RESOURCE AND PATIENT MANAGEMENT SYSTEM

iCare Population Management GUI

(BQI)

Taxonomy Maintenance User Manual

Version 2.6
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Office of Information Technology
Division of Information Technology

Table of Contents

Preface

The purpose of this manual is to provide the user with the information needed to use the latest enhancements to the Taxonomy Maintenance window in the iCare (BQI) population management application.

This manual contains reference information about iCare views, examples of its processes, and step-by-step procedures on how to perform activities related to the Taxonomy Maintenance window in the latest version of the iCare application.

For more information about iCare basic functionality, iCare usage, or training for iCare, consult these resources:

- iCare – IHS OIT available at https://www.ihs.gov/icare/

- iCare Population Management User Manuals Version 2.5 available at https://www.ihs.gov/RPMS/index.cfm?module=Applications&option=View&AC_ID=0

- iCare Training available at https://www.ihs.gov/RPMS/index.cfm?module=Training&option=index&sortChoice=Title&newquery=1

- Recorded AdobeConnect sessions for iCare available at https://ihs.adobeconnect.com/admin/show-event-catalog?folder-id=1547484315

- Join the iCare listserv by sending an e-mail to icare@listserv.ihs.gov

1.0   Introduction

iCare is a Windows-based, client-server graphical user interface (GUI) to the IHS Resource and Patient Management System (RPMS). iCare retrieves key patient information from various components of the RPMS database and brings it together under a single, user-friendly interface. iCare is intended to help providers manage their patients care. The ability to create multiple panels of patients with common characteristics (e.g., age, diagnosis, community) allows users to personalize the way they view patient data.

The information included in this Taxonomy Maintenance user manual covers iCare functionality enhancements in iCare Version 2.6. For more information about iCare basic functionality, iCare usage, or training for iCare, consult the resources listed above in the Preface.

1.1   Background

Along with the rest of the healthcare industry, IHS has already developed a set of chronic condition management (or register) applications, including diabetes, asthma, and HIV. This type of application provides a way for healthcare providers to manage a specific group (register) of patients for a single disease state. Register management applications assist healthcare providers to identify high-risk patients, and proactively track care reminders and health status of individuals or populations. It assists in providing more standardized and appropriate care by embedding evidence-based guidelines, and reporting outcomes.

Many patients, however, have more than one diagnosed disease. For instance, at the current time within the Indian Health system, a diabetic asthmatic woman could be a member of four RPMS registers (diabetes, asthma, women's health, and immunizations). This 'silo' approach to patient care could potentially result in fragmented care, and could increase the risk of inadequate patient care management due to misidentification of the true level of risk.

1.2   iCare Graphical User Interface

The iCare GUI is intended to allow providers to see a more complete view of patients with multiple conditions, while maintaining the integrity of the user-defined, disease-specific registers.

iCare can help IHS providers by:

- Proactively identifying and managing different groups (populations) of patients who share user-defined characteristics.

- Providing an integrated view of a patient's conditions that would minimize "stovepipe" care management.

- Providing an intuitive and integrated interface to the diverse patient data elements of the RPMS database.

- Providing providers a review of clinical quality of care measures for their own patients, enabling improvement in the quality of healthcare delivery.

- Enabling views of traditional healthcare information from the perspectives of community, population and public health.

- Providing the default tag selection as Proposed and Accepted. The tag selection for any record can be changed by selecting or de-selecting any checkbox.

- Clicking the "use AND?" check box when there are multiple tags selected. The "And" option searches for patients who have ALL of the user-defined tags.

1.3 Who Should Use iCare?

Any provider who needs to identify a group of patients for long-term management or to create a temporary list should think about using iCare. The following scenarios provide examples of when iCare should be used.

- A nurse at a facility that assigns a primary care provider to each patient. Every day, she/he needs to create a list of scheduled patients for two different doctors in the clinic.

- A practitioner wants to identify which of his/her patients are considered obese so he/she can recommend nutrition counseling.

- Because providers at a local clinic have performance goals related to annual GPRA clinical measures, a practitioner wants to identify which of his/her patients are missing key clinical data.

- A Women's Health Clinic wants to focus on two clinical performance improvement initiatives this year. They want to identify the performance problem areas for female patients between the ages of 18 and 50.

- One of two part-time case managers for a group of children wants to create a patient list that both case managers can use.

1.4 User Desktop (Client) Requirements

iCare software resides on both the local facility's RPMS server and on the desktop computer that each operator uses. In order to use iCare successfully, the computer should have the following minimum configuration:

Table 1-1: Computer configuration for installing iCare

Client PC	Minimum Version
Microsoft Windows (Any Windows OS that supports .NET 2.0 Framework)	Windows XP SP2, Windows 2003 Server, Windows 2000 SP3+, Windows ME, Windows 98/98SE
Microsoft .NET Framework	V2.0
Suggested Client PC Hardware	Processor: Minimum: Pentium III 800MHz; Suggested: Pentium 4 2GHz+ Memory (RAM): Minimum: 256MB; Suggested: 512MB+
Approximate Disk Space Requirements	iCare Application Footprint ~10MB .NET 2.0 Framework ~ 100MB (if not already installed via Windows Updates)

2.0   Taxonomy Maintenance

Taxonomy maintenance operation is accessed by selecting **Tools** | **Taxonomy Maintenance** | **View**/**Edit Taxonomy Entries** from any **iCare main window**. The application displays the **iCare Taxonomy View/Edit dialog** box.
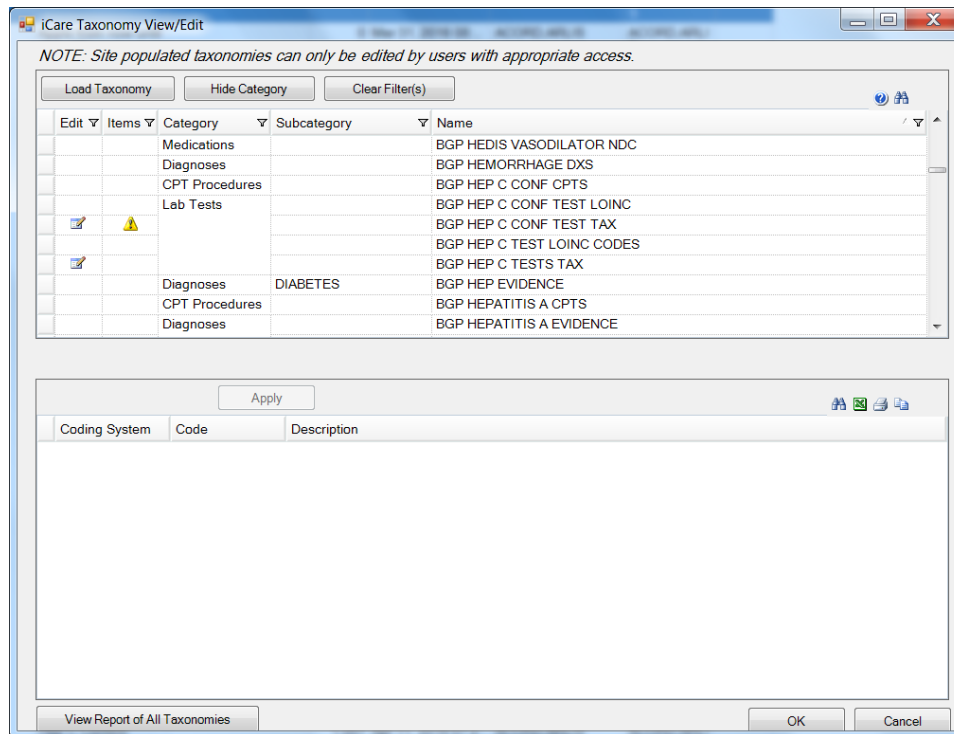
Figure 2-1: **iCare Taxonomy View/Edit** dialog box

Note the following about the upper panel:

- The **Add/Edit icon** icon in the **Edit column** indicates that the taxonomy can be edited (add or remove codes).

- The **Warning icon** in the **Items column** indicates that there are no associated codes and none can be added or removed.

- No icon in the Edit column indicates that only associated codes can be viewed.

- When the taxonomy cannot be edited, the application displays the message on the lower panel that reads: * The selected taxonomy is not site-editable.

The major function of the **iCare Taxonomy View/Edit dialog box** is to select a taxonomy in the upper pane and then click **Load Taxonomy**. The application will populate the lower panel with the codes associated with the taxonomy.
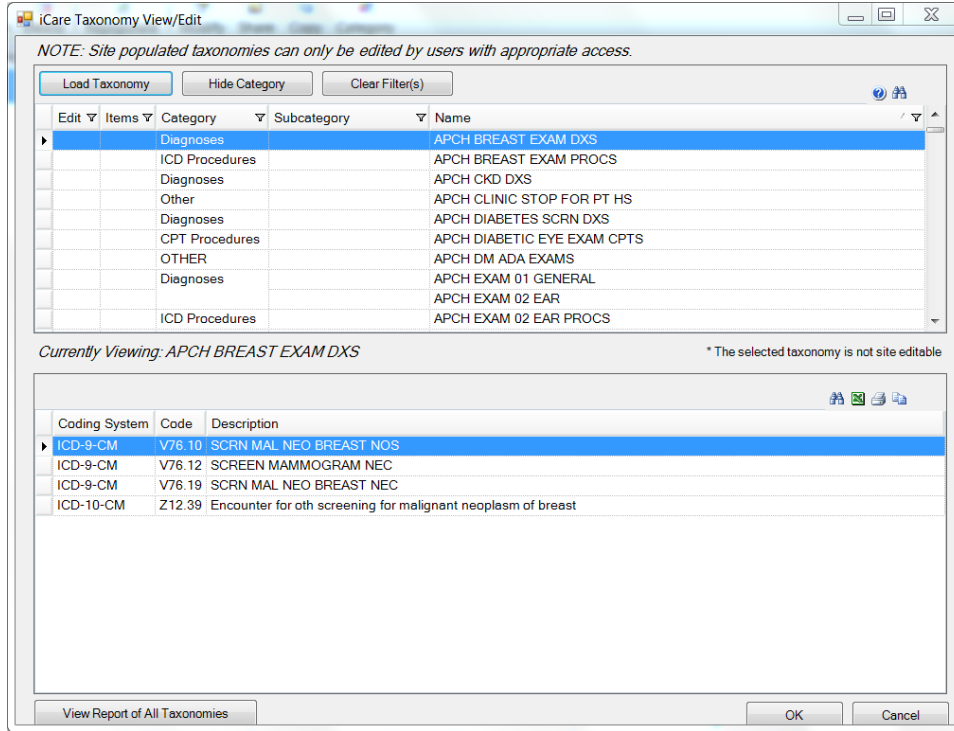
Figure 2-2: **iCare Taxonomy View/Edit** with lower panel populated

Use the **scroll bar** to scroll through the codes in the lower pane.

3.0   Buttons on Upper Panel of iCare Taxonomy View Edit

3.1   Load Taxonomy

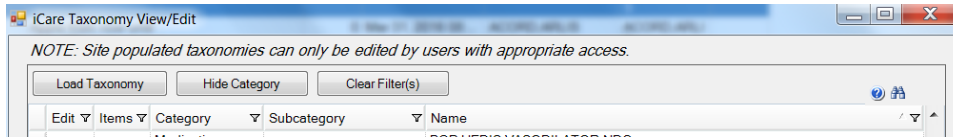Click **Load Taxonomy** to load the associated codes of the selected taxonomy.
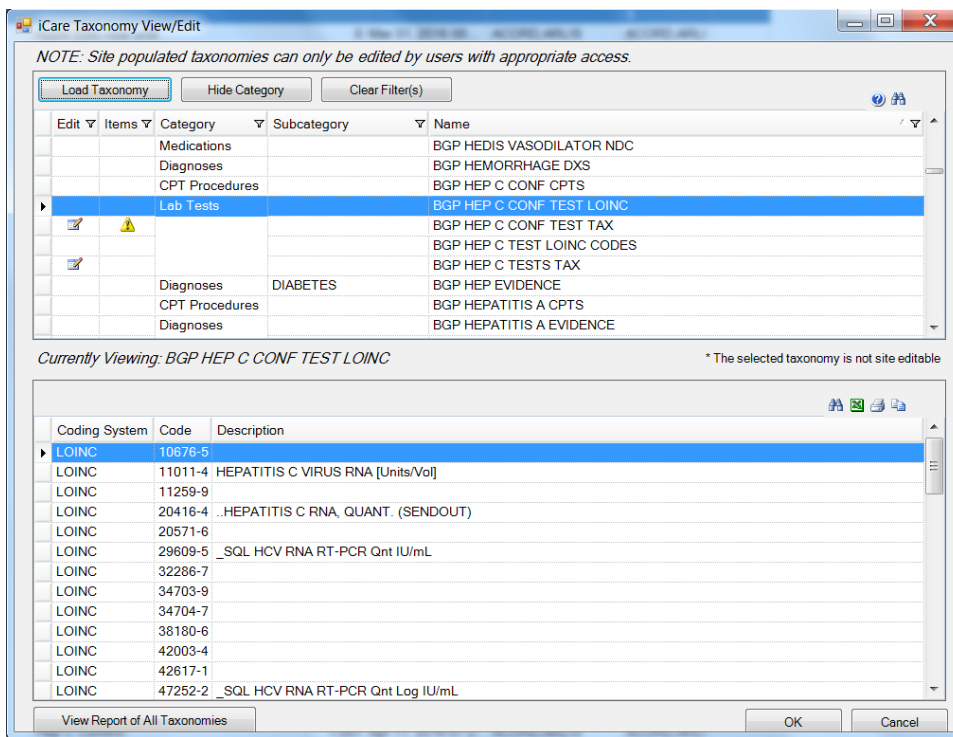

Figure 3-1: Record selected

Figure 3-2: Lower panel populated after clicking Load Taxonomy

> **Note**:   Double-clicking the selected record also loads the associated codes.

For LOINC and NDC taxonomies, the description field will be populated if a matching lab or medication record was found for that code in the taxonomy. Not all codes may be mapped.

3.2   Hide Category

Click **Hide Category** to hide the Category and Subcategory columns on the upper panel of the **iCare Taxonomy View/Edit** dialog box.
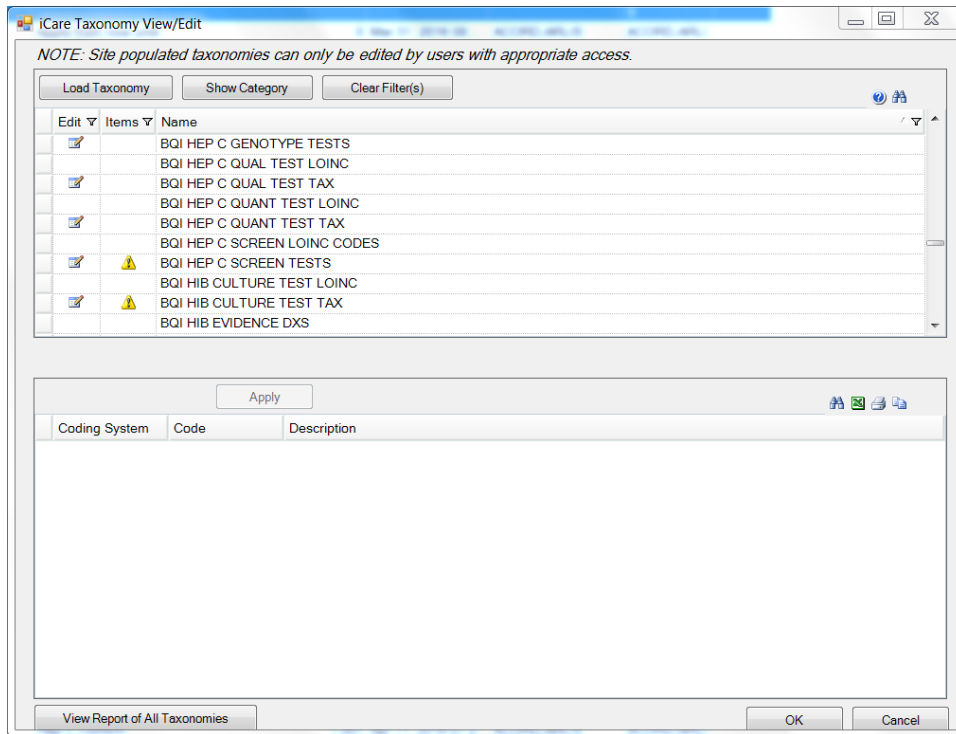

Figure 3-3: **iCare Taxonomy View/Edit** dialog box after using Hide Category

> **Note**:   If **Show Category** in the upper panel is clicked, the window refreshes and displays the Category and Subcategory columns.

3.3   Clear Filter(s)

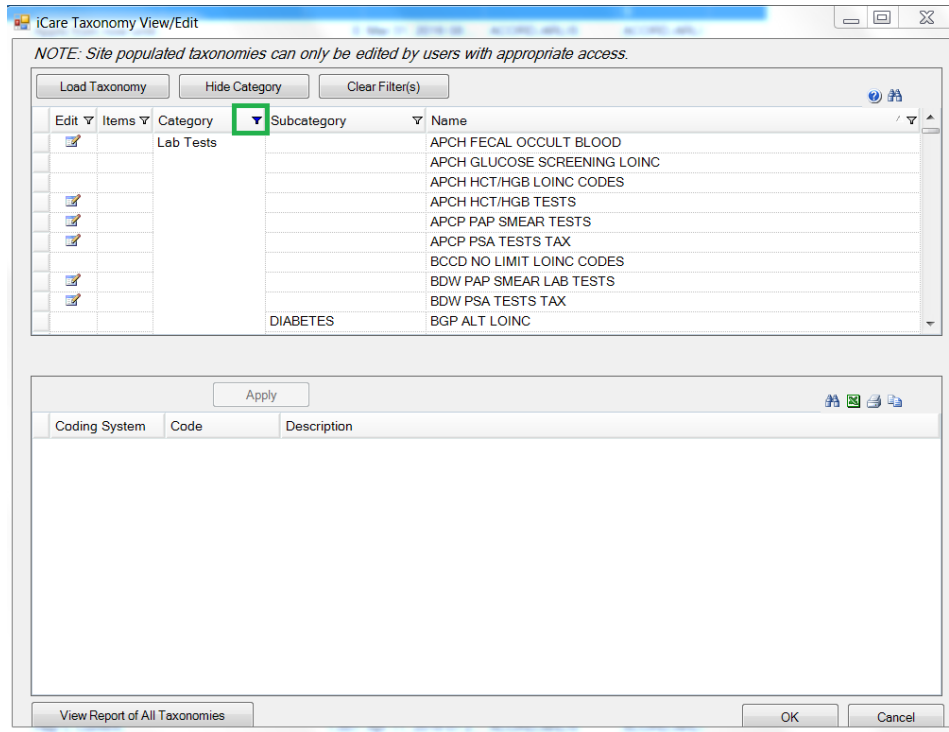Click **Clear Filter**(s) to clear any filtering that might have been done on any columns.
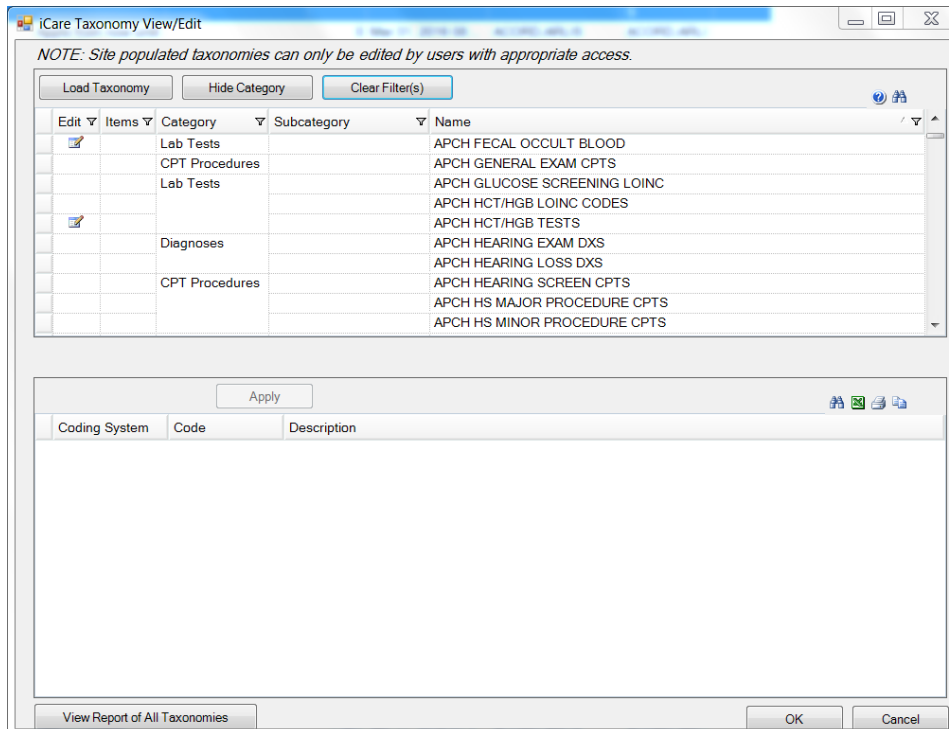
Figure 3-4: Filtered Category

Figure 3-5: **iCare Taxonomy View/Edit** dialog box after using Clear Filter

3.4 Add/Edit Taxonomy

A code for a particular taxonomy can be added or edited when the **Add/Edit icon** 🖊
appears in the **Edit column** on the upper panel of the **iCare Taxonomy View/Edit
dialog box**.

The iCare Taxonomy Editor holds the security key (BQIZTXED) allowing that
person to read/edit iCare taxonomies. The iCare Taxonomy Editor holds the security
key (BQIZTXED) allowing that person to read/edit iCare taxonomies.

> **Note**: If the user does not hold that security key, the information
> on the dialog can only be viewed. The following
> information displays: You do not currently have access
> rights to edit taxonomies. In order to edit taxonomy entries,
> you will need to have the iCare Taxonomy Editor security
> key (BQIZTXED) added to your RPMS user account.

Double-click the **row on the upper panel containing the icon** to have the associated
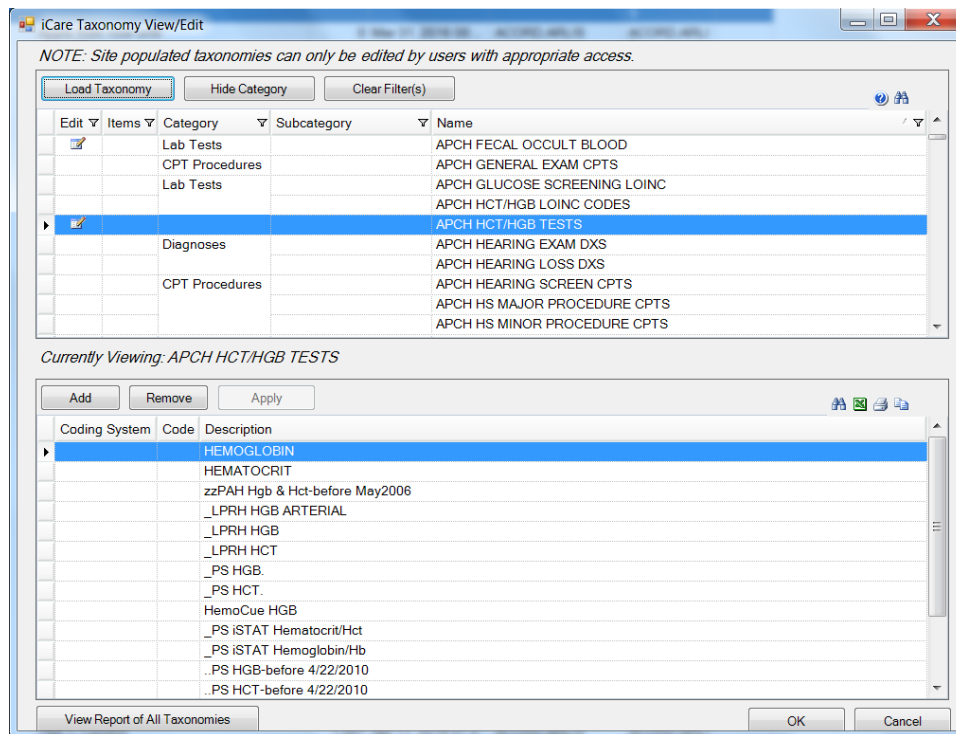codes display in the lower panel.

Figure 3-6: Codes in lower panel that can be edited

3.4.1 Add Function

Click **Add** to add a new code to the particular taxonomy.
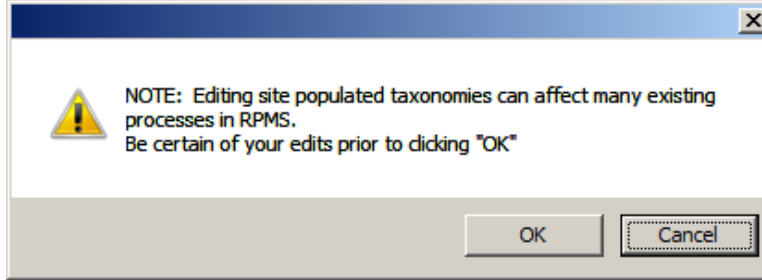
The application displays a warning message.

Figure 3-7: Warning message before changing the taxonomy

Click **OK** to continue the Add function (otherwise, click **Cancel**). After clicking **OK**, the application displays the **Select Taxonomy Item** dialog box.
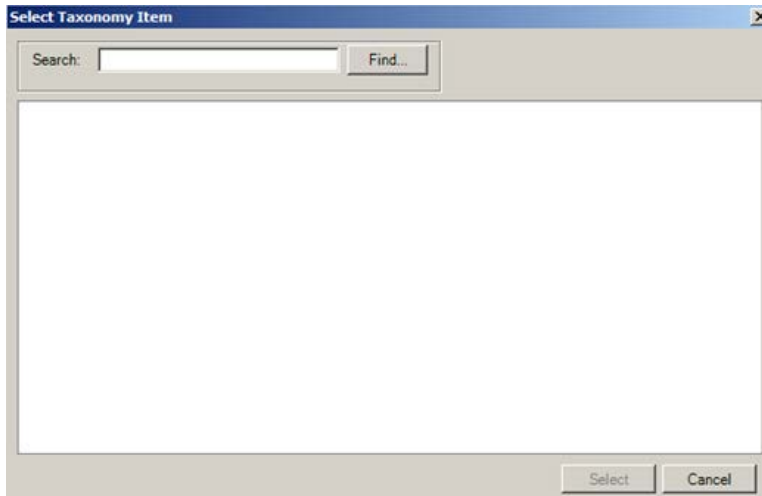

Figure 3-8: **Select Taxonomy Item** dialog box

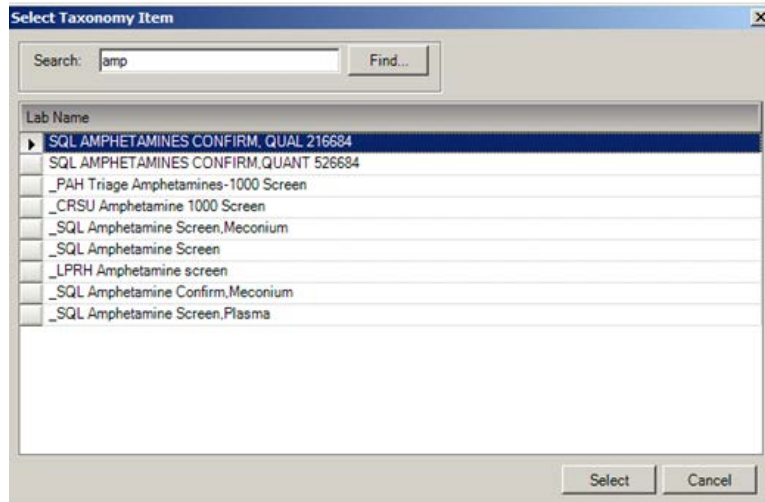Use the **Search** field to search for a taxonomy item.

Figure 3-9: Populated **Select Taxonomy Item** dialog box

Highlight the item to add and click **Select**. The application appends it to bottom of the list in the grid.

After finished adding the codes for the particular taxonomy, click **Apply** to "save" changes. If **Apply** is NOT clicked, and the user tries to move to another taxonomy or another part of the iCare application, the "Save Taxonomy changes?" information message displays, asking if the user if "you want to apply the changes now? In this case, click **Yes** to apply the changes (otherwise, click **No**).

The process of adding items to various taxonomies can be repeated. When finished using the **iCare Taxonomy View/Edit** dialog box, click **OK** (otherwise, click **Cancel**). Clicking **OK** closes the dialog box.

3.4.2   Remove Function

Select **one or more codes** to remove and then click **Remove**.

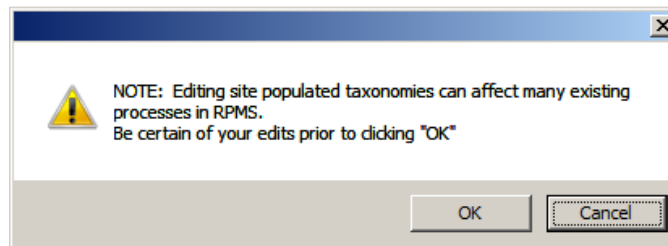The application displays a warning message.

Figure 3-10: Warning message before changing the taxonomy

Click **OK** to use the Remove function (otherwise, click **Cancel**).

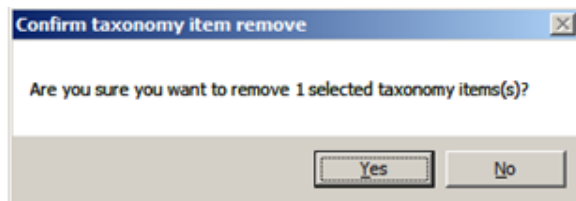After clicking **OK**, the application displays a confirmation message.

Figure 3-11: Sample **Confirm taxonomy item remove dialog box**

Click **Yes** to remove the code(s) (otherwise, click **No**).

When the Remove function is complete, click **Apply** to apply the changes.

4.0   Search Tool

The Search tool function applies to the upper pane of the iCare Taxonomy View/Edit dialog box. Use it to search for words in the upper panel.

Access the search tool for taxonomy maintenance window by clicking the **Search button** (🔍 .) The application displays the Search dialog box. When first accessing this dialog box, the lower fields do not display. The **Show Additional Search Options** checkbox must be selected to display the lower fields.
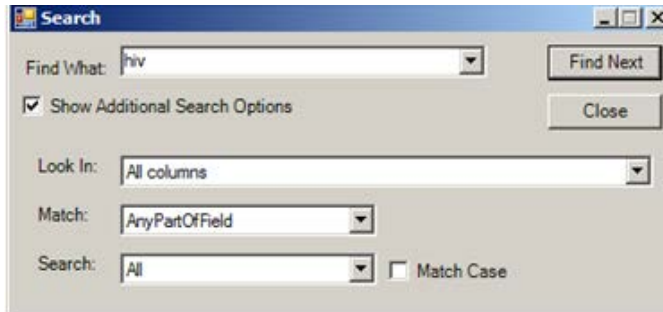

Figure 4-1: Sample **Search** dialog box

If the **Show Additional Search Options** checkbox is not chosen, all of the columns will be searched.

This search tool will search the columns in the upper pane of the **iCare Taxonomy View/Edit** dialog box.

4.1   Look In

Click the drop-down list for the **Look In field** on the **Search dialog box** to view the options for that field. The highlighted option determines what part of the window to search.

4.2   Match

Click the drop-down list for the **Match** field on the **Search** dialog box to view the options for that field. The highlighted option determines what part of the Find What field will be matched in the search.

4.3   Search

Click the drop-down list for the **Search** field on the **Search** dialog box to view the options for that field. The highlighted option determines the direction of the search.

4.4   Match Case

Select the **Match Case** checkbox to have the search match the case of the text in the **Find What** field.

4.5   Completing the Search

After all fields are populated with the search criteria, click the **Find Next** button.

If a match is found, the matching text will be highlighted on the upper panel of the **iCare Taxonomy View/Edit dialog box**.
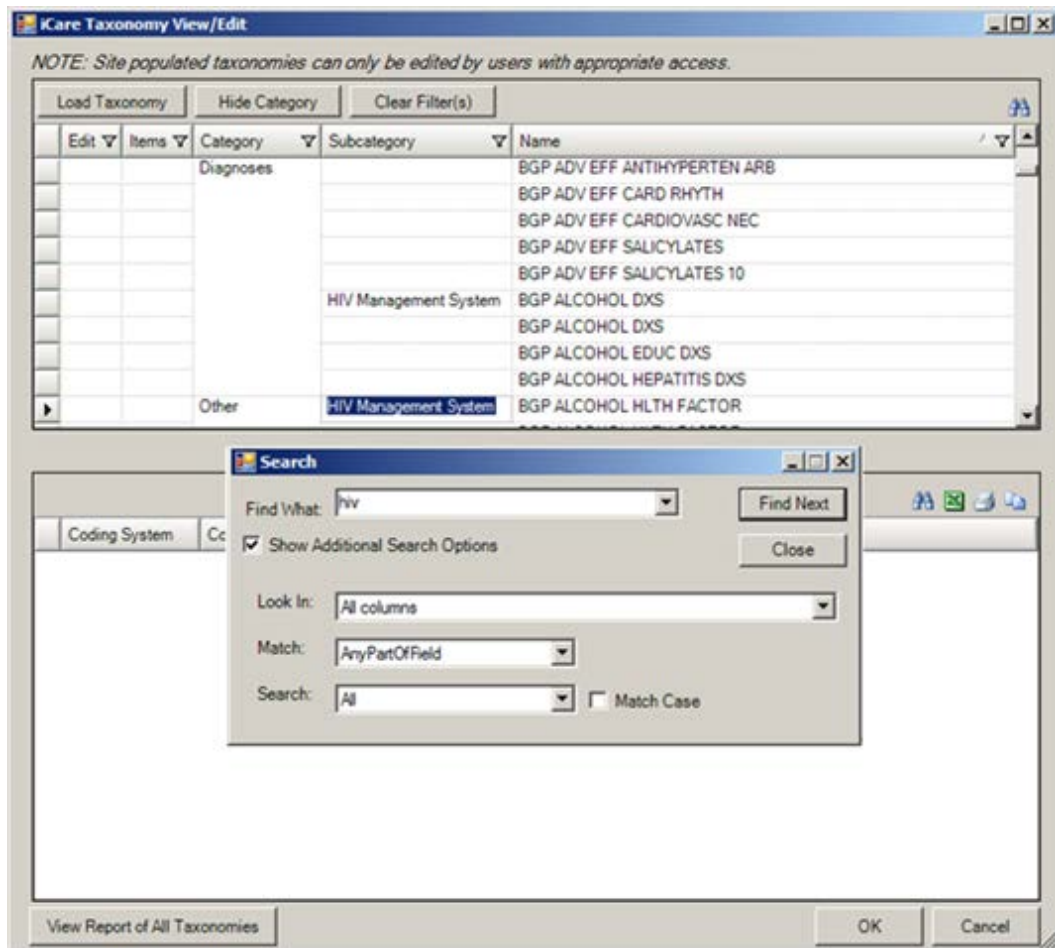

Figure 4-2: Sample search

To continue in the search, click **Find Next** again. Click **Close** to close the Search dialog box.

5.0   Buttons on Lower Panel of iCare Taxonomy View/Edit

5.1   View Report of All Taxonomies

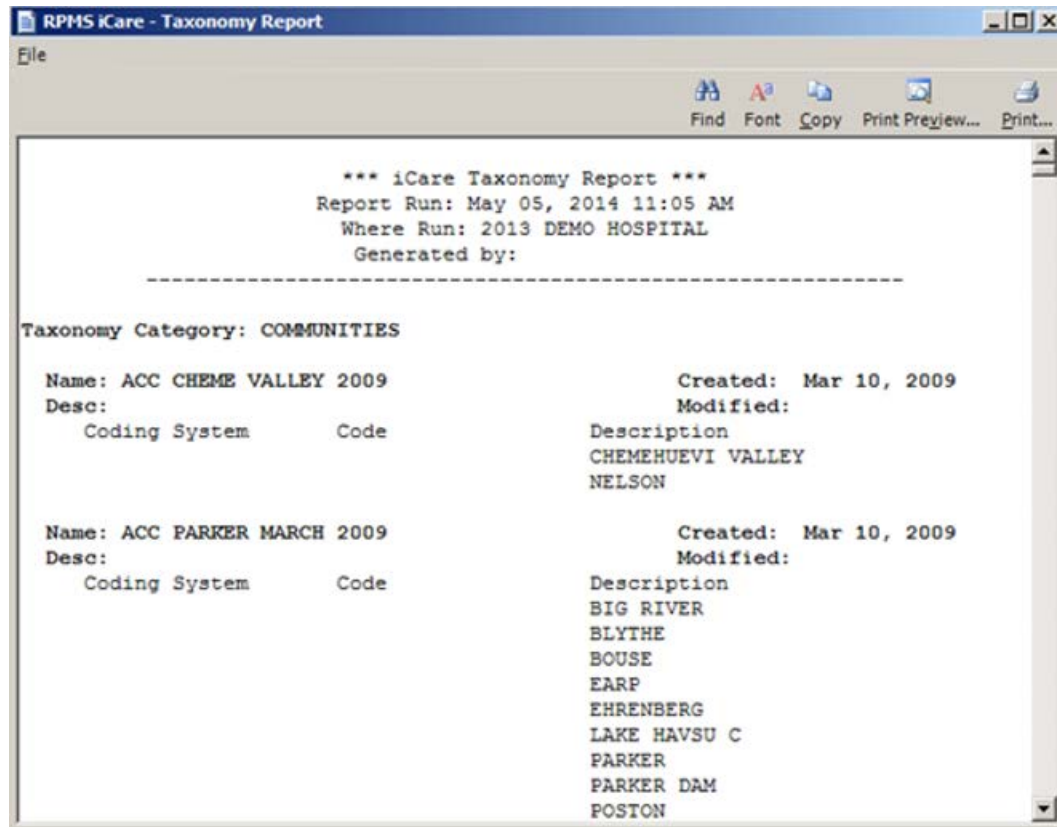Click the **View Report of All Taxonomies** button to view the Taxonomy Report.

Figure 5-1 Sample Taxonomy Report

The report shows information about various taxonomy categories, a description of the Coding System and Code, and when the taxonomy was created and modified. All data applies to the facility listed in the "Where Run" field.

The report window has the same features of other pop-up windows in iCare.

Select **File** | **Close** to dismiss the report window.

The following actions can be taken on this report window:

- Navigate through the information by using the scroll bar.

- Click the **Find button** (![Find icon]) (or select **File** | **Find**) to access a search tool to find data in the report. This button works like the Search function. Section 6.3.1 provides more information about the Search function.

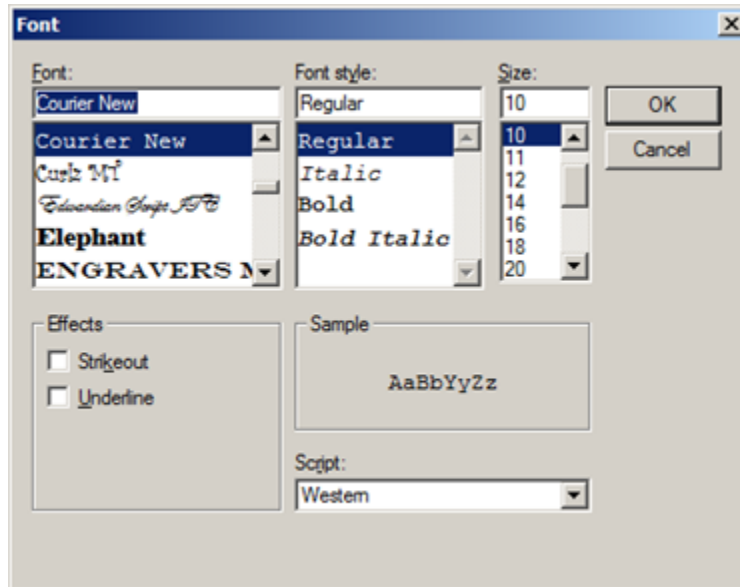- Click the **Font button** (![Font icon]) (or select **File** | **Font**) to display the **Font** dialog.

Figure 5-2: **Font** dialog

Use the Font dialog to change the Font name, style, and size of the text in the report (applies to all of the text). In addition, effects like "Strikeout" and "Underline" can be added. These perform like those effects indicated in MS Word.

Change the Script option to see the text displayed in another language and that language pack is installed on the local computer. If the language pack is not installed, the display does not change by selecting another script.

Click **OK** to apply the changes to the text in the report. These changes are only effective for the current view of the report. (Otherwise, click **Cancel**.)

- Click the **Copy button** (![Copy icon]) (or select **File** | **Copy**) to copy the selected text to the Windows clipboard.

- Click the **Print Preview button** (![Print Preview icon]) (or select **File** | **Print Preview**) to display the Print Preview dialog. The contents of the report can be printed from this dialog. Section 6.3.3 provides more information about the **Print Preview** dialog.

- Click the **Print button** (⬚Print) (or select **File** | **Print**) to display a print dialog where the user specifies the printer to output the contents of the report, the page range, and number of copies.

5.2   Buttons on Right Side of a Window

These buttons operate like those on other iCare windows. Section 6.3 provides more information.

6.0   iCare Features Used by Taxonomy Maintenance

This section focuses on the iCare features that are used by Taxonomy Maintenance. This focus is on those things that influence the functionality of the iCare Taxonomy Maintenance View/Edit dialog box.

6.1   Working with Columns

This section reviews how to customize the view by manipulating the columns in a window.

- Sorting

- Changing Column Width

- Filtering

6.1.1   Sorting

A column can be sorted by clicking on the column's name.

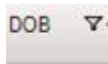This changes the column's heading to having a sort-by (arrow) image.

Figure 6-1: Column Heading With Arrow Image

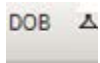Click the **column's heading** again and the arrow changes direction.

Figure 6-2: Column Heading With Arrow in Opposite Direction

If another column's name is clicked, the sort-by image disappears and the most recently-selected column contains the sort-by image.

6.1.2   Changing Column Width

Column widths displayed in iCare lists can be modified by selecting and dragging either of the column's left or right borders.

To change the default column width, do the following:

1. Move **the mouse pointer** over either the left or right edge of the column's header. The arrow will change into an icon.

Figure 6-3: Icon for Moving Column's Edge

2. **Click and drag** this icon to the left or right to resize the column's width in that direction; release **the mouse** when reaching the desired new width.

3. The other columns will adjust to the new "view" of the columns.

6.1.3   Filtering

Filtering is a means by which a sub-set of the current set of data can be displayed. Filters can be used on more than one column.

Click a **column's Filter icon** ▽ icon to display the options for that column from which to choose. The options include each of the values found in that column, as well as (All), (Custom), (Blanks), and (NonBlanks).
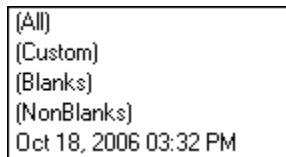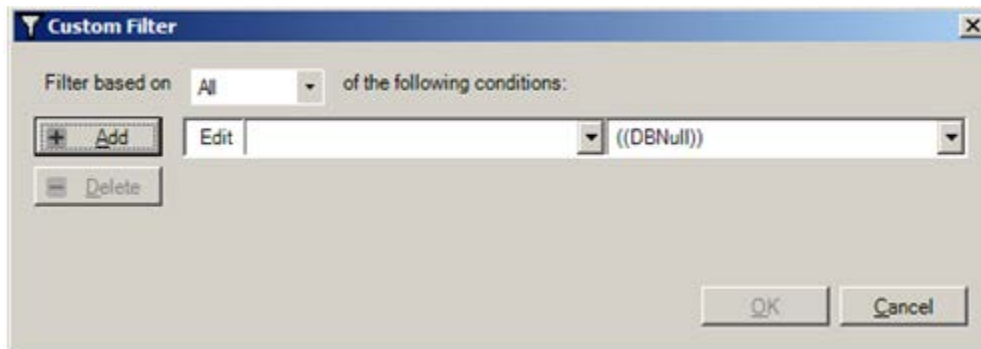

Figure 6-4: Sample Filter drop-down list

6.1.3.1   Creating a Filter

Select (**Custom**) from the drop-down list to display the **Custom Filter dialog box** for the column. Using the custom filter allows filtering using multiple criteria for the column.

Figure 6-5: Sample **Custom Filter** dialog box

Filter based on

> The options on the drop-down list are All or Any. Use **All** when all of the conditions satisfied for the filter. Use **Any** when any of the conditions are satisfied for the filter.

- AND = Returns TRUE if all its arguments are TRUE; returns FALSE if one or more arguments are FALSE. This means that a record will be returned only if all the AND statements are true.

- OR = Returns TRUE if any argument is TRUE; returns FALSE if all arguments are FALSE. This means that a record will be returned if any of the OR statements are true.
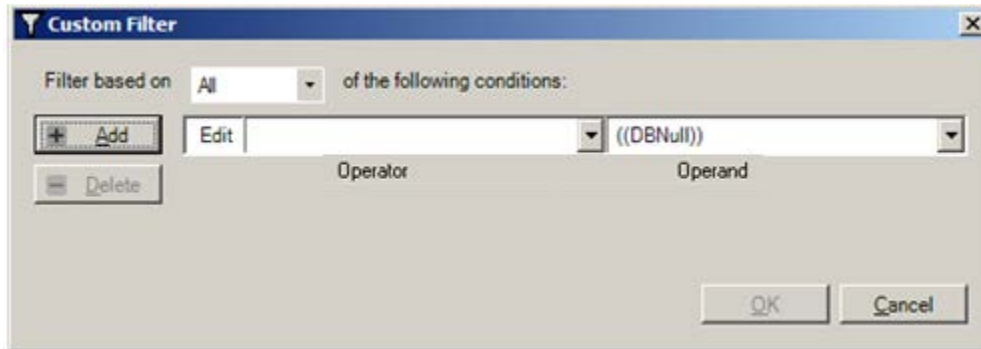

Figure 6-6: **Custom Filter** dialog box showing the **Operator** and **Operand** fields

The Operator and Operand fields make up the condition for the criteria statement.

Field next to Add

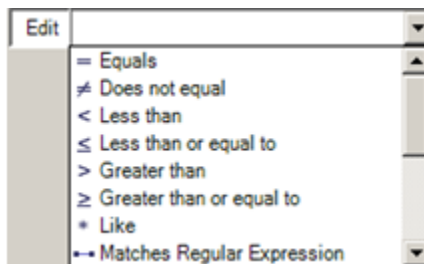The field next to the Add button determines the operator for the criteria statement.

Figure 6-7: Operators for the criteria statement

Field next to Operators

The field next to the Operators is the Operand field (the operand is a value for the column to filter). After selecting the **Operator,** click the **drop-down list for the Operator field**. Select the **appropriate operand** or **type the value** to use as a filter (the value does not need to be on the drop-down list).

Need More Criteria Statements

If a second condition is required, click the **Add** button. This adds a new row for the Operator and Operand fields.

Create the filter criteria statement on this dialog by using these guidelines.

Need to Remove Criteria Statement

To remove a criteria statement row, select the row and click **Delete**. There is no confirmation for this action. The row is automatically removed.

Completing the Filter

Click **OK** and the application executes the criteria statement and displays the results.

The column's Filter icon changes color (▼); this color change happens even if there was no apparent change to the rows displayed, because all records matched the specified conditions.

EXAMPLE: The user needs a list of patients born between two dates. Filter based on the values in the DOB column (the Operand). An example of the resulting dialog could look like that shown in Figure 6-8:
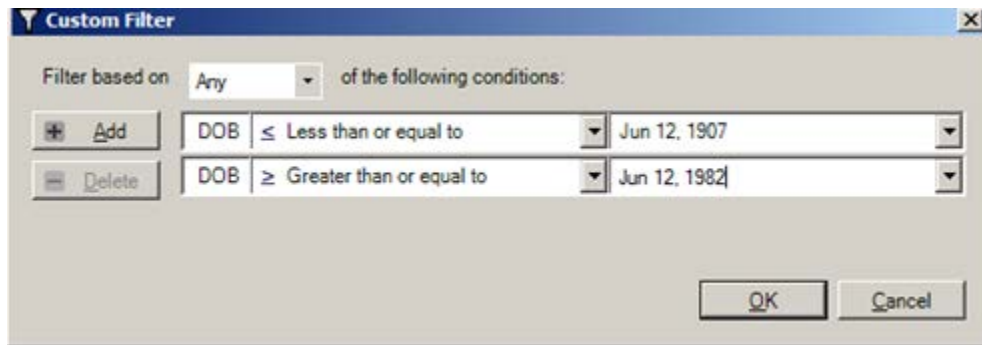

Figure 6-8: Sample of **Custom Filter** dialog box

6.1.3.2   Returning to All Rows

Generally, this action is used after filtering the column. Click the **Filter icon** and select **All** from the drop-down list. The Filter icon changes to its original (▽) color and all rows are restored to the display.

TIP: To filter based on values in more than one column, use the custom feature and specify all the conditions at once. If the columns are filtered separately, Select [**All]** must be chosen from the drop-down lists on each filtered column to restore all rows.
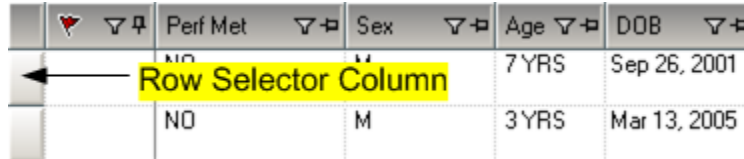
6.1.3.3   Other Filter Choices

To view all the rows where the value is blank for a particular column, select **Blank** from that column's filter drop-down list.

To view all the rows that are not blank for a column, select **NonBlank** from the filter drop-down list.

6.2   Selecting Records

Select records on a window by clicking in the **row selector column**. If the user does not click in this particular column, then it might appear that more than one record cannot be selected.

Figure 6-9 shows an example of where the row selector column is located:

Figure 6-9: Example of Row Selector Column

- To select adjacent records, click the **first record** (in the row selector column), hold down the **Shift key**, and then click the **last record** (in the row selector column).

- To select non-adjacent records, click the **first record** (in the row selector column), hold down the **Ctrl key**, click the **next record** (in the row selector column), etc.

- To select all records, use the **key combination Ctrl+A** on the keyboard (or select **Edit** | **Select All**).

- To de-select a row, use the **key combination Ctrl+Click** (the left mouse button,) then click on the **Row Selector column**.

6.3   Buttons on Right Side of Window

The buttons on the right side of the lower pane have the same functionality as those on any iCare window. Their functions apply to the data in the lower panel.

Figure 6-10: Buttons on right side of window

The application provides hover help for each button. The function of these buttons apply to the grid in the lower panel of the **iCare Taxonomy Maintenance View/Edit dialog box**.

6.3.1   Search

Search for data in the current grid by clicking the **Search button** ()(or by selecting **Tools** | **Search** or by using the **Ctrl+F key combination**) to display the **Search** dialog. (See Figure 6-11.)
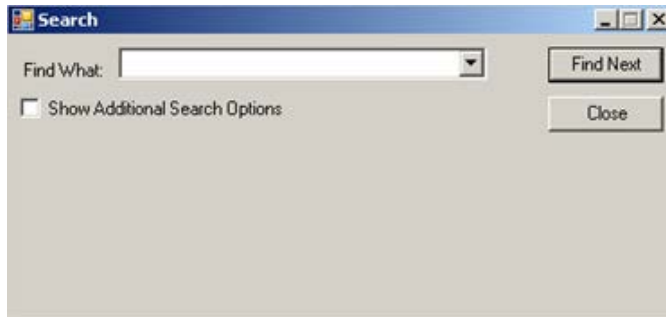
Figure 6-11: **Search** dialog

If the **Show Additional Search Options** checkbox is NOT checked, the search looks in all columns for a match.

If the **Show Additional Search Options** checkbox IS selected, the **Search** dialog changes to show more options for the search.
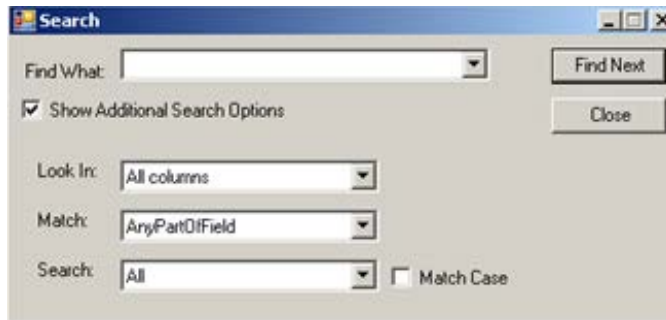

Figure 6-12: **Search** dialog with additional search options

Type in the **desired search criteria** in the **Find What** field. The remaining fields determine the criteria for the search.

If the **Match Case** checkbox is selected, that will cause the search to match the case of the text that typed into the **Find What** field.

The fields Look In, Match, and Search work are described in the section 4.2 Search Criteria Fields.

After all fields are populated with the search criteria, click the **Find Next button**. (Otherwise, click **Cancel** to dismiss the Search dialog.)

If a match is found, the matching text will be highlighted (in the grid). To continue the same search, click the **Find Next button** again; repeat this process as needed.

If a match is not found, the Datagrid Search Results message displays. Click **OK** to close the message and to return to the **Search** dialog.

Figure 6-13: Sample **Datagrid Search Results**

6.3.2   Export to Excel

The information in the window can be exported to Excel by clicking the **Export to Excel button** ( ) (or by selecting **Tools** | **Export to Excel** or by using the **Ctrl**+**E key combination**).

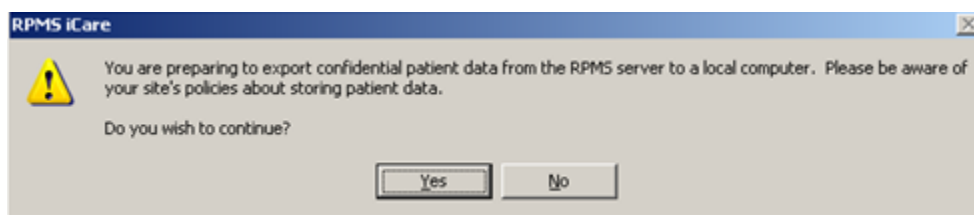The application displays the warning message about the export. (See Figure 6-14.)
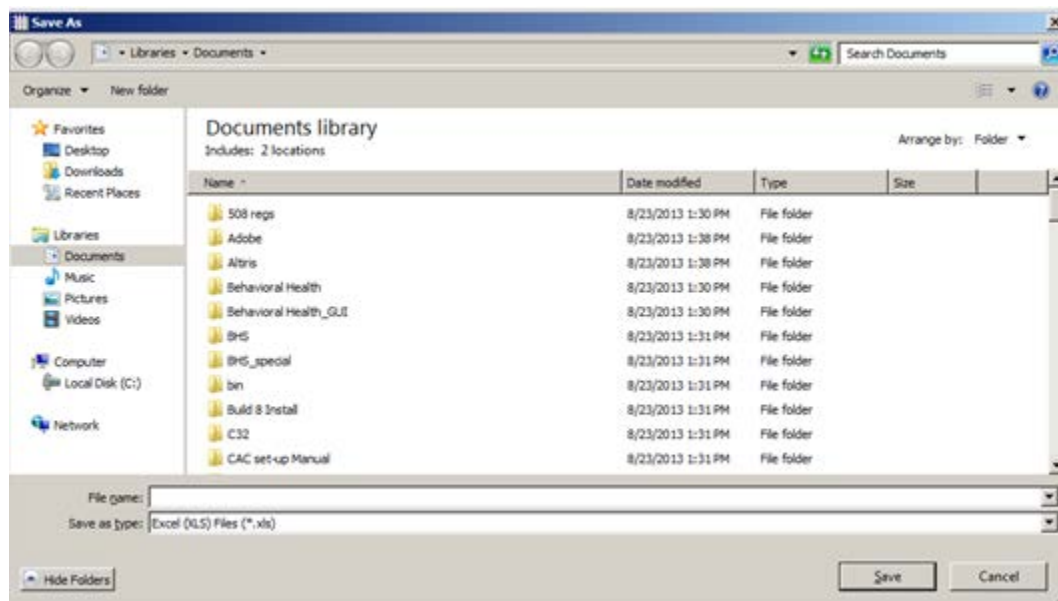

Figure 6-14: Warning Message about Exporting the Information

Click **No** to dismiss the warning and to exit the export process.

Click **Yes** to continue the export process and to display the **Save As** dialog (Figure 6-15.)

Figure 6-15: Sample **Save As** dialog

Make sure the location where to save the file displays in the first field.

Type the **name** in the **File name field**. The system will add XLS as the extension to the field name (automatically).

Click **Save**. (Otherwise, click **Cancel** to not save.). If using Save, the Export Panel message "Excel export has been created." displays when the Save command is complete; click **OK** to dismiss the message.

6.3.3   Print

Print the selected rows in the grid by clicking the **Print button** (🖨 ,) (or by selecting **Tools** | **Print** or by using the **Ctrl+P key combination**) to display the **Print Preview** dialog. (See Figure 6-16.)
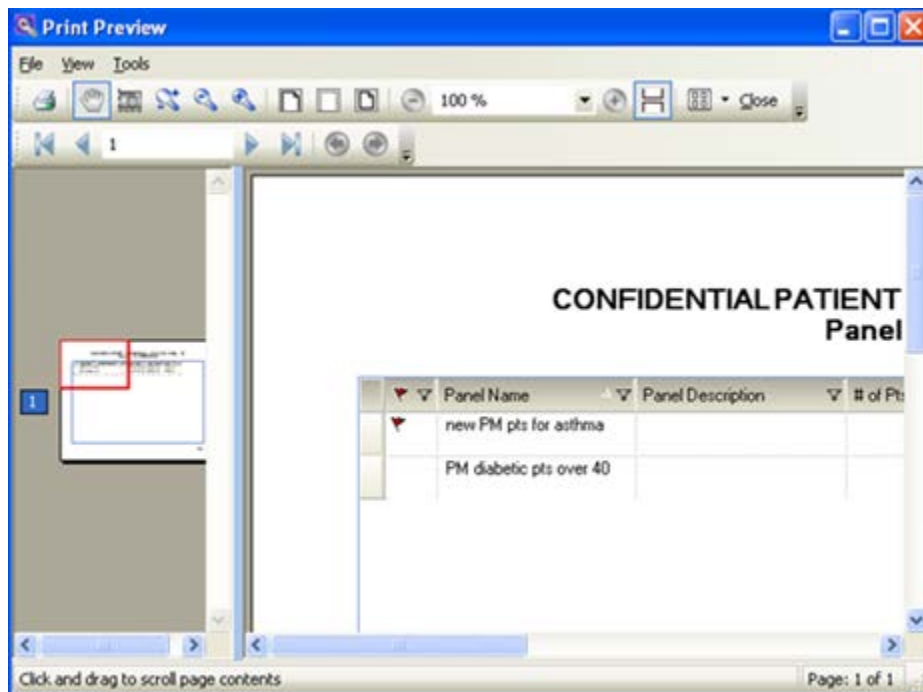

Figure 6-16: Sample **Print Preview** Dialog

Select **File** | **Print** or click the **Print button** (on the **Print Preview** dialog) to output the data. If no rows are selected, the application displays the warning message: You have not selected any rows to print. Do you want to proceed and print all rows in this view or cancel this print? Click **Yes** to print all the rows. Click **No** to cancel the print function.

The following table provides information about the various buttons on the **Print Preview** window.

Button	Description
	Used to output the contents of the document. Also available by selecting the **Print option** on the **File menu**.
	Used to move the red rectangular box on the selected page in the left panel. As the Hand Tool is moved, the display in the right panel changes. This is used to view information in a particular part of a page. Also available by selecting the Hand Tool option on the Tools menu.
	Used to get a screen capture of a specified rectangular area. This screen capture copies the area to the Windows clipboard. Then paste the copy in a particular field, for example, or another application like MS Word. Also available by selecting the **Snapshot Tools option** on the **Tools menu**.
	Used to specify the zoom magnification. Click the **button** and then move to the area where to apply the zoom function. Right-click on the **area** and select the **zoom magnification option** from the **context menu**. Also available by selecting the Dynamic Zoom Tool option on the Tools menu.
	Used to zoom out by clicking the **button in an area in the right panel** (the image becomes smaller). Also available by selecting the **Zoom Out option** on the **View menu**.
	Used to zoom in by clicking **the button in an area in the right pane**l (the image becomes larger). Also available by selecting the **Zoom In option** on the **View menu**.
	Used to cause the image in the right panel to display to its maximum page width (usually enlarges the image). Also available by selecting the **Page Width option** on the **View menu.**
	Used to cause the image in the right panel to display the image with no page margins showing. Also available by selecting the **Margin Width option** on the **View menu**.
	Used to display the image and its page margins in the right panel. Also available by selecting the **Whole Page option** on the **View menu**.
	Used to automatically cause the image in the right panel to zoom out (do not click in the panel). Also available by selecting the **Zoom Out** on the **View menu**.
	Used to automatically cause the image in the right panel to zoom in (do not click in the panel). Also available by selecting the **Zoom In** on the **View menu**.
	Used to cause all of the pages to display in the right panel. Also available by selecting the **Continuous option** on the **View menu**.
	Used to specify the page layout. Also available by selecting the **Page Setup option** on the **File menu**.

6.3.4   Copy to Clipboard

Copy the selected rows in the grid to the Windows clipboard by clicking the **Copy to Clipboard button** () (or by selecting **Tools** | **Copy Rows to Clipboard** or by using the **Ctrl+Shift+C key combination**). Paste the contents of the Windows clipboard to any Windows application.

Glossary

iCare Package Manager

The designated person with authority to manage all information settings for iCare.

Providers

Any staff member in an I/T/U facility who provides direct healthcare to patients, e.g. general practice or specialty physicians, registered nurses, social workers, physician assistants, etc.

Within RPMS, the term "provider" has different specific meanings. See definitions for Designated Primary Care Provider (DPCP); Primary Provider; Visit Providers.

Taxonomy

In RPMS, a grouping of functionally related data elements, such as ICD codes, that are created and maintained within the RPMS Taxonomy Setup application. Taxonomies will be used as definitions for diagnoses, procedures, lab tests, medications, and other clinical data types.

To change or add to an existing taxonomy, please see the CRS coordinator.

Tooltip

A common GUI element used to provide additional information to users. To display a Tooltip, hover the mouse pointer, without clicking, over a column heading or field.

Acronym List

Acronym	Term Meaning
BQI	Namespace for iCare
CMET	Care Management Event Tracking
CRS	Clinical Reporting System
DPCP	Designated Primary Care Provider
EHR	Electronic Health Record
GPRA	Government Performance and Results Act
GUI	Graphical User Interface
HIV	Human Immunodeficiency Virus
I/T/U	Indian Health Service, or Tribal or Urban Indian health programs
ICD	International Classification of Diseases
IHS	Indian Health Service
OIT	Office of Information Technology
RPMS	Resource and Patient Management System

Contact Information

For questions or comments regarding this distribution, please contact the OIT Help Desk (IHS).

Phone: (888) 830-7280 (toll free)

Web: http://www.ihs.gov/helpdesk/

Email: support@ihs.gov