Multiple Sclerosis Surveillance Registry (MSSR) User Guide



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1. Introduction

In response to Congressional legislation, the VHA established two Multiple Sclerosis Centers of Excellence (MSCoE) in 2003. These Centers (East and West) were subsequently made permanent by "The Veteran's Benefits, Healthcare and Information Technology Act of 2006." The MSCoEs were mandated to report on the epidemiology, healthcare use, and costs of the Veteran Multiple Sclerosis (MS) population. Current tools to date have failed to fulfill this mandate that is critical to all MSCoE functions. A VHA Handbook entitled Multiple Sclerosis System of Care Procedures 1011.06, was released to the field on December 7, 2009. This approved Handbook (which includes reference to the Congressional Mandate for the MSCoE) established policy and procedure for healthcare services for patients with MS and requires ongoing surveillance of this patient population.

The goal of this procurement is to create a surveillance system for the entire MS patient population within VHA. This objective will be met through the collection of clinical utilization, demographic, and epidemiologic data. The scope entails the creation of a front end portal within the Computerized Patient Record System (CPRS) for the entry of data by clinicians, as well as a back end data storage capability. The portal tool will be triggered annually for any patient with an MS diagnosis and will provide a user interface for data entry into the database. The tool will prompt providers to enter standard demographic and clinical variables important for clinical, quality improvement, and research activities mandated by VHA (which can be found in Appendix C of the VHA Handbook, Multiple Sclerosis System of Care Procedures 1011.06). Data shall be stored centrally at the enterprise level.

VA also requires development of a new registry system leveraging VA's existing Converged Registries Solution (CRS) to provide clinical data surveillance tools and a back end registry database for surveillance of the entire MS population within VHA, along with software enhancements to the following existing systems: Converged Registries Solution, Traumatic Brain Injury Registry, Oncology Registry, and Clinical Case Registry. Both MSCoE (East and West) require real-time access to this data, so to provide up-to-date surveillance data on the MS patient population. Relevant clinical and administrative data from other VHA databases, such as VistA, (made available to the MS Registry) shall be aggregated and reported as required to allow for systematic evaluation and analysis. This effort is intended to provide VHA with a population-focused perspective for the MS patient population.

1.1 Purpose

The Purpose of this User Guide is to familiarize users with the important features and navigate elements of the enhancements made to the Multiple Sclerosis Surveillance Registry (MSSR).

1.2 Document Orientation

1.2.1 Organization of the Manual

Section 1 Introduction contains the Purpose, Document Orientation, and National Service Desk (NSD) and Organizational Contacts.

Section 2 System Summary contains the System Configuration, Data Flows, User Access Levels, and Continuity of Operations.

Section 3 Getting Started contains the Logging On, System Menu, Changing User ID and Password, Exit System, and the Caveats and Exceptions.

Section 3.4 Using the Software contains the specific instructions for using the application.

Section 5 Troubleshooting contains the Special Instructions for Error Correction.

Section 6 Acronyms and Abbreviations contains the specific terminology necessary to understand and use the MSSR.

Section 0 Appendix contains supplementary and ancillary material helpful for the usage of the MSSR.

1.2.2 Assumptions

This guide was written with the following assumed experience and skills of the audience:

- User has basic knowledge of the Computerized Patient Record System (CPRS) and the Converged Registries Solution (CRS), such as the use of commands, menu options, and navigation tools.
- User has been provided the appropriate active roles, menus, and security keys required for the MSSR.
- User has validated access to the AITC Active Directory group for MSSR.
- User has set up the Multiple Sclerosis Assessment Tool (MSAT) linkage in CPRS.

1.2.3 Coordination

The coordination necessary between the MSSR implementation, and the hospital services it addresses, is as follows:

- The site Clinical Application Coordinator (CAC) is responsible for the implementation and coordination of the CPRS with hospital users and services, such as Nursing Services, Pathology and Laboratory Medicine Service (P&LMS), Pharmacy, and local Information Technology (IT) Application Support.
- The MSSR Administrators are responsible for the implementation and coordination of the MSSR application.
- The audience for this User Guide includes the MSSR Directors and Clinicians, who would review, analyze, and monitor longitudinal data for the MS patient pool via MSSR and who would enter pertinent MS data via MSAT, respectively.

1.2.4 Disclaimers

1.2.4.1 Software Disclaimer

The MSSR has no IP law protections (patent/copyright/trademark) and can be distributed freely via the Freedom of Information Act (FOIA). The Office of General Counsel submitted the following official disclaimer to the OI&T PD Documentation Standards Committee via email on 9/26/2014 to be used as a "boilerplate" legal disclaimer in software documentation:

Original: August 2014 MSSR v2.0 User Guide Release: January 2016 6 User Guide v2.1 For VA applications (apps) developed in-house and distributed internally or externally to the VA, this software was developed at the Department of Veterans Affairs (VA) by employees of the Federal Government in the course of their official duties. Pursuant to title 17 Section 105 of the United States Code this software is not subject to copyright protection and is in the public domain. VA assumes no responsibility whatsoever for its use by other parties, and makes no guarantees, expressed or implied, about its quality, reliability, or any other characteristic. We would appreciate acknowledgement if the software is used. This software can be redistributed and/or modified freely provided that any derivative works bear some notice that they are derived from it, and any modified versions bear some notice that they have been modified.

1.2.4.2 Documentation Disclaimer

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

1.2.5 Documentation Conventions

The documentation conventions used in this user guide are as follows:

- Screen shots of the computer online displays, e.g., character-based screen captures and dialogs, are shown in a non-proportional font and enclosed within a box. Also included are Graphical User Interface (GUI) Microsoft Windows image, e.g., dialogs or forms.
- Conventions for displaying TEST data in this manual are as follows:
 - Social Security Numbers (SSNs) and any other Personally Identifiable Information (PII) as defined in OMB Memorandum M-07-1616, have been grayed out and conveyed in a manner such that the patient is indiscernible.
 - Additionally, patient and user names are also grayed out and indiscernible, in the same manner as the SSNs above. Port Numbers, IP addresses, URLs, Fully Qualified Domain Names (FQDN), Mail Groups used to receive data, and sensitive information identified in the ProPath "Displaying Sensitive Data Guide" are prohibited from inclusion in artifacts published external to the VA, such as the VA Software Document Library (VDL), Freedom of Information Act (FOIA), Open Source Electronic Health Record Agent (OSEHRA) and other open source organizations (Code in Flight), and any other non-VA external organization.

1.2.6 References and Resources

This User Guide is an output of the MSSR System Design Document (SDD) and the formal documentation located in the Technical Services Project Repository (TSPR) at: REDACTED

1.3 National Service Desk and Organizational Contacts

2 System Summary

MSSR is a web-based registry application that provides clinical data surveillance tracking and

Original: August 2014 MSSR v2.0 User Guide Release: January 2016 7 User Guide v2.1 longitudinal patient data analysis and reporting for the entire MS population within VHA. Due to the VA mandate for the Multiple Sclerosis Centers of Excellence (MSCoEs) to report on the epidemiology, healthcare use, and costs of the Veteran Multiple Sclerosis (MS) population, the new development of a national health registry for MSSR is required. The benefits of developing MSSR include, but are not limited to, providing the MSCoE Directors the ability to track and monitor the MS patient population at a national level, wherein all clinicians can enter and track MS data for their patients, and the ability to retrieve, extract, analyze, and report data. The major users of the registry application include the MSCoE Directors and any approved Clinicians, who will engage in the data entry, analysis, and reporting functionalities of MSSR. The participants in its operation include the MSSR Administrators at both the Local Facility and National levels, who will provide technical support and maintenance of MSSR.

2.1 System Configuration

The equipment, communications, and networks used by the MSSR are depicted in **Figure 1** below. The System Design Document (SDD), located in TSPR, provides additional details.

2.2 Data Flows

Below you will find the overview of the business processes that MSSR plans to support, depicted as a Conceptual Data Flow and System Diagram in **Figure 1** below. Each process in the diagram traces to the list of business processes in **Table 1** below.

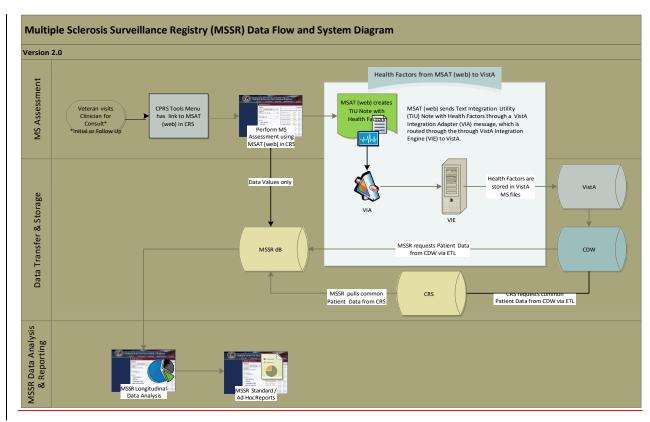


Figure 1: MSSR Data Flow and System Diagram

Below you will find **Table 1**, which maps to the MSSR Data Flow and System Diagram above. Each business process is assigned a unique numeric identifier that traces back to the MSSR Data Flow and System Diagram in **Figure 1** above.

Table 1: Business Processes for MSSR

ID	Business Process Name	Type	Owner	Description
1	Veteran visits Clinician for Consult	Existing	VA	Veteran visits the Clinician (Neurologist or MS Specialist) for Initial or Follow Up Consult.
2	CPRS Tools Menu has link to MSAT (web) in CRS	Existing	VHA Clinician	Currently, MS Assessments are done using the MS Clinical Reminder in CPRS, but once MSAT and MSSR are developed, the CPRS Tools Menu should be configured to contain a link to MSAT (web) in CRS.
3	Perform MS Assessment using MSAT (web) in CRS	Existing	VHA Clinician	Clinician uses MSAT (web), which is part of MSSR (inside CRS framework), to complete the MS Assessment.
4	MSAT (web) creates TIU Note with Health Factors	Existing	VA OI&T Health Registries	MSAT (web) creates the TIU Progress Note with Health Factors to be eventually transmitted to VistA.
5	MSSR Back End DB	Existing	VA OI&T Health Registries	MSAT (web) sends data values only to be stored in the MSSR Back End Database.

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ID	Business Process Name	Туре	Owner	Description
6	VIA	Existing	VA OI&T	MSAT (web) sends TIU Note with Health Factors via VistA Integration Adapter (VIA).
7	VIE	Existing	VA OI&T	HL7 message is routed through VIE to VistA.
8	VistA	Existing	VA OI&T	Health Factors are stored in VistA MS files via VIE.
9	CDW	Existing	VA OI&T	VistA stores MS Clinical Data in CDW.
10	CRS	Existing	VHA OI&T Health Registries	CRS requests common Patient Data from CDW via ETL.
11	MSSR pulls common Patient Data from CRS	Existing	VHA OI&T Health Registries	MSSR pulls common Patient Data from CRS.
12	MSSR requests Patient Data from CDW via ETL	Existing	VHA OI&T Health Registries	MSSR requests Patient Data from CDW via ETL
13	MSSR Back End DB	Existing	VHA OI&T Health Registries	Receives Common Patient Data from CRS and MS-related Clinical Data from CDW.
14	MSSR Longitudinal Data Analysis	Existing	VHA OI&T Health Registries	With comprehensive MS-related Clinical Data from both MSAT and CDW, MSSR is able to provide Longitudinal Data Analysis.
15	MSSR Standard / Ad Hoc Reports	Existing	VHA OI&T Health Registries	With comprehensive MS-related Clinical Data from both MSAT and CDW, MSSR is able to provide Standard and Ad Hoc Reports.

2.3 User Access Levels

Table 2 describes the attributes of the user community (and their proficiency with the software system), and the technical community (and their familiarity with support and maintenance) for MSSR. See section 4.2.1 for further detail on permission levels within MSSR Patient records.

Table 2: MSSR User Characteristics Attributes

User Role	User Community	Background / Experience	System Proficiency	Tech Support / Maint Expertise	Access Privileges
MSSR System Administrator	Health Registries Administrator	Mid	High	High	Full
MSSR Local Administrator	Local Facility Registry Administrator	Mid	Mid	Mid	Full (Local)
MSSR National	MSCoE Directors, NW Innovation Center	High	Mid	Low	Full
MSSR National Read Only	MSCoE Administrative / Clerical Staff	Varies	Varies	Low	Reporting

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User Role	User Community	Background / Experience	System Proficiency	Tech Support / Maint Expertise	Access Privileges
MSSR Local	Clinicians	Varies	Varies	Low	Local VISN
MSSR Local Read Only	Administrative / Clerical Staff	Varies	Varies	Low	None

2.4 Continuity of Operation

There is no system criticality or high availability with regards to MSSR. However, the system is availability and business continuity level routine support is administered by the CRS relational database framework.

Under CRS, it is designated as a Disaster Recovery (DR) Routine Support system with the following Recovery Time Objectives (RTO) and Recovery Point Objectives (RPO):

- RTO of 30 days to ensure that the 30-day RTO can be met, a DR site has to be identified and infrastructure should be acquired for inventory or contract should be in place for vendors who are able to provide a drop shipment option in-time to rapidly acquire infrastructure to satisfy the 30-day RTO requirement. In addition, provisions must be made for the restoration of the backup at the DR site.
- RPO of 24 hours to ensure the 24-hour RTO requirement can be met, system must be configured to be able to perform daily backups or weekly full backups with either incremental or differential daily backups. To ensure that the backups are usable, backup data integrity must be periodically checked and validated. In a case of a disaster, the backups will need to be made available at the DR site within the specified 30-day RTO.

3 Getting Started

3.1 System Menu

The System menu consists of the following menu options, as shown in Figure 2 below.



Figure 2: MSSR Menu Options

- Patients: contains all of the details for the patients and assessments
- **Reporting**: contains the smart charts for various longitudinal data analysis, such as medication types and usages.
- **Administration**: contains the administrative functions for adding, editing, and deleting user accounts, profiles, and medications.
- Help: contains the screen tips, instructions, and troubleshooting tips.

3.2 Administration

The Administration page provides four (4) administrative functions as follows:

- Users: add, edit, and delete user accounts
- Medications: add, edit, and delete medications
- Role Matrix: add, edit, and delete user permissions
- **System Availability**: add, edit, and delete system warnings, messages, and other administrator messages to the end user community

3.2.1 Users

The Users page allows the MSSR Administrator to add, delete, and edit end users (see Figure 3 below).



Figure 3: Administration > Users

3.2.2 Medications

For the MSSR Administrator only, the Medications page allows the MSSR Administrator to add, edit, and delete medications (see Figure 4 below).

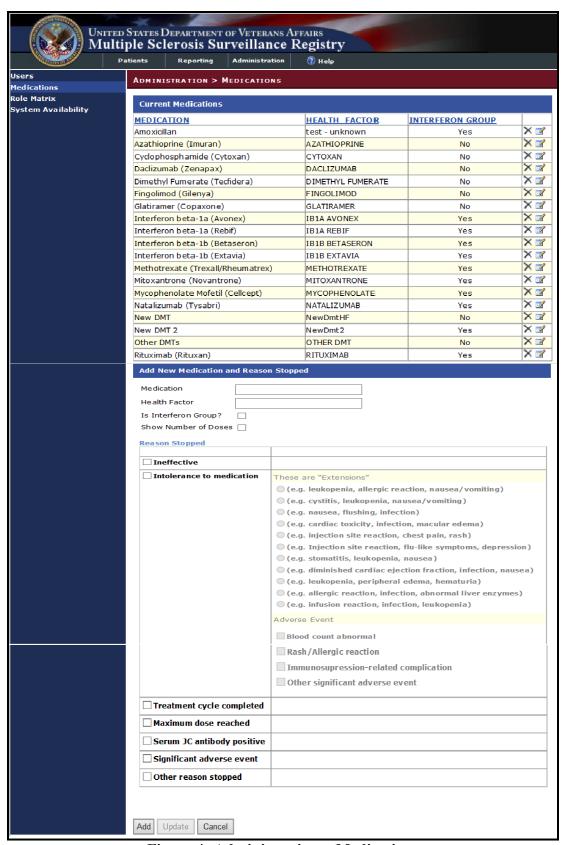


Figure 4: Administration > Medications

3.2.3 Role Matrix

For the MSSR Administrator only, the Role Matrix page allows the MSSR Administrator to add, edit, and delete user permissions (see **Figure 5** below).

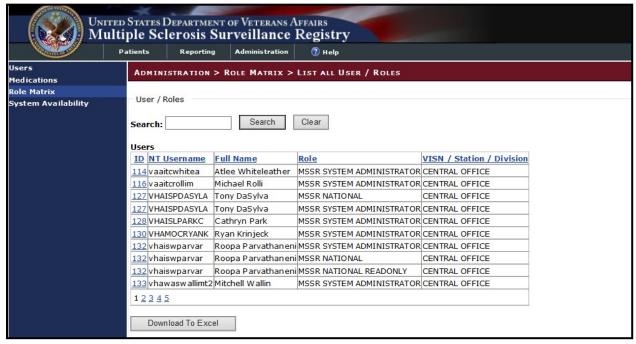


Figure 5: Administration > Role Matrix

3.2.4 System Availability

The System Availability page allows the MSSR Administrator to add, edit, and delete system warnings, messages, and other administrator messages to the end user community (see Figure 6 below).



Figure 6: Administration > System Availability

3.3 Basic System Elements

The basic web-based registry elements for the MSSR are as follows:

Text Box



Note how the appearance of the box changes: from a plain line border (SAMPLE 1) to an almost three-dimensional, pale yellow-highlighted field when you tab to it or click in it (SAMPLE 2).

Type your entry into the text box. The entry will not be saved until you tab away from or otherwise exit from the text box. In cases where the format of your entry is important, a sample will appear near the box. The relative width of these boxes is usually a reflection of the number of characters you are allowed to enter. Sometimes (as with date fields) there may also be a "date picker" next to the field.

You should see a "tool tip" pop up when you hover your mouse pointer over the text box.



Figure 7: Tool Tip for Text Box

Checkbox

SAMPLE: Work Related

A checkbox "toggles" (changes) between a YES / NO, ON / OFF setting. It is typically a square box which can contain a check mark or an "X" and is usually accompanied by text. Clicking the box or tabbing to the field and pressing the spacebar toggles the checkbox setting. In some instances, checkboxes may be used to provide more than one choice; in such cases, more than one box can be selected. Sometimes, a pre-determined "default" entry will be made for you in a checkbox; you can change the default if needed.

Radio Button

SAMPLE: Living OAlone OFamily OFriend OFacility OOther

A radio button, also known as an option button, is a small, hollow circle adjacent to text. Radio buttons usually appear in sets, with each button representing a single choice; normally, only one button in the set may be selected at any one time. Clicking on the radio button places a solid dot in the circle, selecting the option. Clicking a selected radio button de-selects it, removing the dot. As one radio button is selected, others within the category switch off. For example, Male or Female may be offered as choices through two radio buttons, but you can only select one of the choices.

Command Buttons

SAMPLES

Search

A command button initiates an action. It is a rectangular "3-dimensional" shape with a label that specifies what action will be performed when the button is clicked. Common examples are shown at left. Command buttons that end with three dots indicate that selecting the command may evoke a subsidiary window.

Save

In the text of this document, command button names appear inside square brackets. *Examples:* [Search], [Save].

Cancel

The [Cancel] command allows you to cancel the action about to be taken, or to discard changes made on a form. For example, when closing an application, you may be prompted to validate the action to close. If you click the [Cancel] button, the application will not close and you will resume from the point at which the close action was initiated. Or, on a data screen, you may use the [Cancel] button to discard any changes you may have made to the data and close the tab.

Select

The [Select] command is used to select records for editing.

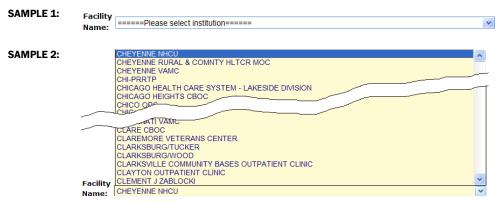
Search

The [Search] command is used to find one or more records. When at least one character is typed in a lookup dialog box, clicking the [Search] button will bring up matching entries. In many cases, leaving the lookup box blank will find all such records. Enter the search string and click [Search]. Searches are case-insensitive and use "contains" logic.

OK

The [OK] command is used to accept a default choice, or to agree with performing an action.

Drop-down List



A drop-down list (sometimes called a "pull-down" list) is displayed as a box with an arrow button on the right side (SAMPLE 1). Such a list allows you to select one item from the list. The current choice (or a prompt) is visible in a small rectangle; when you click on the arrow, a list of

items is revealed (SAMPLE 2). Click on one of the entries to make it your choice; the list disappears.

3.4 Exit System

As a web-based intranet application, MSSR requires no special instructions to properly exit the system, other than shutting down the browser. However, for security purposes, the system will time-out after approximately 15 minutes, and the end user should not leave the application unattended, to avoid PII and PHI theft risk.

3.5 Caveats and Exceptions

As a web-based intranet application, MSSR requires no special actions to ensure that data is properly saved or that some other function executes properly, other than selecting the "Save" button.

4 Using the Application

4.1 MSAT

To enter MS assessment data, ensure that the MSAT linkage (URL) is added to the CPRS Tools Menu, as displayed below in Figure 8 below. Detailed instructions for MSAT linkage in CPRS is detailed in Section 0.0

Appendix.

Select "MSSR-PROD-VIA", which should direct you to the external Confirmation page on the MSSR intranet website, which contains the MSAT.

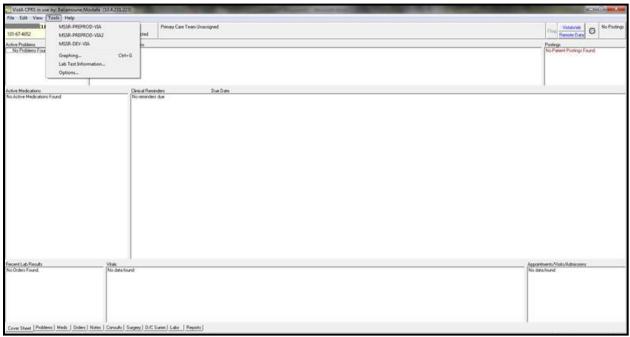


Figure 8: MSAT Linkage (URL) in CPRS Tools Menu

1. In the **Confirm Patient** page, verify that the patient name and SSN match between CPRS and the MSSR intranet website (see **Figure 9** below).

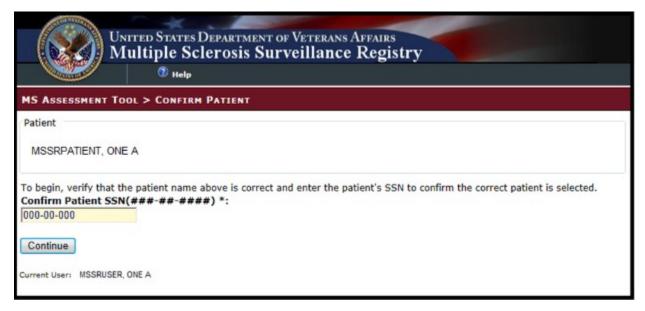


Figure 9: Confirm Patient

2. Once the patient is confirmed, the MSAT online form will appear, and the user should enter

patient data as described in Figure 10, Figure 11, and Figure 12 below. Some questions are mandatory, while others are user-intuitive and intelligent, which trigger more selections.

- 3. If more time is required to complete the MSAT online form, press the 'Save Draft' button.
- 4. If the note should be cancelled for any reason, press the 'Cancel' button to cancel the progress note.
- 5. Once the MSAT online form is complete, press the 'Save and Prepare Note' button.

ates Department of Veterans Afpairs e Sclerosis Surveillance Registr	у			
h		Mul	tiple Sclerosis Assessment	t Tool
Name: Last 4: Assessment Date: *		Assessment Type * O Baseline O Annual O Interim		Interview Completed by * OTelephone Oclinical Video Teleconferencing In-person Assessment
Date Of Death Feb. 2007 2/19/2007 Cause Of Death MS Natural Combat Unknown		O Medications Only		
1. Race, as defined by patie American Indian or Alas Asian Black or African Americ Native Hawaiian or othe White Other Question 1: Race selection i Ethnicity, as defined by i Hispanic Not Hispanic Question 2: Ethnicity selecti Guestion 2: Ethnicity selecti Guestion 3: Gender * Male Female 4. Biological family history Unknown None Yes Question 4: Biological Famil S. Biological family history Unknown None Yes Question 5: Biological Famil G. Biological family history Unknown None Yes	skan Native an er Pacific Islander s required. patient * on is required. of Multiple Sclerosis? * y History of MS selection is required. of Neuromyelitis Optica/Det y History of NMO selection is re sis rome (CIS) evic's Disease (NMO) te Multiple Sclerosis	uired. vic's Disease? *		
8. Type of initial MS/NMO s Motor Sensory Brainstem	symptom (check all that app Cerebellar Optic Neuritis Cognitive	l y) * Bowel/Bladder Spinal Cord		

Figure 10: MSAT – 1 of 3

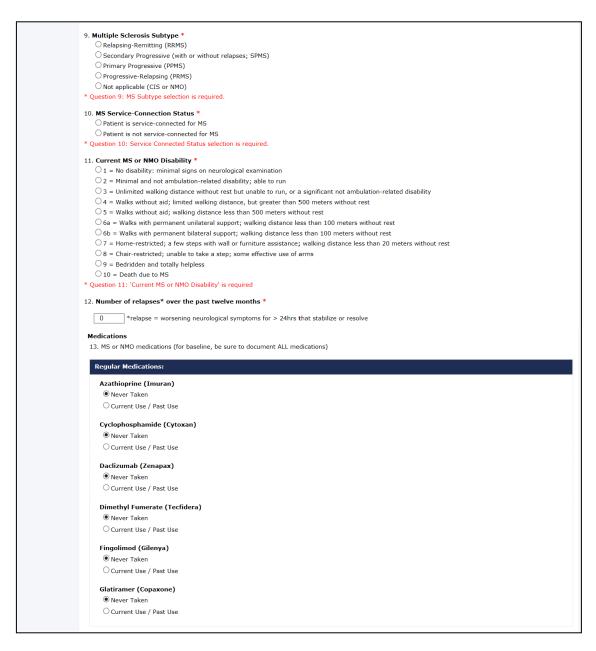


Figure 11: MSAT – 2 of 3

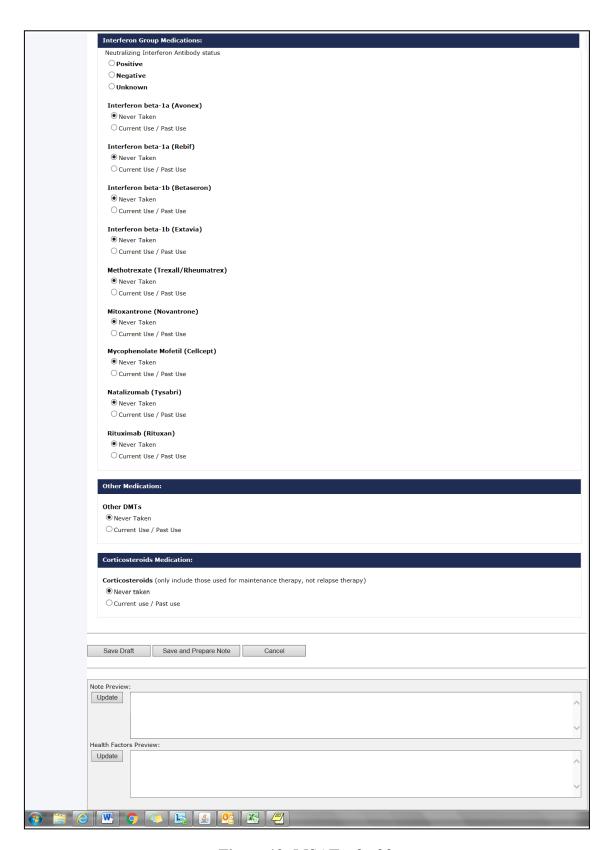


Figure 12: MSAT – 3 of 3

6. Once the 'Save and Prepare Note' button is pressed, the **Progress Note Setup** page (as shown in Figure 13 below) is displayed, and the Patient Name and Instrument Type that was previously selected appears.

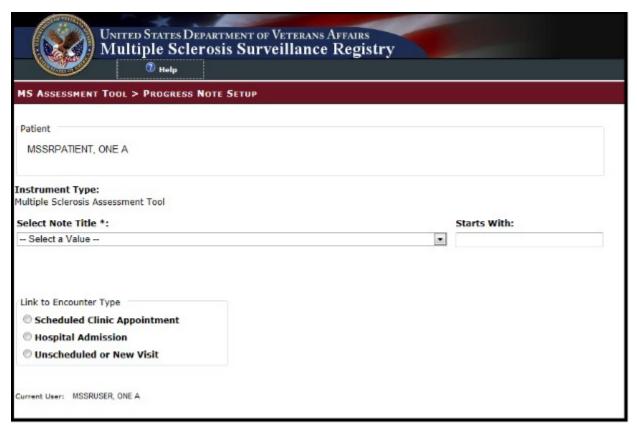


Figure 13: Progress Note Setup

7. Select the appropriate Note Title from the **Select Note Title** drop-down list, i.e., "Neurology..." (See **Figure 14** below).

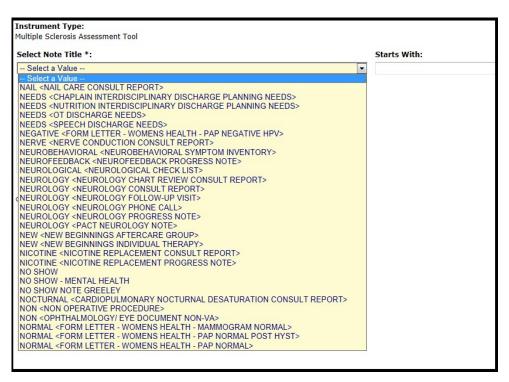


Figure 14: Multiple Sclerosis Assessment Tool

8. If the note title selected is classified as a "Consult Report", the user entry will complete a consult in CPRS. Use the **Link to Consult** drop-down list to select the appropriate consult to which the entry should be linked in CPRS. The **Link to Consult** drop-down list is populated with previously ordered consults for this patient. If the user selects a consult from the drop-down list, the data then entered via the Multiple Sclerosis Assessment Tool will be associated with the selected consult.

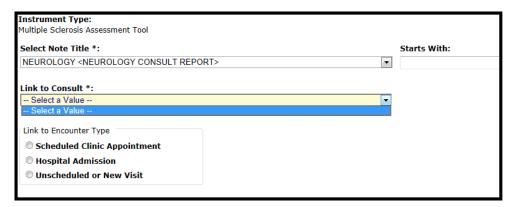


Figure 15: Multiple Sclerosis Assessment Tool Link to Consult

- 9. Use the radio buttons to select the appropriate Link to Encounter Type from the list.
- 10. If you select **Scheduled Clinic Appointment**, the application searches the period of time one month before today through one month after today. If any appointments are found, they are loaded into the **Select the Scheduled Clinic Appointment** drop down list. Select an appointment to proceed to the next step. If the user wishes to expand the date range for the

search, the user can input new start and end dates and click **Get Appointments** and then proceed to the next step. This step associates the current instrument with the selected appointment.

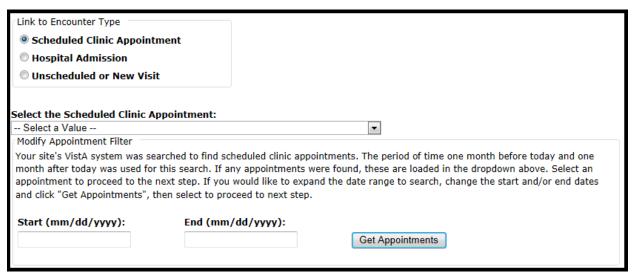


Figure 16: Link to Encounter Type

11. If you select **Hospital Admission**, the application searches for previous hospital stays. If any are found, they are loaded into the **Select the Hospital Admission** drop down list, and the user can make the appropriate selection. If no previous stays are found for the patient, the user must select a different encounter type from the **Link to Encounter Type** list in order to proceed.

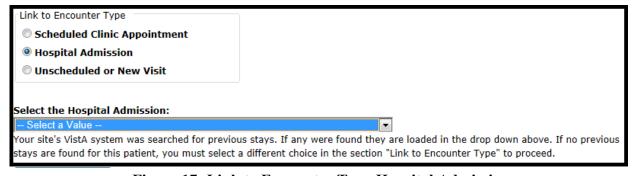


Figure 17: Link to Encounter Type Hospital Admission

12. If you select **Unscheduled or New Visit**, the application searches to find all locations at your site which contain **Multiple Sclerosis**. If any locations are found, they are loaded into the **Location** drop down list. If the user wants to search using a different location, the user can change the default search string and click **Get Locations**. After selecting a location, the user can click **Continue** to move to the next screen.

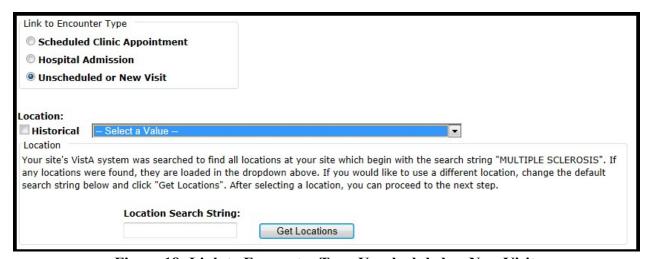


Figure 18: Link to Encounter Type Unscheduled or New Visit

- 13. The application reformats the information entered into the questionnaire and displays the resulting information on the screen.
- 14. If the material displayed is correct, click **Submit Note** to complete the note transfer.
- 15. If the material needs changed or corrected, click Cancel to re-enter the choice selections.



Figure 19: Note Summary

- 16. Be aware that once the note is submitted, it is no longer editable within the Multiple Sclerosis Assessment Tool and any updates will have to be made within CPRS.
- 17. The clinician must sign the note in CPRS.

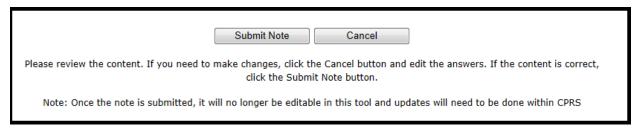


Figure 20: Submit Note

4.2 MSSR

To log onto the MSSR intranet website, go to: REDACTED. If you cannot access the site, please submit a Remedy ticket to request access, with Category "Applications-HealtheVet-Vista" and with Type "MSSR Registry".

Once logged in, a notice will appear, select "OK" to move to enter the MSSR application.

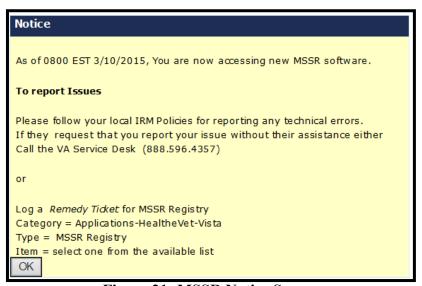


Figure 21: MSSR Notice Screen

4.2.1 MSSR Patients

The MSSR Patients screen (shown in the figure below) displays relevant patient information in a grid format.

Use the **Filters** area of the page to customize the data that is shown in the grid below. Once the appropriate filters have been selected click **View Results** to see the applicable data, or click **Reset** to reset the filter fields.

Use the **Sort** feature, which are the clickable column headers, to sort the data in ascending or descending order, for each column heading.

Use the **Paging** buttons at the bottom of the screen to navigate through the grid results. The **Results per page** drop down list changes the number of rows displayed in the grid per page.

The **Export** button allows the current data in the grid to be exported into an Excel spreadsheet.

Permission levels include the following:

- Administrator will be able to choose from the following 3 options:
 - MS Assessment Patients with assessment only
 - o Culpepper Algorithm All patients pulled based on Master list
 - o Non-MS Assessment Delta between the above two categories
- Non-Administrator National will have access to only:
 - o MS Assessment Patients with assessment only
- Non-Administrator VISN level
 - o MS Assessment Patients for given VISN only

Upon entering the MSSR Patients page, the default will be set on MS Assessment.

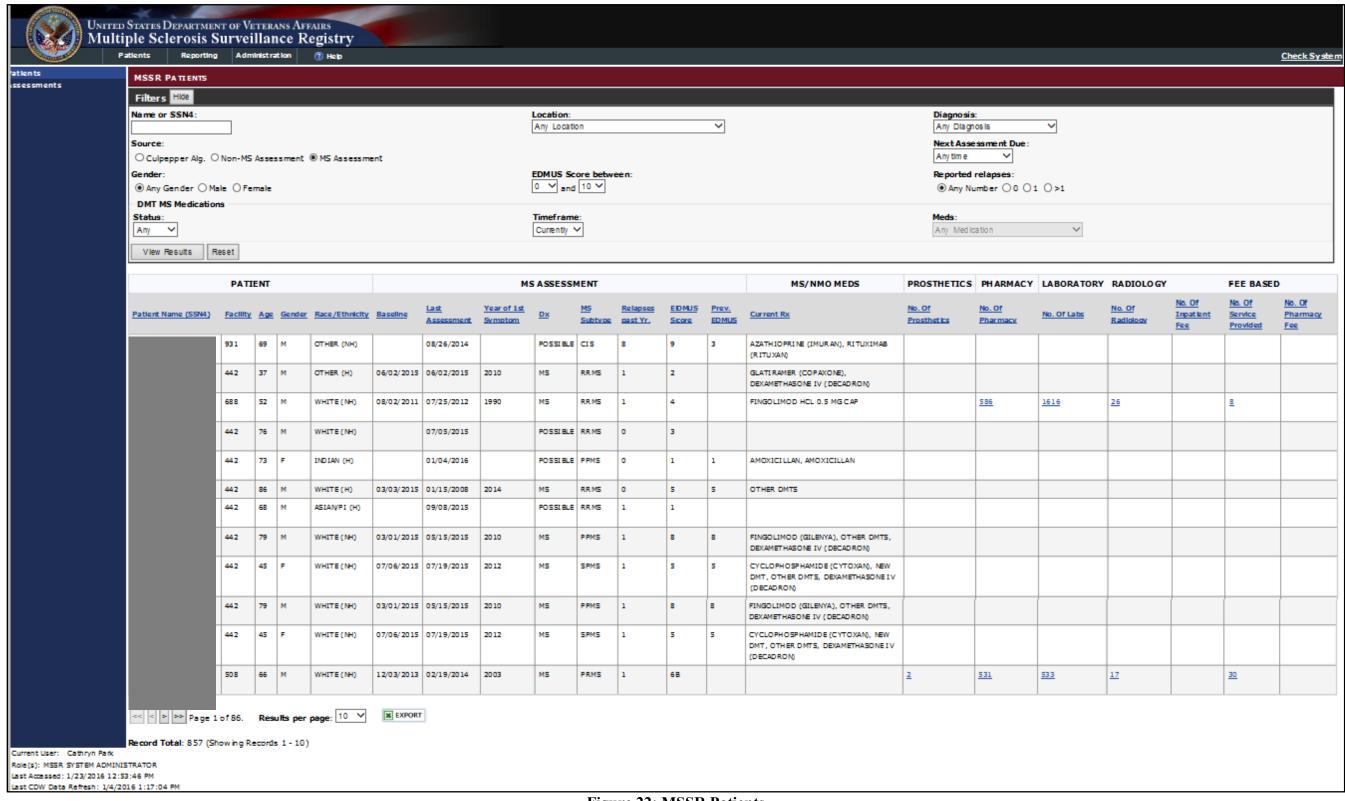


Figure 22: MSSR Patients

The MSSR Patient Details screen displays relevant information for a specific patient.

The **Export** button allows the current data in the grid to be exported into an Excel spreadsheet.

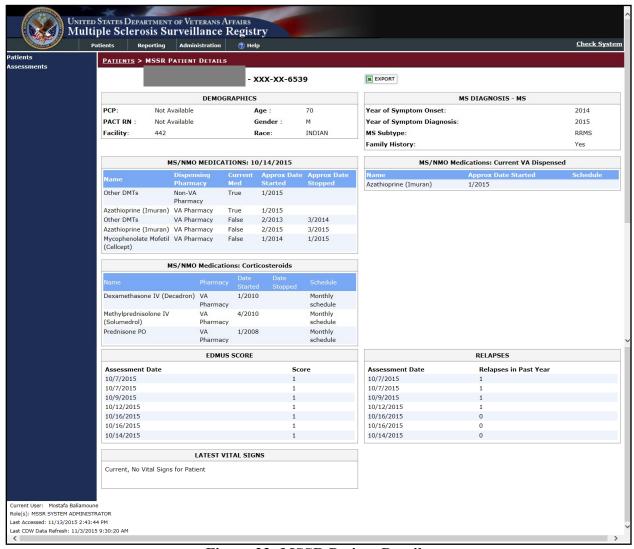


Figure 23: MSSR Patient Details

Select the numerical count under **Prosthetics** for a specific patient to display member demographics, facility, HCPC number, HCPC code, issue date, provider, quantity, description, source and source of procurement.

Enter a specified issue date range or **Prosthetic Type** to filter further details of the patient's record.

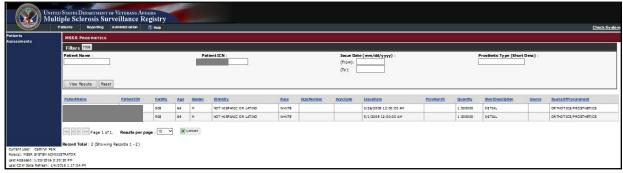


Figure 23: MSSR Prosthetics

Selecting the numerical count under **Pharmacy** for a specific patient will display member demographics, facility, action date, action status, drug classification, local drug name with dosage and type of patient procedure (e.g. inpatient, outpatient).

The data may be further filtered by selecting date ranges for **Action Date** and **Drug Name/Classification**.

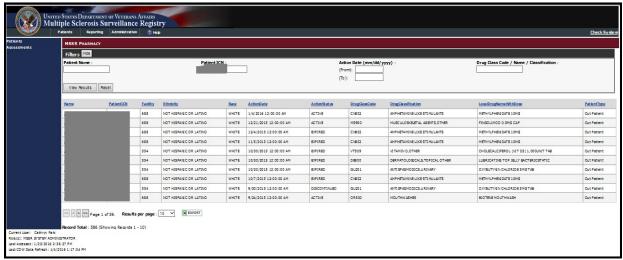


Figure 24: MSSR Pharmacy

Selecting the numerical count under **Lab** for a specific patient will display member demographics, facility, lab type and results.

The data may be further filtered by entering a Lab Test Date range or Lab Chem Test Name.

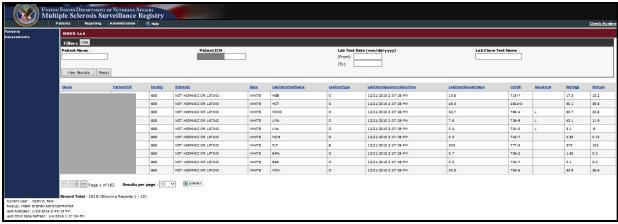


Figure 25: MSSR Lab

Selecting the numerical count under **Radiology** for a specific patient will display member demographics, facility, procedure name, exam date, whether services was completed inpatient or outpatient, free text field for clinical impressions, source, type of imaging, requesting physician and verifying physician.

The data may be further filtered by entering an **Issue Date** range or **Type of Imaging/Procedure Name**.

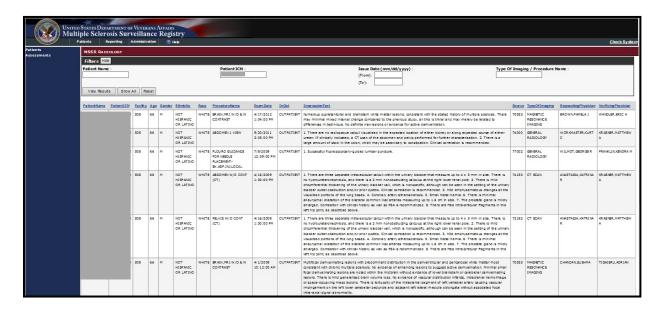


Figure 26: MSSR Radiology

Selecting the numerical count under **Fee Inpatient** for a specific patient will display member demographics, facility, diagnosis, procedure, vendor invoice date, claimed amount and amount paid.

The data may be further filtered by entering a **Vendor Invoice Date** range or **Diagnosis** / **Procedure**.

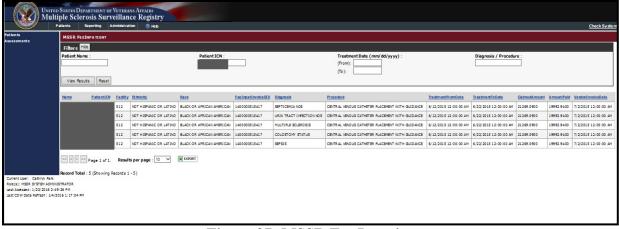


Figure 27: MSSR Fee Inpatient

Selecting the numerical count under **Fee Service Provided** for a specific patient will display member demographics, facility, CPT Name, diagnosis, payment type code, amount claimed, amount paid, vendor invoice date, IBT type of service and IB place of service.

The data may be further filtered by entering an **Invoice Date** range or **Diagnosis**.

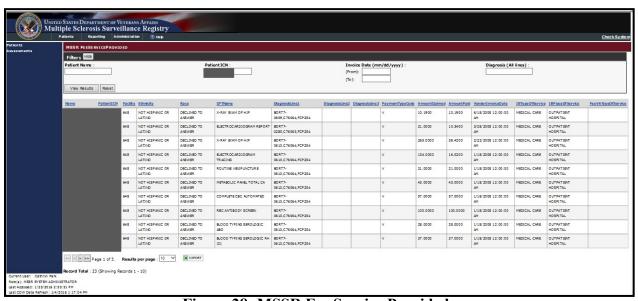


Figure 28: MSSR Fee Service Provided

Selecting the numerical count under **Fee Pharmacy** for a specific patient will display member demographics, facility, drug name, strength, quantity, prescription fill date, amount claimed, amount paid, drug class code and drug classification name.

The data may be further filtered by entering a **Prescription Date** range or **Drug Name/Classification**.

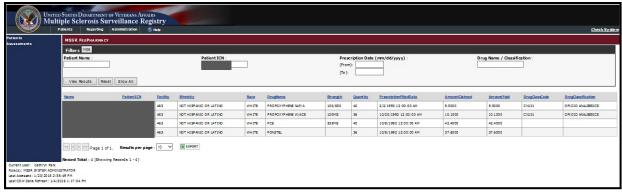


Figure 29: MSSR Fee Pharmacy

4.2.2 MSSR Assessments

The MSSR Assessments screen displays relevant assessment data by patient in a grid format.

Use the **Filters** area of the page to customize the data that is shown in the grid below. Once the appropriate filters have been selected click **View Results** to see the applicable data, or click **Reset** to reset the filter fields.

The column headers are clickable and change the sorting order for the data column.

Use the **Paging** buttons at the bottom of the screen to navigate through the grid results. The **Results per page** drop down list changes the number of rows displayed in the grid per page.

The **Export** button allows the current data in the grid to be exported into an Excel spreadsheet.

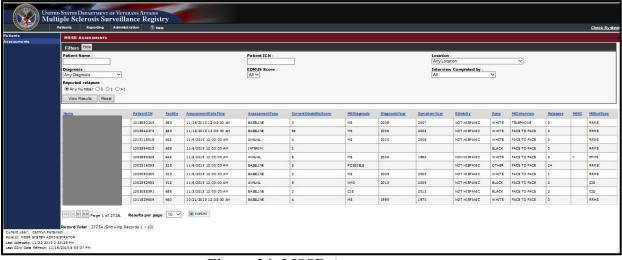


Figure 24: MSSR Assessments

4.2.3 MSSR Reporting

The MSSR Reporting is displayed as graphical "smart charts", generated by data pulled in from CDW and the MSSR database itself (see **Figure 25** below). Additional charts have been added in the enhancements to MSSR: a clickable Prosthetics pie chart and an aggregate Pharmacy Average Cost per Patient graph. Once additional data is input, the reporting will be updated to reflect the new data.

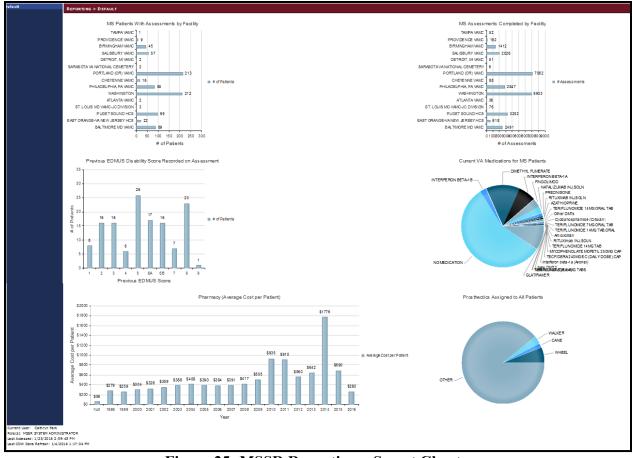


Figure 25: MSSR Reporting – Smart Charts

5 Troubleshooting

Each page has a dedicated Help page, with general instructions, as exemplified in **Figure 32** below for the MSSR Reporting screen.

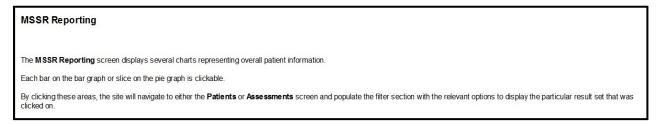


Figure 32: MSSR Help

6 Acronyms and Abbreviations

Below is a list of the acronyms and abbreviations that has been used in this document.

Term	Description	
C&P Mini	Compensation and Pension Mini Master	
CARA	Criticality Analysis and Risk Assessment	
CDS	Clinical Data Surveillance	
CDW	Corporate Data Warehouse	
CPRS	Computerized Patient Record System	
CRS	Converged Registries Solution	
DR	Disaster Recovery	
DSS	Decision Support System	
ESE	Enterprise Systems Engineering	
GAT	Government Acceptance Testing	
GUI	Graphical User Interface	
HERC	Health Economics Resource Center	
IAL	IVV Analysis Level	
IDR	Initial Document Review	
IIS	Internet Information Services	
IOC	Initial Operating Capabilities	
IVV	Independent Verification and Validation	
MS	Multiple Sclerosis	
MSCoE	Multiple Sclerosis Centers of Excellence	
MSAT	Multiple Sclerosis Assessment Tool	
MSSR	Multiple Sclerosis Surveillance Registry	
OI&T, OIT	Office of Information and Technology	
ORR	Operational Readiness Review	
PM	Project Manager	
PMAS	Project Management Accountability System	
PMP	Project Management Plan	
PWS	Performance Work Statement	
R2	Release 2	
RATSR	Risk Analysis and Testing Scope Report	
RDW	Regional Data Warehouse	
RED	Requirements Elaboration Document	
RRM	Rational Requirements Manager	
RSD	Requirements Specification Document	
RTM	Requirements Traceability Matrix	
SDD	System Design Document	
SDLC	System Development Life Cycle	
SME	Subject Matter Expert	
SQA	Software Quality Assurance	
SQL	Structured Query Language	
TBD	To Be Determined	
TIA	Testing Intake Assessment	

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Term	Description
UAT	User Acceptance Test
UFT	User Functionality Test
UI	User Interface
VA	Veterans Affairs
VIA	VistA Integration Adapter
VBA	Veterans Benefits Administration
VDW	VISN Data Warehouse
VetsNet	Veterans Service Network
VHA	Veterans Health Administration
VISN	Veterans Integrated Service Network
VistA	Veterans Health Information System and Technology Architecture

7 Appendix

Below you will find the instructions for creating the MSAT linkage (URL) in CPRS.

Use the following steps to change the URL for MS Assessment Tool on the CPRS Tools menu.

- 1. Double click on a test center connection file (see Note 1). Use the **Creating a Test**Center Connection Using Reflection.docx for creating the file. Skip to step 7.
- 2. Click on the Windows Start button.
- 3. From the **Start** menu, select the **All Programs** | **Attachmate Reflections** | **Host UNIX** and **OpenVMS** menu options (see Figure 1).

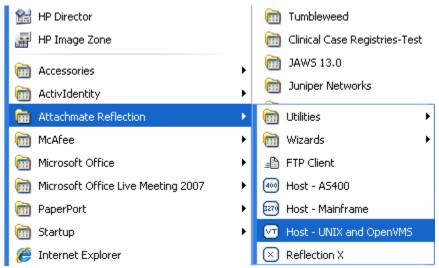


Figure 1

4. The **Untitled – Reflection for UNIX and OpenVMS** dialog (see Figure 2) should appear.

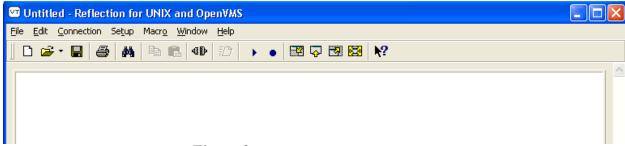


Figure 2

- 5. Select **File** | **Open** from the menu bar and browse to the location of the test center connection file you want to use. The default location for saved connection files is the **My Documents****Attachmate****Reflection** folder.
- 6. Highlight the test center connection file (see Note 1) and click on the **Open** button.

NOTE 1: Currently, MS Assessment Tool testing is done in the CHEY243 test center.

7. At the **Reflection Secure Shell** dialog (see Figure 3), click on the OK button.

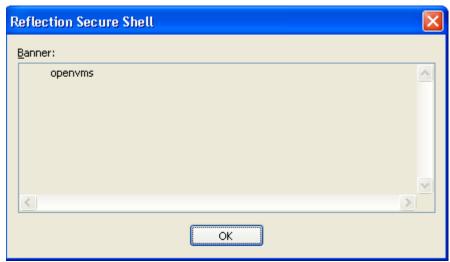


Figure 3

8. At the **Reflection Secure Shell** dialog (see Figure 4), click on the OK button.

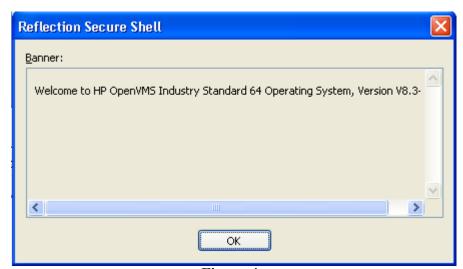


Figure 4

9. At the **Reflection Secure Shell Client** dialog (see Figure 5), leave the password field blank and click on the OK button.



Figure 5

10. You should see a screen similar to Figure 6.

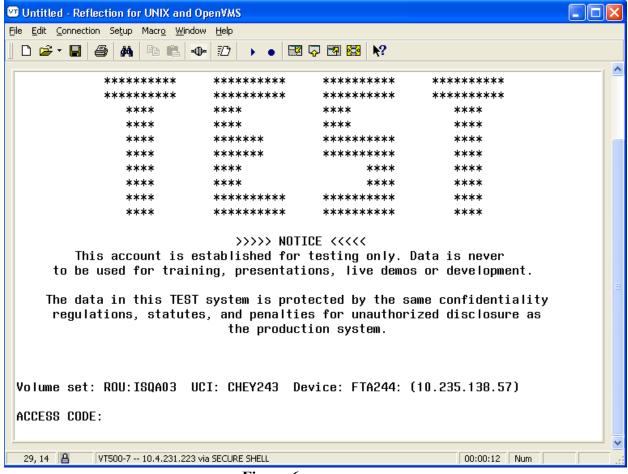


Figure 6

- 11. At the ACCESS CODE prompt, enter your access code and press the Enter key.
- 12. At the **VERIFY CODE** prompt, enter your verify code and press the **Enter** key.
- 13. At the **Select TERMINAL TYPE NAME: C-VT100**// prompt (see Figure 7), press the **Enter** key to accept the default of VT-100.

```
Good afternoon MICYUS,EDWARD
You last signed on today at 14:51
Select TERMINAL TYPE NAME: C-VT100//
Digital Equipment Corporation VT-100 video
```

Figure 7

14. At the **Select System Manager Menu Option** prompt (see Figure 8), type **P** and press the **Enter** key.

```
Core Applications ...
          Device Management ...
  FM
          VA FileMan ...
          Manage Mailman ...
          Menu Management ...
          Programmer Options ...
          Operations Management ...
          Spool Management ...
          Information Security Officer Menu ...
          Taskman Management ...
          User Management ...
  HL7
          HL7 Main Menu ...
   VDEF
          VDEF Configuration and Status ...
          Application Utilities ...
          Capacity Planning ...
          Fileman Access for the OIG ...
Select Systems Manager Menu Option: P
```

Figure 8

15. At the **Select Programmer Options Option** prompt (see Figure 9), type **P** and press the **Enter** key.

```
KIDS
          Kernel Installation & Distribution System ...
          Build an 'NTEG' routine for a package
   NTEG
   PG
          Programmer mode
          Calculate and Show Checksum Values
          Delete Unreferenced Options
          Error Processing ...
          List Global
          Map Pointer Relations
          Number base changer
          Routine Management Menu ...
          Routine Tools ...
          Test an option not in your menu
          Verifier Tools Menu ...
Select Programmer Options Option: P
```

Figure 9

- 16. You should see a command prompt similar to the one in Figure 10. The actual prompt will be different based upon the test center you are accessing.
- 17. At the command prompt (see ① in Figure 10), type **D** ^**XUP** and press the **Enter** key.

ISQA03:CHEY243>D ^XUP ①
Setting up programmer environment
This is a TEST account.

Terminal Type set to: C-VT100

Select OPTION NAME: CPRS ②

Figure 10

- 18. At the **Select OPTION NAME** prompt (see ② in Figure 10), type **CPRS** and press the **Enter** key.
- 19. At the **CHOOSE 1-5** prompt (see ① in Figure 11), press the Enter key.
- 20. At the CHOOSE 1-10 prompt (see ② in Figure 11), type 9 and press the Enter key.

```
Select OPTION NAME: CPRS
         CPRS CLEAN-UP UTILITIES ORE MGR
                                              CPRS Clean-up Utilities
         CPRS CLINICIAN MENU OR OE/RR MENU CLINICIAN
                                                          CPRS Clinician Menu
     2
         CPRS CONFIGURATION (CLIN COORD OR PARAM COORDINATOR MENU
                                                                       CPRS Conf
iguration (Clin Coord)
         CPRS CONFIGURATION (IRM) OR PARAM IRM MENU
                                                         CPRS Configuration (IRM
         CPRS COVER SHEET REMINDER LIST PXRM CPRS COVER SHEET LIST
                                                                        CPRS Cov
er Sheet Reminder List
Press <RETURN≥ to see more, '^' to exit this list, OR
CHOOSE 1-5: (1)
         CPRS GUI CHART DISTRIBUTION AN XQOCGCANALYSIS
                                                            CPRS GUI CHART DISTR
IBUTION ANALYSIS
         CPRS HEALTH SUMMARY DISPLAY/ED GMTS GUI SITE DEFAULTS
                                                                    CPRS Health
Summary Display/Edit Site Defaults
         CPRS LOOKUP CATEGORIES PXRM CPRS LOOKUP CATEGORIES
                                                                 CPRS Lookup Cat
egories
         CPRS MANAGER MENU ORMGR
                                      CPRS Manager Menu
        CPRS MENU ORDERS MENU
                                    CPRS Menu
Press <RETURN> te see more, '^' to exit this list, OR
CHOOSE 1-10: 9
```

Figure 11

21. At the **CPRS Manager Menu Option** prompt (see Figure 12), type **PE** and press the **Enter** key.

```
CL Clinician Menu ...

NM Nurse Menu ...

**> Out of order: PLEASE USE CPRS GUI

WC Ward Clerk Menu ...

**> Out of order: PLEASE USE CPRS GUI

PE CPRS Configuration (Clin Coord) ...

IR CPRS Configuration (IRM) ...

Select CPRS Manager Menu Option: PE
```

Figure 12

22. At the **Select CPRS Configuration (Clin Coord) Option** prompt (see Figure 13), type **GP** and press the **Enter** key.

```
ΑL
          Allocate OE/RR Security Keys
          Check for Multiple Keys
   KK
   DC
          Edit DC Reasons
   GP
          GUI Parameters ...
          GUI Access - Tabs, RPL
   GA
   MΙ
          Miscellaneous Parameters
          Notification Mgmt Menu ...
   NO
   00
          Order Checking Mgmt Menu ...
   MM
          Order Menu Management ...
          Patient List Mgmt Menu ...
   LI
   FP
          Print Formats
   PR
          Print/Report Parameters ...
   RE
          Release/Cancel Delayed Orders
          Unsigned orders search
   US
   ΕX
          Set Unsigned Orders View on Exit
          Search orders by Nature or Status
   NA
   CM
          Care Management Menu ...
   DO
          Event Delayed Orders Menu ...
   LO
          Lapsed Orders search
   PM
          Performance Monitor Report
Select CPRS Configuration (Clin Coord) Option: GP
```

Figure 13

23. At the **GUI Parameters Option** prompt (see Figure 14), type **TM** and press the **Enter** key.

```
CS
          GUI Cover Sheet Display Parameters ...
          GUI Health Summary Types
   HS
   TM
          GUI Tool Menu Items
  MΡ
          GUI Parameters - Miscellaneous
   UC
          GUI Clear Size & Position Settings for User
   RF
          GUI Report Parameters ...
          GUI Non-VA Med Statements/Reasons
   NV
   EΧ
          GUI Expired Orders Search Hours
   RM
          GUI Remove Button Enabled
   NON
          GUI Remove Button Enabled for Non-OR Alerts
   CLOZ
          GUI Edit Inpatient Clozapine Message
   COAG
          GUI Anticoagulation Parameters ...
   EIE
          GUI Mark Allergy Entered in Error
Select GUI Parameters Option: TM
```

Figure 14

24. At the **Enter Selection** prompt (see ① in Figure 15), type 1 and press the **Enter** key to modify the Tools menu for a specific user.

CPRS GUI Tools Menu may be set for the following:

1	User	USR	[choose from NEW PERSON]
2	Location	LOC	[choose from HOSPITAL LOCATION]
2.5	Service	SRV	[choose from SERVICE/SECTION]
3	Division	DIA	[choose from INSTITUTION]
4	System	SYS	[CHEY243.FO-BAYPINES.MED.VA.GOV]
9	Package	PKG	[ORDER ENTRY/RESULTS REPORTING]

Enter selection: 1 User NEW PERSON 1
Select NEW PERSON NAME: CCRPROVIDER 2

Figure 15

- 25. At the Select NEW PERSON NAME prompt (see ② in Figure 15), type all or part of the user last name and press the Enter key. The value you type will depend on the user in the test account and will probably be different. We used CCRPROVIDER in this example. This will be the user that the link should be added to. Note: Setting the link for a Location or Division may also be used.
- 26. If there is more than one matching person, a list of the matching person will be displayed (see Figure 16). Type the number of the user and press the **Enter** key. We used 4 in this example.
- 27. At the **CHOOSE 1-5** prompt (see Figure 16), enter the number of the desired person and press the **Enter** key. The number **4** was entered in this example.

```
Select NEW PERSON NAME: CCRPROVIDER
         CCRPROVIDER, FIVE B
                                 FBC
         CCRPROVIDER, FOUR A
                                 FAC
         CCRPROVIDER, ONE A
     3
                                OAC
         CCRPROVIDER, THREE B
                                  TBC
         CCRPROVIDER, TWO A
                                TAC
CHOOSE 1-5: 4
```

Figure 16

28. At the **Select Sequence** prompt (see Figure 17), type ? and press the **Enter** key to see a list of the entries on the user's **CPRS** | **Tools** menu.

```
Select Sequence: ?
Sequence
         Value
          TBI-TESTDATA-V5=https://vauw.tbiqa-testdata.registries.aac.va.gov/TBI
2
          John-LOCAL-TBI=http://localhost:1629/TBI_UserInterface/TBI_Instrument
3
          TBI-WEB70=https://vaww.tbi-dev.registries.aac.va.gov/TBI_Instruments/
Select Sequence:
```

Figure 17

29. At the Select Sequence prompt (see Figure 17), type 1 and press the Enter key to modify the TBI Prod or Pre-Prod/Dev entry. **Below is the Pre-Production URL – replace XXX** with your facility code (i.e. 442 = Chevenne VAMC. Our example uses 931)

Note: After replacing the 'XXX' with the facility code, you may copy the URL and "Right-Click / Paste" into AttachMate Reflection:

```
URL (for use within CPRS): REDACTED
```

DEV: REDACTED

Seguence: 1//

Name=Command: MSAT-DEV=https://vauu.mssr-dev.registries.aac.va.gov/MSSR_Instrume nts/Default.aspx?q9gtw0=931&xqi4z=%DFN&yiicf=%DUZ&jbPI0202=%SRV&27trp=%PORT Replace

Figure 18

30. At the **Sequence:** 1// prompt (see Figure 18), press the **Enter** key to accept the default and leave the sequence number unchanged.

- **31.** At the **Replace** prompt (see Figure 18), type the value to be replaced and press the **Enter** key.
- 32. At the **With** prompt, type the new value and press the **Enter** key.
- 33. Multiple changes can be made at the same time by repeating steps 31 and 32 until the user presses the **Enter** key at the **Replace** prompt.
- 34. Type ^ and press the **Enter** key to navigate back through the menu system until the Logged out message appears (see Figure 19).

```
Logged out at Jun 12, 2013 3:03 pm

<Your 'SECURE SHELL' connection has terminated>
```

Figure 19

- 35. Click on the **X** in the upper right hand corner to exit.
- 36. At the Exit Reflection dialog (see Figure 20), click on the **OK** button.



Figure 20