



# RAVEN-SB SYSTEM SOFTWARE

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## *RESIDENT ASSESSMENT VALIDATION AND ENTRY FOR SWING BED (RAVEN-SB) SYSTEM REFERENCE MANUAL*

VERSION 2.0

NOVEMBER 1, 2005

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# OVERVIEW

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## INTRODUCTION

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The Swing Bed Minimum Data Set (SB-MDS) was developed by the Centers for Medicare & Medicaid Services (CMS) to establish a standardized protocol for assessing the clinical characteristics of swing bed facility residents. This information will be used to better support the regulatory process and policy-making by providing survey agencies with a mechanism for objectively measuring and comparing facility performance and quality. In addition, it will provide researchers with a rich set of information to support the development of improved standards of care through the study of resident care outcomes.

CMS has sponsored the development of a data entry system known as the Resident Assessment Validation and Entry System for Swing Bed (RAVEN-SB). RAVEN-SB can be used by swing bed facilities for collecting SB-MDS data in a standardized format and electronically sending SB-MDS data records to the National Assessment Collection Database. Based on CMS's MedQuest tool, RAVEN-SB enables the user to electronically enter resident assessment data into SB-MDS standard record formats, calculate Resource Utilization Groups (RUGs), and export the resident assessment data records to the National Assessment Collection Database.

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## CONVENTIONS

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Standard conventions have been adopted in the RAVEN-SB Reference Manual to facilitate locating and identifying desired information. These conventions and their definitions include the following:

<b>Bolded Title Case</b>	Windows, screen titles, program functions, variable names, and dialog boxes (e.g., the <b>Resident Information</b> screen).
<b>Title Case and Italicized</b>	Text box or list box descriptions (e.g., the <i>Select an Employee</i> list box).
<b>Title Case</b>	Menu options (e.g., the General Help menu option).
<b>&lt;CAPITALS&gt;</b>	Menus, buttons, icons, and function keys (e.g., the HELP menu, the <CANCEL> button, the <NOTES> icon, and the <T> key).
<b>Bolded</b>	User entered data (e.g., Enter the password <b>SWB</b> ).
	<b>Notes Symbol.</b> This symbol indicates that the user should take notice of the information.
	<b>Question Mark Symbol.</b> This symbol prompts a user to review the procedure about to be invoked. For example, if a user adds a new patient and then decides to cancel the addition, a message box with a question mark will appear asking the user to verify the request.
	<b>X Symbol.</b> This symbol indicates that the requested procedure cannot be completed and displays a short message explaining why.
	<b>Exclamation Point Symbol.</b> This warning symbol indicates that an action has been selected that may have undesirable results. The warning provides an explanation and asks for verification before continuing with the selected action.

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# QUICK START

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## INSTALLATION AND START UP

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This section discusses the following topics:

- Hardware
- Software
- Printing
- Installation
- Help

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## HARDWARE/SOFTWARE

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- IBM or IBM-compatible personal computer with Pentium 200 MHz or higher processor
- VGA or VGA-compatible display monitor with a minimum resolution of 800x600 pixels

**NOTE:**

RAVEN-SB was designed using Super VGA resolution (800x600). At a lower resolution (e.g., 640x480), all of the variables on a given screen may not be visible. Use the scroll bars to view the entire screen and perform data entry.

- Hard disk with a minimum of 40 megabytes of available space
- Sixteen megabytes of RAM (32 are recommended)
- Microsoft Windows 95, 98, NT, 2000, or XP
- Microsoft or Microsoft-compatible mouse or pointing device

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## PRINTING RAVEN-SB ASSESSMENT FORMS

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Before printing the RAVEN-SB assessment forms, it will be necessary to activate the Adobe Acrobat Reader. If the software is not installed, the user can download the installation file from the Adobe web site ([www.adobe.com](http://www.adobe.com)).

**NOTE:**

Instructions on how to activate the Adobe Acrobat Reader are provided in the Setup section.

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## INSTALL THE RAVEN-SB APPLICATION

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Detailed installation instructions are contained in README.TXT. Unzip the downloaded RAVEN-SB installation file in a temporary directory (e.g., C:\TEMP). This action will decompress all of the installation files as well as README.TXT. Then run the SETUP.EXE program to begin the installation and follow the steps to install the RAVEN-SB program.

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## *Operating RAVEN-SB within Large Facilities*

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The intent of RAVEN-SB is to provide software to facilities to whom either: 1) could not afford to purchase software from a vendor; and/or 2) did not require a full-featured, client/server application that would be integrated with existing systems. As such, RAVEN-SB is designed as a stand-alone application and is not intended to be run in a multi-user environment. Consequently, RAVEN-SB utilizes Microsoft Access databases for storage. This places limits on the software in terms of performance and capacity.

However, RAVEN-SB will operate correctly in a network environment and allow entry and maintenance of a large number of assessments:

- The RAVEN-SB storage database can be located on a shared, network drive while the RAVEN-SB application files are located on the client PC. This capability allows multiple installations of the software to perform data entry against the same database. For more information, see the section below titled "Installing RAVEN-SB in a Network Environment".
- The Archive functionality is included in RAVEN-SB. This functionality alleviates the burden on the primary storage database and allows RAVEN-SB to operate in a high capacity environment. However, this functionality does not operate automatically and requires conscious effort on the part of the System Administrator. For more information, see the "Archive Setup" section.

**RAVEN-SB should not be mistaken for a network application.** It is still a stand-alone application, but contains features that make it possible to operate in a network environment under limited circumstances. Microsoft Access is not a full-featured RDBMS. Although a number of steps have been taken to address collisions in the software, collisions that will cause application errors can still occur. In addition, when the number of records in the storage database becomes very high, the performance and reliability of the system will degrade.

To ensure the best possible operation under a network environment, the following steps should be taken:

- Limit the number of collisions against the database
  - Assign one user to perform all data entry for a particular resident
  - Assign one user to perform all maintenance of the resident information including the adding and deleting of residents
  - Assign one user to perform all maintenance of the employee information
  - Assign one user to perform all maintenance of the facility information
  - Assign one user to perform all imports and exports
  - Assign one user to perform all archiving and restoring
  - Do not perform maintenance of the resident information while other users are performing data entry
  - Do not perform maintenance of employee information while other users are performing data entry
  - Do not perform maintenance of facility information while other users are performing data entry
  - Do not perform imports and exports while other users are performing data entry
  - Do not perform archiving and restoring while other users are performing data entry
- Utilize the **Archive** functionality regularly to alleviate the burden on the storage database. In addition, be certain to compact the storage database (SWB.MDB) after several archives.

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## *Installing RAVEN-SB in a Network Environment*

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There are several steps to follow when installing RAVEN-SB in a network environment. These steps include:

- For the first PC, install the RAVEN-SB software. Log in to the RAVEN-SB system and click on the ADMINISTRATION menu and select the Preferences option. Click on the Location tab and enter the network path where the SWBMDB and SWBTRACK.MDB databases will reside. Exit RAVEN-SB.
- Copy SWB.MDB and SWBTRACK.MDB to the network path that was specified in the previous step.
- Log in to RAVEN-SB and set up employee, facility, and resident information. If desired, specify an archive database. Also, go to the **RAVEN-SB Preferences** screen and select the desired options and paths. Exit RAVEN-SB and copy SWBDICT.MDB (in the installation directory) and SWB.INI (in the Windows SWBPRINT directory) to the network.
- Now install RAVEN-SB on all additional client PCs. Copy the SWBDICT.MDB from the network to the installation directory and copy the SWB.INI to the Windows SWBPRINT directory. This process will ensure that the settings established from the original installation are incorporated into each of the additional client installations.

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## HELP

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The General Help provides RAVEN-SB system help regarding how to use and maintain the RAVEN-SB software. The About (RAVEN-SB) Help identifies software and dictionary version information. From the RAVEN-SB Management screen or any of the RAVEN-SB Data Entry screens, click on the HELP menu and select either the General Help or the About Help options.

**NOTE:**

Context sensitive help is available from any window by pressing the <F1> key. Individual variable help is also available by right mouse clicking anywhere within the variable's frame.

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# LOG IN

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The user can log in to the RAVEN-SB module by entering the user identification and password in the *User Name* and *Password* text boxes, respectively.

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## USER IDs AND PASSWORDS

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Use the following log in identifications and passwords for RAVEN-SB the first time:

- User ID **SWB** and password **SWB**

The user login identification and password can be added, modified, or deleted by using the **Maintain Employee Database** feature within the RAVEN-SB software. For information on Authorization Rights, see Authorization Rights under the System Setup section.

**NOTE:**

After installation, it is recommended that the System Administrator log in first, using **SWB** as both the User ID and Password. The first task that the System Administrator should complete is to establish a new User ID and Password that will be used as the System Administrator account. This task can be accomplished by using the **Maintain Employee Database** function described in Chapter 3, System Setup. The **SWB** account should then be deleted to ensure the security of the RAVEN-SB software.

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## AUTHORIZATION RIGHTS

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The *Authorizations* radio buttons on the **Maintain Employee Database** screen -- Data Entry, Clinical Supervisor, and System Administrator -- determine the level of access for the currently selected employee. The following table displays the Authorization Rights for users by function.

ITEM	DATA ENTRY	CLINICAL SUPERVISOR	SYSTEM ADMINISTRATOR	VIEW ONLY
Maintain Employee Information Database	No	No	Add/Edit/Delete	No
Maintain Facility Information Database	Edit in Data Entry mode	Add/Edit	Add/Edit	No

<b>ITEM</b>	<b>DATA ENTRY</b>	<b>CLINICAL SUPERVISOR</b>	<b>SYSTEM ADMINISTRATOR</b>	<b>VIEW ONLY</b>
<b>Maintain Resident Information Database Assessments</b>	Edit in <b>Data Entry</b> mode	Add/Edit	Add/Edit/Hide/Delete/Archive	No
<b>Perform Data Entry for All RAVEN-SB Forms</b>	Add/Edit	Add/Edit	Add/Edit/Hide/Delete	View
<b>Review Assessments Performed by Other Users</b>	Yes	Yes	Yes	No
<b>View Hidden Assessments</b>	No	Yes	Yes	No
<b>Correct Assessment</b>	No	No	Yes	No
<b>View User List</b>	Yes	Yes	Yes	Yes
<b>Calculate RUGs</b>	Yes	Yes	Yes	No
<b>Print Assessments</b>	Yes	Yes	Yes	Yes
<b>View/Print Reports</b>	Assessment Data Entry Report	Assessment Data Entry Report	Assessment Data Entry Report Event Tracking Report	Assessment Data Entry Report
<b>Set Tracking of Events</b>	No	No	Yes	No
<b>Set RAVEN-SB Preferences</b>	No	No	Yes	No
<b>Import Files</b>	No	No	Yes	No
<b>Export Files</b>	No	No	Yes	No
<b>Change SB_SUB_REQ</b>	No	No	Yes	No
<b>List Open Assessments</b>	No	No	Yes	No
<b>Reset Open Status</b>	No	No	Yes	No
<b>Archive Setup</b>	No	No	Yes	No

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# SYSTEM SETUP

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## MAINTAIN EMPLOYEE DATABASE

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The Employee Database provides centralized management of employee records that will be used continuously in the entry of assessment data and to customize the operation of the RAVEN-SB software. It is accessed from the main menu by selecting the ADMINISTRATION menu item and then choosing the Maintain Employee Database option.

Note that this screen is only accessible to users with System Administrator rights. After installation, the user (authorized as System Administrator) will want to define the expected users of the RAVEN-SB software. The **Employee Information** screen is used to collect employee identification and authorization information. This screen consists of two sections: Select an Employee and Enter Employee Information.

	User ID	On	Login Time	Location	Phone	Resident	Assessment
1	SWB	*	14:54:40				

Enter Employee Information

User ID:  Password:  Title:

First Name:  Middle Initial:  Last Name:

Authorizations:  Data Entry  Clinical Supervisor  Systems Administrator  View Only

Allow multiple logins

Reset User Logon Flag Delete New Save Cancel

The *Select an Employee* section consists of: User ID; On \* (indicates the employee is currently logged in); Login Time; Location; Telephone; current Resident and Assessment that the employee is working on (if the user is logged in), and the Status of that assessment for all employees currently defined in the database.

When the user clicks on a specific User ID, the ID is highlighted and the corresponding employee data is displayed in the *Enter Employee Information* section. The *Enter Employee Information* section consists of:

User ID; Password; Title; First and Last Name and Middle Initial; Authorizations; Allow Multiple Logins, and Reset User Logon Flag.

**The user may:**

- Add a new employee record
- Edit an existing employee record
- Save all changes made to an employee record
- Delete an employee record
- Cancel all edits to an employee record
- Assign Authorization rights
- Allow user to login multiple times
- Reset user logon flag
- Reset user logon status

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## ADD A NEW EMPLOYEE RECORD

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Click on the <NEW> button to add a new employee record. The User ID and Password fields must be completed. Upon completion of the Employee Information section, click on the <SAVE> button to update the employee database. Saving will also refresh the *Employee Selection* list box to display the new user.

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## EDIT AN EMPLOYEE RECORD

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Click on the field or checkbox of interest to edit the data. Clicking the <SAVE> button will save all changes made to the employee record to the database, while clicking the <CANCEL>FOR BUTTON will abandon all changes made to the employee record since the last save.

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## SAVE AN EMPLOYEE RECORD

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Click on the <SAVE> button to save all information entered for a new or existing employee record.

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## DELETE AN EMPLOYEE RECORD

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Click on the <DELETE> button to remove the currently selected employee record from the database.

**NOTE:**

Since the System Administrator has access to all functions of the RAVEN-SB software, the user is prevented from deleting the last System Administrator record from the database or changing the rights (from System Administrator to Data Entry) for the last System Administrator record.

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## CANCEL AN EMPLOYEE RECORD

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Click on the <CANCEL> button to abandon all changes made to the employee record since the last save.

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## AUTHORIZATION RIGHTS

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The *Authorizations* radio buttons on the **Employee Information** screen -- Data Entry, System Administrator, and Clinical Supervisor -- determine the level of access for the currently selected employee.

- **Data Entry Rights.** Users are able to edit Resident/Facility information (in **Data Entry** mode) add/edit assessments, perform data entry for all RAVEN-SB forms, calculate RUGs, print assessments, and view/print reports.
- **Clinical Supervisor Rights.** Users are able to add/edit Facility and Resident database information, add/edit assessments, review assessments performed by other users, view users, view hidden assessments, perform data entry for all RAVEN-SB forms, calculate RUGs, print assessments, view/print reports, and track resident/facility/assessment/employee information.
- **System Administrator Rights.** Users are able to add/edit/delete Employee database information, add/edit Facility database information, add/edit/hide/delete/archive Resident database information, add/edit/hide/delete assessments, create corrections, review assessments performed by other users, view users, view hidden assessments, perform data entry for all RAVEN-SB forms, calculate RUGs, print assessments, view/print reports, track resident/facility/assessment/employee information, set RAVEN-SB preferences, import and export files, reset open status, archive setup, and change SB\_SUB\_REQ.
- **View Only Rights.** Users are able to view what has been entered in data entry. Users are able to view/print reports, print assessment(s) from file, and view assessment data.

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## ALLOW MULTIPLE LOGINS

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The *Allow Multiple Logins* check box allows the user to login using the same User ID from multiple installations in a network environment. For stand-alone installations, it is recommended that this option be checked.

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## RESET USER LOGON FLAG

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This feature allows a System Administrator to reset the selected Employee's login status. After selecting an Employee and clicking on the <RESET USER LOGON FLAG> button, the Employee's status will be reset from "On" (i.e., an asterisk indicates that the user is logged in) to "Off", (i.e., the asterisk is removed). This function is useful when the RAVEN-SB software has not been exited properly such as after a power outage.

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## MAINTAIN FACILITY DATABASE

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The Facility Database collects facility identification and system preferences and options. It is accessed from the main menu by selecting the ADMINISTRATION menu item and then choosing the Maintain Facility Database option.

The **Facility Information** screen collects facility, agent, and system information used to customize the operation of the RAVEN-SB software. It is recommended that a user with System Administrator rights complete this information after installation. This screen is divided into three sections: 1) Facility Information; 2) Agent Information; and 3) Facility/State Options.

Facility Information	
Enter Facility Information	
9a. Facility Medicaid Provider Number	<input type="text"/>
<b>9b. Facility Medicare Provider Number</b>	<input type="text"/>
<b>Facility ID</b>	<input type="text"/>
<b>Facility Name</b>	<input type="text"/>
<b>Facility Address</b>	<input type="text"/>
<b>Zip Code</b>	<input type="text"/>
<b>City</b>	<input type="text"/> <b>State</b> <input type="text"/>
<b>Facility Contact Person Name</b>	<input type="text"/>
<b>Facility Contact Person Phone Number and Ext.</b>	<input type="text"/> <input type="text"/>
Enter Agent Information	
Agent Tax ID	<input type="text" value="1"/>
Agent Name	<input type="text"/>
Agent Address	<input type="text"/>
Zip Code	<input type="text"/>
City	<input type="text"/> <input type="text" value="State"/>
Agent Contact Person Name	<input type="text"/>
Agent Contact Person Phone Number and Ext.	<input type="text"/> <input type="text"/>
Enter Facility/State Options	
<input type="checkbox"/> 100% Medicare/Medicaid certified facility	
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

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## FACILITY INFORMATION

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The Facility Information section enables the user to specify information that can uniquely identify the facility such as facility name, address, contact person, and Medicare, Medicaid, and State-specified provider numbers. Fields shown in **bold** are required to complete and export RAVEN-SB assessments.

**NOTE:**

When the user enters a valid zip code for the Facility Address, the correct city and state will be added. The user can still change the city and state if needed.

**NOTE:**

After entering 9B. Facility Medicare Provider Number, RAVEN-SB searches a CMS-provided facility list for a matching number. If a match is not found, nothing will happen and RAVEN-SB will assume that this is a new swing bed provider. However, if a match is found, RAVEN-SB will either (a) populate the facility name, address, city, state, and zip fields if they are empty, or (b) compare the facility list data with the field data and inform the user if the data does not match. For option (b), the user has the option to keep the existing field data or replace it with the data in the facility list.

In addition, if a match is found, RAVEN-SB will inform the user if the currently specified CMI set (i.e., rural or urban) does not match the facility list data. This specific check is also performed when clicking the Save button on the Maintain Facility Database screen.

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## AGENT INFORMATION

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The Agent Information section collects unique agent data such as name, address, tax identification number (TIN), and telephone number.

**NOTE:**

The Facility Information and Agent Information data are included as header information for each export from the RAVEN-SB software. Information about RAVEN-SB export capabilities is provided in the Export section.

When the user enters a valid zip code for the Agent Address, the correct city and state will be added. Users can change the city and state.

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## FACILITY/STATE OPTIONS

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If the facility contains only Medicare—and/or Medicaid—certified beds, then check this option. This action sets the SB\_SUB\_REQ to 1 by default for newly created assessments (not existing assessments). Note that the user still has the option to change SB\_SUB\_REQ within data entry, if desired.

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## GROUPEL CONFIGURATION

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The Grouper Configuration screen allows the user to specify Medicare and State RUG calculation parameters. The screen consists of two main sections: Medicare RUG Options and State RUG Options. Each section contains a grid displaying which RUG Model, Calculation Method and CMI Set are in effect for a specified timeframe. The data entry variables underneath the grid can be used to specify changes to the highlighted row in the grid. After entering values, the Medicare RUG grid is updated when the user clicks the Update Medicare RUG Options button; similarly, the State RUG grid is updated when the user clicks the Update State RUG Options button.

**NOTE:**

Note that for Medicare RUGs, the user is only allowed to change the Calculation Method and Case Mix Index Set for Medicare RUGs. The RUG Model, Begin Date and End Date variables are read-only, since users should not be changing them.

While the number of Medicare RUG records in the grid is fixed, there is no limit to the number of State RUG records that can be defined by the user. Click the **Add** button to add a State RUG record and the **Delete** button to delete a State RUG record.

The **Restore Defaults** button will delete all existing RUG records and replace them with the RAVEN-SB default RUG records, as shown in the picture below.

The **Validate and Save** button evaluates the defined RUG records on the **Grouper Configuration** screen and ensures that valid timeframes have been established, i.e., the Begin Date and End Date values for the records do not overlap or have gaps.

**NOTE:**

For both Medicare and State RUGs, there **must** be at least one RUG record with a Begin Date of "01/01/1998" and at least one RUG record with an End Date of "12/31/1999." In addition, the RUG records **must** account for all dates between 01/01/1998 and 12/31/1999. In this way, RAVEN-SB can always determine how to calculate RUGs for any MDS assessment, old or new.

RUG calculations may be performed for both Medicare and State purposes. The 53, 44 and 34 Group Models are supported for RUG calculations. The user has the option to specify the RUG calculation method, i.e., Medicare, Hierarchical (State RUG only), Index (State RUG only), or None, if RUGs will not be calculated. These methods are described further in the RUG calculation pseudo-code documentation

available on the CMS SB-MDS web site. Note that the user must specify at least one type of RUG calculation other than None (e.g., Medicare, Hierarchical, or Index) for either Medicare or State purposes.

A Begin Date and an End Date must be specified for a RUG Model-Calculation Method-CMI Set record to take effect. When RAVEN-SB calculates the RUG values for an assessment, it determines the Assessment Reference Date (ARD) for the assessment. Then RAVEN-SB finds the grouper configuration record where the assessment ARD is within the Begin Date-End Date range. Finally RAVEN-SB retrieves the RUG Model-Calculation Method-CMI Set values to use for the calculation.

**Grouper Configuration**

**Medicare RUG Options**

Model	Calc Method	CMI Set	Begin Date	End Date
<b>44 Group</b>	<b>Medicare</b>	<b>C01</b>	<b>01/01/1998</b>	<b>12/31/2005</b>
53 Group	Medicare	C03	01/01/2006	12/31/9999

RUG Model:  53 Group  44 Group  34 Group  
 Calculation Method:  Medicare  None  
 Begin Date:   
 End Date:   
 Case Mix Index Set:

**State RUG Options**

Model	Calc Method	CMI Set	Begin Date	End Date
<b>44 Group</b>	<b>Medicare</b>	<b>C01</b>	<b>01/01/1998</b>	<b>12/31/9999</b>

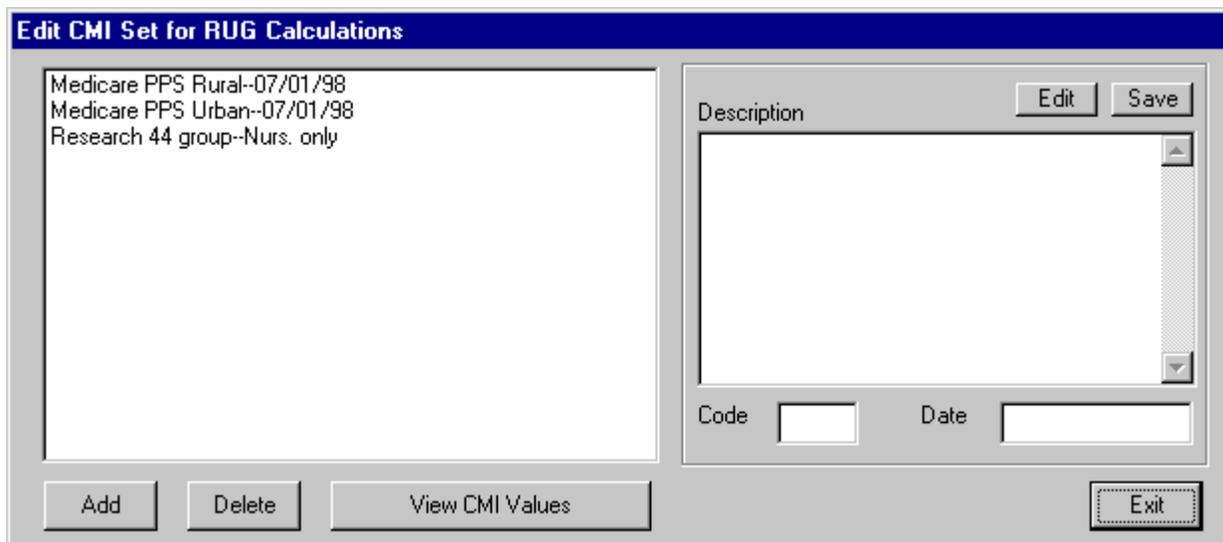
RUG Model:  53 Group  44 Group  34 Group  
 Calculation Method:  Medicare  Index Maximizing  Hierarchical  None  
 Begin Date:   
 End Date:   
 Case Mix Index Set:

NOTE: Begin Date and End Date are Assessment Reference Dates.

For each RUG calculation to be performed, the user must also select a CMI Index set. Select a CMI Index set from the Case Mix Index drop down menu list on the **Group Configuration** screen. Six standard sets are available for selection in this release:

- Medicare PPS 44 Group Rural (C01)
- Medicare PPS 44 Group Urban (C02)
- Medicare PPS 53 Group Rural (C03)
- Medicare PPS 53 Group Urban (C04)
- Research 34 Group (D01)
- Research 44 Group (D02)

Note that these index sets are read-only; they cannot be deleted. In addition, the individual index values for the standard sets cannot be modified. Click on the <VIEW CMI VALUES> button to view the index values for the highlighted CMI set. After viewing the group index values, click on the <CLOSE> button.



In RAVEN-SB, new CMI sets may be created from one of the three standard sets; this feature is useful if the new set only requires changing one or two of the index values from the standard set. To create a new CMI Index set, click on the <EDIT CMI SETS> button from the **Facility Information** screen. Highlight the appropriate set and click on the <ADD> button. This action will create a working copy of the standard index set that the user can name and modify as needed. Use the <EDIT> button to modify the description for the new index set and the <SAVE> button to store it in the database.

**NOTE:**

After a new index set has been added, the context sensitive <VIEW CMI VALUES> button will change to <EDIT CMI VALUES>. If a read-only set of indices is highlighted, the button will read <VIEW CMI VALUES>. If the user has created the highlighted index, the button will read <EDIT CMI VALUES>.

A user-created index set can be deleted by highlighting the index set and clicking the <DELETE> button. As noted above, the standard CMI Index sets are read-only and cannot be deleted.

**Edit CMI Set**

CMI Values for:

test--

	GROUP	CMIINDEX
1	RUC	1.430
2	RUB	1.050
3	RUA	0.850
4	RVC	1.240
5	RVB	1.140
6	RVA	0.890
7	RHC	1.300
8	RHB	1.160
9	RHA	0.960
10	RMC	1.480
11	RMB	1.200
12	RMA	1.060
13	RLB	1.220
14	RLA	0.870
15	SE3	1.860
16	SE2	1.520
17	SE1	1.280
18	...	...

Save Cancel

Click on the <EDIT CMI VALUES> button to change the CMI values as needed. The user can save the changes by clicking on the <SAVE> button or exit the **Edit CMI Set** screen by clicking on the <CANCEL> button.

---

## RUG CALCULATIONS

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RUG calculations are automatically performed for an assessment when the data entry for the assessment has been completed and its status is made "Export Ready". The RUGs can be recalculated at any time during data entry. Click on the RUGs menu item in data entry to recalculate the RUGs. The **Calculate RUGs** screen will be displayed. Note, however, that the RUG values are not saved until the assessment is locked.

RUGs can also be calculated for an applicable assessment from the **RAVEN-SB Management** screen using the <RUGS> button. If the assessment is "Export Ready" or "Exported", the RUGs have already been calculated and will be displayed in the **View RUGs** screen. RUGs will be recalculated and displayed for applicable assessments with any other status. If RUGs are not applicable for an assessment (e.g., a discharge or reentry assessment), then the user is notified that RUGs cannot be calculated for that assessment type.

**NOTE:**

For assessments with ARDs between 11/11/2005 and 01/13/2006, an additional button is available on the **Calculate RUGs/View RUGs** screen. If the 44 Group Model was used for Medicare RUGs, then a **Calculate 53 Group Model for Medicare** button will allow the user to view a 53 Group calculation, which could be useful for billing purposes. Similarly, if the 53 Group Model was used for Medicare RUGs, then a **Calculate 44 Group Model for Medicare** button will appear.

# MAINTAIN RESIDENT DATABASE

The Resident Database provides centralized management of resident information records that will be used continuously in the entry of assessment data and also to customize the operation of the RAVEN-SB software. It is accessed from the main menu by selecting the ADMINISTRATION menu item and then choosing the Maintain Resident Database option.

The **Resident Information** screen collects resident information that is reused in RAVEN-SB assessments. It is recommended that a user with System Administrator rights complete this screen prior to creating assessments for the residents. This screen consists of two sections: the Resident Selection section and the Resident Information section.

The Resident Selection section on this screen is similar to the Resident Selection section on the **RAVEN-SB Management** screen. The only option available in the Resident Selection section on the **RAVEN-SB Management** screen is the capability to add a resident. Any maintenance (e.g., edit/hidden/delete) for a resident record must be completed through the Maintain Resident Database menu option.

**Resident Information**

Select a Resident

Search for...  
 Last Name = [ ] Search [ ]

Filter for...  
 Unit = [ ] Filter [ ]

Last Name	First Name	MI	SSN	Unit	Medicare No.
FRANKENHEIMER	JOHN		546-87-9413	7	9

Browse Next 1000  
 View Archived Residents Also  
 View Hidden Residents Also

1. Resident Name  
 a. (First) [ ] b. (M.I.) [ ] c. (Last) [ ] d. (Suffix) [ ]  Hidden

2. Gender  
 1. Male  
 2. Female

3. Birthdate [ ]

4. Marital Status  
 1. Never Married  
 2. Married  
 3. Widowed  
 4. Separated  
 5. Divorced

5. Race/Ethnicity: (Check all that apply)  
 a. American Indian/Alaskan Native  
 b. Asian  
 c. Black or African American  
 d. Hispanic or Latino  
 e. Native Hawaiian or other Pacific Islander  
 f. White

6. Zip Code [ ]

7. Resident SSN and Medicare Numbers  
 a. Social Security Number [ ] b. Medicare or Railroad Insurance Number [ ]

8. Resident Medicaid Number [ ]  
 [Enter '+' if pending or 'N' if not a Medicaid recipient in first digit followed by blanks]

State Resident ID Code [ ]  
 Facility Specific Resident ID [ ]

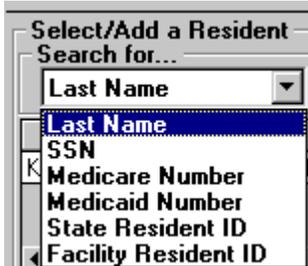
Unit [ ]

Delete [ ] New [ ] Save [ ] Cancel [ ]

This section allows the user to select, search, or filter for a resident in the same manner as the **RAVEN-SB Management** screen. Residents are displayed in alphabetical order. Use the scroll bars on the *Resident* list box to view the available residents and click on the preferred row to select a resident. If there are more than

1,000 residents from which to choose, click on the <BROWSE NEXT 1000> button to display the next 1,000 residents.

The user may search the Resident database by selecting the Last Name, Social Security Number (SSN), Medicare Number, Medicaid Number, State Resident ID, or Facility Resident ID of a resident in the *Search for...* drop-down list box.



After selecting an item from the *Search for...* drop-down list box, click on the <SEARCH> button to begin the search. The closest match will be the first item displayed in the *Resident* list box. To remove the search, clear the = text box and click on the <SEARCH> button. The residents will then be displayed alphabetically for selection within the *Resident* list box.

The user may want to reduce the number of residents available from which to choose by filtering on Unit. This filtering is accomplished by entering the desired Unit in the *Filter for Unit...* text box. Click on the <FILTER> button to begin the filter. An alphabetical list of residents by unit will be displayed in the *Resident* list box. If the Unit list is extensive, the user can search this list by Last Name, Social Security Number (SSN), Medicare Number, Medicaid Number, State Resident ID, or Facility Resident ID. To remove the filter, clear the Unit field and click on the <FILTER> button. An alphabetical list of residents will then be displayed for selection within the *Resident* list box.

The user can also sort by a field, (e.g., Last Name, First Name, MI, SSN, Unit, Medicare Number, Medicaid Number, State Resident ID, or Facility Resident ID) by clicking on the column header. Clicking once on the column header will sort the list in ascending order. Clicking on the column header again will sort the list in descending order.

Once a resident is selected, the corresponding data appears in the *Resident Information* text box. This section consists of data entry fields for demographic and identification information such as gender and race/ethnicity. The information collected is utilized to prefill the corresponding fields on the RAVEN-SB assessment forms for the selected resident.

**The user may:**

- Add a new resident record
- Edit an existing resident record
- Save all changes made to a resident record
- Hide a resident record
- View an archived resident record
- Delete a resident record
- Cancel all edits to a resident record

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## ADD A NEW RESIDENT RECORD

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Click on the <NEW> button and begin entering data in the Resident Information section. The user must complete Last Name, Gender, Birth date, and Race/Ethnicity before the record can be saved. The remaining fields are optional. Click on the <SAVE> button or the <CANCEL> button when data entry is complete. The user will be prompted with a message to "Save new resident currently displayed"? Click on the <YES> button to save the changes or the <NO> button to cancel the changes.

**NOTE:**

If neither a SSN or Medicare/Railroad Insurance Number are entered for a resident, the user will not be able to mark PPS assessments complete for that resident.

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## EDIT A RESIDENT RECORD

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Click on the field or radio button of interest to edit the data. Clicking on the <SAVE> button will save all changes made to a resident record to the database, while clicking on the <CANCEL> button will abandon all changes made to the resident record since the last save.

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## SAVE A RESIDENT RECORD

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Click on the <SAVE> button to save all information entered for a new or existing resident record.

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## HIDE A RESIDENT RECORD

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Check the *View Hidden Residents Also* text box, select the resident to hide, and then check the *Hidden* text box. The resident is no longer visible in the *Resident* list box. Note that if a resident is marked as hidden, the user will not have access to the assessments for that resident. To view the hidden residents, check the *View Hidden Residents Also* check box. The user has the capability to redisplay a resident by unchecking the *Hidden* check box.

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## VIEW AN ARCHIVED RESIDENT RECORD

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Check the *View Archived Residents Also* text box to view the archived residents. Until a resident is restored, the only activity that can be performed on an archived resident record is to search the list and view that resident record.

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## DELETE A RESIDENT RECORD

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Click on the <DELETE> button to delete the currently selected resident. This action will remove the data record for the resident from the database. Note that a resident record can only be deleted if no assessments are associated with the resident.

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## CANCEL A RESIDENT RECORD

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Click on the <CANCEL> button to abandon all changes made to the resident record since the last save.

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## ENABLE PRINTING

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Before accessing the **Print** function for the RAVEN-SB assessment forms, it will be necessary to activate the Adobe Acrobat Reader. If this software is installed, then a System Administrator can click on the ADMINISTRATION menu item, select the Preferences option, and click on the Print tab. The System Administrator can then enter the file path/name into the *Adobe Acrobat Reader File Path/Name* text box (i.e., C:\PROGRAMS FILES\ADOBE\ACROBAT5\READER\ACRORD32.EXE). Completing the path for the Adobe Acrobat Reader from the PREFERENCES menu allows users to access the **Print** function for the RAVEN-SB assessment forms. Leaving the path blank prevents users from having access to the **Print** function for the RAVEN-SB assessment forms.

**NOTE:**

If the Adobe Acrobat Reader is not installed, then the user can download the installation file from the Adobe web site ([www.adobe.com](http://www.adobe.com)).

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## ENABLE BACKUP

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RAVEN-SB provides the option to make a backup copy of the data collection databases (e.g., SWB.MDB, SWBTRACK.MDB, EXPORT.MDB, RUGS.MDB, and SWBARCH.MDB) each time the user exits RAVEN-SB normally). If these databases are corrupted due to abnormal termination of RAVEN-SB (e.g., power failure, system lockup), the System Administrator may copy the backup databases into the installation directory and only the last RAVEN-SB session will be lost.

To enable the backup, the System Administrator may click on the ADMINISTRATION menu item, select the Preferences option, and click on the Backup tab. Then the user may specify a directory location for the

backup files. Note that this directory cannot be the directory where the application and databases currently reside. Also, if a path is not provided, the backup option is disabled.

**NOTE:**

The RAVEN-SB **Backup** capability is no substitute for a comprehensive backup strategy. It is **HIGHLY RECOMMENDED** that RAVEN-SB users institute a regular procedure of backing up the databases to a reliable media (e.g., floppies, CD-ROM, tape). For additional suggestions regarding backup, read the RAVEN-SB Help Desk Note on Backup (BACKUP.PDF).

Three compression options are available for the backup file (S). If "No Compression" is selected then the files are simply copied to the backup location. If "Enable Compression of Databases to ZIP Format" is selected then the backup files are compressed to SWBMDB.ZIP in the backup location. If "Enable Compression of Databases to Self-extracting EXE" is selected then the backup files are compressed to SWBMDB.EXE in the backup location. If an existing compressed backup file is present in the backup location then it is copied to SWBBACK.ZIP (or SWBBACK.EXE if the EXE option is selected) in the application directory.

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# WINDOWS SETTINGS

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In order to ensure the reliable operation of the RAVEN-SB software, the following two Windows properties **must** be set accordingly:

- The Windows short date style must be set to display a four-digit year (e.g., 1999) instead of a two-digit year (e.g., 99).

For Windows 95, 98, NT, 2000, and XP click on the <START> button, select the Settings option and then select the Control Panel option to display the **Control Panel** screen. Next, click on the <REGIONAL SETTINGS> icon to display the **Regional Settings Properties** screen. Then, click on the Date tab to review the short date style properties. Verify that the short date style includes a four-digit year. A style that includes "YYYY" will satisfy this condition. The recommended setting is "MM/DD/YYYY".

- For Windows 95, 98, NT, 2000, and XP the Windows Font Size property must be set to "Small Fonts" and not "Large Fonts". This property can be found under the Settings tab of desktop properties.

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# RAVEN-SB DATA ENTRY

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## RAVEN-SB MANAGEMENT SCREEN

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Once RAVEN-SB has been loaded, a number of functions may be performed. These functions are all activated from icons or drop-down menu items available on the screen.

**RAVEN-SB Management**

File Options Administration Help

Select/Add a Resident

Search for... Last Name = [ ] Search Filter for... Unit = [ ] Filter

Last Name	First Name	MI	SSN	Unit	Medicare Number
GERSHWIN	GEORGE		894-35-4986	5	1

Browse Next 1000  
Archive Resident  
Add Resident

**GERSHWIN** Correct Assessment Add Assessment

	Date	Type	#	Status	User	Open
1	04/10/2002	Non-PPS Assessment ( )	00	In Use	SWB	
2	04/10/2002	Discharge (Rtn not anticip..)	00	New	SWB	
3	04/09/2002	PPS Assessment (5 day)	00	In Use	SWB	

View Only (Data Entry Not Allowed)  View Hidden Assessments Also

Print RUGs Enter Data Exit

The **RAVEN-SB Management** screen consists of the following components:

- **Title Bar.** Displays the title **RAVEN-SB Management**.
- **Menu Bar.** Displays the list of functions that can be performed on the **RAVEN-SB Management** window. Each of these functions contains additional options. These options are displayed by using the mouse.
- **Button Bar.** Provides quick access to commonly used menu items. The functions available to all users include: **Log Off/On; User List; View/Print Reports; Print Assessment(s);** and **Help**. An additional function, **Maintain Facility** and **Resident Database** information, is available to Clinical Supervisors and System Administrators. **Import, Export, Hide/Display Assessment, Hide All Assessments (Current Resident), Delete Assessment,** and **Maintain Employee Database** information are available only to a System Administrator.

**NOTE:**

Additional features available to the System Administrator, but not displayed on the Button Bar, include: **Change SB\_SUB\_REQ**; **Archive Setup**; **Tracking Setup**; and **Preferences**. All of these features can be accessed from the ADMINISTRATION menu item.

- **Select a Resident.** Enables the user to select a resident to access his/her assessment history.
- **Add a Resident.** Allows the user (Clinical Supervisor and System Administrator) to add a resident.
- **Select Assessment for Resident.** Allows the user to view the history of previous assessments and their status for the currently selected resident. For additional information on the status of assessments, see the Assessment Status section below.
- **Add an Assessment.** Allows the user to add an assessment to a selected resident.
- **Correct an Assessment.** Allows the user to correct an assessment that has already been exported and accepted by the National Assessment Collection Database.

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## UNDER THE FILE MENU, THE USER CAN:

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### *Open Archive*

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This option allows the System Administrator to open the archive directory and view the archived residents. To view an archive database, select the Open Archive option from the FILE menu on the **RAVEN-SB Management** screen. By opening the archive database, the user also has the option to restore a resident. See the Restore a Resident section for a complete explanation of the **Restore** function.

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### *Exit*

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This option allows the user to exit the RAVEN-SB software. To exit RAVEN-SB, select the Exit option from the FILE menu on the **RAVEN-SB Management** screen or click on the <EXIT> button.

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## UNDER THE OPTIONS MENU, THE USER CAN:

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### *Log Off/On*

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This option allows the user to return to the **RAVEN-SB Login** screen. From here, the user can log in as a different user or click on the <CANCEL> button and return to the **RAVEN-SB Management** screen.

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### *User List*

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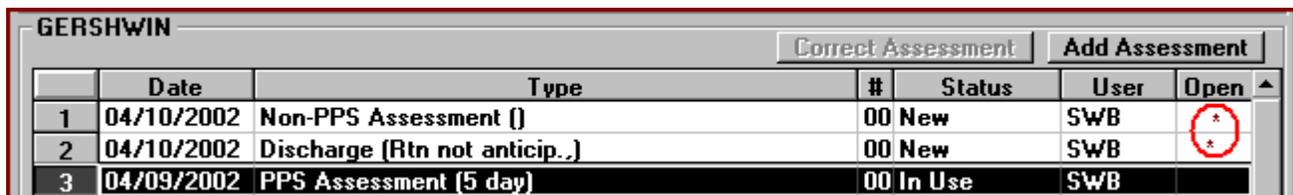
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This option allows a user to view others who are logged on and the resident and assessment on which they are working. Select the User List option from the OPTIONS menu to display the **User List** screen. The **User List** screen contains the same information as the *Select an Employee* section of the **Employee Information** screen. This consists of: User ID; On (\* indicates the employee is currently logged in); Login Time; Location; Telephone; name of current Resident and Assessment the employee is working on, and the Status of the assessment number.



	User ID	On	Login Time	Location	Phone	Resident	Assessment
1	SWB	*	12:44:54				

When using RAVEN-SB across a network environment, only one user can access a particular assessment at a time. The User List option displays any users who are currently logged on to the system and the assessment that user has open for data entry. Users can also see whether an assessment is in use by an asterisk (\*) in the *Open* column for each assessment on the **RAVEN-SB Management** screen.



GERSHWIN							Correct Assessment	Add Assessment
	Date	Type	#	Status	User	Open		
1	04/10/2002	Non-PPS Assessment ( )	00	New	SWB	*		
2	04/10/2002	Discharge (Rtn not anticip..)	00	New	SWB	*		
3	04/09/2002	PPS Assessment (5 day)	00	In Use	SWB			

#### **NOTE:**

An assessment is considered open while data entry is being performed. This situation only occurs when an assessment is accessed in a network installation of RAVEN-SB.

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### *View/Print Reports*

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This feature is discussed in the Reports section.

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## *Print Assessment(s) from File*

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This feature is discussed in the Reports section.

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## *Import*

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This feature is discussed in the Import section.

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## *Export*

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This feature is discussed in the Export section.

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## *Hide/Display Assessment*

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This option gives the System Administrator the capability to specify whether an exported, modified, or inactivated assessment for the current resident can be viewed in the *Resident Assessment* list box. To hide an exported, modified, or inactivated assessment, highlight the desired assessment and select the Hide/Display Assessment option from the OPTIONS menu or click on the <HIDE/DISPLAY ASSESSMENT> button. The selected assessment will be removed from the list and given the status of "Hidden". Hidden assessments are only visible when "View Hidden Assessments Also" is checked. This feature is automatically enabled when an assessment is hidden.

To display a hidden assessment, click on the *View Hidden Assessments Also* check box to display the hidden assessment(s). Highlight an assessment and select the Hide/Display Assessment option from the OPTIONS menu or click on the <HIDE/DISPLAY ASSESSMENT> button. When the *View Hidden Assessments Also* check box is unchecked, the assessment will remain in the list. The assessment's status will be reset to the status it had prior to being hidden.

**NOTE:**

Although a Clinical Supervisor cannot hide/unhide an assessment, he/she can view hidden assessments by checking the *View Hidden Assessments Also* check box.

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## *Hide All Assessments (Current Resident)*

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This option gives the System Administrator the capability to remove all exported assessments for the current resident from view in the *Resident Assessment* list box. Highlight a resident and select the Hide All Assessments (Current Resident) option from the OPTIONS menu or click on the <HIDE ALL ASSESSMENTS (CURRENT RESIDENT)> button. All assessments marked exported will be hidden from view and given the status of "Hidden".

To display a hidden assessment, click on the *View Hidden Assessments Also* check box to display the hidden assessment(s). Highlight an assessment and select the Hide/Display Assessment option from the OPTIONS menu or click on the <HIDE/DISPLAY ASSESSMENT> button. When the *View Hidden Assessments Also* check box is unchecked, the assessment will remain in the list. The assessment's status will reset to the status it had prior to being hidden.

**NOTE:**

Although a Clinical Supervisor cannot hide/unhide an assessment, he/she can view hidden assessments by checking the *View Hidden Assessments Also* check box.

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## *Delete Assessment*

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This option gives the System Administrator the capability to delete a specific assessment for the current resident. Note that the assessment is deleted not only from the *Resident Assessment* list box but also from the database. Once an assessment has been deleted, it cannot be retrieved.

To delete an assessment, highlight an assessment and select the Delete Assessment option from the OPTIONS menu or click on the <DELETE ASSESSMENT> button to delete the assessment.

**NOTE:**

Assessments with a status of "Exported" or "Hidden" cannot be deleted. Once an assessment has been deleted, it cannot be retrieved.

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## **UNDER THE ADMINISTRATION MENU, THE USER CAN:**

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The maintenance functions for the Employee, Facility, and Resident databases, as well as the Grouper Configuration function, are discussed in the System Setup section. Administrators may also set up Archive and Tracking functions, specify RAVEN-SB preferences, and monitor utilization of RAVEN-SB. Furthermore, an exported assessment requiring a manual change to SB\_SUB\_REQ can be modified using the Change SB\_SUB\_REQ feature.

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## *Change SB\_SUB\_REQ*

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The Change SB\_SUB\_REQ function is used to modify the SB\_SUB\_REQ for an exported assessment that has been submitted to and accepted by the National Assessment Collection Database. Since the SB\_SUB\_REQ for this assessment cannot be changed on the National Assessment Collection Database by a modification request, it must be performed manually by National Assessment Collection Database personnel. Therefore, in order for the RAVEN-SB database to match the National Assessment Collection Database for this assessment, highlight the assessment and the Change SB\_SUB\_REQ function will be enabled since the assessment has Exported status. Select this option and the SB\_SUB\_REQ screen will appear. The user may then make the appropriate change. After clicking the <SAVE> button the new SB\_SUB\_REQ value will be stored and the assessment will maintain its Exported status.

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## *List Open Assessments*

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This feature allows a System Administrator to view the assessments that have open status. To display the assessment list, click on the ADMINISTRATION menu and select the List Open Assessments option. For each open assessment, the user ID of the employee that is working on an assessment, the resident name, Social Security Number, and assessment reference date are displayed in the List Open Assessments window. In a multi-user environment, this enables the administrator to easily monitor the current RAVEN-SB workload.

In addition, the **List Open Assessments** function is useful in pinpointing which assessments require a reset of the open status (see **Reset Open Status**) in the event of an abnormal termination of RAVEN-SB.

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## *Reset Open Status*

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This feature allows a System Administrator to reset an assessment's open status. The open status is normally reset (the \* disappears from the *Open* box) when a user exits data entry for an assessment.

The **Reset Open Status** function is especially useful when abnormal termination of RAVEN-SB (e.g., power failure, system lockup) occurs. When RAVEN-SB is restarted, a user cannot access any assessments that were marked as open. A System Administrator must reset these assessments before data entry can continue.

To reset the open status of an assessment, the System Administrator should highlight an assessment that needs to be reset, click on the ADMINISTRATION menu, and select the Reset Open Status option. This action will clear the *Open* box and reset the currently selected assessment. If more than one assessment needs to be reset, highlight the next assessment and repeat the process until all of the desired assessments have been reset.

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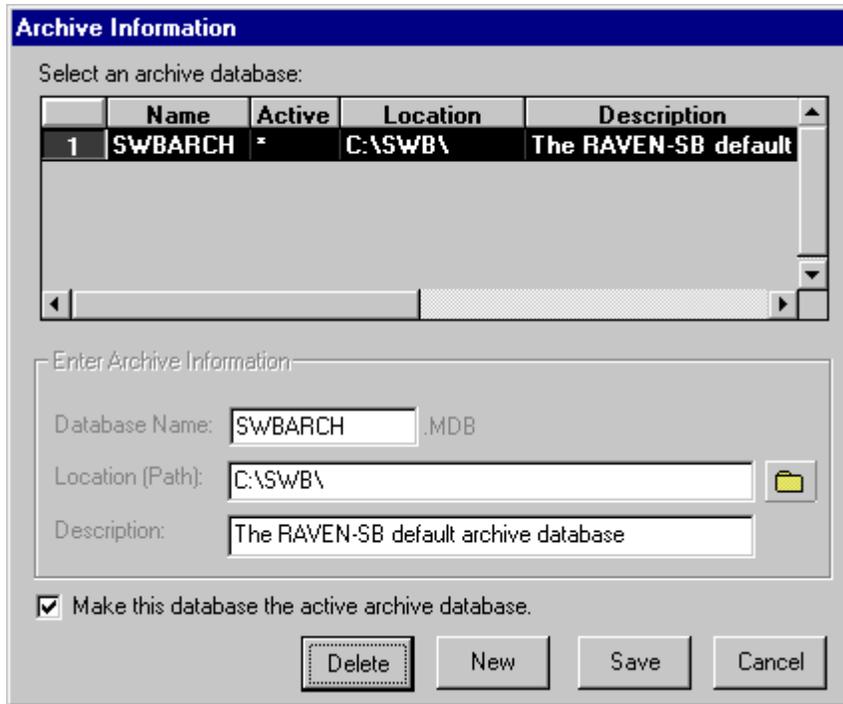
## *Archive Setup*

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The **Archive Setup** function allows the user to define an archive database for a resident's assessments. By default, when the RAVEN-SB software is installed, the SWBARCH.MDB archive database is created.

The System Administrator has the capability to add an archive database. After selecting the ADMINISTRATION menu item, select the Archive Setup option to display the **Archive Information** screen.



The **Archive Information** screen displays two separate sections. The *Select an Archive Database* section displays the name of the archive database, a flag indicating whether that archive database is the active archive database, the location of the archive database, and a description. To add a new archive database, click on the <NEW> button and enter the following information in the *Enter Archive Information* section:

- Up to an eight character archive database name
- A path for the location of the archive databases
- A description for the archive databases

After completing the *Enter Archive Information* section, click on the <SAVE> button to save the archive databases or on the <CANCEL> button to cancel the archive databases.

A user may choose to delete an archive database if all of the records contained in it have been restored, it was created in error, or it was never utilized. To delete an archive database, select an archive database from the *Select an Archive Database* list and click on the <DELETE> button. Note that an archive database must be empty before it can be deleted.

To mark an archive database as the active archive database, select an archive database from the *Select an Archive Database* section. Click on the *Make this Database the Active Archive Database* check box and then click on the <SAVE> button to mark the selected archive database as the active archive database.

To exit the **Archive Setup** function, click on the <CANCEL> button.

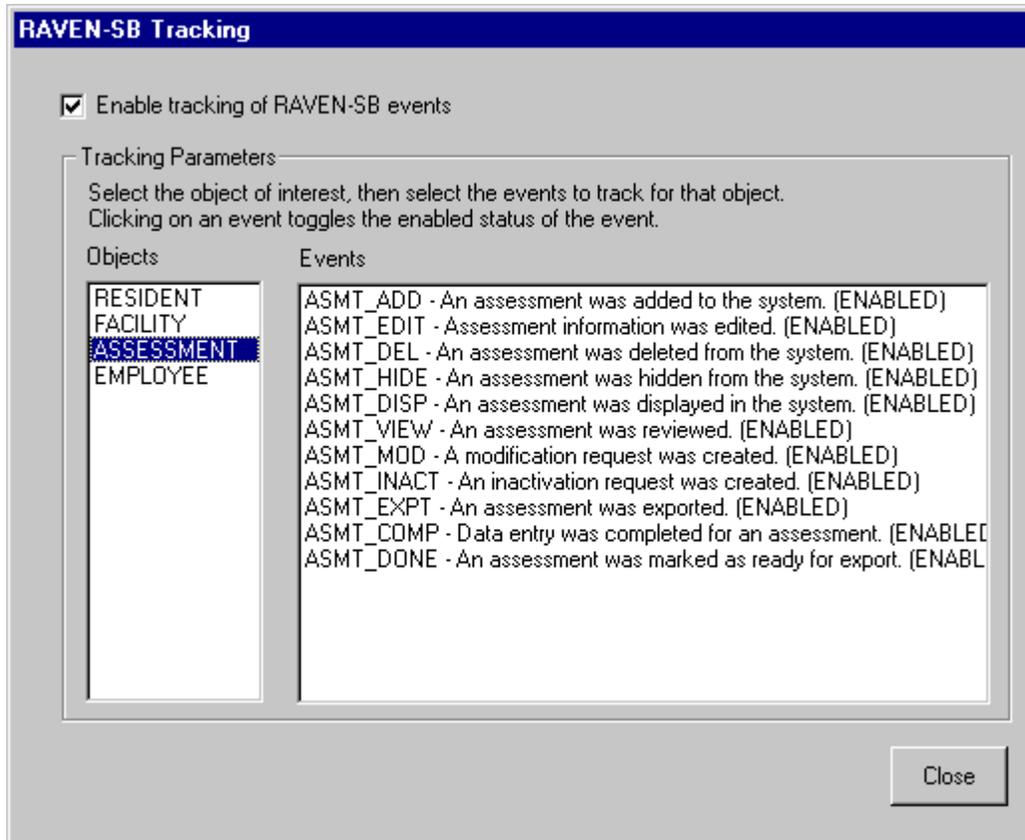
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## *Tracking Setup*

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The purpose of the **Tracking** function is to record significant events associated with the primary objects in the RAVEN-SB system: Resident; Facility; Employee; and Assessment. If the Tracking system is enabled, then any events enabled for these objects will be captured and saved to the SWBTRACK.MDB database. This function enables the System Administrator to generate a history of events.

For example, as depicted in the screen below, each time an assessment is added, edited, or deleted, a record containing the Assessment ID, the Event ID, the Employee ID, and the time stamp of when the event occurred is created in the Assessment table of the SWBTRACK.MDB. In addition, each time an assessment is modified or inactivated, an appropriate event is generated.



After a System Administrator selects the Tracking Setup option from the ADMINISTRATION menu item, the **RAVEN-SB Tracking** screen will be displayed. Click on the *Enable Tracking of RAVEN-SB Events* check box to enable the **Tracking** function. Select one of the objects, Resident, Facility, Assessment, or Employee, from the *Objects* list box to display a list of the possible events to track in the *Events* list box. Clicking on an event toggles the enabled status of that event. Click on an event to give it a status of "Enabled". Click on an enabled event to remove its enabled status. After defining the required Tracking events, click on the <CLOSE> button to exit the **Tracking** function.

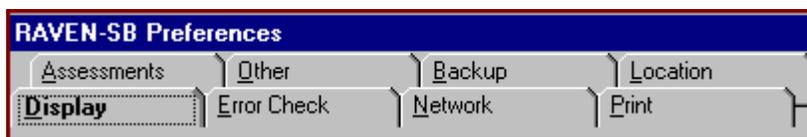
**NOTE:**

To stop the tracking of RAVEN-SB events, yet maintain the tracking settings, click on the *Enable Tracking of RAVEN-SB Events* check box to disable the **Tracking** function.

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## Preferences

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## Display

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### Choose to Disable Color Tabs

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When data entry is performed in RAVEN-SB, the main tabs are displayed in red and the subtabs are displayed in blue. RAVEN-SB gives the System Administrator the capability to turn off these colors and display gray tabs and subtabs. When gray tabs and subtabs are displayed, the name of the tab or subtab selected for data entry is bolded.

After selecting the Preferences option from the ADMINISTRATION menu and clicking on the Display tab, click on the *Disable Color Tabs* check box to disable the colored tabs/subtabs.

---

## Error Check

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### Choose to Display Warning Messages When Error Checking Assessments

---

RAVEN-SB will display warning messages as part of the error checking process. These messages indicate whether assessments are in violation of the timing requirements as defined in the SB-MDS 1.0 Specifications. The messages do not prevent completion or submission of assessments. They are displayed for information purposes only.

The RAVEN-SB software defaults to display warning messages only when the <ERROR CHECK> button on the **Export** screen is clicked. After selecting the Preferences option from the ADMINISTRATION menu and clicking on the Error Check tab, click on the *Show Warning Messages when Error-Checking Assessments* check box to display warning messages during the **Data Entry** or **Import** processes.

**NOTE:**

Warning messages are always displayed when error checking from the **Export** screen.

---

## Network

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By default, a user has the option of accessing an assessment already marked as open for data entry. RAVEN-SB has the capability to allow only one user to access an assessment at a time. This option is useful for network environments.

After selecting the Preferences option from the ADMINISTRATION menu and clicking on the Network tab, click on the *Stop Users from Entering Open Assessments* check box. This selection will prevent multiple users from opening the same assessment.

---

## Print

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### Specify a Path for the Adobe Acrobat Reader in Order to Print Assessment Forms

---

To print the RAVEN-SB assessment forms, the file/path name for the Adobe Acrobat Reader must be entered. The 32-bit Adobe Acrobat Reader executable name is ACROD32.EXE. From the ADMINISTRATION menu item, select the Preferences option and then click on the Print tab and enter the file path/name into the *Adobe Acrobat Reader Executable File Path/Name* text box (e.g., C:\PROGRAMS FILES\ADOBE\ACROBAT5\READER\ACROD32.EXE.).

**NOTE:**

A complete explanation of the **Print Assessment(s)** function is available in the System Setup section.

---

## Enable Silent Printing

---

RAVEN-SB can prevent the printer dialog box from appearing when launching Adobe Acrobat Reader to print an assessment on the SB-MDS forms. After selecting the Preferences option from the ADMINISTRATION menu and clicking on the Print tab, check the *Enable Silent Printing* check box to enable this feature.

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## Assessments

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### Choose Radio Button or Check Box for Display of Option Pick One Variables

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For variables that allow the user to select only one choice (e.g., Option Pick One), the default display uses radio buttons. For keyboard data entry that utilizes tabbing between variables, radio buttons automatically select the first item displayed in the list. Choosing check boxes instead of radio buttons for this variable type alters system behavior. This selection allows tabbing to and from Option Pick One-type variables without forcing the user to select an option. If an option is selected, RAVEN-SB will still enforce the rule that ensures only one option from the list of items can be selected.

After selecting the Preferences option from the ADMINISTRATION menu and clicking on the Assessments tab, click on the *Use Check Boxes for Variables Where You Select Only One Choice* radio button to change the display to check boxes.

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## Other

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### Specify Location Name and Telephone Number

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By specifying a location name and telephone number for this installation of RAVEN-SB, employees who log *in* will be associated with this location. The User List menu option from the **RAVEN-SB Management** screen displays this information. After selecting the Preferences option from the ADMINISTRATION menu and clicking on the Other tab, type the location name and telephone number of the current installation in the *Location Name* and *Telephone* text boxes provided.

**NOTE:**

The location name and telephone number for a new employee will not be displayed until that employee logs into the system.

---

## Enable Warning for Number of Assessments in Archive Database

---

By default, RAVEN-SB will not warn the user of the number of assessments contained in an archive database. However, RAVEN-SB gives the user the capability to display a warning when an archive database has reached a specific number of records.

After selecting the Preferences option from the ADMINISTRATION menu and clicking on the Other tab, click on the *Warn if an Archive Database Contains \_\_\_ or More Assessments* check box to display warning messages during the archiving process. The default value for the number of assessments on which to warn is 1000. To change the default number, click in the box and enter the desired number, up to 99,999.

---

## Backup

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By specifying a path for the **Backup** function in RAVEN-SB and a Compression option, the collection databases in the RAVEN-SB system will be automatically backed up every time the system is exited normally. The path for the backup process cannot be the same as the RAVEN-SB installation path. For example, if RAVEN-SB is installed to C:\SWB, the backup path cannot be C:\SWB. If the path is left blank, the **Backup** function is disabled. A complete explanation of the **Backup** function is available in the System Setup section.

---

## Location

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### Specify Location of Databases

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By default, RAVEN-SB looks for the data entry databases (SWB.MDB) in the application directory. To specify a different location for these files, select the Preferences option from the ADMINISTRATION menu item and click on the Location tab, then enter the desired path in the *Path* text box provided.

**NOTE:**

To use the new path, exit the system and restart the RAVEN-SB software.

---

### Specify Default Paths for the RAVEN-SB Export, Import, and Print (from file) Functions

---

The user can optionally specify default locations for the following:

- Where export files are created
- Where import files are located
- Where print (from file) files are found

Note that for exports an output file name must be specified. This file will be written to the export path, if specified. After selecting the Preferences option from the ADMINISTRATION menu item and clicking on the Location tab, enter the path locations for the desired features.

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## UNDER THE HELP MENU, THE USER CAN:

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### *Access General Help and About Help*

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**General Help** provides RAVEN-SB system help regarding how to use and maintain the RAVEN-SB software. **About (RAVEN-SB)** identifies software and dictionary version information. From the **RAVEN-SB Management** screen or any of the **RAVEN-SB Data Entry** screens, click on the HELP menu and select either the General Help or the About options.

**NOTE:**

Context sensitive help is available from any window by pressing the <F1> key. Individual variable help is also available by right mouse clicking anywhere within a variable's frame.

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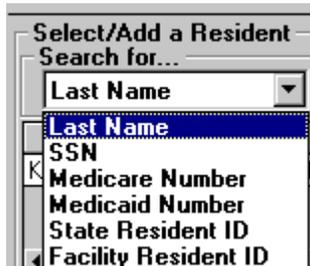
## SELECT/ADD A RESIDENT

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---

The Resident Selection section enables the user to select the resident whose assessment history will be accessed. Residents are displayed in alphabetical order. Use the scroll bars on the *Resident* list box to view the available residents and click on the preferred row to select a resident. If there are more than 1,000 residents from which to choose, click on the <BROWSE NEXT 1000> button to display the next 1,000 residents.

The user may search the Resident database by selecting the Last Name, Social Security Number (SSN), Medicare Number, Medicaid Number, State Resident ID, or Facility Resident ID of a resident in the *Search for...* drop-down list box.



After selecting an item from the *Search for...* drop-down list box, click on the <SEARCH> button to begin the search. The closest match will be the first item displayed in the *Resident* list box. To remove the search, clear the = text box and click on the <SEARCH> button. The residents will then be displayed alphabetically for selection within the *Resident* list box.

The user may want to reduce the number of residents available from which to choose by filtering on Unit. This filtering is accomplished by entering the desired Unit in the *Filter for Unit...* text box. Click on the <FILTER> button to begin the filter. An alphabetical list of residents by unit will be displayed in the *Resident* list box. If the Unit list is extensive, the user can search this list by Last Name, Social Security Number (SSN), Medicare Number, Medicaid Number, State Resident ID, or Facility Resident ID. To remove the filter, clear the Unit field and click on the <FILTER> button. An alphabetical list of residents will then be displayed for selection within the *Resident* list box.

The user can also sort by a field (e.g., Last Name, First Name, MI, SSN, Unit, Medicare Number, Medicaid Number, State Resident ID, or Facility Resident ID) by clicking on the column header. Clicking once on the column header will sort the list in ascending order. Clicking on the column header again will sort the list in descending order.

The <ADD RESIDENT> button allows the Clinical Supervisor or System Administrator to add a new resident record. The user must complete the Last Name, Gender, Birth date, and Race/Ethnicity before the record can be saved. The remaining fields are optional.

To edit, hide, or delete an existing resident record, the Maintain Resident Database option from the ADMINISTRATION menu item must be selected. Refer to the Maintain Resident Database section for a detailed explanation of how to add/edit/hide/delete a resident.

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## ARCHIVE A RESIDENT

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The purpose of the **Archive** feature is to help maintain the size of the system database SWB.MDB. The **Archive** function allows the System Administrator to archive a resident and his or her associated assessments when the last completed assessment was a discharge assessment and all of the assessments for that resident have a status of "Exported". For instance, if a resident has been discharged due to death, discharged with no intention of returning, or a specified amount of time has passed since his/her last discharge assessment, he/she and all of his/her assessments can be archived for storage purposes, thus reducing the size of the system database SWB.MDB.

To begin the **Archive** function, select a resident whose last completed assessment was a discharge assessment and whose assessments have all been exported and click on the <ARCHIVE RESIDENT> button. RAVEN-SB will archive that resident's assessments to the active archive database. The System Administrator also has the capability to create an archive database and specify the location of that archive database. Click on the ADMINISTRATION menu item and select the Archive Setup option to display the **Archive Information** screen. See the Archive Setup section under the Data Entry/Select Case Functions section for a complete explanation of creating an archive database.

**NOTE:**

To view archived resident records on the **Resident Information** screen, click on the ADMINISTRATION menu item, select the Maintain Resident Database option, and click on the *View Archived Residents Also* check box. To view archived resident records from the **RAVEN-SB Management** screen, click on the FILE menu item and select the Open Archive option.

It is recommended that the system database, SWB.MDB, be repaired and compacted after several archives have been performed. In order to complete the **Repair/Compact** process, all users must exit the RAVEN-SB software. See Appendix A for a complete description of executing the **Repair/Compact** function.

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## RESTORE A RESIDENT

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The **Restore** function allows the System Administrator to reinstate a resident who has been archived and removed from the system database SWB.MDB. To begin the **Restore** function, select the Open Archive option from the FILE menu to display the residents who have been archived in the default archive database or in the archive database specified on the **Archive Information** screen. All archived residents will be displayed on the **RAVEN-SB Management** screen. Select a resident and click on the <RESTORE RESIDENT> button to reinstate that resident. To close the archive database and display the active residents in the system database, SWB.MDB, reselect the Open Archive option from the FILE menu.

While in the **Restore** mode of RAVEN-SB, the user has limited functionality. These features include: switching between the **Archive** and **Restore** functions; the **Reports** function; the **Log Off/On** function; accessing **Help**; viewing and printing assessments; and RUGs

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## SELECT/ADD AN ASSESSMENT

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The Assessment Selection section allows the user to view the history of previous assessments and their status for the currently selected resident. For each assessment, the date, assessment type, correction number, status, last user to access the assessment, and open status (an asterisk [\*] indicates an assessment is currently open for data entry) are displayed.

**NOTE:**

An assessment is "Open" once it is accessed for data entry. The open status only occurs when an assessment is accessed in a network installation of RAVEN-SB. The *Open* box will be empty when a user is working in a stand-alone configuration.

An assessment is selected by scrolling through the list and clicking on the preferred assessment. The user can access the selected assessment to perform data entry by clicking on the <ENTER DATA> button or by double-clicking on the assessment. The user may run RUGs (both discussed in this manual) or print the highlighted assessment by clicking on the appropriate button.

The Add Assessment section also enables the user to initiate a new assessment for the selected resident. Click on the <ADD ASSESSMENT> button to access the **Reasons for Assessment -- Add Assessment** screen (described below) before the assessment is added to the resident.

Note the following:

- Newly created assessments have a status of "New"
- Edited assessments have a status of "In Use"
- Exported assessments have a status of "Exported"
- Closed assessments (data entry completed) have a status of "Export Ready"
- Hidden assessments have a status of "Hidden"

Hidden assessments are only visible when "View Hidden Assessments Also" is checked. This feature is automatically enabled when an assessment is hidden.

---

## *Reason for Assessment*

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When the user clicks on the <ADD ASSESSMENT> button, the **Reasons for Assessment -- Add Assessment** screen is displayed.

**Reasons For Assessment - Add Assessment**

Enter reasons for assessment as taken from item 11:

**11. REASONS FOR ASSESSMENT**

a. Primary Reasons for Assessment

- 00. PPS assessment for Medicare Payment
- 06. Discharged--Return Not Anticipated
- 07. Discharged--Return Anticipated
- 09. Reentry
- 11. Assessment--Not for Medicare payment

b. PPS Scheduled Assessments

- 1. 5-day     7. 14-day
- 2. 30-day     9. Other
- 3. 60-day
- 4. 90-day
- 5. Readmission/Return

c. OMRA Assessment

d. Clinical Change Assessment

e. State-Required Assessment

f. Assessment Needed for Other Reasons (e.g., HMDs, MSP, sanction situations, etc.)

The selection made in Section 11a (Primary Reason for Assessment) will determine the options available in each subsequent section. After the selections have been made, click on the <ADD> button to save those choices and return to the **RAVEN-SB Management** screen or click on the <CANCEL> button to cancel the assessment and return to the **RAVEN-SB Management** screen.

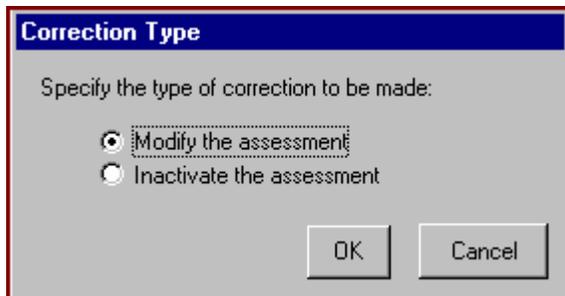
**NOTE:**

If the RAVEN-SB Sequencing of Assessments option is selected, the user will be restricted to adding assessments that can sequentially follow the assessment highlighted on the **RAVEN-SB Management** screen.

---

## *Correct an Assessment*

---



Once an assessment has been Exported only a System Administrator has access to it. Listed below are the two types of corrections that can be performed:

- **Assessment was Submitted to the National Database and was Accepted. Correction to Fields is Necessary.** By selecting this option, a copy of the assessment record is created with an incremented correction number, and the user is taken directly into data entry for that assessment. After the necessary corrections are made, the assessment can be completed, exported, and re-submitted to the National Assessment Collection Database.
- **Assessment was Submitted to the National Database and was Accepted. Inactivation of the Assessment is Necessary.** By selecting this option, a copy of the assessment record is created. The user is taken directly into data entry for that assessment, however the entire assessment is view-only. After viewing the assessment, the user can exit the assessment. The correction number on the RAVEN-SB Management screen will be 99.

**NOTE:**

After exporting an inactivation record, a new assessment containing the data from the inactivated assessment can be created. Select the inactivated assessment from the **RAVEN-SB Management** screen and click on the <CORRECT ASSESSMENT> button. A confirmation box will appear. Click on the <OK> button to create the assessment prepopulated with the data from the inactivated assessment. The correction number for this assessment will be 00.

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## **SPECIAL FEATURES (RAVEN-SB MANAGEMENT SCREEN)**

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### *View Only (Data Entry Not Allowed)*

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The View Only (Data Entry Not Allowed) option is only visible to users with Clinical Supervisor or System Administrator rights. If checked, this option allows the Clinical Supervisor or System Administrator to view an assessment in read-only mode. This option is useful in reviewing the work of other users while ensuring that no data is accidentally edited.

---

### *View Hidden Assessments Also*

---

The View Hidden Assessments Also option is available only to users with Clinical Supervisor or System Administrator rights. If checked, this option enables the user to see and access previously hidden assessments (i.e., assessments saved in the database but not available for viewing by users with Data Entry privileges only).

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## EXIT

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The user may exit the RAVEN-SB software by clicking on the <EXIT> button or by selecting the Exit option from the FILE menu item.

# RAVEN-SB DATA ENTRY WINDOW

The screenshot shows the RAVEN-SB Data Entry window with the following components and data:

- Title Bar:** RAVEN-SB Data Entry - In Use
- Menu Bar:** File, RUGs, SB\_SUB\_REQ, Administration, Help
- Data Entry Top:**
  - 1c. Last=FRANKENHEIME, 7a. SSN=546879413
  - 1a. First=JOHN, 3. Birthdate=05/05/1925
- Tabs/Subtabs:** 31 - 37 (selected), 38, 39 - 41, 42 - 45; 1 - 10 (selected), 11 - 16, 17 - 22, 23 - 27
- 1. Resident Name (AA1):**
  - a. (First): JOHN
  - b. (Middle Initial): \_
  - c. (Last): FRANKENHEIMER
  - d. (Suffix): \_
- 2. Gender (AA2):**
  - 1. Male
  - 2. Female
  - UTD
- 3. Birthdate (AA3):** 05/05/1925
- 4. Marital Status (A5):**
  - 1. Never married
  - 2. Married
  - 3. Widowed
  - 4. Separated
  - 5. Divorced
  - UTD
- 5. Race/Ethnicity (Check all that apply):**
  - a. American Indian/Alaskan Native
  - b. Asian
  - c. Black or African American
  - d. Hispanic or Latino
  - e. Native Hawaiian or other Pacific Islander
  - f. White
- 6. Zip Code (AB4) - Enter code for the pre-hospital residence:** 22033
- 7. Resident SSN and Medicare Numbers (AA5):**
  - a. Social Security Number: 546879413
  - b. Medicare or Railroad Insurance Number: 9
- 8. Resident Medicaid Number (AA7) - (Enter + if pending or N if not a Medicaid recipient in first digit followed by blanks):** 8
- 9. Facility Provider Number (AA6):**
  - a. State Medicaid Provider Number: 1
  - b. Medicare Provider Number: 2
- 10. Assessment Reference Date (A3a):**
  - a. Last day of MDS observation period: \_/\_/\_\_\_
  - b. Original (00) or correction (enter number of correction): 00

The **Data Entry** screen consists of the following components:

- **Title Bar.** Displays the RAVEN-SB function **Data Entry**.
- **Menu Bar.** Displays the list of functions that can be performed on the **Data Entry** window. Each of these functions contains additional options that can be displayed by using the mouse.
- **Data Entry Button Bar.** Provides the available **Data Entry** functions. Currently, the following functions are available: **Enter Notes** (for an assessment), and **Pause Data Entry** (pause abstraction time for data entry).
- **Data Entry Top.** Displays the Last Name, First Name, Social Security Number (SSN), and Birth Date of the selected Resident at the top of the **Data Entry** window.
- **Tabs/Subtabs.** Displays the names of the screens for the selected set of screens. Each tab can have up to five subtabs associated with it. When selecting a tab or subtab, the **Data Entry** window of the selected screen or subscreen will open in the space below it.
- **Data Entry Window.** Contains variables that belong to the selected screen or subscreen. On this screen, data entry can be performed for each variable.

## ENTER DATA FOR A VARIABLE

Perform data entry after selecting a Resident record and an Assessment form. See previous sections, Selecting/Adding a Resident and Selecting/Adding an Assessment for further information. Data entry can be exited at any time by clicking on the FILE menu item and selecting the Exit and Validate Assessment option.

Using the mouse is the most efficient way to move around the data entry system. Tabbing is also available. Since Microsoft™ has restrictions pertaining to variables with radio buttons, the mouse must be used to move between variables of this type (**Option (Pick One)**).

To begin data entry, point to the preferred tab or subtab and click on it to open the corresponding screen. Follow the descriptions below to enter data for the various types of variables.

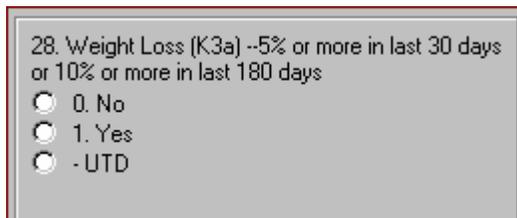
---

---

### *Option (Pick One)*

---

---



28. Weight Loss (K3a) --5% or more in last 30 days  
or 10% or more in last 180 days

0. No  
 1. Yes  
 - UTD

The variable type **Option (Pick One)** includes the options from which only one option can be chosen. Choose an item by selecting the radio button next to the item. Clicking on the <RIGHT MOUSE> button and selecting the Clear Variable option, clears variables with radio buttons.

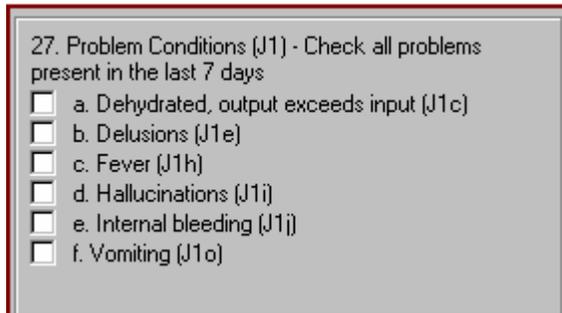
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### *Option (Pick One or More)*

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27. Problem Conditions (J1) - Check all problems  
present in the last 7 days

a. Dehydrated, output exceeds input (J1c)  
 b. Delusions (J1e)  
 c. Fever (J1h)  
 d. Hallucinations (J1i)  
 e. Internal bleeding (J1j)  
 f. Vomiting (J1o)

The variable type **Option (Pick One or More)** includes options from which one or more items can be chosen. Choose the item(s) by marking the check box(es) next to the desired item.

**NOTE:**

Check boxes have three possible states: checked, unchecked, and checked/grayed. Checked indicates that the option is true. Unchecked indicates that the option is false. Checked/grayed indicates that the option is Unable to Determine (UTD). To set the option to UTD, click the <RIGHT MOUSE> button on the check box and select the Set as UTD option.

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## *Date*

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12. Prior Acute Care Stay -  
Date of admission for prior  
qualifying hospital stay

The variable type **Date** accepts data entered in the date format that has been specified in the design (the default format for date is MM/DD/YYYY).

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---

## *Number*

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40. Physician Visits (P7) - In the LAST 14 DAYS (or since swing  
bed admission/readmission if less than 14 days in facility) how  
many days has the physician (or authorized assistant or  
practitioner) examined the resident? (Enter 0 if none)

The variable type **Number** accepts data entered in numeric format, including one decimal point, if applicable. If the value cannot be determined, press the hot key combination **<SHIFT>** and **<?>**. A dash will be displayed.

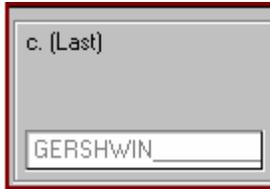
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## *String*

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---



The variable type **String** accepts up to 99 characters in any alphanumeric combination. If the value cannot be determined, press the hot key combination **<SHIFT>** and **<?>**. A dash will be displayed.

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## **SPECIAL FEATURES (RAVEN-SB DATA ENTRY SCREEN)**

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### *Note Box*

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To enter a general note about a variable during data entry, select the **<NOTES>** button. The box allows the user to enter a note containing up to 32,000 alphanumeric characters. Since all the notes for a given assessment are stored in one file, copying the variable screen title before writing a note provides a good reference point to the variable. In order to paste the screen title of the current variable at the bottom of the note, select the **<COPY>** button. Click on the **<CLOSE>** button to save the notes and return to the **Data Entry** window.

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### *Pause Button*

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When the user selects the **<PAUSE ABSTRACTION>** button, the internal RAVEN-SB clock that keeps track of the amount of time spent on an assessment is stopped.

**NOTE:**

When in **View Only** mode, abstraction time does not accumulate.

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### *Clear Value on a Variable Radio Button*

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To clear variables with radio buttons, click on the **<RIGHT MOUSE>** button and select the Clear Variable option.

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---

### *View Help*

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To display the Help available for each variable, click on the <RIGHT MOUSE> button and select the View Help option. For variables that do not have any other options associated with them (e.g., the UTD option), the help will be displayed immediately.

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## *Print Screen*

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Selecting the Print Screen option from the FILE menu item allows the user to print the current screen. If the screen does not print properly (possibly due to the default printer settings), another process, screen capture, is available.

Several steps need to be followed when capturing a screen for printing. To copy a screen, press on the <PRINT SCRNR> button or press on the <ALT> + <PRINT SCRNR> buttons to capture only the active window. After opening a word processing package, such as Word, or a graphics package, such as Paint, paste the screen into the document by pressing on the <CTRL> + <V> buttons. The screen also can be copied into a document by using the paste function available in the application being used.

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## *Edit Facility Data*

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During data entry, the user will have access to the **Facility Information** screen by selecting the Edit Facility Data option from the ADMINISTRATION menu item. This feature allows the user to correct the Facility Information for an assessment.

For example, if incorrect information is added during the setup process for the facility, the user can edit this information during the data entry process. This edit will correct the information for this assessment and future assessments. Prior assessments are not automatically corrected. It is necessary to revisit those assessments to update their facility information.

After returning to the **RAVEN-SB Management** screen, select each assessment (by resident) that contains the incorrect information and click on the <ENTER DATA> button. A message indicating that the data have been changed for the facility will appear and the user has the option to update the current assessment.

**NOTE:**

Only the Facility and Agent Information can be edited on the **Facility Information** screen during **Data Entry** mode. The Facility/State Options cannot be edited while in **Data Entry** mode.

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## *Edit Resident Data*

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During data entry, the user will have access to the **Resident Information** screen by selecting the Edit Resident Data option from the ADMINISTRATION menu item. This feature allows the user to correct the Resident Information for an assessment.

For example, if incorrect information is added during the setup process for a resident, the user can edit this information during the data entry process. This edit will correct the information for this assessment and future assessments.

Prior assessments are not automatically corrected. It is necessary to revisit those assessments to update their resident information. After returning to the **RAVEN-SB Management** screen, select each assessment that contains the incorrect information for the resident and click on the <ENTER DATA> button. A message

indicating that the data have been changed for the resident will appear and the user has the option to update the current assessment.

**NOTE:**

When editing the **Resident Information** screen during data entry, only the Resident Information portion of the screen will be visible. The user cannot search for or select another resident.

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## CALCULATE/VIEW RUGS (IF APPLICABLE)

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**Calculate RUGs**

RUG Values:

43MDCR. Medicare case mix group  Version

Calculation Method

CMI Set

---

43STATE. State case mix group  Version

Calculation Method

CMI Set

---

NOTE: RUGs are stored with this assessment.

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44. HIPPS Code

RUG calculations are automatically performed for an assessment when the data entry for the assessment has been completed and its status is made "Export Ready". RUGs can be calculated for all applicable assessments. The RUGs can be recalculated at any time during data entry. Click on the RUGs menu item in data entry to recalculate the RUGs. The **Calculate RUGs** screen will be displayed. Note, however, that the RUG values are not saved until the assessment is locked.

RUGs can also be viewed for an assessment from the **RAVEN-SB Management** screen using the <RUGS> button. If the assessment is "Export Ready" or "Exported", the RUGs have already been calculated and will merely be displayed in the **View RUGs** screen. RUGs will be recalculated and displayed for applicable assessments with other statuses. Note that the calculation method and CMI set are not displayed, since these parameters may have been modified by the user since the RUGs were calculated and stored for the assessment.

See the Maintain Facility Database section in the System Setup chapter for a complete description of how to setup the RUG calculations.

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## SB\_SUB\_REQ

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**SB\_SUB\_REQ**

Select the appropriate SB\_SUB\_REQ value for this assessment:

1 - If the patient IS in a Medicare- or Medicaid-certified swing bed. The Swing Bed-MDS event (assessment reference date, discharge date, or reentry date) DID occur while the patient was in a Medicare- or Medicaid-certified swing bed.

0 - If the patient IS NOT in a Medicare- or Medicaid-certified swing bed. The Swing Bed-MDS event (assessment reference date, discharge date, or reentry date) occurred while the patient was in a bed other than a certified swing bed.

Save Cancel

Click on the SB\_SUB\_REQ menu item to display the **SB\_SUB\_REQ** screen. All assessments are required to have a SB\_SUB\_REQ value.

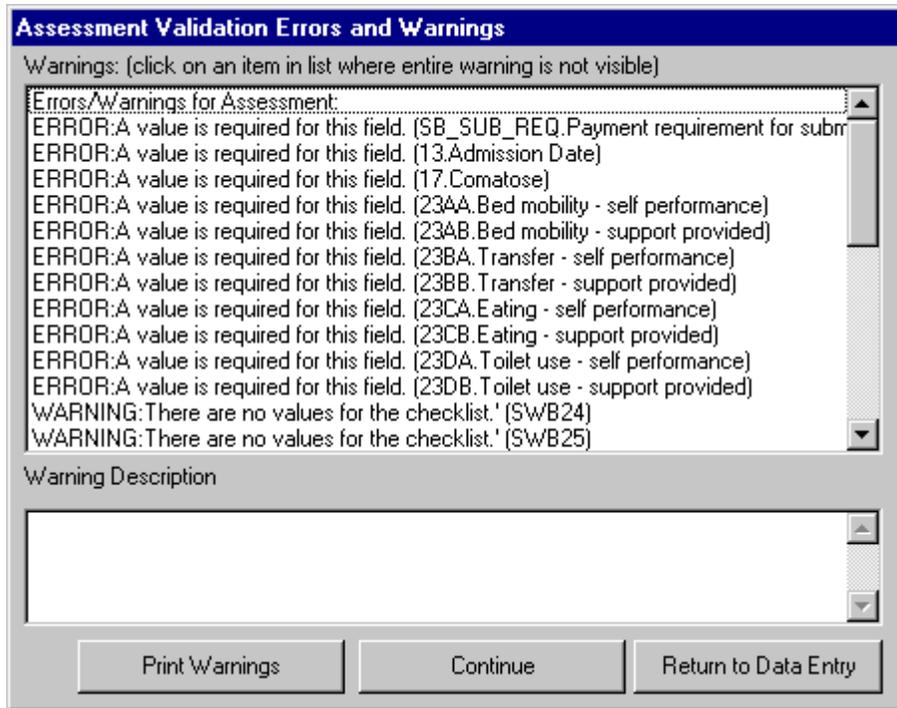
---

## ASSESSMENT VALIDATION AFTER EXIT

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When the user attempts to exit data entry, the system will check all of the rules in place. As the rules are being processed, the status of the validation will be displayed in the center of the screen. One such rule is the mandatory variable rule. All mandatory variables must have valid data values. If a mandatory variable is left blank (i.e., data are not entered), the user will be warned that this variable is mandatory (e.g., ERROR: A value is required for this field.) The user will not be able to mark an assessment as complete until all mandatory variables have been entered.

In addition, any assessment validation warnings will be displayed. Since these warnings are for informational purposes and are not considered errors, they are not required to be resolved before an assessment can be marked as complete.



Three options are available on the **Assessment Validation Errors and Warnings** screen. Clicking on the <PRINT WARNINGS> button will print the first 30 errors/warnings listed on the screen. Selecting the <CONTINUE> button will take the user to the **Assessment Status** screen where the assessment can be exited by marking it as complete or in use. Choosing the <RETURN TO DATA ENTRY> button will allow the user to continue the data entry process.

**NOTE:**

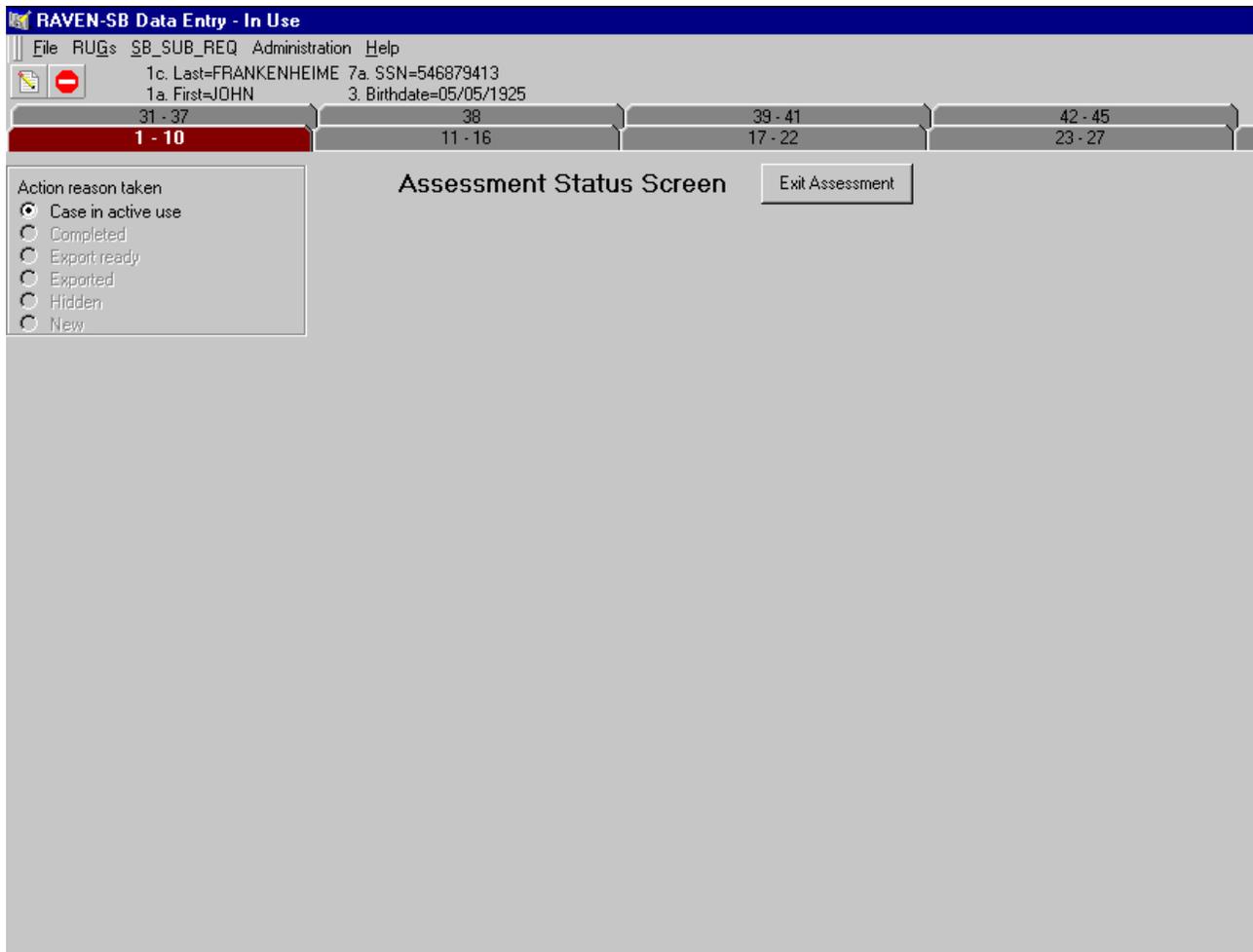
To enable the display of warning messages for timing requirements, the System Administrator must select the Error Check tab from the PREFERENCES menu item and then click on the *Show Warning Messages when Error-Checking Assessments* check box.

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## ASSESSMENT STATUS WINDOW

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On the **Assessment Status** screen, the status of an assessment must be marked before the assessment can be exited.



The various options that can be selected when exiting the **Assessment Status** screen include:

- Assessment in active use -- An assessment has been edited
- Completed -- Data entry has been completed for an assessment

The options that only can be viewed when exiting the **Assessment Status** screen include:

- New -- A newly created assessment
- Exported -- An exported assessment
- Hidden -- A hidden assessment
- Export Ready -- An assessment with a status of closed (data entry completed)

At a minimum, the user will be required to mark the assessment as "Assessment in active use" or "Completed". These two options are the default options on the **Assessment Status** screen.

In addition, the other options available on the Assessment **Status** screen, New, Exported, Hidden, and Export Ready, will automatically be selected depending on the type and status of the Assessment. To mark the status, select the best choice and press the <EXIT ASSESSMENT> button.

**NOTE:**

Once an assessment has been marked "Export Ready" or "Exported", only users with Clinical Supervisor or System Administrator rights are permitted to reopen it.

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# RAVEN-SB DATA EXPORT

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## EXPORTING ASSESSMENTS

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To initiate the **Export** function, select either the Export option from the OPTIONS menu item or the <EXPORT> button on the **RAVEN-SB Management** screen.

**RAVEN-SB Export**

**Export Details**

New Export (Assessments Marked as Export Ready)  
 Previous Export (Assessments Marked as Export Ready or Exported)

Production Submission  
 Test Submission

Export Path and File Name (including extension): C:\SWB\ 

Export Description (optional):

Previous Exports:

Select Assessments to be Included in Export

#	Name	11A	11B	Date	43MDCR	43STATE	HIPPS	Status
---	------	-----	-----	------	--------	---------	-------	--------

Select All  Clear All

Print Assessment List

Error Check Export Close

The RAVEN-SB **Export** function enables data for "Export Ready" assessments to be output from the RAVEN-SB database into the Data Record Layout format (i.e., 1,814-byte string) suitable for submission to the State. Note that each data field in each exported assessment has been error-checked in accordance with the rules specified in the RAVEN-SB Data Record Layout.

Following is a description of the **Export** function.

- Select the type of submission -- New Export or Previous Export. Previous Exports are described in the next section.
- After selecting the New Export radio button, a description of the file may be entered into the *Export Description* text box. If no description is entered, a default description will be generated stating the number of assessments exported. The assessments will be displayed in the *Select Assessment to be Included in Export* text box. Select the assessment(s) to be included with this export from the *Select Assessments to be Included in Export* text box. To select one assessment, click on the desired assessment. To select more than one assessment, use the <SHIFT> or <CTRL> keys. To include all of the displayed assessments for export, click on the Select All radio button. Click on the <CLEAR ALL> button to deselect all highlighted assessment.
- Enter the path/file name into the *Export File Path/Name* text box. Either type the information in the text box or click on the <FILE FOLDER> icon, select a path and enter a file name. The data will be saved in text file format. The user may want the file name to correspond to the description used in the *Export Description* text box.

**EXAMPLE:**

For easy reference, the user may wish to create a directory called RAVEN-SB with subdirectories for the year/month. The saved file names could reference the weeks of the month (i.e., C:\SWB\2001\OCTOBER\WEEK1.TXT). This structure will help to organize the export files for submission to the National Assessment Collection Database.

- Select the type of submission -- Production or Test. An assessment receives the status "Exported" once it has been exported using the Production Submission option. Note that the user has the capability to generate a test submission (i.e., create a test export file) without changing the status of the assessment records. This structure allows the agency to validate the submission format with the National Assessment Collection Database.
- Click on the <ERROR CHECK> button to check the highlighted assessments for errors. This action should result in warning messages for timing violations only since each assessment is "Export Ready". The user has the option to print any warning messages that appear.
- Click on the <EXPORT> button to complete the export process. A message will be displayed stating that the export is complete and the file is ready to submit to the State. Click on the <OK> button to close the message box. After the export has been completed, the current date, file and path name, and a description of the exported file will be displayed in the *Previous Exports* text box. Click on the <CLOSE> button to exit the **Export** function and return to the **RAVEN-SB Management** window.

**NOTE:**

Some assessments may not be included in the submission file, however the status of those assessments will change from Export Ready to Exported. The excluded assessments include: (1) Assessments that have SB\_SUB\_REQ=0.

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## RE-EXPORTING ASSESSMENTS

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It also is possible to resubmit previously exported assessments, should an error be detected by the National Assessment Collection Database. To create a resubmission file, the user selects the Previous Export radio button and is presented with a list of previous submissions in the *Previous Exports* list box. After selecting a previous submission, the user may then generate a new export file that contains data for each of the assessments displayed in the *Select Assessments to be Included in Export* text box.

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# RAVEN-SB DATA IMPORT

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## SELECTING IMPORT OPTIONS

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The System Administrator has the capability to import files. Import files must utilize the same format as export files (i.e., they must contain a header record, assessments in the 1,814-byte string format specified in the SB-MDS Data Record Layout, and a trailer record). On the **RAVEN-SB Management** screen, the user may click on the <IMPORT> button or select the **Import** function from the OPTIONS menu item to display the **RAVEN-SB Import Assessments** screen.

The screenshot shows a dialog box titled "RAVEN-SB Import Assessments". It features a text input field for "Import file path/name:" with a folder icon to its right. Below this is a section titled "Import Options" containing two checkboxes: "Assign Exported status to assessments without errors (instead of Export Ready)." and "If necessary, change 10b to the next available value.". Another section titled "Show Warning Messages When..." contains three checkboxes: "A new resident is added.", "A modification request cannot be processed.", and "An inactivation request cannot be processed.". At the bottom, there are three buttons: "Error Check File", "Import", and "Close".

The user must enter an Import file path/name for the file to be imported or use the default file path/name.

Two Import options are available when importing files. They include:

- **Assign Exported Status to Assessments without Errors (Instead of Export Ready).** This feature allows users to specify how completed assessments with no errors are handled by the **Import** function. By default, these assessments are given the status of "Export Ready". However, if this feature is checked, the assessment will be given the status of "Exported".
- **If Necessary, Change 10B to the Next Available Value.** If a modification or inactivation request is valid except for the 10B value, RAVEN-SB can automatically assign the next available value to the 10B variable and proceed with the import of the modification or inactivation.

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## SELECTING TO SHOW WARNING MESSAGES

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During the Import process, the user has the capability to display several types of warning messages. These include: a new resident is added; a modification request cannot be processed; and an inactivation request cannot be processed. Select the desired warnings to be displayed during import by clicking in one or more of the warning check boxes.

For uninterrupted processing, leave these options unchecked.

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## PERFORMING ERROR CHECKS ON AN IMPORT FILE

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Each record in the import file is processed in accordance with the rules specified in the SB-MDS Data Record Layout. The user may check the file for errors by clicking on the <ERROR CHECK FILE> button.

If errors are encountered, a list box describing the line number, field name, and type of each error encountered, as well as the number of records processed, will appear. The user may then click on the <PRINT> button to print the error list or the user may click on the <CLOSE> button to return to the **RAVEN-SB Import Assessments** screen. If no errors are detected, a message box appears to announce that the error check is complete and to display the number of records processed.

**NOTE:**

This function does not import data from any other type of file format.

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## IMPORTING RAVEN-SB DATA

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The user may proceed with the import by clicking on the <IMPORT> button. This action will process all records in the designated import file. The following paragraphs describe how the Import function handles facility, resident, and assessment data.

- **Facility Data**

The Facility information for the header record in the import file is compared with the existing facility information in the SWB database. If the information does not match, the user is given the option to update the facility database.

- **Resident Data**

The Resident information for each assessment in the import file is matched against the data in the existing resident database. The software compares the following fields: First Name, Last Name, Social Security Number, and Gender. If a match is not found, a new entry will be added to the resident database.

By default, a message will not be displayed when a new resident is added; however, the user can override this feature by checking the box labeled "A new resident is added". This feature is useful when importing assessments for a small number of residents who do not have previous resident database information in RAVEN-SB.

- **Assessment Data**

Imported assessments may either have a status of "In Use", "Export Ready" or "Exported". In order for an imported assessment to be "Export Ready" or "Exported", depending on the selected option, the assessment must pass all error checking. All other assessments will be assigned the "In Use" status.

When a modification assessment is imported, the RAVEN-SB software will verify whether or not the prior version of the assessment exists. If the prior assessment is not found, RAVEN-SB will always import the modification assessment. However, if the prior assessment is found, RAVEN-SB will only import the modification assessment if the prior assessment has a status of "Exported".

When importing an inactivation assessment, the RAVEN-SB software must locate the prior version of the assessment and the status of the prior assessment must be "Exported". If RAVEN-SB cannot locate the prior version of the assessment or the status of the prior assessment is not "Exported", the inactivation assessment will not be imported. If RAVEN-SB can locate the prior version of the assessment and the status of the prior assessment is "Exported", the import of the modification assessment will continue.

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# RAVEN-SB HELP

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## GENERAL/ABOUT HELP

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The **General Help** provides information about how to use and maintain the RAVEN-SB software. The **About (RAVEN-SB)** identifies software and dictionary version information. From the **RAVEN-SB Management** screen, or any of the **RAVEN-SB Data Entry** screens, click on the HELP menu and select either the General Help or About options.

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## ADDITIONAL HELP

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Context sensitive help is available from any window by pressing the <F1> key. Individual variable help is also available by right mouse clicking anywhere within a variable's frame.

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# REPORTS

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## SELECT A REPORT TO VIEW/PRINT

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RAVEN-SB provides the user with a report that can be used to review the quality of the abstracted data as well as a report that tracks various events within the RAVEN-SB software.

**NOTE:**

The Event Tracking Report is only available to a System Administrator.

When the **Reports** function is selected, the user will be presented with a **Report Selection** window where the type of report can be specified. After a report type is selected, the report criteria for that report will be displayed.

For each of these reports, a temporary file is always produced. Therefore, it is necessary to specify the location and the name of the file in order to change the default file location and the file name provided by RAVEN-SB.

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## ASSESSMENT DATA ENTRY REPORT

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This report summarizes the data entered for an assessment(s) for quality control/review purposes.

**View/Print Assessment Data Entry Report**

Select a report:

Search For Assessments By:  
 Resident  Status

Select A Status:  
 Search for...

Select A Resident  
 Search for...  
 =   Filter for...  
 Unit =

Last Name	First Name	MI	SSN	Unit
GERSHWIN	GEORGE		894-35-4986	5

Select Assessment(s) Below To Report

After selecting the Assessment Data Entry Report, select either the Resident option or the Status Option to determine the assessments to be used in the report.

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## REPORT ON AN ASSESSMENT(S) USING THE RESIDENT FUNCTION

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- **Search for an Assessment by Resident**

Click on the <RESIDENT> radio button and from the *Search for...* drop-down list box and select the desired criteria on which to search. Follow the instructions discussed in the RAVEN-SB Data Entry section under Select/Add a Resident. Click on the <SEARCH> button to perform the search and display the results in the *Select a Resident* list box. Resident search options include:

- **Last Name.** A list of residents will be displayed by Last Name in the *Select a Resident* list box.
- **SSN.** A list of residents will be displayed by Social Security Number in the *Select a Resident* list box.
- **Medicare Number.** A list of residents will be displayed by Medicare Number in the *Select a Resident* list box.
- **Medicaid Number.** A list of residents will be displayed by Medicaid Number in the *Select a Resident* list box.
- **State Resident ID.** A list of residents will be displayed by State Resident ID in the *Select a Resident* list box.
- **Facility Resident ID.** A list of residents will be displayed by Facility Resident ID in the *Select a Resident* list box.

**NOTE:**

To select assessments that are new or deleted, it is necessary to search by Resident.

After selecting a resident, the associated assessments will be displayed in the *Select Assessment(s) Below to Report* list box on which to report. Selecting one or more assessments on which to report, click on the <OK> button to produce the report(s) or the <CANCEL> button to return to the **View/Print Assessment Data Entry Report** screen. To exit the **Reports** function, click on the <CANCEL> button.

**NOTE:**

A report(s) can take some time to produce depending on the size of the data entry system. Also, if a large number of assessments exist in the system, it is not advisable to select all of the assessments at once because of the amount of time it takes to produce a report(s).

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## REPORT ON AN ASSESSMENT(S) USING THE STATUS FUNCTION

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- **Search for an Assessment by Status**

Click on the <STATUS> radio button and from the drop-down list select the status on which to report. Click on the <SEARCH> button to perform the search and display the results in the *Select Assessment(s) Below to Report* list box. Status search options include:

- **In Use.** An alphabetical list of residents with assessments coded "In Use" will be displayed.
- **Export Ready.** An alphabetical list of residents with assessments coded "Export Ready" will be displayed.
- **Exported.** An alphabetical list of residents with assessments coded "Exported" will be displayed.
- **Hidden.** An alphabetical list of residents with assessments coded "Hidden" will be displayed.

After selecting one or more assessments on which to report, click on the <OK> button to produce the report(s) or the <CANCEL> button to return to the **View/Print Assessment Data Entry Report** screen. To exit the **Reports** function, click on the <CANCEL> button.

**NOTE:**

A report(s) can take some time to produce depending on the size of the data entry system. Also, if a large number of assessments exist in the system, it is not advisable to select all of the assessments at once because of the amount of time it takes to produce a report(s).

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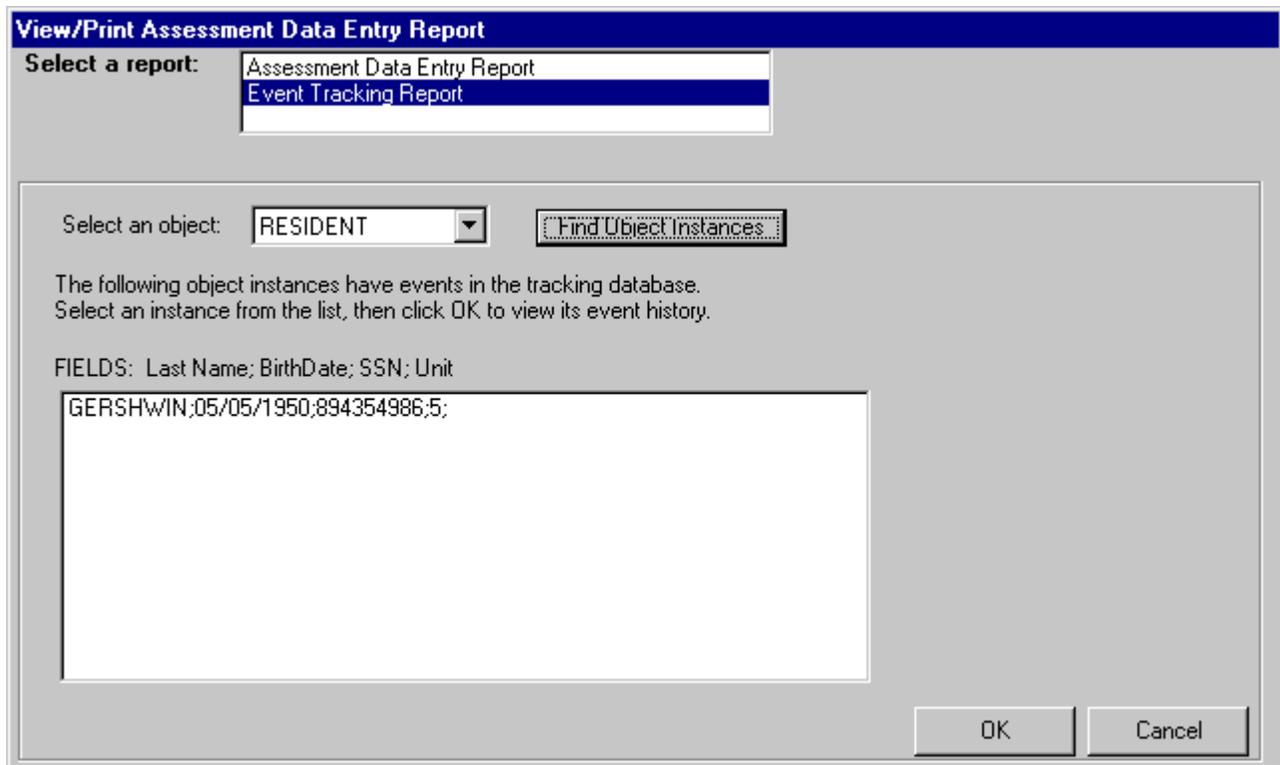
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## EVENT TRACKING REPORT

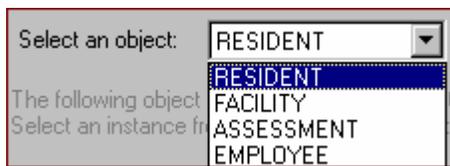
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The purpose of the **Tracking** function is to record significant events associated with the primary objects in the RAVEN-SB System: Resident; Facility; Assessment; and Employee. If the Tracking function is enabled, then any events enabled for the primary objects will be captured and saved to the SWBTRACK.MDB database. The Event Tracking Report summarizes the selected events for each object and enables the System Administrator to generate a history of these events.



After selecting the Event Tracking Report, click on the drop-down menu list to select an object on which to report, and click on the <OK> button.



Once an object has been selected, click on the <FIND OBJECT INSTANCES> button to display the instances associated with that object. Select an instance, and then click on the <OK> button to display its event history.

Following is a list of the events available for each of the objects in the RAVEN-SB system.

- **Resident**

RES\_ADD -- A resident was added to the system.

RES\_DEL -- A resident was deleted from the system.

RES\_EDIT -- Resident information was edited.

RES\_ARCH -- A resident was archived.

RES\_HIDE -- A resident was hidden from the system.

RES\_DISP -- A resident was displayed in the system.

RES\_REST -- A resident was restored from the archive.

- **Facility**

FAC\_EDIT -- Facility information was edited.

AGT\_EDIT -- Agent information was edited.

RUG\_EDIT -- RUG setup information was edited.

CMI\_EDIT -- CMI setup information was edited.

CMI\_ADD -- A CMI set was added to the system.

CMI\_DEL -- A CMI set was deleted from the system.

- **Assessment**

ASMT\_ADD -- An assessment was added to the system.

ASMT\_EDIT -- Assessment information was edited.

ASMT\_DEL -- An assessment was deleted from the system.

ASMT\_HIDE -- An assessment was hidden from the system.

ASMT\_DISP -- An assessment was displayed in the system.

ASMT\_VIEW -- An assessment was reviewed.

ASMT\_MOD -- A modification request was created.

ASMT\_INACT -- An inactivation request was created.

ASMT\_EXPT -- An assessment was exported.

ASMT\_COMP -- Data entry was completed for an assessment.

ASMT\_DONE -- An assessment was marked as ready for export.

- **Employee**

EMP\_ADD -- An employee was added to the system.

EMP\_DEL -- An employee was deleted from the system.

EMP\_EDIT -- Employee information was edited.

The report generated for each object instance will include the events that were defined by the System Administrator during the **Tracking Setup** function.

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## REPORT VIEW WINDOW

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When a report has finished processing, it will appear in the **Report View** window. The user can scroll through the report, move from page to page, and zoom in on the report. In addition, the user can save the report to PDF, RTF, or text files, or print the report.

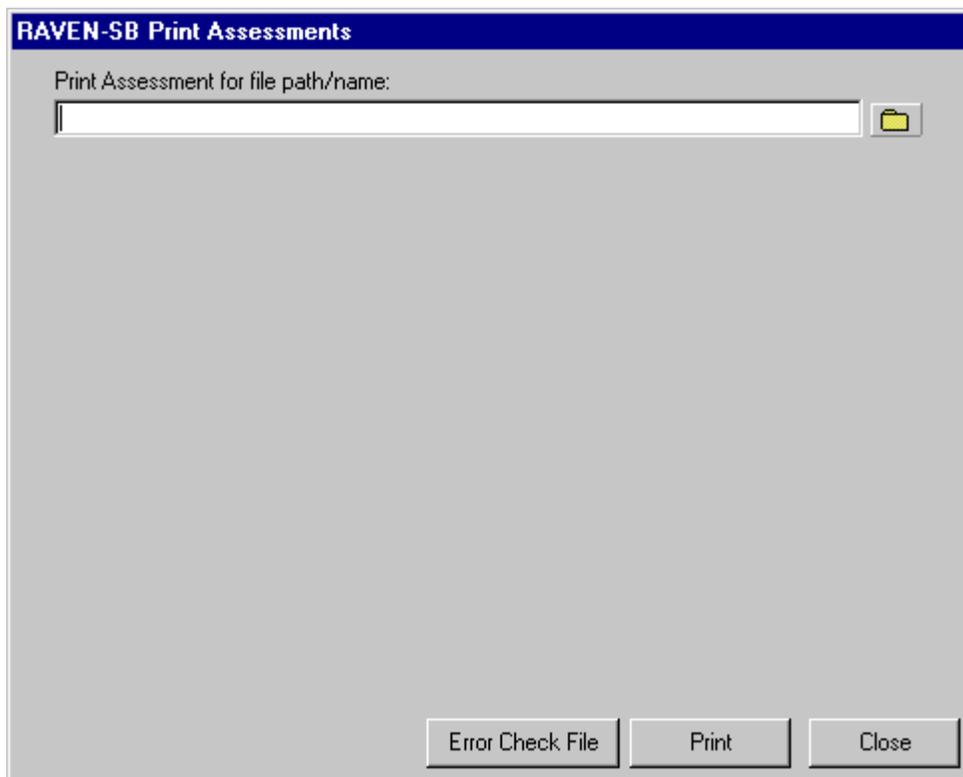
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## RAVEN-SB ASSESSMENT FORMS

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The user can access the **Print** function for an individual assessment from the **RAVEN-SB Management** screen by clicking on the <PRINT> button located on the bottom of the screen. The Adobe Acrobat Reader will be launched with a PDF representation of the SB-MDS forms and a data overlay containing the assessment data. As a result, the *Print* dialog box will appear. Click on the <OK> button to print the complete assessment.

RAVEN-SB also has the capability to print multiple assessments contained in a standard export file. This capability can be accessed by selecting the Print Assessment(s) From File option from the OPTIONS menu item or the <PRINTER> icon located on the tool bar. The *RAVEN-SB Print Assessments* dialog box will be displayed.



The user must provide the file path/name for the file containing the assessment(s). The user may then check for errors in the assessments by clicking on the <ERROR CHECK FILE> button. In order to proceed with printing, click on the <PRINT> button. A printer dialog box will appear for each assessment processed in the file. Click on the <OK> button to proceed. The user can stop printing assessments by pressing the <ESC> key. A message box will be displayed stating the number of assessments printed.

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# APPENDIX A

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## REPAIR/COMPACT UTILITY FOR MICROSOFT ACCESS DATABASE

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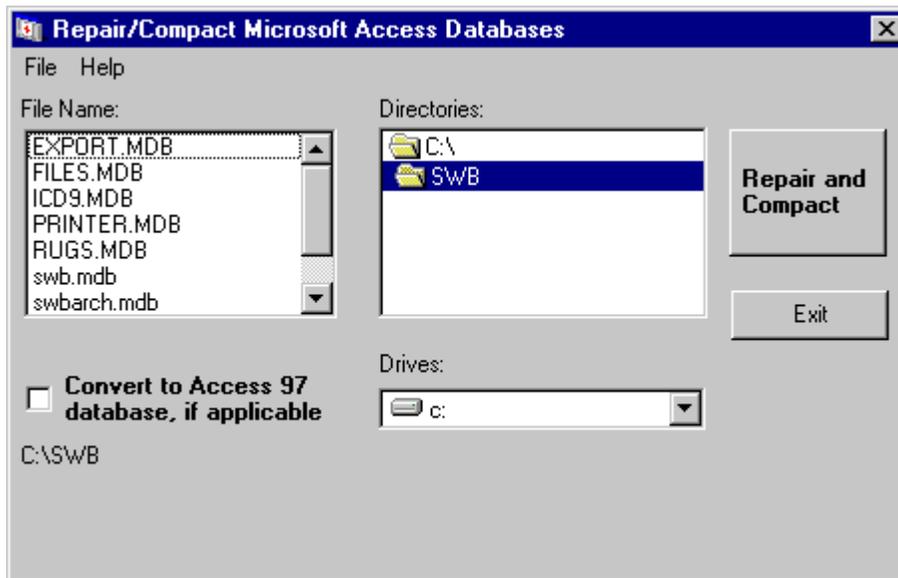
### REPAIR AND COMPACT

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This utility module is named REPAIR.EXE. Use standard Windows procedures to execute this utility.

**i** **IMPORTANT:** It is strongly recommended that the databases be backed up and archived before the Repair/Compact utility begins. Not all damaged Microsoft Access databases can be repaired and compacted by this or any repair/compact utility. If a database is badly corrupted, data truncation may occur as the result of a repair and compact and data loss may result.

**i** **IMPORTANT:** This function only works on a valid Microsoft Access database with an ".MDB" or ".ARK" extension.



The Microsoft Access Databases Repair Utility is designed to fix a Microsoft Access database that becomes corrupted. To use the **Repair/Compact** utility, select the file using the drive, directory, and file list boxes on the single window that comprises this utility. The name of the file that has been selected appears in the lower left portion of the window.

The **Repair** function of the **Repair/Compact** utility tries to repair any index corruption and attempts to recover from data loss.

The **Compact** function of the **Repair/Compact** utility program compacts records on the selected database to recover space when records are deleted. Since the size of the database files does **not** decrease when records are deleted from the database, it is recommended that this program function be used when a large number of records have been deleted from the database.



To begin the compacting process, click on the <REPAIR AND COMPACT> button. The user will be prompted for a new database name to which the data will be repaired and compacted. Enter the database name and click on the <OK> button to complete the **Repair/Compact** function. If successful, the message "Repair and compact completed!" is displayed otherwise an error message is displayed.

The amount of time it takes to repair and compact depends on the size of the database and the speed of the computer. To cancel the **Repair/Compact** function, click on the <CANCEL> button.



**IMPORTANT: Do not interrupt the repairing and compacting process. An interruption may leave the database in an unstable state and could result in data loss.**

**After repairing, compacting, and verifying that the records have been repaired and compacted properly, it is important that the user replace the working database with the repaired and compacted one since the replacement is not performed automatically.**

To exit the **Repair/Compact** utility, click on the <EXIT> button.

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# GLOSSARY OF TERMS

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## Data Entry

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A MedQuest function that allows users to collect data for the data entry system designed by the **MedQuest Design** function by creating the data store file called **XXX.MDB** where "XXX" represents the module acronym (e.g., SWB.MDB is the data store file for the data entry module RAVEN-SB).

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## Data Entry Rule

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A rule specified during the design process that is executed during data entry.

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## Data Entry Screen

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A system designed by MedQuest to collect clinical data for a data analysis project. Each project is called a module and is represented by a three-character acronym (e.g., SWB is the Data Entry System for the Resident Assessment Validation and Entry for Swing Beds (RAVEN-SB) System project).

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## Module

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See Data Entry System.

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## Screen

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A screen is an area beneath the tab where variables are presented. A tab represents a screen. The variables on the screen are displayed by selecting a tab. A tab may contain one or more subtabs.

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## Subscreen

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A subscreen is an area beneath the subtab where variables are presented. A subtab represents a subscreen. The variables on the subscreen are displayed by selecting a subtab.

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## Tab/Subtab

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A tab/subtab indicates the label for the screen that can be selected (e.g., Tab **Section A** is the tab used for retrieving the **Section A** screen).

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## Variable

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A variable is a data entry field that accepts data according to the specifications and rules indicated by the designer during the design.

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## Variable Type

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Variable types and attributes determine the type of data the system will accept (e.g., a date variable will accept only data in date format, i.e., MM/DD/YYYY) during data entry. The designer defines a variable type for each variable. For example, if variable **Admission Date** accepts only data that are in date form, the variable type must be defined as variable type.

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