IRVEN SYSTEM SOFTWARE

INPATIENT REHABILITATION VALIDATION AND ENTRY (IRVEN) SYSTEM REFERENCE MANUAL

VERSION 1.4　　　　　　　　　　　　　　　　　　　　**OCTOBER 1, 2005**

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OVERVIEW

INTRODUCTION

The Inpatient Rehabilitation Facility Patient Assessment Instrument (IRF-PAI) was developed by the Centers for Medicare & Medicaid Services (CMS) to establish a standardized protocol for assessing the clinical characteristics of patients in rehabilitation hospitals and rehabilitation units in acute care hospitals. 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 patient care outcomes.

CMS has sponsored the development of a data entry system known as the Inpatient Rehabilitation Validation and Entry (IRVEN) System. IRVEN can be used by rehabilitation facilities for collecting IRF-PAI data in a standardized format. Based on CMS's *MedQuest* tool, this system enables the user to electronically enter patient assessment data into IRF-PAI standard record formats and export the patient assessment data records files appropriate for submission to the IRF-PAI National database.

CONVENTIONS

Standard conventions have been adopted in the *IRVEN System Reference Manual* to facilitate locating and identifying desired information. These conventions and their definitions include the following:

Bolded Title Case Windows, screen titles, program functions, variable names, and dialog boxes (e.g., the **Patient Information** screen).

Title Case and Italicized Text box or list box descriptions (e.g., the *Select an Employee* list box).

Title Case Menu options (e.g., the General Help menu option).

<CAPITALS> Menus, buttons, icons, and function keys (e.g., the HELP menu, the <CANCEL> button, the <NOTES> icon, and the <T> key).

Bolded User entered data (e.g., Enter the password **IRF***).

Notes Symbol. This symbol indicates that the user should take notice of the information.

Question Mark Symbol. 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.

X Symbol. This symbol indicates that the requested procedure cannot be completed and displays a short message explaining why.

Exclamation Point Symbol. 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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TOOL BAR ICONS

The following icons have been established in the *IRVEN Data Entry System* to facilitate the selection of desired functionality. These icons and their tool tip titles include the following:

IRVEN System Icons

Log Off/On

View/Print Reports

Print Assessment(s) From File

Import

Export

Hide/Display Assessment

Hide All Assessments (Current Patient)

Delete Assessment

Maintain Employee Database

Maintain Facility Database

Maintain Patient Database

General Help

Exit (IRVEN System)

Close

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Notes

Pause Abstraction

QUICK START

INSTALLATION AND START UP

This section discusses the following topics:

- Hardware/Software Specifications

- Printing

- Installation

- Help

HARDWARE/SOFTWARE SPECIFICATIONS

To operate IRVEN, the following hardware and software are required:

- 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:
IRVEN 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, ME, NT, or 2000

- Microsoft or Microsoft-compatible mouse or pointing device

PRINTING IRVEN ASSESSMENT FORMS

Before printing the IRVEN assessment forms, it will be necessary to activate the Adobe Acrobat Reader. If the software is not installed, the user can execute the appropriate installation file from the IRVEN CD (in the Acrobat subdirectory) or download the installation file from the Adobe web site (www.adobe.com/).

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

Installing the IRVEN System Application

Extract the installation files (including README.TXT) from the downloaded file (SETUPIRF.ZIP) in a temporary directory (e.g., C:\TEMP). Review installation instructions contained in README.TXT. Run the SETUP.EXE program to begin the installation and follow the steps to install the IRVEN program.

Operating IRVEN within Large Facilities

IRVEN is designed as a stand-alone application and is not intended to be run in a multi-user environment. IRVEN can operate in a network environment and allow entry and maintenance of a large number of assessments:

- The IRVEN storage database can be located on a shared, network drive while the IRVEN 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 Installing IRVEN in a Network Environment section below.

- The Archive functionality is included in IRVEN. This functionality alleviates the burden on the primary storage database and allows IRVEN 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 section titled Archive Setup.

IRVEN should not be mistaken for a network application. IRVEN is a stand-alone application containing 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 patient.

  - Assign one user to perform all maintenance of the patient information including the adding and deleting of patients.

  - 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 patient 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 (IRF.MDB) after several archives.

Installing IRVEN in a Network Environment

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

- For the first PC, install the IRVEN software. Log in to the IRVEN System, click on the ADMINISTRATION menu, and select the Preferences option. Click on the Location tab and enter the network path where the IRF.MDB and IRFTRACK.MDB will reside. Exit IRVEN.

- Copy IRF.MDB and IRFTRACK.MDB to the network path that was specified in the previous step.

- Log in to IRVEN and set up employee, facility, and patient information. If desired, specify an archive database. Also, go to the **IRVEN Preferences** screen and select the desired options and paths. Exit IRVEN and copy IRFDICT.MDB (in the installation directory) and IRF.INI (in the Windows IRFPRINT directory) to the network.

- Now install **IRVEN** on all additional client PCs. Copy the IRFDICT.MDB from the network to the installation directory and copy the IRF.INI to the Windows IRFPRINT directory. This process will ensure that the settings established from the original installation are incorporated into each of the additional client installations.

HELP

The **General Help** provides IRVEN System help regarding how to use and maintain the **IRVEN** software. The **About (IRVEN)** identifies software and dictionary version information. From the **IRVEN Management** screen or any of the **IRVEN Data Entry** screens, click on the HELP menu and select either the General Help or the About options. The **General Help** can also be accessed by clicking on the <?> icon from the **IRVEN Management** screen.

LOGIN

The user can log in to the IRVEN module by entering the User ID and Password in the *User ID* and *Password* text boxes, respectively, and clicking the <OK> button or pressing the <ENTER> key. To exit the **IRVEN Login** screen without actually logging in to the system, click on the <EXIT> button.
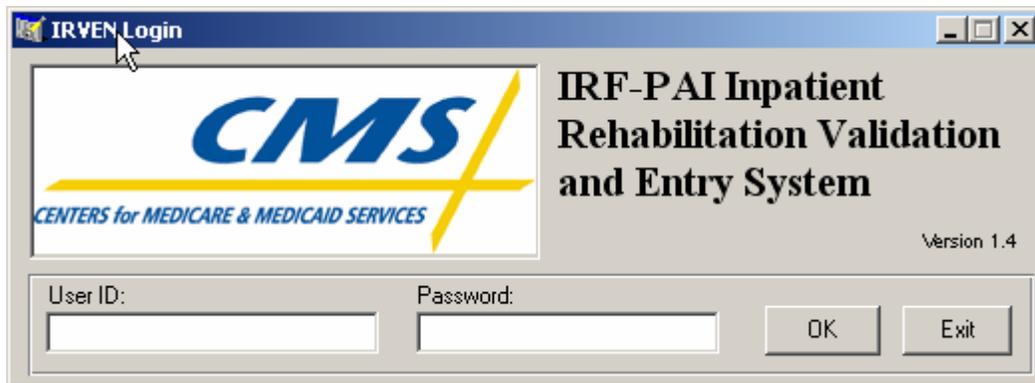
USER IDS AND PASSWORDS

Use the following login identifications and passwords for IRVEN the first time:

- User login identification **IRF** and password **IRF**.

The user login identification and password can be added, modified, or deleted by using the **Maintain Employee Database** function within the IRVEN 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 **IRF** 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 the System Setup section. The **IRF** account should then be deleted to ensure the security of the IRVEN software.

AUTHORIZATION RIGHTS

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

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
Maintain Patient Information Database	Edit in **Data Entry** mode	Add/Edit	Add/Edit/Hide/Delete/ Archive	No
Assessments	Add/Edit	Add/Edit	Add/Edit/Hide/Delete	View
Perform Data Entry for All IRF-PAI Forms	Yes	Yes	Yes	No
Review Assessments Performed by Other Users	No	Yes	Yes	No

Item	Data Entry	Clinical Supervisor	System Administrator	View Only
View Hidden Assessments	No	Yes	Yes	No
View User List	Yes	Yes	Yes	Yes
Print Assessments	Yes	Yes	Yes	Yes
View/Print Reports	Assessment Data Entry Report	Assessment Data Entry Report	Assessment Data Entry Report Event Tracking Report	Assessment Data Entry Report
Set Tracking of Events	No	No	Yes	No
Set IRVEN Preferences	No	No	Yes	No
Import Files	No	No	Yes	No
Export Files	No	No	Yes	No

SYSTEM SETUP

MAINTAIN EMPLOYEE DATABASE

The Employee Database provides centralized management of employee records that will be used continuously in the entry of assessment data. From the **IRVEN Management** screen, select the Maintain Employee Database option from the ADMINISTRATION menu item, or click on the <MAINTAIN EMPLOYEE DATABASE> icon.
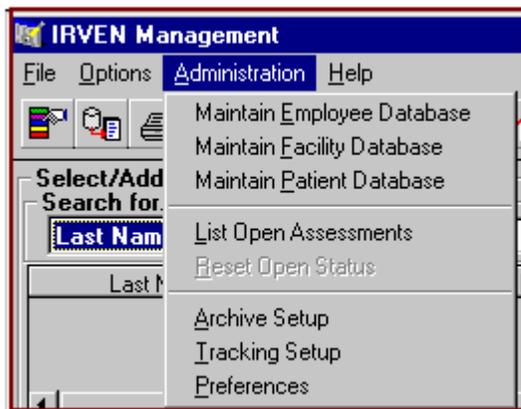
Note that this screen is only accessible to users with System Administrator rights. After installation, the user (authorized as System Administrator) will want to define the expected users of the IRVEN software. The **Employee Information** screen is used to enter employee identification and authorization information. This screen consists of two sections: Select an Employee and Enter Employee Information.

Employee Information

Select an employee:

	User ID	On	Login Time	Location	Phone	Patient	Assessment
1	IRF	*	09:47:40				

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; Phone; Patient, Assessment the employee is working on (if the user is logged in), and the Status of the 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 Name, Middle Initial, Last Name; 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 a user to login multiple times

- Reset user logon status

ADD A NEW EMPLOYEE RECORD

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.

EDIT AN EMPLOYEE RECORD

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> button will abandon all changes made to the employee record since the last save.

SAVE AN EMPLOYEE RECORD

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

DELETE AN EMPLOYEE RECORD

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 IRVEN 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.

CANCEL CHANGES TO AN EMPLOYEE RECORD

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

ASSIGN AUTHORIZATION RIGHTS

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

- **Data Entry Rights.** Users with data entry rights are able to edit patient/facility information (in **Data Entry** mode), add/edit assessments, perform data entry for all IRVEN forms, print assessments, and view/print reports.

- **Clinical Supervisor Rights.** Users with clinical supervisor rights are able to add/edit facility and patient database information, add/edit assessments, review assessments performed by other users, view users, and view hidden assessments. They are also able to perform data entry for all IRVEN forms, print assessments, view/print reports, and track patient/facility/assessment/employee information.

- **System Administrator Rights.** Users with System Administrator rights are able to add/edit/delete employee database information, add/edit facility database information, add/edit/hide/delete/archive patient database information, add/edit/hide/delete assessments, review assessments performed by other users, view users, and view hidden assessments. They are also able to perform data entry for all IRVEN forms, print assessments, view/print reports, track patient/facility/assessment/employee information, set IRVEN preferences, and import and export files.

- **View Only Rights.** Users with view only rights are able to view what has been entered in data entry. They are also able to view/print reports, print assessment(s) from file, and view assessment data.

ALLOW MULTIPLE LOGINS

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

RESET USER LOGON STATUS

This feature allows a System Administrator to reset the selected employee's login status. After selecting an employee record 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 IRVEN software has not been exited properly such as after a power outage.

MAINTAIN FACILITY DATABASE

The Facility Database collects the facility and agent identification information. From the **IRVEN Management** screen, select the Maintain Facility Database option from the ADMINISTRATION menu item, or click on the <MAINTAIN FACILITY DATABASE> icon. It is recommended that a user with System Administrator rights complete this information after installation.

FACILITY INFORMATION

The Enter Facility Information section enables the user to specify information that can uniquely identify the facility such as Facility Name, Address, Contact Person, State and Federal Facility Provider numbers. Fields shown in **bold** are required to complete and export IRVEN assessments.

AGENT INFORMATION

The Enter 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 IRVEN software. Information about **IRVEN Export** capabilities is provided in the Export section.

MAINTAIN PATIENT DATABASE

The Patient Database provides centralized management of patient information records that will be used continuously in the entry of assessment data. From the **IRVEN Management** screen, select the Maintain Patient Database option from the ADMINISTRATION menu item, or click on the <MAINTAIN PATIENT DATABASE> icon.

The **Patient Information** screen collects patient information that is reused in IRVEN assessments. It is recommended that a user with System Administrator rights complete this screen prior to creating

assessments for the patients. This screen consists of two sections: the Select a Patient section and the Patient Information section.

The Select a Patient section on this screen is similar to the Select/Add a Patient section on the **IRVEN Management** screen. The only option available in the Select/Add a Patient section on the **IRVEN Management** screen is the capability to add a patient. Any maintenance (edit/hide/delete) for a patient record must be completed through the **Maintain Patient Database** function.

This section allows the user to select, search, or filter for a patient in the same manner as the **IRVEN Management** screen. Patients are displayed in alphabetical order. Use the scroll bars on the *Patient* list box to view the available patients and click on the preferred row to select a patient. If there are more than 1,000 patients from which to choose, click on the <BROWSE NEXT 1000> button to display the next 1,000 patients.

The user may search the patient database by selecting the last name, Social Security Number (SSN), Medicare number, Medicaid number, or Facility Patient ID of a patient 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 *Patient* list box. To remove the search, clear the = text box and click on the <SEARCH> button. The patients will then be displayed alphabetically for selection within the *Patient* list box.

The user may want to reduce the number of patients 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 patients by unit will be displayed in the *Patient* 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, or Facility Patient ID. To remove the filter, clear the Unit field and click on the <FILTER> button. An alphabetical list of patients will then be displayed for selection within the *Patient* list box.

The user can also sort by any field, (e.g., Last Name, First Name, MI, SSN, Unit, Medicare number, Medicaid number, or Patient Identification Number) 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 patient is selected, the corresponding data appears in the *Patient Information* text box. This section consists of data entry fields for demographic and identification information such as gender and race/ethnicity. The information collected here will be utilized to prefill the corresponding fields on the IRVEN assessment forms for the selected patient.

The user may:

- Add a new patient record

- Edit an existing patient record

- Save all changes made to a patient record

- Hide a patient record

- View an archived patient record

- View a hidden patient record

- Delete a patient record

- Cancel all edits to a patient record

ADD A NEW PATIENT RECORD

Click on the <NEW> button and begin entering data in the Patient Information section. The user must complete the First Name, Last Name, Gender, Birthdate, and Medicare Number 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 patient currently displayed"? Click on the <YES> button to save the changes or the <NO> button to cancel the changes.

EDIT A PATIENT RECORD

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 patient record to the database, while clicking on the <CANCEL> button will abandon all changes made to the patient record since the last save.

SAVE A PATIENT RECORD

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

HIDE A PATIENT RECORD

Check the *View Hidden Patients Also* text box, select the patient to hide, and then check the *Hidden* text box. Click on the <SAVE> button or the <CANCEL> button when data entry is complete. The patient is no longer visible in the *Patient* list box. Note that if a patient is marked as hidden, the user will not have access to the assessments for that patient. To view the hidden patients, check the *View Hidden Patients Also* check box. The user has the capability to redisplay a patient by unchecking the *Hidden* check box.

VIEW AN ARCHIVED PATIENT RECORD

Check the *View Archived Patients Also* text box to view the archived patients. Until a patient is restored, the only activity performed on an archived patient record is to search the list and view that patient record.

DELETE A PATIENT RECORD

Click on the <DELETE> button to delete the currently selected patient. The user will be prompted with the message "Are you SURE you want to delete the currently displayed Patient"? Click on the <YES> button to save the changes or the <NO> button to cancel the changes. Clicking on <YES> will remove the data record for the patient from the database. Note that a patient record can only be deleted if no assessments are associated with the patient.

CANCEL EDITS TO A PATIENT RECORD

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

ENABLE PRINTING

Before accessing the **Print Forms** function for the IRVEN 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:\PROGRAM FILES\ADOBE\ACROBAT5\READER\ACROBAT32.EXE). Completing the path for the Adobe Acrobat Reader from the PREFERENCES menu allows users to access the **Print Forms** function (located on the IRVEN Management Screen) for the IRVEN assessment forms. Leaving the path blank prevents users from having access to the **Print Forms** function for the IRVEN assessment forms.

NOTE:
> If the Adobe Acrobat Reader is not installed, then the user can execute the appropriate installation file from the IRVEN CD (in the Acrobat subdirectory) or download the installation file from the Adobe web site (www.adobe.com/).

ENABLE BACKUP

IRVEN provides the option to make a backup copy of the data collection databases (e.g., IRF.MDB, IRFTRACK.MDB, EXPORT.MDB, and IRFARCH.MDB) each time the user exits IRVEN normally. If these databases are corrupted due to abnormal termination of IRVEN (e.g., power failure, system lockup), the System Administrator can copy the backup databases into the installation directory and only the last IRVEN session will be lost.

To enable the backup, the System Administrator can click on the ADMINISTRATION menu item, select the Preferences option, and click on the Backup tab. Then the user can 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 **IRVEN Backup** capability is no substitute for a comprehensive backup strategy. It is HIGHLY RECOMMENDED that IRVEN users institute a regular procedure of backing up the databases to a reliable media (e.g., floppies, CD-ROM, tape).

WINDOWS SETTINGS

In order to ensure the reliable operation of the IRVEN 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., 2000) instead of a two-digit year (e.g., 00).

  For Windows 95, 98, NT, ME, and 2000 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, ME, and 2000 the Windows Font Size property must be set to "Small Fonts" and not "Large Fonts". From the Control Panel screen, click on the <DISPLAY> icon to display the **Display Properties** screen. Then click on the Settings tab and verify that the font size property is set to small fonts.

IRVEN DATA ENTRY

IRVEN MANAGEMENT SCREEN

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

The **IRVEN Management** screen consists of the following components:

- **Title Bar.** Displays the title IRVEN Management.

- **Menu Bar.** Displays the list of functions that can be performed on the **IRVEN Management** screen. Each of these functions contains additional options that can be displayed by using the mouse or by using the function's shortcut key. The shortcut key is the <ALT> key and the underlined letter key, (i.e., the FILE menu option can be accessed by pressing the <ALT> key and the <F> key simultaneously).

- **Button Bar.** Provides quick access to commonly used menu items. The functions available to all users include: **Log Off/On**; **View/Print Reports**; **Print Assessment(s) From File**; and **Help**. Additional functions, **Maintain Facility** and **Patient Database** information, are available to Clinical Supervisors and System Administrators. **Import**, **Export**, **Hide/Display Assessment**, **Hide All Assessments (Current Patient)**, **Delete Assessment**, and **Maintain Employee Database** information, are only available to a System Administrator.

NOTE:
> Additional features available to the System Administrator not displayed on the Button Bar include: **Archive Setup**; **Tracking Setup; List Open Assessments; Reset Open Status**; and **Preferences**. All of these features can be accessed from the ADMINISTRATION menu item.

- **Select Patient.** Enables the user to select a patient to access his/her assessment history.

- **Add Patient.** Allows the user (Clinical Supervisor and System Administrator) to add a patient.

- **Select Assessment for Patient.** Allows the user to view the history of previous assessments and their status for the currently selected patient. For additional information on the status of assessments, see the Assessment Status Window section below.

- **Add Assessment.** Allows the user to add an assessment for a selected patient.

- **Archive Patient.** Allows the user to archive a patient and his/her assessments once all assessments have been completed and exported.

UNDER THE FILE MENU, THE USER CAN:

Open Archive

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

Exit

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

UNDER THE OPTIONS MENU, THE USER CAN:

Log Off/On

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

User List

This option allows a user to view other users who are logged on and the patient 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 IDs; On* (indicates the employee is currently logged in); Login time; Location; Phone; Patient, Assessment that the employee is working on, and the Status of the assessment.

When using IRVEN 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 each user has open for data entry also indicates that an assessment is in use. An asterisk (*) in the *Open* column for each assessment on the **IRVEN Management** screen.

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 IRVEN. The *Open* box will be empty when a user is working in a stand-alone configuration.

View/Print Reports

This feature is discussed in the Reports section.

Print Assessment(s) from File

This feature is discussed in the Reports section.

Import

This feature is discussed in the Import section.

Export

This feature is discussed in the Export section.

Hide/Display Assessment

This option gives the System Administrator the capability to specify whether an exported or completed assessment for the current patient can be viewed in the *Patient Assessment* list box. To hide an exported or completed 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.

Hide All Assessments (Current Patient)

This option gives the System Administrator the capability to remove all exported or completed assessments for the current patient from view in the *Patient Assessment* list box. Highlight a patient and select the Hide All Assessments (Current Patient) option from the OPTIONS menu or click on the <HIDE ALL ASSESSMENTS (CURRENT PATIENT)> button. All assessments marked exported or completed 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.

Delete Assessment

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

To delete an assessment, highlight it 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", "Completed", or "Hidden" cannot be deleted.

UNDER THE ADMINISTRATION MENU, THE USER CAN:

Maintain Employee, Facility, and Patient Databases

The maintenance functions for the Employee, Facility, and Patient databases are discussed in the System Setup section.

List Open Assessments

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.

Reset Open Status

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 AMINISTRATION 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.

Archive Setup

The **Archive Setup** function allows the user to define an archive database for a patient's assessments. By default, when the IRVEN software is installed, the IRFARCH.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.

NOTE:
> A database name and the path of the databases must be completed when adding 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.

Tracking Setup

The purpose of the **Tracking** function is to record significant events associated with the primary objects in the IRVEN System: Patient, Facility, Assessment, and Employee. If the Tracking system is enabled, then any events enabled for these objects will be captured and saved to the IRFTRACK.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 IRFTRACK.MDB. In addition, each time an assessment is modified or inactivated, an appropriate event is generated.
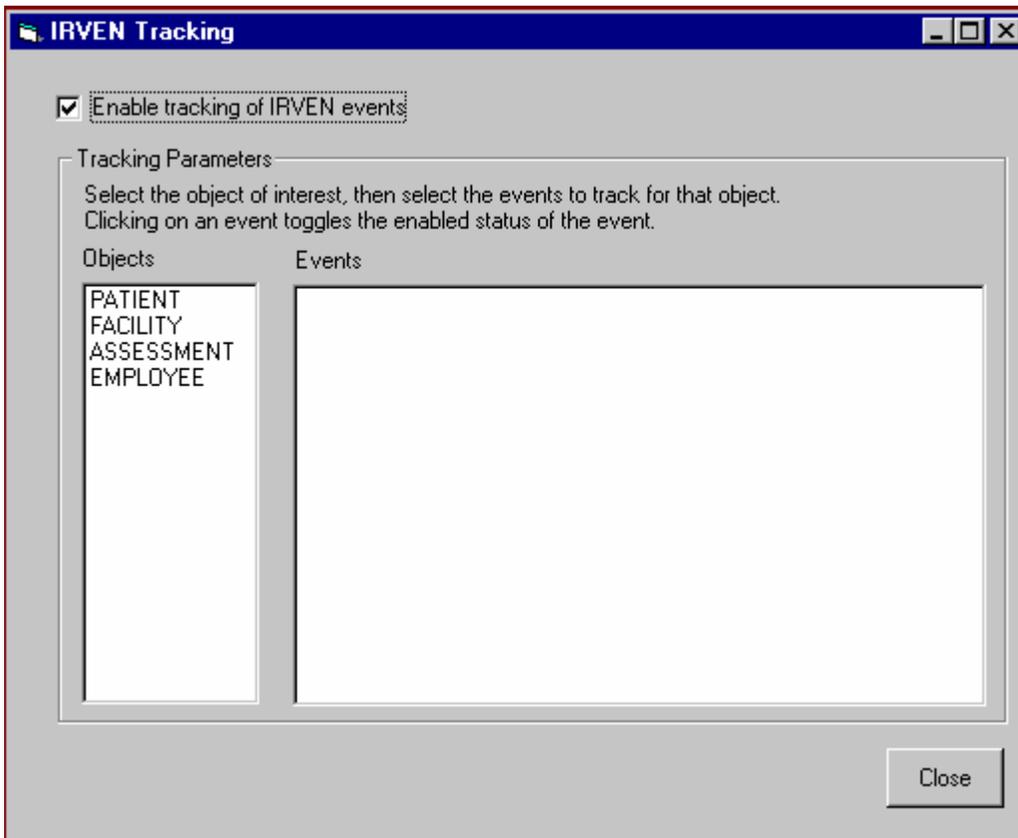
After a System Administrator selects the Tracking Setup option from the ADMINISTRATION menu item, the **IRVEN Tracking** screen will be displayed. Click on the *Enable Tracking of IRVEN Events* check box to enable the **Tracking** function. Select one of the objects, Patient, Facility, Assessment, or 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 IRVEN events, yet maintain the tracking settings, click on the *Enable Tracking of IRVEN Events* check box to disable the **Tracking** function.

Preferences

Display

When data entry is performed in IRVEN, the main tabs are displayed in red and the subtabs are displayed in blue. IRVEN gives the System Administrator the capability to turn these colors off 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.

Network

By default, a user has the option of accessing an assessment already marked as open for data entry. IRVEN 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

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

To print the IRVEN assessment forms, the file/path name for the Adobe Acrobat Reader must be entered. The 32-bit executable name is ACRORD32.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:\PROGRAM FILES\ADOBE\ACROBAT5\READER\ACROBAT32.EXE).

A complete explanation of the **Print Forms** function is available in the System Setup section.

Enable Silent Printing

IRVEN can prevent the printer dialog box from appearing when launching Adobe Acrobat Reader to print an assessment on the IRF 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.

Assessments

Select Radio Button/Check Box Display Option

For variables that allow the user to select only a single choice (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, IRVEN 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.

Other

Specify Location Name and Telephone Number

By specifying a location name and telephone number for this installation of IRVEN, employees who *log in* will be associated with this location. The User List menu option from the **IRVEN Management** screen displays this information. After selecting the Preferences option from the ADMINISTRATION menu and clicking on the Other tab, type the location name 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, IRVEN will not warn the user of the number of assessments contained in an archive database. However, IRVEN gives the user the capability to display a warning message 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 5,000. To change the default number, click in the box and enter the desired number, up to 99,999.

Backup

Choose to Specify a Path to Backup the Data Collection Databases (IRF.MDB and EXPORT.MDB). By specifying a path for the **Backup** function in IRVEN, the collection databases in the IRF 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 IRVEN installation path. For example, if IRVEN is installed to C:\IRF, the backup path cannot be C:\IRF. If the path is left blank, the **Backup** function is disabled. In addition users can choose to have the backup compressed. The three compression options are: no compression, enable compression of databases to ZIP format (IRFMDB.ZIP), or enable compression of databases to self-extracting EXE (IRFMDB.EXE).

NOTE:
> A complete explanation of the **Backup** function is available in the System Setup section.

Location

Specify Location of Databases

By default, IRVEN looks for the data entry databases (IRF.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 IRVEN software.

Specify Default Paths for the IRVEN Reports, Export, Import, and Print (from file) Functions

The user can optionally specify default locations for the following:

- Where reports are generated

- Where export files are created

- Where import files are located

- Where print (from file) files are found

Note that for reports and exports, the default output file name will be "TEMP.TXT". This file will be written to the report and export paths, 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.

UNDER THE HELP MENU, THE USER CAN:

Access General Help and About (IRVEN)

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

SELECT A PATIENT

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

The user may search the patient database by selecting the Last Name, Social Security Number (SSN), Medicare Number, Medicaid Number, or Patient ID Number of a patient 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 *Patient* list box. To remove the search, clear the = text box and click on the <SEARCH> button. The patients will then be displayed alphabetically for selection within the *Patient* list box.

The user may want to reduce the number of patients 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 patients by unit will be displayed in the *Patient* 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, or Patient Identification Number. To remove the filter, clear the Unit field and click on the <FILTER> button. An alphabetical list of patients will then be displayed for selection within the *Patient* list box.

The user can also sort by any field (e.g., Last Name, First Name, MI, SSN, Unit, Medicare Number, Medicaid Number, or Patient Identification Number) 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.

ADD A PATIENT

The <ADD PATIENT> button allows the Clinical Supervisor or System Administrator to add a new patient record. The user must complete First Name. Last Name, Gender, Birthdate, Social Security Number, and Medicare Number before the record can be saved. The remaining fields are optional.

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

ARCHIVE A PATIENT

The purpose of the **Archive** feature is to help maintain the size of the system database IRF.MDB. The **Archive** function allows the System Administrator to archive a patient and his or her associated assessments if the last completed assessment was a discharge assessment and all of the assessments for that patient have a status of "Exported". For instance, if a patient 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 IRF.MDB.

To begin the **Archive** function, select a patient whose last completed assessment was a discharge assessment and whose assessments have all been exported and click on the <ARCHIVE PATIENT> button. IRVEN will archive that patient'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 patient records on the **Patient Information** screen, click on the ADMINISTRATION menu item, select the Maintain Patient Database option, and click on the *View Archived Patients Also* check box. To view archived patient records from the **IRVEN Management** screen, click on the FILE menu item and select the Open Archive option.

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

RESTORE A PATIENT

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

While in the **Restore** mode of IRVEN, the user has limited functionality. Features include: switching between the **Archive** and **Restore** functions; the **Reports** function; accessing **Help**; and viewing and printing assessments.

SELECT AN ASSESSMENT

The Assessment Selection section allows the user to view the history of previous assessments and their status for the currently selected patient. For each assessment, the date, assessment type, 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 IRVEN. 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.

ADD AN ASSESSMENT

The Add Assessment function enables the user to initiate a new assessment for the selected patient. Click on the <ADD ASSESSMENT> button to add an assessment.

Note the following:

- Newly created assessments have a status of "New"

- Edited assessments have a status of "In Use"

- Completed assessments have a status of "Export Ready" if they are eligible for export; otherwise, they have a status of "Completed"

- Exported assessments have a status of "Exported"

- Hidden assessments have a status of "Hidden"

- Assessments that have only the admission-related variables completed may have a status of "Adm Complete"

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

When the user clicks on the <ADD ASSESSMENT> button, an assessment with a status of "new" is automatically added to the system and is displayed on the **IRVEN Management Screen**.

CORRECT AN ASSESSMENT
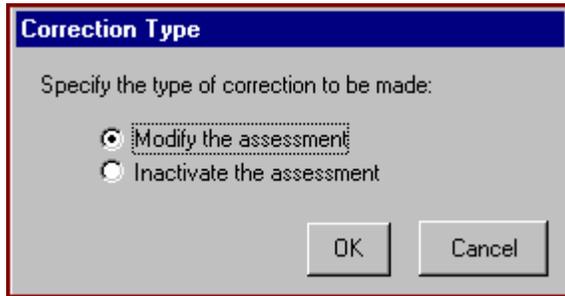
Once an assessment has been Exported only a System Administrator has access to it. Listed below are the two types of corrections:

- **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 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 **IRVEN 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 **IRVEN 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.

PRINT AN ASSESSMENT REPORT

Users may print an assessment report. To print an assessment, select the assessment and click on the <PRINT REPORT> button. The *Select Report Options* popup box will appear.
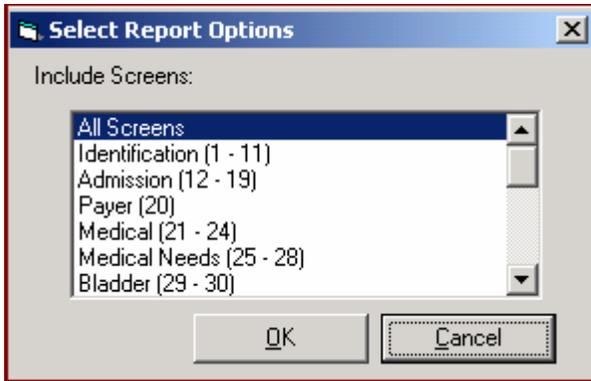
The report to be printed is highlighted in blue. The All Screens report is the default selection by IRVEN. To select another report to print, click once on the report name. To select more than one report to print, use the <SHIFT> or <CTRL> keys. Note, that, selecting All Screens, will clear the other selected items. Click on the <OK> button to print or click on the <CANCEL> button to return to the **IRVEN Management Screen**.

IRF-PAI Report

Last Name: CHAPLIN	First Name: OONA	SSN: 489787489	ID: 456
Admission date:	Discharge Date:	Assessment Ref Date:	
CMG Value:	CMG Version:	Assessment Status: 00	

Identification (1 - 11)

   1. Facility Information
   A. Facility Name   = GRACE MANOR
   B. Facility Medicare Provider Number   = 1
   2. Patient Medicare Number   = 179715687333
   3. Patient Medicaid Number
   4. Patient First Name   = OONA
   5A. Patient Last Name   = CHAPLIN
   5B. Patient Identification Number   = 456
   6. Birth Date (MM/DD/YYYY)   = 05/05/1955
   7. Social Security Number   = 489787489
   8. Gender
        ☐ 1 - Male
        ☑ 2 - Female
   9. Race/Ethnicity (Check all that apply)
        ☐ A. American Indian or Alaska Native
        ☐ B. Asian
        ☐ C. Black or African American
        ☐ D. Hispanic or Latino
        ☐ E. Native Hawaiian or other Pacific Islander
        ☑ F. White
   10. Marital Status
        ☐ 1 - Never Married
        ☑ 2 - Married
        ☐ 3 - Widowed
        ☐ 4 - Separated
        ☐ 5 - Divorced
   11. Zip Code of Patient's Pre-Hospital Residence   = 22201

When an assessment 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 assessment to PDF, RTF, or text files, or print the assessment.

SPECIAL FEATURES (IRVEN MANAGEMENT SCREEN)

View Only (Data Entry Not Allowed)

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 to ensure 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).

EXIT

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

IRVEN DATA ENTRY WINDOW

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

- **Title Bar.** Displays the IRVEN function **Data Entry**.

- **Menu Bar.** Displays the list of functions that can be performed on the **Data Entry** screen. 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, two 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, and Birth Date of the selected Patient at the top of the **Data Entry** screen.

- **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** screen of the selected screen or subscreen will open in the space below it.

- **Data Entry Screen.** 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 Patient record and an Assessment form. See previous sections, Select/Add a Patient and Select/Add an Assessment for additional information. Data entry can be exited at any time by clicking on the FILE menu item and selecting the Exit 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 that screen. Follow the descriptions below to enter data for the various variable types.

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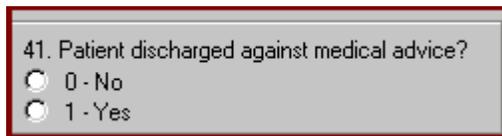
The variable type **Option (Pick One)** includes the options from which only a single option can be chosen. Choose an item by selecting the radio button next to the item. Clicking the <RIGHT MOUSE> button and selecting the Clear Variable option clears variables with radio buttons.

Option (Pick One or More)
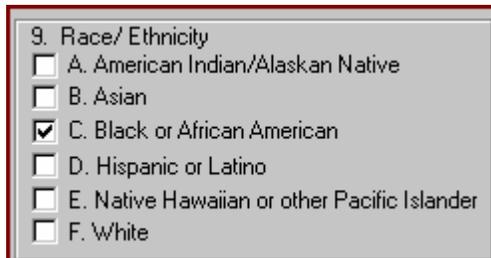
The variable type **Option (Pick One or More)** includes options from which one or more items can be chosen. Choose the item(s) by marking the check box(es) next to the desired item. Note that, normally, the last item on the list (usually None of the Above) clears all the other items. However, one exception to this rule is for a variable in which the first item on the list clears the other items.

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 Unable to Determine (UTD) has been selected. To set the option to UTD, click the <RIGHT MOUSE> button on the check box and select the Set as Unable to Determine option.

NOTE:
Depending on the data specifications not all check lists will have UTD functionality available.

If the variable has a None of the Above option, and all other options are either false or UTD, then None of the Above will automatically be set to true.

Date

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).

If the date cannot be determined, press the hot key combination **<SHIFT>** and **<?>** (shift and question mark keys). A dash will be displayed.

NOTE:
Depending on the data specifications not all data fields will have UTD functionality available.

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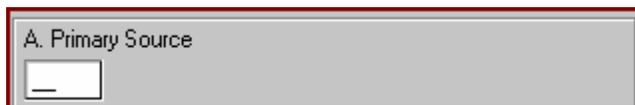
The variable type **Number** accepts data entered in numeric format, including one decimal point, if applicable. If the value cannot be determined, press the hot key combination **<SHIFT>** and **<?>**. A dash will be displayed.

NOTE:
Depending on the data specifications not all data fields will have UTD functionality available.

String

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.

ICD-9
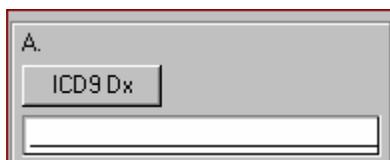
The variable type **ICD9** accepts up to 32,000 characters in any alphanumeric combination. In addition to text entry, this variable type provides an applicable assistive data entry button <ICD9 DX> for retrieving ICD9-CM Diagnosis Codes. The button provides access to the **ICD9 Diagnosis Codes** window from which the data abstractor can view a list of codes belonging to the group selected, search for a code by either the code or the code description, select a desired code(s), and add the code(s) to the text field.

External List (Impairment Codes)

This variable type is used to display the available Impairment codes in a list box. Click on a code to select it, click again to deselect the code. Only on Impairment code can be selected.

SPECIAL FEATURES (IRVEN DATA ENTRY SCREEN)

Note Box

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** screen.

Pause Button

When the user selects the <PAUSE ABSTRACTION> button, the internal IRVEN 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.

Clear Value on a Variable Radio Button

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

View Help

To display the Help available for each variable, click 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.

Print Screen

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 is available.

Several steps need to be followed when capturing a screen for printing. To copy a screen, press the <PRINT SCRN> button or press the <ALT> + <PRINT SCRN> 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 the <CTRL> + <V> buttons. The screen can also be copied into a document by using the paste function available in the application being used.

Edit Facility Data

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 **IRVEN Management** screen, select each assessment by patient 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.

Edit Patient Data

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

For example, if incorrect information is added during the setup process for the patient, 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 patient information.

After returning to the **IRVEN Management** screen, select each assessment for a patient that contains the incorrect information and click on the <ENTER DATA> button. A message indicating that the data have been changed for the patient will appear and the user has the option to update the current assessment.

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

CALCULATE/VIEW CMG (IF APPLICABLE)
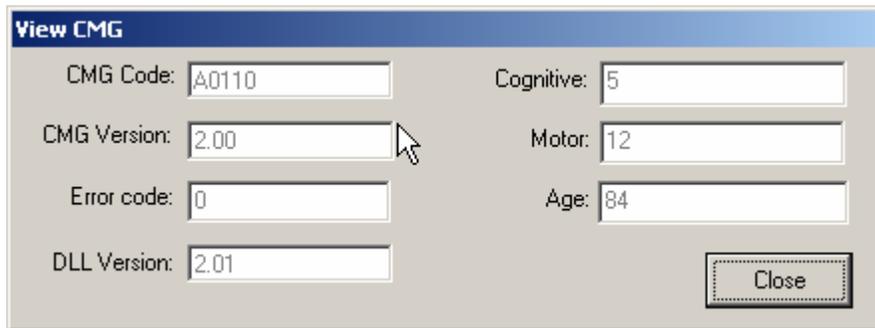
CMG calculations are automatically performed for an assessment when the data entry for the assessment has been completed and its status is made Export Ready.

CMG data can also be viewed from the **IRVEN Management Screen** using the <CMG> button. Click on the <CMG> button and the CMG will be recalculated and then displayed.

NOTE:

The CMG will be calculated with the Version 1.0 DLL (CMG_100.DLL) if the assessment has a discharge date prior to October 1, 2005. If the discharge date is on or after October 1, 2005, the CMG will be calculated with the Version 2.0 DLL (CMG_200.DLL).

ASSESSMENT VALIDATION AFTER EXIT

When the user attempts to exit data entry, the system will check all of the rules in place. 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. (B1. Comatose Persistent vegetative state/no discernible consciousness)]. 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.

Assessment Validation Errors and Warnings

Warnings: (click on an item in list where entire warning is not visible)

Errors/Warnings for Assessment:
ERROR:A value is required for this field. (STATE_CD.STATE ID TWO-CHARACTER F
ERROR:A value is required for this field. (FAC_ID.CMS ASSIGNED UNIQUE FACILITY
ERROR:A value is required for this field. (1A.Facility Name)
ERROR:A value is required for this field. (1B.Facility Medicare Provider Number)
ERROR:A value is required for this field. (12.Admission Date)
ERROR:A value is required for this field. (13.Assessment Reference Date)
ERROR:A value is required for this field. (15.Admit From (at date of admission))
ERROR:A value is required for this field. (20A.Primary payment source)
ERROR:A value is required for this field. (21A.Impairment Group: Admission)
ERROR:A value is required for this field. (22.Etiologic Diagnosis Code (ICD-9 Code))
ERROR:A value is required for this field. (25.Comatose: Admission)
ERROR:A value is required for this field. (26.Delirious: Admission)
ERROR:A value is required for this field. (27A.Swallowing Status: Admission)

Warning Description

ERROR:A value is required for this field. (STATE_CD.STATE ID TWO-CHARACTER
POSTAL CODE)

| Print Warnings | Continue | Return to Data Entry |

Three options are available on the **Assessment Validation 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.

ASSESSMENT STATUS WINDOW

On the **Assessment Status** screen, the status of an assessment must be marked before the assessment can be exited.
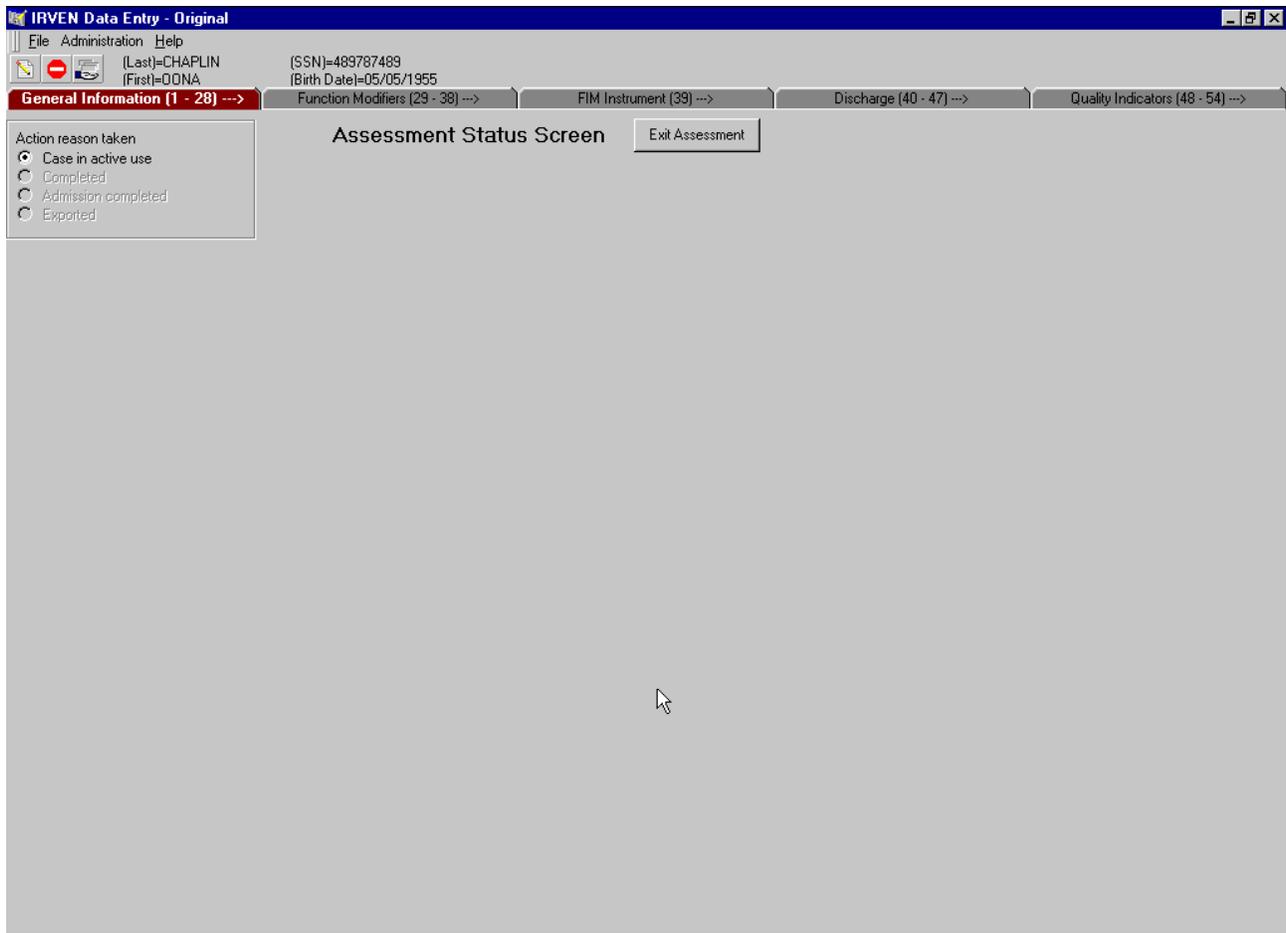
The various options that can be selected when exiting the **Assessment Status** screen include:

- Case in active use: An assessment has been edited but is not complete

- Completed: Data entry has been completed for an assessment (both admission and discharge variables)

- Admission Completed: The admission portion of the assessment has been completed.

- Exported: An exported assessment

To mark the status, select the best choice and press the <EXIT ASSESSMENT> button.

NOTE:
Once an assessment has been marked " Exported", only users with Clinical Supervisor or System Administrator rights can reopen it.

NOTE:
The status "Admission Completed" is available for an assessment if all admission-related variables have been completed and no errors are detected. After an assessment is marked "Admission Completed", it cannot be marked "Admission Completed" again. Upon exiting the next session of data entry, all errors for discharge-related variables will be reported and the assessment can only be marked as "Active Use" or "Completed".

IRVEN DATA IMPORT

SELECTING IMPORT OPTIONS

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 1,260-byte string format specified in the IRF Data Record Layout, and a trailer record). On the **IRVEN Management** screen, the user may click on the <IMPORT> button or select the **Import** function from the OPTIONS menu item to display the **IRVEN Import Assessments** screen.

The user must enter an Import file path/name for the file to be imported or use the default file path/name. The default file path is the directory where the IRVEN software was initially installed.

The following Import option is available when importing files:

- **Mark Completed Assessments As Exported 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 correction number to the next available value.** This feature allows a modification to be imported even if the correction number on the imported record is not the next number available for that assessment in IRVEN.

SELECTING TO SHOW WARNING MESSAGES

During the **Import** process, the user has the capability to display a warning message when a new patient is added. Select the desired warnings to be displayed during import by clicking in the warning check box.

For uninterrupted processing, leave these options unchecked.

PERFORMING ERROR CHECKS ON AN IMPORT FILE

Each record in the import file is processed in accordance with the rules specified in the IRF 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. If no errors are detected, a message box appears announcing that the error check is complete and displaying the number of records processed.

NOTE:
This function only imports data in the 1,260-byte format.

IMPORTING IRVEN DATA

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, patient, 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 IRF-PAI database. If the information does not match, the user is given the option to update the facility database.

- Patient Data

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

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

- Assessment Data

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

IRVEN DATA EXPORT

EXPORTING ELECTRONIC FORMS

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

The **IRVEN Export** function enables data for "Export Ready" assessments to be output from the IRVEN database in the IRF-PAI Data Record Layout format (i.e., 1,260-byte string) suitable for submission to the IRF-PAI National database. Note that each data field in each exported assessment has been error-checked in accordance with the rules specified in the IRVEN 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 New Export, enter a description of the file into the *Export Path and File Name (including extent ions)* text box. The assessments will be displayed in the *Select Assessments 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> button. Click on the <CLEAR ALL> button to deselect all highlighted assessments.

- Enter the path/file name into the *Export Path and File Name (including extensions)* text box. Either type the information in the text box or click on the <FILE FOLDER> icon, and select a path and enter a file name (including extension). 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 IRVEN with subdirectories for the year/month.   The saved file names could reference the weeks of the month (e.g., C:\IRF\2001\NOVEMBER\WEEK1.TXT).   This structure will help to organize the export files for submission to the IRF-PAI National 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 IRF-PAI National 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 IRF-PAI National database. 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 **IRVEN Management** screen.

RE-EXPORTING ELECTRONIC FORMS

It is also possible to resubmit previously exported assessments, should an error be detected by the IRF-PAI National database. To initiate a resubmission, 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 *Assessments Included in Export (the highlighted assessments are exported)* list box.

IRVEN HELP

GENERAL/ABOUT HELP

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

ADDITIONAL HELP

Context sensitive help is available by pressing F1.

REPORTS

SELECT A REPORT TO VIEW/PRINT

IRVEN 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 IRVEN software.

ASSESSMENT DATA ENTRY REPORT

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

After selecting View/Print Reports from the OPTIONS menu on the **Management Screen**, the **View/Print Assessment Data Entry Report** screen will be displayed. Select Assessment Data Entry Report, and select either the Patient option to enable the **Patient** function for selecting assessments on which to report, or the Status option to enable the **Status** function from which to select assessments on which to report.

REPORT ON AN ASSESSMENT(S) USING THE PATIENT FUNCTION

- Search for an Assessment by Patient

Click on the <PATIENT> radio button and, from the *Search for...* drop-down list box, select the desired criteria on which to search. Follow the instructions discussed in the IRVEN Data Entry section under Select/Add a Patient. Click on the <SEARCH> button to perform the search and display the results in the *Select a Patient* list box. After selecting a patient, the associated assessments will be displayed in the *Select Assessment(s) Below to Report* list box on which to report. Patient search options include:

- **Last Name**
- **SSN**
- **Medicare Number**
- **Medicaid Number**
- **Patient Identification Number**

NOTE:

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

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 Reports** 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).

REPORT ON AN ASSESSMENT(S) USING THE STATUS FUNCTION

- 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 patients with assessments coded "In Use" will be displayed in the *Select Assessment(s) Below to Report* list box from which the user can choose.

- **Admission Complete.** An alphabetical list of patients with assessments coded "Adm Complete" will be displayed in the *Select Assessment(s) Below to Report* list box from which the user can choose.

- **Export Ready.** An alphabetical list of patients with assessments coded "Export Ready" will be displayed in the *Select Assessment(s) Below to Report* list box from which the user can choose.

- **Exported.** An alphabetical list of patients with assessments coded "Exported" will be displayed in the *Select Assessment(s) Below to Report* list box from which the user can choose.

- **Completed.** An alphabetical list of patients with assessments coded "Completed " will be displayed in the *Select Assessment(s) Below to Report* list box from which the user can choose.

- **Hidden.** An alphabetical list of patients with assessments coded "Hidden" will be displayed in the *Select Assessment(s) Below to Report* list box from which the user can choose.

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 Reports** 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).

EVENT TRACKING REPORT

The purpose of the **Tracking** function is to record significant events associated with the primary objects in the IRVEN System: Patient, Facility, Assessment, and Employee. If the Tracking system is enabled, then any events enabled for the aforementioned objects will be captured and saved to the IRFTRACK.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.
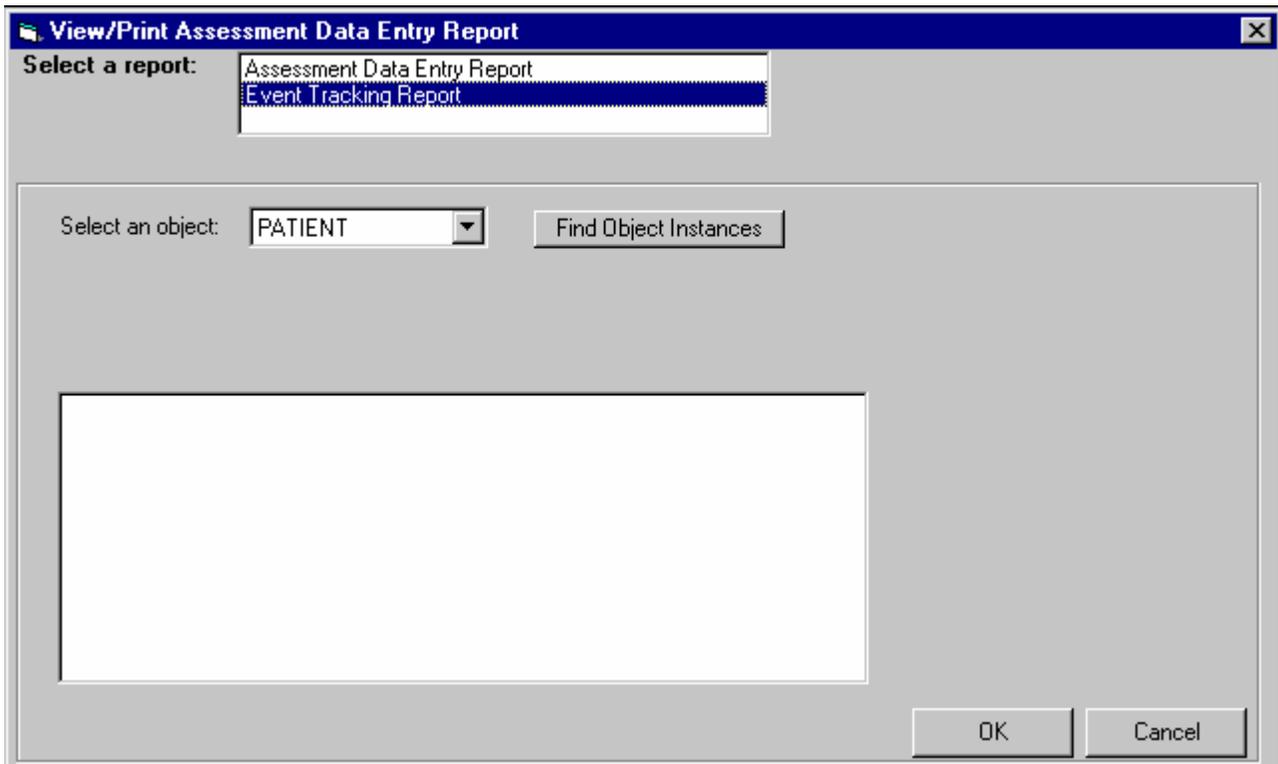
After selecting the Event Tracking Report on the **View/Print Reports** screen, the **View/Print Event Tracking Report** screen will be displayed. Click on the drop-down menu list and select an object on which to report.

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 IRVEN System.

- Patient

  - PAT_ADD: A patient was added to the system.

  - PAT_DEL: A patient was deleted from the system.

  - PAT_EDIT: Patient information was edited.

  - PAT_ARCH: A patient was archived.

  - PAT_HIDE: A patient was hidden from the system.

  - PAT_DISP: A patient was displayed in the system.

  - PAT_REST: A patient was restored from the archive.

- Facility

  - FAC_EDIT: Facility information was edited.

  - AGT_EDIT: Agent information was edited.

- 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_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.

IRVEN ASSESSMENT FORMS

The user can access the print function for an individual assessment from the **IRVEN Management** screen by clicking on the <PRINT FORMS> button located on the bottom of the screen. The Adobe Acrobat Reader will be launched with a PDF representation of the IRF forms and a data overlay containing the assessment data. As a result, the *Print* dialog box may appear if the silent printing option is not enabled. Click on the <OK> button to print the complete assessment.
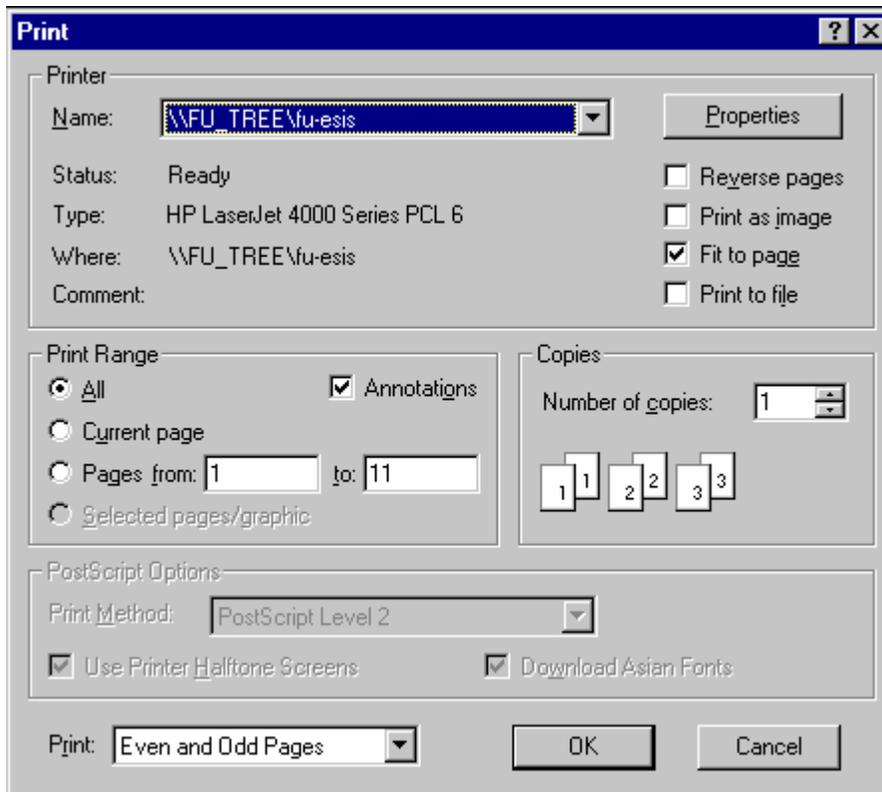
IRVEN also has the capability to print multiple assessments contained in a standard export file. This capability can be accessed by selecting the Print Assessment(s) From File option from the OPTIONS menu item or the <PRINTER> icon located on the tool bar. The *IRVEN Print Assessment* dialog box will be displayed.

IRVEN Print Assessments

Print Assessment for file path/name:

[   ] 📁

| Error Check File | Print | Close |
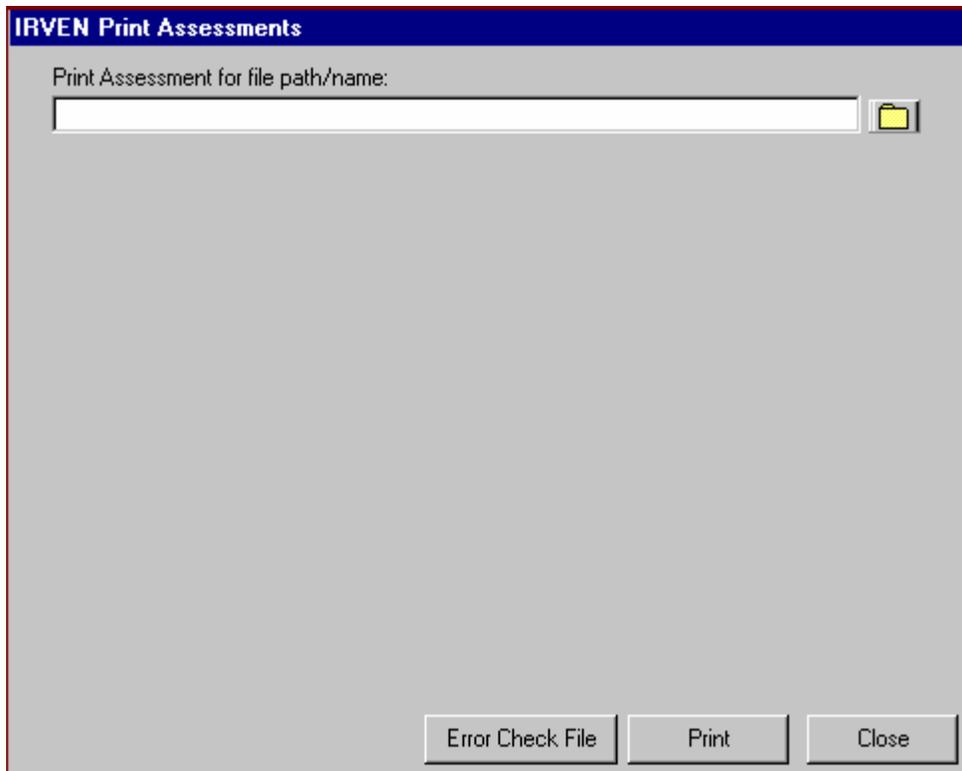
The user must provide the file path/name for the file containing the assessment(s). The user may then check for errors in the assessments by clicking on the <ERROR CHECK FILE> button. In order to proceed with printing, click on the <PRINT> button. A printer dialog box will appear for each assessment 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.

APPENDIX A

REPAIR/COMPACT UTILITY FOR MICROSOFT ACCESS DATABASE

REPAIR AND COMPACT

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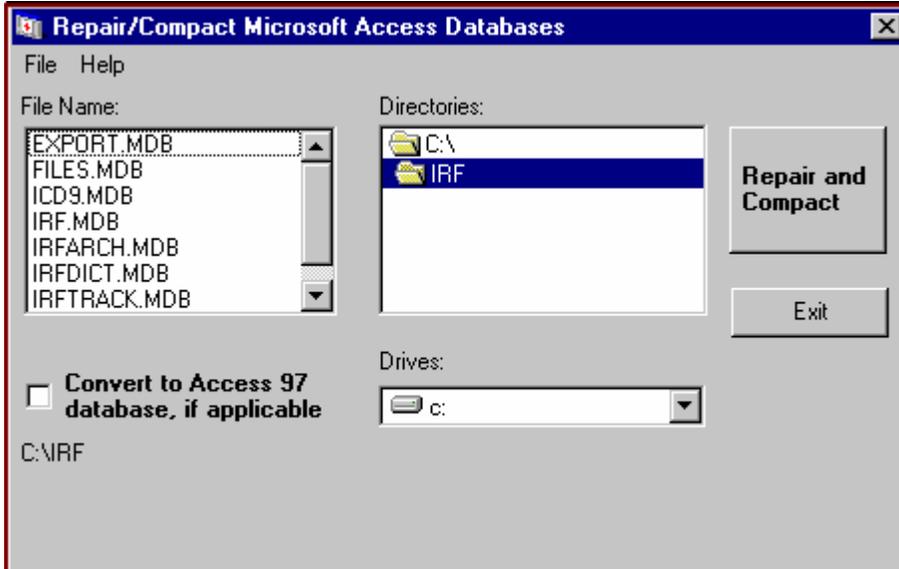
The Microsoft Access Databases Repair Utility is designed to fix a Microsoft Access database that becomes corrupted. To use the **Repair/Compact** utility, select the file using the drive, directory, and file list boxes on the single window that comprises this utility. The name of the file that has been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

GLOSSARY OF TERMS

Data Entry

A function that allows users to collect data by creating the data store file called **XXX.MDB** where "XXX" represents the module acronym (e.g., IRF.MDB is the data store file for the data entry module *IRVEN*).

Data Entry Rule

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

Data Entry System

A system designed 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., IRF-PAI is the Data Entry System for the Inpatient Rehabilitation Validation and Entry (IRVEN) System project).

Module

See **Data Entry System**.

Screen

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.

Subscreen

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.

Tab/Subtab

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).

Variable

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

Variable Type

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. For example, if variable **Admission Date** accepts only data that are in date form, the variable type must be defined as variable type **Date**.