

VistAWeb

Version 16.1 WEBV*1*26

User Manual

November 2012

Department of Veterans Affairs Office of Information & Technology Product Development

Revision History

Date	Patch	Page(s)	Change(s)	Project Manager	Technical Writer
November 2012	WEBV*1*26 VistAWeb 16.1	Throughout	Updates for Product Support review comments	Green	John Service
October 2012	WEBV*1*26 VistAWeb 16.1	<u>vi, 10</u>	Updates for 508 compliance changes	Green	John Service
September 2012	WEBV*1*26 VistAWeb 16	Throughout	Updated screen shots.	Pam O'Reilly	Nick Metrokotsas
July 2012	WEBV*1*25 VistAWeb 16	p. 12	Updated section on new features in Version 16	Pam O'Reilly	Nick Metrokotsas
July 2012	WEBV*1*25 VistAWeb 16	Throughout	Updated section on new features in Version 16	Pam O'Reilly	Nick Metrokotsas
Sept 2011	WEBV*1*24 VistAWeb 15	p. 12	Updated section on new features in Version 15	Muse	Green
Sept 2011	WEBV*1*24 VistAWeb 15	throughout	Combined V14 and V15 manuals	Muse	Green
August 2011	WEBV*1*24 VistAWeb 15	p. 12	Added section on what's new in Version 15	Muse	Green
Nov 2010	WEBV*1*20 VistAWeb 13.0	p. <u>53</u>	Added examples of NwHIN documents	Schram	Green
Sept 2010	WEBV*1*20 VistAWeb 13.0	<u>preface</u>	Added Preface	Schram	Green
May 2010	WEBV*1*18 VistAWeb 12.0	Throughout	Updated screen captures	Muse	Green
Jan 2010	WEBV*1*19 VistAWeb V11	p <u>. 8</u> , <u>53</u>	Added information and screen captures about NwHIN	Ridley	Green

Table of Contents

REVISION HISTORY	II
TABLE OF CONTENTS	III
PREFACE	VI
INTRODUCTION TO VISTAWEB	7
BRIEF OVERVIEW OF NWHIN	8
BRIEF OVERVIEW OF THE HDR	
BRIEF OVERVIEW OF AWIV	
KNOWN CONSTRAINTS	
Figure 1: Setting IE to Allow Pop-ups	
WHAT'S NEW WITH VISTAWEB RELEASE 16.1?	
ACCESSING VISTAWEB	12
VISTAWEB UNDER THE CPRS TOOLS MENU	
Figure 2: VistAWeb Access from the CPRS Tools Menu	
Figure 3: Initial Launch Using CPRS Access and Verify Codes	14
ACCESS TO VISTAWEB FROM CPRS VISTAWEB BUTTON	
Figure 4: VistAWeb from the VistaWeb Button	
Figure 5: New Remote Data Tool message on Options screen	
PATIENT CONTEXT IN CPRS-SPAWNED VISTAWEB	
Figure 6: VistAWeb Maintains Context with the CPRS Patient	
Figure 7: Two CPRS Sessions: One in Context, One Not in Context	
Figure 8: VistAWeb Home Page	
Figure 9: VistAWeb Home FageFigure 9: VistAWeb – VistA Site-Login Screen	
PATIENT SELECTION	
Figure 10: Using the Patient Selection Screen to "Find" a Patient	
SPECIAL USERS	
Figure 11: Special User Multiple Site and Patient Selection	
REQUESTING SPECIAL USER ACCESS	
SENSITIVE PATIENT WARNING	
Figure 12: Restricted Record Warning	
REFRESH PATIENT DATA	
Figure 13: Refresh Patient Data Button	23
CATEGORY I PATIENT RECORD FLAGS	_
Figure 14: Example Category I Patient Record Flag in Standalone VistAWeb	
Figure 15: Example Category I Patient Record Flag on the Sites & Notices Screen	24
USING VISTAWEB	25
AUTOMATIC RETRIEVAL OF DATA FROM MULTIPLE SITES	25
Figure 16: Please WaitMessage	
Figure 17: Patient Data Available at Multiple Sites	
Figure 18: Aggregated View	

EXPANDED LIST OF ALL REPORTS	28
Figure 19: Expanded List of VistAWeb Reports	
Report Examples	29
Text Reports	
Figure 20: Patient Inquiry Text Report	29
Text Report with Date Range Option	29
Figure 21: Date Range Entry and Radio Button Selection	30
Figure 22: Progress Notes Report showing AWIV column, Date Range, Author,	
Location, and Site	30
Figure 23: Progress Notes Report with Chem & Hematology	
Predefined Filtering and Date Range	
Figure 24: Date Range Selection Criteria for All Outpatient Pharmacy Report	
Figure 25: Date Range for Lab and Other Large Volume Reports	
Data Grid Style of Report	
Data Grid with Additional Details	
Figure 26: Progress Notes	
Figure 27: Progress Note Title link (AWIV – Imaging details)	
Figure 28: Imaging Report	
Figure 29: Imaging Report Details	
Figure 30: Vital Sign Report Presented as Table	
Figure 31: Details of HT Standardized Vitals	37
Figure 32: Details of Non-HT Standardized Vitals	
Figure 33: Details of Non-Standardized Vitals	
Figure 34: Vitals Graphing	
Data Grid with Copy to Clipboard Option	
Figure 35: Copy to Clipboard	
Figure 36: Medications from VistAWeb Pasted into CPRS Progress Note	
Figure 37: Non-VA Medications	
Department of Defense Reports	
Figure 38: Outpatient Pharmacy detailed display	
Figure 39: Active Outpatient Medications - Grid	
Figure 40: Active Outpatient Medications - Details	
Figure 41: Active IV	
Figure 42: Herbal / OTC / Non-VA Meds	
Figure 43: Dept of Defense Reports – Social Histories	
Figure 44: Dept of Defense Reports – Details	
Figure 45: Dept of Defense Reports – Other Histories	
Figure 46: Dept of Defense Reports – Other Histories Details	
Figure 48: Dept of Defense Reports – Questionnaires Details	
Figure 49: Comment Field	
Figure 50: Detailed Display	
NwHIN Documents	
Figure 51: NwHIN Documents	
Figure 52: Display of Aggregated Reports Procedures	
Figure 53: Allergies Report	
Figure 54: Allergies Report – Details	
Figure 55: Chem and Hematology Grid-style report	
Figure 56: ALL OUTPATIENT PHARMACY PROFILE	
Figure 57: Health Summaries (Non-VA) - NwHIN Documents (C32 and/or C62)	
Figure 58: NwHIN Documents (C32 and/or C62) - Details	
1 19410 00. 14WI III 4 DOUGITIOTIO (OUZ GITG/OT OUZ) - DOUGIIO	

VISTAWEB TIMEOUT	
Figure 59: VistAWeb Timeout Dialog Box	
Figure 61: Empty Session Message – Rerun VistAWeb	60
Figure 62: Empty Session Message – Use a Different Browser Window	
DEFINITIONS	

Preface

VistAWeb Version 16.1 (WEBV*1*26) incorporates changes to comply with section 508 standards and regulations. VistAWeb is removing the detailed display column on the grid domain reports. Columns have been rearranged so that now the first column in the grid will be the column that specifies the type of data from a clinician's perspective, e.g. Medication Name, Title of Note, Lab Test name, etc. The items in this column will have a hyperlink added to them that will provide detailed display information to the user. A few reports where this change can be seen are the Consults and Procedures, Chem & Hematology, Microbiology, Ccurrent Orders, All Outpatient Pharmacyt, Progress Notes, and Readiology Reports.

Introduction to VistAWeb

Veterans Health Information Systems and Technology Architecture (VistA) VistAWeb is a read-only intranet web application. It delivers to the client a uniform, well-defined suite of objects from the medical domain, objects such as patient, provider, progress note, lab results, prescriptions, allergies, and imaging. Designated as the preferred method for VA clinicians to view both Department of Defense (DoD) and remote data from other Department of Veteran's Affairs Medical Centers (VAMCs) due to its ease of use, flexibility and reliability. VistAWeb is a key component of Nationwide Health Information Network (NwHIN), as it is the only application which supports the clinical use of the NwHIN.

It is used to review remote patient information found in VistA, Bidirectional Health Information Exchange (BHIE) system, the Health Data Repository II (HDR II) databases, the Nationwide Health Information Network (NwHIN), and all local VAMCs.

To a large extent, VistAWeb mirrors the reports behavior of the Computerized Patient Record System (CPRS) and Remote Data View (RDV). However, by permitting a more robust and timely retrieval of remote-site patient data, VistAWeb is also an enhancement to CPRS/RDV.

(For further information about NwHIN, go to the following link: http://healthit.hhs.gov/portal/server.pt?open=512&mode=2&cached=true&objID=1142).

There are three ways to access VistAWeb. VistAWeb can be made available by adding it to the CPRS Tools Menu, and it can be selected by choosing the VistaWeb button on the CPRS toolbar. These two methods are referred to as CPRS-spawned versions of VistAWeb. They are compliant with the Health Level 7 (HL7) Clinical Context Object Workgroup (CCOW) standards and therefore maintain context with the patient selected in CPRS. As a third option, VistAWeb can be accessed in a standalone mode by entering the uniform resource locator (URL) link (https://vistaweb.med.va.gov/) in the Internet Explorer (IE) address bar. These methods of accessing VistAWeb are discussed in more detail in later sections of this manual.

Note: Some links found in this user manual go to sites or pages found on the VA intranet. These sites or pages are not accessible from outside the VA network.

The standalone version of VistAWeb is connected to neither CPRS nor the clinical context management application. Standalone VistAWeb serves an important function for users who have been granted special access to multiple sites, such as for National Programs, Veterans Administration (VA) researchers, and others. VistAWeb was also made available more broadly, though temporarily, to assist clinical staff with the retrieval of patient information from the sites affected by damage caused by hurricane Katrina.

To fully appreciate the data that VistAWeb presents to the user, it is important to know something about the HDR as one of the sources of that data. Please read the following section to familiarize the user with the purpose of the HDR and some of the terms and acronyms that describe it, as these will be used in subsequent sections of this manual.

Brief Overview of NwHIN

The Nationwide Health Information Network (NwHIN) provides a secure, nationwide, interoperable health information infrastructure that will connect providers, consumers, and others involved in supporting health and healthcare. This critical part of the national health IT agenda will enable health information to follow the consumer, be available for clinical decision making, and support appropriate use of healthcare information beyond direct patient care so as to improve health. NwHIN, which is a network of networks, securely connects consumers, providers and others who use health-related data. With NwHIN, there is no national data store or centralized systems at the national level and no national patient identifier.

NOTE: a double dagger (‡) is displayed next to all document domains/reports that contain NwHIN data. NwHIN data will only display if you are signed on to a VAMC that is participating with an NwHIN partner. Otherwise, you will get a message saying "No NwHIN data found."

Brief Overview of the HDR

The purpose of the HDR project is to establish a clinical data repository. A clinical data repository is a collection of clinical information that resides on one or more independent platforms and is used by clinicians and other personnel to facilitate longitudinal patient-centric care. The data in the HDR will be retrieved from existing VistA files and organized in a format that supports the delivery of care, regardless of the patient's current location or where the patient has been treated in the past. Additionally, the HDR serves several purposes:

- Serves as a primary source for the legal health record (LHR)
- Enables the generation of clinical reports based on the entire clinical holdings of Veterans Health Administration (VHA)
- Supports standardization between and among Department of Defense (DoD), Indian Health Services (IHS), and other government and private industry clinical databases through the creation of a standards-based database.

For more information, see HDR documentation on the VistA Documentation Library (VDL).

Brief Overview of AWIV

Version 13 of VistAWeb enabled use of the Advanced Windows Imaging Viewer (AWIV). (See "<u>VistAWeb V 12.0</u> Features/ Enhancements" for further details.) AWIV is an ActiveX component created by VistA Imaging for the purpose of displaying medical images from a variety of sources. The AWIV uses the same components inside the VistA Imaging Clinical

Display application, which is an FDA regulated medical device. It is distributed with Patch 105 (MAG*3.0*105).

VistAWeb provides information to the AWIV component to indicate what is to be displayed. The AWIV communicates with the Centralized VistA Imaging Exchange (CVIX) service for VA and DoD data.

AWIV is dependent on Patch 104 (MAG*3.0*104) for communication service to retrieve images from the web for display.

The AWIV supports displaying artifacts provided by the VA and, in the future, will display artifacts provided by the DoD. In this context, an artifact is an image or image-like object stored by VistA Imaging or by DoD HAIMS. Artifacts include images of various types as well as scanned documents. Note that VistA Imaging EKG images are not accessible because they are stored on third-party servers.

When viewing reports and notes from VA sites, VistAWeb can determine if there are images associated using the same remote procedure calls (RPC) CPRS has already defined. When VistAWeb determines a note or report has images associated, VistAWeb should indicate to the user that images are available through an icon. VistAWeb will then display a page containing the AWIV component and then provides the AWIV component with the necessary parameters and the string identifier from CPRS.

Known Constraints

There are known constraints in the installation and use of VistAWeb:

VistAWeb is a CCOW-compliant application. If VistAWeb is launched from CPRS on a
computer without the CCOW-compliant Vergence Desktop Components installed, a
message will be displayed saying "VistAWeb is CCOW compliant and has been
unsuccessful in locating a CCOW vault. Please contact your local IRM for assistance."
VistAWeb will then exit.

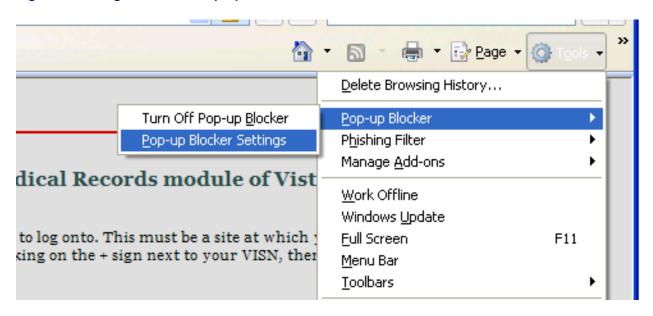
Note: Information Resources Management (IRM) staff should refer to the VistAWeb Informational Patch OR*3*230 for guidance on where to find information and who to talk to about installation and configuration of the CCOW Desktop Components. Additional CCOW information can be found at http://vista.med.va.gov/CCOW/index.htm].

2. Access to VistAWeb in a test account should *not* be made available to general users. Access *should* be made available in a production account. Accessing VistAWeb in test accounts will require the user to enter the IP address and port number of the test system each time a patient selection is performed. Access to VistAWeb in a test account should be restricted to IRM staff for limited testing purposes only.

Note: Using VistAWeb to look up "test patients" may produce confusing results. Normally, no two sites ever have the same test patients. Using a test patient in a production account may seem to work satisfactorily, but can cause VistAWeb to error out as it attempts to reconcile a test patient at multiple sites.

- 3. VistAWeb uses pop-ups. Field facilities that have chosen to turn off pop-ups on desktops will need to allow them for VistAWeb. In IE in the *Tools* menu pull-down, select *Pop-up Blocker>Pop-up Blocker Settings*, type the VistAWeb URL in the *Address of the Web site to allow:* box, and click the *Add* button.
- 4. VistaWeb is only supported with use of IE version 7 or higher.

Figure 1: Setting IE to Allow Pop-ups





Note: Some links found in this user manual go to sites or pages found on the VA intranet. These sites or pages are not accessible from outside the VA network.

What's New with VistAWeb Release 16.1?

If you are already familiar with VistAWeb, read this section of the manual to find out what is new in this release. If you are not familiar with VistAWeb, you may want to start with Accessing VistAWeb and then come back to this section to find out what's new.

VistAWeb Version 16.1 (WEBV*1*26) incorporates changes to comply with section 508 standards and regulations. VistAWeb is removing the detailed display column on the grid domain reports. Columns have been rearranged so that now the first column in the grid will be the column that specifies the type of data from a clinician's perspective, e.g. Medication Name, Title of Note, Lab Test name, etc. The items in this column will have a hyperlink added to them that will provide detailed display information to the user. A few reports where this change can be seen are the Consults and Procedures, Chem & Hematology, Microbiology, Ccurrent Orders, All Outpatient Pharmacyt, Progress Notes, and Readiology Reports.

Accessing VistAWeb

There are three ways to access patient data using VistAWeb:

- 1. VistAWeb can be made available by adding it to the CPRS Tools Menu.
- 2. CPRS users also have direct "one-click" access to VistaWeb from a VistaWeb button located on the CPRS Toolbar.

These two methods are referred to as CPRS-spawned versions of VistAWeb. They are compliant with the HL7 Clinical Context Object Workgroup (CCOW) standards and, therefore, maintain context with the patient selected in CPRS.

3. As a third option, VistAWeb can be accessed in a standalone mode by entering the URL link (https://vistaweb.med.va.gov/) in the IE address bar.

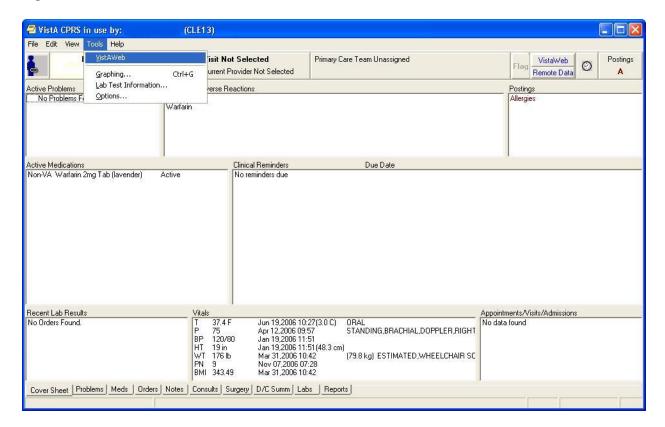
These methods of accessing VistAWeb are discussed in more detail in later sections of this manual.

VistAWeb under the CPRS Tools Menu

To access VistAWeb, you must first log into CPRS using your access/verify codes, select a patient, and select VistAWeb from the Tools menu. VistAWeb will maintain context with the selected patient and retrieve data for that patient from all sites where the patient has records. When you select a different patient from the CPRS File menu, VistAWeb will

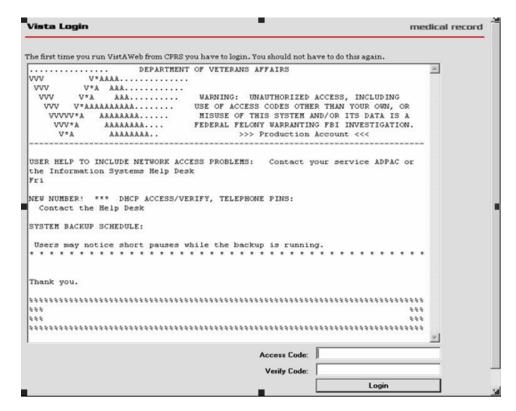
maintain context with the new selection. This is described in <u>Patient Context in CPRS-Spawned VistAWeb</u>.

Figure 2: VistAWeb Access from the CPRS Tools Menu



The first time you launch VistAWeb from CPRS, a login (using the same access and verify codes as for CPRS) is required. Subsequent uses of VistAWeb do not require a second login.

Figure 3: Initial Launch Using CPRS Access and Verify Codes



Access to VistAWeb from CPRS VistaWeb Button

A VistAWeb button is available next to the Remote Data Available button; when you click this button, CPRS will launch VistAWeb for you. Additionally, when VistAWeb is launched by CPRS, patient context is maintained. This means that VistAWeb will change patients whenever you do a patient selection in CPRS.

Figure 4: VistAWeb from the VistaWeb Button

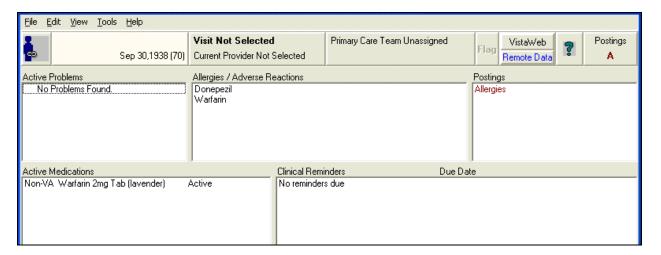
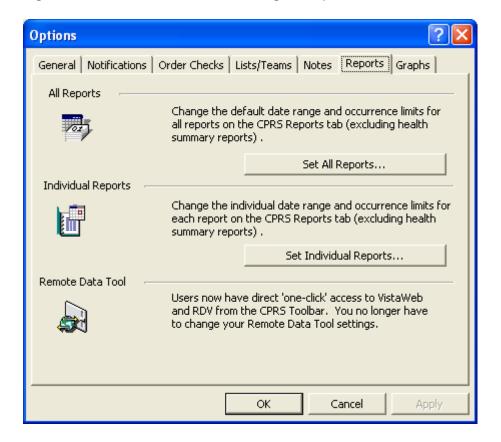


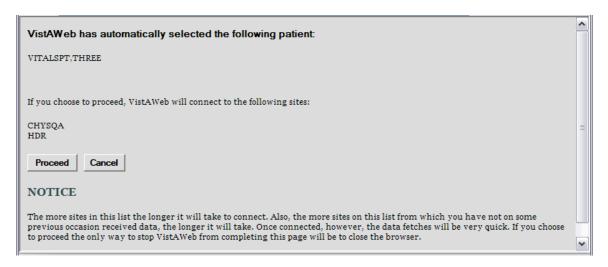
Figure 5: New Remote Data Tool message on Options screen



Patient Context in CPRS-Spawned VistAWeb

VistAWeb is a CCOW-compliant application and, therefore, maintains context with the patient who was selected in CPRS. When you spawn VistAWeb from CPRS, VistAWeb presents you with a screen that confirms the patient identity, the sites where there is patient data, and gives you the option to proceed or cancel. If you select Proceed, VistAWeb displays the Sites & Notices screen for the new patient along with a menu of reports that are available in VistAWeb. If you select Cancel, VistAWeb forces you to close the session. When using VistAWeb through the CPRS Tools menu, you will not be able to select a new patient from within the VistAWeb application; however, you can return to CPRS to select a new patient and the VistAWeb connection process will begin again.

Figure 6: VistAWeb Maintains Context with the CPRS Patient



To avoid potential patient safety problems, VistAWeb will not open from a CPRS session that is not in context. This can occur when multiple CPRS sessions are open on the desktop. In the following example, two CPRS sessions are open. One session is in context, as indicated by the icon with a blue person and a connected chain link. The other CPRS session is not participating in patient context, as indicated by the icon with red and blue people and a broken chain. The VistAWeb warning message is the result of attempting to launch VistAWeb from the CPRS session that is not in context. VistAWeb forces the user to exit the attempted connection.

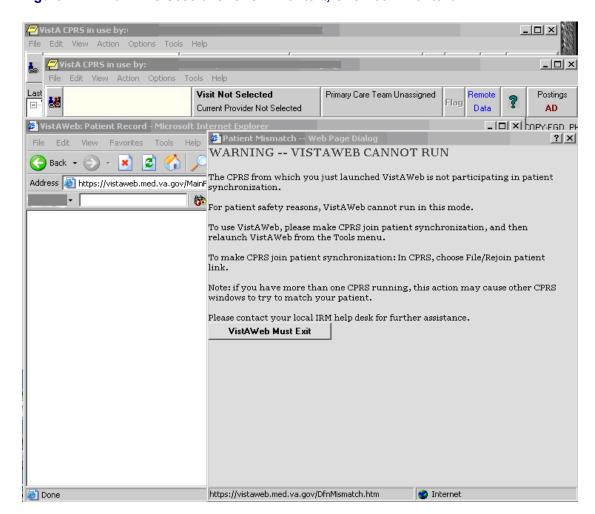


Figure 7: Two CPRS Sessions: One in Context, One Not in Context

VistAWeb Directly from IE ("Standalone" VistAWeb)

VistAWeb can also be accessed directly from IE by entering https://vistaweb.med.va.gov/ in the IE address bar. Users must select their local site for login, then log in using their CPRS/VistA access and verify code pair.

Note: Some links found in this user manual go to sites or pages found on the VA intranet. These sites or pages are not accessible from outside the VA network.

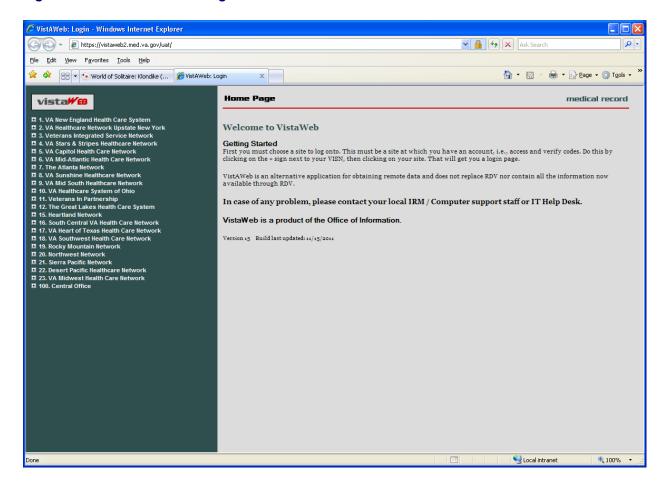
Once you have made your login site selection, you may want to save the URL in the IE "Favorites" menu for future ease of access.

Note: Users who regularly only use the standalone version of VistAWeb will be required to update their verify codes periodically, just as they would if logging into CPRS. When this happens, the login screen will display the message, "User must enter a new Verify code at this time."

By default, users will be able to look up only those patients who are in their local VistA site. Data for those patients will be retrieved from all other sites the patients have visited. Some users (researchers or referral coordinators, for example) may need to look up patients who are not in the local VistA. VistAWeb requires that these users be granted Special User access. <u>Special Users</u> and <u>Requesting Special User Access</u> are discussed in more detail later in this manual

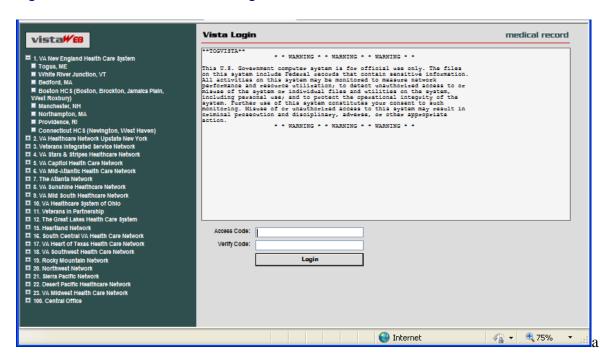
Note: An exception to the VistA/CPRS account requirement is made for properly credentialed Special Users, who do not have clinical VistA accounts. For those users, access can be obtained by logging in through the "100. Central Office Claims System," as shown at the bottom of the sites menu in the figure below.

Figure 8: VistAWeb Home Page



To log into VistAWeb, select the site where you have an account from the list of sites on the left side of the page. The VistA login page for that site will appear. You should enter your access/verify codes the same way you would enter them in CPRS.





After you log into VistAWeb, the Patient Selection screen appears. If you have Special User access, a list of sites for patient selection will be present on the left side of the screen. Special Users may select a site other than their login site for patient selection. All other users will be limited to patient selection from their login site only. In either case, data for the selected patient will be automatically retrieved from all sites where that patient has data.

Patient Selection

In standalone VistAWeb, patient selection can be performed in much the same way as in CPRS. You can enter the patient's name, part of the patient's last name, social security number, or the five-digit identifier (first letter of patient's last name plus the last four digits of the patient's social security number). After entering one of these identifiers, click your mouse button on the FIND button or press the Enter key on the keyboard. A list of potential matching patients appears in the box below. If there are more names available than shown in the scroll box, click the "More names..." button to see them. Once you have identified the desired patient, click your mouse button on the patient name, and click the mouse again on the OK button or press the Enter key on the keyboard.

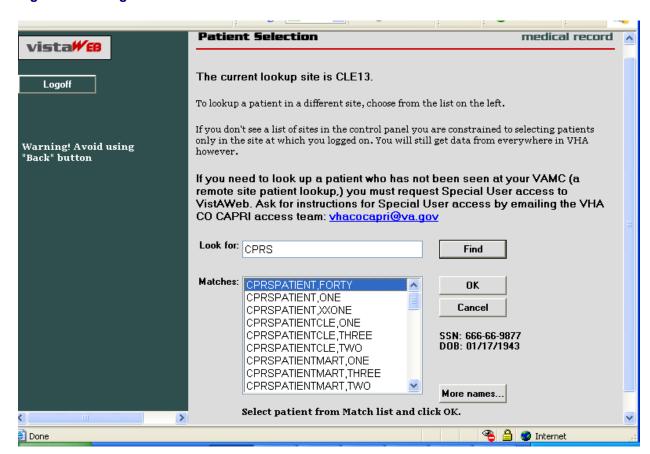


Figure 10: Using the Patient Selection Screen to "Find" a Patient

In the example above, the user does not have Special User access, so patient selection is limited to the local site where the user first logged in. There is no list of alternate patient selection sites on the left side of the VistAWeb Patient Selection screen.

Special Users

By default, users of VistAWeb are permitted to select patients that are in the local VistA system where the user logs in. VistAWeb will retrieve data for these patients from all sites where the patients have records. Some users (researchers or referral coordinators, for example) may need to select patients that are not in the local VistA. These users will require Special User access, which can be granted for one site in addition to the login site, several sites, an entire Veteran's Integrated Service Network (VISN), or all sites nationally.

After logging in to VistAWeb, Special Users will see the Patient Selection screen, with a list of sites accessible for patient selection.

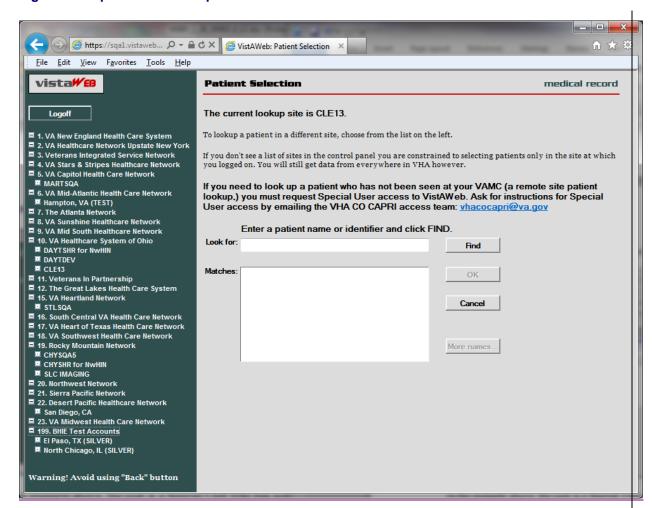


Figure 11: Special User Multiple Site and Patient Selection

In the example above, the user is a Special User who has access to perform patient selection at several sites, which are listed on the left side of the screen. To select a patient from a site other than the login site, you must first click on the desired site on the left side of the screen and then perform patient selection.

Requesting Special User Access

Requests for Special User access fall into one of three categories:

- **National Programs** requiring "Special User" access, such as Blind Rehab, Transplant, War Related Illnesses, and so forth
- VA Researchers requiring "Special User" access for the purpose of approved research projects
- **All Others**, for example, local users, requiring "Special User" access to multiple VA sites for the purpose of clinical opinions, referral coordination, and so forth.

All users requesting Special User access will be required to verify completion of the annual VHA Privacy Policy Training and VA Information Security Awareness Course and to sign the Rules of Behavior (ROB) prior to approval of the request.

Individuals requesting Special User access to VistAWeb should request instructions by emailing the VHA CO CAPRI access team at white=vhacocapri@va.gov, or by visting the Health Information Access (HIA) website.

Sensitive Patient Warning

Similar to CPRS, standalone VistAWeb displays a warning to you if you select a patient who has been flagged or designated as a Sensitive Patient. VistAWeb differs from CPRS in that it will display the warning message to you if the patient is sensitive in ANY of the sites from where the sensitive data will be retrieved. If you elect to proceed, notification will be sent to the Information Security Officer (ISO) at any and all sites where the patient data is marked sensitive. Both standalone and CPRS-spawned versions of VistAWeb also display the sensitivity status on the Sites & Notices screen.

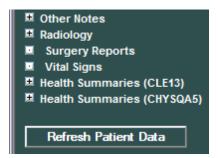
Figure 12: Restricted Record Warning



Refresh Patient Data

A *Refresh Patient Data* button has been added to VistAWeb that allows you to update reports without having to log off and back into a VistAWeb session when new data is added to the patient's record in CPRS. Clicking on the Refresh Patient Data button returns you to the Sites & Notices screen from which you can navigate back to the appropriate report to see the new data.

Figure 13: Refresh Patient Data Button



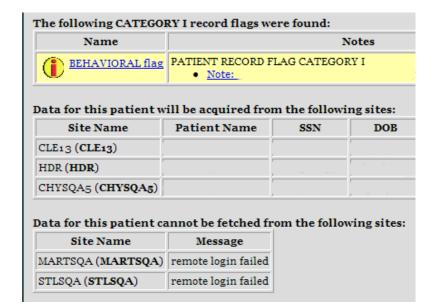
Category I Patient Record Flags

Category I Patient Record Flags are now displayed in standalone sessions of VistAWeb before the user is permitted to "Continue to Patient Record." The Category I flags are also displayed in both standalone and spawned versions of VistAWeb on the Sites & Notices screen below.

Figure 14: Example Category I Patient Record Flag in Standalone VistAWeb



Figure 15: Example Category I Patient Record Flag on the Sites & Notices Screen



Using VistAWeb

After the Patient Selection page, all VistAWeb functionality for a Special User is the same as for other users, except that there is no clinical context management as described earlier in *Patient Context in CPRS-Spawned VistAWeb*.

Automatic Retrieval of Data from Multiple Sites

When the patient is first selected, VistAWeb determines how many sites the patient has visited and displays a message similar to the following to let you know that VistAWeb is establishing connections to those systems.

Figure 16: Please Wait...Message



The Sites and Notices page is then displayed, which includes a list of sites where data for that patient will be retrieved. In the following example, VistAWeb will attempt to retrieve data from all available sites listed in the patient's treating facility list.. In this example, MARTSQA, STLSQA, and DAYTSHR are three examples of sites in the patient's treating facility list to which VistAWeb has been able to make a connection. If VistAWeb cannot connect to some of the systems (sites) where the patient has been seen, that information is supplied in table format below the sites that are connected. The Last Seen field in the tables is only populated when the Master Patient Index (MPI) has that information to report.

On the left side of the screen, there is a list of reports for which VistAWeb is able to retrieve patient data. It is important to note that just because a site is listed doesn't mean there will be data available from that site in all domains. For more detail regarding the type of reports, refer to the *Expanded List of All Reports* section of this manual.

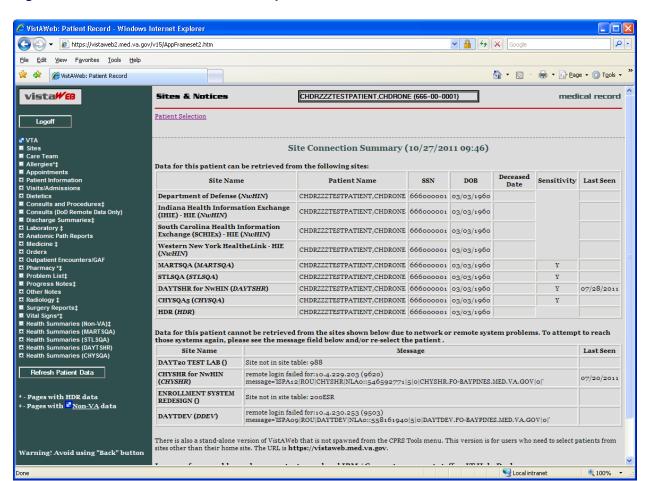


Figure 17: Patient Data Available at Multiple Sites

Reports/"domains" that have data from non-VAMCs are indicated with the appropriate icon from the legend; these reports/domains show the data in an "aggregated view," which means that all sources provide that data for the specific report/domain.

Figure 18: Aggregated View



Expanded List of All Reports

Entries preceded by a plus sign (+) can be expanded to show sub-reports by clicking the mouse on the plus sign (+). Expanded lists can be collapsed by clicking the mouse on the minus sign (-). Figure 19_is a fully expanded list of reports retrieved by VistAWeb. In addition to National and local VistA health summaries, VISN level health summaries are available. Consequently, the list of available summaries can be quite long and will vary depending on the user's login site. The list of health summaries is similar to the Health Summary list available from the Reports tab in CPRS.

Items on the menu that are followed by this symbol (≠) will include NwHIN DoD data, if available.



Figure 19: Expanded List of VistAWeb Reports

Report Examples

There are over 80 different reports available in VistAWeb. A representative sampling is presented here to demonstrate the different types of reports and formatting options.

Text Reports

Text reports are the most basic of all reports available to users. Text is displayed in a non-interactive mode and is very similar to the corresponding reports found in CPRS from the Reports tab. One example of a Text report is the Patient Inquiry report. All site data is retrieved for the selected report, and the patient's data for the associated site is placed within the tab from where the data was retrieved. In the example below, there are four tabs:

MARTSQA, CLE13, STLSQA, and CHYSQA5. To view data retrieved from MARTSQA for the selected patient, click the mouse on the MARTSQA tab. If any particular report is not available from a site where the patient has been seen, or if there is no data for a specified date range, then that site's report tab will return the statement "No Data Found."

Patient Inquiry medical record Patient Selection MARTSQA CLE13 STLSQA CHYSQA5 MARTSQA Primary care team unassigned. COORDINATING MASTER OF RECORD: CLEVELAND VAMO Temporary: NO TEMPORARY ADDRESS Address: STREET ADDRESS UNKNOWN UNK. CITY/STATE County: UNSPECIFIED Phone: UNSPECIFIED Office: UNSPECIFIED From/To: NOT APPLICABLE Phone: NOT APPLICABLE Cell: UNSPECIFIED E-mail: UNSPECIFIED Bad Addr: Confidential Address: Confidential Address Categories: NO CONFIDENTIAL ADDRESS From/To: NOT APPLICABLE DOS- INSPECTATED Claim #: UNSPECIFIED Relig: UNSPECIFIED
Race: UNANSWERED Sex: MALE
Ethnicity: UNANSWERED Combat Vet Status: NOT ELIGIBLE Primary Eligibility: UNSPECIFIED Other Eligibilities: Unemployable: NO : PATIENT HAS NO INPATIENT OR LODGER ACTIVITY IN THE COMPUTER Future Appointments: NONE

Figure 20: Patient Inquiry Text Report

Text Report with Date Range Option

In report screens where date ranges can be typed, two digits can be entered for years, and dashes can be entered instead of slashes. VistAWeb will reformat to the dd/mm/yyyy format for the user, e.g., 12-11-05 will be reformatted to 12/11/2005 automatically. Typing in a date range clears any set radio button. Likewise, setting a radio button for one of the available time periods will clear dates previously typed into the From/To fields. The following

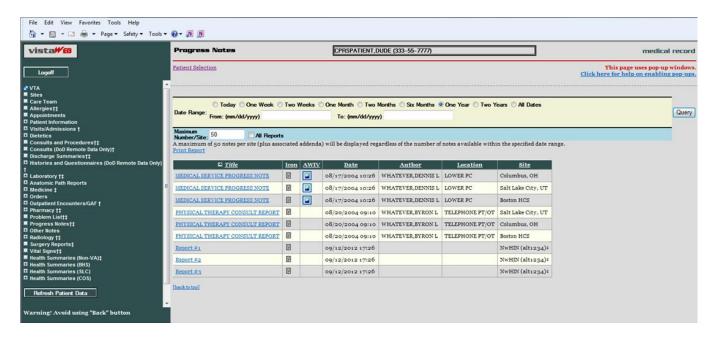
composed sequence demonstrates that VistAWeb corrects the date format and then shows that clicking the All Results button clears the To/From date fields.

Figure 21: Date Range Entry and Radio Button Selection



When these reports are generated they are presented in table format, which typically can be sorted and can contain data from multiple sites, as with Allergies, Outpatient Pharmacy, and Vital Signs reports. In the following example report of Progress Notes or Chem & Hematology, the initial default query is performed automatically for a one-year time period, and the maximum number of items per site to return is defaulted to 50. You can type in a different number or click in the All Data box to retrieve all the items for the specified period. You can select a different time period or enter a From/To date range, and you can specify a different maximum number of items to return. Click the mouse on the Query button to run the report for the new time period or date range and number of items. Note that, if the default number is deleted, either a minimum of 1 item must be requested or All Data must be checked for the specified time period. Otherwise, an error message is displayed.

Figure 22: Progress Notes Report showing AWIV column, Date Range, Author, Location, and Site



_ D X Q → 🔒 ♂ 🗙 🏻 🙆 VistAWeb: Patient Record https://sqa1.vistaweb... File Edit View Favorites Tools vista#£8 Chem & Hematology CLZWKHAA, ALUUN A (101-36-4841) medical record Patient Selection This page uses pop-up windows. Click here for help on enabling pop-ups. Logoff ✓ VTA Sites Care Team ○ Two One ○ Two Six One All One Today Week ■ Allergies* Dates ■ Appointments
■ Patient Information Query From: (mm/dd/yyyy) To: (mm/dd/yyyy) ■ Visits/Admissions **■** Dietetics Maximum Number/Site: All Reports Consults (DoD Remote Data Only) A maximum of 50 reports per site will be displayed regardless of the number of reports available within the specified date range. ■ Discharge Summaries Autopsy ■ Blood Availability <u>Icon</u> <u> ■ Date</u> Specimen Result Flag Units <u>Test Name</u> ■ Blood Transfusion 10/24/2005 SERUM CHEYENNE HDR SQA ■ Blood Bank Report CREATININE mg/dL 12:31 1.3 Surgical Pathology 10/24/2005 SERUM CHEYENNE Cytology UREA NITROGEN H mg/dL 7-18 HDR SQA ■ Electron Microscopy 10/24/2005 SERUM CHEYENNE Lab Orders SODIUM 131 meq/L Chem & Hematology 12:31 145 HDR SQA 10/24/2005 SERUM CHEYENNE 2.6-8.4 URIC ACID н mg/dL HDR SOA Warning! Avoid using "Back 10/24/2005 SERUM CHEYENNE GLUCOSE mg/dL

Figure 23: Progress Notes Report with Chem & Hematology

Predefined Filtering and Date Range

The Pharmacy – All Outpatient report often contains a large number of entries, depending on the patient's history of outpatient prescriptions. Providing shorter date ranges allows for the quicker retrieval of data. For this report, the Date Range selection criteria defaults to 15 Months. You can select 2 Years or All Results by clicking on their radio buttons and then clicking the Query button.

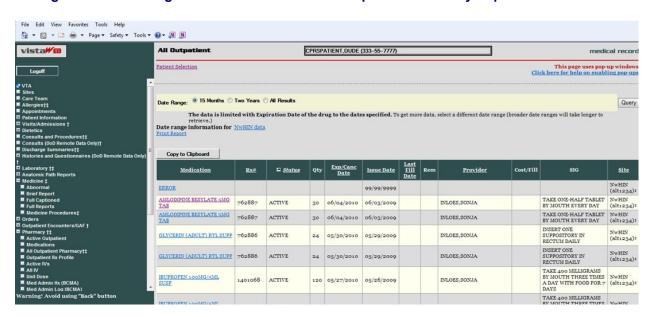


Figure 24: Date Range Selection Criteria for All Outpatient Pharmacy Report

Some reports require you to enter the date range before the report will appear. This is the case for queries that have the potential to return very large amounts of data or where filtering the data lends usability to the report. Summaries, such as Discharge, Lab, some Order summaries, and both of the Med Admin Hx and Med Admin Log reports, tend to generate large volumes of data. Narrowing the date range for a report for a patient's summary data may improve the speed of the data retrieval.

Some reports that do not require a date range include the following: Sites, Care Team, Allergies, Appointments, Patient Inquiry, Patient Demographics, Patient Insurance, Dietetics Profile, Blood Bank, Daily Order Summary, Medications, Outpatient Rx Profile, All IV, and Imaging.

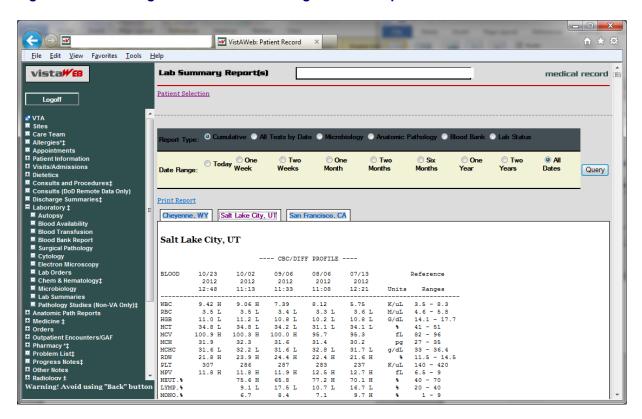


Figure 25: Date Range for Lab and Other Large Volume Reports

Data Grid Style of Report

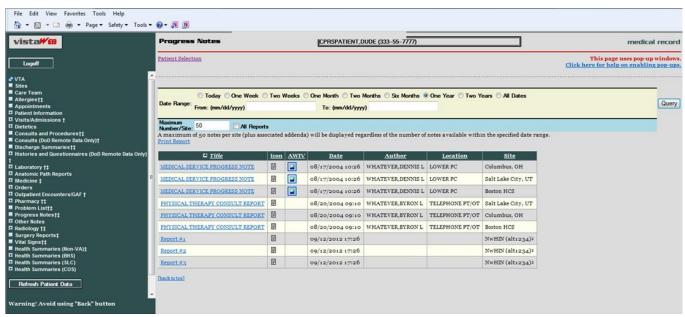
The data grid style of report presents data in the form of a grid or table, with the data being retrieved and displayed according to a specified date range. The data for most of the tables can then be sorted in multiple ways. The underlined column headers indicate which columns may be used for sorting. Report data is generally retrieved and presented with the most recent date at the top, descending to the earliest date at the bottom. For some reports, Vitals for example, data from multiple sites is presented strictly by date, without consideration for the site. For some other reports, Problem List for example, the problems from multiple sites are displayed by status (active first) and then in descending date order for one site and then descending order for the next site, and so on. Then inactive problems are listed if there are any. In most of the reports that

have a date column, clicking the date won't change the sorting of that column unless some other sort, alphabetical, for example, had been done which upset the descending date order.

Data Grid with Additional Details

The data grid permits you to view additional details about a selected item in a row. In this example, Progress Notes titles are listed in VistAWeb. To view the actual text of the note, click on the Title link for the note of interest.

Figure 26: Progress Notes



When you click on the Title link, the detail of the selected note appears in a pop-up box, represented in the example below. Click on the Print or Close buttons to effect the desired action.

🐧 ▼ 🔝 ▼ 🖪 🖷 ▼ Page ▼ Safety ▼ Tools ▼ 😥 ▼ 🔊 🥦 vista₩€ Progress Note Detail -- Webpage Dialog Patient Selection Print Copy to Clipboard Close ○ Today ○ One Week ○ Two Week CPRSPATIENT, DUDE (333-55-7777) Query From: (mm/dd/yyyy) MEDICAL SERVICE PROGRESS NOTE
Site: Columbus, OH
Date: 08/17/2004 10:26 Author: DENNIS L WHATEVER Location: LOWER PC All Reports MEDICAL SERVICE PROGRESS NOTE

MEDICAL SERVICE PROGRESS NOTE

MEDICAL SERVICE PROGRESS NOTE

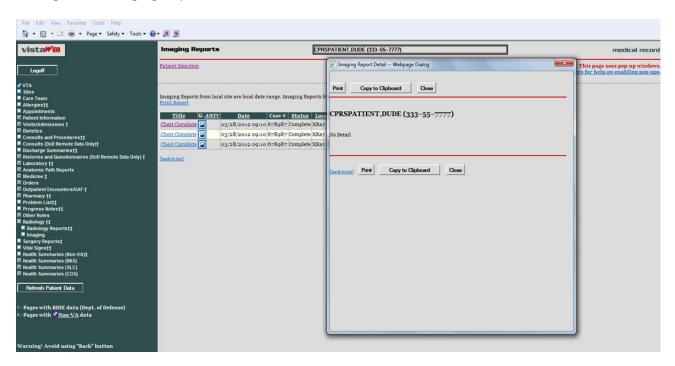
PHYSICAL THERAPY CONSULT REPORT User Class: No user class for this timestamp PHYSICAL THERAPY CONSULT REPORT backtotop] Print Copy to Clipboard Close PHYSICAL THERAPY CONSULT REPORT P Report #3 - Pages with BHIE data (Dept. of Defense) - Pages with 🗳 <u>Non-VA</u> data arning! Avoid using "Back" butto

Figure 27: Progress Note Title link (AWIV – Imaging details)

Figure 28: Imaging Report



Figure 29: Imaging Report Details



Vital Signs Report

In the following Vital Signs example report, note that three of the Site column listings display Home Telehealth (HT) as the site where the vitals were taken. The HT indicates the data was supplied through the HT interface.

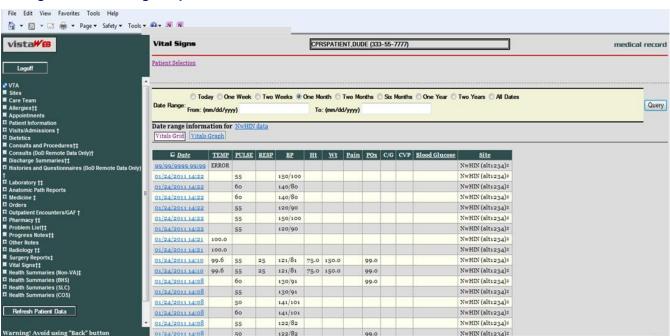
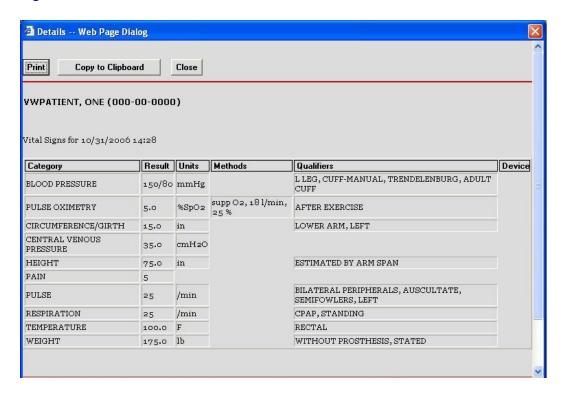


Figure 30: Vital Sign Report Presented as Table

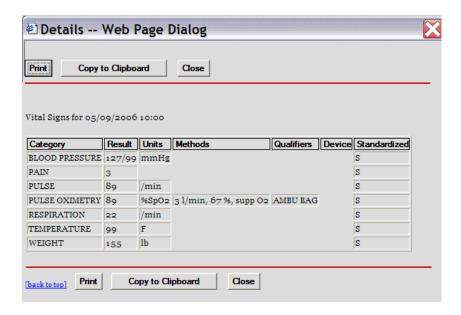
When you select the Date link of an HT site from the Vital Signs screen, additional information is provided about the method of data entry, qualifiers, vitals measuring devices, and that data standardization has been accomplished for this vital sign record.

Figure 31: Details of HT Standardized Vitals



If the vitals data is coming from the Health Data Repository – Interim Messaging Solution (HDR-IMS) repository, but was not entered through the HT interface, the Details – Web Page Dialog will show the letter S in the Standardized column and any other data that was entered through the Vitals package that maps to other column headings. In the following example, the Methods and Qualifiers for supplemental oxygen that was delivered to the patient are shown.

Figure 32: Details of Non-HT Standardized Vitals



If the vitals data is coming from the HDR-Historical database or a VistA site, the Standardized column does not display the letter S and no data is supplied for Units, Methods, Qualifiers, or Device. If for some reason the HDR databases are inaccessible, VistAWeb still polls the VistA sites where the patient has been seen and will return any available requested data for display.

Figure 33: Details of Non-Standardized Vitals

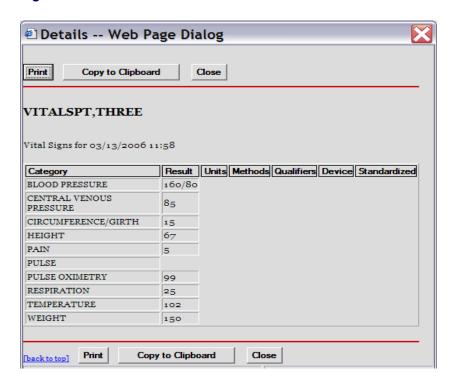
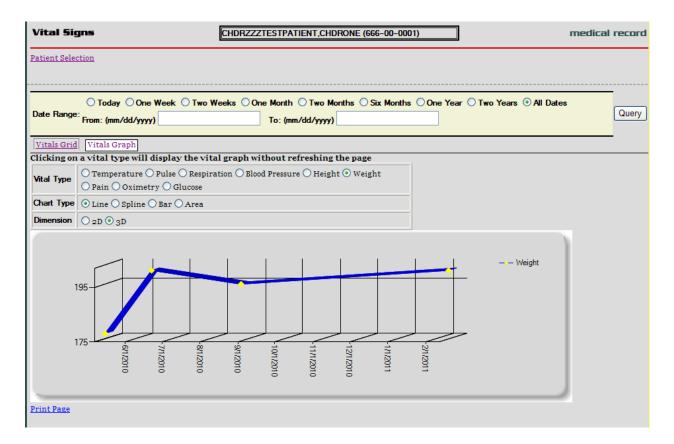


Figure 34: Vitals Graphing



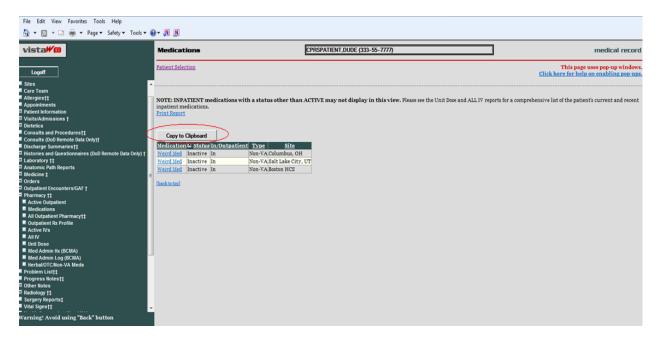
Data Grid with Copy to Clipboard Option

The following example of a Medications report lists a variety of medications and their statuses, along with Copy to Clipboard button. Providers often find it useful to copy lists of active and suspended medications to a patient note. When you click the mouse on the Copy to Clipboard button, the list of Active and Suspended medications is automatically copied to the clipboard and grouped by Status. Discontinued and expired medications are not copied.

NOTE: When you do a copy to clipboard, this data is available to other web pages, which poses a patient safety issue, since patient information can be seen by other web pages

In V8, users can set up an option that does not allow the clipboard data to be available to other web pages.

Figure 35: Copy to Clipboard



The list can be pasted into another document or a Progress Note within CPRS.

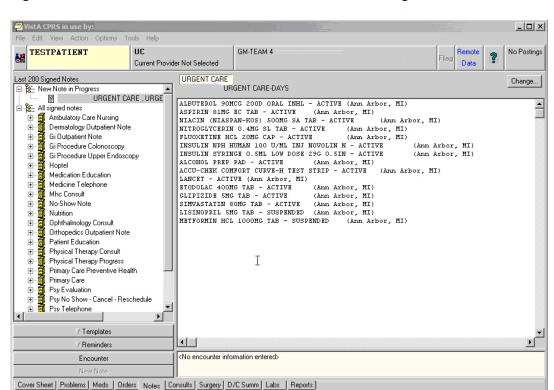
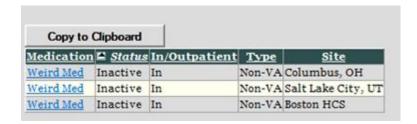


Figure 36: Medications from VistAWeb Pasted into CPRS Progress Note

Note: VistAWeb displays Non-VA and Herbal/OTC medications if applicable. In the following screen capture of a Medication report, the Type field has one medication listed as Non-VA.

Figure 37: Non-VA Medications



Department of Defense Reports

VistAWeb version10 added the following:

- 1. Detailed display for DoD data for the Outpatient Pharmacy report. The following fields are displayed in the detailed display:
 - Medication
 - Start Date/ Time
 - Stop Date/ Time
 - Current Status
 - Order #
 - Medication Instructions
 - o Sig
 - o Days Supply
 - o Quantity
 - o Refills
 - o Pick Up
 - Dispense Comments.

Figure 38: Outpatient Pharmacy detailed display



- 1. Three new reports under Pharmacy:
 - Active Outpatient
 - o Active IV report
 - O Herbal/OTC/Non-VA Meds.

Figure 39: Active Outpatient Medications - Grid

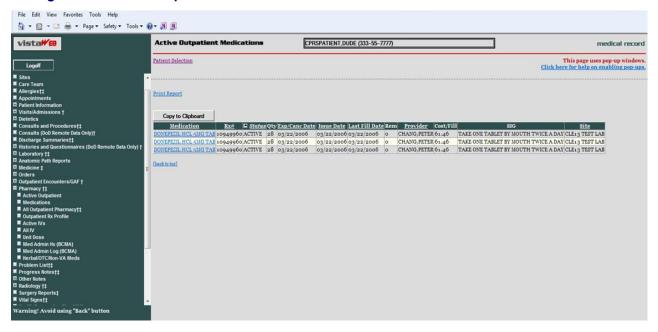


Figure 40: Active Outpatient Medications - Details

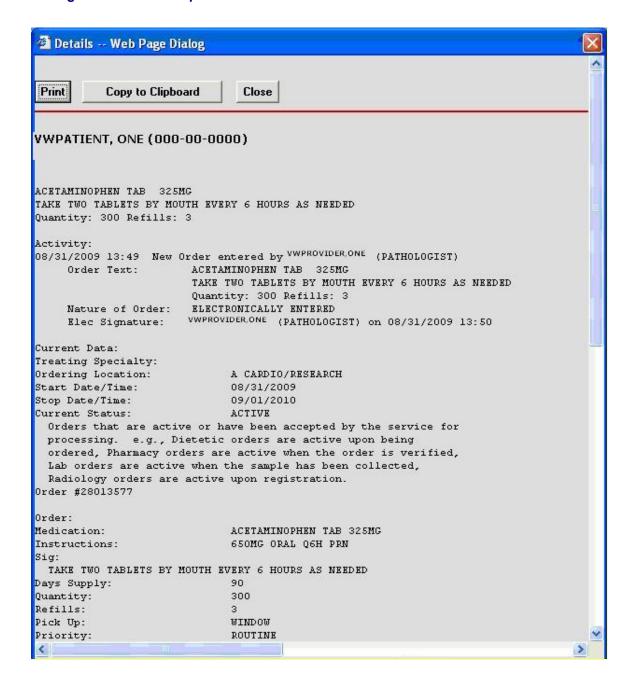


Figure 41: Active IV

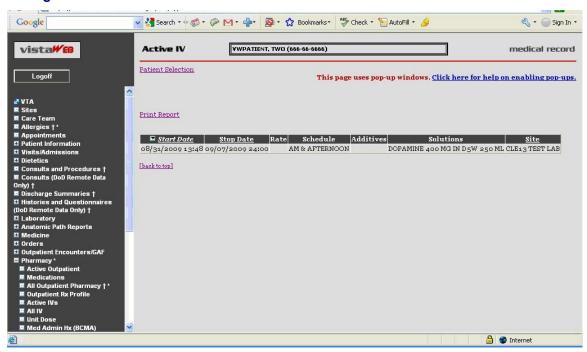
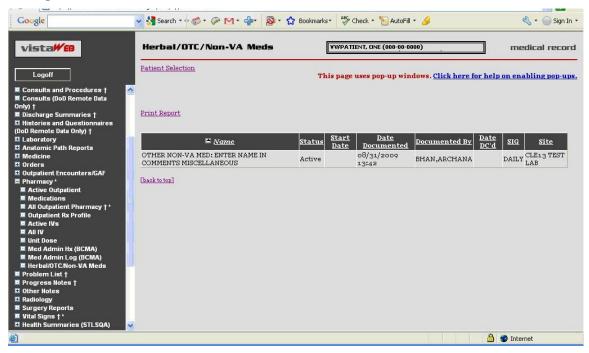


Figure 42: Herbal / OTC / Non-VA Meds



2. In response to PSPO 832:

Added a new centered heading "Site Connection Summary" followed by the date and time in parenthesis.

Example: "Site Connection Summary (12/19/2008 10:06AM)"

- Added the following two notes above the tables that display a list of the sites that VistAWeb could / could not connect to:
 - Data for this patient can be retrieved from the following sites:
 - Data for this patient cannot be retrieved from the sites shown below due to network or remote system problems. To attempt to reach those systems again, please see the message field below and/or re-select the patient":

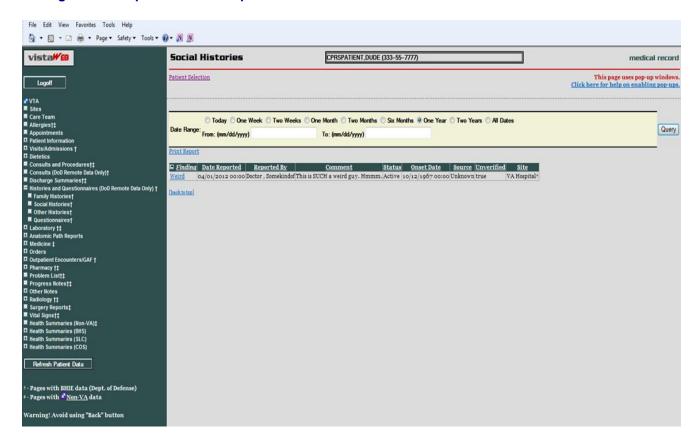
Department of Defense (DoD) Reports, cont'd

VistAWeb version 9 added reports to retrieve and display data received through the BHIE Framework from DoD for the following:

- Family Histories
- Social Histories
- Other Histories
- Questionnaires.

Users can select a date range and specify the number of observations, and the BHIE real-time DoD data and DoD pre-separation data within these parameters are displayed in VistAWeb for the above mentioned reports.

Figure 43: Dept of Defense Reports - Social Histories



When the "Finding" window is clicked, a new window with details pops up.

Figure 44: Dept of Defense Reports - Details

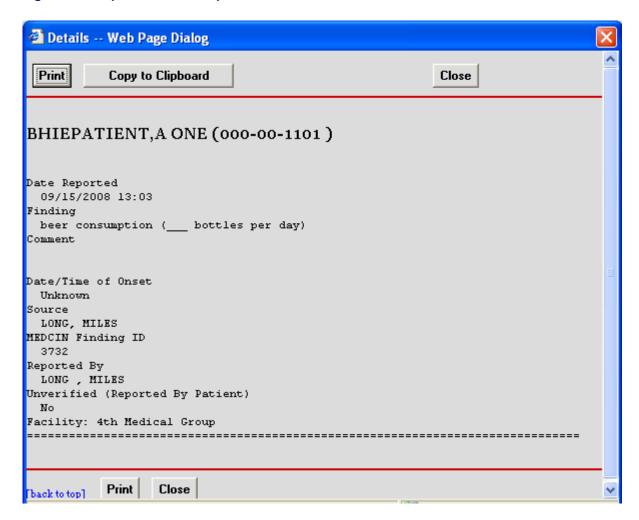
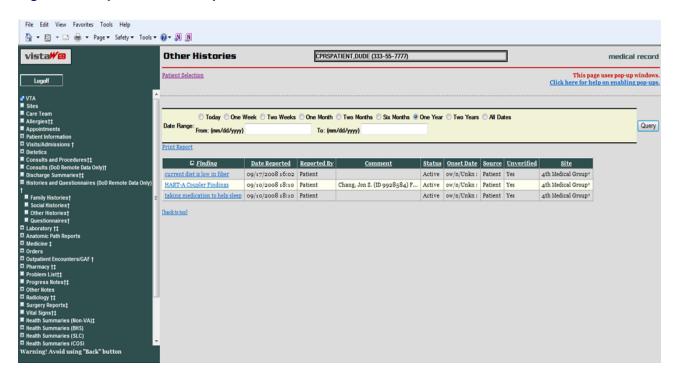


Figure 45: Dept of Defense Reports - Other Histories





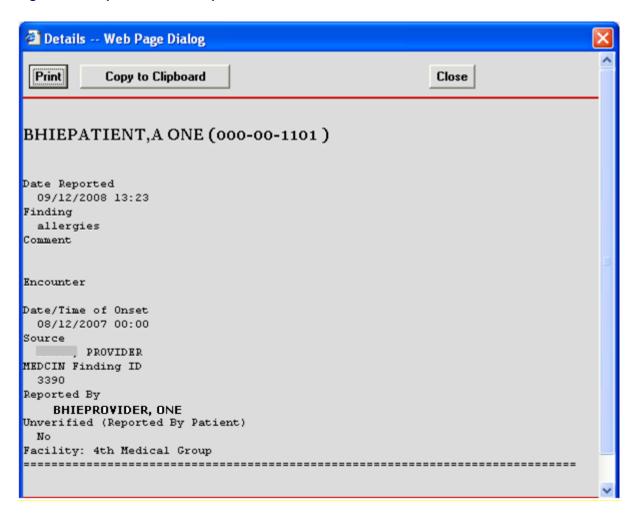


Figure 47: Dept of Defense Reports – Questionnaires

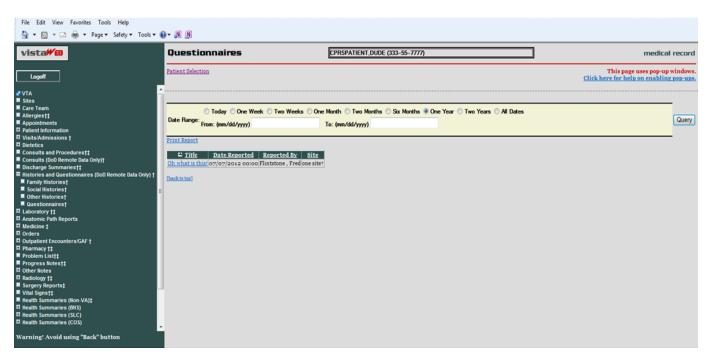
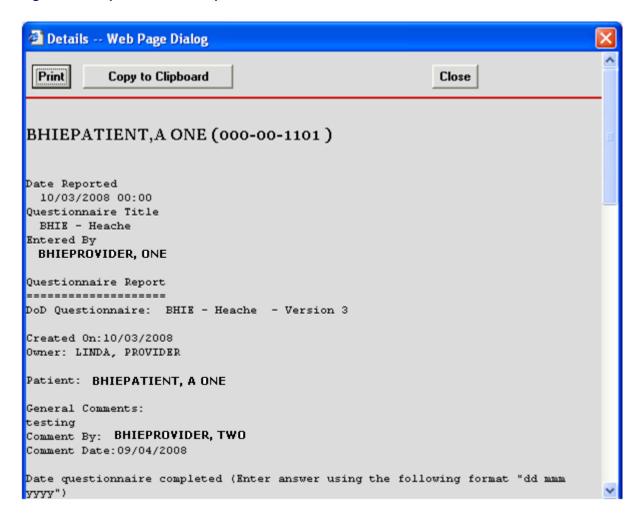


Figure 48: Dept of Defense Reports - Questionnaires Details



Other Past Medical Histories report from DoD

HART Report from Department of Defense

The report referenced by the HART Health Assessment Review Tool (HART) Report is comprised of answers, "findings," to a health assessment questionnaire (health indicator data including physical activity, overweight and obesity, substance abuse, etc.). Although this is originally entered in a question and answer format, the report is stored and displayed simply as "findings" (no longer associated with questions). The report is displayed in VistAWeb as "Other Past Medical Histories."

Data displayed on the HART report was not truncated in the Comment column, so the entire report appeared making the row unreasonably tall.

The report will now have similar truncating for HART data as is done in CPRS. This will reduce the size of the report and make it easier for the user to read. The entire text of the comment field will be available in the detailed display window.

The display of the "Comment" field will be restricted to 30 characters in the grid view of the "Other Past Medical Histories" report in VistAWeb.

Figure 49: Comment Field

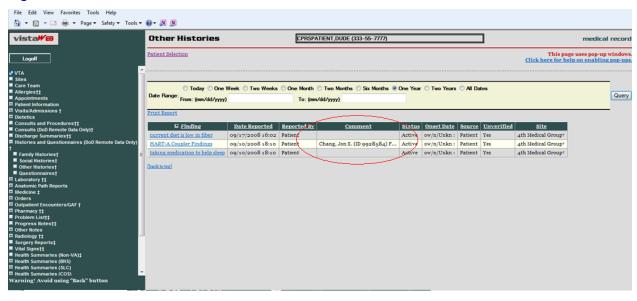
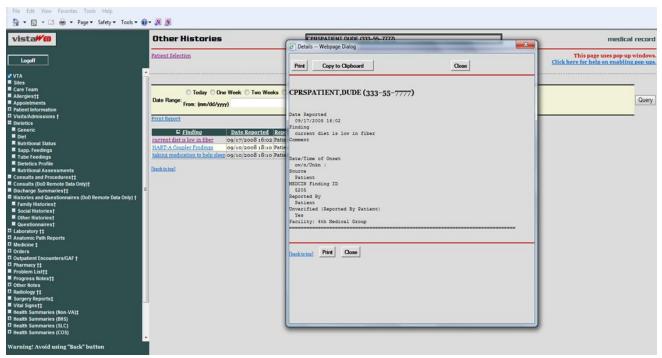
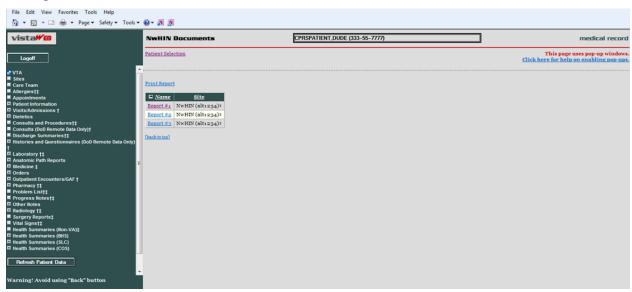


Figure 50: Detailed Display



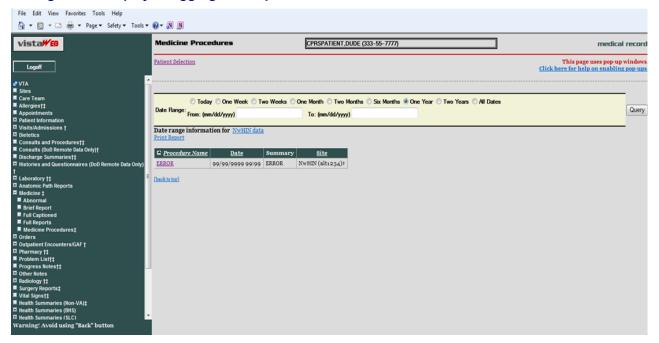
NwHIN Documents

Figure 51: NwHIN Documents



Details for NwHIN documents (also called Non-VA):

Figure 52: Display of Aggregated Reports Procedures



This is a grid-type report. Columns can be sorted and the Reactant link will open up another box and provide more info

Figure 53: Allergies Report

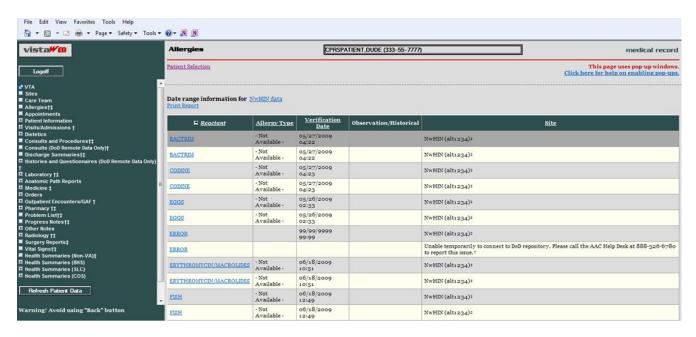
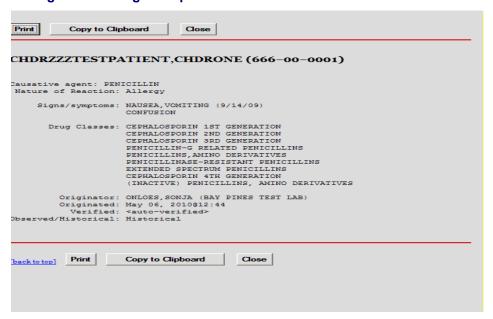
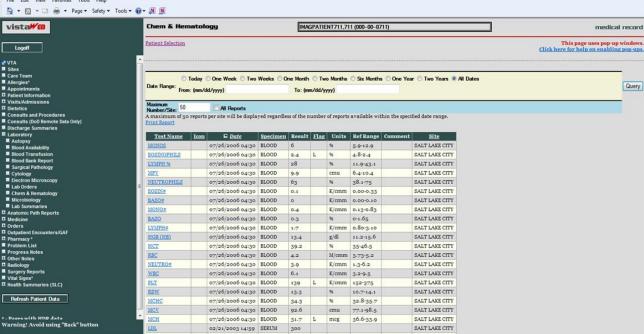


Figure 54: Allergies Report - Details



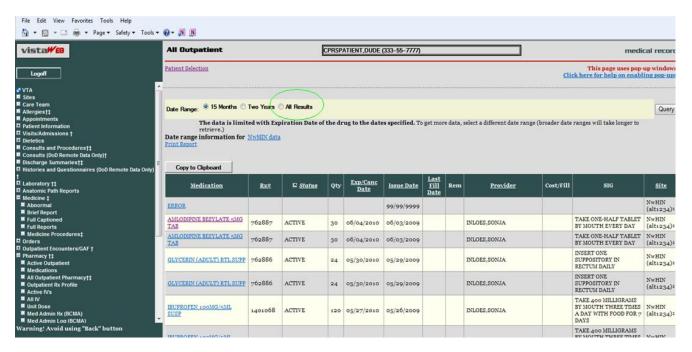
This is a variation on the grid-style of report displayed earlier; adding in the max number/site default of 50 or user can select all reports





This popular report pulls data from HDR/DoD/NwHIN sites; default is 15 months with the ability and disclaimer to pull all results.





On this report, you can click on Report links to see the total report from a partner.

Figure 57: Health Summaries (Non-VA) - NwHIN Documents (C32 and/or C62)

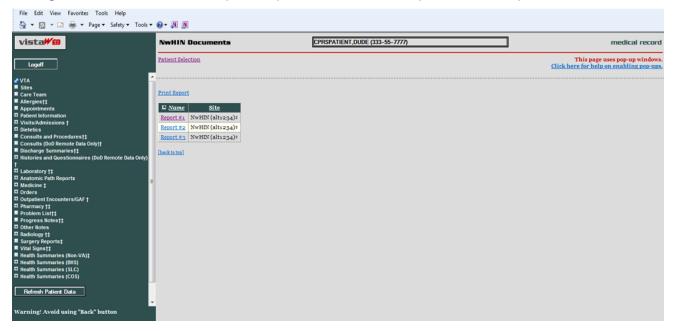


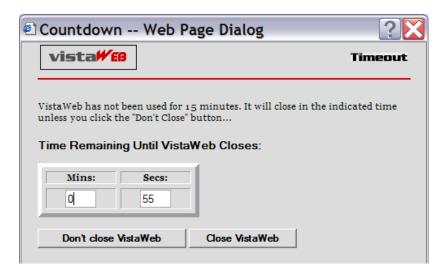
Figure 58: NwHIN Documents (C32 and/or C62) - Details



VistAWeb Timeout

VistAWeb has a 15-minute inactivity timeout, which disconnects you from the current session if you don't respond to the 2-minute Web Page Dialog Countdown. Click the *Don't close VistAWeb* button to reset the timer to 15 minutes. Click the *Close VistAWeb* button to exit VistAWeb immediately.

Figure 59: VistAWeb Timeout Dialog Box



If you allow VistAWeb to timeout, the following IE dialog box is displayed telling you that VistAWeb is trying to close the window. If you click the No button, an empty IE window will remain. If you want to continue to use VistAWeb, you will have to reestablish your connection, and since VistAWeb will bring up the new session in a new window anyway, you should click the Yes button to eliminate this empty window.

Figure 60: IE Close Dialog



Under some circumstances, VistAWeb will cease operations. This is usually related to running a standalone session and a spawned session of VistAWeb at the same time. When this occurs, you will be presented one of the following messages indicating an appropriate course of action for you to pursue.

Figure 61: Empty Session Message – Rerun VistAWeb

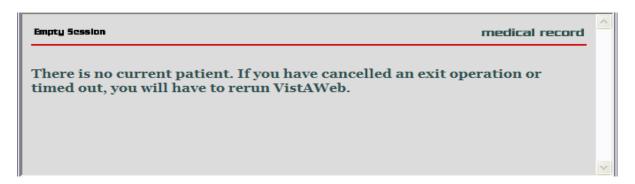
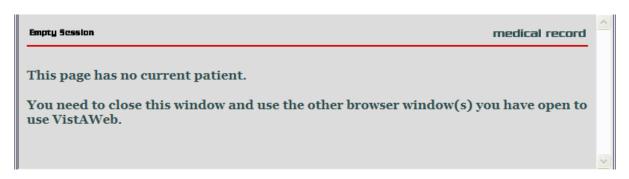


Figure 62: Empty Session Message – Use a Different Browser Window



Glossary: Acronyms, Abbreviations, and Definitions

Term	Definition
AWIV	Advanced Windows Imaging Viewer
BHIE	Bidirectional Health Information Exchange
CCOW	Clinical Context Object Workgroup
CPRS	Computerized Patient Record System
DoD	Department of Defense
FHIE	Federal Health Information Exchange
HDR	Health Data Repository
HDR II	Health Data Repository II – final stage of project to develop and deploy an HDR
HDR-IMS	Health Data Repository-Interim Messaging Solution
HITSP	Healthcare Information Technology Standards Panel
HL7	Health Level 7
HT	Home Telehealth
IE	Internet Explorer (Microsoft)
IHS	Indian Health Service
IRM	Information Resource Management
ISO	Information Security Officer
LHR	Legal Health Record
MPI	Master Patient Index
NwHIN	Nationwide Health Information Network
RDV	Remote Data View
RPC	Remote Procedure Call
URL	Uniform Resource Locator (internet address)
VA	Department of Veterans Affairs
VAMC	Department of Veterans Affairs Medical Center
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Network
VistA	Veterans (Health) Information Systems and Technology Architecture

Definitions

http://vaww.oed.wss.va.gov/process/Library/master_glossary/masterglossary.htm

Term	Definition
Application Coordinator	Designated individuals responsible for user-level management and maintenance of an application package, such as CPRS or Laboratory. Also abbreviated as ADPAC (Automated Data Processing Application Coordinator) or CAC (Clinical Application Coordinator)
Austin Information Technology Center (AITC)	The AITC (a.k.a. Austin Automation Center (AAC)) provides comprehensive e-government solutions to match the critical needs of VA and other federal agency customers, from managing data to automating business processes. The AITC supports over 100 customer applications that provide mission\ critical data for financial management, payroll, human resources, logistics, medical records, eligibility benefits and supply functions.
Business Owner	A key stakeholder (individual or entity) that is accountable for the business outcomes for a particular existing or new Information Technology (IT) system and has the final authority on project scope, deliverables, quality, risks, and change management processes.
C32	NwHIN Health Summary documents. HITSP definition: The HITSP Summary Documents Using HL7 Continuity of Care Document (CCD) Component describes the document content summarizing a consumer's medical status for the purpose of information exchange. The content may include administrative (e.g., registration, demographics, insurance, etc.) and clinical (problem list, medication list, allergies, test results, etc) information. This specification defines content in order to promote interoperability between participating systems.
C62	NwHIN Clinical Note documents. HITSP definition: The HITSP Unstructured Document Component is provided for the capture and storage of patient identifiable, unstructured document content, such as text, PDF, and images rendered in PDF. It is based on the Cross-Enterprise Sharing of Scanned Documents (XDS-SD) Integration Profile from the Integrating the Healthcare Enterprise (IHE) IT Infrastructure Technical Framework (ITI-TF).
Computerized Patient Record System	The Computerized Patient Record System (CPRS) is a VistA application that enables users to enter, review, and continuously update all the information connected with any patient. In addition, CPRS supports clinical decision-making, with order-checking, alerts, clinical reminders, and patient record flags.

Data Standardization Program	The development, adoption, implementation, and verification of standard terminology within VA software applications to promote interoperability of patient record data between VA and non-VA healthcare providers and to ensure that clinical decisions are based on each patient's entire medical record. Program scope includes standard clinical and administrative terminologies for both current and future VA software applications. (Also see data standardization.)
Domain	Medical areas such as Allergies, Consults, Notes, Laboratory, Medical Procedures, etc. An area of knowledge or activity characterized by a family of related systems. An area of knowledge or activity characterized by a set of concepts and terminology understood by practitioners in that area.
Double dagger (‡)	The double dagger is a symbol that is displayed next to VistAWeb domains to indicate that NwHIN (non-VA) data is available.
Enterprise System Engineering (ESE)	ESE replaces Testing Service, IVV, and Enterprise Infrastructure Engineering (EIE)
Federal Health	The Federal Health Information Exchange (FHIE) Program is a Federal
Information	IT health care initiative that facilitates the secure electronic one-way
Exchange (FHIE)	exchange of patient medical information between Government health
	organizations. The project participants are the Department of Defense (DoD) and the Department of Veterans Affairs (VA).
Healthcare	The Healthcare Information Technology Standards Panel is a
Information	cooperative partnership between the public and private sectors. The
Technology	Panel was formed for the purpose of harmonizing and integrating
Standards Panel	standards that will meet clinical and business needs for sharing
(HITSP)	information among organizations and systems.
Health Data	A repository of clinical information normally residing on one or more
Repository	independent platforms for use by clinicians and other personnel in
	support of patient-centric care. The data is retrieved from heritage,
	transaction-oriented systems and is organized in a format to support
	clinical decision-making in support of patient care. Formerly known as
	Clinical Data Repository.
HL7	Health Level Seven is one of several American National Standards
	Institute (ANSI) -accredited Standards Developing Organizations
	(SDOs) operating in the healthcare arena.
Initial Operating	Initial Operating Capability (IOC) Testing (formerly known as field
Capability (IOC)	testing) is when a product/system that has been modified/enhanced is
Testing	placed into a limited production (live) environment, which includes a
	minimum of three test sites of varying size/complexity, in order to test the
	new features and functionality of the product/system and to ascertain if
	the features and functionality perform as expected and do not adversely
	affect the existing functionality of the product/system.

Requirements	User needs that trigger the development of a program, system, or project. Requirements may be business, functional, and/or system needs. They are documented in detail in the Requirements Specifications Document (RSD) document.
Subject Matter Experts (SME)	Persons representing application development/functional requirements.
User Acceptance Testing (UAT)	UAT is a type of acceptance test that involves end-users as testers. User Acceptance Test (1) exercises the functionality of the application using test data in a controlled test environment and (2) evaluates the usability of a component or system. The Program Manager may invite Product Support to participate in this evaluation.
Veterans Health Administration (VHA)	VHA facilities are divided into geographical regions called VISNs. In the 1990s VHA organized into 22 administrative VISN regions. VISN 20 services veterans in Alaska, Idaho, Oregon and Washington. However each individual facility continued to maintain its own clinical database (VISTA); the databases were not integrated as a VISN. In 1997-98 VISN 20 began an initiative called CHIPS, to develop a VISN wide information system for decision support, performance measuring and population studies.
VHA Health Information Model (VHIM)	VHIM is an enterprise-wide initiative developed to guide the reengineering of VHA systems. It is a UML-based model that classifies and represents data elements, including their relationships and constraints. The VHIM mitigates risk of project failure by creating standardized service payloads that all systems will understand. It is a computationally independent model, meaning it can be transformed to different implementations – such as XML, Java, Delphi, etc. It is the authoritative source for semantics and information structure for VHA.
Veterans Health Information Systems And Technology Architecture (VISTA)	 A term used to describe the VA's health care information system. It encompasses in-house developed applications developed by VA staff (see Decentralized Hospital Computer Program), office automation applications, locally developed applications and commercial-off-the-shelf applications. VISTA is the largest healthcare system in the world and is extremely complex. The majority of the historical VISTA documentation is out of date and does not provide the detailed information needed by development teams. The development of the current VISTA environment occurred by evolution and was triggered by needs; it was not designed as a whole system. Therefore, the software code, relationships, data structure, and infrastructure were developed incrementally, in individual applications and functions, and are very interdependent.