

CALIFORNIA CABG OUTCOMES REPORTING PROGRAM

USER GUIDE

BD-CCORP-R1.0-TRG-002

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Set up and Conventions

The Scope of this tutorial

The primary goal of the California CABG Outcomes Reporting Program (CCORP) Database application is to enter and maintain information about outcomes of Coronary Artery Bypass Graft surgeries.

Resources: Software, FAQs, and Documentation

The CCORP software is available free of charge from the Office of Statewide Health Planning and Development at (link will be provided in future).

Starting the application and linking to the data file.

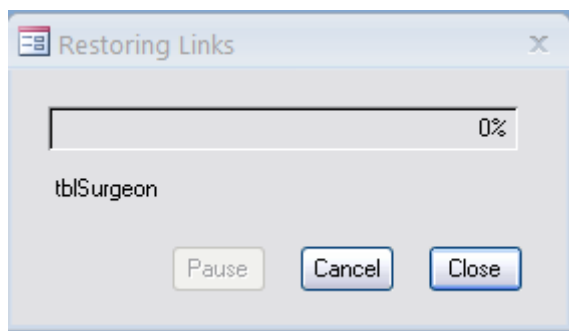
Once the CCORP application is installed on your computer, it will appear in your Start Menu as Start > All Programs > CCORPAPP. Please refer to the user guide for installation.

To start the application:

Click on the CCORPAPP icon on the desktop.

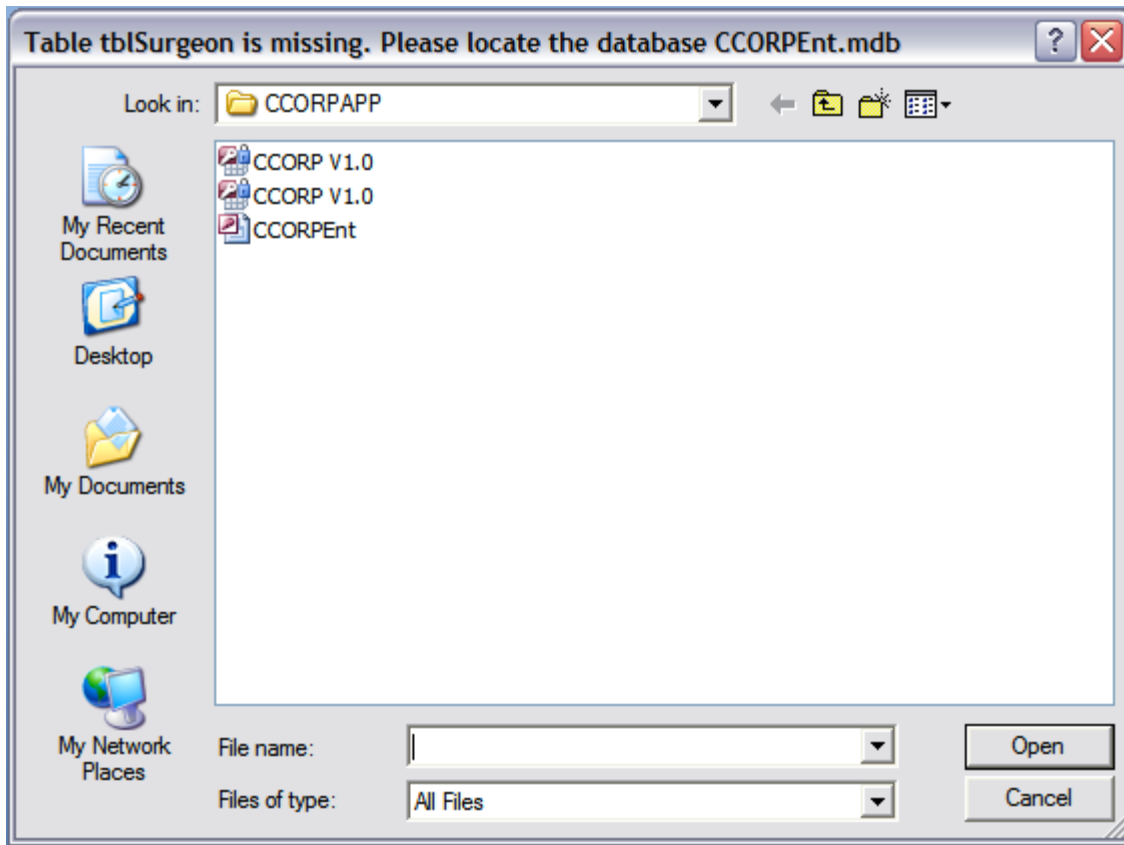
The application opens the 'Restoring Links' screen.

Figure 1 Restoring Links screen



The Application will prompt you to locate the files (Figure 1).

Figure 2 Prompt to locate data file.



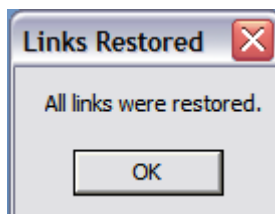
Note: The file will be located in C:/CCORPAPP/CCORPEnt.

If you don't know where to find the file, check with your network administrator or IT department..

Select the file **CCORPEnt**, and then click **Open**. Select **CCORPEnt** again and click **Open**.

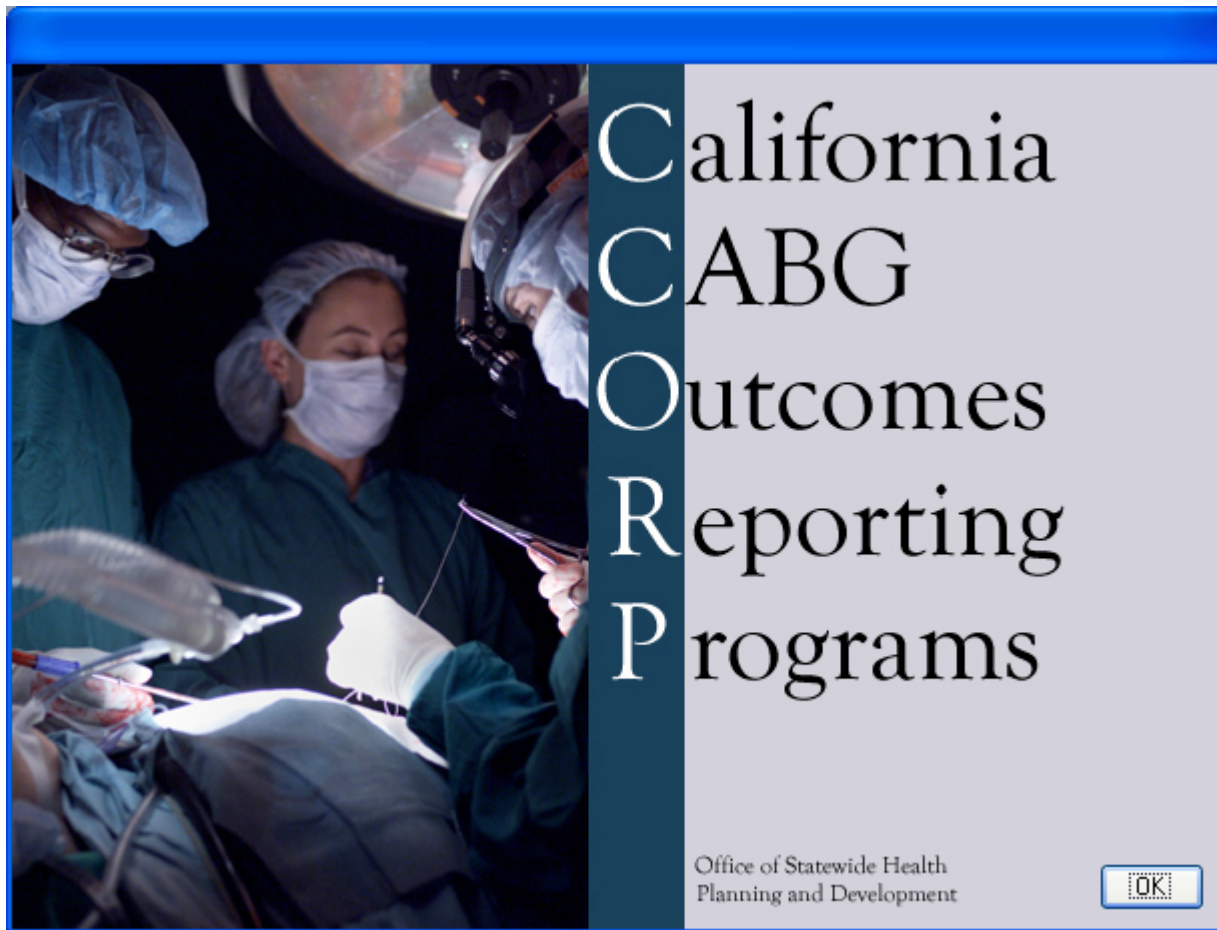
The pop up message occurs saying that 'All links were restored'.

Figure 3 All links were restored screen



Click on 'OK' and the application opens the CCORP opening screen.

Figure 4 CCORP Splash screen

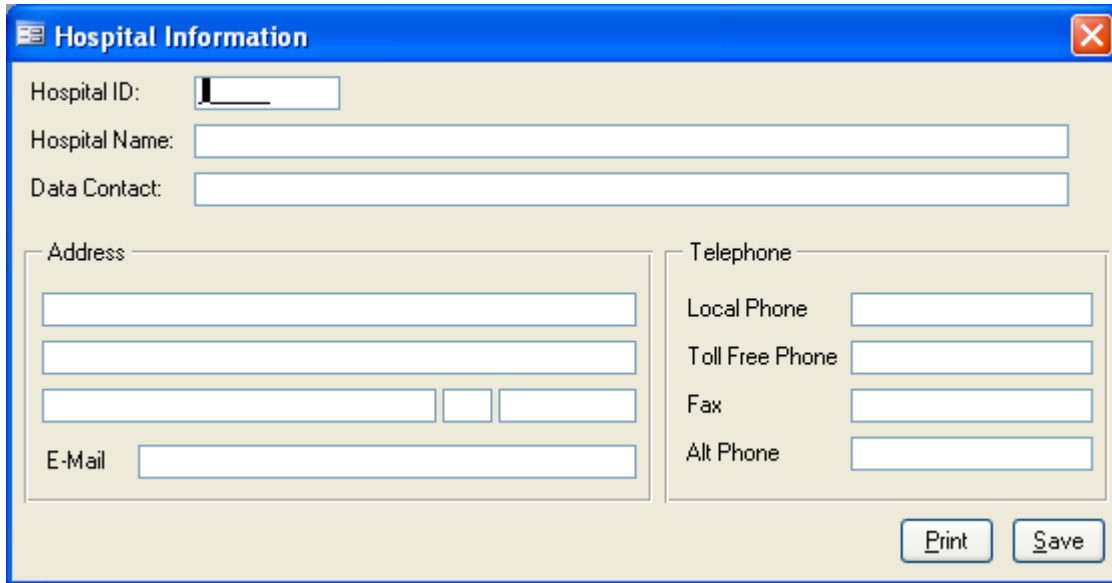


Click on **OK** when the **Wait** button turns into **OK**. The application will invoke the Hospital Information window.

Application set up for a hospital.

Before you can enter any patient data, you'll need to enter your hospital information. For this step, you'll need the hospital ID provided by OSHPD. If you don't know your hospital ID, contact the CCORP Data Manager.

Figure 5 Hospital Information screen

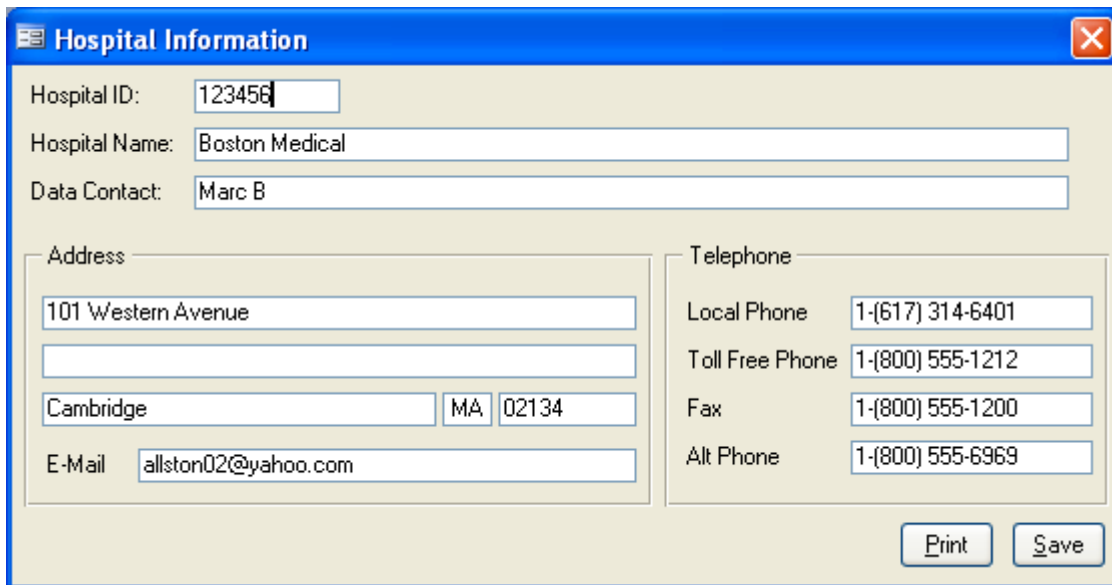


A screenshot of a web application window titled "Hospital Information". The window has a blue header bar with a close button (X) in the top right corner. The form is divided into several sections: "Hospital ID:" with a single-line text input; "Hospital Name:" with a wide text input; "Data Contact:" with a wide text input; "Address:" with four text inputs (street, city, state, zip) and an "E-Mail" input; and "Telephone:" with four text inputs (Local Phone, Toll Free Phone, Fax, Alt Phone). At the bottom right, there are "Print" and "Save" buttons.

1. Enter the 'Hospital ID' provided by OSHPD. Hospital ID is the mandatory field.
2. Enter the remaining information such as Hospital Name, Data Contact, Address details [Refer to Hospital Information – sample data screen for details]

Note: Hospital ID is the only mandatory field. Even though rest of the fields is optional fields OSHPD recommends entering all the information.

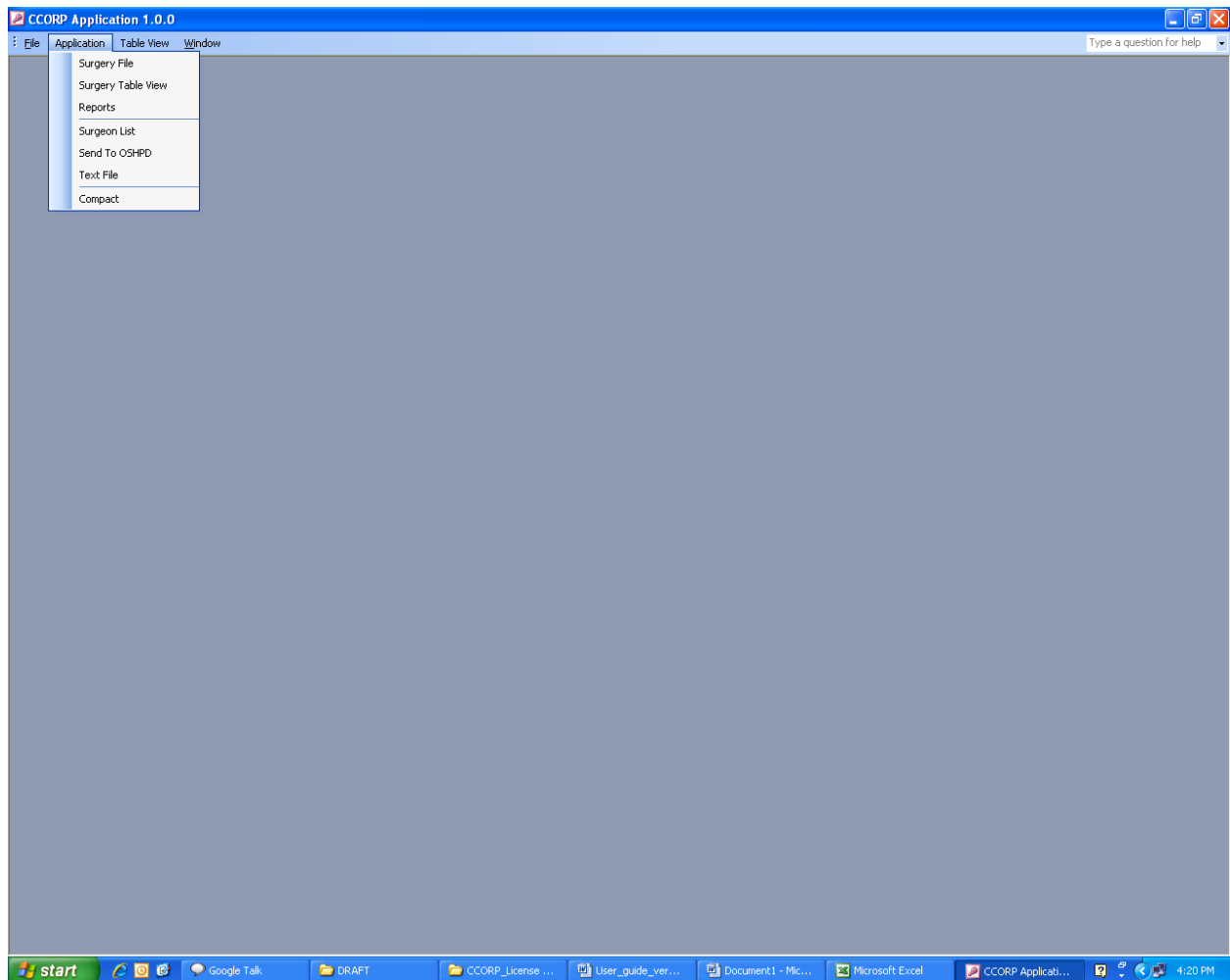
Figure 6 Hospital Information- sample data screen



A screenshot of the "Hospital Information" form with sample data entered. The "Hospital ID" is 123456. The "Hospital Name" is Boston Medical. The "Data Contact" is Marc B. The "Address" section contains: 101 Western Avenue, Cambridge, MA, 02134. The "E-Mail" is allston02@yahoo.com. The "Telephone" section contains: Local Phone 1-(617) 314-6401, Toll Free Phone 1-(800) 555-1212, Fax 1-(800) 555-1200, and Alt Phone 1-(800) 555-6969. The "Print" and "Save" buttons are at the bottom right.

Click **Save**. The application will display CCORP Menu bars. In the CCORP application, nearly all functions are found under the Application menu. (Figure 7)

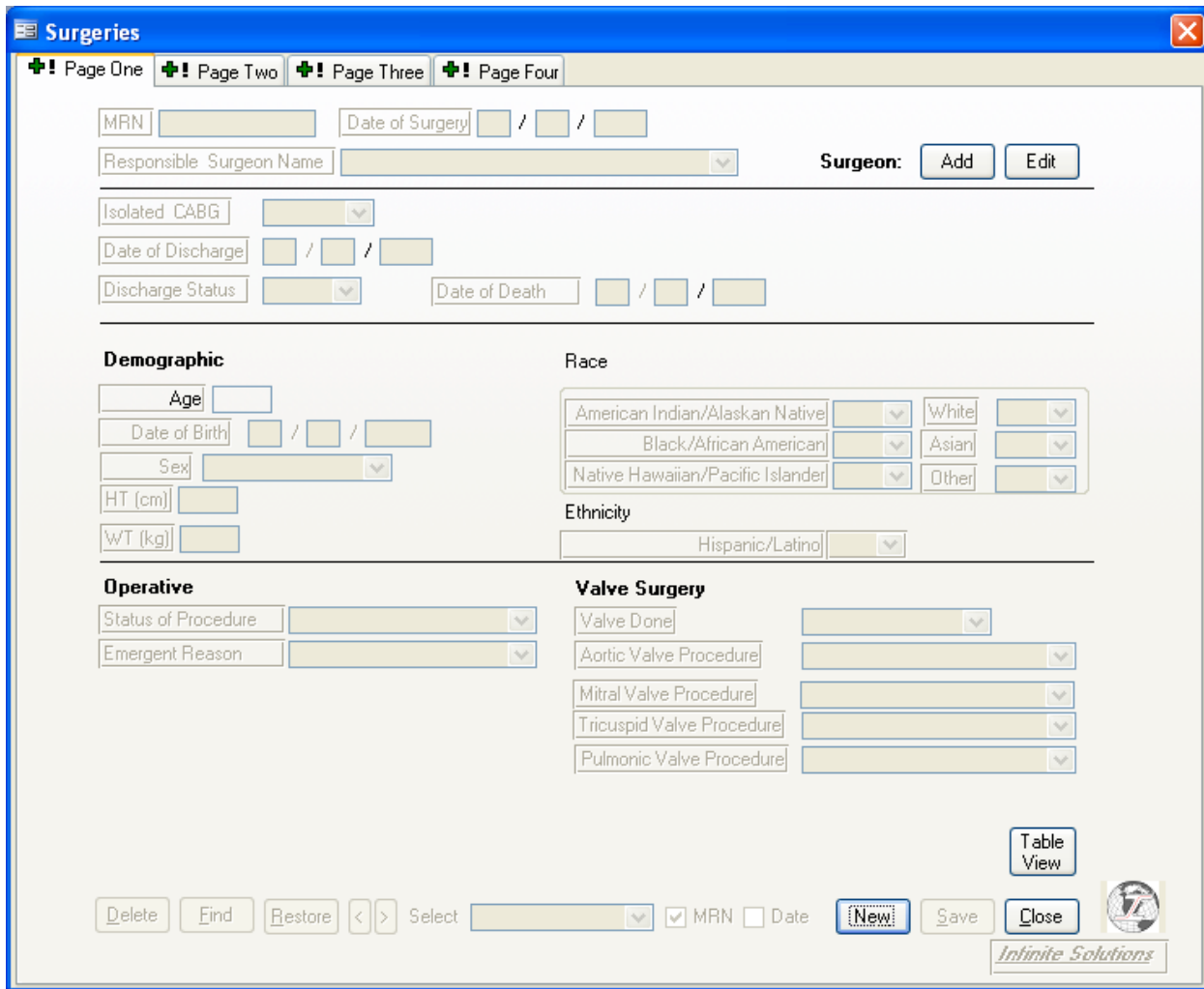
Figure 7 Application Menu



To enter the surgeries window, click on **Application > Surgery File**.

The surgeries screen is displayed as shown in Figure 8.

Figure 8 Surgeries Screen



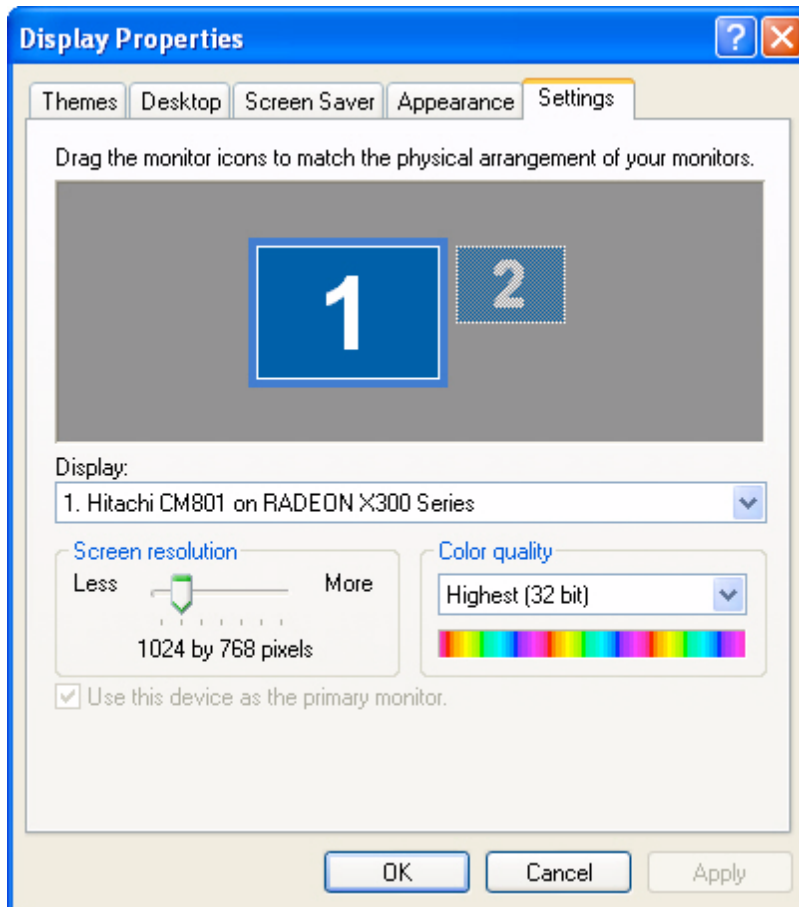
If all the buttons are visible at the bottom of the screen, click **Close**, then quit the application by selecting File > Exit and clicking **Yes**. If you *can't* see the buttons at the bottom of the screen, you'll need to adjust your monitor's resolution.

To adjust your Monitor's resolution, quit the application by clicking on Close button or the X button. Then select File > Exit and click **Yes**.

For Windows XP and Windows Vista, right-click on the blank area of desktop and click on 'Properties'. Then click on the settings Tab. (Figure 9)

For Windows Vista, right-click on the blank area of desktop and click on Personalize. Then click on Display Settings. (Figure 9)

Figure 9 Display window, settings tab



Move the Screen Resolution slider until the resolution displayed is at least 1024 x 768 as illustrated in Figure 7.9

Click on **OK**.

Tip []: Changing the screen resolution to higher numbers makes all objects appear smaller. Select File > Close or click the close box (X) to close the Display Properties screen. Click on Program files -> CCORPAPP to restart the application and verify the screen is properly displayed.

Conventions used in this tutorial

Before proceeding, you should be familiar with the conventions used throughout this tutorial to describe windows, buttons, menus, and actions.

Menus

The following format is used to refer to selections from the menu: Menu name > Submenu name > Sub-submenu name.

For example, the first exercise in this tutorial asked you to enter your identifying information by selecting **File > Hospital Information**. This instruction means that you should open the File menu item and select the item named Hospital Information.

Selecting command buttons

In Windows, the various buttons available from on-screen forms are called *command buttons*. When they are referred to in the text, they will appear in **bold**.

For example, a reference to a close button might say, “Click the **Close** button” or simply, “Click **Close**.”

Entering data

When you are asked to enter specific data, the data to be entered will be in bold and centered. For example:

Type: Manju Kamalamma

Then press the Enter key.

Using CTRL-key combinations

In Windows, commands can have different effects depending on the context. When you preview reports, for example, clicking a printer icon will send the report directly to the printer. Pressing CTRL-P, on the other hand, will open the *print dialog box* where you can select the number of copies, change printers, select a specific print tray, or set other printer parameters. When you need to use a control-key combination, the command will appear in upper-case, for example CTRL-P (for the print command).

CCORP Application Menu Bar.

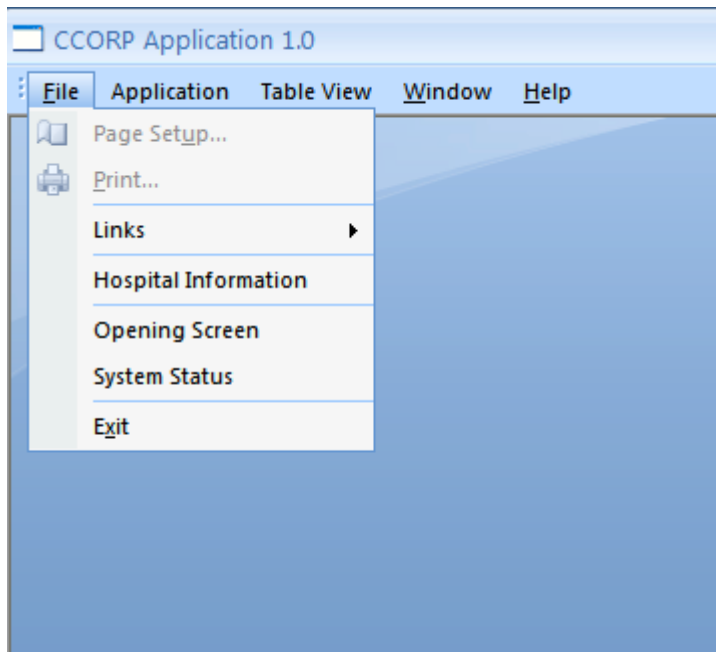
The CCORP Application has five different tabs. For us to use the software at ease and to save time, we are going to see each of the five tabs in detail in this chapter.

File

The File menu has Page Setup, Print, Links, Hospital Information, Opening Screen, System Status and Exit options.

1. If the user needs to Update, Change or Check links, the user goes to **File>Links** and then clicks on the appropriate option.

Figure 10 File menu

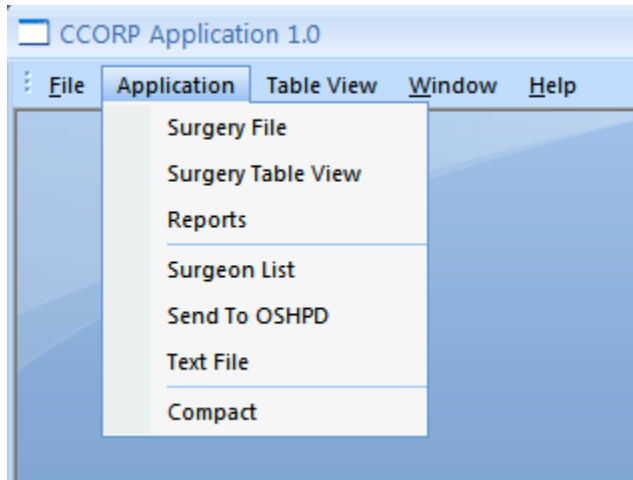


2. If at any time the user needs to update the Hospital Information, the user goes to **File>Hospital Information** and then updates the information.

Application

The Application tab contains shortcuts to go to Surgery File, Surgery Table View, Reports, Surgeon List, Send To OSHPD, Text File and Compact.

Figure 11 Application menu

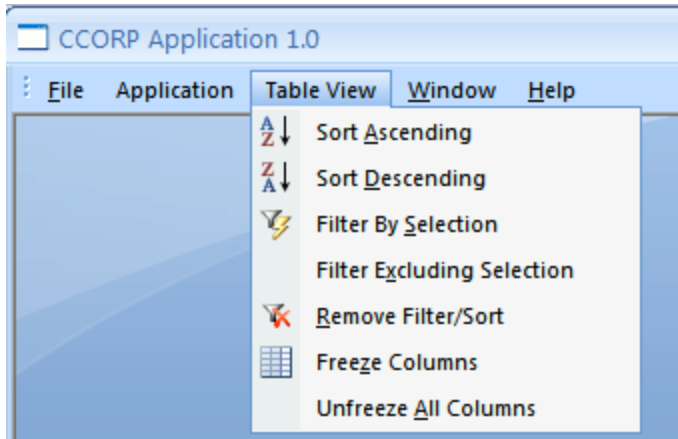


1. The user can open the Surgeries window anytime by going to **Application>Surgery File**.
2. To display the data in a spreadsheet format the user can click on **Application>Surgery Table view**.
3. To generate reports, the user can click on **Application>Reports**.
4. To Manage the list of Surgeons the user can click on **Application>Surgeon List**.
5. To create an electronic text file to send to OSHPD the user can click on **Application>Text File**.
6. The user can also compact the database by clicking on **Application>Compact**.

Table View

This tab contains all the functions for sorting or filtering the list of surgeries in the surgeries table. The user can open the table view of surgeries by either clicking on Application>Surgery Table View or by clicking on the 'Table view' on the surgeries window. The user then clicks on any cell of the table for the 'Table View' Menu to become active. The user then uses the required function by clicking on it.

Figure 12 Table View Menu



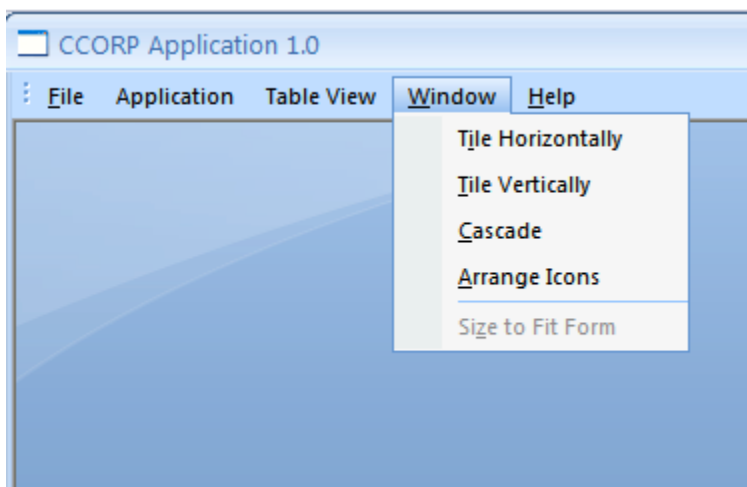
Window

There may be a need for the user to open more than one report at a time. The 'Window' tab in the menu bar helps the user to manage and display the opened reports.

The reports can be displayed by

1. Horizontal tiles
2. Vertical Tiles
3. Cascade
4. Arrange by Icons

Figure 13 Window Menu

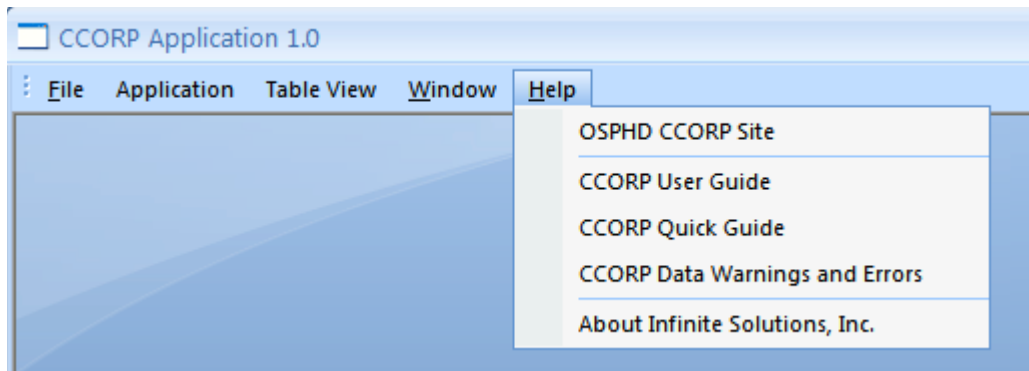


Help

The Help menu contains the links to the OSHPD's CCORP Site, CCORP User Guide, CCORP Quick Guide and CCORP Data Warnings and Errors.

All these documents can be downloaded from **Help>About Infinite Solutions Inc.** or www.4infinitesolutions.com. Also if you have any questions or need help you can contact Infinite Solutions.

Figure 14 Help Menu



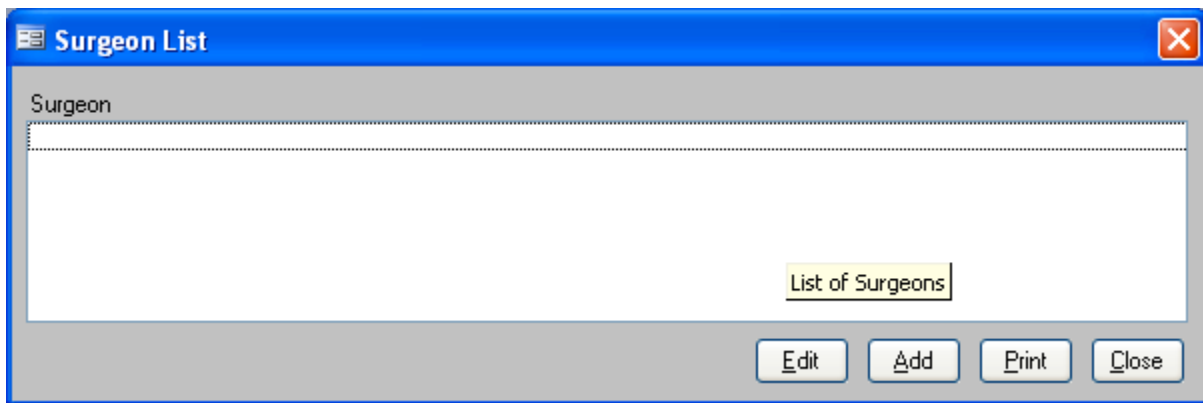
Creating Surgeon Profiles

In this chapter users will learn how to ‘Add a Surgeon to the Surgeon List’, ‘Edit a Surgeon’s data that exists on the Surgeon List’ and to ‘Delete a surgeon’s name from the Surgeon’s List’ of your Hospital.

Adding Surgeon to the Surgeon List

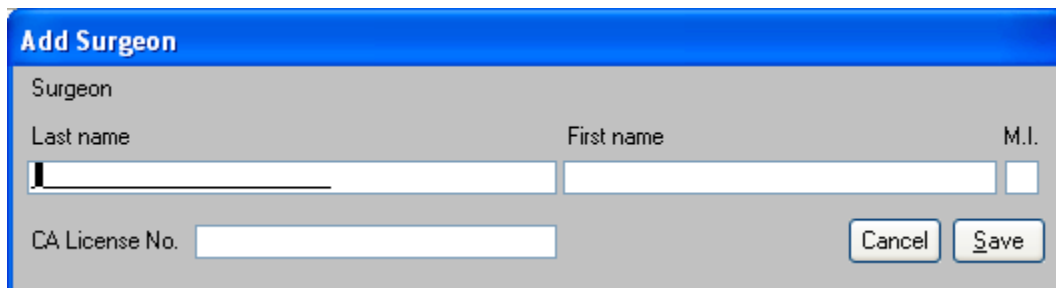
Select the Surgeon list from the Application tab. Select **Application > Surgeon list**. The application will invoke the Surgeon list screen.

Figure 15 Surgeon List screen

The image shows a software window titled "Surgeon List". It has a blue title bar with a close button (X) in the top right corner. The main area is a large, empty rectangular box. Below this box, there is a label "List of Surgeons" with a yellow highlight. At the bottom of the window, there are four buttons: "Edit", "Add", "Print", and "Close".

Click on **Add** to add a new surgeon to the records. The application invokes the Add Surgeon screen

Figure 16 Add Surgeon screen

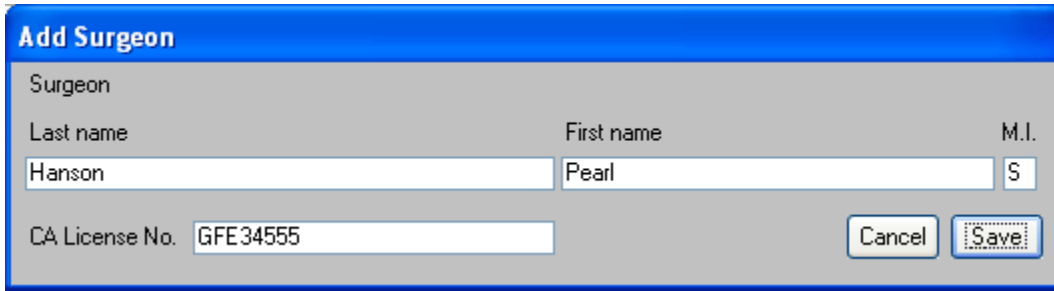
The image shows a software window titled "Add Surgeon". It has a blue title bar. The main area is a form with three input fields: "Last name", "First name", and "M.I.". Below these fields is a "CA License No." field. At the bottom right of the form, there are two buttons: "Cancel" and "Save".

Enter the Last Name First and then the First name in the next field. Enter the Middle Initial If available. Enter the CA License No. for the surgeon. Valid CA License Nos. are A, C, G, AFE, CFE, GFE followed by 5 numbers.

Note: Surgeon’s First name, Last Name, and CA License No. fields are mandatory.

To move to the next field, click TAB or ENTER...

Figure 17 Add Surgeon, sample



Add Surgeon

Surgeon

Last name First name M.I.

Hanson Pearl S

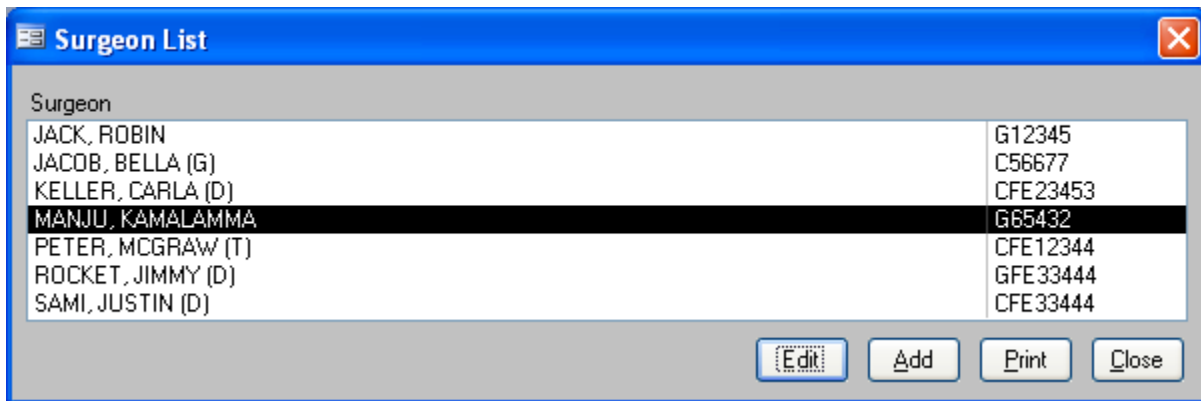
CA License No. GFE34555

Cancel Save

Editing a surgeon's data that exists on the Surgeon List

Select the Surgeon list from the Application tab by clicking on **Application > Surgeon list**. The application will open the Surgeon list window.

Figure 18 Sample Surgeon list



Surgeon List

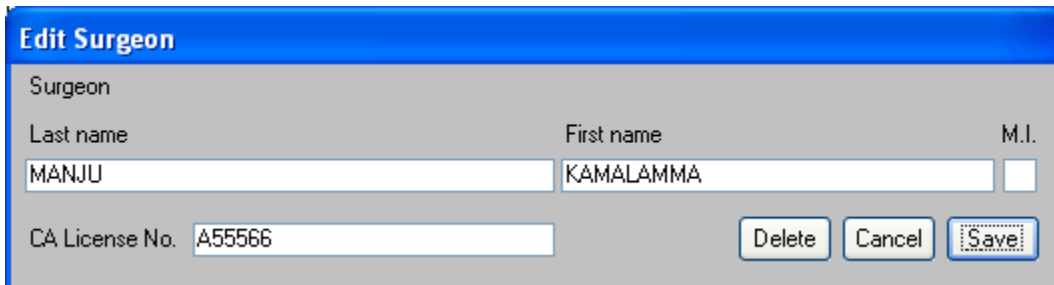
Surgeon

JACK, ROBIN	G12345
JACOB, BELLA (G)	C56677
KELLER, CARLA (D)	CFE23453
MANJU, KAMALAMMA	G65432
PETER, MCGRAW (T)	CFE12344
ROCKET, JIMMY (D)	GFE33444
SAMI, JUSTIN (D)	CFE33444

Edit Add Print Close

Select the Surgeon's name that needs to be edited and then click on **Edit**. The application invokes the Edit Surgeon screen.

Figure 19 Edit Surgeon screen



Edit Surgeon

Surgeon

Last name First name M.I.

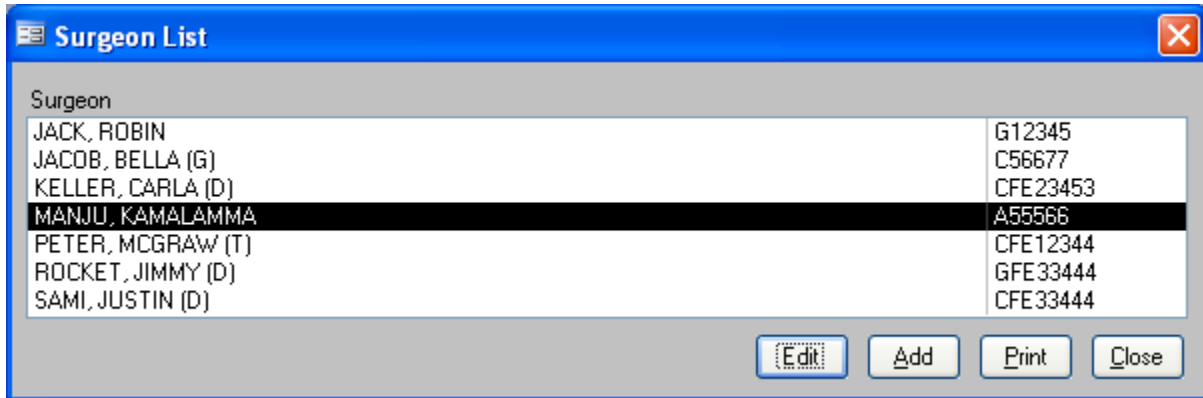
MANJU KAMALAMMA

CA License No. A55566

Delete Cancel Save

Update the Surgeon's data and click on **Save**. The Surgeon list gets updated.

Figure 20 Updated Surgeon list



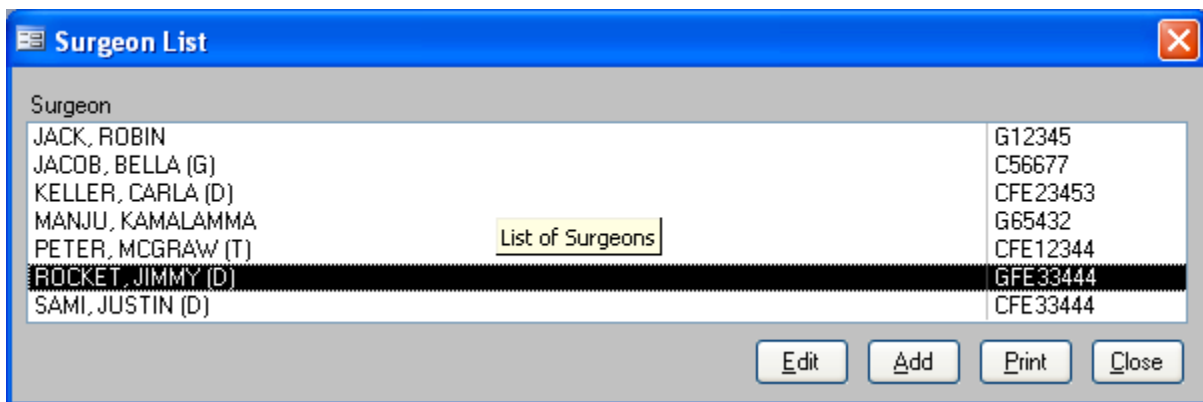
Surgeon	
JACK, ROBIN	G12345
JACOB, BELLA (G)	C56677
KELLER, CARLA (D)	CFE23453
MANJU, KAMALAMMA	A55566
PETER, MCGRAW (T)	CFE12344
ROCKET, JIMMY (D)	GFE33444
SAMI, JUSTIN (D)	CFE33444

Buttons: Edit, Add, Print, Close

Deleting a Surgeon's name from the Surgeon list

Select the Surgeon list from the Application tab. Select **Application > Surgeon list**. The application will invoke the Surgeon list screen. Pl. see figure 21.

Figure 21 Sample Surgeon list

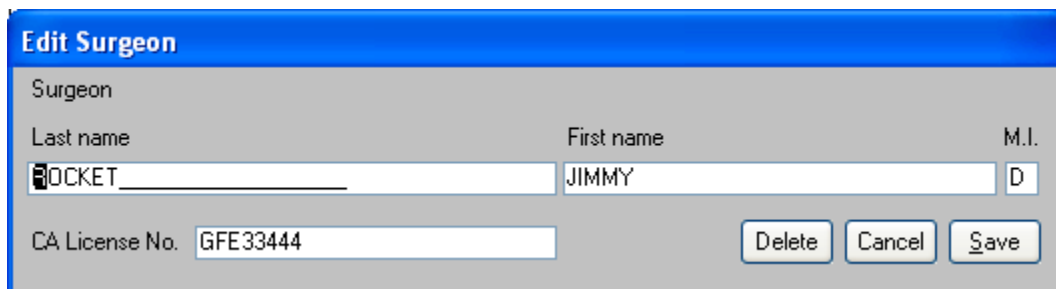


Surgeon	
JACK, ROBIN	G12345
JACOB, BELLA (G)	C56677
KELLER, CARLA (D)	CFE23453
MANJU, KAMALAMMA	G65432
PETER, MCGRAW (T)	CFE12344
ROCKET, JIMMY (D)	GFE33444
SAMI, JUSTIN (D)	CFE33444

Buttons: Edit, Add, Print, Close

Select the Surgeon's name that needs to be edited and then click on **Edit**. The application invokes the Edit Surgeon screen.

Figure 22 Edit Surgeon sample screen



Edit Surgeon

Surgeon

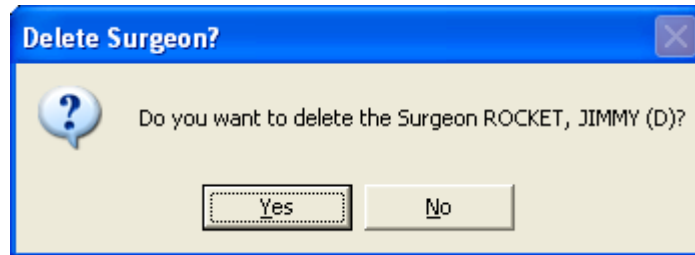
Last name: ROCKET First name: JIMMY M.I.: D

CA License No.: GFE33444

Buttons: Delete, Cancel, Save

Click on the **Delete** button. The application invokes the 'Delete Surgeon?' screen.

Figure 23 Delete Surgeon confirmation



Click **Yes**.

The Application displays a confirmation message that the surgeon was deleted.

Figure 24 Surgeon deleted message



Click on **OK** and the Surgeon list gets updated.

Managing Surgery records

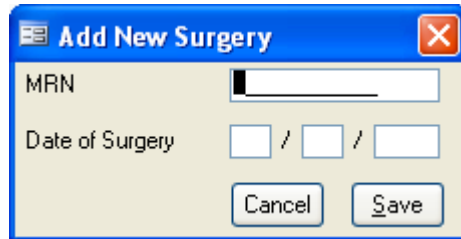
In this chapter we will review on how to create a new surgery record, edit an existing surgery record and delete a surgery record. The CCORP Surgeries window contains all the information about a particular surgery. The Surgeries window consists of four *tabs* or pages.

Creating a new surgery record

1. Invoke the application by selecting **Start > All Programs > CCORPAPP**.
2. Once the Hospital Information is entered, the application by default invokes the Surgeries screen (Figure 11).
3. Click **New** on the surgeries screen to invoke ‘**Add New Surgery screen**’. (Figure 25)

Note: If “No Hospital ID Number” message gets displayed, stop and complete the steps beginning on page 7 for setting up the application for the hospital. When the user completes the set-up, click on **Close** and the application will return to the Surgeries screen.

Figure 25 Add new surgery screen

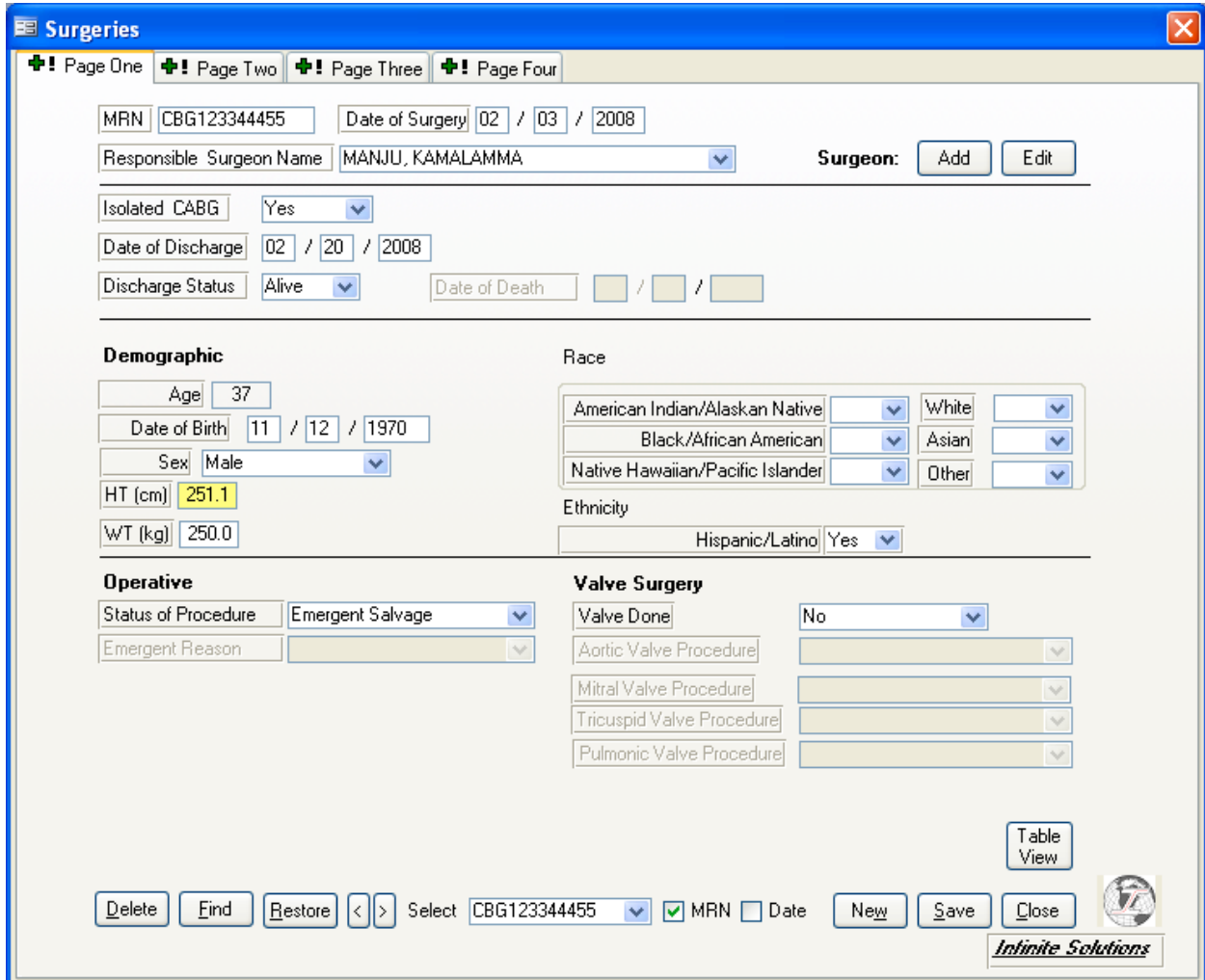


4. Enter the MRN Number. For ex: CBG123344455
5. Press TAB or ENTER to move to the first Surgery Date field (month).
6. Enter Date of Surgery

Note: User must always enter the date in mm/dd/yyyy format.

12. Click on **Save**. The Surgeries screen now invokes with all fields and buttons activated.

Figure 26 Sample Surgeries screen



Surgeries

Page One Page Two Page Three Page Four

MRN CBG123344455 Date of Surgery 02 / 03 / 2008

Responsible Surgeon Name MANJU, KAMALAMMA Surgeon: Add Edit

Isolated CABG Yes

Date of Discharge 02 / 20 / 2008

Discharge Status Alive Date of Death / /

Demographic

Age 37

Date of Birth 11 / 12 / 1970

Sex Male

HT (cm) 251.1

WT (kg) 250.0

Race

American Indian/Alaskan Native White

Black/African American Asian

Native Hawaiian/Pacific Islander Other

Ethnicity

Hispanic/Latino Yes

Operative

Status of Procedure Emergent Salvage

Emergent Reason

Valve Surgery

Valve Done No

Aortic Valve Procedure

Mitral Valve Procedure

Tricuspid Valve Procedure

Pulmonic Valve Procedure

Table View

Delete Find Restore < > Select CBG123344455 MRN Date New Save Close

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About the Surgeries screen

The Surgeries window consists of four *tabs* or pages that contain:

- Fields for data entry,
- The *surgery selector* (the drop-down list at the bottom of the window) used for moving from one record to another,
- The *delete* button for deleting records from the database,
- The *find* button for finding records based on general criteria,
- The *restore* button for *discarding* any changes that have been made but not saved,
- The *next* and *previous* record buttons,

- The **selection** *sort order* check boxes for sorting the drop-down list by Patient MRN or Surgery date,
- The **new** button for creating a new surgery record,
- The **save** button for saving changes to the surgery record,
- The **close** button for closing the Surgeries window, and table **view** button for viewing the surgery records in a row-and-column format like that used in spreadsheets.

In the CCORP application, required fields are indicated by a red background if the field is empty or the data is not valid (Figure 20). If the required fields are not completed, the state (OSHPD) will not consider the record to be complete and you will be required to complete the information and re-submit the data. There are ten required fields:

1. MRN
2. Date of Surgery
3. Surgeon
4. Date of Discharge
5. Discharge Status
6. Sex
7. Isolated CABG
8. Status of Procedure
9. Dialysis
10. Prior Percutaneous Coronary Intervention

In Figure 20, however, you'll notice that only six fields are pink: Responsible Surgeon Name, Isolated CABG, Discharge Date, Discharge Status, Sex and Status of Procedure. As you enter data in required fields, the field reverts to white. When you create a surgery record, you must enter an MRN and a surgery date in the Add New Surgery window. Thus, when you first see a record in the Surgery window, the first two required fields have already been completed.

The Surgeries window: Page One

Page one of the Surgeries window (Figure 20) contains the identifying information like Demographic, Date of Discharge, Discharge Status as well as some of the information about the surgical procedure like Operative and Valve Surgery.

1. Click in the Responsible Surgeon's name field and click on the drop arrow. Pick a surgeon from the drop down list you created, by clicking on the name.

Ex: Manju Kamalamma

Note

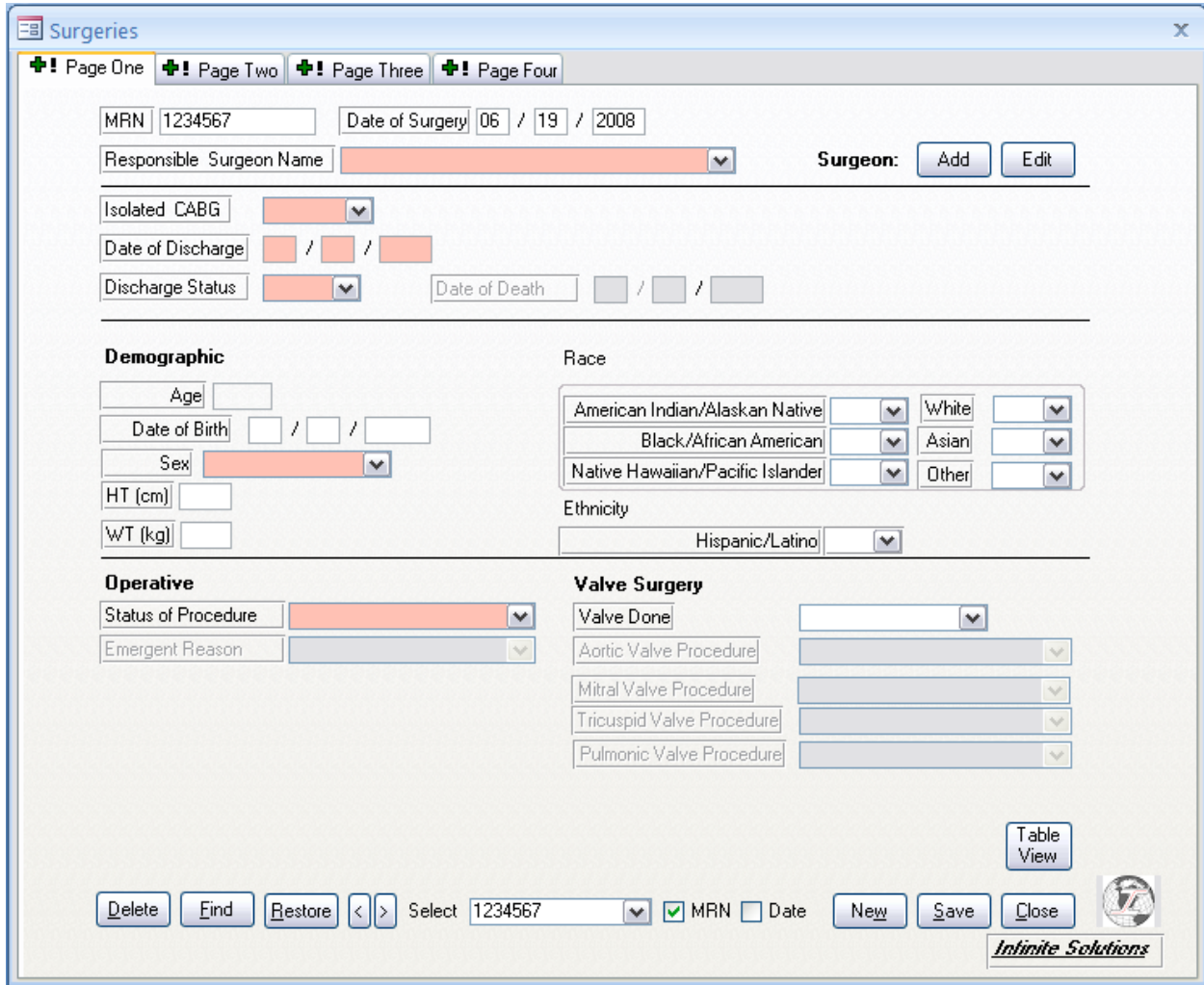
If a new Surgeon's name needs to be added to the surgeon list click on Add and follow the steps on adding a new surgeon on page 12. For adding a new surgeon to the list, repeat step # 1 above.

Remember to press TAB or ENTER to move from one field to the next.

2. Click **Save**.

Now that you have a few entries, you can use the surgery selector to move from one record to another.

Figure 27 Page One of the Surgeries window



Surgeries

Page One Page Two Page Three Page Four

MRN 1234567 Date of Surgery 06 / 19 / 2008

Responsible Surgeon Name Surgeon: Add Edit

Isolated CABG

Date of Discharge / /

Discharge Status Date of Death / /

Demographic

Age Date of Birth / /

Sex HT (cm) WT (kg)

Race

American Indian/Alaskan Native White

Black/African American Asian

Native Hawaiian/Pacific Islander Other

Ethnicity

Hispanic/Latino

Operative

Status of Procedure Emergent Reason

Valve Surgery

Valve Done

Aortic Valve Procedure

Mitral Valve Procedure

Tricuspid Valve Procedure

Pulmonic Valve Procedure

Table View

Delete Find Restore < > Select 1234567 ☒ MRN ☐ Date New Save Close

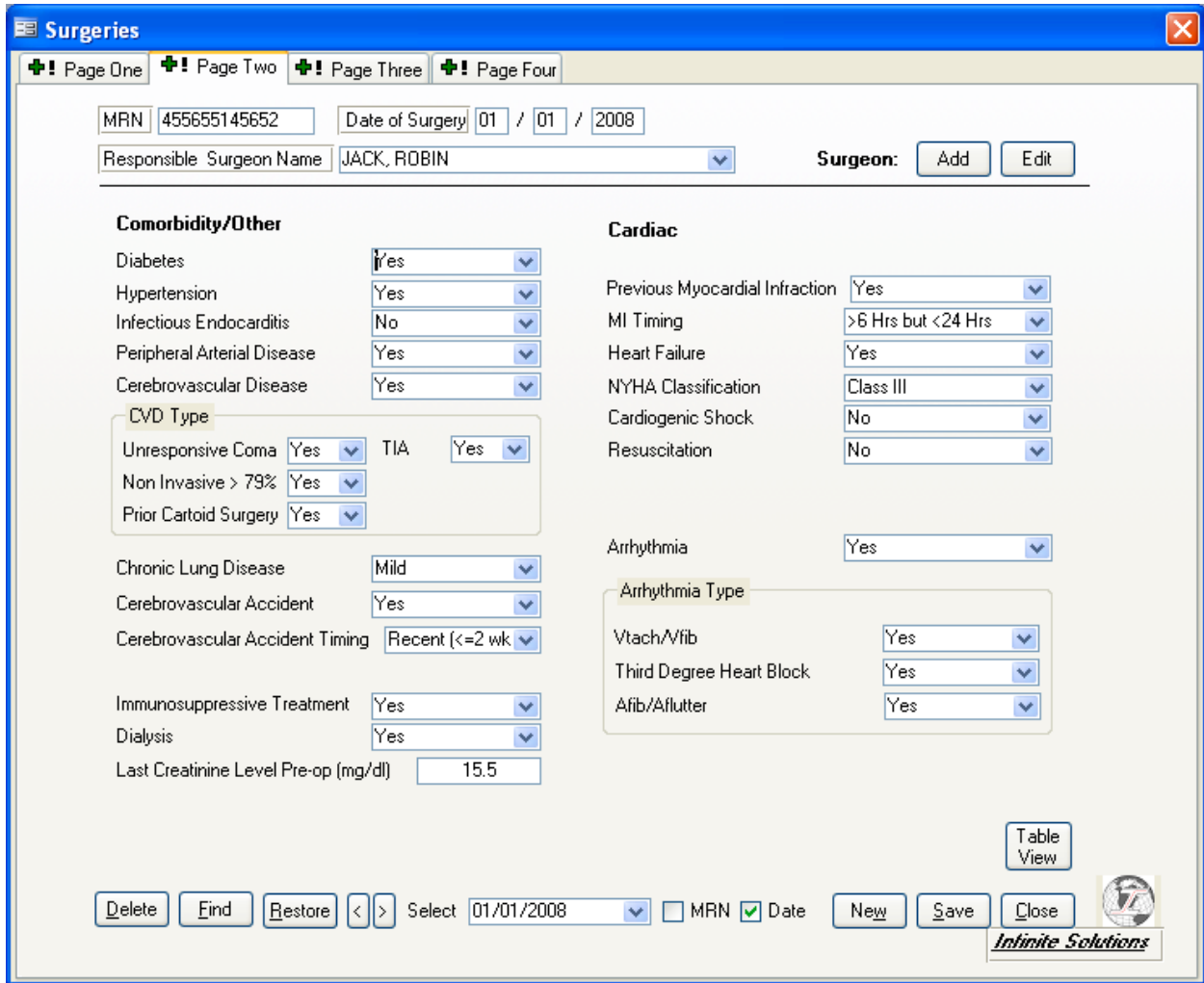
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Surgeries window, page two

Page two of the Surgeries window contains the fields related to Comorbidity/Other and Cardiac risk factors, as well as the required field Dialysis.

To go to the next page, click the page tab (Figure 28).

Figure 28 Page Two of the Surgeries window



Surgeries

Page One Page Two Page Three Page Four

MRN 455655145652 Date of Surgery 01 / 01 / 2008

Responsible Surgeon Name JACK, ROBIN Surgeon: Add Edit

Comorbidity/Other

Diabetes Yes

Hypertension Yes

Infectious Endocarditis No

Peripheral Arterial Disease Yes

Cerebrovascular Disease Yes

CVD Type

Unresponsive Coma Yes TIA Yes

Non Invasive > 79% Yes

Prior Carotid Surgery Yes

Chronic Lung Disease Mild

Cerebrovascular Accident Yes

Cerebrovascular Accident Timing Recent (<=2 wk)

Immunosuppressive Treatment Yes

Dialysis Yes

Last Creatinine Level Pre-op (mg/dl) 15.5

Cardiac

Previous Myocardial Infarction Yes

MI Timing >6 Hrs but <24 Hrs

Heart Failure Yes

NYHA Classification Class III

Cardiogenic Shock No

Resuscitation No

Arrhythmia Yes

Arrhythmia Type

Vtach/Vfib Yes

Third Degree Heart Block Yes

Afib/Aflutter Yes

Table View

Delete Find Restore < > Select 01/01/2008 MRN Date New Save Close

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Note:

Press the CTRL-SHIFT-TAB key to move backwards (in this case, back to Page One).

Press the CTRL-TAB to move forwards (in this case, to Page Two).

The primary fields (MRN, Surgery Date, Surgeon, License Number, and Notes) are displayed on all pages. The tool-tip for each field is displayed for all pages.

Command functions (*controls*) displayed on all pages.

Surgeries window, page three

Page three of the Surgeries window contains fields related to Previous Intervention and Hemodynamic Status risk factors. This page also contains one of the required fields: Prior Percutaneous Coronary Intervention. (Figure 29)

Figure 29 Page Three of the Surgeries window

Surgeries

+! Page One
+! Page Two
+! Page Three
+! Page Four

MRN 455655145652
Date of Surgery 01 / 01 / 2008

Responsible Surgeon Name JACK, ROBIN
Surgeon: Add Edit

Previous Intervention

Hemodynamic Status

Incidence First cardiovascular surgery
Previous CABG No
Previous Valve No
Prior Percutaneous Coronary Intervention Yes
Prior PCI Interval <=6 Hours

Number of Diseased Coronary Vessels Three
Left Main Disease (% Stenosis) 100
Ejection Fraction Done Yes
Ejection Fraction (%) 99.8
EF Method LV Gram
Mean Pulmonary Artery Done Yes
Pulmonary Artery Mean 99.5
Mitral Insufficiency None

Delete Find Restore < > Select 01/01/2008
☐ MRN ☒ Date
New Save Close

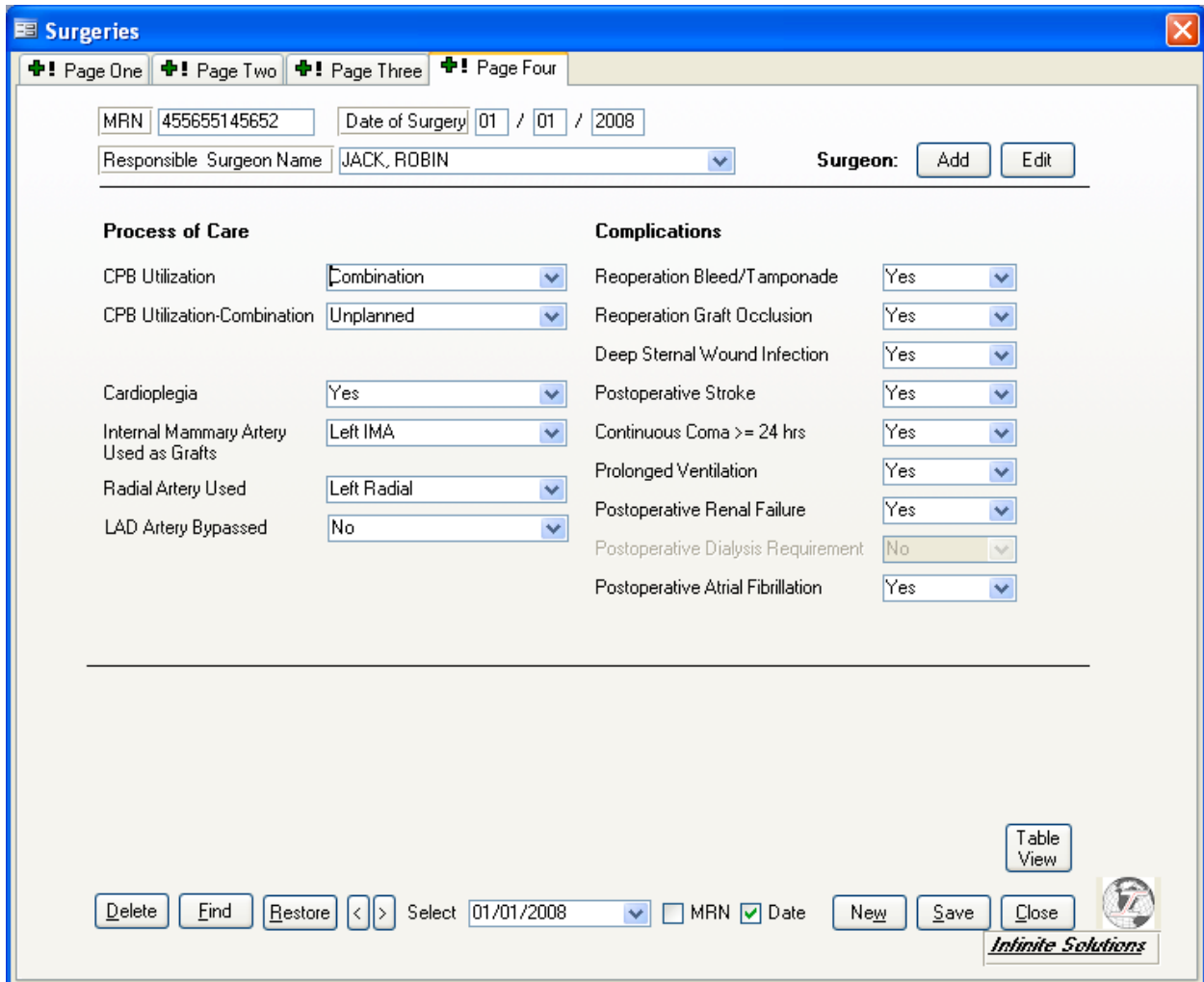
Table View



Surgeries window, page four

Page four of the Surgeries window contains fields related to Process of Care and Complications. (Figure 30) .Page four also contains a conditional field: CPB Utilization-Combination. This field is enabled only if you select Combination in the field CPB Utilization.

Figure 30 Page Four of the Surgeries window



Surgeries

Page One Page Two Page Three Page Four

MRN: 455655145652 Date of Surgery: 01 / 01 / 2008

Responsible Surgeon Name: JACK, ROBIN Surgeon: Add Edit

Process of Care		Complications	
CPB Utilization	Combination	Reoperation Bleed/Tamponade	Yes
CPB Utilization-Combination	Unplanned	Reoperation Graft Occlusion	Yes
Cardioplegia	Yes	Deep Sternal Wound Infection	Yes
Internal Mammary Artery Used as Grafts	Left IMA	Postoperative Stroke	Yes
Radial Artery Used	Left Radial	Continuous Coma >= 24 hrs	Yes
LAD Artery Bypassed	No	Prolonged Ventilation	Yes
		Postoperative Renal Failure	Yes
		Postoperative Dialysis Requirement	No
		Postoperative Atrial Fibrillation	Yes

Table View

Delete Find Restore < > Select 01/01/2008 ☐ MRN ☒ Date New Save Close

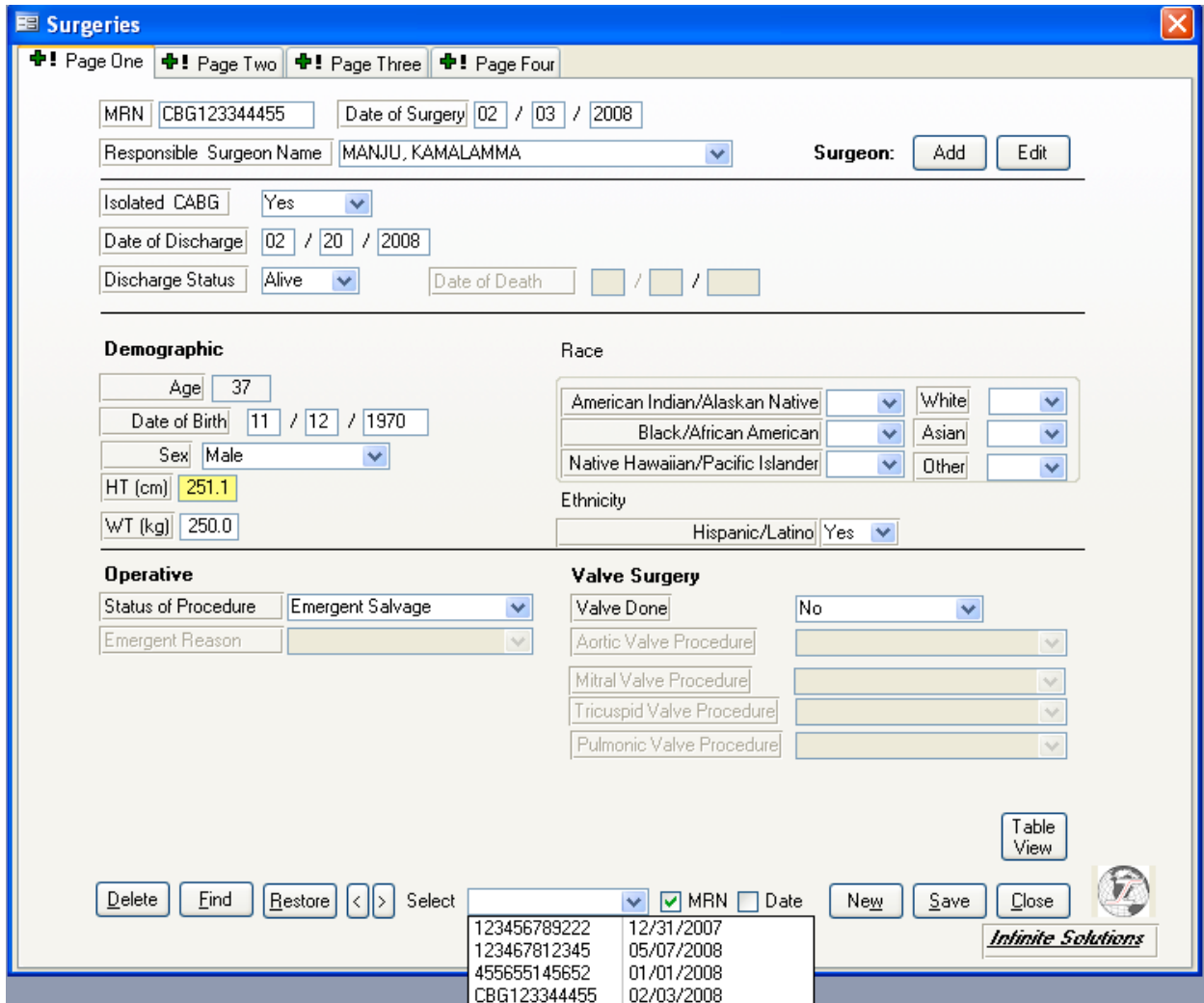
Infinite Solutions

Using the surgery selector

At the bottom of the window (to the right of the word “**Select**”) is a drop-down list called the ‘**Surgery Selector**’. The surgery selector lists all records in the database and displays both the MRN and the surgery date.

Open the **surgery selector** at the bottom of the window by clicking its dropdown arrow (to the left of “MRN”), as in Figure 31

Figure 31 Surgery selector



Surgeries

Page One Page Two Page Three Page Four

MRN: CBG123344455 Date of Surgery: 02 / 03 / 2008

Responsible Surgeon Name: MANJU, KAMALAMMA Surgeon: Add Edit

Isolated CABG: Yes

Date of Discharge: 02 / 20 / 2008

Discharge Status: Alive Date of Death: / /

Demographic

Age: 37

Date of Birth: 11 / 12 / 1970

Sex: Male

HT (cm): 251.1

WT (kg): 250.0

Race

American Indian/Alaskan Native White

Black/African American Asian

Native Hawaiian/Pacific Islander Other

Ethnicity

Hispanic/Latino Yes

Operative

Status of Procedure: Emergent Salvage

Emergent Reason:

Valve Surgery

Valve Done: No

Aortic Valve Procedure:

Mitral Valve Procedure:

Tricuspid Valve Procedure:

Pulmonic Valve Procedure:

Table View

Delete Find Restore < > Select

MRN	Date
123456789222	12/31/2007
123467812345	05/07/2008
455655145652	01/01/2008
CBG123344455	02/03/2008

New Save Close

Infinite Solutions

2. Click the last entry in the surgery selector (the one for MRN JAC123455676).

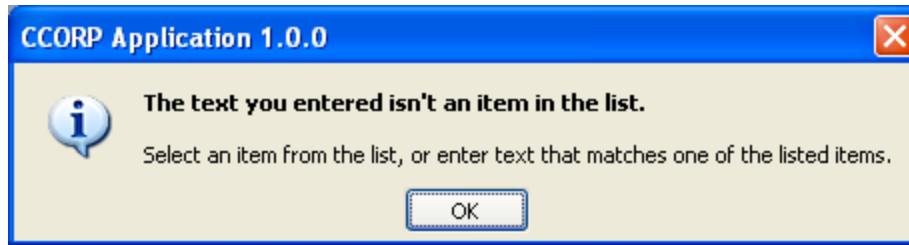
Notice that the window is immediately updated to show the data for that entry.

Tip: Use the surgery selector to move from one record to another and to sort the list by either MRN or surgery date.

The “not in list” message

If you type into the surgery selector a number that does not already exist in the database, you’ll receive the message in Figure 32. Click **OK** and then retype the correct number.

Figure 32 ‘Not in list’ Message



Note: If you still get the “Not in list” message, it means you have not yet entered the surgery information. Rule: Use the surgery selector to select an *existing* surgery record. Click **New** to create a *new* surgery record.

Try it:

1. Open the drop-down surgery selector to display the records you have entered so far
2. Double-click to select all the text in the surgery selector.
3. Type:

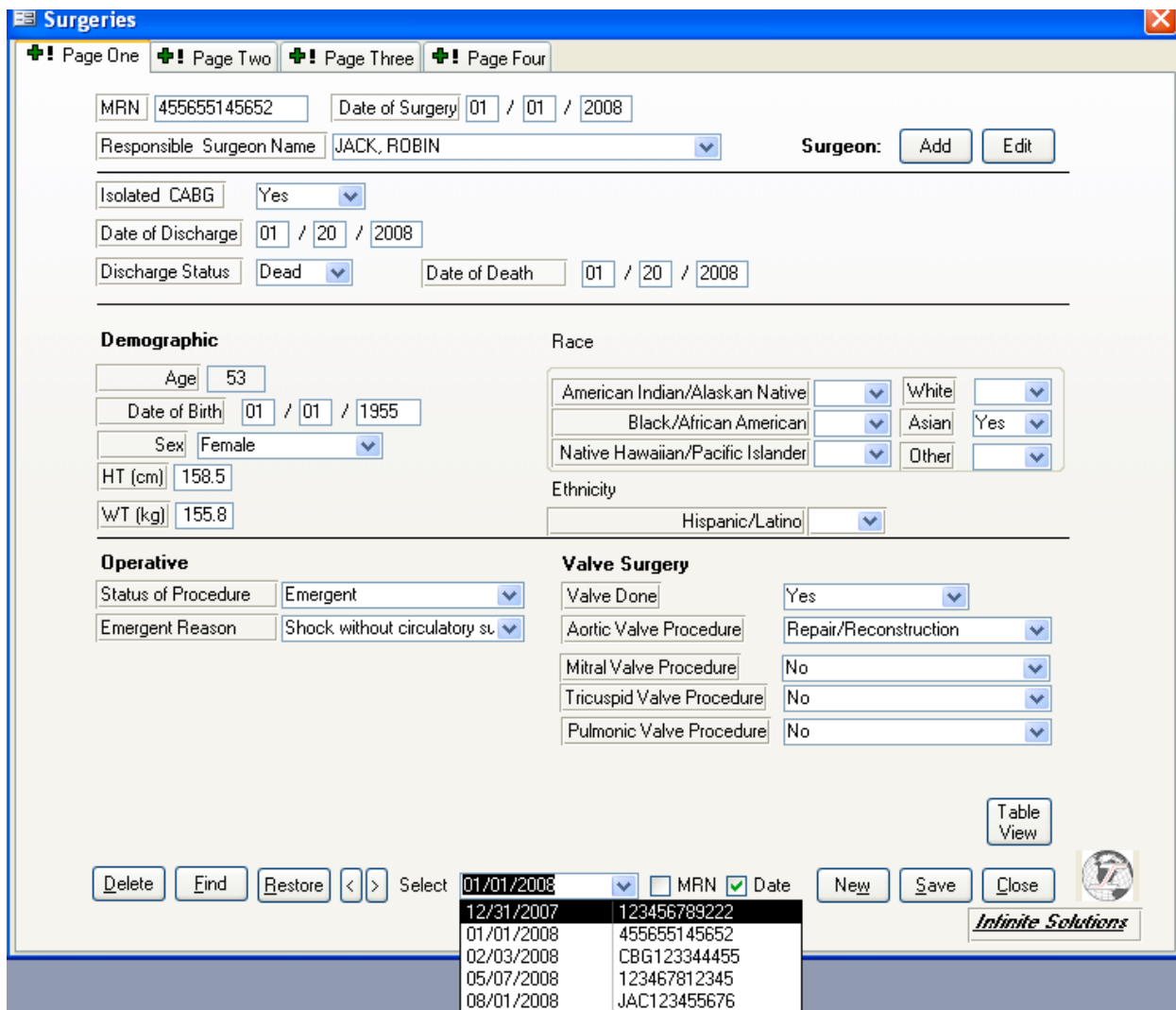
Ex: 77777

4. Notice that the surgery selector doesn’t select a new record because the number you have entered does not match any existing records.
5. Press ENTER. The application will display the message in Figure 18, above.
6. Click **OK**.
7. Open the surgery selector and select any record in the list.

Changing the sort order in the surgery selector

1. In some cases, you may want to view all surgeries performed on a specific date. In that case, you would change the *sort order* of the surgery selector to display records in order of their surgery dates.
2. Select the last entry displayed. Notice that the MRN and Surgery Date at the top of the window change as soon as you select the record. By default, the surgery selector displays entries in order of MRN, but you can change the sort order.
3. If you sort by surgery date, the application will display the earliest surgery date first. Select (check) the Date check box to list the records by surgery date. Open the surgery selector again and notice that the list has changed (Figure 26).
4. Select (check) the MRN check box to return the surgery selector to sorting by MRN.

Figure 33 Viewing the surgery list sorted by date



Surgeries

Page One Page Two Page Three Page Four

MRN 455655145652 Date of Surgery 01 / 01 / 2008

Responsible Surgeon Name JACK, ROBIN Surgeon: Add Edit

Isolated CABG Yes

Date of Discharge 01 / 20 / 2008

Discharge Status Dead Date of Death 01 / 20 / 2008

Demographic

Age 53

Date of Birth 01 / 01 / 1955

Sex Female

HT (cm) 158.5

WT (kg) 155.8

Race

American Indian/Alaskan Native White

Black/African American Asian Yes

Native Hawaiian/Pacific Islander Other

Ethnicity

Hispanic/Latino

Operative

Status of Procedure Emergent

Emergent Reason Shock without circulatory st

Valve Surgery

Valve Done Yes

Aortic Valve Procedure Repair/Reconstruction

Mitral Valve Procedure No

Tricuspid Valve Procedure No

Pulmonic Valve Procedure No

Table View

Delete Find Restore < > Select 01/01/2008 MRN Date New Save Close

12/31/2007	123456789222
01/01/2008	455655145652
02/03/2008	CBG123344455
05/07/2008	123467812345
08/01/2008	JAC123455676

Infinite Solutions

Tip: In drop-down lists, you can use the mouse to click on an entry, use type-ahead to select an entry, or use the up and down arrow keys to select the entry. For the most part, when you use the CCORP software, you'll use the surgery selector to move from one record to another. You can also use the next and previous buttons, however, to move among records. These buttons function just like those in your Internet browser. The next button (>) will take you to the next record, while the previous button (<) will take you to the previous record.

The Table View: viewing data as columns and rows

In addition to the Surgeries window, which lists the details of one surgery at a time, the CCORP application provides a *table view* that lists the records as rows and the fields as columns. This view is similar to the way data is displayed in spreadsheet applications. In the table view, you can find

records based on the data in a specific field (column), you can sort the records by specific fields, and you can *filter* the data so that the application displays only records that meet specific criteria. You can open the Table View of the data from either the File menu (Application >Surgery Table View) or from the Surgery window, using the Table View button .

1. Click **Table View** to display the data in a spreadsheet format (Figure 34).

Figure 34Surgeries table view window

This form does not allow editing. To edit a record, select the record, then click Show to return to the Surgeries window. To sort or filter the data, click the field on which you want to sort or filter, then right-click.

All numeric values are treated as text. Therefore, when you sort on fields with "numeric" values, the values will be sorted by the leftmost character first. For example, "15" will appear before "6."

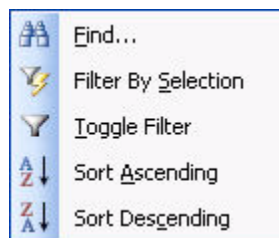
Patient MRN	Surgeon Last N	Surgeon First N	Surgeon M.I.	Isolated CABG	Date of Surgery	Date of Discharge
123467812345	SAMI	JUSTIN	D	Yes	05/07/2008	06/01/2008
CBG123344455	MANJU	KAMALAMMA		Yes	02/03/2008	02/20/2008
455655145652	JACK	ROBIN		Yes	01/01/2008	01/20/2008
123456789222	KELLER	CARLA	D	Yes	12/31/2007	01/01/2008
JAC123455676					08/01/2008	

Record: 1 of 5

2. Click in the Surgery Date field for any record.

3. Right-click in the same field. Notice that a new pop-up menu becomes available in the table view window (Figure 35):

Figure 35 Pop up Menu window



When you have the table view open, you can use this menu to find specific entries, filter the records so that only records with specific data are displayed, clear or remove the filters, or sort on a specific field. Using the menu, you can also freeze or unfreeze columns, which are useful if you want a specific column (say, MRN or Date of Surgery) to remain visible as you scroll through the fields to the right.

4. Press ESC to close the pop-up menu. In the next step, you'll see that, while you can click in a field, you cannot enter new data or change existing data.

5. Click in any field (column) and type:

123

6. Notice that *typing has no effect* on the data in table view. All changes or additions to the data must be made in the Surgeries window.

7. Click on a record (row) from your list of MRN.

8. Click **Show**. The table view window closes and the application opens the Surgeries window.

Finding records matching specific criteria

In some cases, you may want to find all entries matching specific criteria, such as all surgeries performed by a specific surgeon, or all male patients. Using the Find function, you can search for entries that meet the following criteria:

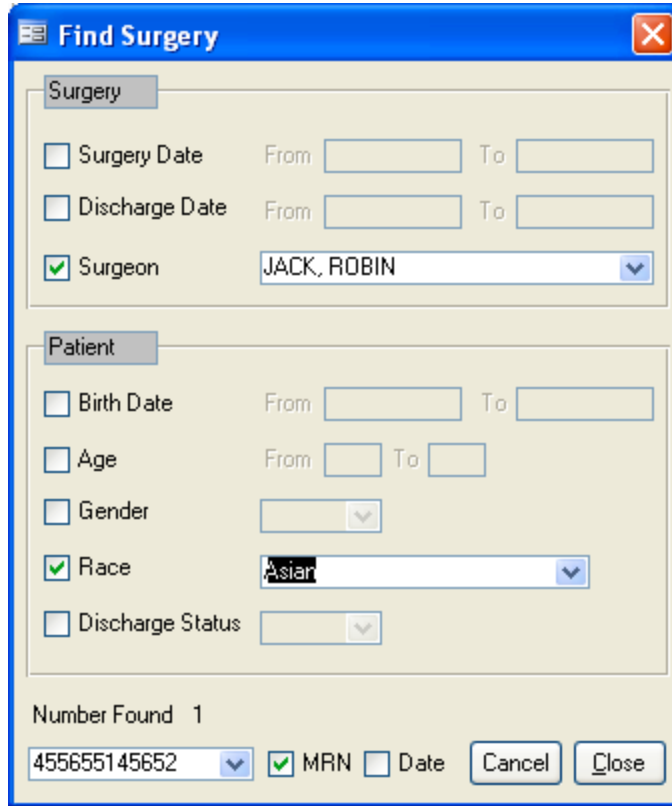
- Date of surgery
- Date of discharge
- Surgeon
- Date of birth
- Age
- Gender
- Race, and
- Discharge status.

In addition to finding entries matching one specific field (such as surgeon), you can combine the criteria by entering values for more than one field.

To review the Find function:

1. If the Surgeries window is not already open, open it by selecting Application >Surgery File.
2. Click **Find** to open the Find Surgery window (Figure 36).

Figure 36 Find Surgery window



The "Find Surgery" window is a software interface for searching medical records. It features two main sections: "Surgery" and "Patient".

Surgery Section:

- ☐ Surgery Date: From [] To []
- ☐ Discharge Date: From [] To []
- ☒ Surgeon: JACK, ROBIN [v]

Patient Section:

- ☐ Birth Date: From [] To []
- ☐ Age: From [] To []
- ☐ Gender: [v]
- ☒ Race: Asian [v]
- ☐ Discharge Status: [v]

Results and Actions:

- Number Found: 1
- 455655145652 [v]
- ☒ MRN ☐ Date
- Buttons: Cancel, Close

3. Select the criteria by which the surgery record needs to be founded as shown in Figure 36.
4. Click close after finding the record. The Surgeries screen opens for the record displayed in the Selector field.

Data Outputs: Reports

Reports are, essentially, anything that can be printed. The CCORP application includes reports for missing data, physician certifications, and summaries of surgery statistics, and a detail record for each surgery. For several of these reports, you can set date ranges so that only a specific period is included in the report.

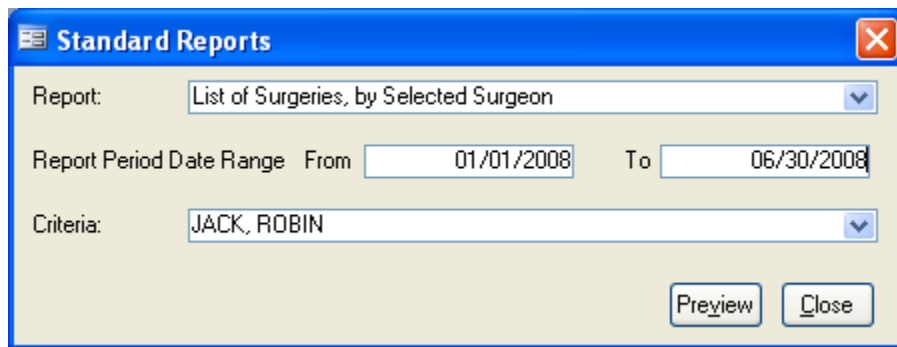
Types of Reports

The CCORP application contains the following reports:

- List of Surgeries, All Surgeons
- List of Surgeries, by Selected Surgeon
- Missing Data, All Patients
- Patient Surgery Detail, All Patients
- Patient Surgery Detail, by Selected MRN and Surgery Date
- Patient Surgery Detail, by Selected Surgeon
- Semi-Annual Hospital Certification
- Semi-Annual Physician Certification, All Surgeons
- Semi-Annual Physician Certification, Selected Surgeon by Period
- Surgery List by CABG and Discharge Status, All Surgeons
- Surgery List by CABG and Discharge Status, by Selected Surgeon

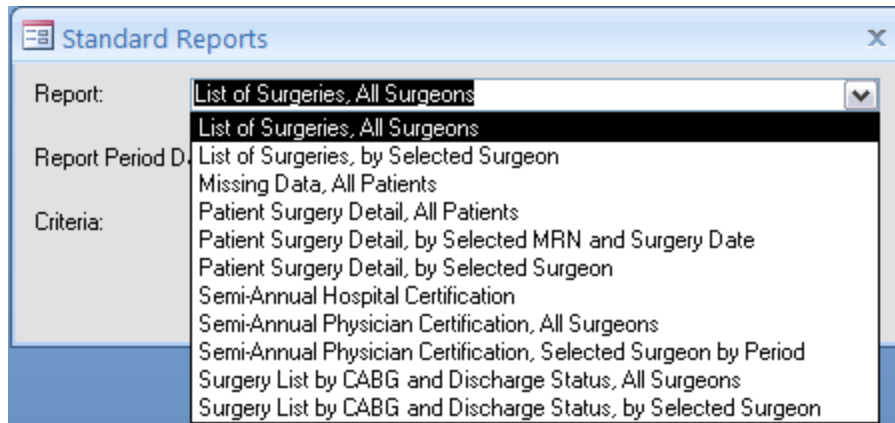
1. From the menu, select Application > Reports. The application opens the Standard Reports window (Figure 37).

Figure 37 Standard Reports window

A screenshot of the 'Standard Reports' window in the CCORP application. The window has a blue title bar with the text 'Standard Reports' and a close button (X) on the right. Inside the window, there are three main sections: 'Report:' with a drop-down menu showing 'List of Surgeries, by Selected Surgeon'; 'Report Period Date Range' with 'From' and 'To' date pickers showing '01/01/2008' and '06/30/2008' respectively; and 'Criteria:' with a drop-down menu showing 'JACK, ROBIN'. At the bottom right of the window are two buttons: 'Preview' and 'Close'.

2. Open the drop-down reports list (Figure 38).

Figure 38 Reports drop-down list window



3. Click the report in the list named “Missing Data, All Patients.”
4. Click **Preview**.
5. Click once on the report to see the entire report in the window.
6. Press ESC to close the report.
7. Open the Standard Reports window again by selecting Application > Reports
8. Open the drop-down reports list and select “Patient Surgery Detail, All Patients.” Notice that you can now enter a date range for surgeries to be included in the report. You haven’t entered any discharge data yet, so the report has nothing to print. Later in the tutorial, when you have entered some surgery information, you’ll print the report and practice entering data ranges for reports like these.
9. Click **Close**.

Printing reports

There are two methods of printing reports: selecting File > Print or pressing CTRL-P. The two methods have markedly different results.

- Selecting **File > Print** from the menu immediately sends the report to the *default* printer and prints one copy.
- Pressing **CTRL-P** opens the print dialog window where you can select a different printer (if available), set the number of copies to be printed, and make other changes such as the page orientation (portrait or landscape) and the like.

Navigating Reports

When a report first opens, you see only the first page. To see other pages (if there are other pages), use the report navigation buttons at the bottom of the window. (Figure 39)

Figure 39 Navigating Reports window

CCORP Application 1.0.0 - [Missing Data, by Patient MRN]

File Application Table View Window Type a question for help

California Office of Statewide Health Planning and Development CCORPApp (1.0.0)

Missing Data, by Patient MRN

Patient MRN: 123456789222
Date of Surgery: 12/31/2007
 Atrial/Flutter, Vtach/Vfib, Cerebrovascular Accident Timing, Unresponsive Coma, Non Invasive > 75%, Prior Carotid Surgery, TIA, EF Method, Pulmonic Valve Procedure, Tricuspid Valve Procedure, Prior PCI Interval

Patient MRN: CBG123344455
Date of Surgery: 02/03/2008
 Deep Sternal Wound Infection, Postoperative Stroke, Continuous coma >= 24 hrs, Reoperation Bleed / Tamponade, Reoperation Graft Occlusion, Prolonged Ventilation, Last Creatinine Level Pre-op (mg/dl), Postoperative Dialysis Requirement, Postoperative Renal Failure, LAD Artery Bypassed, Left Main Disease (% Stenosis)

Patient MRN: JAC123456676
Date of Surgery: 09/01/2008
 Age, Arrhythmia, Cardiogenic Shock, Cardioplegia, Postoperative Atrial Fibrillation, Heart Failure, Chronic Lung Disease, Deep Sternal Wound Infection, Postoperative Stroke, Continuous coma >= 24 hrs, Reoperation Bleed / Tamponade, Reoperation Graft Occlusion, CPB Utilization, Prolonged Ventilation, Last Creatinine Level Pre-op (mg/dl), Postoperative Dialysis Requirement, Postoperative Renal Failure, Cerebrovascular Accident, Cerebrovascular Disease, Diabetes, Dialysis, Number of Diseased Coronary Vessels, Discharge Date, Date of Birth, Discharge Status, Race, Ejection Fraction Done, Mean Pulmonary Artery Done, Pulmonary Artery Mean, Height, Hypertension, Internal Mammary Artery used as graft, Immunosuppressive Treatment, Infectious Endocarditis, Isolated CABG, LAD Artery Bypassed, Left Main Disease (% Stenosis), Previous Myocardial Infarction, Mitral Insufficiency, Valve Done, Prior PCI, Peripheral Arterial Disease, Radial Artery Used, Resuscitation, Gender, Status of Procedure, First Name, Surgeon License Number, Last Name, Weight

Report: rptMissingMRN (1.0) Printed: 8/6/2008

Page: 1

To move to a specific page in the report, type the number in the page number area and press ENTER. You can also click on the arrow to go to the next page.

Data Outputs: Creating External Files

The CCORP application can create two types of external files: (1) a Microsoft Office Excel Comma Separated Values File submission to OSHPD, and (2) a text file for which you can select specific fields and specific types of records to be included. The OSHPD export file has a file-name extension of “.csv”. The file produced by the “Text File” function has a file-name extension of “.txt” and can be used to analyze CCORP data in statistical analysis applications.

Creating an electronic text file to send to OSHPD

Creating a file to submit to OSHPD is a very simple process. Select the six-month period to be included in the file and note the name of the exported file. The drop-down list will display *only* the periods for which records are available.

1. From the menu, select Application > Send to OSHPD to open the export window (Figure 40).

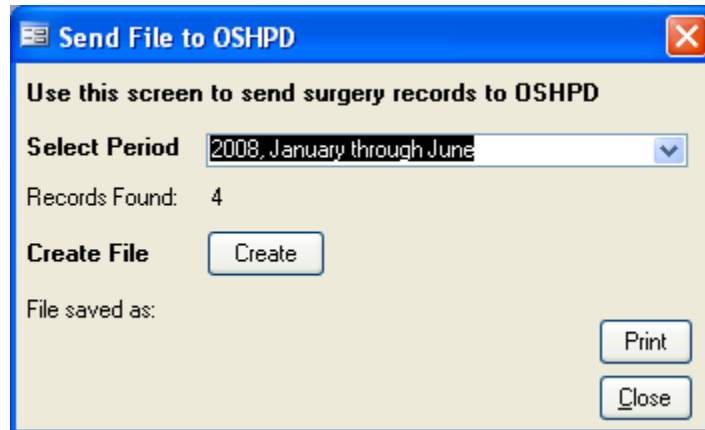
Figure 40 Send file... window

2. Open the drop-down list to select the period to include in the export file (Figure 41).

Figure 41 selecting a period to send file ... window

3. Select any period. The surgeries are grouped into 6 month periods by discharge dates.
4. Note the number of records to be included for a period in the file (Figure 42).

Figure 42 Found records indicator



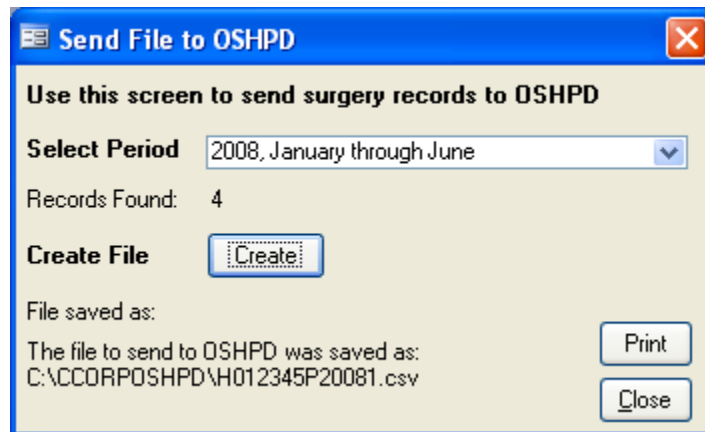
5. Click **Create**. When the export is finished, the export window will indicate the number of records included in the export file (Figure 43).

Figure 43 File export completed message



6. Click **OK**.
7. The application displays the Send File to OSHPD window with the location and name of the export file (Figure 37).
8. Note the name of the file in C:\CCORPOSHPD.
9. If you want to keep a record of the file location, click **Print**. The application will print the screen exactly as it appears; the **Print** button sends the document directly to the printer.
10. Click **Close**.
11. Copy the file in C:\CCORPOSHPD\ to a floppy disk, Zip disk or CD and send it to OSHPD.

Figure 44 Completed export message



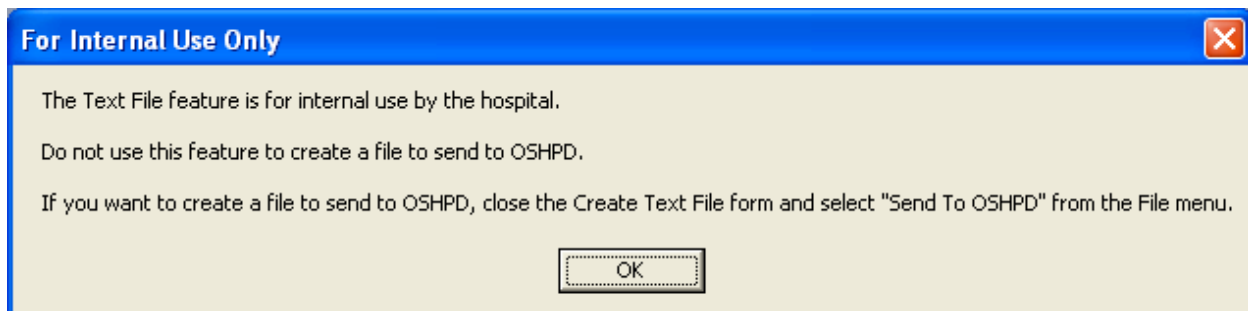
Creating an External Text File

The external text file produced by the CCORP application is a tab-delimited file consisting of the fields and records you select. After you export the file, the application displays a window listing the fields contained in the export file. In the following tasks, you'll create an external text file selecting only certain types of patients and only a subset of the fields in the CCORP application.

To create the external text file:

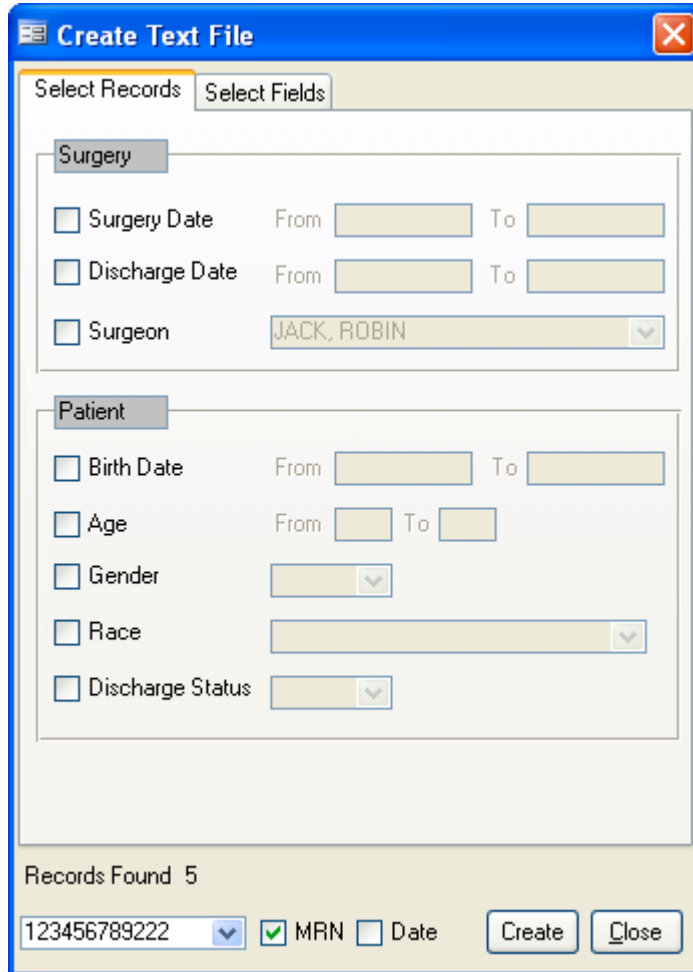
1. From the menu, select Application > Text File to open the Create Text File window.
2. The application will display a warning that the Text File function will not create the correct file to send to OSHPD (Figure 45).

Figure 45 Text file warning



3. Click **OK**. The application will open the window for creating the text file (Figure 46).

Figure 46 Create Text File window when first opened



Create Text File

Select Records | Select Fields

Surgery

☐ Surgery Date From To

☐ Discharge Date From To

☐ Surgeon JACK, ROBIN

Patient

☐ Birth Date From To

☐ Age From To

☐ Gender

☐ Race

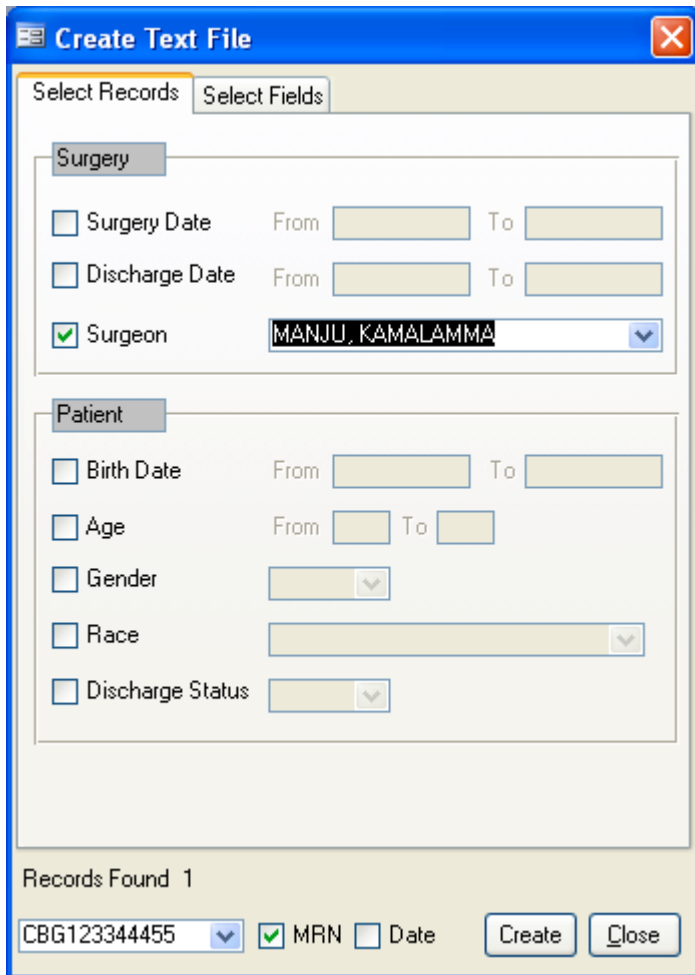
☐ Discharge Status

Records Found 5

123456789222 ☒ MRN ☐ Date

4. Notice the two tabs in the window. On the first tab, you can select the type of *patients* to be included in the file. On the second tab, you can select the *fields* to be included.
5. Select (check) the Surgeon check box, open the drop-down list, and select MANJU, KAMALAMMA. (Figure 46)

Figure 46 Selecting a Surgeon



Create Text File

Select Records | **Select Fields**

Surgery

☐ Surgery Date From To

☐ Discharge Date From To

☒ Surgeon **MANJU, KAMALAMMA** ▼

Patient

☐ Birth Date From To

☐ Age From To

☐ Gender ▼

☐ Race ▼

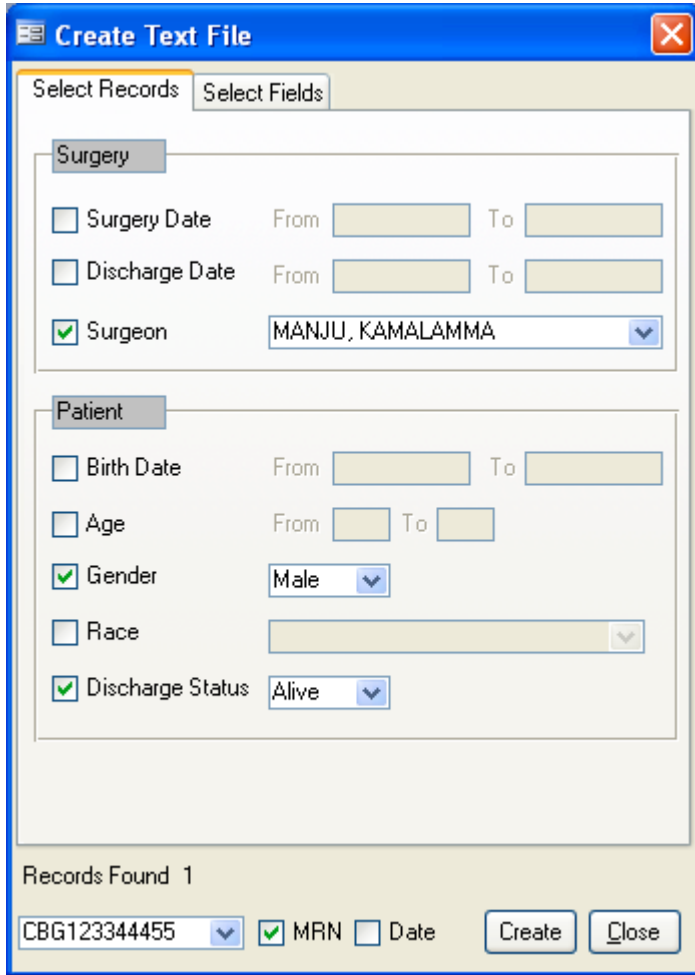
☐ Discharge Status ▼

Records Found 1

CBG123344455 ▼ ☒ MRN ☐ Date **Create** **Close**

6. Select the Gender check box, open the list, and select **Male**.
7. Select the Discharge Status check box and select **Alive**.
8. The Create Text File window should now look like Figure 47. (The number of records found may differ, if records have been entered other than those in this tutorial.)

Figure 47 Selected surgery and patient characteristics to be included in the text file



Create Text File

Select Records | **Select Fields**

Surgery

☐ Surgery Date From To

☐ Discharge Date From To

☒ Surgeon **MANJU, KAMALAMMA** ▼

Patient

☐ Birth Date From To

☐ Age From To

☒ Gender **Male** ▼

☐ Race ▼

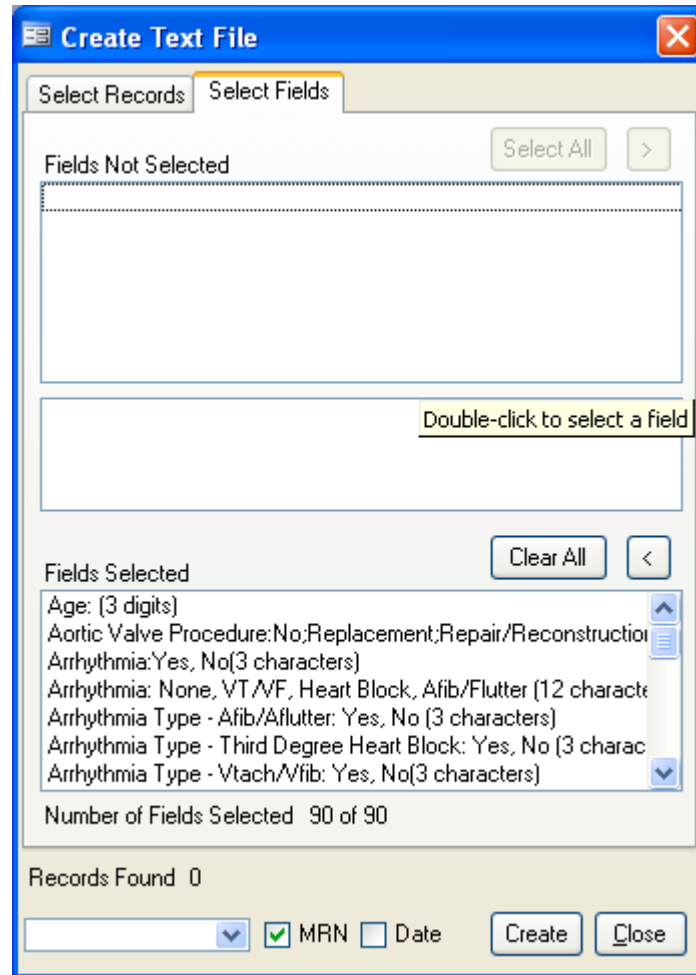
☒ Discharge Status **Alive** ▼

Records Found 1

CBG123344455 ▼ ☒ MRN ☐ Date **Create** **Close**

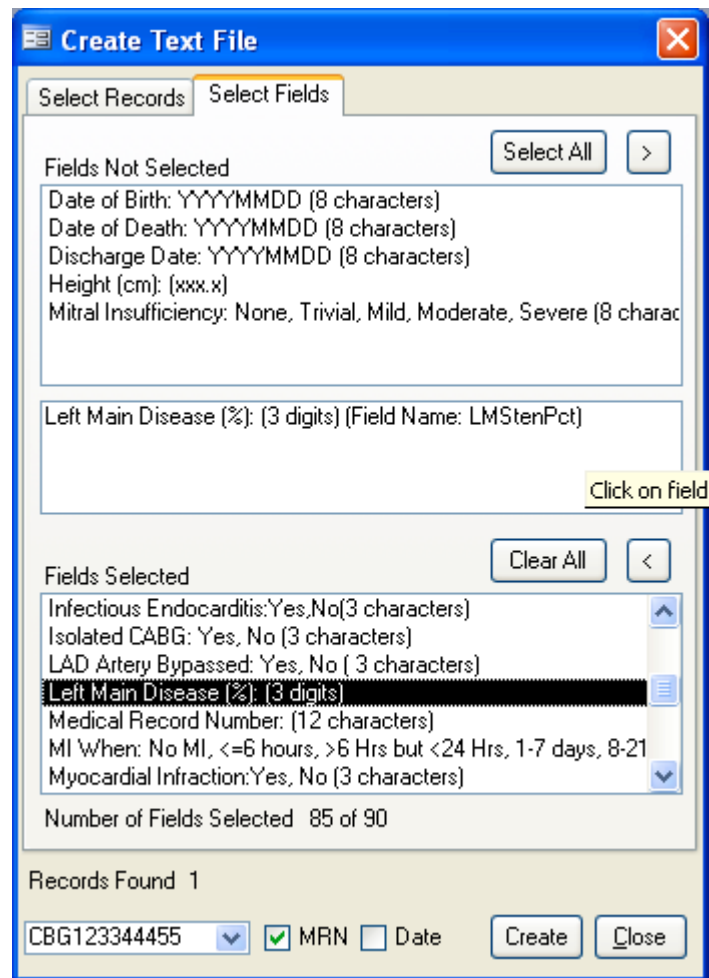
9. Click the Select Fields tab (Figure 48). By default, the text file contains all fields *except those you exclude*. Notice that when the tab first appears, all the fields have been selected for inclusion in the text file. The next step, therefore, is to exclude fields.

Figure 48 Select fields tab window



10. Scroll through the bottom list to Date of Birth
11. Double-click Date of Birth to exclude it. (You'll keep the age field.)
12. Double-click Date of Death to exclude it. (Because you selected Alive on the Select Records tab.)
13. Double-click Date of Discharge to exclude it.
14. Scroll down to Height and double-click it or type H on your keyboard until you come to Height
15. Scroll down to Mitral Insufficiency and double-click it.
16. Scroll up to Left Main Disease(%)
17. Click **once** on Left Main Disease(%) and notice the value list displayed in the middle section of the window.

Figure 49 Displaying the value list for a specific field

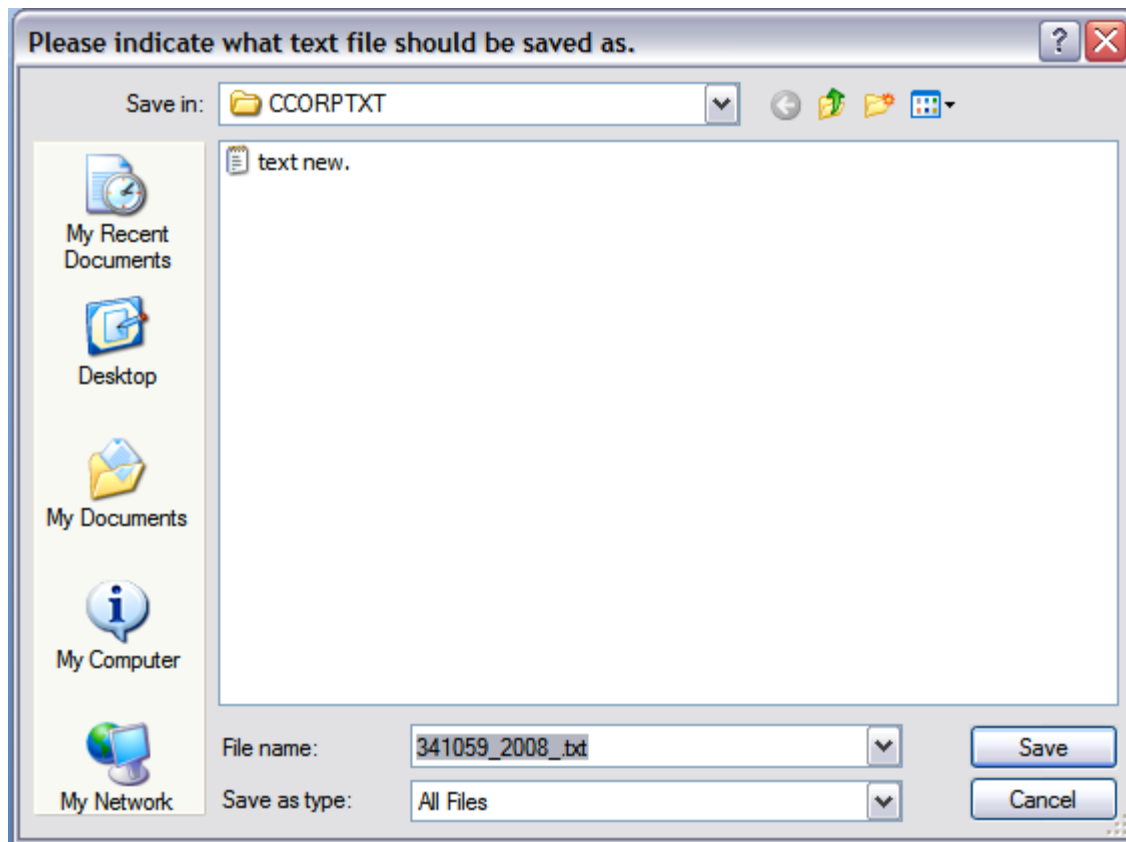


18. Scroll down further in the Fields Selected window and exclude the following fields by double-clicking them:

- Record Changed (The “record” fields are administrative fields used by the database. You should always exclude them from your exported fields unless you are auditing database use.)
- Record Entered
- Record Imported
- Record Status
- Surgeon name first
- Surgeon name last
- Surgeon name middle initial
- Weight.

19. Move to the top section of the window and double-click **Weight** to move it back to the list of included fields. (Hint: you'll have to scroll down the list to find it.)
20. Click **Create**. The application opens a Save window and offers a default file name of CCORP.txt. This is not a particularly informative name, so change the name to indicate the date you exported the file using the following format: mmddyyyy. Thus, if you are exporting the file on August5,2008, you would name it 080508.txt or in the format Hospital ID_YYYY_Report Period.txt. For example 341059_2008_1.txt
21. For the purposes of this tutorial, select the complete file name and change it to: **341059_2008_1**. Your Save window should now look like Figure 50.

Figure 50 Assigning a name for the text file



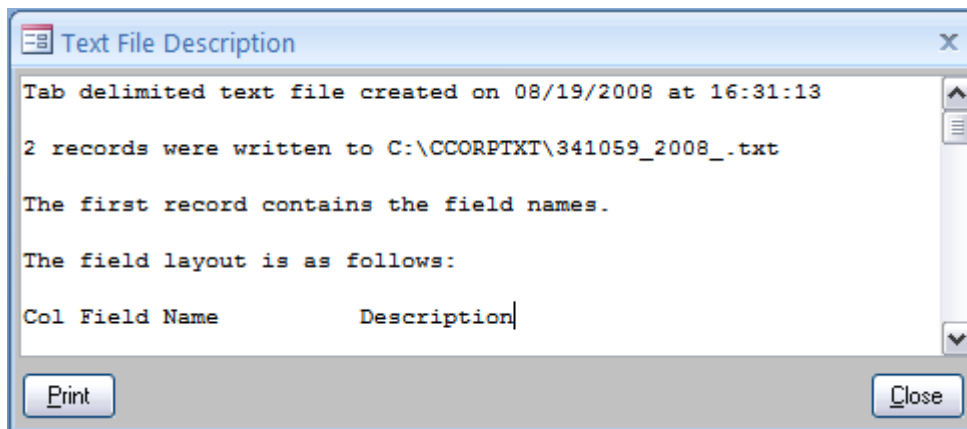
22. Click **Save**
23. When the application displays the Export Completed message (Figure 51), click **OK**

Figure 51 Export Completed window



24. The application will then display the Text File Description window (Figure 52). Your information may differ depending on when you export the data and the number of records in the database at the time.

Figure 52 Text file window description



25. Click **Print**.

26. Click anywhere in the white area of the Text File Description window. Notice that the scroll bars are activated and you can select text.

27. Click the cursor at the beginning of the row reading "Col Field Name Description."

28. Holding down the mouse button, drag the cursor down to the end of the window so that you have highlighted all the text describing the fields.

29. Press CTRL-C to copy the text.

30. Leaving this window open, go to the Start button and select Start > Programs > Accessories > Word Pad.

31. Press CTRL-V or select Edit > Paste to paste the text into this new document. You can now save this file in the same folder as the text file you exported.

32. Exit Word Pad by selecting File > Exit. Save the file if you want to keep a record of this export.

33. Select CCORP from the task bar to return to the CCORP application.

34. Click **Close** to close the Text File Description window.

35. Click **Close** to close the Create Text File window.

Once you have created an external text file, you can open the file in a spreadsheet program such as Excel, a database program, a word processor, or any statistical analysis program that can read text files. If your program asks you for the file type, indicate that it is a tab-delimited text file.

Errors and Help

The best source of information about the CCORP software is the CCORP FAQ page maintained by Infinite Solutions at www.4infinitesolutions.com/CCORP. In addition to answers to frequently asked questions, this site provides links to the application and data files, as well as all documentation. This site is available under the Help menu in the CCORP application.

Unexpected Events

Unexpected events generally occur when the CCORP application can't link or write to the data file or to itself.

Red: unallowable data

Red error messages indicate invalid data that cannot be saved. Types of invalid data include:

Missing, required data

Required fields that have not been completed will have a red background until you enter valid data.

Dates

- Dates in the future
- Dates that conflict with other CCORP dates, such as a discharge date that occurs before a surgery date.

Unallowable, out of range data

Fields that accept numerical values (Last Creatinine Level Pre-op, Ejection Fraction, and Left Main Disease, % Stenosis), do not accept data that is outside the defined allowable range. If you enter a value that is outside the defined range, the application will display an error message. Invalid data cannot be saved. Delete the data and enter valid data.

Yellow: unexpected data

In addition to allowable ranges, the three fields listed above also have "expected" ranges. If you enter data that is outside the expected range, but within the allowable range, the application will display a yellow warning message. Unlike unallowable data, unexpected data can be saved, although

the field will remain yellow.

Not in list

The “not in list” error occurs if you type a value in a field that allows only the entries from the drop-down list. Delete the typed entry and select a value from the list. The “not in list” error applies to all fields that use drop-down lists, including the surgery selector and the surgeon selector.

The Help menu

The Help menu in the CCORP application provides links to the main Infinite Solutions CCORP FAQ page, as well as pages dealing with specific topics. The Help menu also provides a link to the CCORP site maintained by the Office of Statewide Health Planning and Development.

The FAQ site

Infinite Solutions Inc. maintains an FAQ page at www.4infinitesolutions.com/CCORPFAQ.html. That page contains links to all software and documentation for the CCORP application and provides a link to the main CCORP site maintained by the Office of Statewide Health Planning and Development.

Infinite Solutions Inc.

If you have questions or need help with the CCORP software, feel free to contact Infinite Solutions Inc. at 1-916-641-0500x5. We will be happy to help.

