

# Midas Care Management SmarTrack Reporting Manual

First Edition

Software Version 2014

Confidential – For Licensed Use Only

September 2014

## Copyright Notice

© 2017 Conduent Business Services, LLC. All rights reserved.

Conduent and Conduent Agile Star are trademarks of Conduent Business Services, LLC in the United States and/or other countries.

Midas and Design are trademarks of Conduent Care Management, Inc. in the United States and/or other countries.

## Confidential and Proprietary

This document contains confidential information which is proprietary to Midas Health Analytics Solutions. Possession and use of this document or any part thereof, in any form, is limited to licensed Midas clients only and is regulated by specific license agreement provisions. Any other use or unauthorized disclosure is strictly prohibited.

Except as specifically provided in the License Agreement, no part of this publication may be reproduced or distributed in any form or by any means without the prior written permission of:

### **Midas Health Analytics Solutions**

#### **CONDUENT**

4801 East Broadway Blvd, Suite 335  
Tucson, Arizona 85711

(877) 414-2676

[www.conduent.com](http://www.conduent.com)

BR435

# Contents

- 1.1 Section 1:  
Introduction**
- 1.2 Using this Manual**
  - 1.2 Manual Conventions
- 1.3 Overview**
- 1.5 Using SmarTrack Reporting**
  - 1.5 Graphs
  - 1.6 Profiles
  - 1.7 Report Data Transfer
- 2.1 Section 2:  
Indicator Definition**
- 2.2 Overview**
- 2.4 Counts**
  - 2.4 Defining Counts
  - 2.10 Defining Custom Condition Logic
  - 2.13 Copying Counts
  - 2.14 Deleting Counts
  - 2.15 Which Count to Count
  - 2.16 Which Date to Reference
  - 2.17 Count Examples

- 2.19 Sums**
  - 2.19 Defining Sums
  - 2.24 Copying Sums
  - 2.24 Deleting Sums
  - 2.25 Sum Examples
- 2.27 Rates**
  - 2.27 Defining Rates
  - 2.32 Adding or Subtracting Indicator Values
  - 2.32 Copying Rates
  - 2.33 Deleting Rates
  - 2.34 Rate Examples
- 2.37 Days at Risk**
  - 2.38 Defining Days at Risk
  - 2.42 Copying Days at Risk
  - 2.42 Deleting Days at Risk
  - 2.43 Days at Risk Examples
- 2.50 Manual Indicators**
  - 2.50 Defining Manual Indicators
  - 2.52 Deleting Manual Indicators
  - 2.52 Entering Data in Manual Indicators
  - 2.53 Totals Tab
  - 2.54 Service Tab
  - 2.54 Specialty Tab
  - 2.55 Provider Tab
- 2.56 Deactivating an Indicator**
- 
- 3.1 Section 3:  
Indicator Processing**
- 3.2 Processing Indicators**
- 3.4 Modifying the Job Queue**
  - 3.4 Run Tonight Only
  - 3.6 Schedule Daily Indicator Summaries
  - 3.7 Schedule Weekly Indicator Summaries
- 3.9 Starting Daily or Weekly Jobs**
- 
- 4.1 Section 4:  
Indicator Graphs**
- 4.2 Compiling Indicator Graphs**
  - 4.4 Compiling Indicator Graphs by Fiscal Year
- 4.6 Working with Indicator Graphs**
  - 4.13 Modifying Axis Settings
  - 4.15 Re-graphing the Data by Provider
  - 4.17 Re-graphing the Data by Cross-tabulated Variables
- 4.19 Drilling Down to Encounter or Non-patient Data**
- 
- 5.1 Section 5:  
Indicator Profiles**
- 5.2 Overview**
- 5.3 Defining Indicator Profiles**
  - 5.5 Copying Profiles
  - 5.5 Deleting Profiles

- 5.6 Defining Labels and Indicator Font Properties in Profiles
- 5.6 Defining Labels in Profiles
- 5.8 Defining Font Properties in Profiles
- 5.9 Adding a Comment and Confidentiality Statement to Profiles
- 5.11 Compiling Indicator Profiles**
- 5.16 Compiling Indicator Profiles by Fiscal Year
- 5.18 Changing Crosstabs
- 5.20 Working with Indicator Profiles**
- 5.20 Exporting the Data to Excel
- 5.23 Copying Data for Pasting into Another Application
- 5.23 Printing the Profile
- 5.24 E-mailing the Data
- 5.24 Displaying Services, Specialties, or Providers
- 5.26 Exporting or Copying Service, Specialty, or Provider Profile Data
- 5.27 Navigating to Indicator Graphs
- 5.28 Drilling Down to Encounter or Non-Patient Data**

## **6.1 Section 6:**

### **Statistical Process Control Charts**

- 6.2 Statistical Process Control Charts**
- 6.2 SPC Overview**
- 6.4 Accessing SPC Functionality**
- 6.10 Viewing SPC Charts**
- 6.10 Viewing Associated Types of Charts
- 6.11 Customizing Chart Options
- 6.12 Process Team
- 6.12 Printing Charts
- 6.13 Exporting Charts
- 6.13 Help Menu
- 6.14 General SPC Chart Characteristics**
- 6.16 Special Information Options
- 6.19 Additional Display Options
- 6.21 Types of Midas+ SPC Charts**
- 6.22 P charts
- 6.23 U charts
- 6.24 I charts
- 6.25 X-bar charts
- 6.28 Median chart
- 6.29 Trend chart
- 6.30 Run chart
- 6.31 Box Plot chart

## **7.1 Section 7:**

### **Report Data Transfer**

- 7.2 Using Report Data Transfer**

## **A.1 Appendix A: Indicator and Profile Restrictions and Added Security**

### **A.2 Indicator and Profile Restrictions**

A.2 Points to Remember

A.2 Defining the Restriction

A.3 Adding Restrictions to an Indicator Definition

A.4 Adding Restrictions to an Indicator Profile Definition

A.5 Adding Restrictions to a User Definition

### **A.7 Indicator Drill-Down Restrictions**

## **B.1 Appendix B: Naming Conventions**

### **B.2 Describing and Titling Your SmarTrack Indicators**

B.3 Titling Your SmarTrack Indicators

## **C.1 Appendix C: SmarTrack Standard Reports**

C.2 Compiling the SmarTrack Definition Report

C.5 Compiling the SmarTrack Worklist Summary

C.7 Using the Print Preview Window

## **IX.1 Index**

# Section 1:

## Introduction

SmarTrack is a powerful tool in the Midas+ Care Management system that can help you monitor and track your data using Indicators and Indicator Profiles.

Indicators are monthly summaries you can use to see a trend over a period of time. You can use SmarTrack Reporting to create Counts, Sums, Rates, or Days at Risk for use as performance measures. You can then compile a report of patients who qualify for a selected Indicator.

For information about SmarTrack Worklists, refer to the *SmarTrack Worklist Manual*.

### In this section:

- 1.2** Using this Manual
- 1.3** Overview
- 1.5** Using SmarTrack Reporting

## Using this Manual

The *Midas+ SmarTrack Reporting Manual* is designed to be both a training and a reference tool. After this section, information is presented in the following structure:

- **Section 2: Indicator Definition** explains how to build Indicators for SmarTrack Reporting.
- **Section 3: Indicator Processing** explains how to process Indicators, as well as how to modify job queues and to start or stop jobs.
- **Section 4: Indicator Graphs** shows how to create graphs based on Indicators.
- **Section 5: Indicator Profiles** shows how to group Indicators into a Profile that can be used for a comparative report.
- **Section 6: Statistical Process Control Charts** describes how to perform statistical process control (SPC) analysis on a wide range of Midas+ data and present the results in a variety of charts.
- **Section 7: Report Data Transfer** explains how to compile a list of patients who qualify for a selected Indicator.
- **Appendix A: Indicator and Profile Restrictions and Added Security** explains how data can be secured with Indicator and Profile restrictions.
- **Appendix B: Naming Conventions** shows several examples of naming conventions that can be used with SmarTrack Indicators.
- **Appendix C: SmarTrack Standard Reports** explains how to generate a report of SmarTrack Indicator definitions.

## Manual Conventions

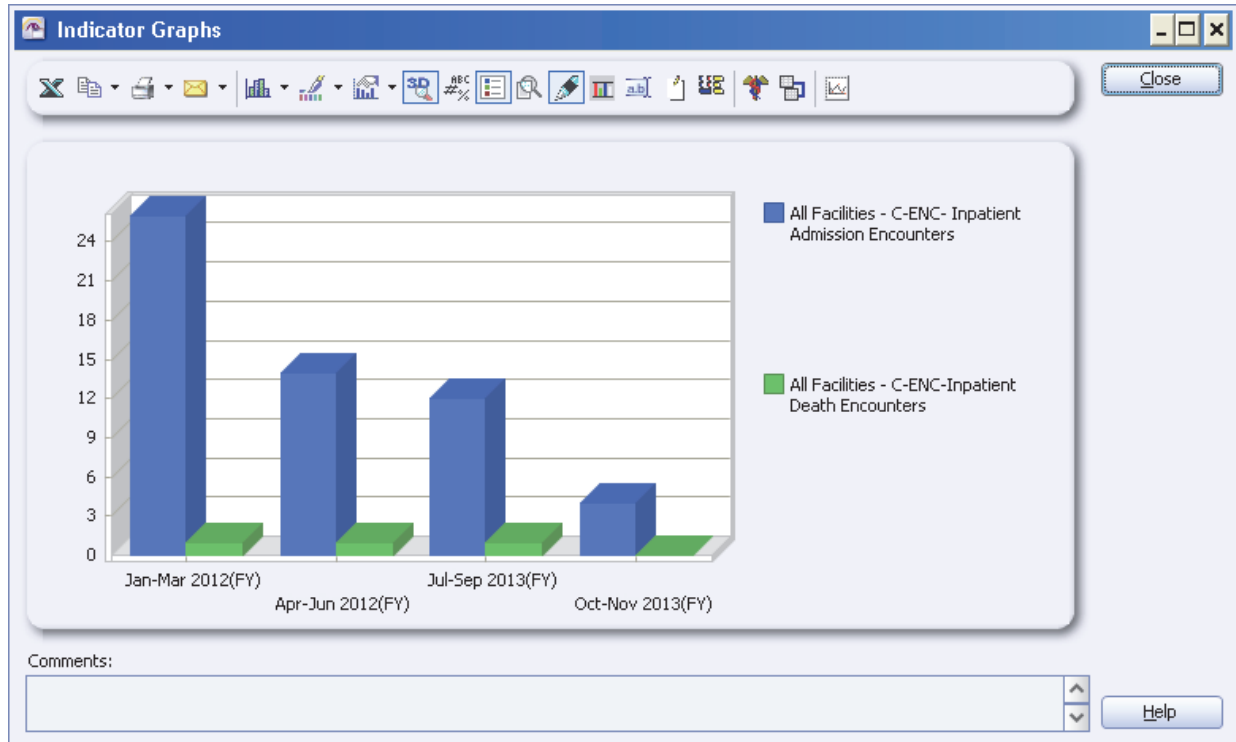
To help you learn SmarTrack, this manual uses the following conventions:

- Control, form, field, button, and key names are printed in **bold** type whenever user action is indicated, and if necessary for clarity. For example, "Click the **Cancel** button" or "Press the **Enter** key."
- New terminology is introduced in *italic* type. For example, "The different types of Indicators are *Counts*, *Sums*, *Rates*, *Days at Risk*, and *Manual Entry*."
- User input, file names, and the contents of entry fields are printed in computer voice. If user action is involved, **bold computer voice** is used. For example, "The Reference Date must always be **INFECTION CONTROL:Date**" or "Select **ENCOUNTER:DRG** in the **If** field."
- **Notes** are supplemental information that give you options or extended explanations about the text.
- **Important** notes highlight critical information you should not overlook.
- **Cautions** warn you that a certain action (or inaction) could cause loss of data.
- System Manager notes contain information that is useful to System Managers. If you are not a System Manager, you can safely ignore these notes.



## Overview

This section introduces you to SmarTrack Reporting and gives you an overview of the topics covered in this manual. SmarTrack Reporting is a powerful tool in Midas+ Care Management that can track your facility data (Figure 1.1).



*Figure 1.1: SmarTrack Indicator Graph*

With SmarTrack Reporting, you can use any combination of defined fields in the Midas+ Care Management system to create Counts, Sums, Rates, or Days at Risk for use as performance measures and Indicators. You can then compile a report of patients who qualify for a selected Indicator.

SmarTrack Reporting is located in the following place on the Midas+ Function menu (Figure 1.2).

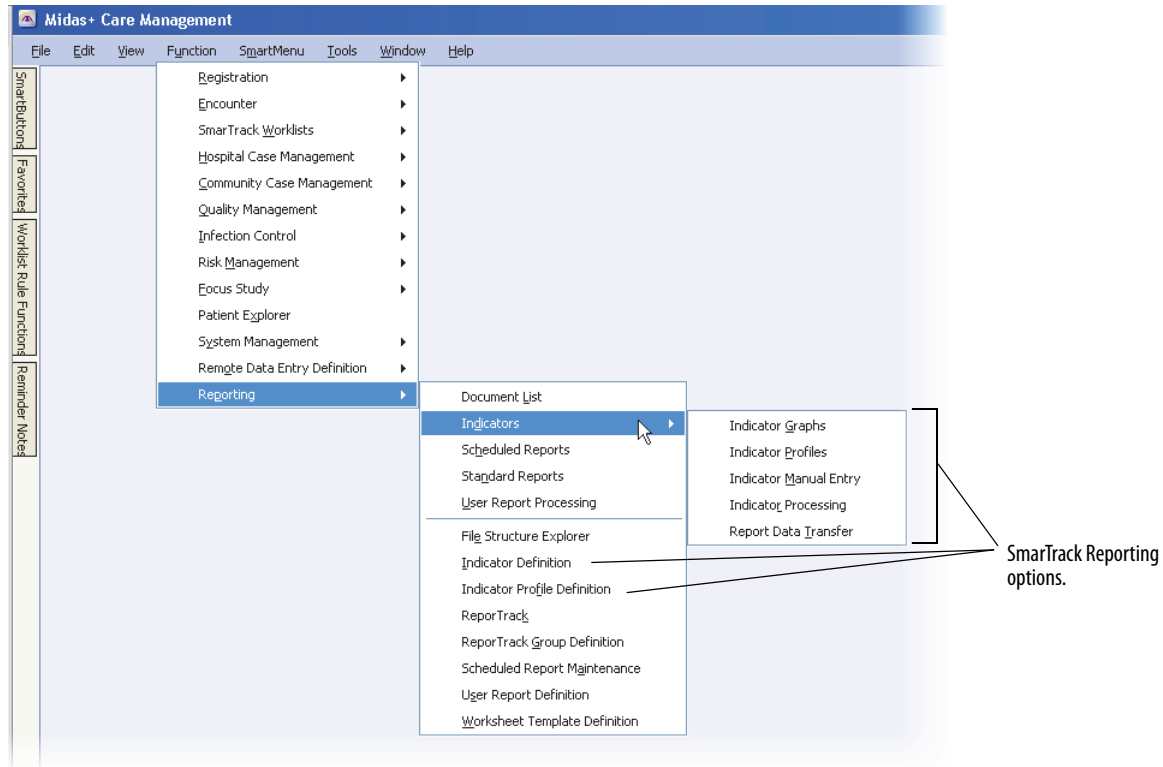


Figure 1.2: SmarTrack Reporting options

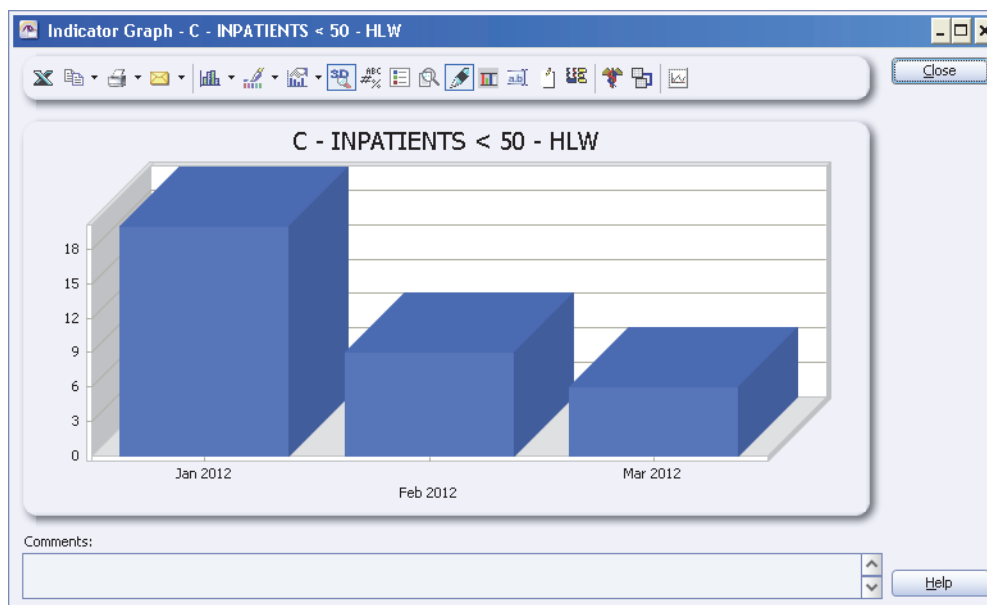
## Using SmarTrack Reporting

With SmarTrack Reporting, you can use a combination of defined fields in the Midas+ Care Management system to create Counts, Rates, Sums, or Days at Risk for performance measures and Indicators. Once you have built the Indicator, you have three ways you can report the data you collect: as a graph (including as a statistical process control [SPC] chart), a Profile, or a report of qualifying patients in Microsoft® Excel®. These reporting functions are described in the following sections. Your Indicators can be used in more than one graph or Profile.

### Graphs

If you want to trend data using a graph, build the Count, Rate, Sum, or Days at Risk Indicator and generate the Indicator graph. The data can be trended monthly, quarterly, semi-annually, or annually. You can then drill down to view specific encounter-level data (Figure 1.3).

**1. Compile the Graph of the Indicator (Trended Monthly).**



**2. Double-click a bar on the graph to view encounter-level data.**

The drill-down form shows the following data:

Acct No.	MRN	Name	Enc Start	Enc End	Type	Facility
120327	.....	Anson, Chris	2/15/2012	2/20/2012	I	Midas General H
(2) 31212353	.....	Barrios, Gabriela	2/1/2012	3/14/2012	I	EMM FACILITY 0
20090630	.....	Chang, Carla	3/1/2012	3/15/2012	I	Midas General H
(2) 10118653	3293	Chapman, Burt	1/6/2012	3/9/2012	I	EMM FACILITY 0
(2) 34229042	6313	Harrison, Deb	1/6/2012	1/15/2012	I	EMM FACILITY 0
29089118	6078	Houston, Ann	1/28/2012	2/10/2012	I	EMM FACILITY 0

Figure 1.3: Indicator Graph with Indicator Drill Down form

## Profiles

Use SmarTrack Indicator Profiles to group Indicators and create a numeric report which you can use for comparison by total, specialty, service, or provider (Figure 1.4). The data can be trended monthly, quarterly, semi-annually, or annually. You can then drill down to view specific encounter data. You can also navigate from the Profile to a graph for a selected Indicator.

### 1. Group Indicators into a Profile.

#### Indicators:

TOTAL INPATIENT ENCOUNTERS  
TOTAL INPATIENT MORTALITIES  
INPATIENT MORTALITY RATES  
TOTAL ENCOUNTERS  
TOTAL MORTALITIES  
TOTAL MORTALITY RATE

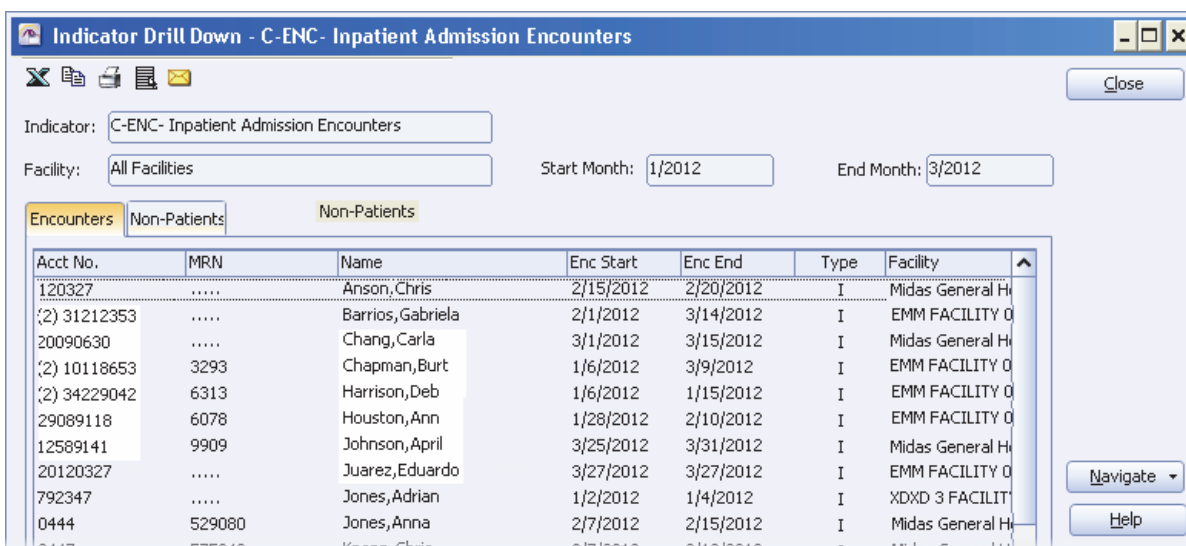
→ **Mortality Profile**

### 2. Compile the Profile.



Indicator	Jan-Mar 2012	Apr-Jun 2012	Jul-Sep 2012	Oct-Dec 2012	Total
Total Bedded IP & OBS	31	18	13	4	66
C-ENC- Inpatient Admission Encounters	26	14	12	4	56
C-ENC-Inpatient Death Encounters	1	1	1	0	3

### 3. Double-click a cell on the Profile to view encounter-level data.



Acct No.	MRN	Name	Enc Start	Enc End	Type	Facility
120327	.....	Anson, Chris	2/15/2012	2/20/2012	I	Midas General H
(2) 31212353	.....	Barrios, Gabriela	2/1/2012	3/14/2012	I	EMM FACILITY O
20090630	.....	Chang, Carla	3/1/2012	3/15/2012	I	Midas General H
(2) 10118653	3293	Chapman, Burt	1/6/2012	3/9/2012	I	EMM FACILITY O
(2) 34229042	6313	Harrison, Deb	1/6/2012	1/15/2012	I	EMM FACILITY O
29089118	6078	Houston, Ann	1/28/2012	2/10/2012	I	EMM FACILITY O
12589141	9909	Johnson, April	3/25/2012	3/31/2012	I	Midas General H
20120327	.....	Juarez, Eduardo	3/27/2012	3/27/2012	I	EMM FACILITY O
792347	.....	Jones, Adrian	1/2/2012	1/4/2012	I	XDxD 3 FACILIT
0444	529080	Jones, Anna	2/7/2012	2/15/2012	I	Midas General H
0447	575840	Krapp, Chris	2/7/2012	2/10/2012	I	Midas General H

Figure 1.4: Indicator Profile with Indicator Drill Down form

## Report Data Transfer

You can also compile a report of patients that qualify for a selected Indicator. The compiled patient list is displayed in a Microsoft Excel spreadsheet (Figure 1.5). Selected data elements from the Registration and Encounter modules serve as spreadsheet column headings.

A32		3166						
	A	B	C	D	E	F	G	H
1								
2	Indicator: C - INPATIENTS < 50 - HLW							
3	Start Month: 1/2012 End Month: 12/2012							
4	All Facilities							
5								
6	Account No.	Fac Code	Facility	Patient Name	Universal ID	MRN	Age	Sex Zip
7	1529	MGH	Midas General Hospital	Abrams, Fred	14665-2		28	M
8	20327	MGH	Midas General Hospital	Anson, Anna	14665-2	28899	47	F
9	29384723	MGH	Midas General Hospital	Barrios, Gabriela	14665-2		13	M
10	19000	MGH	Midas General Hospital	CARTER, SAM	14665-2		9	M
11	23000	MGH	Midas General Hospital	Jones, Adrian	14665-3		32	F
12	25000	MGH	Midas General Hospital	Jones, Anna	14665-4		21	F
13	8991	CDC	CDC FACILITY	Knapp, Chris	14665-4		21	F
14	20120327-1529	CDC	CDC FACILITY	Smith, Aileen	14665-4		21	F
15	29080	MGH	Midas General Hospital	Smith, Ana 20 (DEAD)	14665-4		21	F
16	0444	MGH	Midas General Hospital	Fred, XDXD	SG11234		36	F
17	0447	MGH	Midas General Hospital	Jones, Adrian	SG11234		37	F
18	894984	MGH	Midas General Hospital	Jones, Anna	14665-1	3293	19	F 857

Figure 1.5: Report of patients who qualify for a selected Indicator



## Section 2: Indicator Definition

Indicators are monthly summaries you can use to see a trend over a period of time. Use the Indicator Definition function to build Counts, Sums, Rates, Days at Risk, and Manual Indicators to trend information in the Midas+ Care Management system. You can display your results in other SmarTrack Reporting functions, such as graphs or Profiles, for a requested date range.

### In this section:

- 2.2** Overview
- 2.4** Counts
- 2.19** Sums
- 2.27** Rates
- 2.37** Days at Risk
- 2.50** Manual Indicators
- 2.56** Deactivating an Indicator

## Overview

The different types of Indicators used in SmarTrack are *Counts*, *Sums*, *Rates*, *Days at Risk*, and *Manual Entry*. Each Indicator type is described as follows.

- A **Count** tallies incidents or other system data elements (for example, the number of CHF patients or the number of inpatient readmissions within 30 days). You can further qualify your Count by other system elements, such as location or encounter type.
- A **Sum** tallies total numeric values in the Midas+ Care Management system (for example, the total of patients' LOS or Hospital Case Management avoidable days). You can further qualify your Sum by other system elements, such as payer or DRG.

To better understand the difference between a Count and Sum, consider the following list of numbers:

2  
3  
4  
7

A Count of the list would give you the answer "4" because there are four items. A Sum of the list would give you the answer "16" because that is the total of the numbers in the list.

- A **Rate** computes ratios for two or more previously defined Counts, Sums, or Days at Risk. You can compare a portion of a total (the numerator) to the total sample (the denominator).

For example, a C-section Rate uses two Counts: 1) Number of Deliveries by C-section and 2) Total Deliveries. The Rate is automatically computed by dividing Count 1 by Count 2:

$$\text{Rate of C-Sections} = \frac{\text{Count 1: Number of Deliveries by C-Section}}{\text{Count 2: Total Number of Deliveries (All Types)}}$$

Rates are also used to calculate averages (for example, the average length of stay for CHF patients).

- A **Days at Risk** Indicator totals the number of days that patients met your qualifying conditions and posts them to the month in which those days occurred (for example, the risk to a patient in a particular payer plan of visiting the hospital or days at risk for infection at a specific location).
- With **Manual Entry**, you can manually enter values that are collected from a source other than the Midas+ Care Management system. For example, you may want to enter data from systems not interfaced into the Midas+ Care Management system, such as ADRs from a pharmacy system; or you may want to enter benchmarking data, such as fall rates or med error rates, from national, state, regional, or professional sources. These values can then be used in graphs and Profiles along with other Counts, Sums, and Rates.

An overview of how Indicators are defined and used is shown in Figure 2.1.



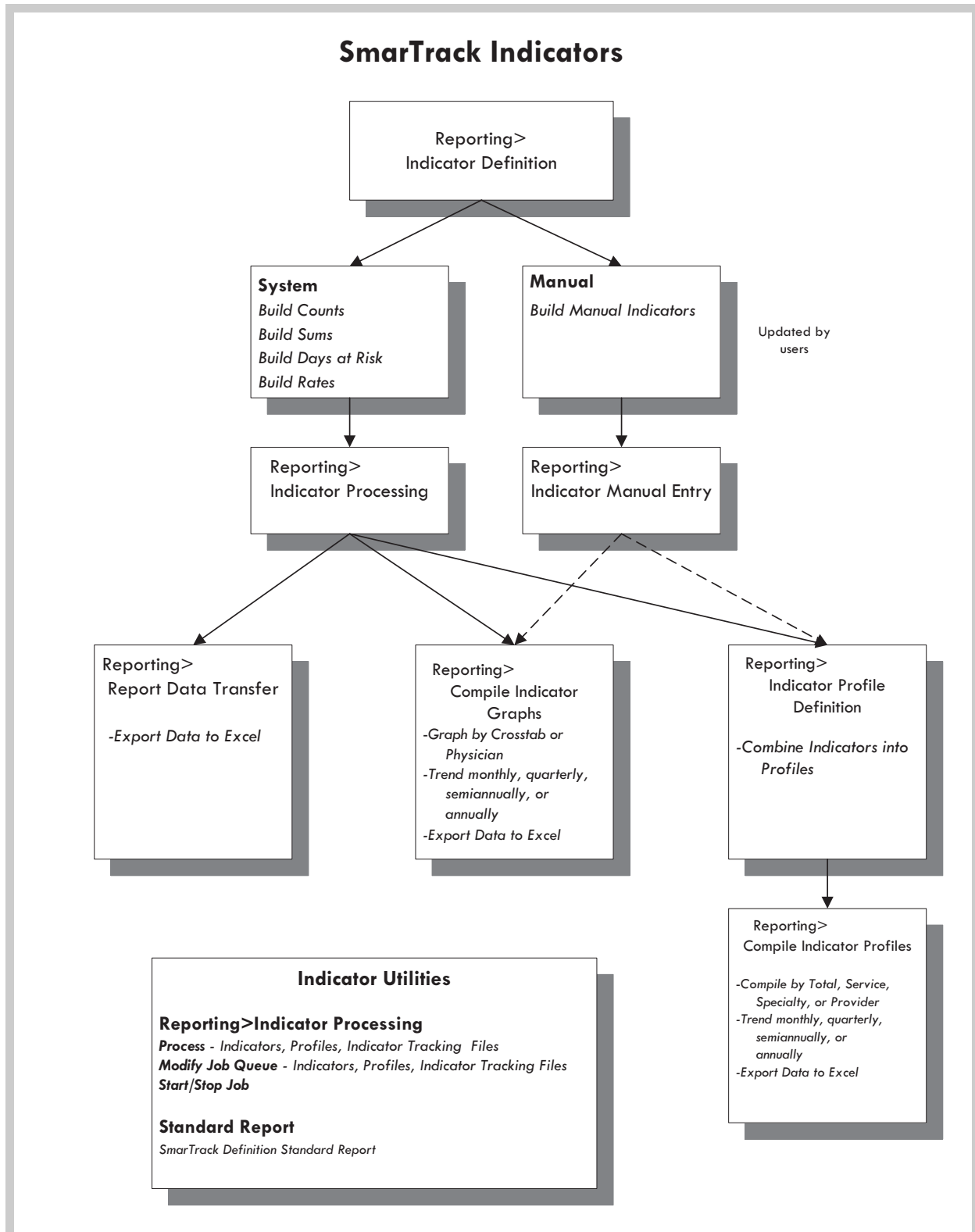


Figure 2.1: An overview of SmarTrack Indicator definition and use

## Counts

Counts are Indicators you can use to tally incidents or other system data elements (for example, the number of CHF patients or the number of inpatient readmissions within 30 days). You can further qualify your Count by other system elements, such as location or encounter type variables.

You can build a Count Indicator that includes variables from a Focus Study when an Encounter module is the source of the data to count. You can also do the reverse: include variables from an Encounter module when the data source is a Focus Study.

In an Indicator, you can use the fields from an Encounter-based module, an Encounter-based multiple, an Encounter Focus Study, or a Patient Focus Study in four places: as qualifying conditions, as the Reference Date, as the Provider, or as the Crosstab.

You can also use combinations of fields: for example, in a Count, you can use an Encounter Focus Study as the data source, use fields from an Encounter-based module and the same Encounter Focus Study as qualifying conditions, and then use a date field from the same Encounter Focus Study as the Reference Date.

However, if you use data from combinations of module and Focus Study, the two *must* have an inherent logical relationship to ensure that the resulting data is valid and meaningful. The following are examples of a logical relationship between a system module and a Focus Study:

- Infection module connected to a Focus Study named *Pressure Ulcer*
- Risk module connected to a Focus Study named *Fall Risk Assessment*
- Drug Therapy module connected to a Focus Study named *Adverse Drug Reaction*

In addition, Indicators cannot use data from Process Focus Studies, because they have no inherent connection to a patient or encounter.

## Defining Counts

Defining a Count sets values for the tally that takes place when the Count is used.

### ► To define a Count:

- 1 Select **Function > Reporting > Indicator Definition** from the main menu bar. The Indicator Definition form is displayed (Figure 2.2).



Figure 2.2: Indicator Definition form

- Click **New Ind.**, and select **Count** from the drop-down menu. The Indicator Definition – Count form is displayed (Figure 2.3).

The screenshot shows the 'Indicator Definition - Count' window. It has a title bar with standard window controls. The form is organized into several sections. At the top, there's a 'Description' field and a 'Code' field containing '2055'. Below these are 'Copy From' and 'Count' (a dropdown menu). A 'Condition Logic' section has radio buttons for 'AND', 'OR', and 'Custom'. The 'If:' section has a text area with '<Add New Condition>' and a sub-section 'If' with a 'Module:Field' label and a text box. The bottom section contains 'Ref. Date', 'Provider', 'Crosstab', 'Title', and 'Access Function' on the left, and 'SPC Chart Type', 'SPC Target Direction' (set to 'Neutral'), 'Display Symbol', 'Display Order' (radio buttons for 'Before' and 'After'), and 'Active' (checked checkbox) on the right. On the far right, there are buttons for 'Save', 'Indicator Restrictions', 'Delete Condition', 'Close', and 'Help'.

Figure 2.3: Indicator Definition – Count form

- In the **Description** field, type a name for the Count using your facility's naming conventions. For more information about using these conventions, see "Appendix B: Naming Conventions".

*Note:* The system automatically generates a **Code** for the Indicator, but you can delete this Code and type in a new one if necessary.

*Note:* If the Count you are defining is similar to an existing one, you can copy the existing Count and make necessary changes. For instructions, see "Copying Counts" on page 2.13.

- From the **Count** drop-down menu (Figure 2.4), select the option that contains the source of the data you want the system to count. For more information, see "Which Count to Count" on page 2.15. These options are described as follows:
  - Registrant** counts the number of registrants (people) who meet the specified conditions.
  - Encounter** counts the number of encounters or visits that meet the specified conditions.
  - Module** counts the number of episodes (for example, Risk Management, Focus, Quality Management Episodes).

If you are using the Module option, select a module in the **Module** field displayed at the right of the Count drop-down menu (Figure 2.4).

Figure 2.4: Count drop-down menu with Module selected

- **Multiples** counts multiple occurrences (for example, Quality Management Events, Blood Bank Components, Encounter Procedures). If you are using this option, select the multiple-entry field in the **Multiple** field displayed at the right of the Count drop-down menu (Figure 2.5).

Figure 2.5: Count drop-down menu with Multiples selected

- 5 In the Module:Field field, select the module and the field where the data is stored. Items in this Dictionary follow the format MODULE:Field (for example, ENCOUNTER:DRG, ENCOUNTER:Principal Diagnosis, INFECTION CONTROL:Infection Type, or RISK MANAGEMENT:Type).

After you complete this field, value selection options are displayed (Figure 2.6).

Figure 2.6: Indicator Definition – Count form with value selection options

- 6 Select either **Has Value**, **Does Not Have Value**, or **Is Not Entered**. These options are described as follows.

- **Has Value:** You want to include all records with a specific value for the selected module:field. In the **Of** field, select the values you want. For example,  
If: ENCOUNTER: DRG  
Has Value: Cesrn Sec w/ C.C.  
Or: Cesrn Sec w/o C.C.

*Note:* If you leave the **Of** field blank, the system assumes all values and returns all records that have a value.

*Note:* If the field selected in the **Module:Field** entry field is a checkbox field, you must select Y or N in the **Of** field, or your report does not return any records. Checkbox fields only have values of Y or N for “Yes” or “No”; they never have a null value.

- **Does Not Have Value:** You want to include all records for the selected module:field *except* for those with a specific value. In the **Of** field, select the values you want to exclude. For example,  
If: RISK MANAGEMENT: Location  
Does Not Have Value: GIFT SHOP  
Nor: HALLWAY  
Nor: CAFETERIA

*Note:* If you selected the **Does Not Have Value** operator, and leave the **Of** field blank, the system assumes all values and excludes all records that have a value.

- **Is Not Entered:** You want to include all records for the selected module:field that are blank or null, and only those are placed on the SmarTrack Worklist. If you select this option, the **Of** field is not available for selection.

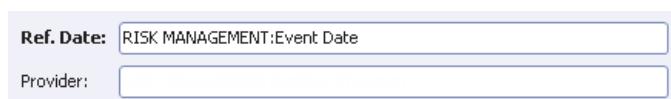
*Note:* If you select a date field to use as a qualifying condition, you must select only **Is Not Entered** or **Has Value**, leaving the **Of** field blank. You might use this to track when a date should have been entered and was not, or to track when a date field is populated. Do not select **Does Not Have Value** or **Has Value** to specify a date in the **Of** field.

- 7 If you want to add more qualifying conditions, click <Add New Condition>, and repeat Step 5 and Step 6.

*Note:* To remove a condition, select it, and click the **Delete Condition** button on the right side of the form.

If you have three or more conditions, you may want a custom If: statement, one with AND, OR, and NOT logical operators. To do that, see “Defining Custom Condition Logic” on page 2.10.

- 8 In the **Ref. Date** field, select a date variable to use as a Reference Date (for example, **ENCOUNTER: End Date**). For more information about the Reference Date, see “Which Date to Reference” on page 2.16.



Ref. Date: RISK MANAGEMENT: Event Date

Provider:

Figure 2.7: Indicator Definition – Count form, Ref. Date field

- 9 Select the appropriate **Provider** from the list of provider fields if you want the system to associate a provider from a specific module with this Count (Figure 2.8). At least one of your qualifying conditions must have a logical relationship to the provider. For example, if your conditions look at the Risk module, you should select **RISK MANAGEMENT: Notified Physician, not INFECTION CONTROL:Physician**.

*Note:* You must populate the Provider field in order to report at the provider, specialty, and/or service level with Profiles and graphs.



*Figure 2.8: Indicator Definition – Count form, Provider field*

- 10 In the **Crosstab** field, select additional fields you want to sub-categorize (for example: location, discharge disposition) (Figure 2.9). A crosstab automatically categorizes the Indicator by each value of the variable selected. A crosstab variable must be from the Encounter file or from a file that has a logical relationship to the first qualifying condition and the reference date.



*Figure 2.9: Indicator Definition – Count form, Crosstab field*

- 11 In the **Title** field, type a title for your Count (Figure 2.10). This title is displayed when you use the Count in compiled Profiles and graphs.

*Note:* The title is not used to look up an Indicator. The entry in the Description field is used for that purpose.



*Figure 2.10: Indicator Definition – Count form, Title field*

- 12 In the **Access Function** field, select a function from the Access Function lookup. This selection gives users the ability to double-click a row in Indicator Drill Down to open an associated function and see the qualifying record or episode lookup, as appropriate.

*Note:* User access to any function is subject to existing User/Role Security settings.

- 13 If your facility uses statistical process control (SPC) Charts (see Section 6: Statistical Process Control Charts), from the **SPC Chart Type** lookup, select the appropriate chart type to display the Indicator data.

- 14 From the **SPC Target Direction** drop-down menu, select one of the following options:

- Select **Up** to show favorable data moving upward, such as accident-free days.
- Select **Down** to show favorable data moving downward, such as mortality rate.
- Select **Neutral** to delete the + and - signs.

- 15 In the **Display Symbol** field, enter a symbol such as **\$** or **%**, or volume measures such **ml**, **cc**, or **lbs**. You can enter only one symbol or volume measure per indicator and you can enter up to five characters. When exported to Excel and displayed in ReporTrack, formatted numbers will appear as raw numeric values with no additional characters.
- 16 Do one of the following:
- Click the **Display Order: Before** button to display the symbol or volume measure before a numerical value. For example, if you entered **\$** as the display symbol and then clicked **Display Order: Before**, if the indicator value is **10**, it is displayed as **\$10**.
  - Click the **Display Order: After** button to display the symbol or volume measure after a numerical value. For example, if you entered **%** as the display symbol and then clicked **Display Order: After**, if the indicator value is **5**, it is displayed as **5%**.
- 17 Counts are automatically marked as **Active**, which means the Count automatically processes when the Weekly Summary job runs. If you clear the **Active** checkbox, the Midas+ Care Management system does not process the Count in the Weekly Update. See "Deactivating an Indicator" on page 2.56.
- 18 If you have determined that access to this Count should be restricted, click the **Indicator Restrictions** button on the right side of the form, and then, in the **Indicator Restriction** field, select one or more restrictions that have been defined in the INDICATOR RESTRICTION Dictionary (#605). For more information see "Adding Restrictions to an Indicator Definition" on page A.3.

Points to remember about Indicator restrictions are as follows:

- Indicators that have at least one matching Indicator security in their definition are accessible to users who have that same Indicator security in their user definition. If no security is defined for the Indicator, all users have access to it.
- If a user has no Indicator securities in his or her user definition, all Indicators are accessible, even those with restrictions in their definitions.
- If both the user and the Indicator have restrictions, at least one of the user's restrictions and one of the Indicator's restrictions must match for the Indicator to be accessible to the user.

- 19 When you have completed the Indicator Definition – Count form, click **Save**. A confirmation box is displayed asking if you want to process the Count Indicator (Figure 2.11).

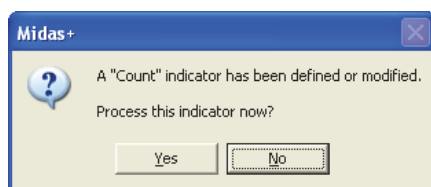


Figure 2.11: Confirmation box for immediate count processing

- 20 Do one of the following:

Click	For the following result:
<b>Yes</b>	The Count Indicator is processed immediately. When the processing is completed, you can view the Indicator data.
<b>No</b>	The Count Indicator enters a queue to be processed overnight. You can view the Indicator data the next day.

**Important:** *Regardless of whether the Indicator is newly defined or an existing one that you modified, it is processed back to the beginning of the date your site began collecting data (or to the date to which the site parameter IND-CUTOFF DATE is set). If the Indicator is encounter-based, processing time could be more lengthy than you expect, depending upon the number of encounters at your facility and the size of your hospital.*

## Defining Custom Condition Logic

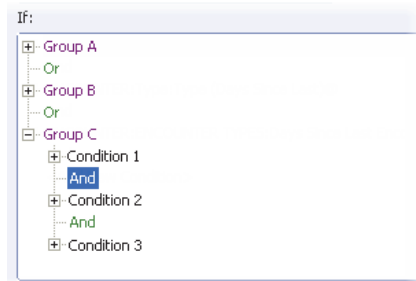
*Note:* Custom logic is only available after selecting at least two conditions.

If you have three or more conditions, you may want a custom If: statement, one with both AND and OR logical operators. That is, to use an AND operator for some conditions and an OR operator for other conditions. This is similar to functionality you may already be familiar with if you use Midas+ ReporTrack or if you have defined a Focus Study.

Custom condition logic works by placing conditions into groups. The conditions within groups share the same logical operator, and group conditions that are at the same level with other group conditions or with any ungrouped conditions all share the same logical operator.



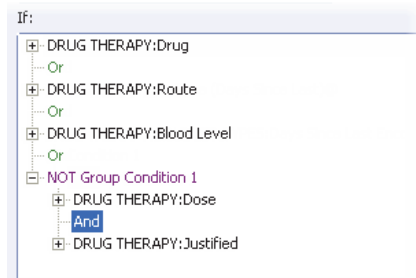
The operator within a group can be different than the operator between groups. For example, consider this If: statement:



In this example, Groups A, B, and C are at the same level and share the OR operator, while the conditions that comprise Group C share the AND operator.

You can be even more precise about whether records qualify by using the NOT operator, which *excludes* records that meet the defined criteria. You can apply the NOT operator to a single condition or to a group condition. In the following example, a record is added when either of the following is true:

- The value in any of the first three items meets specified conditions.
- Neither of the fields in the group meets the specified conditions.



The NOT operator gives results like those you get using the Does Not Have Value option when defining a single condition; however, the NOT operator simplifies the process of changing between excluding a value or including a value, especially when doing so for a group of conditions.

Before you define custom condition logic, you must already have defined the conditions using the <Add New Condition> control on the Indicator Definition form. For details, see “Defining Counts” on page 2.4, “Defining Sums” on page 2.19, or “Defining Days at Risk” on page 2.38.

The Condition Logic options do not apply unless an Indicator has two or more conditions; after you have defined a second condition, the Condition Logic group, shown in Figure 2.12, becomes available.

Figure 2.12: Condition Logic options group

► **To define custom condition logic:**

- 1 On the Indicator Definition form, under Condition Logic, click Custom, and then click Edit. The Edit Condition Logic form (Figure 2.13) opens.

Click one of the existing logical operators between two conditions, and then click **And** or **Or**. The operator between all conditions or groups at the same level changes to reflect your selection.

Select **And** to require that a record meets all conditions before it can be part of the Indicator.

Select **Or** to allow a record to meet any of the conditions at that level.

Figure 2.13: Edit Condition Logic form

- 2 Do one or more of the following to define the appropriate custom condition logic:

To ...	Take these steps
Add a group	Click <b>Add Group</b> . The new group condition appears in the list.
Add a condition to a group	Drag the condition to the group and drop it there. The condition appears beneath the group name.
Show the group or condition details	Click the plus sign to the left of the group or condition name
Hide the group or condition details	Click the minus sign to the left of the group or condition name
Change the logical operator between conditions or groups	Select the item to display the Logical Operators option buttons at the bottom of the form. Select either <b>And</b> or <b>Or</b> .
Rename a group	Right-click the group and choose <b>Rename</b> . Type the new name, and then press ENTER.
<i>Note:</i> You cannot nest a group within another group.	

- 3 Click **OK** to close the form and save your changes. To close the form without saving changes, click **Cancel**.

## Copying Counts

If an existing Count is similar to the one you are defining, you can copy and modify it to suit your needs.

### ► To copy a Count:

- 1 Select **Function > Reporting > Indicator Definition** from the main menu bar. The Indicator Definition form is displayed.
- 2 Click **New Ind.**, and select **Count** from the drop-down menu. The Indicator Definition – Count form is displayed (Figure 2.14).

Select an Indicator to copy here.

Figure 2.14: Indicator Definition – Count form

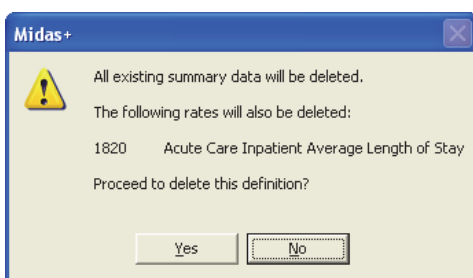
- 3 In the **Copy From** field, select the Count you want to copy. To modify the Count, follow Step 3 through Step 20 of “Defining Counts”.

## Deleting Counts

If a Count is no longer being used in your system, you can delete it.

► **To delete a Count:**

- 1 Select **Function > Reporting > Indicator Definition** from the main menu bar. The Indicator Definition form is displayed.
- 2 In the **Indicator to Edit** field, select the Count you want to delete. The Indicator Definition – Count form is displayed and is populated with values for the Count you selected.
- 3 Click **Delete Ind.** A confirmation box is displayed requesting confirmation since all associated summary data is deleted with the Count (Figure 2.15).



*Figure 2.15: Confirmation box for deleting a count*

- 4 Click **Yes** to confirm the deletion or **No** to cancel it.

## Which Count to Count

To effectively use Counts, you must select the appropriate option from the **Count** pull-down menu on the Indicator Definition form (Figure 2.16).

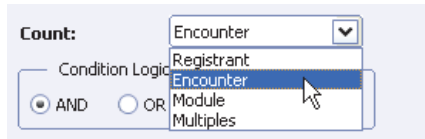


Figure 2.16: Count pull-down menu with Encounter selected

The following examples show how the option you select affects the tally your Count produces.

- 1 **Smith,Joe is a patient at Midas General Hospital. He has three separate encounters, some of which contain one or more falls.**

### Smith,Joe

**Encounter 1**  
Admission 5/02/2002  
Fall 5/03/2002  
Fall 5/05/2002  
Fall 5/07/2002  
Discharge 5/10/2002

**Encounter 2**  
Admission 5/20/2002  
Discharge 5/23/2002

**Encounter 3**  
Admission 5/31/2002  
Fall 6/02/2002  
Discharge 6/05/2002

### Counts:

- If **Registrant** is chosen as the count, the result would be **1** since there is only one person in this example who had a fall.
- If **Encounter** is chosen as the count, the result would be **2** since there are two encounters (visits) that contain a fall episode.
- If **Module** is chosen as the count, the result would be **4** since there are four fall episodes.

- 2 **Smith,Rebecca had three Packed RBC transfusions during the same visit.**

### Smith,Rebecca

Select **BLOOD BANK:Components** to count each component within the multiple.

Count: Multiples Multiple: BLOOD BANK:COMPONENTS

**Blood Bank Entry - Smith,Rebecca 7/13/2012 10:35 AM Inpatient**

General Abstract/Actions Comments User Fields

Components				
Component	Order Type	No. Transfused	Date	Time
Packed RBC	Type and Crossmatch	1	7/13/2012	
Packed RBC	Type Only	1	7/18/2012	
Packed RBC	Type and Hold	1	7/18/2012	
*				

### Counts:

- If **Module** is chosen as the count, the result would be **1** because there is one Blood Bank episode.
- If **Multiples** is chosen as the count, the result would be **3** because there are 3 entries in the Component multiple-entry field.

## Which Date to Reference

The field you select as your Reference Date can affect the information your Indicator gives when a patient's encounter spans several months. All of the values are displayed in the month in which the Reference Date falls. The following example shows how a Reference Date could change the month for which a patient with a Quality Event is counted (Figure 2.17).

If ENCOUNTER : Start Date is used, this patient would show up in the Count for February, 2012.

If QUALITY MANAGEMENT : Date of Event is used, this patient would show up in the Count for March, 2012.

If ENCOUNTER : End Date is used, this patient would show up in the Count for April, 2012.

**Encounter Entry - Gustus, Marcus 2/29/2012**

General Other Medical History Comments User Fields

Encounter Type: Inpatient

Facility: Midas Medical Center

Account Number: 602006581

Start Date: 2/29/2012

Start Time: 9:58 AM

Status: Emergency

Service: Emergency

**Quality Management Entry - Gustus, Marcus 2/29/2012 9:58 AM Inpatient**

General Comments User Fields

Reference Date: 3/5/2012 QM No.: 11

Location: Intensive Care Unit Description: co

Surg. Procedure: Info Source:

Events			
Date	Event	Outcome	Significance
3/31/2012	Core Measure Failure, Pneumonia		2-No De
*			

**Discharge Entry - Gustus, Marcus 2/29/2012 9:58 AM**

General Procedures/Consultants Charges/Cost Centers Severity As

Discharge Date: 4/5/2012 Discharge Time: 11:54 AM

Discharge Phys.: Olson, James

Disposition: Home with Home Health Care

Diagnosis

Figure 2.17: Example of varying reference dates for the same patient

## Count Examples

Examples of how you can use Counts are shown as follows.

### 1 You want a Count of the total inpatient readmissions within 30 days.

The screenshot shows the 'Indicator Definition - Count' window. The 'Description' is 'C-ENC-Inpatient Readmissions < 30 Days' and the 'Code' is '2051'. The 'Count' is set to 'Encounter'. The 'Condition Logic' is 'AND'. The 'If' condition is 'ENCOUNTER:Days Since Previous Inpatient Encounter' with a value of '<30'. The 'Ref. Date' is 'ENCOUNTER:End Date', 'Provider' is 'ENCOUNTER:Admitting Physician', 'Crosstab' is 'ENCOUNTER:Location', 'Title' is 'Inpatient Readmissions < 30 Days', and 'Access Function' is 'DISCHARGE INQUIRY'. The 'SPC Chart Type' is 'I Chart', 'SPC Target Direction' is 'Neutral', 'Display Symbol' is empty, 'Display Order' is 'After', and 'Active' is checked.

### 2 You want a Count of all unplanned returns to the OR entered in Quality Episode Entry.

The screenshot shows the 'Indicator Definition - Count' window. The 'Description' is 'C-QM- Unplanned Return to OR' and the 'Code' is '1383'. The 'Count' is set to 'Module' and the 'Module' is 'QUALITY MANAGEMENT EPISODES'. The 'Condition Logic' is 'AND'. The 'If' condition is 'QUALITY MANAGEMENT:EVENTS:Event' with a value of 'OR, Unplanned Return'. The 'Ref. Date' is 'QUALITY MANAGEMENT:EVENTS:Event Date', 'Provider' is 'QUALITY MANAGEMENT:EVENTS:PHYSICIANS:Physician', 'Crosstab' is 'QUALITY MANAGEMENT:EVENTS:PHYSICIANS:Standard Of Care', 'Title' is 'Unplanned Return to OR', and 'Access Function' is 'QM ENTRY'. The 'SPC Chart Type' is 'I Chart', 'SPC Target Direction' is 'Neutral', 'Display Symbol' is empty, 'Display Order' is 'After', and 'Active' is checked. There is a 'Delete Ind.' button on the right.

### 3 You want a Count of mortalities for patients over the age of 65.

**Indicator Definition - Count**

Description: C-ENC-INPT MORTALITIES OVER AGE 65 Code: 2059

Copy From:

Count: Encounter

Condition Logic: ☒ AND ☐ OR ☐ Custom

If:

- ENCOUNTER:Disposition
  - Has Value: Expired
- And
- ENCOUNTER:Age At Encounter (Years)
  - Has Value: >65
- And
- ENCOUNTER:Encounter Type:Type
  - Has Value: INPATIENT
- And
- <Add New Condition>

If:

Module:Field: ENCOUNTER:Disposition

☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered

Of Expired

\* Or

Ref. Date: ENCOUNTER:End Date SPC Chart Type:

Provider: ENCOUNTER:Attending Physician SPC Target Direction: Neutral

Crosstab: ENCOUNTER:Location Display Symbol:

Title: Count of Mortalities for Inpatients over the Age of 65 Display Order: ☐ Before ☒ After

Access Function: DISCHARGE INQUIRY Active: ☒

Help

### 4 You want a Count of total falls.

**Indicator Definition - Count**

Description: C-RISK-Falls Total (x-tab by Location) Code: 2060

Copy From:

Count: Module Module: RISK MANAGEMENT EPISODES

Condition Logic: ☒ AND ☐ OR ☐ Custom

If:

- RISK MANAGEMENT:Type:Class
  - Has Value: Fall (FALL)
- And
- <Add New Condition>

If:

Module:Field: RISK MANAGEMENT:Type:Class

☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered

Of Fall (FALL)

\* Or

Ref. Date: RISK MANAGEMENT:Event Date SPC Chart Type: I Chart

Provider: RISK MANAGEMENT:Notified Physician SPC Target Direction: Neutral

Crosstab: RISK MANAGEMENT:Location Display Symbol:

Title: Cont of Total Falls Display Order: ☐ Before ☒ After

Access Function: RISK MANAGEMENT INQUIRY Active: ☒

Help



## Sums

Sums are Indicators that sum numeric values in the Midas+ Care Management system. For example, you can sum patients' LOS or Hospital Case Management avoidable days. You can further qualify your Sum by other system elements, such as payer or DRG.

You can build a Sum Indicator that includes variables from a Focus Study when an Encounter module is the source of the data to sum. You can also do the reverse: include variables from an Encounter module when the data source is a Focus Study.

In an Indicator, you can use the fields from an Encounter-based module, an Encounter-based multiple, an Encounter Focus Study, or a Patient Focus Study in four places: as qualifying conditions, as the Reference Date, as the Provider, or as the Crosstab.

You can also use combinations of fields: for example, in a Sum, you can use an Encounter Focus Study as the data source, use fields from an Encounter-based module and the same Encounter Focus Study as qualifying conditions, and then use a date field from the same Encounter Focus Study as the Reference Date.

However, if you use data from combinations of module and Focus Study, the two *must* have an inherent logical relationship to ensure that the resulting data is valid and meaningful. The following are examples of a logical relationship between a system module and a Focus Study:

- Infection module connected to a Focus Study named *Pressure Ulcer*
- Risk module connected to a Focus Study named *Fall Risk Assessment*
- Drug Therapy module connected to a Focus Study named *Adverse Drug Reaction*

In addition, Indicators cannot use data from Process Focus Studies, because they have no inherent connection to a patient or encounter.

## Defining Sums

Defining a Sum sets values for the calculation that takes place when the Sum is used.

### ► To define a Sum:

- 1 Select **Function > Reporting > Indicator Definition** from the main menu bar. The Indicator Definition form is displayed (Figure 2.19).

Figure 2.18: Indicator Definition form

- 2 Click **New Ind.** and select **Sum** from the drop-down menu. The Indicator Definition – Sum form is displayed (Figure 2.19).

Figure 2.19: Indicator Definition – Sum form

- 3 In the **Description** field, type a name for the Sum using your facility's naming conventions. For more information about using these conventions, see "Appendix B: Naming Conventions".

*Note:* The system automatically generates a **Code** for the Indicator, but you can delete this Code and type in a new one if necessary.

*Note:* If the Sum you are defining is similar to an existing one, you can copy the existing Sum and make necessary changes. For instructions, see "Copying Sums" on page 2.24.

- 4 In the **Sum Field** field, select the field you wish to sum. The system sums this field for all patients or encounters that qualify for this Indicator.
- 5 In the **Module:Field** field, select the module and the field where the data is stored. Items in this Dictionary follow the format *MODULE:Field* (for example, HCM AVOID/DENIED:ATTRIBUTIONS:Cause).

After you complete this field, value selection options open on the form (Figure 2.20).

Value selection options that are displayed when the Sum Field is completed.

Figure 2.20: Indicator Definition – Sum form with value selection options

- 6 Select either the **Has Value**, **Does Not Have Value**, or **Is Not Entered** option. These options are described as follows.

- **Has Value:** You want to include all records with a specific value for the selected module:field. In the **Of** field, select the values you want (for example,  
If: ENCOUNTER: DRG  
Has Value: Cesrn Sec w/ C.C.  
Or: Cesrn Sec w/o C.C.)

*Note:* If you leave the **Of** field blank, the system assumes all values and returns all records that have a value.

*Note:* If the field selected in the **Module:Field** entry field is a checkbox field, you must select Y or N in the **Of** field, or your report does not return any records. Checkbox fields only have values of Y or N for “Yes” or “No”; they never have a null value.

- **Does Not Have Value:** You want to include all records for the selected module:field *except* those with a specific value. In the **Of** field, select the values you want to exclude. For example,  
If: RISK MANAGEMENT: Cost Center  
Does Not Have Value: ADMINISTRATION  
Nor: ROOM AND BOARD

*Note:* If you selected the **Does Not Have Value** operator and leave the **Of** field blank, the system assumes all values and excludes all records.

- **Is Not Entered:** You want to include all records for the selected module:field that are blank or null, and only those are placed on the Worklist. If you select this option, the **Of** field is not available for selection.

*Note:* If you select a date field to use as a qualifying condition, you must select only **Is Not Entered** or **Has Value**, leaving the **Of** field blank. You might use this to track when a date should have been entered and was not, or to track when a date field is populated. Do not select **Does Not Have Value** or **Has Value** to specify a date in the **Of** field.

- 7 If you want to add more qualifying conditions, click And If: <Add New Condition> and repeat Step 5 and Step 6.

*Note:* To remove a condition, select it, and click **Delete Condition**.

If you have three or more conditions, you may want a custom If: statement, one with AND, OR, and NOT logical operators. To do that, see “Defining Custom Condition Logic” on page 2.10.

- 8 In the **Ref. Date** field, select a Date variable (Figure 2.21). For more information about the Reference Date, see “Which Date to Reference” on page 2.16.



The screenshot shows a form with two input fields. The first field is labeled 'Ref. Date:' and contains the text 'BLOOD BANK:COMPONENTS:Transfusion Date'. The second field is labeled 'Provider:' and is currently empty.

Figure 2.21: Indicator Definition – Sum form, Ref. Date field

- 9 In the **Provider** field, select the appropriate provider if you want the system to associate a provider from a specific module with this Sum (Figure 2.22). At least one of your qualifying conditions must have a logical relationship to the provider (for example, if your conditions look at the Risk module, you should select **RISK MANAGEMENT:Notified Physician**, not **INFECTION CONTROL:Physician**).

*Note:* You must populate the Provider field in order to report at the provider, specialty, and/or service level with Profiles and graphs.

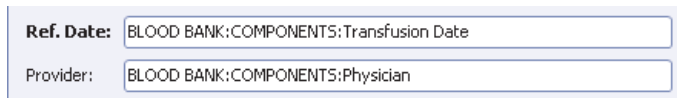


Figure 2.22: Indicator Definition – Sum form, Provider field

- 10 In the **Crosstab** field, select additional fields you want to sub-categorize (for example, location, discharge disposition) (Figure 2.23). A crosstab automatically categorizes the Indicator by each value of the variable selected. A crosstab variable must be from the Encounter file or from a file that has a logical relationship to the first qualifying condition and the reference date.

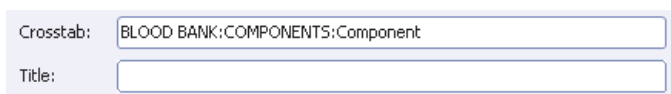


Figure 2.23: Indicator Definition – Sum form with Crosstab field

- 11 In the **Title** field, type a title for your Count (Figure 2.24). This title is displayed when you use the Count in compiled Profiles and graphs.

*Note:* The title is not used to look up an Indicator. The entry in the Description field is used for that purpose.

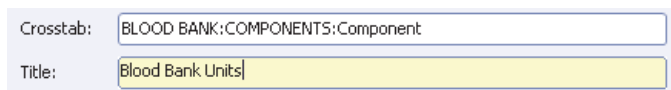


Figure 2.24: Indicator Definition – Sum form with Title field

- 12 In the **Access Function** field, select a function from the Access Function lookup. This selection gives users the ability to double-click a row in Indicator Drill Down to open an associated function and see the qualifying record or episode lookup, as appropriate.

*Note:* User access to any function is subject to existing User/Role Security settings.

- 13 If your facility uses statistical process control (SPC) Charts (see Section 6: Statistical Process Control Charts), from the **SPC Chart Type** lookup, select the appropriate chart type to display the Indicator data.

- 14 From the **SPC Target Direction** drop-down menu, select one of the following options:

- Select **Up** to show favorable data moving upward, such as accident-free days.
- Select **Down** to show favorable data moving downward, such as mortality rate.
- Select **Neutral** to delete the + and - signs.

- 15 In the **Display Symbol** field, enter a symbol such as **\$** or **%**, or volume measures such **ml**, **cc**, or **lbs**. You can enter only one symbol or volume measure per indicator and you can enter up to five characters. When exported to Excel and displayed in ReporTrack, formatted numbers will appear as raw numeric values with no additional characters.
- 16 Do one of the following:
- Click the **Display Order: Before** button to display the symbol or volume measure before a numerical value. For example, if you entered **\$** as the display symbol and then clicked **Display Order: Before**, if the indicator value is **10**, it is displayed as **\$10**.
  - Click the **Display Order: After** button to display the symbol or volume measure after a numerical value. For example, if you entered **%** as the display symbol and then clicked **Display Order: After**, if the indicator value is **5**, it is displayed as **5%**.
- 17 Sums are automatically marked as **Active**, which means the Sum automatically processes when the Weekly Summary job runs. If you clear the **Active** checkbox, the Midas+ Care Management system does not process the Sum in the Weekly Update. See "Deactivating an Indicator" on page 2.56.
- 18 If you have determined that access to this Sum should be restricted, click Indicator Restrictions, and then, in the **Indicator Restriction** field, select one or more restrictions that have been defined in the INDICATOR RESTRICTION Dictionary (#605). Points to remember about Indicator restrictions are as follows:
- Indicators that have at least one matching Indicator security in their definition are accessible to users who have that same Indicator security in their user definition. If no security is defined for the Indicator, all users have access to it.
  - If a user has no Indicator securities in his or her user definition, all Indicators are accessible, even those with restrictions in their definitions.
  - If both the user and the Indicator have restrictions, at least one of the user's restrictions and one of the Indicator's restrictions must match for the Indicator to be accessible to the user.
- 19 When you have completed the Indicator Definition – Sum form, click **Save**. A confirmation box is displayed asking if you want to process the Sum Indicator immediately (Figure 2.25).

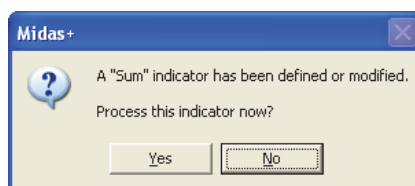


Figure 2.25: Confirmation box for processing a Sum Indicator

20 Do one of the following:

Click	For the following result:
<b>Yes</b>	The Sum Indicator is processed immediately. When the processing is completed, you can view the Indicator data.
<b>No</b>	The Sum Indicator enters a queue to be processed overnight. You can view the Indicator data the next day.

**Important:** *Regardless of whether the Indicator is newly defined or an existing Indicator that you modified, the system processes it back to the beginning of the date your site began collecting data (or to the date to which the site parameter IND-CUTOFF DATE is set). If the Indicator is encounter-based, processing time could be more lengthy than you expect, depending upon the number of encounters at your facility and the size of your hospital.*

## Copying Sums

If an existing Sum is similar to the one you are defining, you can copy and modify it to suit your needs.

### ► To copy a Sum:

- 1 Select **Function > Reporting > Indicator Definition** from the main menu bar. The Indicator Definition form is displayed.
- 2 Click **New Ind.**, and select **Sum** from the drop-down menu. The Indicator Definition – Sum form is displayed.
- 3 In the **Copy From** field, select the Sum you want to copy.
- 4 To modify the Sum, follow Step 3 through Step 20 of “Defining Sums”.

## Deleting Sums

If a Sum is no longer being used in your system, you can delete it.

**Caution:** *Any Rates that use this Sum are also deleted.*

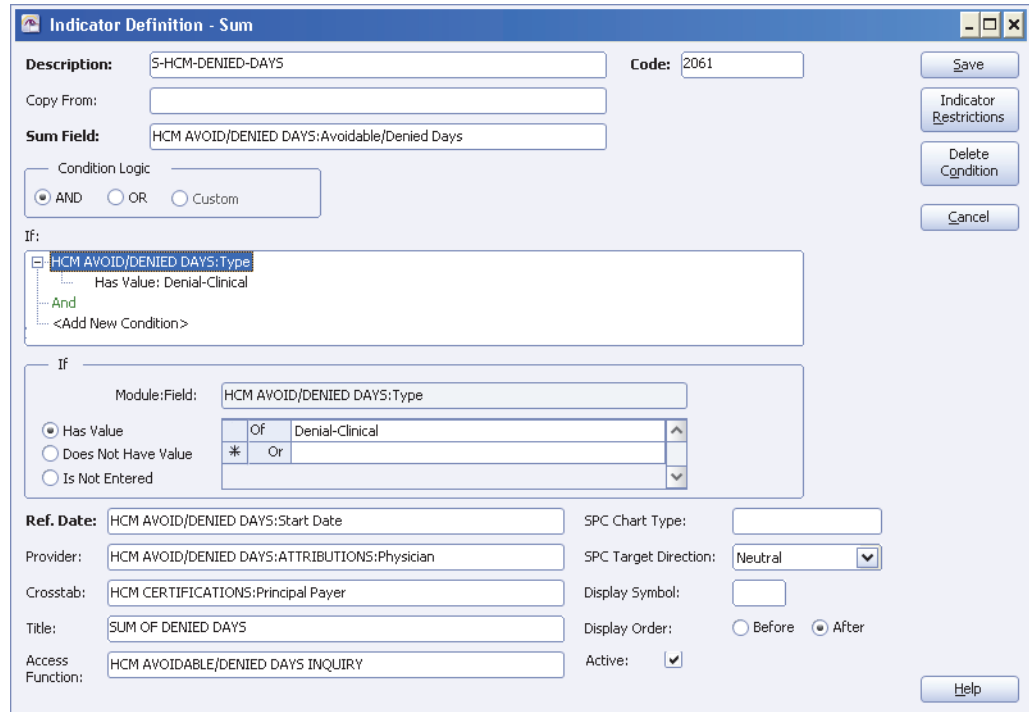
### ► To delete a Sum:

- 1 From the main menu bar, select **Function > Reporting > Indicator Definition**. The Indicator Definition form is displayed.
- 2 In the **Indicator to Edit** field, select the Sum you want to delete.
- 3 Click **Delete Ind.** A confirmation box is displayed that asks you to confirm the deletion since all associated summary data is deleted with the Sum.
- 4 Click **Yes** to confirm the deletion or **No** to cancel it.

## Sum Examples

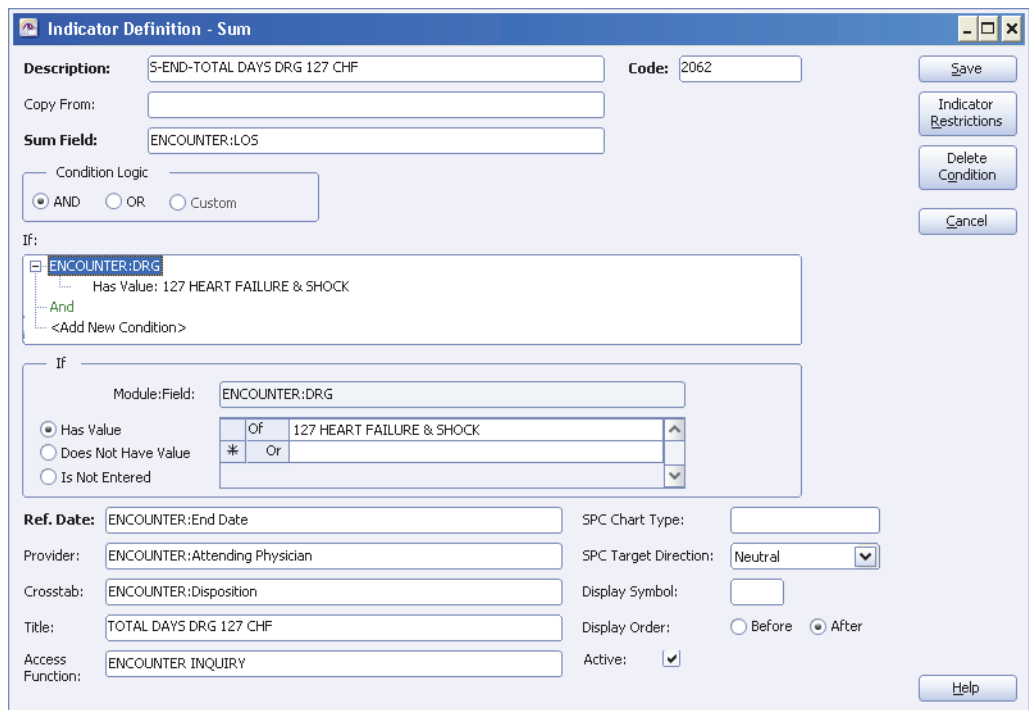
Examples of how you can use Sums are shown as follows.

### 1 You want a Sum of all denied days.

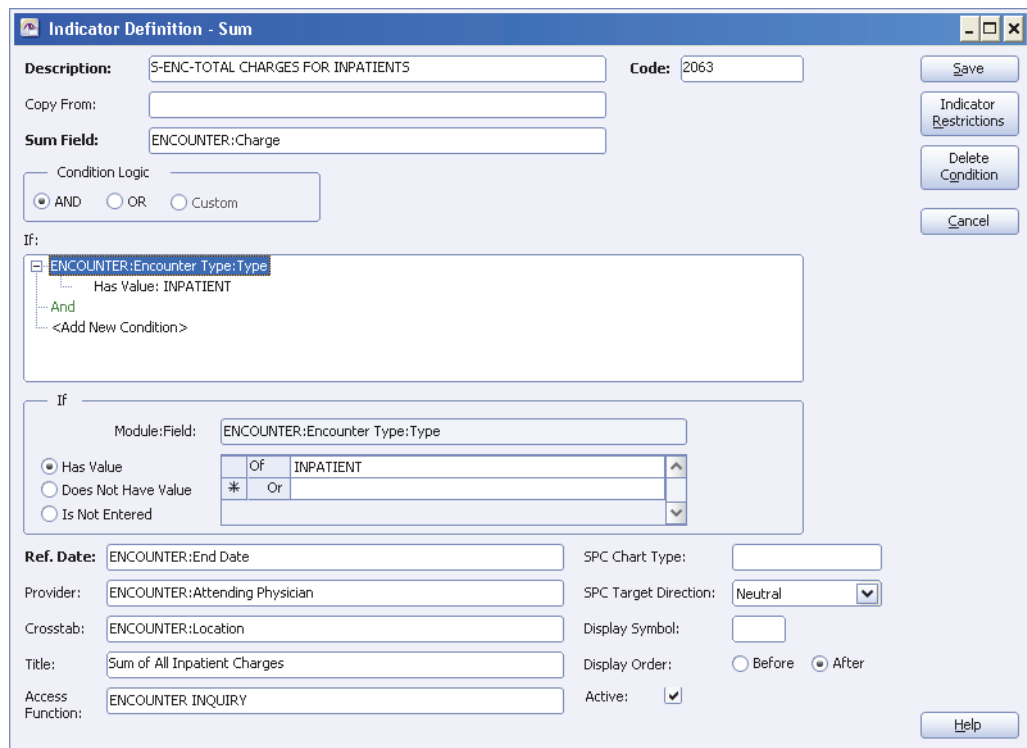


The screenshot shows the 'Indicator Definition - Sum' window for the indicator 'S-HCM-DENIED-DAYS' (Code: 2061). The 'Description' field contains 'S-HCM-DENIED-DAYS' and the 'Sum Field' is 'HCM AVOID/DENIED DAYS:Avoidable/Denied Days'. The 'Condition Logic' is set to 'AND'. The 'If' condition is 'HCM AVOID/DENIED DAYS:Type' with 'Has Value: Denial-Clinical'. The 'Ref. Date' is 'HCM AVOID/DENIED DAYS:Start Date', 'Provider' is 'HCM AVOID/DENIED DAYS:ATTRIBUTIONS:Physician', 'Crosstab' is 'HCM CERTIFICATIONS:Principal Payer', and 'Title' is 'SUM OF DENIED DAYS'. The 'Access Function' is 'HCM AVOIDABLE/DENIED DAYS INQUIRY'. The 'SPC Chart Type' is empty, 'SPC Target Direction' is 'Neutral', 'Display Symbol' is empty, and 'Display Order' is 'After'. The 'Active' checkbox is checked.

### 2 You want a Sum of the total LOS for encounters that have a DRG 127.



The screenshot shows the 'Indicator Definition - Sum' window for the indicator 'S-END-TOTAL DAYS DRG 127 CHF' (Code: 2062). The 'Description' field contains 'S-END-TOTAL DAYS DRG 127 CHF' and the 'Sum Field' is 'ENCOUNTER:LOS'. The 'Condition Logic' is set to 'AND'. The 'If' condition is 'ENCOUNTER:DRG' with 'Has Value: 127 HEART FAILURE & SHOCK'. The 'Ref. Date' is 'ENCOUNTER:End Date', 'Provider' is 'ENCOUNTER:Attending Physician', 'Crosstab' is 'ENCOUNTER:Disposition', and 'Title' is 'TOTAL DAYS DRG 127 CHF'. The 'Access Function' is 'ENCOUNTER INQUIRY'. The 'SPC Chart Type' is empty, 'SPC Target Direction' is 'Neutral', 'Display Symbol' is empty, and 'Display Order' is 'After'. The 'Active' checkbox is checked.

**3 You want a Sum of all inpatient charges.**

The dialog box is titled "Indicator Definition - Sum". It contains the following fields and options:

- Description:** S-ENC-TOTAL CHARGES FOR INPATIENTS
- Code:** 2063
- Copy From:** (empty field)
- Sum Field:** ENCOUNTER:Charge
- Condition Logic:** ☒ AND ☐ OR ☐ Custom
- If:** A tree view showing a condition: ENCOUNTER:Encounter Type:Type (expanded) with a sub-condition: Has Value: INPATIENT. Below this is an "And" button and a "<Add New Condition>" link.
- If:** A section for defining the condition logic. It includes a "Module:Field:" dropdown set to "ENCOUNTER:Encounter Type:Type". Below this are three radio buttons: ☒ Has Value, ☐ Does Not Have Value, and ☐ Is Not Entered. To the right of these is a table with two columns: "Of" and "Or". The "Of" column contains "INPATIENT". The "Or" column is empty. There are up and down arrow buttons next to the table.
- Ref. Date:** ENCOUNTER:End Date
- Provider:** ENCOUNTER:Attending Physician
- Crosstab:** ENCOUNTER:Location
- Title:** Sum of All Inpatient Charges
- Access Function:** ENCOUNTER INQUIRY
- SPC Chart Type:** (empty field)
- SPC Target Direction:** Neutral (dropdown menu)
- Display Symbol:** (empty field)
- Display Order:** ☐ Before ☒ After
- Active:** ☒

Buttons on the right side: Save, Indicator Restrictions, Delete Condition, Cancel. A Help button is at the bottom right.



## Rates

SmarTrack Rates are Indicators you can use to compute ratios between any two or more previously defined Counts, Sums, Days at Risk, or Manual Indicators. In doing this, you compare a portion of a total (the numerator) to the total sample (the denominator). For example, to determine the rate of C-sections, use two Counts: (1) Deliveries by C-section and (2) Total Deliveries. The Rate is automatically computed by dividing the number of deliveries by C-section (Count 1) by the total number of deliveries (Count 2) (see the following equation).

$$\text{Rate of C-Sections} = \frac{\text{Count 1: Number of Deliveries by C-Section}}{\text{Count 2: Total Number of Deliveries (All Types)}}$$

You can also use Rates to calculate averages, such as the average length of stay for CHF patients.

## Defining Rates

Defining a Rate sets values for the calculation that take place when the Rate is used.

► **To define a Rate:**

- 1 From the main menu bar, select **Function > Reporting > Indicator Definition**. The Indicator Definition form is displayed (Figure 2.26).



Figure 2.26: Indicator Definition form

- Click **New Ind.**, and select **Rate** from the drop-down menu. The Indicator Definition – Rate form is displayed (Figure 2.27).

**Indicator Definition - Rate**

**Description:**

**Code:**

**Copy From:**

**Numerator**

**Denominator**

**Benchmark:**  **Per:**  **Decimal Places:**

**Title:**

**SPC Chart Type:**  **SPC Target Direction:**  **Display Symbol:**

**Access Function:**  **Display Order:** ☐ Before ☒ After

**Buttons:** Save, Indicator Restrictions, Close

Figure 2.27: Indicator Definition – Rate form

If the Rate you are defining is similar to an existing one, you can copy the existing Rate and make necessary changes. For instructions, see “Copying Rates” on page 2.32.

- In the **Description** field, type a name for the Rate using your facility’s naming conventions. For more information about using these conventions, see “Appendix B: Naming Conventions”.

The system automatically generates a **Code** for the Indicator, but you can delete this Code and type in a new one if necessary.

- In the **Numerator** field, select one or more numerators that you want to use in calculating your Rate.
- In the **Denominator** field, select each denominator that you want to include in calculating your Rate.

*Note:* You can add additional Indicators to the numerator or denominator. When creating numerators and denominators, you can add or subtract indicators by changing the + sign to a - sign by clicking it.

- If you want to record a recognized benchmark for the Rate, enter a value in the **Benchmark** field. If you use a benchmark, it is included in Profile reports when the Rate is included in the Profile.
- In the **Per** field, enter the numeric value by which the system should multiply the result of the Rate. For example, enter **1** for an average, **100** for a percentage (rate), or **1000** for 1,000 patient days.
- In the **Decimal Places** field, enter a whole number from zero to nine or leave the field blank. This specifies the number of digits to the right of the decimal point you want

displayed on Indicator Profiles and Graphs. Leave the field blank to use the default value of 3 decimal places. If calculations result in values with more decimal places than you specify, the value is rounded, not truncated, for display. This setting is ignored when graphing Indicators on SPC Charts.

When you export Indicator values to Excel, the exported data contains the same number of decimal places you specify in this field. When defining a Rate Indicator that you intend to export, you have two options for maximum precision: either set the Decimal Places field to 9 or export the applicable numerator and denominator Indicators and perform the calculation using Excel or other third-party tool.

- 9 In the **Title** field, type a title for your Rate. This title is displayed when you use the Rate in compiled Profiles and graphs.

The title is not used to look up an Indicator. The entry in the Description field is used for that purpose.

- 10 If your facility uses statistical process control (SPC) Charts (see Section 6: Statistical Process Control Charts), from the **SPC Chart Type** lookup, select the appropriate chart type to display the Indicator data.
- 11 From the **SPC Target Direction** drop-down menu, select one of the following options:
  - Select **Up** to show favorable data moving upward, such as accident-free days.
  - Select **Down** to show favorable data moving downward, such as mortality rate.
  - Select **Neutral** to delete the + and - signs.
- 12 In the **Display Symbol** field, enter a symbol such as **\$** or **%**, or volume measures such **ml**, **cc**, or **lbs**. You can enter only one symbol or volume measure per indicator and you can enter up to five characters. When exported to Excel and displayed in ReporTrack, formatted numbers will appear as raw numeric values with no additional characters.
- 13 Do one of the following:
  - Click the **Display Order: Before** button to display the symbol or volume measure before a numerical value. For example, if you entered **\$** as the display symbol and then clicked **Display Order: Before**, if the indicator value is **10**, it is displayed as **\$10**.
  - Click the **Display Order: After** button to display the symbol or volume measure after a numerical value. For example, if you entered **%** as the display symbol and then clicked **Display Order: After**, if the indicator value is **5**, it is displayed as **5%**.
- 14 In the **Access Function** field, select a function from the Access Function lookup. This selection gives users the ability to double-click a row in Indicator Drill Down to open an associated function and see the qualifying record or episode lookup, as appropriate.

*Note:* User access to any function is subject to existing User/Role Security settings.

- 15** If you have determined that access to this Rate should be restricted, click Indicator Restrictions, and then, in the **Indicator Restriction** field, select one or more restrictions that have been defined in the INDICATOR RESTRICTION Dictionary (#605). Points to remember about Indicator restrictions are as follows:

- Indicators that have at least one matching Indicator security in their definition are accessible to users who have that same Indicator security in their user definition. If no security is defined for the Indicator, all users have access to it.
- If a user has no Indicator securities in his or her user definition, all Indicators are accessible, even those with restrictions in their definitions.
- If both the user and the Indicator have restrictions, at least one of the user's restrictions and one of the Indicator's restrictions must match for the Indicator to be accessible to the user. If a user has no Indicator securities in his or her user definition, all Indicators are accessible, even those with restrictions in their definitions.

If a user has a restriction for one of the Indicators in a Rate, the security setup in the Rate overrides the security of the specific Indicator, allowing the user to see the Rate but not the individual Indicator.

Your completed Indicator Definition – Rate form may look like Figure 2.28.

**Indicator Definition - Rate**

Description: R-OB-C-section rate Code: 1075 Save

Copy From: Indicator Restrictions

**Numerator** Close

+ C-OB-Total C-Sections

**Denominator**

+ C-OB-Total OB Deliveries

Benchmark: Per: 100 Decimal Places: 1

Title: C-Section Rate (total number of c-sections/total deliveries) Delete Ind.

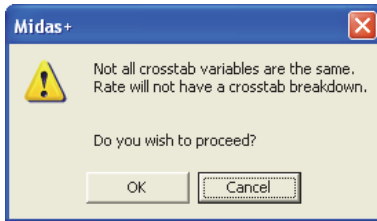
SPC Chart Type: SPC Target Direction: Neutral Display Symbol:

Access Function: Display Order: ☐ Before ☒ After

Figure 2.28: Completed Indicator Definition - Rate form

16 Click **Save**. One of two things happens:

- The Rate is saved and a new Indicator Definition form is displayed.
- The following message appears:



You see this message when the indicators selected as numerator and denominator have different variables in their respective crosstab fields. Unless the selected indicators all reference the same crosstab variable, the system cannot calculate the rate; the result is that only zeros are displayed when you compile a profile or graph that includes the indicator.

17 If the message appears, click **Cancel** and then do one of the following:

- Redefine the Rate by selecting a different numerator or denominator.
- Redefine one or more of the indicators by changing the crosstab variable.
- Create a new indicator based on the existing one you had selected, but using a different crosstab variable. Then, redefine the rate indicator to use the new indicator instead of the existing one.

## Adding or Subtracting Indicator Values

If you would like to add or subtract the values of two or more previously defined Indicators without computing a ratio, complete the **Numerator** field on the Indicator Definition – Rate form, and leave the **Denominator** field blank.

- In the **Numerator** field, enter the Indicators that you want to include in the calculation, following Step 4 through Step 6 under “Defining Rates” on page 2.27. Indicators default with a + in the column left of the Numerator field.
- To subtract an Indicator, select the + in its left column, and type a -.

A sample Indicator Definition – Rate form for these types of calculations is shown in Figure 2.29.

The screenshot shows the 'Indicator Definition - Rate' form. The 'Description' field is 'C-ENC-TOTAL MORTALITY' and the 'Code' is '2064'. The 'Benchmark' is '22', 'Per' is '100', and 'Decimal Places' is '2'. The 'Title' is 'Total Mortality'. The 'SPC Chart Type' is empty, 'SPC Target Direction' is 'Neutral', 'Display Symbol' is empty, and 'Display Order' is 'After'. The 'Access Function' is empty. The 'Copy From' field is empty. The 'Numerator' field contains a list of indicators: 'C-ENC-ADULT MORTALITIES' and 'C-ENC-INFANT MORTALITIES', both with a '+' sign. The 'Denominator' field is empty.

Figure 2.29: Indicator Definition – Rate form for calculated Indicators

## Copying Rates

If an existing Rate is similar to the one you are defining, you can copy and modify it to suit your needs.

### ► To copy a Rate:

- 1 Select **Function > Reporting > Indicator Definition** from the main menu bar. The Indicator Definition form is displayed.
- 2 In the Indicator Definition form, click **New Ind.**, and select **Rate** from the drop-down menu. The Indicator Definition – Rate form is displayed.

- 3 In the **Copy From** field, select the Rate that you want to copy (Figure 2.30).

Select an Indicator to copy here.

Indicator Definition - Rate

Description:

Code:

Copy From:

+ Numerator

+ C-RM-Falls Total x Location

\*

Save

Indicator Restrictions

Cancel

Figure 2.30: Indicator Definition – Rate form with Rate to copy

- 4 To modify the Rate, follow Step 3 through Step 16 of “Defining Rates”.

## Deleting Rates

If a Rate is no longer being used in your system, you can delete it.

### ► To delete a Rate:

- 1 Select **Function > Reporting > Indicator Definition** from the main menu bar. The Indicator Definition form is displayed.
- 2 In the **Existing Indicator to Edit** field, select the Rate that you want to delete.
- 3 If you are certain you want to delete the Rate, click **Delete Ind.**

*Note:* When you delete other Indicator types, a confirmation message appears, asking if you are sure you want to delete the Indicator. Because deleting a Rate definition does not also delete other data, such as summary data, no confirmation is necessary.

## Rate Examples

Examples of how you can use Rates are shown as follows.

### 1 You want to find the C-section rate from Obstetrics episodes.

1A

Build the **Numerator**, a Count of the total number of C-sections.

**Indicator Definition - Count**

**Description:** C-OB-Total C-Sections **Code:** 832

Copy From:

**Count:** Module **Module:** OBSTETRICS EPISODES

Condition Logic: ☒ AND ☐ OR ☐ Custom

If:   
 OBSTETRICS:Delivery Type   
 Has Value: Primary C-Section   
 Or: Repeat C-Section   
 <Add New Condition>

If:   
 Module:Field: OBSTETRICS:Delivery Type   
☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered   
 Of Primary C-Section   
 Or Repeat C-Section   
 \* Or

**Ref. Date:** OBSTETRICS:Delivery Date **SPC Chart Type:** I Chart   
**Provider:** OBSTETRICS:Physician **SPC Target Direction:** Neutral   
**Crosstab:** HCM CERTIFICATIONS:Principal Payer **Display Symbol:**   
**Title:** Total C-Sections **Display Order:** ☐ Before ☒ After   
**Access Function:** OBSTETRICS INQUIRY **Active:** ☒

Buttons: Save, Indicator Restrictions, Delete Condition, Cancel, Delete Ind., Help

1B

Build the **Denominator**, a Count of the total number of deliveries.

**Indicator Definition - Count**

**Description:** C-OB-Total OB Deliveries **Code:** 831

Copy From:

**Count:** Module **Module:** OBSTETRICS EPISODES

Condition Logic: ☒ AND ☐ OR ☐ Custom

If:   
 OBSTETRICS:Delivery Type   
 Has Value: Primary C-Section   
 Or: Repeat C-Section   
 <Add New Condition>

If:   
 Module:Field: OBSTETRICS:Delivery Type   
☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered   
 Of Primary C-Section   
 Or Repeat C-Section   
 Or Vaginal Delivery

**Ref. Date:** OBSTETRICS:Delivery Date **SPC Chart Type:** I Chart   
**Provider:** OBSTETRICS:Physician **SPC Target Direction:** Neutral   
**Crosstab:** HCM CERTIFICATIONS:Principal Payer **Display Symbol:**   
**Title:** Total OB Deliveries **Display Order:** ☐ Before ☒ After   
**Access Function:** OBSTETRICS INQUIRY **Active:** ☒

Buttons: Save, Indicator Restrictions, Delete Condition, Cancel, Delete Ind., Help



1C

Use the **Counts** to build the Rate.

**Indicator Definition - Rate**

Description: R-OB-C-section rate Code: 1075

Copy From:

**Numerator**

- + C-OB-Total C-Sections

**Denominator**

- + C-OB-Total OB Deliveries

Benchmark: 14 Per: 100 Decimal Places: 1

Title: C-Section Rate (total # c-sections/total deliveries)

SPC Chart Type: SPC Target Direction: Neutral Display Symbol:

Access Function: OBSTETRICS INQUIRY Display Order: ☐ Before ☒ After

Buttons: Save, Indicator Restrictions, Cancel, Delete Ind.

2 You want the average length of stay for CHF patients.

2A

Build the **Numerator**, a Sum of the length of stay for all CHF patients.

**Indicator Definition - Sum**

Description: S-ENC-TOTAL DAYS DRG 127 CHF Code: 2062

Copy From:

Sum Field: ENCOUNTER:LOS

Condition Logic: ☒ AND ☐ OR ☐ Custom

If:

- ENCOUNTER:DRG Has Value: 127 HEART FAILURE & SHOCK

<Add New Condition>

If:

Module:Field: ENCOUNTER:DRG

- ☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered
- Of 127 HEART FAILURE & SHOCK
- Or

Ref. Date: ENCOUNTER:End Date SPC Chart Type:

Provider: ENCOUNTER:Attending Physician SPC Target Direction: Neutral

Crosstab: ENCOUNTER:Disposition Display Symbol:

Title: TOTAL DAYS DRG 127 CHF Display Order: ☐ Before ☒ After

Access Function: ENCOUNTER INQUIRY Active: ☒

Buttons: Save, Indicator Restrictions, Delete Condition, Close, Delete Ind., Help

2B

Build the  
Denominator,  
a  
Count of CHF  
encounters.

**Indicator Definition - Count**

Description: C-ENC-TOTAL ADMISSIONS W/CHF Code: 2065

Copy From:

Count: Encounter

Condition Logic: ☒ AND ☐ OR ☐ Custom

If:

ENCOUNTER:DRG  
Has Value: 127 HEART FAILURE & SHOCK  
<Add New Condition>

If:

Module:Field: ENCOUNTER:DRG

☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered

Of 127 HEART FAILURE & SHOCK

Ref. Date: ENCOUNTER:End Date SPC Chart Type:

Provider: ENCOUNTER:Attending Physician SPC Target Direction: Neutral

Crosstab: ENCOUNTER:Disposition Display Symbol:

Title: Total Admissions w/CHF Display Order: ☐ Before ☒ After

Access Function: ENCOUNTER INQUIRY Active: ☒

Buttons: Save, Indicator Restrictions, Delete Condition, Cancel, Help

2C

Use the Sum  
and  
the Count  
to build  
the Rate.

**Indicator Definition - Rate**

Description: R-ENC-ALOS DRG 127 CHF Code: 2066

Copy From:

Numerator

+ S-ENC-TOTAL DAYS DRG 127 CHF

Denominator

+ C-ENC-TOTAL ADMISSIONS W/CHF

Benchmark: 3 DAYS Per: 1 Decimal Places: 2

Title: AVERAGE LOS DRG 127 CHF

SPC Chart Type: SPC Target Direction: Neutral Display Symbol:

Access Function: ENCOUNTER INQUIRY Display Order: ☐ Before ☒ After

Buttons: Save, Indicator Restrictions, Cancel

The Per field is set to 1 because  
we want the system to  
multiply the result by 1.

## Days at Risk

By using SmarTrack Days at Risk Indicators, you can total the number of days that patients met qualifying conditions. You create the qualifying conditions, and the system collects the totals for patients who meet your conditions. Any values are displayed in the month in which the event occurred. You then use the Days at Risk Indicators in a Rate to calculate the following information:

- The risk of a patient who is in a particular payer plan visiting the hospital
- Infection rates, such as days at risk for infection while on monitors
- Days at Risk rates for supports in the Critical Care module
- Days at Risk for infection for a specific location

You can build a Days at Risk Indicator that includes variables from a Focus Study when an Encounter module is the source of the data to total. You can also do the reverse: include variables from an Encounter module when the data source is a Focus Study.

In an Indicator, you can use the fields from an Encounter-based module, an Encounter-based multiple, an Encounter Focus Study, or a Patient Focus Study in four places: as qualifying conditions, as the Reference Date, as the Provider, or as the Crosstab.

You can also use combinations of fields: for example, in a Days at Risk Indicator, you can use an Encounter Focus Study as the data source, use fields from an Encounter-based module and the same Encounter Focus Study as qualifying conditions, and then use a date field from the same Encounter Focus Study as the Reference Date.

However, if you use data from combinations of module and Focus Study, the two *must* have an inherent logical relationship to ensure that the resulting data is valid and meaningful. The following are examples of a logical relationship between a system module and a Focus Study:

- Infection module connected to a Focus Study named *Pressure Ulcer*
- Risk module connected to a Focus Study named *Fall Risk Assessment*
- Drug Therapy module connected to a Focus Study named *Adverse Drug Reaction*

In addition, Indicators cannot use data from Process Focus Studies, because they have no inherent connection to a patient or encounter.

### System Manager:

The site parameter IND-INCLUDE ALL DAYS IN DAYS AT RISK CALCULATION controls whether days are counted up through the end date or up through but not including the end date (the latter is the default setting). To change the setting for this site parameter, log in to [www.midasplus.com](http://www.midasplus.com) and submit a request for assistance through the Support Center.

## Defining Days at Risk

Defining Days at Risk sets values for the calculation that takes place when the Days at Risk value is used.

► **To define a Days at Risk Indicator:**

- 1 Select **Function > Reporting > Indicator Definition** from the main menu bar. The Indicator Definition form is displayed (Figure 2.31).

Figure 2.31: Indicator Definition form

- 2 Click **New Ind.** and select **Days at Risk** from the drop-down menu. The Indicator Definition – Days at Risk form is displayed (Figure 2.32).

Figure 2.32: Indicator Definition – Days at Risk form

If the Days at Risk Indicator you are defining is similar to an existing one, you can copy the existing Indicator and make necessary changes. For instructions, see “Copying Days at Risk” on page 2.42.

- 3 In the **Description** field, type a name for the Days at Risk Indicator using your facility's naming conventions. For information about using these conventions, see

"Appendix B: Naming Conventions".

*Note:* The system automatically generates a **Code** for the Indicator, but you can delete this Code and type in a new one if necessary.

- 4 In the **Days** field, select the entry that indicates the type of days that patients who qualify for your Indicator were at risk for the condition you are studying. Each option populates a different entry in the Ref. Date field. Options are:
  - CRITICAL CARE MONITOR:MONITORS:Patient Days on Monitor - The sum of days patients are being monitored. This can be more narrowly defined in the Module:Field.
  - CRITICAL CARE MONITOR:SUPPORTS:Patient Days on Support - The sum of days patients are on a type of support. The days are counted in the month in which they occur. For example, if 23 days of support cross a month barrier, the days are counted as 3 days in June and 20 days in July.
  - ENCOUNTER:LOCATION HISTORY:Patient Days in Location - The sum of days patients are at a specific location. This can be more narrowly defined in the Module:Field.
  - ENCOUNTER:Patient Days - The sum of days that patients are in the facility.
  - INFECTION CONTROL:PREDISPOSING TREATMENT: Days - The sum of days the patient was receiving treatments that may have increased the risk of infection.
  - PATIENT:PAYERS:Member Days - The sum of days that patients are part of a health plan.
  - WORKER'S COMP:OFFWORK:Days Lost - The number of actual days the employee was off work.
  - WORKER'S COMP:RESTRICTIONS:Days Lost - The number of days employee was on restriction from certain work duties.

*Note:* The Ref. Date field is populated automatically based upon what you select in the Days field.

- 5 In the **Module:Field** field, select the module and the field where the data is stored. Items in this Dictionary follow the format *MODULE:Field* (for example, CRITICAL CARE:Support, ENCOUNTER:Location History Location, ENCOUNTER:Encounter Type:Type).

After you complete this field, value selection options open on the form (Figure 2.33).

Figure 2.33: Indicator Definition – Days at Risk form with value selection options

- 6 Select the **Has Value** option, which allows you to include all records with a specific value for the selected module:field. In the **Of** field, select the values you want (for example, If:ENCOUNTER:Location History Location, Has Value:Intensive Care Unit).

*Note:* If you select a date field to use as a qualifying condition, you must select only **Is Not Entered** or **Has Value**, leaving the **Of** field blank. You might use this to track

when a date should have been entered and was not, or to track when a date field is populated. Do not select **Does Not Have Value** or **Has Value** to specify a date in the **Of** field.

- 7 If you want to add more qualifying conditions, click **And if: <Add New Condition>**, and repeat Step 6.

If you have three or more conditions, you may want a custom If: statement, one with AND, OR, and NOT logical operators. To do that, see “Defining Custom Condition Logic” on page 2.10.

- 8 To remove a condition, select the condition, and click **Delete Condition**.
- 9 Select the appropriate **Provider** from the list of provider fields if you want the system to associate a provider from a specific module with this Days at Risk Indicator. At least one of your qualifying conditions must have a logical relationship to the provider (for example, if your conditions look at the Risk module, you should select **RISK MANAGEMENT:Notified Physician**, not **INFECTION CONTROL:Physician**).

*Note:* You must complete the Provider field in order to report at the provider, specialty, and/or service level with Profiles and graphs.

- 10 In the **Crosstab** field, select additional fields you want to sub-categorize (for example, Location, Discharge Disposition). A crosstab automatically categorizes the Indicator by each value of the variable selected. A crosstab variable must be from the Encounter file or from a file that has a logical relationship to the first qualifying condition and the reference date.
- 11 In the **Title** field, type a title for your Count. This title is displayed when you use the Count in compiled Profiles and graphs.

*Note:* The title is not used to look up an Indicator. The entry in the Description field is used for that purpose.

- 12 In the **Access Function** field, select a function from the Access Function lookup. This selection gives users the ability to double-click a row in Indicator Drill Down to open an associated function and see the qualifying record or episode lookup, as appropriate.

*Note:* User access to any function is subject to existing User/Role Security settings.

- 13 If your facility uses statistical process control (SPC) Charts (see Section 6: Statistical Process Control Charts), from the **SPC Chart Type** lookup, select the appropriate chart type to display the Indicator data.

- 14 From the **SPC Target Direction** drop-down menu, select one of the following options:

- Select **Up** to show favorable data moving upward, such as accident-free days.
- Select **Down** to show favorable data moving downward, such as mortality rate.
- Select **Neutral** to delete the + and - signs.

- 15 In the **Display Symbol** field, enter a symbol such as \$ or %, or volume measures such **ml**, **cc**, or **lbs**. You can enter only one symbol or volume measure per indicator and you can enter up to five characters. When exported to Excel and displayed in ReporTrack, formatted numbers will appear as raw numeric values with no additional characters.

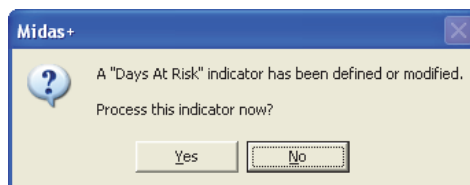
**16** Do one of the following:

- Click the **Display Order: Before** button to display the symbol or volume measure before a numerical value. For example, if you entered \$ as the display symbol and then clicked **Display Order: Before**, if the indicator value is **10**, it is displayed as **\$10**.
- Click the **Display Order: After** button to display the symbol or volume measure after a numerical value. For example, if you entered % as the display symbol and then clicked **Display Order: After**, if the indicator value is **5**, it is displayed as **5%**.

**17** Days at Risk Indicators are automatically marked as **Active**, which means the Days at Risk automatically processes when the Weekly Summary job runs. If you clear the **Active** checkbox, the Midas+ Care Management system does not process the Days at Risk Indicators in the Weekly Update. See “Deactivating an Indicator” on page 2.56.**18** If you have determined that access to this Days at Risk should be restricted, click Indicator Restrictions, and then, in the **Indicator Restriction** field, select one or more restrictions that have been defined in the INDICATOR RESTRICTION Dictionary (#605). Points to remember about Indicator restrictions are as follows:

- Indicators that have at least one matching Indicator security in their definition are accessible to users who have that same Indicator security in their user definition. If no security is defined for the Indicator, all users have access to it.
- If a user has no Indicator securities in his or her user definition, all Indicators are accessible, even those with restrictions in their definitions.
- If both the user and the Indicator have restrictions, at least one of the user’s restrictions and one of the Indicator’s restrictions must match for the Indicator to be accessible to the user.

*Note:* If a user has a restriction for one of the Indicators in a Rate, the security setup in the Rate overrides the security of the specific Indicator, allowing the user to see the Rate, but not the individual Indicator.

**19** When you have completed the Indicator Definition – Days at Risk form, click **Save**. A confirmation box is displayed, in which you are asked if you want to process the Days at Risk Indicator immediately (Figure 2.34).

*Figure 2.34: Confirmation box for Indicator Definition processing*

20 Do one of the following:

Click	For the following result:
<b>Yes</b>	The Days at Risk Indicator is processed immediately. When the processing is completed, you can view the Indicator data.
<b>No</b>	The Days at Risk Indicator enters a queue to be processed overnight. You can view the Indicator data the next day.

**Important:** *Regardless of whether the Indicator is newly defined or an existing one that you modified, the system processes it back to the beginning of the date your site began collecting data (or to the date to which the site parameter IND-CUTOFF DATE is set). If the Indicator is encounter-based, processing time could be more lengthy than you expect, depending upon the number of encounters at your facility and the size of your hospital.*

## Copying Days at Risk

If an existing Days at Risk Indicator is similar to the one you are creating, you can copy and modify the existing Indicator to suit your needs.

### ► To copy a Days at Risk Indicator:

- 1 Select **Function > Reporting > Indicator Definition** from the main menu bar. The Indicator Definition form is displayed.
- 2 In the Indicator Definition form, click **New Ind.** and select **Days at Risk** from the drop-down menu. The Indicator Definition – Days at Risk form is displayed.
- 3 In the **Copy From** field, select the Indicator that you want to copy.
- 4 To modify the Indicator, follow Step 3 through Step 20 of “Defining Days at Risk”.

## Deleting Days at Risk

If a Days at Risk Indicator is no longer being used in your system, you can delete it.

### ► To delete a Days at Risk Indicator:

- 1 Select **Function > Reporting > Indicator Definition** from the main menu bar. The Indicator Definition form is displayed.
- 2 Select the Indicator you want to delete. You are returned to the Indicator Definition – Days at Risk form, which is populated with the data from your selection.
- 3 Click **Delete Ind.** A confirmation box is displayed that asks you to confirm the deletion since all associated summary data is deleted with the Days at Risk Indicator.
- 4 Click **Yes** to confirm the deletion or **No** to cancel it.



## Days at Risk Examples

Examples of the specific uses for Days at Risk are shown as follows.

### 1 You want to know the days at risk for an infection in the ICU per 1000 patient days.

**Note:** Days at Risk Indicators are usually used in conjunction with a Count in a Rate when calculating infection rates. In this situation, the Count is always the numerator and the Days at Risk is the denominator.

#### 1A

Build the  
**Numerator**, a Count  
that defines the  
location to use in the  
calculation of the  
Rate.

**Note:** The Reference Date must always come from the referenced module to ensure that the incidents are tallied in the month of occurrence.

**Indicator Definition - Count**

Description: C-ENC-LOCATION Code: 2067

Copy From:

Count: Module: INFECTION CONTROL EPISODES

Condition Logic: ☒ AND ☐ OR ☐ Custom

If:

- INFECTION CONTROL:Location
  - Has Value: Intensive Care Unit
  - And
  - <Add New Condition>

If:

Module:Field: INFECTION CONTROL:Location

☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered

Of Intensive Care Unit

\* Or

Ref. Date: INFECTION CONTROL:Onset Date SPC Chart Type:

Provider: SPC Target Direction: Neutral

Crosstab: Display Symbol:

Title: Display Order: ☐ Before ☒ After

Access Function: ENCOUNTER INQUIRY Active: ☒

Buttons: Save, Indicator Restrictions, Delete Condition, Cancel, Help

1B

Build the **Denominator**, a Days at Risk Indicator that totals the days the patients were in a specified location. This example looks at days in ICU.

**Indicator Definition - Days At Risk**

**Description:** D-ENC-PT DAYS IN ICU **Code:** 2068

Copy From:

**Days:** ENCOUNTER:LOCATION HISTORY:Patient Days in Location

Condition Logic: ☒ AND ☐ OR ☐ Custom

If:

- ENCOUNTER:Location
  - Has Value: Intensive Care Unit
  - And
  - <Add New Condition>

If:

Module:Field: ENCOUNTER:Location

☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered

Of Intensive Care Unit

Ref. Date: ENCOUNTER:LOCATION HISTORY:Date Entered Location SPC Chart Type:

Provider:  SPC Target Direction: Neutral

Crosstab:  Display Symbol:

Title: Patient Days in ICU Display Order: ☐ Before ☒ After

Access Function: ENCOUNTER INQUIRY Active: ☒

Buttons: Save, Indicator Restrictions, Delete Condition, Cancel, Help

1C

Combine the **Count** and the **Days at Risk** Indicator to build the Rate.

**Indicator Definition - Rate**

**Description:** R-ENC-DAYS AT RISK FOR ICU INFECTION **Code:** 2069

Copy From:

**Numerator**

- + C-ENC-LOCATION

**Denominator**

- + D-ENC-PT DAYS IN ICU

Benchmark:  **Per:** 100 **Decimal Places:** 0

Title: DAYS AT RISK FOR ICU INFECTION

SPC Chart Type:  SPC Target Direction: Neutral Display Symbol:

Access Function: ENCOUNTER INQUIRY Display Order: ☐ Before ☒ After

Buttons: Save, Indicator Restrictions, Cancel

The **Per** field is set to 1000, because sites typically want to review the risk of events occurring per 1000 patient days; larger facilities may use 10,000 patient days.

**Midas+**

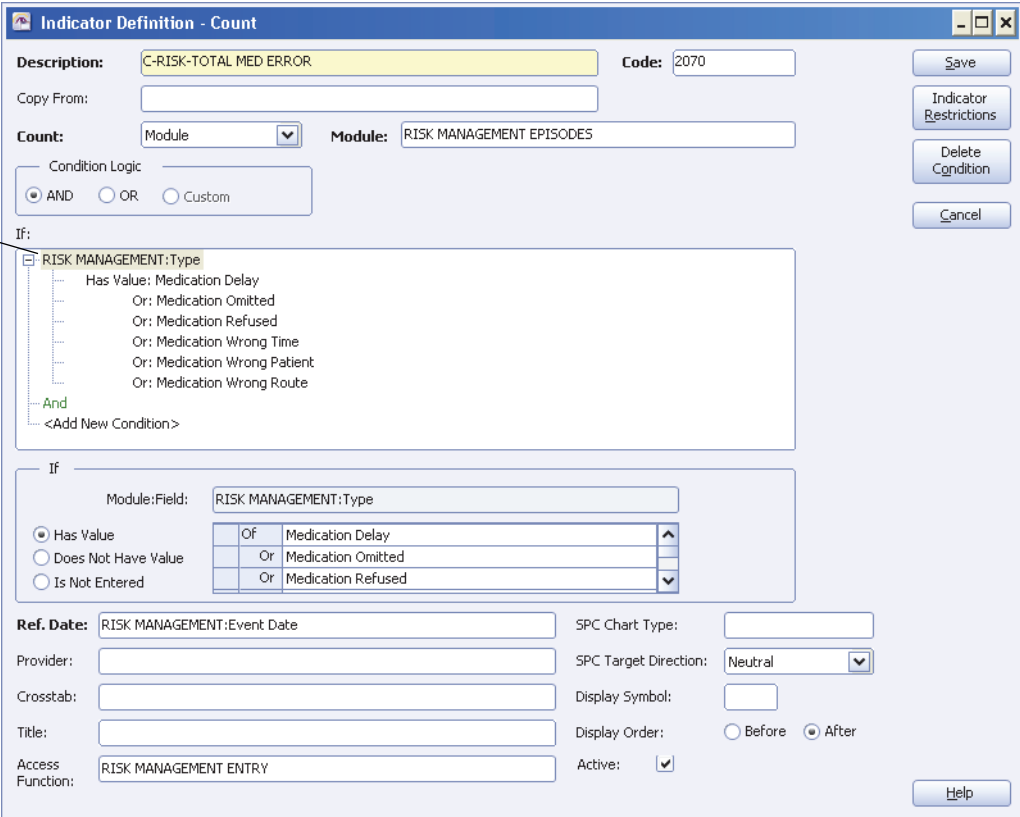
Not all reference dates are the same.  
Do you wish to proceed?

Buttons: OK, Cancel

This dialog box is displayed when saving a rate which contains a Days at Risk Indicator. Click **Yes** to proceed.

**2 You want the days at risk rate for medication errors for inpatients per 1000 patient days.****2A**

Build the **Numerator**, a Count of the medication errors for all inpatients.



**Indicator Definition - Count**

**Description:** C-RISK-TOTAL MED ERROR **Code:** 2070

Copy From:

**Count:**  **Module:** RISK MANAGEMENT EPISODES

**Condition Logic:** ☒ AND ☐ OR ☐ Custom

**If:**

- ☒ RISK MANAGEMENT:Type
  - Has Value: Medication Delay
  - Or: Medication Omitted
  - Or: Medication Refused
  - Or: Medication Wrong Time
  - Or: Medication Wrong Patient
  - Or: Medication Wrong Route
- ☐ And
- ☐ <Add New Condition>

**If:**

**Module:Field:** RISK MANAGEMENT:Type

☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered

Of	Or
<input checked="" type="radio"/>	Medication Delay
<input type="radio"/>	Medication Omitted
<input type="radio"/>	Medication Refused

**Ref. Date:** RISK MANAGEMENT:Event Date **SPC Chart Type:**

**Provider:**  **SPC Target Direction:** Neutral

**Crosstab:**  **Display Symbol:**

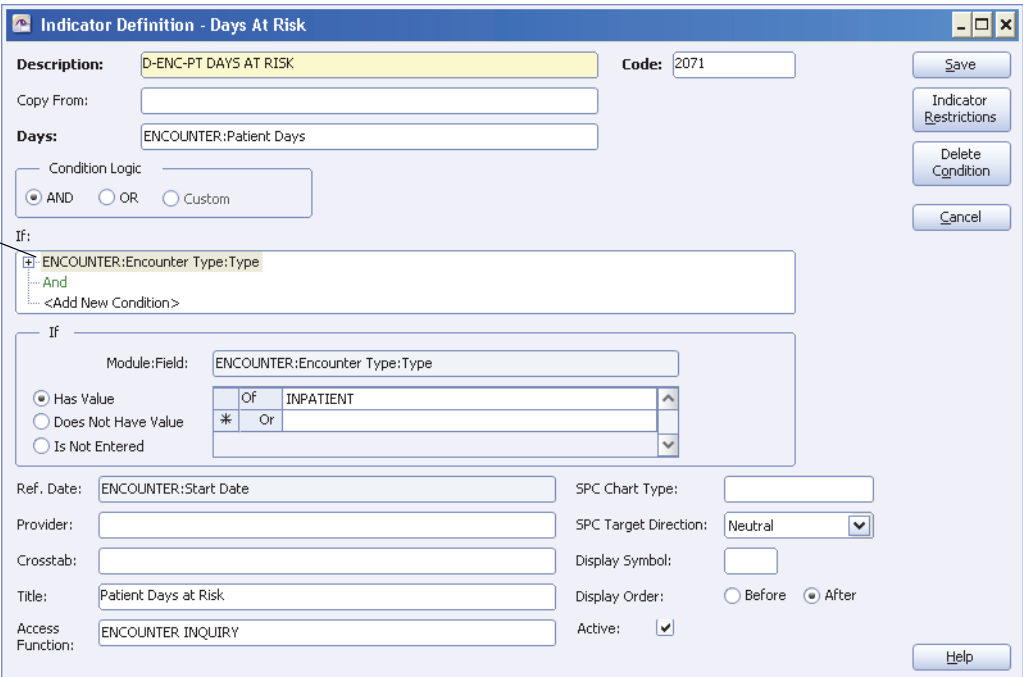
**Title:**  **Display Order:** ☐ Before ☒ After

**Access Function:** RISK MANAGEMENT ENTRY **Active:** ☒

Buttons: Save, Indicator Restrictions, Delete Condition, Cancel, Help

**2B**

Build the **Denominator**, a Days at Risk Indicator that totals patient days at risk.



**Indicator Definition - Days At Risk**

**Description:** D-ENC-PT DAYS AT RISK **Code:** 2071

Copy From:

**Days:** ENCOUNTER:Patient Days

**Condition Logic:** ☒ AND ☐ OR ☐ Custom

**If:**

- ☒ ENCOUNTER:Encounter Type:Type
  - And
  - ☐ <Add New Condition>

**If:**

**Module:Field:** ENCOUNTER:Encounter Type:Type

☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered

Of	Or
<input checked="" type="radio"/>	INPATIENT
<input type="radio"/>	*

**Ref. Date:** ENCOUNTER:Start Date **SPC Chart Type:**

**Provider:**  **SPC Target Direction:** Neutral

**Crosstab:**  **Display Symbol:**

**Title:** Patient Days at Risk **Display Order:** ☐ Before ☒ After

**Access Function:** ENCOUNTER INQUIRY **Active:** ☒

Buttons: Save, Indicator Restrictions, Delete Condition, Cancel, Help

2C

Combine the **Count** and **Days at Risk** Indicators to build the Rate.

**Indicator Definition - Rate**

Description: R-RISK-RISK FOR MED ERROR PER 1000 PT DAYS Code: 2072

Copy From:

**Numerator**

- + C-RISK-TOTAL MED ERROR

**Denominator**

- + D-ENC-PT DAYS AT RISK

Benchmark: Per: 1000 Decimal Places: 2

Title: Risk for Med Errors Per 1000 Patient Days

SPC Chart Type: SPC Target Direction: Neutral Display Symbol:

Access Function: RISK MANAGEMENT INQUIRY Display Order: ☐ Before ☒ After

Buttons: Save, Indicator Restrictions, Cancel

The **Per** field is set to 1000, because sites typically want to review the risk of events occurring per 1000 patient days; larger facilities may use 10,000 patient days.

- 3 You want to measure utilization for a particular health plan (average days utilized per member). This requires all patients in the particular plan to be entered into the Midas+ Care Management system.

3A

Build the **Numerator**, a Days at Risk Indicator that calculates the total days in the hospital for all patients who have the payer MGH Healthplan of Arizona.

**Indicator Definition - Days At Risk**

Description: D-PT-MGH AZ HEALTHPLAN PT DAYS Code: 2073

Copy From:

Days: ENCOUNTER:Patient Days

Condition Logic: ☒ AND ☐ OR ☐ Custom

If:

- PATIENT:PAYERS:Payer (Any)
  - Has Value: MGH Healthplan of Arizona
  - And
  - <Add New Condition>

If:

Module:Field: PATIENT:PAYERS:Payer (Any)

☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered

Of: MGH Healthplan of Arizona

Ref. Date: ENCOUNTER:Start Date SPC Chart Type:

Provider: SPC Target Direction: Neutral

Crosstab: Display Symbol:

Title: D-MGH AZ HEALTHPLAN PT DAYS Display Order: ☐ Before ☒ After

Access Function: ENCOUNTER INQUIRY Active: ☒

Buttons: Save, Indicator Restrictions, Delete Condition, Cancel, Help

3B

Build the **Denominator**,  
a Days at Risk Indicator  
that calculates the total  
member days in the plan  
MGH Healthplan of  
Arizona.

**Indicator Definition - Days At Risk**

**Description:** D-PT-MGH AZ HEALTHPLAN MEM DAYS **Code:** 2073

Copy From:

**Days:** PATIENT:PAYERS:Member Days

Condition Logic: ☒ AND ☐ OR ☐ Custom

If: ☒ PATIENT:PAYERS:Payer (Any)  
Has Value: MGH Healthplan of Arizona  
And  
<Add New Condition>

If: ☐ ☐ ☐  
Module/Field: PATIENT:PAYERS:Payer (Any)  
☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered  
Of MGH Healthplan of Arizona  
\* Or

Ref. Date: PATIENT:PAYERS:Effective Date SPC Chart Type:   
Provider:  SPC Target Direction: Neutral  
Crosstab:  Display Symbol:   
Title: MGH AZ HEALTHPLAN MEMEBERS DAYS Display Order: ☐ Before ☒ After  
Access Function: HCM CDI INQUIRY Active: ☒

Save Indicator Restrictions Delete Condition Cancel Help

3C

Combine the two **Days  
at Risk Indicators** to  
build the Rate.

**Indicator Definition - Rate**

**Description:** R-PT-RATE FOR DAYS RISK MGH AZ **Code:** 2074

Copy From:

**Numerator**  
+ D-PT-MGH AZ HEALTHPLAN MEM DAYS  
\*

**Denominator**  
+ D-PT-MGH AZ HEALTHPLAN MEM DAYS  
\*

Benchmark:  Per: 1000 Decimal Places: 2

Title: RATE FOR DAYS AT RISK-MGH HEALTHPLAN FOR AZ

SPC Chart Type:  SPC Target Direction: Neutral Display Symbol:   
Access Function: RISK MANAGEMENT INQUIRY Display Order: ☐ Before ☒ After

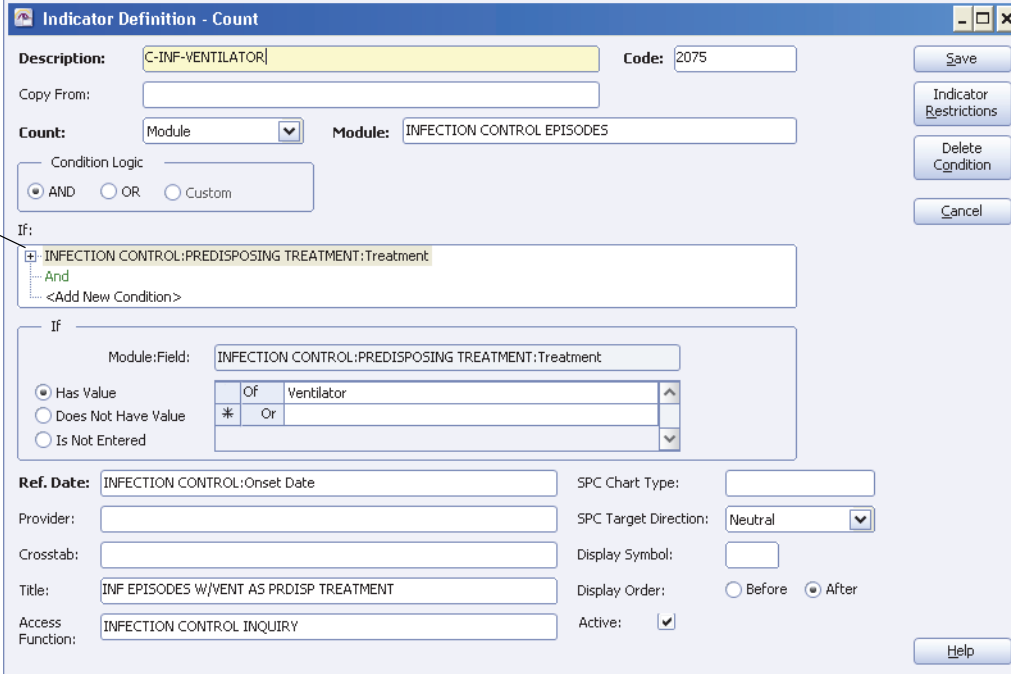
Save Indicator Restrictions Cancel

**4 You want the days at risk rate for ventilator days.**

*Note:* Data must be entered in the Predisposing Treatment field of the Infection Control module and the Support Systems field of the Critical Care module for this Rate to calculate.

**4A**

Build the **Numerator**, a Count of Infection episodes in which ventilators are the predisposing treatment.



**Indicator Definition - Count**

Description: C-INF-VENTILATOR Code: 2075

Copy From:

Count: Module: INFECTION CONTROL EPISODES

Condition Logic: ☒ AND ☐ OR ☐ Custom

If:

- + INFECTION CONTROL:PREDISPOSING TREATMENT:Treatment
- And
- <Add New Condition>

If:

Module:Field: INFECTION CONTROL:PREDISPOSING TREATMENT:Treatment

☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered

Of Ventilator

Ref. Date: INFECTION CONTROL:Onset Date SPC Chart Type:

Provider: SPC Target Direction: Neutral

Crosstab: Display Symbol:

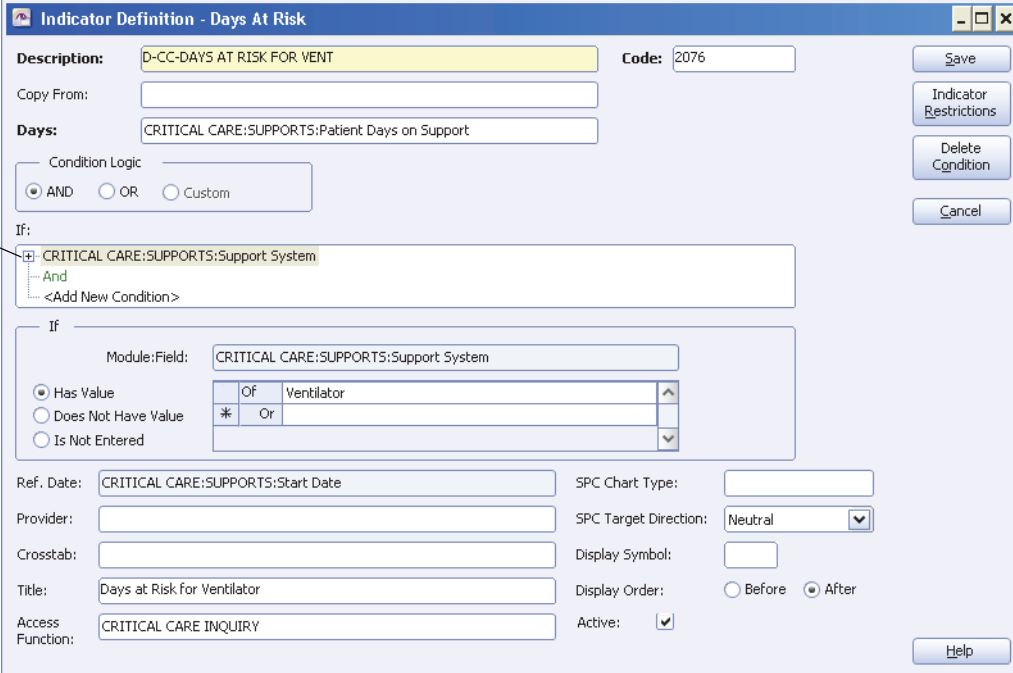
Title: INF EPISODES W/VENT AS PRDISP TREATMENT Display Order: ☐ Before ☒ After

Access Function: INFECTION CONTROL INQUIRY Active: ☒

Buttons: Save, Indicator Restrictions, Delete Condition, Cancel, Help

**4B**

Build the **Denominator**, a Days at Risk Indicator that totals patient days in a critical care unit in which the patient was on a ventilator.



**Indicator Definition - Days At Risk**

Description: D-CC-DAYS AT RISK FOR VENT Code: 2076

Copy From:

Days: CRITICAL CARE:SUPPORTS:Patient Days on Support

Condition Logic: ☒ AND ☐ OR ☐ Custom

If:

- + CRITICAL CARE:SUPPORTS:Support System
- And
- <Add New Condition>

If:

Module:Field: CRITICAL CARE:SUPPORTS:Support System

☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered

Of Ventilator

Ref. Date: CRITICAL CARE:SUPPORTS:Start Date SPC Chart Type:

Provider: SPC Target Direction: Neutral

Crosstab: Display Symbol:

Title: Days at Risk for Ventilator Display Order: ☐ Before ☒ After

Access Function: CRITICAL CARE INQUIRY Active: ☒

Buttons: Save, Indicator Restrictions, Delete Condition, Cancel, Help

4C

Combine the **Count**  
and the **Days at Risk**  
Indicator to build your  
Rate.

Indicator Definition - Rate

Description: R-INF-INFECTION RATE BY VENT
Code: 2077
Save
Indicator Restrictions
Cancel

Copy From:

Numerator	
+	C-INF-VENTILATOR
*	

Denominator	
+	D-CC-DAYS AT RISK FOR VENT
*	

Benchmark:
Per: 100
Decimal Places: 2

Title: Infection Rate By Ventilator

SPC Chart Type:
SPC Target Direction: Neutral
Display Symbol:

Access Function: INFECTION CONTROL INQUIRY
Display Order:
Before
After

## Manual Indicators

By using Manual Indicators, you can create an Indicator that accepts only values manually entered into the Midas+ Care Management system. Using this Indicator, you can enter data that is not collected in the Midas+ Care Management system, such as data from other systems not interfaced into the Midas+ Care Management system or benchmarking data. Manual Indicators are *not* processed by the daily and weekly Indicator jobs.

## Defining Manual Indicators

Defining a Manual Indicator sets values for the calculation that takes place when the Indicator is used.

► **To define a Manual Indicator:**

- 1 Select **Function > Reporting > Indicator Definition** from the main menu bar. The Indicator Definition form is displayed (Figure 2.35).

Figure 2.35: Indicator Definition form

- 2 Click **New Ind.**, and select **Manual Entry** from the drop-down menu. The Indicator Definition – Manual Indicator form is displayed (Figure 2.36).

Figure 2.36: Indicator Definition – Manual Indicator form

- 3 In the **Description** field, type a name for the Indicator using your facility's naming conventions. For information about using these conventions, see "Appendix B: Naming Conventions".

*Note:* The system automatically generates a **Code** for the Count, but you can delete this Code and type in a new one if necessary.



- 4 In the **Title** field, type a title for your Manual Indicator. This title is displayed when you use this Indicator in compiled Profiles and graphs.

*Note:* The Title is not used to look up an Indicator. The entry in the Description field is used for that purpose.

- 5 If your facility uses statistical process control (SPC) Charts (see Section 6: Statistical Process Control Charts), from the **SPC Chart Type** lookup, select the appropriate chart type to display the Indicator data.
- 6 From the **SPC Target Direction** drop-down menu, select one of the following options:
  - Select **Up** to show favorable data moving upward, such as accident-free days.
  - Select **Down** to show favorable data moving downward, such as mortality rate.
  - Select **Neutral** to delete the + and - signs.
- 7 In the **Display Symbol** field, enter a symbol such as \$ or %, or volume measures such **ml**, **cc**, or **lbs**. You can enter only one symbol or volume measure per indicator and you can enter up to five characters. When exported to Excel and displayed in ReporTrack, formatted numbers will appear as raw numeric values with no additional characters.
- 8 Do one of the following:
  - Click the **Display Order: Before** button to display the symbol or volume measure before a numerical value. For example, if you entered \$ as the display symbol and then clicked **Display Order: Before**, if the indicator value is **10**, it is displayed as **\$10**.
  - Click the **Display Order: After** button to display the symbol or volume measure after a numerical value. For example, if you entered % as the display symbol and then clicked **Display Order: After**, if the indicator value is **5**, it is displayed as **5%**.
- 9 If you have determined that access to this indicator should be restricted, click Indicator Restrictions, and then, in the **Indicator Restriction** field, select one or more restrictions that have been defined in the INDICATOR RESTRICTION Dictionary (#605). Points to remember about Indicator restrictions are as follows:
  - Indicators that have at least one matching Indicator security in their definition are accessible to users who have that same Indicator security in their user definition. If no security is defined for the Indicator, all users have access to it.
  - If a user has no Indicator securities in his or her user definition, all Indicators are accessible, even those with restrictions in their definitions.
  - If both the user and the Indicator have restrictions, at least one of the user's restrictions and one of the Indicator's restrictions must match for the Indicator to be accessible to the user.
- 10 When you have completed the Indicator Definition – Manual Definition form, click **Save**. Your Indicator is saved, and a new Indicator Definition – Manual Indicator form is displayed.

## Deleting Manual Indicators

If a Manual Indicator is no longer being used in your system, you can delete it.

### ► To delete a Manual Indicator:

- 1 Select **Function > Reporting > Indicator Definition** from the main menu bar. The Indicator Definition form is displayed.
- 2 Select the Indicator you want to delete. The Manual Indicator form is displayed, populated with the data from your selection.
- 3 Click **Delete Ind.** A dialog box is displayed that asks you to confirm the deletion because all associated summary data is deleted with the selected Indicator.
- 4 Click **Yes** to confirm the deletion or **No** to cancel it.

## Entering Data in Manual Indicators

Use the Indicator Manual Entry function to modify or update monthly Indicator data by facility, service, specialty, or provider.

**Important:** *Manual data will be replaced with Indicator-based values if a Manual Indicator is processed. To prevent the Indicator from being processed, you can add data to the totals tab (Figure 2.38) for the corresponding Months, or you can remove the Active checkmark in the original Indicator Definition.*

### ► To enter data into an Indicator:

- 1 Select **Function > Reporting > Indicators > Indicator Manual Entry**. The Indicator Manual Entry form is displayed (Figure 2.37).

Figure 2.37: Indicator Manual Entry form

- 2 Select the **Indicator** for which you want to view, add, or modify monthly data.

**Important:** *If you choose to enter data into something other than a manual Indicator, you must use extreme caution to ensure you do not inadvertently overwrite compiled data. Any overwritten data is permanently lost.*

- 3 In the **Start Month** field, enter the earliest month and year for which you want to view, add, or modify monthly data.

*Note:* The system uses a default of six months previous to the current date. If you do not enter the year, the system assumes you mean the current year. The system displays twelve months of data, beginning with the start month you indicate. If you

need to enter more monthly data, save the data, and enter a new **Start Month** when the form is redisplayed.

- 4 In the **Facility** field, select the Facility for which you want to enter Indicator data. Mark the **All Facilities** checkbox if you want to collect data on all available facilities.
- 5 Click the **Enter Values** button to begin entering the numeric values. Four sub-tabs with grids for data entry are displayed on the form: Totals, Service, Specialty, and Provider. The tabs are described on the following pages.

*Note:* Any Count, Sum, Days at Risk, or Manual Indicator can be modified using this function.

## Totals Tab

- 6 Use the **Totals** tab (Figure 2.38) to add or modify existing Indicator summary data for the entire organization.

The screenshot shows the 'Indicator Manual Entry' window. At the top, the title bar says 'Indicator Manual Entry'. Below it, there are several input fields and buttons. The 'Indicator' field contains 'C-ENC-INPT MORTALITIES OVER AGE 65'. The 'Start Month' field contains '5/2012'. The 'All Facilities' checkbox is unchecked. The 'Facility' field contains 'Midas General Hospital'. There are buttons for 'Save', 'Close', 'Enter Values', and 'Help'. Below these fields, there are four tabs: 'Totals', 'Service', 'Specialty', and 'Provider'. The 'Totals' tab is selected. It contains a table with two columns: 'Month' and 'Value'. The 'Month' column lists months from 5/2012 to 3/2013. The 'Value' column is empty. There is a small arrow icon next to the 'Value' header and a dropdown arrow at the bottom of the table.

Month	Value
5/2012	
6/2012	
7/2012	
8/2012	
9/2012	
10/2012	
11/2012	
12/2012	
1/2013	
2/2013	
3/2013	

Figure 2.38: Indicator Manual Entry form – Totals tab

## Service Tab

- 7 Use the **Service** tab (Figure 2.39) to add or modify existing Indicator summary data for a particular service. Select a **Service**; then enter or update Indicator values for the service beside each date. Continue adding services and data as needed.

**Indicator Manual Entry**

Indicator: C-ENC-INPT MORTALITIES OVER AGE 65

Start Month: 5/2012 All Facilities: ☐ Enter Values

Facility: Midas General Hospital

Totals **Service** Specialty Provider

Service	ACUTE CARE
ACUTE CARE	Month Value
	5/2012
	6/2012
	7/2012
	8/2012
	9/2012
	10/2012
	11/2012
	12/2012
	1/2013
	2/2013

Help

Figure 2.39: Indicator Manual Entry form – Service tab

## Specialty Tab

- 8 Use the **Specialty** tab (Figure 2.40) to add or modify existing Indicator summary data for a particular specialty. Select a **Specialty**; then enter or update Indicator values for that specialty beside each date. Continue adding specialties and data as needed.

**Indicator Manual Entry**

Indicator: C-ENC-INPT MORTALITIES OVER AGE 65

Start Month: 5/2012 All Facilities: ☐ Enter Values

Facility: Midas General Hospital

Totals Service **Specialty** Provider

Specialty	ED-Emergency Medicine
ED-Emergency Medicine	Month Value
	6/2012
	7/2012
	8/2012
	9/2012
	10/2012
	11/2012
	12/2012
	1/2013
	2/2013
	3/2013

Help

Figure 2.40: Indicator Manual Entry form – Specialty tab

## Provider Tab

- 9 Use the Provider tab to add or modify existing Indicator summary data for a one or more particular providers (Figure 2.41). Select a **Provider**; then enter or update Indicator values for that provider beside each date. Continue adding data as needed.

**Indicator Manual Entry**

Indicator: C-ENC-INPT MORTALITIES OVER AGE 65

Start Month: 5/2012 All Facilities: ☐ Enter Values

Facility: Midas General Hospital

Totals Service Specialty **Provider**

Provider	Month	Value
Atkins, Susan Alene	5/2012	
	6/2012	
	7/2012	
	8/2012	
	9/2012	
	10/2012	
	11/2012	
	12/2012	
	1/2013	
	2/2013	

Buttons: Save, Cancel, Help

Figure 2.41: Indicator Manual Entry form – Provider tab

- 10 When you have entered all necessary data, click Save. If you entered data in the Values column of the Provider tab, a confirmation box is displayed (Figure 2.42).

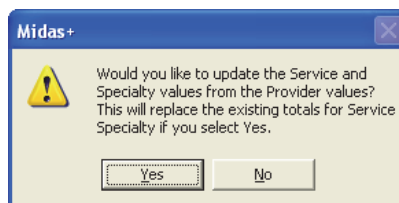


Figure 2.42: Update confirmation box

- 11 If you entered data for providers and the providers have Service and Specialty information recorded in the PROVIDER Dictionary (#1), click **Yes** in the dialog box to update the values on the Service and Specialty tabs with the data entered on the Provider tab. If a provider's specialty or service is already listed on the corresponding tabs, those values are updated to include the values on the Provider tab. Click **No** to leave the values on the Service and Specialty tabs unchanged. The values entered on the Totals tab are not affected.

## Deactivating an Indicator

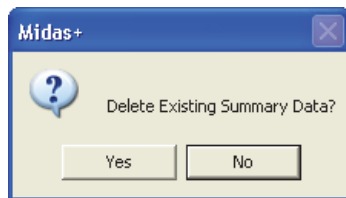
You can improve Indicator processing by deactivating the unused Indicators from the processing schedule. You can deactivate all types of Indicators except for Rates and Manual Indicators.

► **To Deactivate an Indicator Definition for Improved Processing:**

- 1 Open the Indicator Definition form and clear the **Active** checkbox.

*Note:* If you perform actions in addition to clearing the Active checkbox, you may see a different message, but Indicators will still be deactivated.

- 2 Click **Save**. A message displays asking if you want to delete existing summary data:



- 3 Choose one of the following options:
  - Select **Yes** to delete all summary data in the database but retain the Indicator Definition.
  - Select **No** to preserve existing summary data.

Whether you select Yes or No, the Indicator Definition will be retained, but the Indicator will no longer be subjected to any processing, such as the Weekly job.

## Section 3:

# Indicator Processing

Use the Indicator Processing function to process Counts, Sums, Rates, and Days at Risk. You can also use this function to modify job queues and to start or stop jobs.

### In this section:

- 3.2** Processing Indicators
- 3.4** Modifying the Job Queue
- 3.9** Starting Daily or Weekly Jobs

## Processing Indicators

Active Indicators are processed following any Save in the Indicator Definition function. Upon saving the Indicator, you are prompted whether to process it now; you can select Yes (Run Now) or No (Run Tonight). Either choice results in processing the Indicator for all qualified records—from the first qualified record stored on your system to the most recent.

*Note:* To exclude Indicators from processing when clicking Save in the Indicator Definition function, see “Deactivating an Indicator” on page 2.56.

You can use the Indicator Processing function to manually run Indicators and Profiles or to override weekly Indicator and Profile processing schedules. By default, all Indicators run once a week for the number of prior months specified in a site parameter. You can select Indicators and Profiles to run on a more frequent basis, such as nightly, and for the number of months you specify.

You might use this function if you want an Indicator that shows:

- Data accurate up to the prior day.  
You can select Indicators and Profiles to be processed on a nightly basis for the prior two months, even if the default is to process on Saturday night for the prior three months.
- Data not included in the weekly processing job, such as data from a date prior to the range processed in the weekly job.

For example, suppose you found an envelope full of patient complaints or compliments from 12 months ago and entered that data into the Patient Relations module, and then you compile the Profile. In this instance, the Profile does not include the newly-entered data because it is from earlier than the weekly job's date range.

- Data entered since the weekly processing job ran, so you can have up-to-date Indicators.

For example, suppose the weekly job runs on Saturday, the month ended on Tuesday, and you have a meeting on Thursday, for which you need a report that includes all of last month's data. In this instance, you would process the Indicator through Wednesday, to obtain a graph including data that wasn't processed during the weekly processing job.

*Note:* You can define an Indicator and, when prompted whether to process it now, choose No (Run Tonight). If you then use Indicator Processing to process the Indicator for a specific date range or number of months back before tonight's job runs, you prevent the system from processing the Indicator for all qualified records. If you do this, we recommend that you reprocess the Indicator for all records at your earliest convenience.

When using the Indicator Processing function, you set the date range or number of months back based on the Reference Date in the Indicator Definition form (for example, ENCOUNTER:Start Date). Then, choose to process the Indicators—either immediately or overnight. After processing completes, you can display the results of the selection process in a graph (Indicator) or spreadsheet (Profile).



► **To process Indicator Summaries (Counts, Sums, Rates, and Days at Risk):**

- 1 Select **Function > Reporting > Indicators > Indicator Processing** from the main menu bar, or select **Indicator Processing** from the SmartMenu or WorkSpace. The Indicator Processing form is displayed with Indicator Summaries selected (Figure 3.1).

Figure 3.1: Indicator Processing form – Process tab

- 2 In the **Indicators to Rerun** field, select one or more Indicators to be processed.  
*Note:* To view the Indicator Definition, right-click the Indicator and select Indicator Inquiry.
- 3 In the **Start Month** and **End Month** fields, enter the date range for which you want to capture the data. The system associates the date range you enter with the Reference Date field you selected when you defined the Indicator in the Indicator Definition form.
- 4 To process all Indicators in a Profile, enter one or more Profiles in the **Indicator Profiles to Rerun** field.
- 5 In the **Start Month** and **End Month** fields, enter the date range for which you want to capture the data. The system associates the date range you enter with the **Reference Date** you entered when you defined the Indicator in the Indicator Definition form.  
*Note:* When processing a Profile, the system processes all Indicators included in the Profile. It is not necessary to process each Indicator individually.
- 6 Select the **Run Tonight** option to process this Indicator with all other Indicators scheduled to be processed overnight, or select **Run Now** to process this Indicator now.
- 7 Click **Process**. You are returned to the preliminary Indicator Processing form.  
*Note:* Regardless of where you insert Indicators in the grid, once you save and reopen the page, the system will redisplay the list in the order in which the Indicators and Profiles are processed.

## Modifying the Job Queue

By default, all Indicators run once a week for the number of prior months specified in a site parameter. You can modify the job queue to override the weekly Indicator and Profile processing schedule.

When you manually process Indicator Summaries, those Indicator Summaries are placed in the Job Queue. Use the Modify Job Queue function to view, delete, or add new Indicators to the queue using one of the following three scheduling options.

- **Run Tonight Only** - to schedule the selected processes to run tonight.
- **Schedule Daily Indicator Summaries** - to schedule the selected processes to run daily
- **Schedule Weekly Indicator Summaries** - to schedule the selected processes to run weekly

All Indicators that are not listed under the three job options listed above are processed according to the system defaults or existing site parameter settings.

### Run Tonight Only

Select the **Run Tonight Only** option to process selected Indicator(s) and Profile(s) with all other Indicators scheduled to run overnight.

► **To Modify Job Queue and Run Indicators Tonight:**

- 1 Select **Function > Reporting > Indicators > Indicator Processing** from the main menu bar, or select **Indicator Processing** from the SmartMenu or WorkSpace. The Indicator Processing form is displayed.
- 2 Select the **Modify Job Queue** tab.

- 3 In the **Type of Modification** box, select (highlight) **Run Tonight Only** (Figure 3.4). If you previously selected an Indicator to process, it is displayed.

**Indicator Processing**

Process **Modify Job Queue** Start Daily/Weekly

Type of Modification

- Run Tonight Only
- Schedule Daily Indicator Summaries
- Schedule Weekly Indicator Summaries

**Indicators to Rerun**

	Start Month	End Month
C - ALL INPATIENTS - HLW	10/2012	11/2012
C - INPATIENTS < 50 - HLW	10/2012	11/2012
* [Empty]		

**Indicator Profiles to Rerun**

	Start Month	End Month
Hand Hygiene Profile	10/2012	11/2012
RISK PROFILE - 12869	10/2012	11/2012
* [Empty]		

Buttons: Modify, Cancel, Help

Figure 3.2: Modify Job Queue tab—Run Tonight Only

- 4 To rerun Indicators, select the Indicators in the **Indicators to Rerun** field.  
*Note:* To view the Indicator Definition, right-click the Indicator and select **Indicator Inquiry**.
- 5 Modify the **Start Month** and **End Month** fields, enter the date range for which you want to capture the data. The system associates the date range you enter with the Reference Date field you selected when you defined the Indicator in the Indicator Definition form.
- 6 To rerun Indicator Profiles, select the Indicator Profiles in the **Indicators to Rerun** field.
- 7 Modify the **Start Month** and **End Month** fields, enter the date range for which you want to capture the data. The system associates the date range you enter with the **Reference Date** field you selected when you defined the Indicator in the Indicator Definition form.  
*Note:* When processing a Profile, the system processes all Counts, Sums, Rates, and Days at Risk Indicators in the Profile. It is not necessary to process each Indicator individually.
- 8 Click **Modify**. The form remains open.  
*Note:* Regardless of where you insert Indicators in the grids, when you reopen the page, the system will redisplay the list in the order in which the Indicators and Profiles are processed.

## Schedule Daily Indicator Summaries

Select the **Schedule Daily Indicator Summaries** option to process selected Indicator(s) and Profile(s) daily.

► **To Modify Job Queue and Schedule Daily Indicator Summaries:**

- 1 Select **Function > Reporting > Indicators > Indicator Processing** from the main menu bar, or select **Indicator Processing** from the SmartMenu or WorkSpace. The Indicator Processing form is displayed.
- 2 Select the **Modify Job Queue** tab.
- 3 In the **Type of Modification** box, select (highlight) **Schedule Daily Indicator Summaries** (Figure 3.4). If you previously selected an Indicator to process, it is displayed.

The screenshot shows the 'Indicator Processing' window with the 'Modify Job Queue' tab selected. The 'Type of Modification' dropdown is set to 'Schedule Daily Indicator Summaries'. Below this, there are two tables:

Indicators to Schedule Daily		Months Back
► C-QM-Surgery Dept Admits to Critical Care		6
C-QM-Surgery Dept Death < 24 H Post Admission		6
C-RM-Falls Total x Location		6
C-RM-Falls Total x Shift		6

Indicator Profiles to Schedule Daily		Months Back
► Anesthesia Department Physician Profile		6
CM-Admissions		12
DEMO Scorecard		6
Infection Control Profile		6

Buttons: Modify, Cancel, Help.

Figure 3.3: Modify Job Queue tab—Schedule Daily Indicator Summaries

- 4 To schedule Indicators to run daily, select the Indicators in the **Indicators To Schedule Daily** field.  
*Note:* To view the Indicator Definition, right-click the Indicator and select Indicator Inquiry.
- 5 Modify the **Months Back** field to indicate the prior number of months for which you want to capture the data. The system associates the time period you enter with the Reference Date field you selected when you defined the Indicator in the Indicator Definition form.
- 6 To schedule Indicator Profiles to run daily, select the Indicator Profiles in the **Indicator Profiles to Schedule Daily** field.
- 7 In the **Months Back** field, enter the number of past months for which you want to capture the data. The Months Back field defaults to the prior entry; enter the number of past months for which you want to process selected Indicators. If you enter 1, the

selected Indicators will be processed for the previous month and current month. If 0 is entered, only the current month will be processed. Null entries or negative integers are not permitted. The system associates the time period you enter with the **Reference Date** field you selected when you defined the Indicator in the Indicator Definition form.

*Note:* When processing a Profile, the system processes all Counts, Sums, Rates, and Days at Risk Indicators in the Profile. It is not necessary to process each Indicator individually.

- 8 Click **Modify**. The form remains open.

*Note:* Regardless of where you insert Indicators in the grids, when you reopen the page, the system will redisplay the list in the order in which the Indicators and Profiles are processed.

## Schedule Weekly Indicator Summaries

Select the **Schedule Daily Indicator Summaries** option to process selected Indicator(s) and Profile(s) weekly.

- ▶ **To Modify Job Queue and Schedule Weekly Indicator Summaries:**
  - 1 Select **Function > Reporting > Indicators > Indicator Processing** from the main menu bar, or select **Indicator Processing** from the SmartMenu or WorkSpace. The Indicator Processing form is displayed.
  - 2 Select the **Modify Job Queue** tab.
  - 3 In the **Type of Modification** box, select (highlight) **Schedule Weekly Indicator Summaries** (Figure 3.4). If you previously selected an Indicator to process, it is displayed.

The screenshot shows the 'Indicator Processing' window with the 'Modify Job Queue' tab selected. The 'Type of Modification' dropdown menu is open, showing 'Schedule Weekly Indicator Summaries' as the selected option. Below this, there are two tables for scheduling weekly processing.

Indicators to Schedule Weekly		Months Back
▶ C-CDI-IP Reviews completed		6
C- QM- Anesthesia Complication		12
S-JAK-Total HCM AD Chart Cost		6
JPN S-ENC-HCM TOTAL AVOIDABLE DENIED DAYS		24

Indicator Profiles to Schedule Weekly		Months Back
▶ HCM Department Data		12
Medication-Related Triggers		6
HCM Support Services Data (SC)		6
HCM PROFILE - 12869		6

Figure 3.4: Modify Job Queue tab—Schedule Weekly Indicator Summaries

- 4 To schedule Indicators to run weekly, select the Indicators in the **Indicators To Schedule Weekly** field.

*Note:* To view the Indicator Definition, right-click the Indicator and select Indicator Inquiry.

- 5 Modify the **Months Back** field to indicate the prior number of months for which you want to capture the data. The system associates the time period you enter with the Reference Date field you selected when you defined the Indicator in the Indicator Definition form.
- 6 To schedule Indicator Profiles to run daily, select the Indicator Profiles in the **Indicator Profiles to Schedule Weekly** field.

*Note:* In the **Months Back** field, enter the number of past months for which you want to capture the data. The Months Back field defaults to the prior entry; enter the number of past months for which you want to process selected Indicators. If you enter 1, the selected Indicators will be processed for the previous month and current month. If 0 is entered, only the current month will be processed. Null entries or negative integers are not permitted. The system associates the time period you enter with the **Reference Date** field you selected when you defined the Indicator in the Indicator Definition form.

*Note:* When processing a Profile, the system processes all Counts, Sums, Rates, and Days at Risk Indicators in the Profile. It is not necessary to process each Indicator individually.

- 7 Click **Modify**. The form remains open.

*Note:* Regardless of where you insert Indicators in the grids, once you save and reopen the page, the system will redisplay the list in the order in which the Indicators and Profiles are processed.

## Starting Daily or Weekly Jobs

The Start Daily/Weekly tab shows Indicator and Worklist/Rule processing. Use the Start Daily/Weekly form (Figure 3.7) to view the current status of the processor and when the last job, Daily New job, and Weekly Update job were last completed. You can also start the processor for everything in the queue for either the daily job or weekly update job.

**Caution:** *If you start the processor, you begin to process everything in the job queue, even those items that were designated to “Run Tonight.” Starting the processor may have an impact on the performance of the Midas+ Care Management system.*

- **Last completed summary:** Shows the date and time that the last Summary of Indicators or Worklist Rules was completed as well as the requestor’s name or identifier (for example, *daily rerun*). If your job doesn’t display it may be because another job was more recently processed.
- **DAILY NEW summary last completed on:** Shows the date and time that the last Daily New Summary was completed (Figure 3.5).

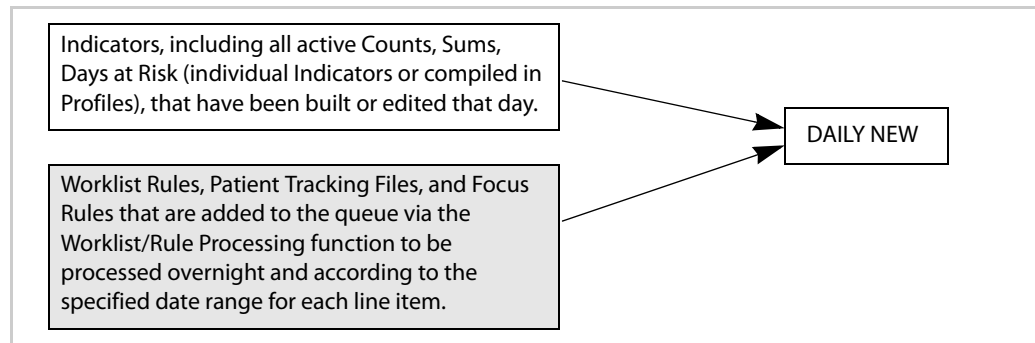


Figure 3.5: What is included in the DAILY NEW

- **WEEKLY UPDATE summary last completed on:** Shows the date the last Weekly Update Summary was run by the system if your site processes Indicator Summaries on a *weekly* basis (Figure 3.6). If you run the WEEKLY UPDATE manually with this function, this field is not affected; however, the DAILY NEW Summary field is affected because it runs Indicators that are new or modified.

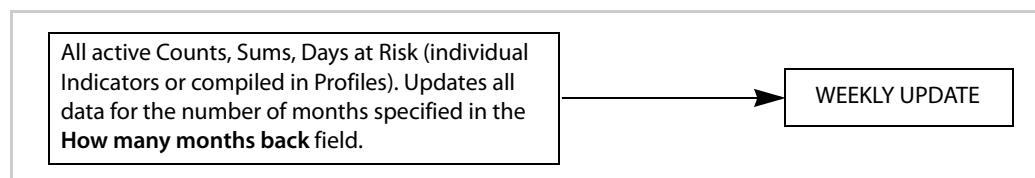


Figure 3.6: What is included in the WEEKLY UPDATE

You can start and stop a weekly update job or daily job. After starting a job, you can attempt to stop a job. The steps for starting a job and stopping a job are described in the following procedures.

**Important:** *If you click **Stop**, you stop the processor while it is compiling data. Some Indicators may have processed before you stopped the job. We recommend that you do not stop a job unless it is absolutely necessary.*

Use the **Update Status** button to refresh the form for the current status of a job being processed. This may be a job completed by the system (such as the Weekly Job) or one that you requested manually (for example, if you processed an Indicator). For more information, see “To display a job status:” on page 3.11.

► **To start a Daily New Summary or Weekly Update Job:**

- 1 Select **Function > Reporting > Indicators > Indicator Processing** from the main menu bar, or select **Indicator Processing** from the SmartMenu or WorkSpace. The Indicator Processing form is displayed.
- 2 Select the **Start Daily/Weekly** tab (Figure 3.7).

**Indicator Processing**

Process Modify Job Queue **Start Daily/Weekly**

Last completed summary: RERUN COMPLETED 12/5/2012 2:12P (requested by daily rerun)

DAILY NEW summary last completed on: 12/5/2012 6:57A

WEEKLY UPDATE summary last completed on: 12/5/2012 6:59A

Start Job Type

☒ Weekly Update Job How many months back: 99

☐ Daily New Summary Job

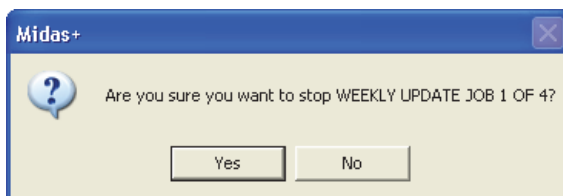
Current Jobs:

Type	User	Started	Requested	Processed	Remaining	Stop
DAILY NEW	Akers, Melissa	12/5/2012 2:12P	24	2	22	Stop

Start Job Update Status Close Help

Figure 3.7: Indicator Processing form—Start Daily/Weekly tab

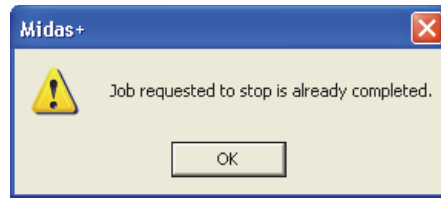
- 3 Select one of the following jobs to start:
    - **Weekly Update Job**
    - **Daily New Summary Job**
  - 4 If you selected the **Weekly Update Job**, enter the number of past months for which you want to capture data in the **How many months back** field.
  - 5 Click **Start Job**. The selected job is started.
- **To stop a Daily New Summary or Weekly Update Job:**
- 1 Click **Stop** to stop a selected job process. The following message is displayed.





- 2 Click **Yes** to Stop the job, or click **No** to cancel the request to stop the job. If you wait, the job might be complete.

If the job has already finished running, the following message is displayed.



► **To display a job status:**

- 1 Select one of the following job options for which you want to display the job status:
  - **Weekly Update Job**
  - **Daily New Summary Job**
- 2 If you selected the **Weekly Update Job**, enter the number of past months for which you want to capture data in the **How many months back** field.
- 3 Click the **Start Job** button and the **Update Status** button. The Current Jobs area displays the following information:
  - **Type** - The job type.
  - **User** - The user who initiated the job.
  - **Started** - The date and time that the job started.
  - **Requested** - The number of Indicators, Indicator Profiles, and Worklist Rules requested to be processed.
  - **Processed** - The number of Indicators, Indicator Profiles, and Worklist Rules processed.
  - **Remaining** - The Indicators, Indicator Profiles, and Worklist Rules remaining to be processed.



## Section 4:

# Indicator Graphs

Use the Indicator Graphs function to create graphs based on your Indicators. Use this function to trend your data monthly, quarterly, semi-annually, or annually. You can also graph Indicators by provider or other crosstab variables. After you have graphed your Indicators, you can change the type of graph (for example, change a bar graph to a pie chart) or change the graph's attributes, such as titles, scaling, colors, and comments. You can also generate statistical process control (SPC) charts based on Indicator data.

### In this section:

- 4.2** Compiling Indicator Graphs
- 4.6** Working with Indicator Graphs
- 4.19** Drilling Down to Encounter or Non-patient Data

## Compiling Indicator Graphs

Use the Indicator Graphs function to create graphs based on your Indicators.

► **To compile Indicator graphs:**

- 1 Select **Function > Reporting > Indicators > Indicator Graphs** from the main menu bar, or select **Indicator Graphs** from the SmartMenu. The Compile Indicator Graphs form is displayed (Figure 4.1).

Figure 4.1: Compile Indicator Graphs form

- 2 In the **Start Month** field, enter the starting month/year.
- 3 In the **End Month** field, enter the ending month/year.
- 4 In the **Trend** field, select the time frame by which you want to group the data: monthly, quarterly, semi-annually, annually, or period. Period summarizes all of the data for the time period into a single value. If you select Period, it:
  - Clears and disables the Reference By Fiscal year checkbox.
  - Makes Provider and Crosstab graphs unavailable.
- 5 In the **No. of Comparison Years** field, enter a single positive integer (1-9) to compare data from that number of prior years for the same time period you specified in steps 2 and 3. This works only if that time period is 12 months or less. The resulting graph displays data for the date range you selected, as well as data from the corresponding date range for the specified number of years prior to the selected date range.
 

*Note:* Entering a number in the No. of Comparison Years field disables the Show SPC Chart button, and makes Provider and Crosstab graphs unavailable.
- 6 If appropriate, mark the **Reference by Fiscal Year** checkbox to indicate the data should be graphed by fiscal year. For details, see "Compiling Indicator Graphs by Fiscal Year" on page 4.4.

- 7 In the **Indicator** field, select one or more Indicators.

*Note:* To view the Indicator Definition, right-click the Indicator and select Indicator Inquiry.

- 8 In the **Facility** field, select one or more facilities, or mark the **All Facilities** checkbox to view data from all facilities.

*Note:* Depending on how their user definitions are set up, users may or may not have access to the data of all facilities. If this is the case, the **All Facilities** checkbox is deactivated. If your organization is a single facility site, it may have chosen to deactivate both the Facility button and the All Facilities checkbox.

*Note:* If the **All Facilities** checkbox is marked, unless the facility referencing Manual Entry data is selected, data from Manual Entry Indicators does not display on the graph.

- 9 Choose one of the following options:
- If your facility uses statistical process control (SPC) charts, click **Show SPC Chart** to generate the chart for the selected Indicators. SPC charts appear in your default Web browser. For more information, see "Section 6: Statistical Process Control Charts".
  - Click **Show Graph** to compile the graph. The Indicator data is displayed graphically (Figure 4.2).

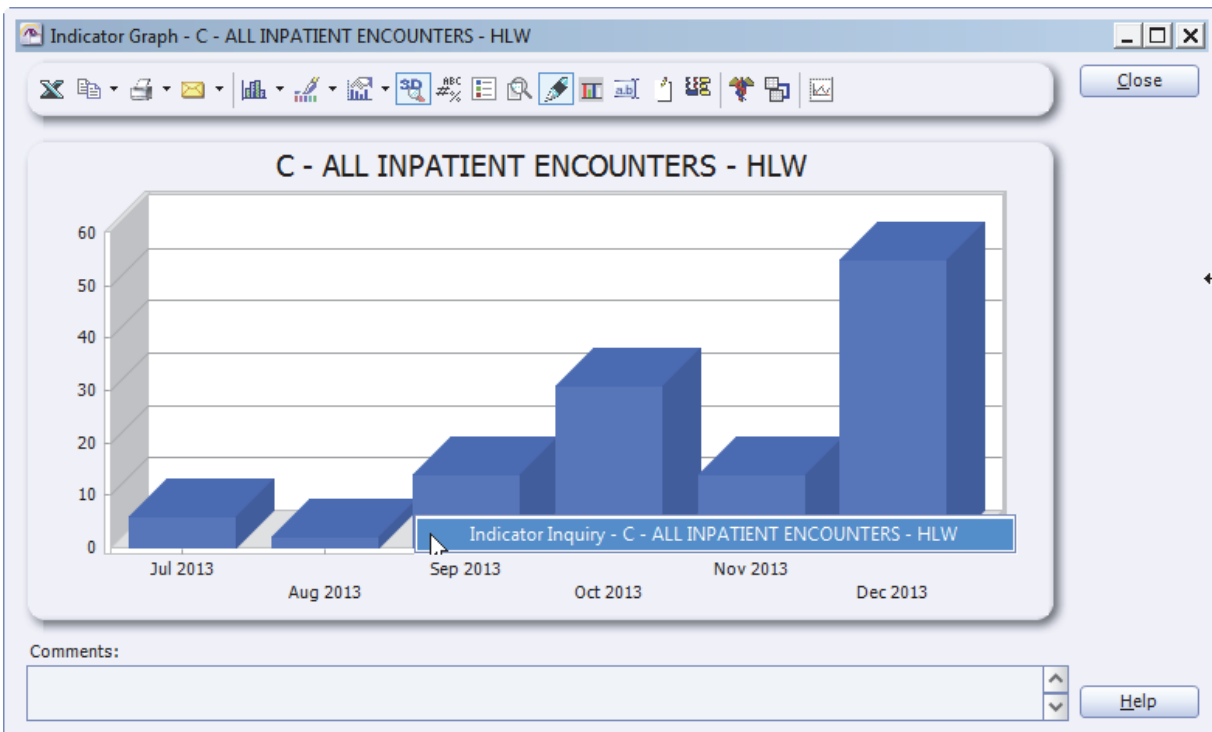


Figure 4.2: Indicator Graph form with graph and right-click option displayed

If you entered a value in the No. of Comparison Years field, the data is displayed with a bar for each of the years you specify to compare (Figure 4.3). The bars aggregate the data for the time frame you specified in the Trend field.

Comparison year data may be easier to view if you select the Line graph style from the Graph Gallery (instead of using the default bar graph) and switch off the 3D effect using the 3D/2D icon. Then, click **Show Legend** to more readily see which line represents which year.

Also note that if you selected Period in the Trend field or specified a number of comparison years, the provider and crosstab graph options are unavailable.

If you selected Period in the Trend field or specified a number of comparison years, the provider and crosstab graph options are unavailable.

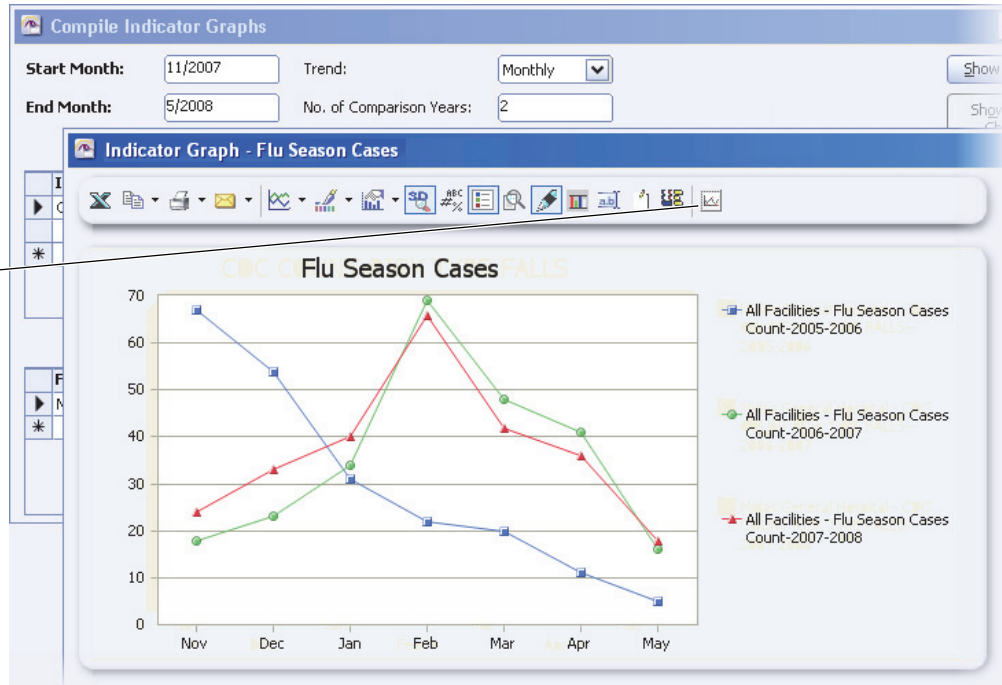


Figure 4.3: Indicator Graph form showing a 2D line graph of comparison years data

- 10** To view the Indicator Definition from the graph, right-click any of the graph's data entry markers (for example, a bar on a bar graph) and select **Indicator Inquiry**.

#### System Manager:

If your organization is a single facility site and has only one facility defined in the FACILITY Dictionary, the Site Parameter IND-SINGLE FACILITY can be set. This site parameter deactivates the Facility button and the All Facilities checkbox. To have this site parameter set, log in to [www.midasplus.com](http://www.midasplus.com) and submit a request for assistance through the Support Center.

## Compiling Indicator Graphs by Fiscal Year

The site parameter IND-FISCAL YEAR START MONTH allows you to view Indicators in accordance with your organization's fiscal year. This is useful if your fiscal year differs from the calendar year.

When the site parameter is set active, and you select Quarterly, Semi-Annually, or Annually in the Trend drop-down list box, the Reference by Fiscal Year checkbox is available in the Indicator Graphs function (Figure 4.4).

**System Manager:**

To activate or deactivate this site parameter, log in to [www.midasplus.com](http://www.midasplus.com) and submit a request for assistance through the Support Center.

Figure 4.4: Reference by Fiscal Year checkbox in Compile Indicator Graphs Entry form

When you mark the Reference by Fiscal Year checkbox, FY is displayed on the Indicator Graph (Figure 4.5) to show the fiscal year in which the data falls.

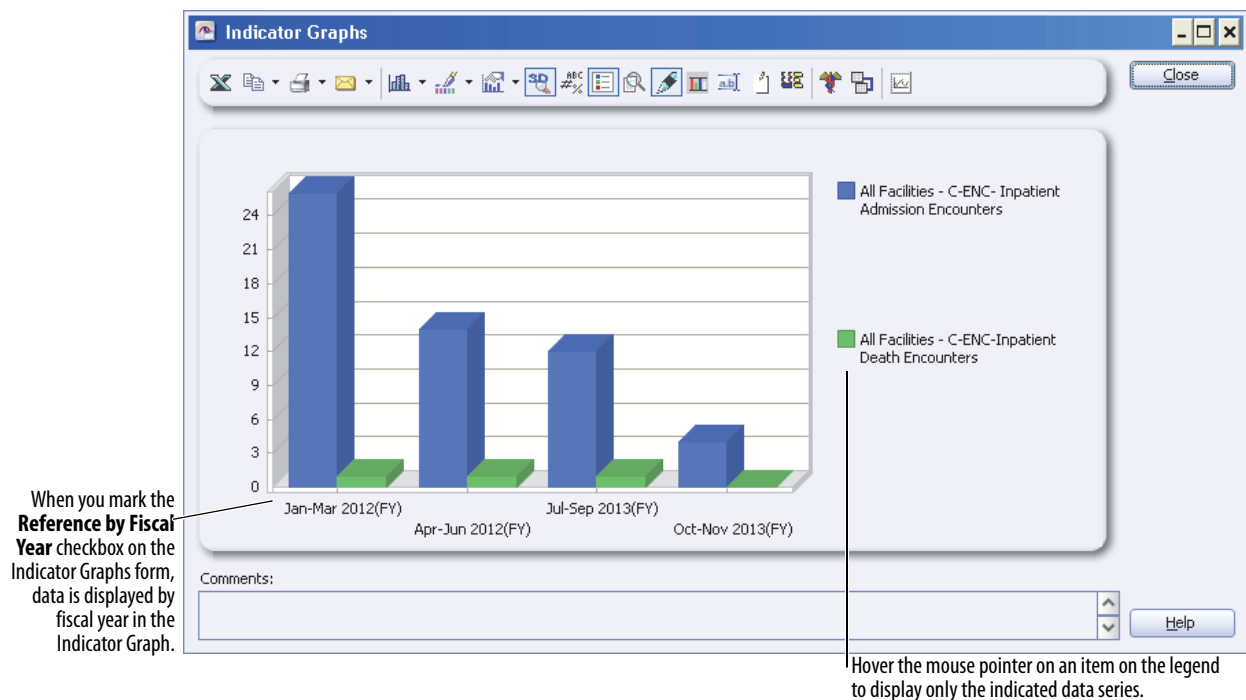


Figure 4.5: Indicator Graph with data displayed by fiscal year


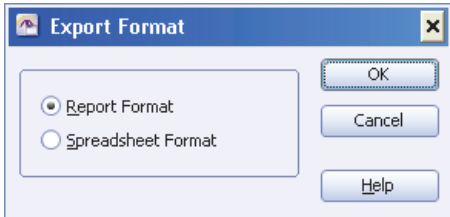

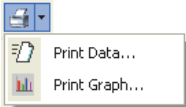
If you hover your mouse pointer on a graph bar, only that bar or series is displayed.

## Working with Indicator Graphs

After you have compiled the Indicator data into a graph, you have the options listed as follows.




*Note:* Changes you make to a graph persist only until you close the graph window; the system does not store them. To keep a copy of any changes you make to the graph (such as title, palette, labels, and so forth), you must print a paper copy of the graph, export to Excel in Report format, or copy the graph and paste it into another application.

Table 4.1: Icon functions

Icon	Function
	<p>The option to display the report in Report Format or Spreadsheet format (Microsoft Excel) is displayed.</p> <div data-bbox="461 732 907 947"></div> <p>Select <b>Report Format</b> to export the data to Excel in a format designed for printing or inclusion in a presentation. The formatting includes blank rows as separators, crosstabs indented under indicators, and bold font for column headings.</p> <p>Select <b>Spreadsheet Format</b> to export the data to Excel in a format optimized for further data manipulation and analysis options, such as sorting.</p>
	<p><b>Copy to Clipboard</b></p> <p>Click this icon to copy either the numerical data of the graphed Indicators or the graph itself to the Microsoft Windows® clipboard so you can paste the data into another application, such as Microsoft Word or Microsoft PowerPoint®. Click this icon to display a drop-down menu from which to select how the data is to be copied:</p> <ul style="list-style-type: none"><li>• As a Bitmap</li><li>• As a Metafile</li><li>• As Text</li></ul>
	<p><b>Print Options</b></p> <p>Click this icon to display a drop-down menu of printing options: Print Graph and Print Data. Select <b>Print Graph</b> to open the print dialog box and print the graph. Select <b>Print Data</b> to open the print dialog box to print the data.</p>



**Table 4.1: Icon functions (Cont'd)**

Icon	Function
	<p><b>E-Mail Options</b></p> <p>Click this icon to display a drop-down menu from which to select how the data is to be e-mailed:</p> <ul style="list-style-type: none"> <li>• E-Mail Data (.xls)</li> <li>• E-Mail Graph (.bmp)</li> <li>• E-Mail Graph and Data (.bmp and .xls)</li> </ul>
	<p><b>Gallery</b></p> <p>Select this icon to display a drop-down menu of options:</p> <p><b>Vertical Bar</b> Select this icon to display a vertical bar graph. This is the default graph.</p> <p><b>Horizontal Bar</b> Select this icon to display the graph as a horizontal bar graph.</p> <p><b>Line</b> Select this icon to display a line graph.</p> <p><b>Pie</b> Select this icon to display a pie chart.</p> <p><b>Doughnut</b> Select this icon to display a doughnut chart.</p> <p><b>Pyramid</b> Select this icon to display a pyramid chart.</p> <p><b>Area</b> Select this icon to display an area graph.</p> <p><b>Cube</b> Select this icon to display a cube graph.</p> <p><b>Curve</b> Select this icon to display a curve graph.</p> <p><b>Area-Curve</b> Select this icon to display a graph showing the area under the curve.</p> <p><b>Scatter</b> Select this icon to display a scatter plot.</p> <p><b>Step</b> Select this icon to display a step graph.</p> <p><i>Note:</i> Only one set of data can be displayed using the Pie, Doughnut, or Pyramid graphs.</p>
	<p><b>Palette Selector</b></p> <p>Click this icon to display a drop-down menu of color palette options.</p>

**Table 4.1: Icon functions (Cont'd)**


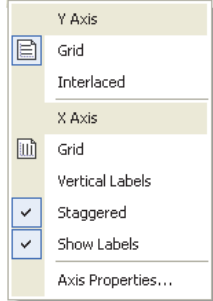






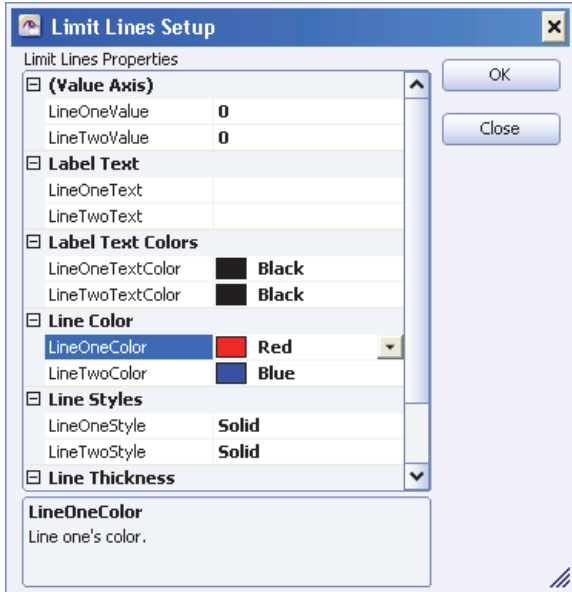
Icon	Function
 	<p><b>Axes Settings</b></p> <p>Click this icon to display a drop-down menu from which to select one or more axis settings:</p> <p><b>Y Axis</b></p> <ul style="list-style-type: none"> <li>• Grid</li> <li>• Interlaced</li> </ul> <p><b>X Axis</b></p> <ul style="list-style-type: none"> <li>• Grid</li> <li>• Vertical Labels</li> <li>• Staggered</li> <li>• Show labels</li> </ul> <p>Selecting options above displays the graph in the selected axis settings.</p> <p><i>Note:</i> The X and Y axis options are reversed when the Horizontal Bar graph display is selected.</p> <p><b>Axis Properties</b></p> <p>The <b>Graph Axis Properties</b> form is described in “Modifying Axis Settings” on page 4.13.</p>
	<p><b>3D/2D</b></p> <p>Click this icon to toggle between displaying the graph in 2 dimensions and 3 dimensions. The default is 3 dimensions.</p>
	<p><b>Point Labels</b></p> <p>Click this icon to display point labels on the graph. If a display symbol or volume indicators were defined in Indicator Definition, that data is displayed when you click the <b>Point Labels</b> icon.</p> <p>For example, if you are compiling an Indicator Graph for units of blood, the graph displays the units as <b>5 cc</b>.</p> <p>The <b>Point Labels</b> default is <b>Off</b>.</p>
	<p><b>Legend</b></p> <p>Click this icon to toggle between displaying and not displaying the legend. The default is <b>On</b> for graphs displaying multiple Indicators or series.</p>
	<p><b>Zoom</b></p> <p>To zoom in on the graph, click this icon, then click and drag on the part of the graph you want to magnify.</p>
	<p><b>Highlight Current Series</b></p> <p>Click this icon to toggle the highlighting feature of the graph. The default is <b>On</b>.</p>


Table 4.1: Icon functions (Cont'd)

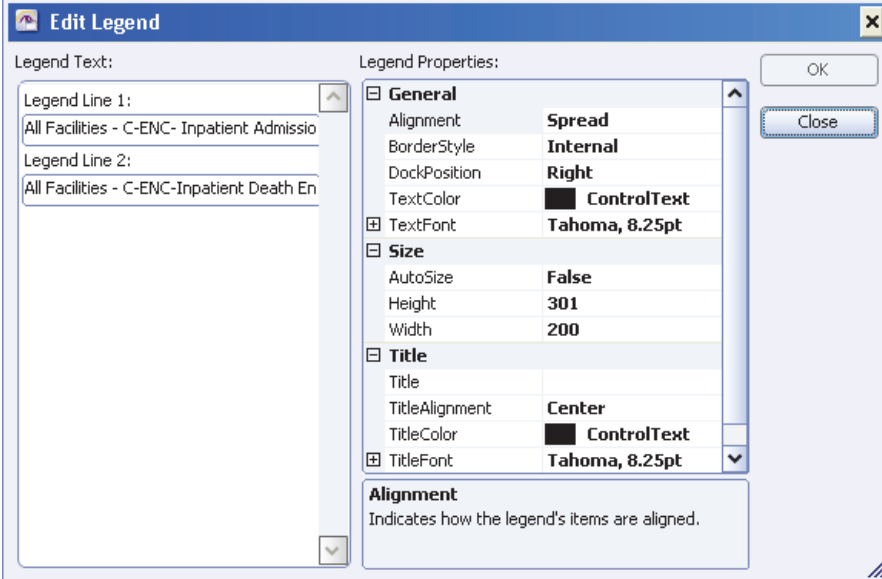
Icon	Function
	<p><b>Set Limit Lines</b></p> <p>This function is used for displaying one or two horizontal lines on the value axis and entering label text to identify what the lines represent. It is useful for delineating the benchmark value for rates. Click this <b>Set Limit Lines</b> icon to display the Limit Lines Setup form:</p>  <p>The <b>Limit Lines Setup</b> dialog box contains the following sections:</p> <ul style="list-style-type: none"><li><b>Limit Lines Properties</b><ul style="list-style-type: none"><li><b>(Value Axis)</b><ul style="list-style-type: none"><li>LineOneValue: 0</li><li>LineTwoValue: 0</li></ul></li><li><b>Label Text</b><ul style="list-style-type: none"><li>LineOneText: </li><li>LineTwoText: </li></ul></li><li><b>Label Text Colors</b><ul style="list-style-type: none"><li>LineOneTextColor: Black</li><li>LineTwoTextColor: Black</li></ul></li><li><b>Line Color</b><ul style="list-style-type: none"><li>LineOneColor: Red</li><li>LineTwoColor: Blue</li></ul></li><li><b>Line Styles</b><ul style="list-style-type: none"><li>LineOneStyle: Solid</li><li>LineTwoStyle: Solid</li></ul></li><li><b>Line Thickness</b><ul style="list-style-type: none"><li>LineOneThickness: </li><li>LineTwoThickness: </li></ul></li></ul></li></ul> <p><b>Value Axis</b></p> <p>Enter the Axis values for LineOneValue and LineTwoValue. The numbers must be within the ranges shown on the <b>Value Axis</b>.</p> <p><b>Label Text</b></p> <p>Enter the label text for <b>LineOneText</b> and <b>LineTwoText</b>.</p> <p><b>Label Text Colors</b></p> <p>Select the colors for <b>LineOneTextColor</b> and <b>LineTwoTextColor</b> from the drop-down menu.</p> <p><b>Line Color</b></p> <p>Select the colors for <b>LineOneColor</b> and <b>LineTwoColor</b> from the drop-down menu.</p> <p><b>Line Styles</b></p> <p>Select the line one and line two styles from the drop-down menu.</p> <p><b>Line Thickness</b></p> <p>Enter a thickness for <b>LineOneThickness</b> and <b>LineTwoThickness</b>.</p>

**Table 4.1: Icon functions (Cont'd)**

Icon	Function
	<p><b>Edit Title</b></p> <p>Use this function to tailor the appearance of graph titles by modifying their text, format, and font properties. You can have up to three graph titles, each of which can be modified independently of the others.</p> <p>Click the <b>Edit Title</b> icon to open the <b>Graph Title Properties</b> form.</p>  <p>For each title, click the appropriate tab (Title 1, Title 2, or Title 3), and modify the title's attributes as necessary.</p> <p><b>Title</b></p> <p>Enter or edit the title text</p> <p><b>Title Format</b></p> <p>Select the <b>TextAlignment</b> from the drop-down menu.</p> <p>Select a <b>TextColor</b> from the three-tab drop-down menu.</p> <p>Select a <b>TextFont</b> by clicking the  and then use the <b>Font</b> form to specify the title font. (If you want to modify a single <b>TextFont</b> attribute, you can click the , scroll down to the attribute, and then select an option from the attribute's drop-down menu.)</p> <p>Select a <b>TitleDockArea</b> from the drop-down menu. This selection combines with your <b>TextAlignment</b> selection to determine the position of the title.</p>
	<p><b>Edit Comments</b></p> <p>Click this icon to toggle the Comments field between read-only and read and write. The default is <b>read-only</b>.</p>

Table 4.1: Icon functions (Cont'd)

Icon	Function
	<p><b>Edit Legend</b></p> <p>Use this function to tailor the appearance of the graph legend by modifying its text, format, and font properties.</p> <p>Click the <b>Edit Legend</b> icon to open the <b>Edit Legend</b> form.</p>



Under **Legend Text**, edit the lines as necessary.

Under **Legend Properties**, format the legend as follows.



#### General

Select an **Alignment** from the drop-down menu. This determines the horizontal or vertical placement of the legend within the space determined by the **DockPosition** setting.

Select a **Border Style** from the drop-down menu.

Select a **DockPosition** from the drop-down menu, which determines the position of the legend relative to the graph.

Select the color for the **TextColor** from the drop-down menu.

Select the **TextFont** by clicking the  and then use the **Font** form to specify the title font. (If you want to modify a single **TextFont** attribute, you can click the , scroll down to the attribute, and then select an option from the attribute's drop-down menu.)

#### Size



To specify the shape of the space the legend occupies, set **AutoSize** to False, and then set **Height** and **Width** as appropriate.

#### Title




Enter or edit the **Title** text

Select a **TitleAlignment** from the drop-down menu.

Select a **TitleColor** from the three-tab drop-down menu.

Select a **TitleFont** by clicking the  and then use the **Font** form controls to specify the title font. (As above, you can click the  to modify a single **TextFont** attribute.)

**Table 4.1: Icon functions (Cont'd)**

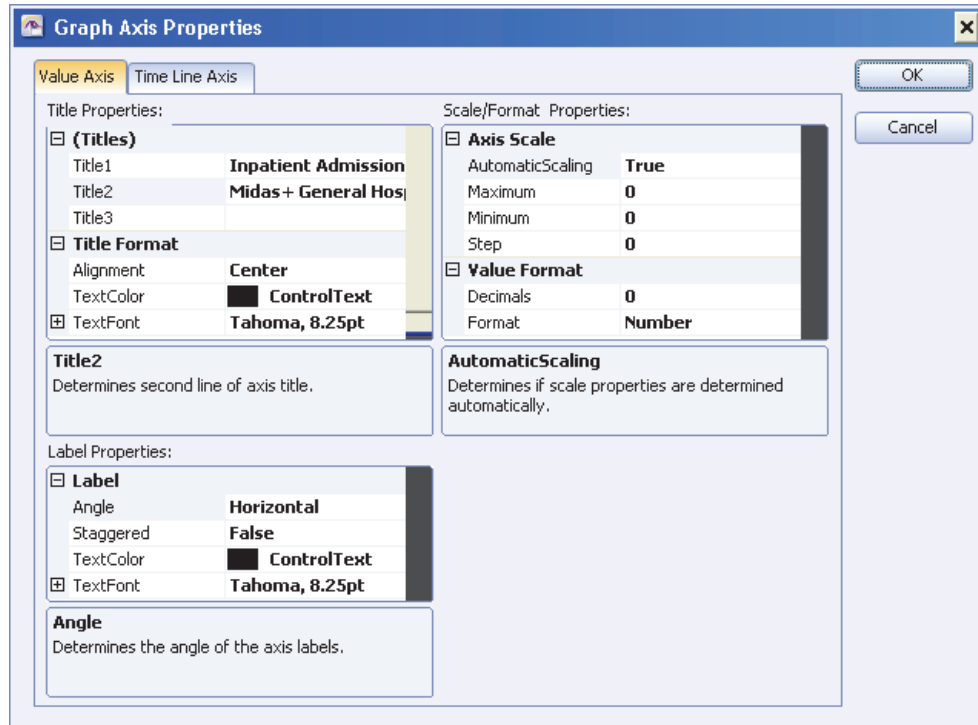
Icon	Function
	<p><b>Create a new graph based on Providers</b></p> <p>The <b>Select Up to 13 Provider Items to Graph</b> form is described in “Re-graphing the Data by Provider” on page 4.15. This function is not available if, in the Indicator Graphs form, you selected Period in the Trend field or entered a number in the No. of Comparison Years field.</p>
	<p><b>Create a new graph based on Crosstabs</b></p> <p>The <b>Select Up to 13 Crosstab Items to Graph</b> form is described in “Re-graphing the Data by Cross-tabulated Variables” on page 4.17. This function is not available if, in the Indicator Graphs form, you selected Period in the Trend field or entered a number in the No. of Comparison Years field.</p>
	<p><b>Open SPC (statistical process control) Chart based on current graph options</b></p> <p>The <b>SPC features</b> are described in “Section 6: Statistical Process Control Charts”.</p>

## Modifying Axis Settings

After you compile a graph, you can change its appearance in a variety of ways, including formatting its axes. In addition to the selections available from the Axes Setting drop-down menu, you can modify the titles, labels, and scales.

### ► To modify axis settings

- 1 On an Indicator Graph window, click , and then, from the drop-down menu, select **Axis Properties**. The **Graph Axis Properties** form (Figure 4.6) is displayed.



**Graph Axis Properties**

Value Axis | Time Line Axis

**Title Properties:**

{Titles}	
Title1	Inpatient Admission
Title2	Midas+ General Hos
Title3	

**Title Format**

Alignment	Center
TextColor	ControlText
TextFont	Tahoma, 8.25pt

**Title2**  
Determines second line of axis title.

**Scale/Format Properties:**

**Axis Scale**

AutomaticScaling	True
Maximum	0
Minimum	0
Step	0

**Value Format**

Decimals	0
Format	Number

**AutomaticScaling**  
Determines if scale properties are determined automatically.

**Label Properties:**

**Label**

Angle	Horizontal
Staggered	False
TextColor	ControlText
TextFont	Tahoma, 8.25pt

**Angle**  
Determines the angle of the axis labels.

OK Cancel





Figure 4.6: Graph Axis Properties

- 2 Click the tab for the axis you want to modify.

*Note:* You can modify Title Properties and Label Properties for both axes, but you can modify the Scale/Format Properties only for the value axis. You establish the time line axis Scale/Format properties when you initiate the graph on the Indicator Graphs form.

3 Use the following table to guide your choices for axis properties.

**Table 4.2: Graph Axis Properties Options**

Properties	Options	Detail
<b>Title</b> Enter and format text for axis titles—text that describes or clarifies the items on that axis.	Titles	Enter the text you want for each of three available title lines. Title1 is the line of text that is stacked above or to the outside of Title2. In turn, Title2 stacks above or outside of Title3.
	Title Format	Select the <b>Alignment</b> from the drop-down menu. Select the color for the <b>TextColor</b> from the drop-down menu. Select the <b>TextFont</b> by clicking the  and then use the <b>Font</b> form to specify the title font. (If you want to modify a single <b>TextFont</b> attribute, you can click the  , scroll down to the attribute, and then select an option from the attribute's drop-down menu.
<b>Label</b> Format the axis labels by choosing their angle, spacing, font, and color.	Label	Select the <b>Angle</b> from the drop-down menu. Select from the drop-down menu to have axis labels <b>Staggered</b> or aligned. Select the color for the <b>TextColor</b> from the drop-down menu. Select the <b>TextFont</b> by clicking the  and then use the <b>Font</b> form to specify the title font. (If you want to modify a single <b>TextFont</b> attribute, you can click the  , scroll down to the attribute, and then select an option from the attribute's drop-down menu.
<b>Scale/Format</b> (Value Axis only) Set the range and steps of the axis scale and indicate the kind of number displayed.	Axis Scale	To modify Axis Scale parameters, you must set <b>AutomaticScaling</b> to False. For <b>Maximum</b> , enter the highest value you want the graph to display. For <b>Minimum</b> , enter the least value you want the graph to display. For <b>Step</b> , enter the interval you want between axis labels.
	Value Format	In <b>Decimals</b> , enter how many numerals you want to appear after the decimal point. Select the <b>Format</b> (such as percentage or currency) from the drop-down menu.

4 When you have finished making modifications, click **OK**.




## Re-graphing the Data by Provider

If you completed the Provider field in the Indicator Definition function, you can re-graph your Indicator data by the provider associated with the Indicator.

*Note:* If the Provider field was not completed when the Indicator was built, you can return to the Indicator Definition function and complete the field. The system updates the data retroactively *after* the Indicator is processed.

### ► To re-graph your data by provider:

- 1 Click . If you selected one Indicator to graph, skip to Step 3. If you graphed more than one Indicator, the Select an Indicator form is displayed (Figure 4.7).

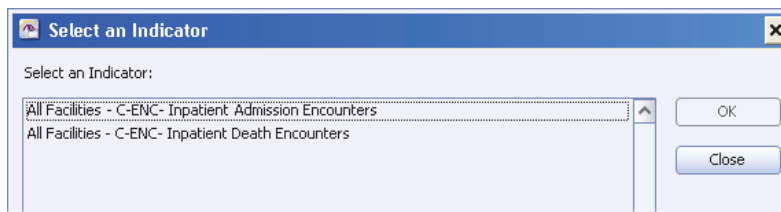
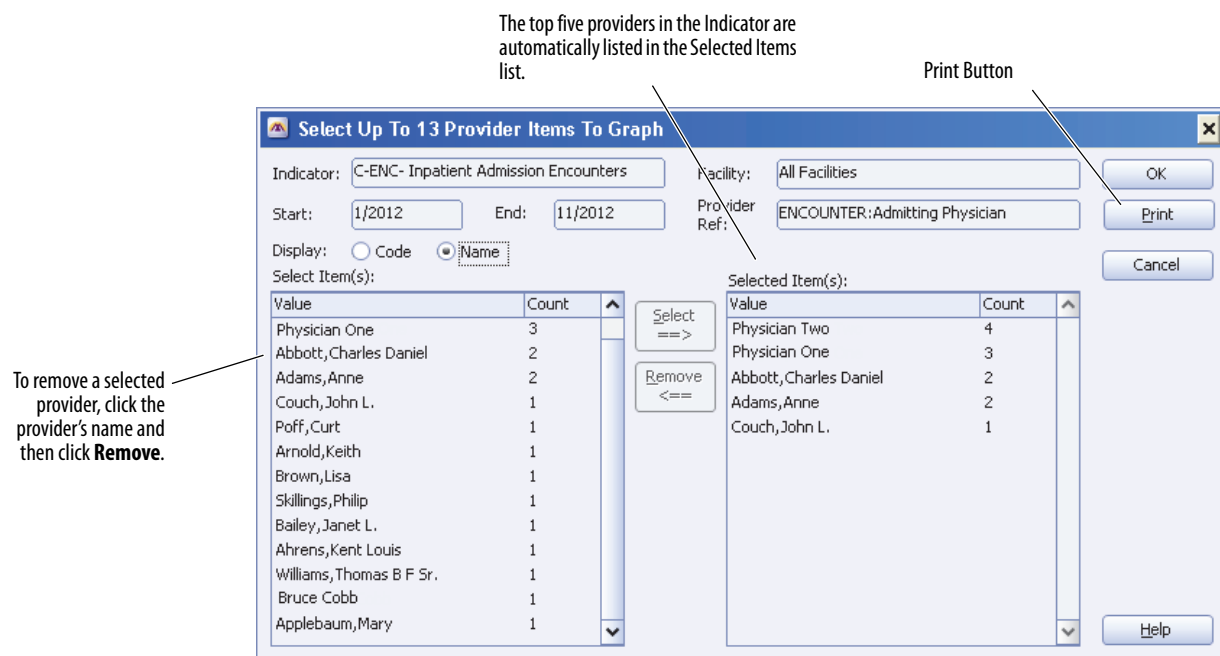


Figure 4.7: Select an Indicator form

- 2 Select the Indicator for which you want to view the provider information, and then click **OK**. The **Select Up to 13 Providers to Graph** form (Figure 4.8) is displayed with the top five providers for this Indicator in the Selected Item(s) list.

The top five providers in the Indicator are automatically listed in the Selected Items list.

Print Button



To remove a selected provider, click the provider's name and then click **Remove**.

Value	Count
Physician One	3
Abbott, Charles Daniel	2
Adams, Anne	2
Couch, John L.	1
Poff, Curt	1
Arnold, Keith	1
Brown, Lisa	1
Skilling, Philip	1
Bailey, Janet L.	1
Ahrens, Kent Louis	1
Williams, Thomas B F Sr.	1
Bruce Cobb	1
Applebaum, Mary	1

Value	Count
Physician Two	4
Physician One	3
Abbott, Charles Daniel	2
Adams, Anne	2
Couch, John L.	1

Figure 4.8: Select Up to 13 Provider Items to Graph form

- 3 To select an item to graph, click the item's name in the **Select Item(s)** list, and then click **Select** (or double-click the item's name). The item's name is moved to the Selected Item(s) list. You may select up to 13 items.

*Note:* To deselect a provider, click the provider's name to highlight it in the Selected Item(s) list, and then click **Remove** (or double-click the provider's name).

- 4 *Optional:* To print re-graphed Indicator data by provider, click **Print**. A Print Setup box is displayed. Select the appropriate printer, and click **OK**. The report printed report displays the words "CONFIDENTIAL INFORMATION", as well as the name of the Indicator selected. Qualifying provider information is listed on the report, including the number of times the provider is counted. This number is the same as that displayed in the Count column after each provider name in the **Select Up to 13 Provider Items to Graph** form.
- 5 Click **OK** to generate the provider graph (Figure 4.9).

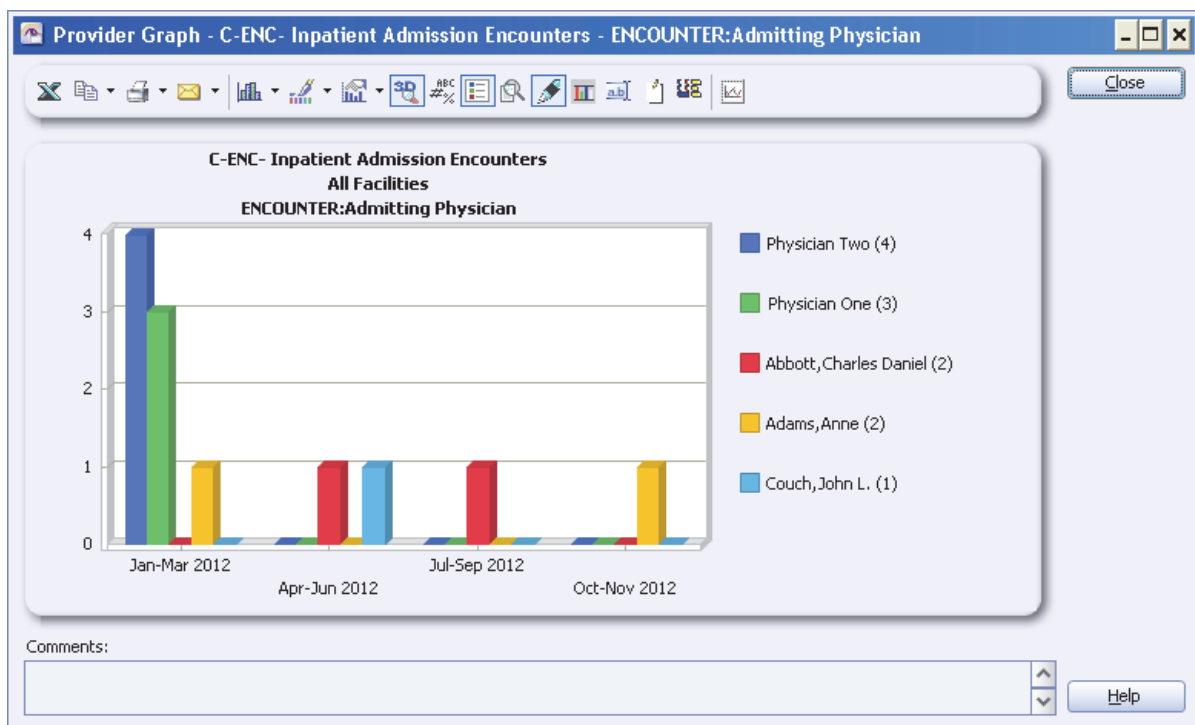



Figure 4.9: Provider Graph example

## Re-graphing the Data by Cross-tabulated Variables

If you completed the Crosstab field in the Indicator Definition function, you can re-graph your Indicator data by the variable you selected.

*Note:* If the Crosstab field was not completed, you can return to the Indicator Definition function and complete it. The system updates the data retroactively *after* the Indicator is processed.

### ► To re-graph your data by crosstab variables:

- 1 Click . If you selected one Indicator to graph, skip to Step 3. If you graphed more than one Indicator, the Select an Indicator form is displayed (Figure 4.10).

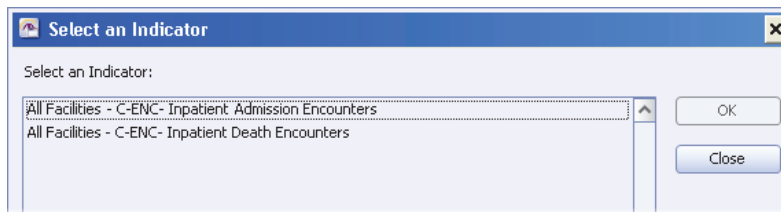
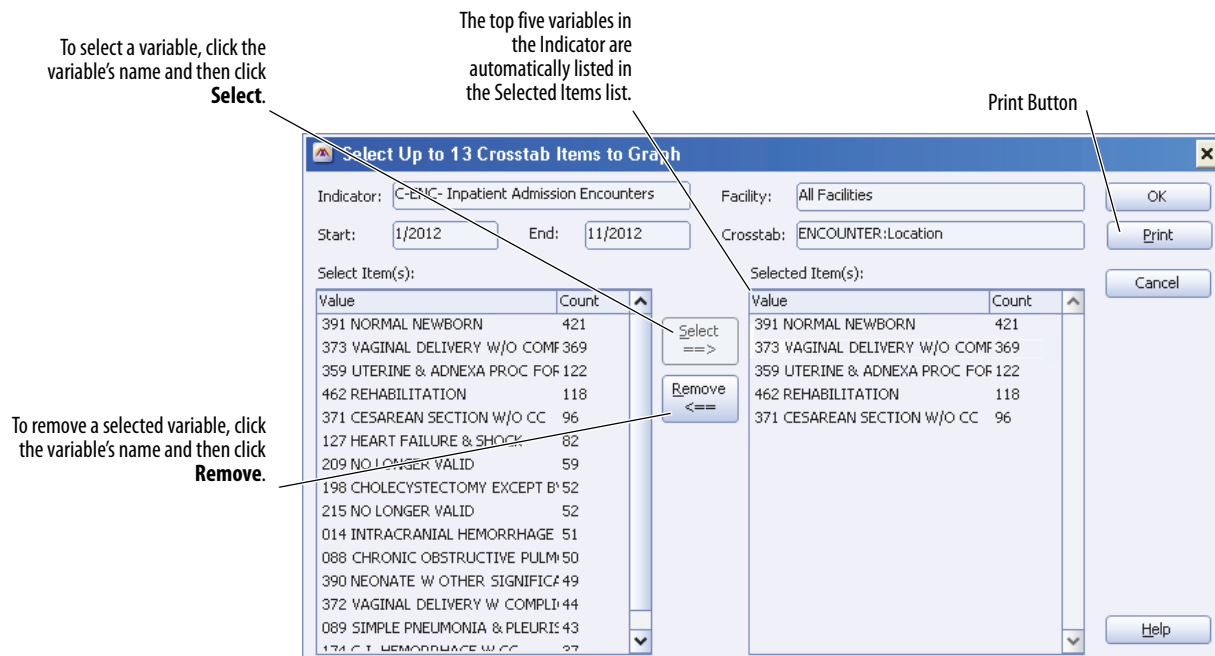


Figure 4.10: Select an Indicator form

- 2 Select the Indicator for which you want to view the crosstab information, and click **OK**. The **Select Up to 13 Crosstab Items to Graph** form is displayed with the top five crosstab variables for this Indicator in the Selected Item(s) list (Figure 4.11).



To select a variable, click the variable's name and then click **Select**.

The top five variables in the Indicator are automatically listed in the Selected Items list.

Print Button

To remove a selected variable, click the variable's name and then click **Remove**.

Value	Count
391 NORMAL NEWBORN	421
373 VAGINAL DELIVERY W/O COMF	369
359 UTERINE & ADNEXA PROC FOF	122
462 REHABILITATION	118
371 CESAREAN SECTION W/O CC	96
127 HEART FAILURE & SHOCK	82
209 NO LONGER VALID	59
198 CHOLECYSTECTOMY EXCEPT B	52
215 NO LONGER VALID	52
014 INTRACRANIAL HEMORRHAGE	51
088 CHRONIC OBSTRUCTIVE PULM	50
390 NEONATE W OTHER SIGNIFIC	49
372 VAGINAL DELIVERY W COMPLI	44
089 SIMPLE PNEUMONIA & PLEURI	43
174 C T HEMORRHAGE W CC	37

Figure 4.11: Select Up to 13 Crosstab Items to Graph form

- 3 To select a variable, click the name of the variable in the Select Item(s) list, and then click **Select** (or double-click the name of the variable). The variable is moved to the Selected Item(s) list. You may select up to 13 variables.

*Note:* To deselect a variable, click the variable to highlight it in the Selected Item(s) box, and then click **Remove** (or double-click the name of the variable).

- 4 Click **OK** to generate the crosstab graph (Figure 4.12).

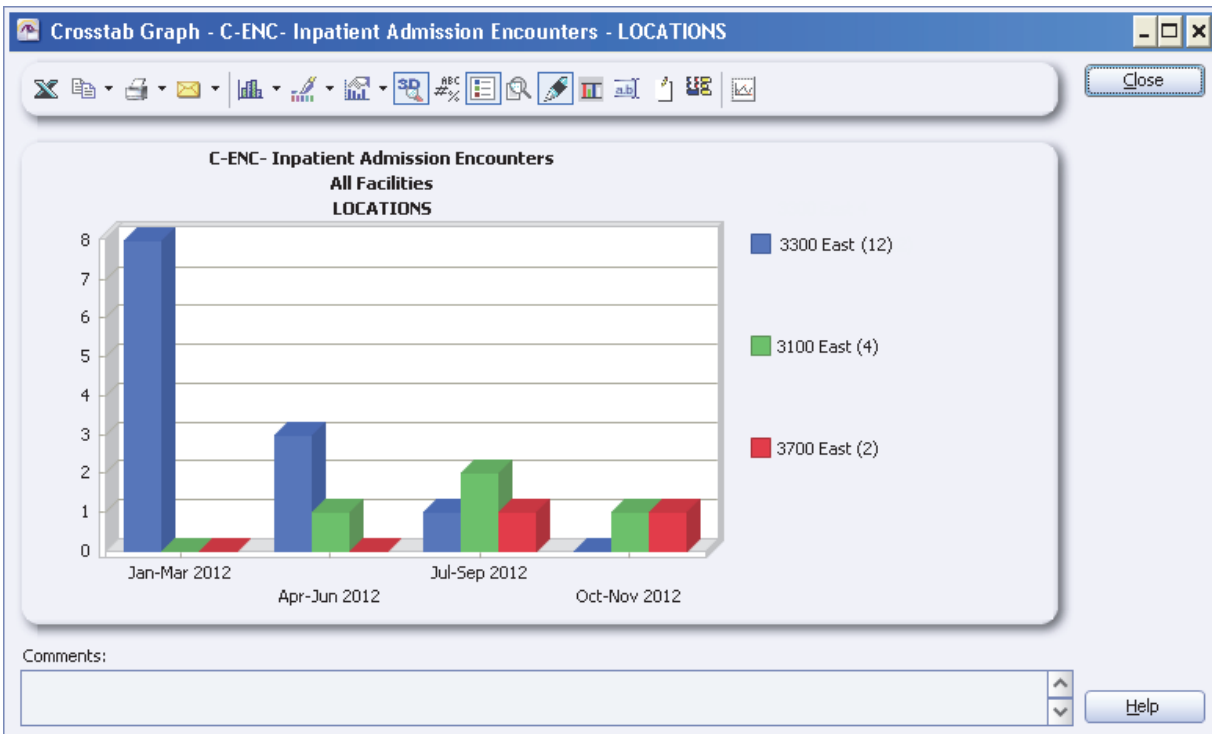


Figure 4.12: Crosstab graph example

- 5 **Optional:** To print re-graphed Indicator data by crosstabs, click **Print**. The Print Setup box is displayed. Select the appropriate printer, and click **OK**. The report that is printed has "Confidential Information" displayed on it, as well as the name of the Indicator selected. Qualifying crosstab information is listed on the report, including the number of times the crosstab is counted. This number is the same as that displayed in the Count column after each crosstab name in the **Select Up to 13 Crosstab Items to Graph** form.

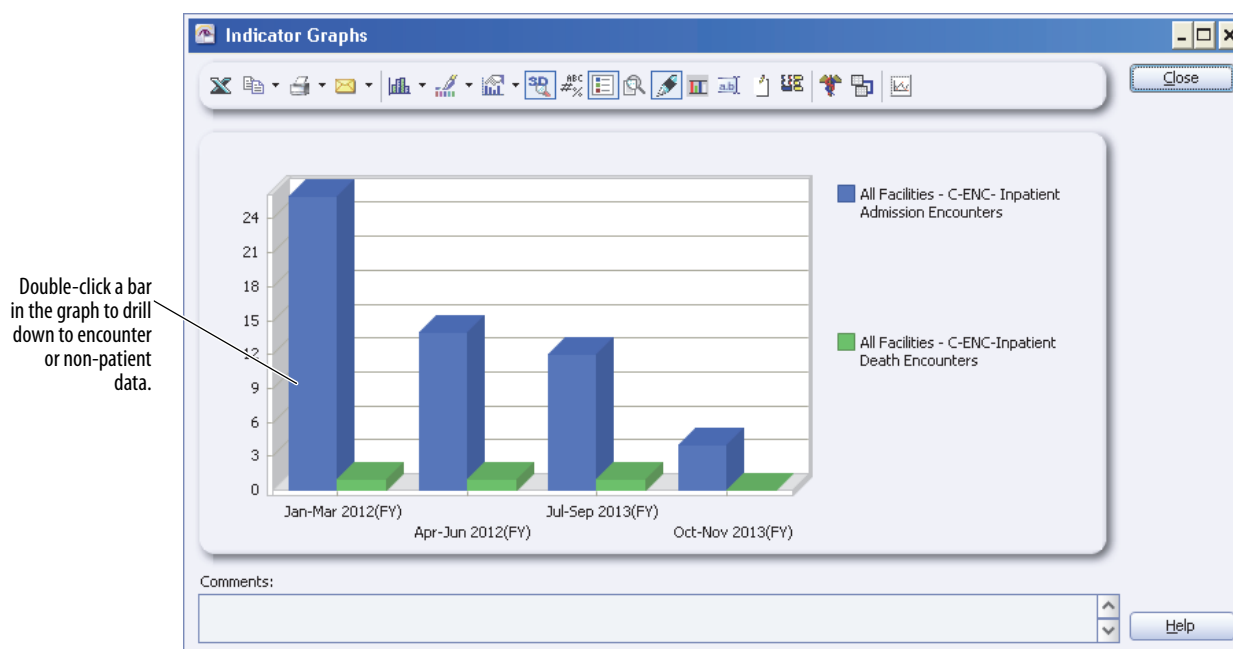
## Drilling Down to Encounter or Non-patient Data

If you have the proper security, you can double-click any bar in the compiled Indicator graph to view the data that contributed to that value. The Midas+ Care Management system can display a maximum of 2,500 entries.

*Note:* The drill-down function is available only for Indicators that contain patient encounter data or non-patient episode-level data, such as risk, claims, or patient relations data. In other words, you cannot drill down on an Indicator that collects data from Registration or from any other patient registration-level file (for example, Authorization episodes), nor can you drill down on Manual Indicators.

► **To drill down to encounter or non-patient data:**

- 1 Double-click the bar of the graph for which you want to see encounter or non-patient data (Figure 4.13).



*Figure 4.13: Example of graphed Indicator*

The Indicator Drill Down form is displayed showing encounter or non-patient data (Figure 4.14). If the indicator contains data for both patient encounters and non-patients, the data for each appears on separate tabs.

If you double-click a point on the graph of a sum-type Indicator that represents a calculation of data values that happen to sum to zero, the system displays a grid of events that qualified for the Indicator, regardless of the value they contribute to the sum. However, if the Indicator is not a sum type, or if the zero indicates that there was no data to sum, a message appears that informs you there was no data found.

If the indicator contains data for both encounters and non-patients, the data for each appears on separate tabs.

The number in the parenthesis shows how many times the patient qualified for the Indicator.

Indicator: C-ENC- Inpatient Admission Encounters

Facility: All Facilities

Start Month: 1/2012

End Month: 3/2012

Acct No.	MRN	Name	Enc Start	Enc End	Type	Facility
120327	.....	Anson, Chris	2/15/2012	2/20/2012	I	Midas General H
(2) 31212353	.....	Barrios, Gabriela	2/1/2012	3/14/2012	I	EMM FACILITY 0
20090630	.....	Chang, Carla	3/1/2012	3/15/2012	I	Midas General H
(2) 10118653	3293	Chapman, Burt	1/6/2012	3/9/2012	I	EMM FACILITY 0
(2) 34229042	6313	Harrison, Deb	1/6/2012	1/15/2012	I	EMM FACILITY 0
29089118	6078	Houston, Ann	1/28/2012	2/10/2012	I	EMM FACILITY 0
12589141	9909	Johnson, April	3/25/2012	3/31/2012	I	Midas General H
20120327	.....	Juarez, Eduardo	3/27/2012	3/27/2012	I	EMM FACILITY 0
792347	.....	Jones, Adrian	1/2/2012	1/4/2012	I	XDXD 3 FACILITY
0444	529080	Jones, Anna	2/7/2012	2/15/2012	I	Midas General H
0447	575840	Knapp, Chris	2/7/2012	2/10/2012	I	Midas General H

Navigate button

Figure 4.14: Indicator Drill Down form

Note: If a patient has qualified for an Indicator more than once, the number of times is noted in parentheses before the account number:

## 2 You now have the following options:


- Click to export the data to Microsoft Excel, in either a report or spreadsheet format. Midas+ Care Management launches Excel and places the drill-down data in an Excel workbook (Figure 4.15). If the Indicator Drill Down form contains data on both patient encounters and non-patient events, two worksheets are created, one for each type of data.

If the Indicator Drill Down form contains data on both patient encounters and non-patient events, two worksheets are created, one for each type of data.

	A	B	C	D	E	F	G	H	I
1	Indicator: C-PR-Total Pt Rel Events (Pt and Non-Pt)								
2	Facility: All Facilities								
3	Start Month: 6/2009								
4	End Month: 6/2009								
5									
6	Acct No.	MRN	Name	Enc Start	Enc End	Type	Facility		
7	(2) 31212353	1520171	Chang, Carla	6/16/2009		I	MIDAS General Hospital		
8	20090630	5201768	Chapman, Burt	6/30/2009		I	MIDAS General Hospital		
9	(2) 10118653	2118346	Harrison, Deb	7/7/2007		I	MIDAS Medical Center		
10	(2) 34229042	1523741	Houston, Ann	9/27/2008	9/8/2009	I	MIDAS General Hospital		
11	29089118	8700210	Johnson, April	6/17/2009		I	MIDAS Medical Center		
12	12589141	2131520	Juarez, Eduardo	6/12/2009		I	MIDAS General Hospital		
13									

Encounters (Report) Non-Patients (Report) Sheet3

Figure 4.15: Drill-down data in an Excel spreadsheet

- Click  to copy the data to the Microsoft Windows clipboard so you can paste the data into another application, such as Microsoft Word or PowerPoint. If the Indicator Drill Down form contains data on both patient encounters and non-patient events, Midas+ Care Management creates two sections in the text, one for each type of data, as shown in Figure 4.16.

Indicator: C-PR-Total Pt Rel Events (Pt and Non-Pt)  
 Facility: All Facilities  
 Start Month: 6/2009  
 End Month: 6/2009



Encounters:

Acct No.	MRN	Name	Enc Start	Enc End	Type	Facility
(2) 31212353	1520171	Chang, Carla	6/16/2009		I	MIDAS General Hospital
20090630	5201768	Chapman, Burt	6/30/2009		I	MIDAS General Hospital
(2) 10118653	2118346	Harrison, Deb	7/7/2007		I	MIDAS Medical Center
(2) 34229042	1523741	Houston, Ann	9/27/2008	9/8/2009	I	MIDAS General Hospital
29089118	8700210	Johnson, April	6/17/2009		I	MIDAS Medical Center
125899141	2131520	Juarez, Eduardo	6/12/2009		I	MIDAS General Hospital

Non-patients for Patient Relations:

Name	ID	DOB	Age	Sex	Home Phone	Event Date
ANDERSON, DAVID	Visitor	5/15/1970	39Y		(520) 555-1256	6/19/2009
BAKER, JET	Vendor				(520) 555-3232	6/24/2009

Figure 4.16: Drill-down data pasted from clipboard into Microsoft Word

- Click  to print the data. If the Indicator Drill Down form contains data on both patient encounters and non-patient events, a separate report is printed for each. That is, the non-patient data begins on a new sheet of paper.
- Click  to choose specific patient ID numbers to be viewed in the Indicator Drill Down form. The Choose ID Types box is displayed (Figure 4.17). ID types apply only to patient data, so if all of the drill-down data is non-patient data, the icon is not available.

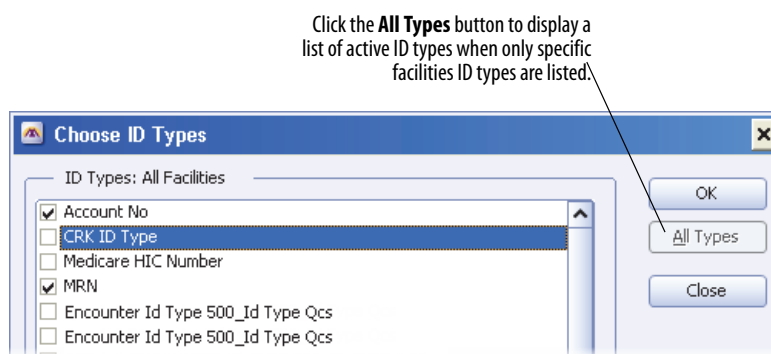


Figure 4.17: Choose ID Types form

By default, the Indicator Drill Down form displays Account Number and MRN. When other ID types are selected, the drill-down data is dynamically updated with the new data. The ID types you selected are included when you export or print the drill-down data.

*Note:* If more than two ID types are chosen, the report prints in landscape mode.

- Navigate to a specific patient's information by double-clicking the patient's name or highlighting the patient's name on the Indicator Drill Down form and clicking **Navigate**. A menu drops down, and you can select the function for which you want to view or enter data (Figure 4.18). If you drilled down to a non-patient record, the Navigate drop-down menu displays only the entry and inquiry functions for the relevant module.

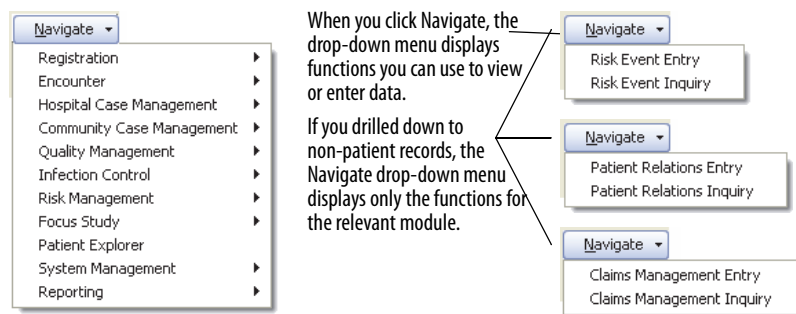




Figure 4.18: Navigate menu

- Click  to e-mail the drill-down data. Use the following instructions to attach drill-down data to an e-mail.

► **To attach drill-down data to an e-mail:**

- 1 On the Indicator Drill Down form, click the e-mail  icon. A message reminds you to save the data as an Excel file.
- 2 Click **OK**. The **Save As** dialog box opens.
- 3 Use the dialog box to name the Excel file and to navigate to the folder where you want to store the file.
- 4 Click **Save**. The **Export Format** dialog box opens.
- 5 Click **Report Format** or **Spreadsheet Format**, and then click **OK**. For details on which format to choose, see "Exporting the Data to Excel" on page 5.20.
- 6 Your e-mail client opens a new message. Attach the Excel file to the e-mail message; the file is *not* automatically attached to the e-mail.

**System Manager:**

Drill-down restrictions can be assigned in the User Definition function. For more information about how to assign these restrictions, see "Indicator Drill-Down Restrictions" on page A.7.



## Section 5: Indicator Profiles

Indicator Profiles are groups of defined Indicators for which you can create a comparative report.

This section shows you how to define a Profile and generate reports of Profile data. Before you can define a Profile, you must first build Indicators for it, as explained in “Section 2: Indicator Definition”.

### In this section:

- 5.2** Overview
- 5.3** Defining Indicator Profiles
- 5.11** Compiling Indicator Profiles
- 5.20** Working with Indicator Profiles
- 5.28** Drilling Down to Encounter or Non-Patient Data

## Overview

Indicator Profiles are groups of defined Indicators for which you can create a comparative report. Effective use of Indicator Profiles consists of three tasks:

- 1 Building the Indicators in the Indicator Definition function
- 2 Defining the Profile in the Indicator Profile Definition function
- 3 Generating reports of Profile data in the Indicator Profiles function

You can use Profiles to compare the Indicators by total, specialty, service, or provider, and you can trend the Indicators monthly, quarterly, semi-annually, or annually.

## Defining Indicator Profiles

This section provides instructions on defining Indicator Profiles.

► **To group Indicators into a Profile:**

- 1 Select **Function > Reporting > Indicator Profile Definition** from the menu bar, or select **Indicator Profile Definition** from the SmartMenu. The Indicator Profile Definition form is displayed (Figure 5.1).

Figure 5.1: Indicator Profile Definition form – preliminary

- 2 Click **Add**. The Copy From field becomes available.

*Note:* If the Profile you are defining is similar to an existing Profile, you can copy the existing Profile by selecting it in the **Copy From** field and making the necessary changes (Figure 5.2).

Figure 5.2: Indicator Profile Definition form with Profile selected to Copy

- 3 In the **Description** field, enter the name of the Profile, and press the Tab key. The Indicator, No. of lines to skip, Crosstab Variable, and Profile Restriction fields on the form become available.

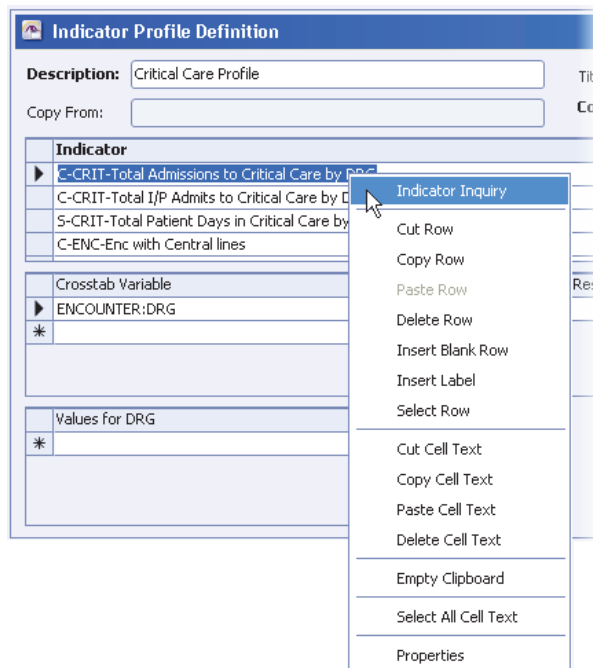
*Note:* The system automatically generates a **Code**, but you can change it if necessary.

- 4 In the **Title** field, type a title for the Profile (Figure 5.2). This title is displayed on compiled Profiles and graphs.

*Note:* The title is not used to look up a Profile. The entry in the Description field is used for that purpose.

- 5 In the **Indicator** field, select one or more Indicators (Counts, Sums, Rates, Days at Risk, and/or Manual Indicators) to be included in the Profile.

*Note:* To view the Indicator Definition, right-click the Indicator and select Indicator Inquiry.



- 6 In the **No. of lines to skip** field, enter the number of blank lines you want to follow the Indicator on the displayed Profile.
- 7 In the **Crosstab Variable** field, select the crosstab variable for each Indicator you selected in the Indicator field. Only crosstab variables that were identified in the individual Indicator definitions are included in the printed Profile.

If there is no choice available in the crosstab variable field, it is because the selected indicator includes two or more component indicators that have different variables in their respective crosstab fields. Unless the component indicators are defined with the same crosstab variable, the system cannot calculate the indicator; the result is that only zeros are displayed when you compile a profile that includes the indicator.

- 8 If you made a selection in the Crosstab Variable field, a **Value** field that contains the name of the crosstab variable is displayed in the following grid the selected crosstab variable. If you entered crosstab variables, in the Values field, select one or more

values for each crosstab. If you do not select any values, all values for your crosstab variable print on your Profile. This may be undesirable for variables that have a large number of associated values.

When you compile the Profile, a dialog box asks if you would like to modify your crosstab variables values. You can change any of the crosstab variable values at this time (for example, you may want to add a particular DRG).

- 9 If access to this Profile should be restricted, select the restrictions in the **Profile Restriction** field.
- 10 Click **Save** to save your Profile and close the form.

## Copying Profiles

If the Profile you are defining is similar to an existing one, you can copy it and make necessary changes.

### ► To copy the profile to create a new one:

- 1 Select **Function > Reporting > Indicator Profile Definition** from the main menu bar, or select **Indicator Profile Definition** from the SmartMenu.
- 2 Click **Add**. The Copy From field becomes available.
- 3 In the **Copy From** field, select the Profile you want to copy.
- 4 Follow Step 3 through Step 10 of “Defining Indicator Profiles” on page 5.3.

## Deleting Profiles

You can delete profiles from the Indicator Profile Definition form.

### ► To delete a Profile:

- 1 In the **Description** field of the Indicator Profile Definition form (Figure 5.1), select the Profile you want to delete.
- 2 Click **Delete**. A confirmation box is displayed that asks you to confirm the deletion action.
- 3 Click **OK** to confirm the deletion or **Cancel** to cancel the deletion action.

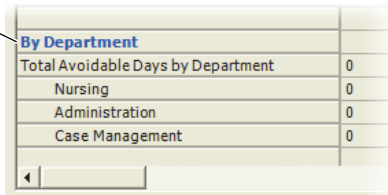
## Defining Labels and Indicator Font Properties in Profiles

You can add labels and font properties to your Indicator Profiles as described in the sections below.

### Defining Labels in Profiles

You can add labels to Indicator Profiles.

Example of a label



By Department	
Total Avoidable Days by Department	0
Nursing	0
Administration	0
Case Management	0

#### ► To create a label:

- 1 In the **Description** field of the Indicator Profile Definition form (Figure 5.1), select the Profile.
- 2 Right-click a row in the Indicator grid before which you would like to insert a label and click **Insert Label**. The Insert Label form is displayed.
- 3 In the **Text** field, enter the label text.
- 4 Click **TextColor** and click the down arrow that is displayed. Select a color you want for the label from any of the three tabs: Custom, Web or System.

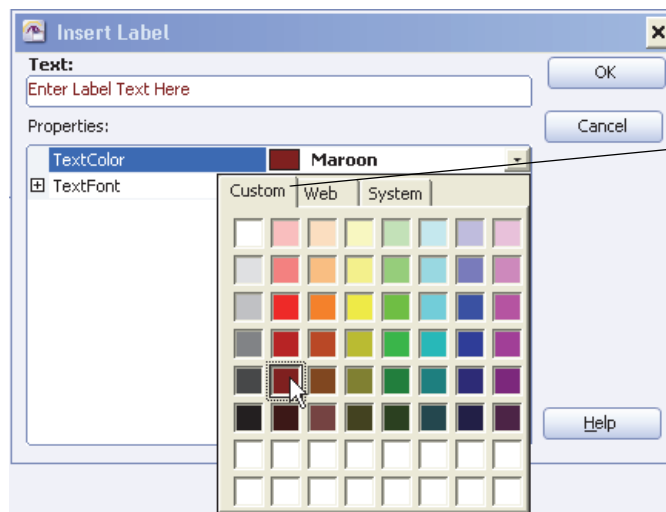



Figure 5.3: Insert Label dialog box with three tabs for colors

- 5 Click **TextFont**, click the ellipsis , and use the Insert Label dialog box to specify the font properties. If you want to modify a single **TextFont** attribute, you can click the

plus sign **+**, and then select an option from the attribute's drop-down list or type the entry.

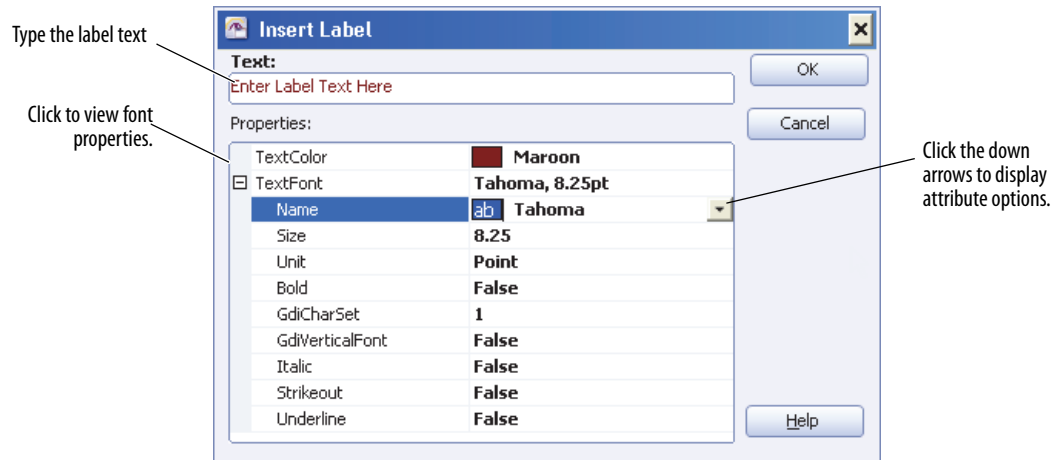


Figure 5.4: Insert Label Dialog box

- 6 Click **OK**.
- 7 Click **Save** in the Indicator Profile Definition to add the label to the report. The label properties are added to the Indicator Profile Viewer, Excel file, clipboard copy, and Print Indicator View of the report.

► **To edit a label:**

- 1 In the **Description** field of the Indicator Profile Definition form (Figure 5.1), select the Profile.
- 2 Right-click a label and click **Properties**. The Display Properties dialog box is displayed.

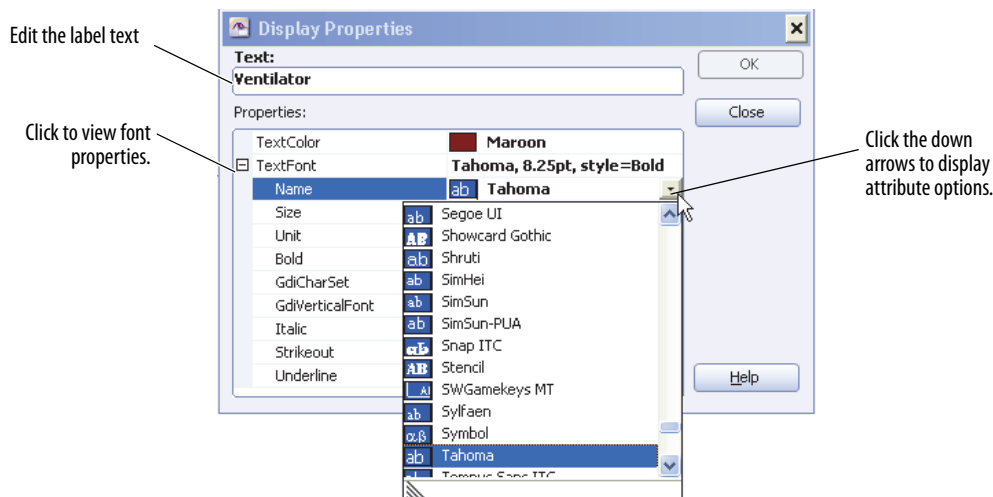




Figure 5.5: Display properties dialog box

- 3 In the **Text** field, edit the label text.
- 4 Click **TextColor** and click the down arrow that is displayed. Select a color you want for the label from any of the three tabs: Custom, Web or System.

- 5 Click **TextFont**, click the ellipsis , and use the Display Properties dialog box to specify the font properties. If you want to modify a single **TextFont** attribute, you can click the plus sign , and then select an option from the attribute's drop-down list (Figure 5.5) or type the entry. Click **OK**.
- 6 Click **Save** in the Indicator Profile Definition to apply the changes to the report. The font properties are added to the Indicator Profile Viewer, Excel file, clipboard copy, and Print Indicator View of the report.

## Defining Font Properties in Profiles

You can edit the font properties of each individual Indicator in a profile.

### ► To add or edit Indicator display properties:

- 1 In the **Description** field of the Indicator Profile Definition form (Figure 5.1), select the Profile.
- 2 Right-click an entry in the Indicator grid that you want to modify and select **Properties**. The Display Properties dialog box is displayed.
- 3 Click **TextColor** and click the down arrow that is displayed. Select a color you want for the font from any of the three tabs: Custom, Web or System.

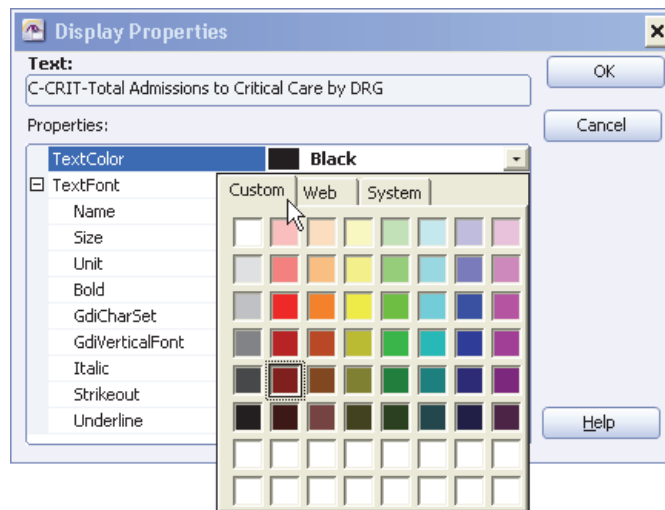




Figure 5.6: Display Properties dialog box with three tabs for colors

- 4 Select **TextFont**, click the ellipsis , and use the Display Properties dialog box to specify the font properties. If you want to modify a single **TextFont** attribute, you can click the plus sign , and then select an option from the attribute's drop-down



list (Figure 5.7) or type the entry.

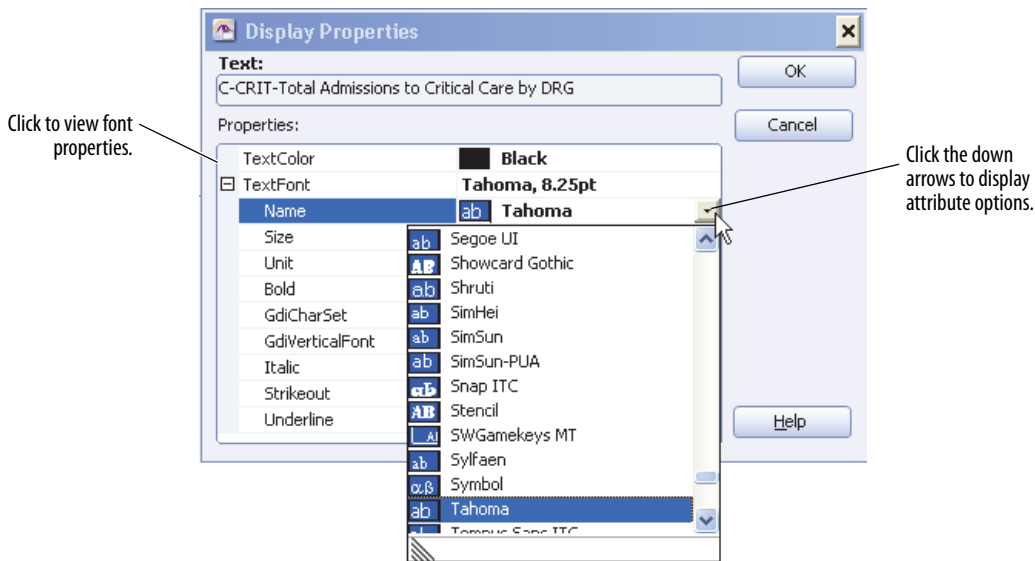


Figure 5.7: Display Properties dialog box

- 5 Click **OK**.
- 6 Click **Save** in the Indicator Profile Definition to apply the changes to the report. The font properties are added to the Indicator Profile Viewer, Excel file, clipboard copy, and Print Indicator View of the report.

*Note:* This affects only the current profile, not other profiles that contain the Indicator.

## Adding a Comment and Confidentiality Statement to Profiles

You can add a comment and also display the default confidentiality statement in a profile. The comments and statement are also displayed in the Excel file, clipboard copy, and Print Indicator View of the report. On the Print Indicator view, they are displayed on a separate last page. If comments have been previously defined, the Comments button on the Indicator Profile Definition form contains a plus sign.

An Indicator Profile with both a comment and confidentiality statement is shown in Figure 5.8.

Indicator Profile Viewer - Critical Care Profile - All Facilities

Indicator	Jan 2012	Feb 2012	Mar 2012	Apr 2012	May 2012
Total Admissions to Critical Care by DRG	1	0	0	0	0
895 - ALCOHOL/DRUG ABUSE OR DEPENDENCE W REHAB	0	0	0	0	0
Total I/P Admits to Critical Care	1	0	0	0	0
Total Patient Days in Critical Care	0	0	0	0	0
895 - ALCOHOL/DRUG ABUSE OR DEPENDENCE W REHAB	0	0	0	0	0
Critical Care - Patients with Central Lines	0	0	0	0	0
Critical Care - Central Line Days	0	0	0	0	0
Critical Care - Rate of Patients with Central Line					

Comments are displayed here.

When you type your comments on the Indicator Profile Definition form, they are displayed here.

The default confidentiality statement is displayed here.

This report is intended only for use in the treatment, payment and operations of the entity noted herein. It may contain legally privileged and/or confidential information. If you are not the intended recipient of this information (or the person responsible for delivering this document to the intended recipient), you are hereby notified that any dissemination, distribution, printing or copying of this document is strictly prohibited.

Figure 5.8: Indicator Profile

► **To define a comment for a profile:**

- 1 In the **Description** field of the Indicator Profile Definition form (Figure 5.1), select the Profile to display.
- 2 Click the **Comments** button. The following form is displayed.

Indicator Profile Comments/Confidentiality

Comments: [Type your comments here.] [OK] [Cancel] [Help]

Confidentiality Statement: ☐

Figure 5.9: Indicator Profile Comments/Confidentiality form

- 3 Type **Comments** up to 240 characters.
- 4 Click **OK**. The comments are shown on the profile in Figure 5.8.

*Note:* The changes are not applied to the profile until the profile is saved.

► **To display the confidentiality statement on a Profile:**

- 1 In the **Description** field of the Indicator Profile Definition form (Figure 5.1), select the Profile to display.
- 2 From the Profile, mark the **Confidentiality Statement** checkbox to display the default confidentiality statement when the profile is compiled.
- 3 Click **OK**.

*Note:* The changes are not applied to the profile until the profile is saved.

## Compiling Indicator Profiles

Use the Indicator Profile function to generate a report of Indicator Profile data. You can report all the Profile data (total) or just the data for one or more specified services, specialties, providers, or provider groups.

► **To compile a report of Indicator profiles:**

- 1 Select **Function > Reporting > Indicators > Indicator Profiles** from the main menu bar, or select **Indicator Profiles** from the SmartMenu. The Compile Indicator Profiles form is displayed (Figure 5.10).

*Figure 5.10: Compile Indicator Profiles form*

- 2 In the **Start Month** field, enter the beginning date (month/year) for the range of dates for which to report Indicator data.
- 3 In the **End Month** field, the ending date (month/year) for the range of dates for which to report Indicator data.
- 4 In the **Profile Type** field, use the drop-down list to select the category for which you want to break out your Profile data: Total, Service, Specialty, Provider, or Provider Group. For a report of all Profile data, choose **Total**.
- 5 In the **Trend** field, select the time frame by which you want to group the data: monthly, quarterly, semi-annually, annually, or period. Period summarizes all of the data for the time period into a single value. If you select Period, it:
  - Sets the Profile Type field to Total and makes the field read-only.

- Clears and disables the Reference By Fiscal year checkbox.
  - Makes Provider and Crosstab graphs unavailable.
- 6 In the **No. of Comparison Years** field, enter a single positive integer (1-9) to compare data from that number of prior years for the same time period you specified with the Start Month and End Month fields. The resulting profile includes—in addition to data for the selected date range—at least one column of data for each of the specified number of years prior. This works only if you:
- specified a time period of 12 months or less
  - selected a Profile Type of **Total**
- Note:* For results that include comparison years, a Total column is not displayed.
- 7 Mark the **Reference by Fiscal Year** checkbox to indicate the profile data should be displayed by fiscal year. For details, see “Compiling Indicator Profiles by Fiscal Year” on page 5.16.
- 8 In the **Profile** field, select the defined Profile on which you want to report.
- 9 If you chose Service, Specialty, Provider, or Provider Group in the Profile Type field, fields related to these specific options open on the form. These fields are described as follows. If you chose Total in the Profile Type field, proceed to Step 10.

If you chose Service, the form is displayed with the Service field (Figure 5.11).

The screenshot shows the 'Compile Indicator Profiles' form. The 'Start Month' is set to 1/2012, 'End Month' to 6/2012, and 'Trend' to Monthly. The 'No. of Comparison Years' field is empty. The 'Profile Type' is set to 'Service', and the 'Reference By Fiscal Year' checkbox is unchecked. The 'Profile' field is set to 'Community Case Management Profile'. Below these fields, there are two sections: 'Service' and 'Facility'. The 'Service' section has a list box with a '\*' icon and a scroll bar. The 'Facility' section has a list box with a '\*' icon and a scroll bar. The 'All Services' checkbox is unchecked, and the 'All Facilities' checkbox is checked. There are 'View', 'Close', and 'Help' buttons on the right side of the form.

Figure 5.11: Compile Indicator Profiles form with Service field

In the **Service** field, select one or more specific services, or mark the **All Services** checkbox to include all services.

If you chose **Specialty**, the form is displayed with the **Specialty** field (Figure 5.12).

The screenshot shows the 'Compile Indicator Profiles' window. The 'Profile Type' is set to 'Specialty'. The 'Specialty' field is a list box with a search icon and a scroll bar. A label 'Specialty grid' points to this field. Other fields include 'Start Month' (1/2012), 'End Month' (6/2012), 'Trend' (Monthly), 'No. of Comparison Years', 'Reference By Fiscal Year' (unchecked), 'Profile' (Community Case Management Profile), 'All Specialties' (unchecked), 'All Facilities' (checked), and 'Facility' (list box). Buttons for 'View', 'Close', and 'Help' are present.

Figure 5.12: Compile Indicator Profiles form with Specialty field

In the **Specialty** field, select one or more specific specialties, or mark the **All Specialties** checkbox to include all specialties.

If you chose **Provider**, the form is displayed with the **Provider** field (Figure 5.13).

The screenshot shows the 'Compile Indicator Profiles' window. The 'Profile Type' is set to 'Provider'. The 'Provider' field is a list box with a search icon and a scroll bar. A label 'Provider grid' points to this field. Other fields include 'Start Month' (1/2012), 'End Month' (6/2012), 'Trend' (Monthly), 'No. of Comparison Years', 'Reference By Fiscal Year' (unchecked), 'Profile' (Community Case Management Profile), 'Include All Providers' (unchecked), 'Print Specialty Comparison' (unchecked), 'Print Service Comparison' (unchecked), 'All Facilities' (checked), 'Facility' (list box), 'Specialty' (list box), and 'Service' (list box). Buttons for 'View', 'Close', and 'Help' are present.

Figure 5.13: Compile Indicator Profiles form with Providers field

The fields that open are described as follows.

- In the **Provider** field, select one or more specific providers. This field is inactive if you have marked the Include All Providers checkbox.

- Mark the **Include All Providers** checkbox to include all defined providers in the Profile report.
- Mark the **Print Specialty Comparison** checkbox to include a specialty summary that compares data for each provider to that of all the providers within the same specialty.
- Mark the **Print Service Comparison** checkbox to include a service summary that compares data for each provider to that of all the providers within the same service.
- In the **Specialty** field, select specialties within which you want to compare providers. This field is inactive if you have marked the Include All Providers checkbox.
- In the **Service** field, select services within which you want to compare providers. This field is inactive if you have marked the Include All Providers checkbox.

*Note:* The Specialty and Service for the provider must be recorded in the PROVIDER Dictionary (#1) for the provider to be included in your report.

If you chose Provider Group, the form is displayed with the Provider Group field (Figure 5.14).

The screenshot shows the 'Compile Indicator Profiles' window. The 'Profile Type' is set to 'Provider Group'. The 'Provider Groups' field is a list box with a search icon, and it is highlighted by a label 'Provider Groups grid' with an arrow. The 'All Provider Groups' checkbox is unchecked. The 'All Facilities' checkbox is checked. The 'Facility' field is also a list box with a search icon. The 'View', 'Close', and 'Help' buttons are on the right side of the window.

Figure 5.14: Compile Indicator Profiles form with Provider Group field

The fields that open are described as follows.

- In the **Provider Groups** field, select one or more specific provider groups. This field is inactive if you have marked the All Providers checkbox.
  - Mark the **All Provider Groups** checkbox to include all defined provider groups in the Profile report.
- 10** In the **Facility** field, select one or more facilities you want to include in the Profile report. If you have security for all facilities associated with your Midas+ Care

Management system, you can mark the **All Facilities** checkbox to include all defined facilities in this Profile report.

*Note:* Depending on how their user definitions are set up, users may or may not have access to the data of all facilities. If this is the case, the **All Facilities** checkbox is deactivated. If your organization is a single facility site, it may have chosen to deactivate both the Facility button and the All Facilities checkbox.

*Note:* If the **All Facilities** checkbox is marked, unless the facility referencing Manual Entry data is selected, data from Manual Entry Indicators does not display on the graph.

- 11 Click the **View** button. A dialog box is displayed asking if you want to alter the crosstabs associated with this Profile.
- 12 If you do not want to change any crosstabs, click **No**. The Profile is displayed in the Indicator Profile Viewer (Figure 5.15).

*Note:* To change crosstabs, see “Changing Crosstabs” on page 5.18.



The screenshot shows a window titled "Indicator Profile Viewer - EMPLOYEE HEALTH STATISTICS - All Facilities". It contains a table with the following data:

Indicator	Jan-Mar 2012	Apr-Jun 2012	Jul-Sep 2012	Oct-Dec 2012	Total
C-Emp Health-Visit x Visit	0	1	1	1	3
Immunization	0	1	1	0	2
Workers Compensation	0	0	0	1	1
Total Environmental Exposures	0	1	0	0	1
Anesthetic Gas	0	1	0	0	1
Anthrax	0	0	0	0	0

*Figure 5.15: Profile displayed in the Indicator Profile Viewer*

*Note:* To view the Indicator Definition, right-click the Indicator and select Indicator Inquiry.

Right-click an **Indicator** selection, and choose **Indicator Inquiry**.

The image shows two screenshots from a software application. The top screenshot is titled "Indicator Profile Viewer - EMPLOYEE HEALTH STATISTICS - All Facilities". It contains a table with the following data:

Indicator	Jan-Mar 2012	Apr-Jun 2012	Jul-Sep 2012	Oct-Dec 2012	Total
C-Emp Health-Visit x Visit	0	1	1	1	3
Immunization	0	1	1	0	2
Workers Compensation	0	0	0	1	1
Total Environmental Exposures	0	1	0	0	1
Anesthetic Gas	0	0	0	0	1
Anthrax	0	0	0	0	0

A right-click context menu is open over the "Total Environmental Exposures" row, with "Indicator Inquiry" selected. The bottom screenshot is titled "Indicator Definition - C-Emp Health-Total Environmental Exposure". It contains the following fields:

- Code: 533
- Description: C-Emp Health-Total Environmental Exposur
- Rule Type: Count
- Title: Total Environmental Exposures
- Ref. Date: EMPLOYEE HEALTH:ENVIRONMENTAL EXPC
- Provider: (empty)
- Crosstab: EMPLOYEE HEALTH:ENVIRONMENTAL EXPC
- Count: EMPLOYEE HEALTH:ENVIRONMENTAL EXPC
- Display Symbol: (empty)
- Display Order: (empty)
- SPC Chart Type: I Chart
- Active: ☒
- SPC Target Direction: Neutral
- Access Function: (empty)
- Indicator Restrictions: (empty)
- Conditions - If: EMPLOYEE HEALTH:ENVIRONMENTAL EXPOSURES:Environmental Exposure Is Entered

The Indicator Definition form is then displayed.

*Figure 5.16: Indicator Definition displayed selecting Indicator Inquiry in right-click menu*

If your organization is a single facility site and has only one facility defined in the FACILITY Dictionary, the site parameter IND-SINGLE FACILITY can be set. This site parameter deactivates the Facility button and the All Facilities checkbox, and it allows the facility name to print in the title bar of the Indicator Profile Viewer. (The display of the facility's name only applies to the Indicator Profile Viewer in the Indicator Profiles function.) To have this site parameter set, log in to [www.midasplus.com](http://www.midasplus.com) and submit a request for assistance through the Support Center.

## Compiling Indicator Profiles by Fiscal Year

The site parameter IND-FISCAL YEAR START MONTH allows you to view Profiles in accordance with your organization's fiscal year. This is useful if your fiscal year differs from the calendar year.



When the site parameter is set as Active, and you select Quarterly, Semi-Annually, or Annually in the Trend drop-down list, the Reference by Fiscal Year checkbox is available in the Indicator Profile function (Figure 5.17).

When a site parameter is set, the Reference by Fiscal Year checkbox is available when **Quarterly**, **Semi-Annually**, or **Annually** is chosen from the Trend drop-down list.

Figure 5.17: Reference by Fiscal Year checkbox in Compile Indicator Profiles (partially illustrated)

When you mark the Reference by Fiscal Year checkbox, FY is displayed in the column headings of the Profile Viewer to show the fiscal year in which the data falls (Figure 5.18).

When you mark the **Reference by Fiscal Year** checkbox on the Compile Indicator Profiles form, data is displayed by fiscal year in the Indicator Profile Viewer.

Indicator	Jun 2012(FY)	Jul-Sep 2013(FY)	Total
Total IP Days	87	872	959
Total Patients with Avoidable Days	0	2	2
Total Number of Avoidable Days	0	5	5
Total Avoidable Days by Department	0	0	0
Total Avoidable Days by Department Reason	0	0	0
Total Avoidable Days by Provider	0	0	0
Total Non-Attributable Avoidable Days	0	5	5
<b>DENIED DAYS</b>			
Total Encounters with Avoidable Care Denials	0	1	1

Figure 5.18: Indicator Profile Viewer with data displayed by fiscal year

### System Manager:

To have this site parameter set, log in to [www.midasplus.com](http://www.midasplus.com) and submit a request for assistance through the Support Center.

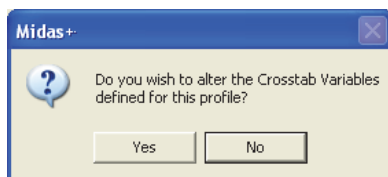
## Changing Crosstabs

If you selected crosstabs when you defined your Profile, you can delete any or all of the defined crosstabs from the current view of the Profile and/or change the defined values for each crosstab.

*Note:* These changes in the crosstabs are only reflected in this view of the Profile. If you want to make any permanent changes to the selected crosstabs and their values, you must change the Profile definition.

► **To change your crosstab selections:**

- 1 When you click **View** on the Compile Indicator Profiles form, a message is displayed asking if you want to alter the crosstabs associated with the Profile.



- 2 Click **Yes** in the message box.

The CrossTabs for Indicator Profile Report form is displayed, showing you the crosstabs that are defined for this Profile (Figure 5.19).

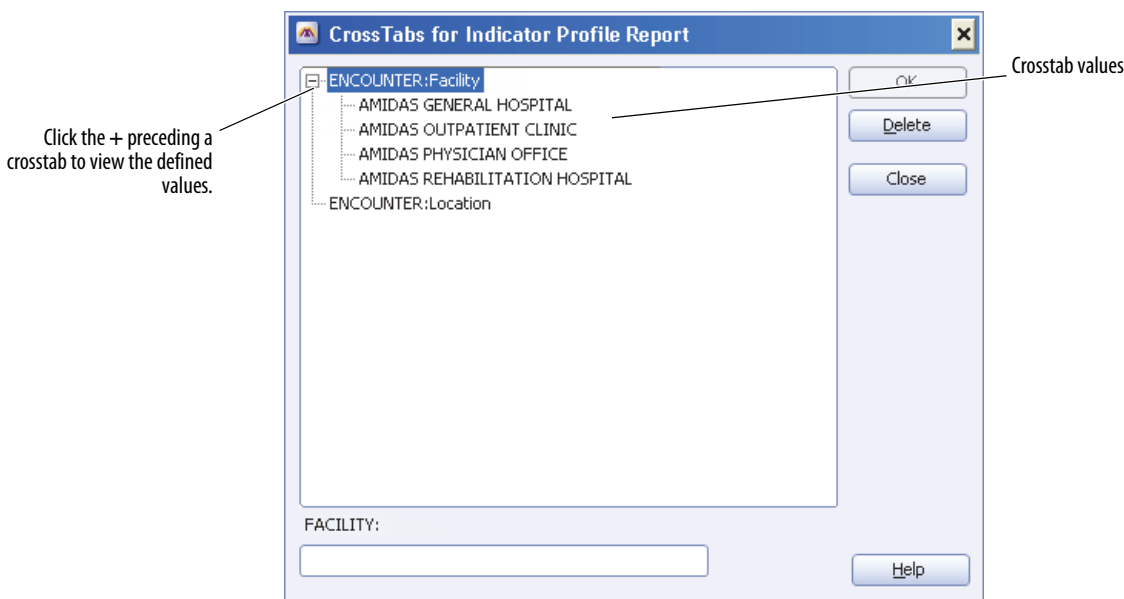


Figure 5.19: CrossTabs for Indicator Profile Report form

**3** You now have the following options:

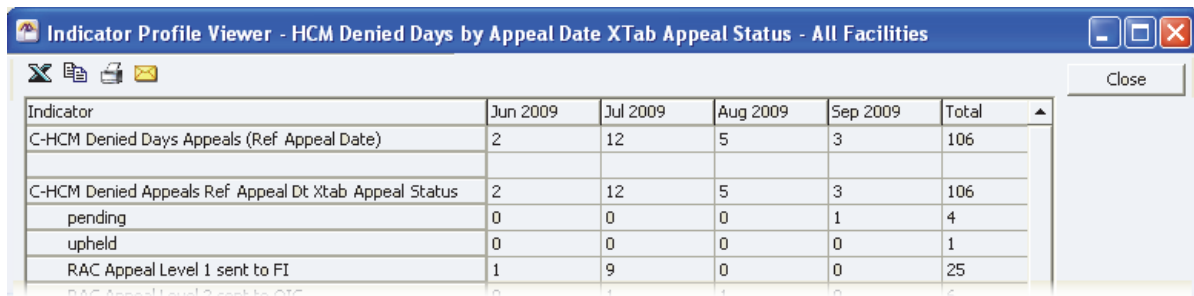
- Click a crosstab, and click **Delete** to remove the crosstab from this view.
- Click a crosstab, and add values in the corresponding field at the bottom of the form. If you have clicked the + preceding a crosstab, you can see that the values display as you add them.
- Click a crosstab value, and click **Delete** to remove the value from this crosstab for this view.

*Note:* For two possible crosstabs (ENCOUNTER:Encounter Type:Type and RISK MANAGEMENT:Shift) you can enter free-text values because the field values themselves can be defined in the corresponding module. You must enter existing values of these two crosstab variables for the system to report any data. Although you could enter any text for a value for either of these variables, an entry that does not match one of the values defined for that variable in its module is reported in the Profile with all zeroes.

**4** After you have made all the changes to the crosstabs that you want for this view, click **OK**. The Profile is displayed in the Indicator Profile Viewer (Figure 5.20).

## Working with Indicator Profiles

After you have compiled the Indicator Profile data, the Indicator Profile Viewer is displayed (Figure 5.20). This section describes the options you have in the viewer.



Indicator	Jun 2009	Jul 2009	Aug 2009	Sep 2009	Total
C-HCM Denied Days Appeals (Ref Appeal Date)	2	12	5	3	106
C-HCM Denied Appeals Ref Appeal Dt Xtab Appeal Status	2	12	5	3	106
pending	0	0	0	1	4
upheld	0	0	0	0	1
RAC Appeal Level 1 sent to FI	1	9	0	0	25

Figure 5.20: Profile displayed in the Indicator Profile Viewer

**Note:** To view the Indicator Definition, right-click the Indicator and select Indicator Inquiry.

## Exporting the Data to Excel

When you export data from Indicator Profiles (or from Indicator Graphs), the data can appear in several formats in Excel, depending on whether you choose to export in Report format or Spreadsheet format, and depending on whether the data is for a single time period or a comparison across several years for a date range.

### ► To export numerical data to Microsoft Excel:

- 1 Click . An Export Format dialog box is displayed (Figure 5.21).

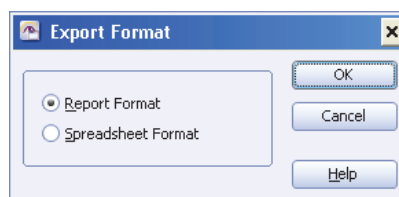


Figure 5.21: Export format dialog box

- 2 Select **Report Format** to export the data to Excel in a format designed for printing or inclusion in a presentation. Select **Spreadsheet Format** to export the data to Excel in a format optimized for further data manipulation and analysis options, such as sorting.
- 3 Click **OK**. Midas+ Care Management opens Microsoft Excel, which displays the exported data.

If you selected Report Format, the data displays with formatting such as blank rows that separate sections, crosstabs indented under indicators, or bold font for column headings, as shown in the following example.

**Table 5.1: Example of Export to Excel in Report Format**

	A	B	C	D	E	F
1	Profile Title: HCM Denied Days by Appeal Date XTab Appeal Status					
2	Facility: All Facilities					
3						
4	<b>Indicator</b>	<b>Jun 2009</b>	<b>Jul 2009</b>	<b>Aug 2009</b>	<b>Sep 2009</b>	<b>Oct 2009</b>
5	HCM Denied Days Appeals (Ref Appeal Date)	2	12	5	3	5
6						
7	HCM Denied Appeals Ref Appeal Dt Xtab Appeal Status	2	12	5	3	5
8	pending	0	0	0	1	0
9	upheld	0	0	0	0	1
10	RAC Appeal Level 1 sent to FI	1	9	0	0	0
11	RAC Appeal Level 2 sent to QIC	0	1	1	0	0
12	RAC Appeal Level 1 upheld by FI	0	0	4	0	1
13	RAC Appeal Level 2 upheld by QIC	1	0	0	1	1

If you selected Spreadsheet Format, the data displays in a plain, database-like spreadsheet format. A key feature of this option is that placing the appropriate data in columns gives you the ability to analyze data that is currently in a Profile or Graph and place the appropriate data in columns that resemble a standard Excel spreadsheet.

**Table 5.2: Example of Export to Excel in Spreadsheet Format**

	A	B	C	D	E
1	Indicator	Crosstab Variable	Jun 2009	Jul 2009	Aug 2009
2	HCM Denied Days Appeals (Ref Appeal Date)		2	12	5
3	HCM Denied Appeals Ref Appeal Dt Xtab App		2	12	5
4	HCM Denied Appeals Ref Appeal Dt Xtab App	pending	0	0	0
5	HCM Denied Appeals Ref Appeal Dt Xtab App	upheld	0	0	0
6	HCM Denied Appeals Ref Appeal Dt Xtab App	RAC Appeal Level 1 sent to FI	1	9	0
7	HCM Denied Appeals Ref Appeal Dt Xtab App	RAC Appeal Level 2 sent to QIC	0	1	1
8	HCM Denied Appeals Ref Appeal Dt Xtab App	RAC Appeal Level 3 sent to ALJ	0	1	0
9	HCM Denied Appeals Ref Appeal Dt Xtab App	RAC Appeal Level 1 upheld by FI	0	0	4
10	HCM Denied Appeals Ref Appeal Dt Xtab App	RAC Appeal Level 2 upheld by Q	1	0	0

► **To understand display of exported comparison years data:**

- 1 Display an Indicator Profile that is defined to show comparison years.
- 2 From the form, export data to Excel. (For details, see “To export numerical data to Microsoft Excel:” on page 5.20.) Midas+ Care Management opens Microsoft Excel, which displays the exported data.

**Table 5.3: Export to Excel—Profile with Comparison Years**

	A	B	C	D	E	F	G
1	Profile: C-ENCS-5579						
2	Facility: All Facilities						
3							
4	Indicator	Jan-Mar 2007	Jan-Mar 2008	Jan-Mar 2009	Apr-Jun 2007	Apr-Jun 2008	Apr-Jun 2009
5	C-ENCS-5579_CMBO	286	0	114	1000	0	0
6	C-ENCS-5579_RNG1	142	0	62	500	0	0
7	C-ENCS-5579_RNG2	144	0	67	504	0	0


- 3 Review the layout and notice that the comparison periods are placed side-by-side, so you can see results from one year just to the left of the prior year's results.
- 4 Display an Indicator Graph that is defined to show comparison years.
- 5 From the form, export data to Excel. Midas+ Care Management opens Microsoft Excel, which displays the exported data.

**Table 5.4: Export to Excel—Graph with Comparison Years**


	A	B	C
1	Indicator: C-ENCS-5579_CMBO		
2	Facility: All Facilities		
3			
4	<b>Jan-Mar 2007</b>	<b>Apr-Jun 2007</b>	<b>Total</b>
5	286	1000	1286
6	<b>Jan-Mar 2008</b>	<b>Apr-Jun 2008</b>	<b>Total</b>
7	0	0	0
8	<b>Jan-Mar 2009</b>	<b>Apr-Jun 2009</b>	<b>Total</b>
9	114	0	114

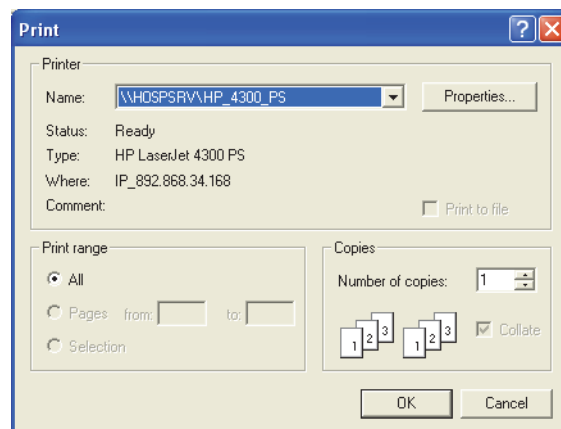
- 6 Review the layout and notice that the comparison periods for Graph data, unlike the Profile data, are stacked vertically. In this case, results from one year are below the prior year's results.

## Copying Data for Pasting into Another Application

Click  to copy the numerical data of one or more Indicators for pasting into another application, such as Microsoft Word or PowerPoint.

## Printing the Profile


Click  to print the Profile. The Print dialog box is displayed (Figure 5.22). Select your printing options, and click **OK** to print the data.

*Figure 5.22: Print form*

## E-mailing the Data

You can send your profile data in an e-mail message by attaching an Excel file of the data to the message.

### ► To e-mail profile data:

- 1 On the Indicator Drill Down form, click the e-mail  icon. A message reminds you to save the data as an Excel file.
- 2 Click **OK**. The **Save As** dialog box opens.
- 3 Navigate to the folder where you want to store the file and assign it a name.
- 4 Click **Save**. The **Export Format** dialog box opens.
- 5 Click **Report Format** or **Spreadsheet Format**, and then click **OK**. For details on which format to choose, see “Exporting the Data to Excel” on page 5.20.
- 6 Your e-mail client opens a new message. Attach the Excel file to the e-mail message; the file is *not* automatically attached to the e-mail.

## Displaying Services, Specialties, or Providers

Depending on your selection in the Profile Type field of the Compile Indicator Profile form, you have the following options.

If Service is chosen for the Profile Type, the Indicator Profile Viewer displays **Service** and **Sort By** drop-down lists (Figure 5.23).



Indicator	Jan-Mar 2012	Apr-Jun 2012	Jul-Sep 2012	Oct-Dec 2012	Total
Total Admissions	0	0	1	0	1
Total Inpatient Days (x tab by location)	0	0	0	0	0
Total Deaths (Acute Care)	0	0	0	0	0
Total Inpatient Deaths	0	0	0	0	0
Total Inpatient Medicare Deaths	0	0	0	0	0
Total Medicare Deaths (Acute Care)	0	0	0	0	0

Figure 5.23: Indicator Profile Viewer with Service field

In the **Service** menu, select the service to view, and in the **Sort By** menu, select whether to sort your selections by Name or Code for viewing and printing.



If **Specialty** is chosen for the Profile Type, the Indicator Profile Viewer displays **Specialty** and **Sort By** drop-down lists (Figure 5.24).

Indicator	Jan-Mar 2012	Apr-Jun 2012	Jul-Sep 2012	Oct-Dec 2012	Total
Total Admissions	0	0	0	1	1
Total Inpatient Days (xstab by location)	0	0	0	0	0
Total Deaths (Acute Care)	0	0	0	0	0
Total Inpatient Deaths	0	0	0	0	0
Total Inpatient Medicare Deaths	0	0	0	0	0

Figure 5.24: Indicator Profile Viewer with Specialty field

In the **Specialty** menu, select the specialty to view, and in the **Sort By** menu, select whether to sort your selections by Name or Code for viewing and printing.

If **Provider** is chosen for the Profile Type, the Indicator Profile Viewer displays **Provider** and **Sort By** drop-down lists (Figure 5.25).

The selected provider's service and specialty are displayed, but cannot be edited.

Indicator	Jan-Mar 2012	Apr-Jun 2012	Jul-Sep 2012	Oct-Dec 2012	Total
Total Admissions	0	1	1	0	2
Total Inpatient Days (xstab by location)	0	0	0	0	0
Total Deaths (Acute Care)	0	0	0	0	0
Total Inpatient Deaths	0	0	0	0	0
Total Inpatient Medicare Deaths	0	0	0	0	0

Figure 5.25: Indicator Profile Viewer with Provider field

In the **Provider** menu, select the provider to view, and in the **Sort By** menu, select whether to sort your providers by Name or Code for viewing and printing.

## Exporting or Copying Service, Specialty, or Provider Profile Data

When you export or copy Service, Specialty, or Provider Profile data from the Indicators Profile Viewer, the Select Profile Items form is displayed to allow you to select the items to include in the exported report (Figure 5.26).

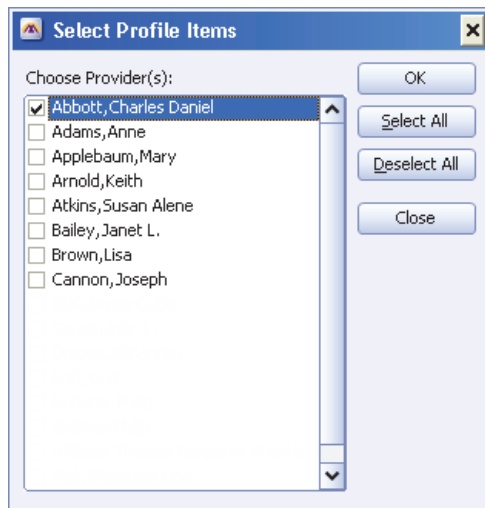


Figure 5.26: Select Profile Items form

You have the following options:

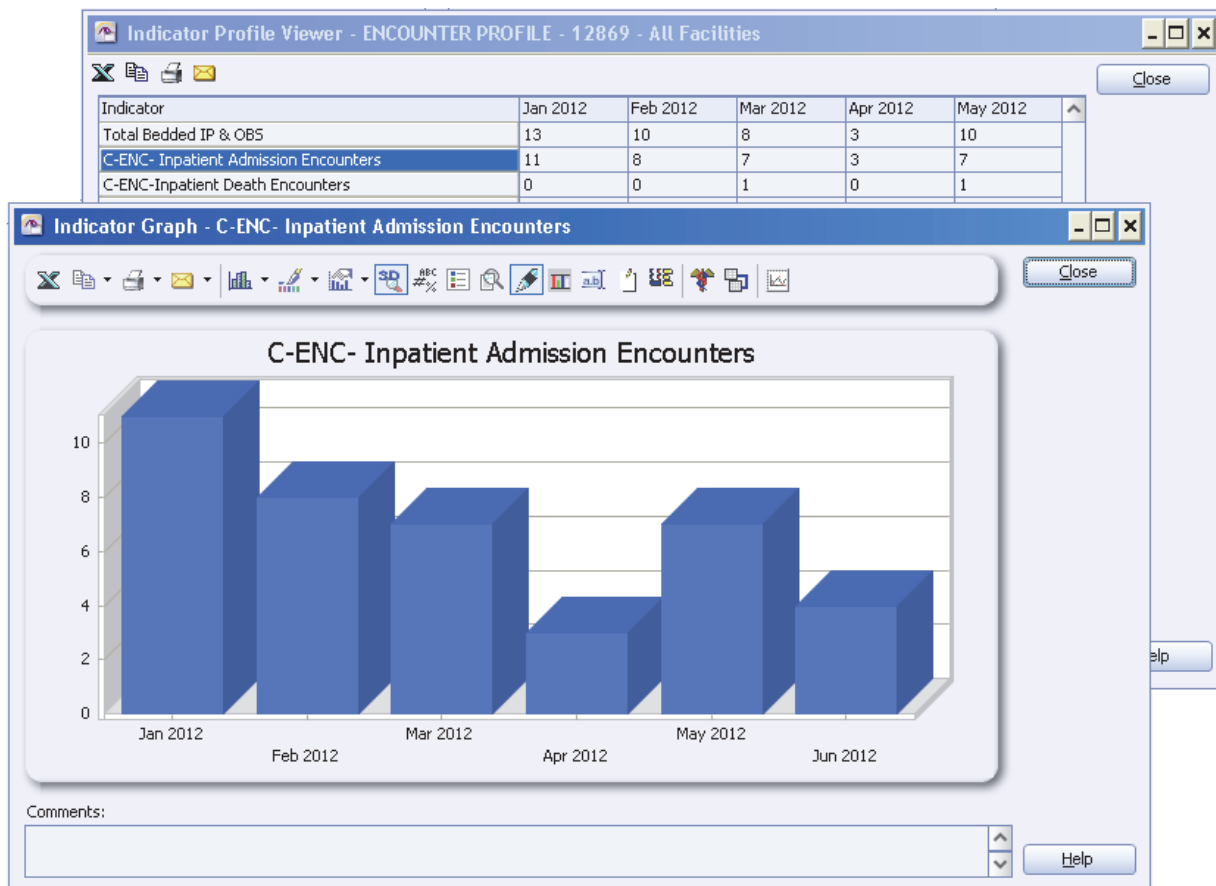
- Select items by marking an item's checkbox or by clicking the item's name.
- Click **Select All** to include all listed items.
- Deselect items by clicking an item's checkbox to clear the mark.
- Click **Deselect All** to clear all marked items.

## Navigating to Indicator Graphs

You can navigate to the Indicator Graphs function to view a graph of a specific Indicator displayed in the Indicator Profile Viewer.

*Note:* You can only navigate to the Indicator Graphs function when Total is selected in the Profile Type drop-down menu of the Indicator Profiles function.

To generate a graph of a single Indicator, double-click the Indicator's name. The system generates and displays the graph (Figure 5.27).



*Figure 5.27: Indicator Graph compiled from an Indicator Profile*

You can also graph multiple Indicators. To do this, press and hold the **Ctrl** key as you click Indicator names in the Indicator Profile Viewer. Then you have selected all the Indicators you want, press the **Enter** key to generate a graph.

## Drilling Down to Encounter or Non-Patient Data

If you have the proper security, you can drill down to encounter-level data from any cell of an Indicator in the compiled Profile. The Midas+ Care Management system can display a maximum of 2,500 entries.


**Note:** The drill-down function is only available for Indicators that contain patient encounter data or non-patient episode-level data, such as risk, claims, or patient relations data. In other words, you cannot drill down on an Indicator that collects data from Registration or from any other patient registration-level file (for example, Authorization episodes), nor can you drill down on Manual Indicators and the Total column.

► **To drill down to encounter or non-patient data:**

- 1 Double-click the cell of the Indicator for which you want to view encounter or non-patient data (Figure 5.28).

**Note:** Be sure that a column is completely displayed with its right border visible before you try to drill down to encounter-level data. If the right border is not visible, scroll the column into full view.

Double-click the cell of the Indicator for which you want to view encounter-level data.



Indicator	Jan-Mar 2012	Apr-Jun 2012	Jul-Sep 2012	Oct-Dec 2012	Total
Total Bedded IP & OBS	31	18	13	4	66
C-ENC- Inpatient Admission Encounters	26	14	12	4	56
C-ENC-Inpatient Death Encounters	1	1	1	0	3

*Figure 5.28: Indicator Profile displayed in the Indicator Profile Viewer*

The Indicator Drill Down form is displayed showing encounter or non-patient data (Figure 5.29). If the indicator contains data for both patient encounters and non-patients, the data for each appears on separate tabs.

If you double-click a zero in a cell of a sum-type Indicator that represents a calculation of data values that happen to sum to zero, the system displays a grid of events that qualified for the Indicator, regardless of the value they contribute to the sum. However, if the Indicator is not a sum type, or if the zero indicates that there was no data to sum, a message appears that informs you there was no data found.

If the indicator contains data for both encounters and non-patients, the data for each appears on separate tabs.

The number in the parenthesis shows how many times the patient qualified for the Indicator.

Indicator: C-ENC- Inpatient Admission Encounters

Facility: All Facilities

Start Month: 1/2012

End Month: 3/2012


Acct No.	MRN	Name	Enc Start	Enc End	Type	Facility
120327	.....	Anson, Chris	2/15/2012	2/20/2012	I	Midas General H
(2) 31212353	.....	Barrios, Gabriela	2/1/2012	3/14/2012	I	EMM FACILITY 0
20090630	.....	Chang, Carla	3/1/2012	3/15/2012	I	Midas General H
(2) 10118653	3293	Chapman, Burt	1/6/2012	3/9/2012	I	EMM FACILITY 0
(2) 34229042	6313	Harrison, Deb	1/6/2012	1/15/2012	I	EMM FACILITY 0
29089118	6078	Houston, Ann	1/28/2012	2/10/2012	I	EMM FACILITY 0
12589141	9909	Johnson, April	3/25/2012	3/31/2012	I	Midas General H
20120327	.....	Juarez, Eduardo	3/27/2012	3/27/2012	I	EMM FACILITY 0
792347	.....	Jones, Adrian	1/2/2012	1/4/2012	I	XD&D 3 FACILITY
0444	529080	Jones, Anna	2/7/2012	2/15/2012	I	Midas General H
0447	575840	Krapp, Chris	2/7/2012	2/10/2012	I	Midas General H

Buttons: Close, Navigate, Help

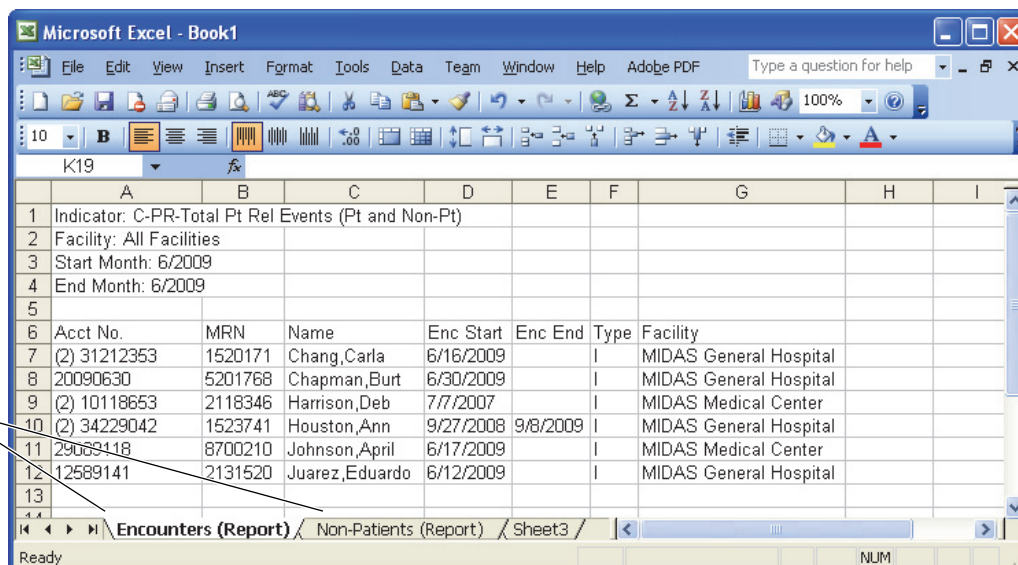
Figure 5.29: Indicator Drill Down form

Note: If a patient has qualified for an Indicator more than once, the number of times is noted in parentheses before the account number:

## 2 You now have the following options:


- Click  to export the data to Microsoft Excel. Midas+ Care Management launches Excel and places the drill-down data in a spreadsheet (Figure 5.30). If the Indicator Drill Down form contains data on both patient encounters and non-patient events, two worksheets are created, one for each type of data. For additional details, see “Exporting the Data to Excel” on page 5.20.

If the Indicator Drill Down form contains data on both patient encounters and non-patient events, two worksheets are created, one for each type of data.



Acct No.	MRN	Name	Enc Start	Enc End	Type	Facility
(2) 31212353	1520171	Chang, Carla	6/16/2009		I	MIDAS General Hospital
20090630	5201768	Chapman, Burt	6/30/2009		I	MIDAS General Hospital
(2) 10118653	2118346	Harrison, Deb	7/7/2007		I	MIDAS Medical Center
(2) 34229042	1523741	Houston, Ann	9/27/2008	9/8/2009	I	MIDAS General Hospital
29089118	8700210	Johnson, April	6/17/2009		I	MIDAS Medical Center
125899141	2131520	Juarez, Eduardo	6/12/2009		I	MIDAS General Hospital

Figure 5.30: Drill-down data in an Excel spreadsheet

- Click  to copy the data to the Microsoft Windows clipboard so you can paste the data into another application, such as Microsoft Word or PowerPoint. If the Indicator Drill Down form contains data on both patient encounters and non-patient events, Midas+ Care Management creates two sections in the text, one for each type of data, as shown in Figure 5.31.

```
Indicator: C-PR-Total Pt Rel Events (Pt and Non-Pt)
Facility: All Facilities
Start Month: 6/2009
End Month: 6/2009



Encounters:

Acct No.      MRN      Name      Enc Start  Enc End  Type  Facility
(2) 31212353  1520171  Chang, Carla  6/16/2009      I  MIDAS General Hospital
20090630      5201768  Chapman, Burt  6/30/2009      I  MIDAS General Hospital
(2) 10118653  2118346  Harrison, Deb  7/7/2007      I  MIDAS Medical Center
(2) 34229042  1523741  Houston, Ann  9/27/2008  9/8/2009  I  MIDAS General Hospital
29089118      8700210  Johnson, April  6/17/2009      I  MIDAS Medical Center
125899141     2131520  Juarez, Eduardo  6/12/2009      I  MIDAS General Hospital

Non-patients for Patient Relations:

Name      ID      DOB      Age  Sex  Home Phone  Event Date
ANDERSON, DAVID  Visitor  5/15/1970  39Y  (520) 555-1256  6/19/2009
BAKER, JET      Vendor      (520) 555-3232  6/24/2009
```

Figure 5.31: Drill-down data pasted from clipboard into Microsoft Word

- Click  to print the data. If the Indicator Drill Down form contains data on both patient encounters and non-patient events, a separate report is printed for each. That is, the non-patient data begins on a new sheet of paper.
- Click  to choose specific patient ID numbers to be viewed in the Indicator Drill Down form. The Choose ID Types form is displayed (Figure 5.32). ID types apply only to patient data, so if all of the drill-down data is non-patient data, the icon is not available.

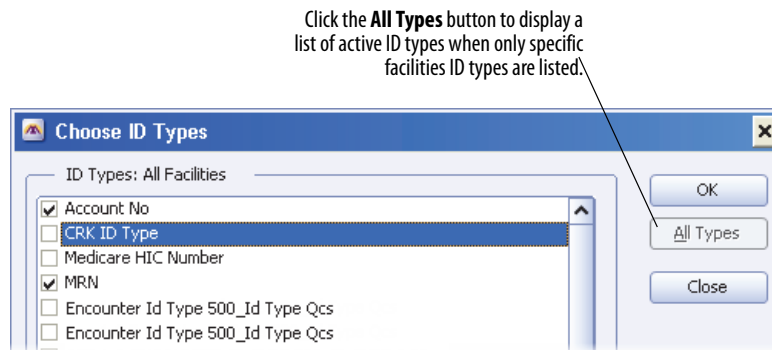


Figure 5.32: Choose ID Types form

By default, the Indicator Drill Down form displays Account Number and MRN. When other ID types are selected, the drill-down data is dynamically updated with the new data, and the ID types you selected are included when you export or print the data.

*Note:* If more than two ID types are chosen, the report prints in landscape mode.

- Navigate to a specific patient's information by highlighting the patient's name on the Indicator Drill Down form and clicking **Navigate**. A menu drops down, and you can select the function for which you want to view or enter data (Figure 5.33). If you drilled down to a non-patient record, the Navigate drop-down menu displays only the entry and inquiry functions for the relevant module.

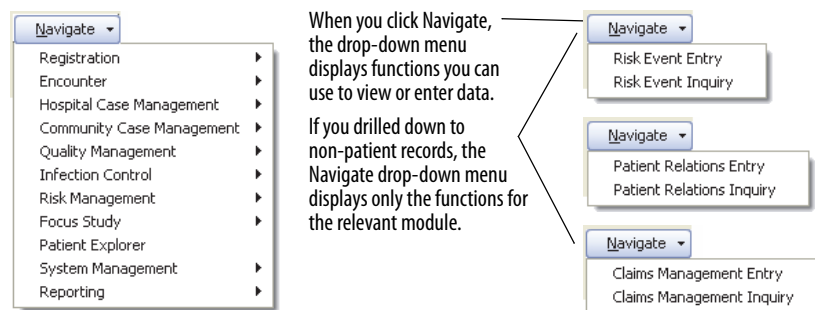




Figure 5.33: Navigate menu

- Click  to e-mail the drill-down data. Use the following instructions to attach drill-down data to an e-mail.

► **To attach drill-down data to an e-mail:**

- 1 On the Indicator Drill Down form, click the e-mail  icon. A message reminds you to save the data as an Excel file.
- 2 Click **OK**. The **Save As** dialog box opens.
- 3 Use the dialog box to name the Excel file and to navigate to the folder where you want to store the file.
- 4 Click **Save**. The **Export Format** dialog box opens.
- 5 Click **Report Format** or **Spreadsheet Format**, and then click **OK**. For details on which format to choose, see “Exporting the Data to Excel” on page 5.20.
- 6 Your e-mail client opens a new message. Attach the Excel file to the e-mail message; the file is *not* automatically attached to the e-mail.

**System Manager:**

Drill-down restrictions can be assigned in the User Definition function. For more information about assigning these restrictions, see “Indicator Drill-Down Restrictions” on page A.7.



## Section 6:

# Statistical Process Control Charts

Statistical process control can contribute to quality patient care by improving overall safety and outcomes, and by encouraging the use of evidence-based best practices.

You can access and perform statistical process control (SPC) analysis on a wide range of Midas+ data and present the results in a variety of helpful charts. Midas+ SPC charts include a family of four basic types: P, U, I, and X-bar charts, as well as a number of other associated types.

### In this section:

- 6.2** Statistical Process Control Charts
- 6.2** SPC Overview
- 6.4** Accessing SPC Functionality
- 6.10** Viewing SPC Charts
- 6.14** General SPC Chart Characteristics
- 6.21** Types of Midas+ SPC Charts

## Statistical Process Control Charts

Midas+ applications can access and perform statistical process control (SPC) analysis on a wide range of data and present the results in a variety of helpful charts. The use of Midas+ SPC charts assumes that you have a basic understanding of statistical process control as it applies in the healthcare field.

*Note:* Six of many good resources for basic statistical information are:

- Carey, R. G. (2003). *Improving Healthcare with Control Charts*. ASQ Quality Press: Milwaukee, Wisconsin
- Lloyd, R. (2004). *Quality Health Care: A Guide to Developing and Using Indicators*. Jones and Bartlett Publishers: Boston.
- Wheeler, D. J. (1992). *Understanding Statistical Process Control*. SPC Press: Knoxville, Tennessee
- Wheeler, D. J. (1993). *Understanding Variation: The Key to Managing Chaos*. SPC Press: Knoxville, Tennessee
- Wheeler, D. J. (1995). *Advanced Topics in Statistical Process Control*. SPC Press: Knoxville, Tennessee

In Midas+ Care Management SmarTrack, SPC chart functionality can be launched from Indicator profiles and Indicator graphs.

## SPC Overview

Statistical process control can contribute to quality patient care by improving overall safety and outcomes, and by encouraging the use of evidence-based best practices. SPC charts assist in identifying variations, trends, and defects. They also help in discovering and controlling underlying causes.

This type of analysis and control also benefits healthcare organizations in meeting public reporting requirements and helping ensure fiscal viability.

Midas+ SPC charts include the following four major types:

**P charts** display how a proportion of events from a total population (a subset percentage ranging from 0 to 100%) is changing over time.

**U charts** display how the frequency of events is changing as a ratio over time (which can exceed 100% at times).

**I charts** display data as individual results (counts) in relation to the mean.

**X-bar charts** display subgroups of data as changes over time or changes associated with a variable (*continuous measures*).

## Associated Chart Selections

The four major chart types contain associated chart selections.

### P charts

- P chart 2-sigma
- P chart
- P Run chart
- P Trend chart

### U charts

- U chart 2-sigma
- U chart
- U Run chart
- U Trend chart

### I charts

- I chart 2-sigma
- Individual chart
- I Run chart
- I Trend chart

### X-bar charts

- Box Plot chart
- Median chart
- X-bar chart 2-sigma
- X-bar chart
- X-bar R chart 2-sigma\*
- X-bar R chart\*
- X-bar R Run chart\*
- X-bar R Trend\* chart
- X-bar Run chart
- X-bar S chart 2-sigma\*
- X-bar S chart\*
- X-bar S Run chart\*
- X-bar S Trend\* chart
- X-bar Trend chart

\* These x-bar chart types are displayed as chart pairs, consisting of two related charts.  
For details on these chart types, see “Types of Midas+ SPC Charts” on page 6.21

## Accessing SPC Functionality

If the user has an appropriate Indicator and Profile security level, there are four primary methods within Care Management to access statistical process control functionality. This applies to both viewing and selecting chart options.

The following are the five overall ways to access an SPC chart.

► **From “Indicator Graphs”:**

- 1 Select **Function > Reporting > Indicators > Indicator Graphs** (Figure 6.1).

The screenshot shows the 'Compile Indicator Graphs' window. It includes fields for 'Start Month', 'End Month', 'Trend' (set to 'Monthly'), 'No. of Comparison Years', and a 'Reference by Fiscal Year' checkbox. There are two list boxes for 'Indicator' and 'Facility', each with a search icon. A 'Show SPC Chart' button is visible on the right side of the window.

Figure 6.1: Compile Indicator Graphs form

- 2 Enter all needed data in the form. (See “Viewing SPC Charts” on page 6.10.)
- 3 Click **Show SPC Chart**. An SPC chart opens.

► **From “Indicator Profiles”:**

- 1 Select **Function > Reporting > Indicators > Indicator Profiles** (Figure 6.2).

Figure 6.2: Compile Indicator Profiles form

- 2 Enter all needed data in the form. (See “Viewing SPC Charts” on page 6.10.)
- 3 Click **View**. The Indicator Profile Viewer opens (Figure 6.3).

Indicator	Aug 2010	Sep 2010	Oct 2010	Nov 2010	Dec 2010
CDB914 - Inpatients - Geometric Mean Length of Stay	3.205	3.464	12.098	3	5
CDB914 - Inpatients - Geometric Mean Length of Stay (numerator)	3.2048	3.4641	12.0979	3	5
CDB914 - Inpatients - Geometric Mean Length of Stay (denominator)	1	1	1	1	1
CDB915 - Acute Care - Arithmetic Mean Length of Stay	3.591	3	91.571	3	5
CDB915 - Acute Care - Arithmetic Mean Length of Stay (numerator)	79	3	641	3	5
CDB915 - Acute Care - Arithmetic Mean Length of Stay (denominator)	22	1	7	1	1
CDB916 - Acute Care - Geometric Mean Length of Stay	3.274	3	12.098	3	5
CDB916 - Acute Care - Geometric Mean Length of Stay (numerator)	3.2742	3	12.0979	3	5
CDB916 - Acute Care - Geometric Mean Length of Stay (denominator)	1	1	1	1	1
CDB917 - Acute Care - Arithmetic Mean Length of Stay, Age over 64	4.111	3	108	3	5
CDB917 - Acute Care - Arithmetic Mean Length of Stay, Age over 64 (numerator)	37	3	216	3	5
CDB917 - Acute Care - Arithmetic Mean Length of Stay, Age over 64 (denominator)	9	1	2	1	1
CDB918 - Acute Care - Geometric Mean Length of Stay, Age over 64	3.869	3	20.688	3	5
CDB918 - Acute Care - Geometric Mean Length of Stay, Age over 64 (numerator)	3.8693	3	20.6882	3	5
CDB918 - Acute Care - Geometric Mean Length of Stay, Age over 64 (denominator)	1	1	1	1	1

Double-click one or more Indicators to create graph.

Figure 6.3: Indicator Profile Viewer form

- 4 Double-click on an Indicator of interest in the first column to launch the graph.

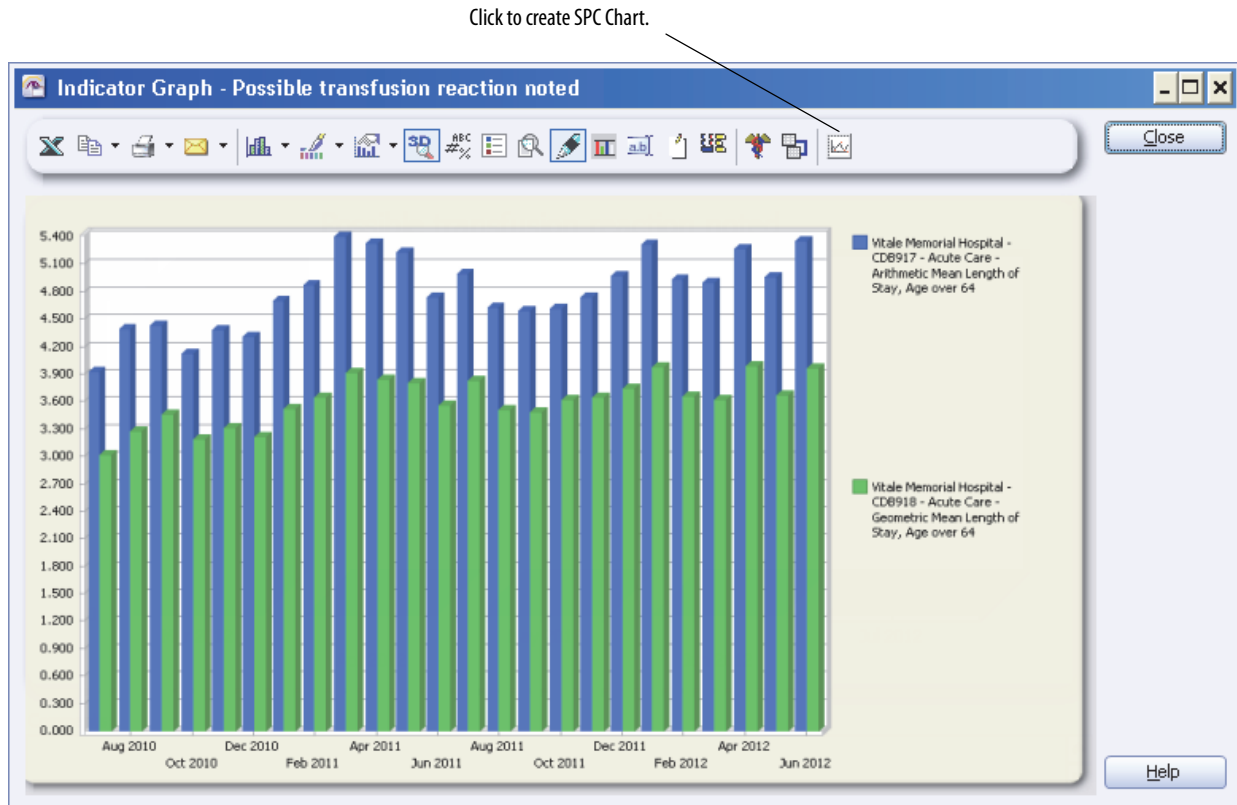


Figure 6.4: Indicator Graphs form

Note: As an alternative method, you can also select and view multiple Indicators from a single profile as follows:

- Select two or more Indicators (press **Ctrl+click**).
- Ctrl+Double-click** on one of the selected Indicators. A combined graph opens.
- Click the **SPC** button. Thumbnail SPC charts open (Figure 6.5).

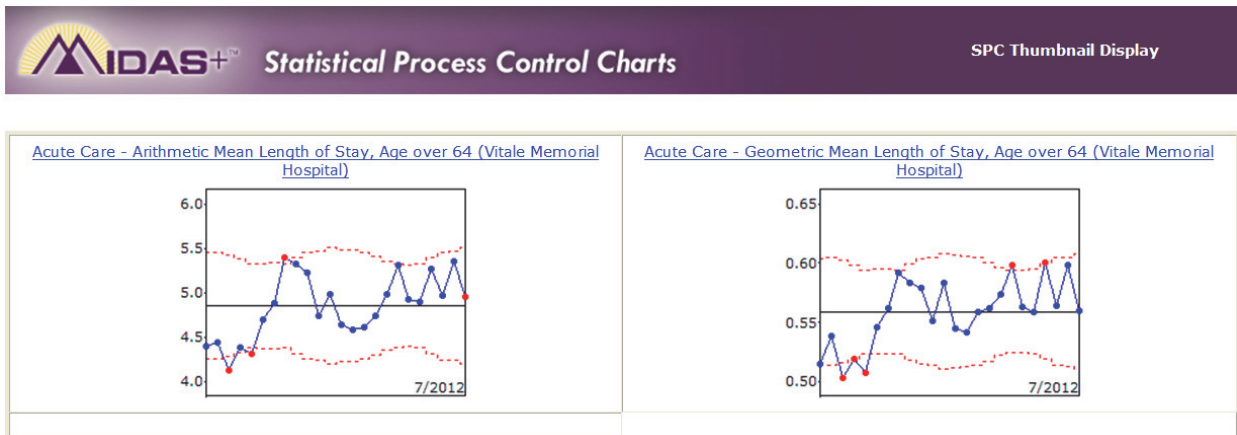


Figure 6.5: Thumbnail SPC Charts

- Click the **SPC** button . An SPC chart opens.

► **From “Indicator Definition”:**

*Note:* Only user-defined Indicators can be viewed or modified from the Indicator Definition function; DataVision and CPMS Indicators cannot.

- 1 Select **Function > Reporting > Indicator Definition**.
- 2 Complete all needed entry fields in the form (to either edit or create a new Indicator) and display the Indicator Definition form.

**Indicator Definition - Count**

Description: Autologous Whole Blood/Packed RBC Code: PXMAT

Copy From:

Count: Encounter

Condition Logic: ☒ AND ☐ OR ☐ Custom

If:

BLOOD BANK:COMPONENTS:Component

And

<Add New Condition>

If:

Module:Field: BLOOD BANK:COMPONENTS:Component

☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered

Of Packed RBC

Ref. Date: ENCOUNTER:End Date

Provider: BLOOD BANK:COMPONENTS:Physician

Crosstab:

Title:

Access Function: BLOOD BANK INQUIRY

SPC Chart Type: I Chart

SPC Target Direction: Neutral

Display Symbol:

Display Order: ☐ Before ☒ After

Active: ☐

Buttons: Save, Indicator Restrictions, Delete Condition, Cancel, Delete Ind., Help

Specify SPC Chart here.

Figure 6.6: Indicator Definition form

- 3 In the **SPC Chart Type** field, select the type from the drop-down menu (“Types of Midas+ SPC Charts” on page 6.21). If you select a type that may be inappropriate for the data given, when you save the definition a message recommends an alternative chart type (although you can still choose the initial type selected).

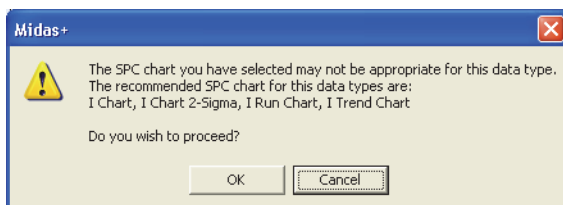


Figure 6.7: Sample Message for alternative chart type

*Note:* Because definitions for distributed measures in Midas+ products are not created or stored using the SmarTrack Indicator Definition function in Midas+, all SPC Chart Types and Target Directions for distributed measures are maintained and distributed by Midas+. You can temporarily change the chart type to display when you run the report, but the default report type (e.g., P chart, U bar chart, I chart, or X-bar chart) is maintained in the software code.

- 4 Click **OK**.

5 In the **SPC Target Direction** field, you can select one of three options:

- **Up** – shows favorable data as moving in an upward direction.

*For example, if the chart-designer wanted to show the number of accident-free days as favorable events, **Up** should be selected.*

- **Down** – shows favorable data as moving in a downward direction.

*For example, to show mortality rate, **Down** should be selected.*

- **Neutral** – presents the chart data without showing favorability in any particular direction.

*Note: Trend and Run charts do not display “+” or “-” symbols to represent trends.*

► **From “Indicator Profile Definition”:**

1 Select **Function > Reporting > Indicator Profile Definition**. This process allows you to access and view the SPC chart previously selected for a specified Indicator.

Figure 6.8: Indicator Profile Definition form

2 Select or complete all needed entry fields in the form (to either edit or create a new Profile) and display the Indicator Definition form.

Figure 6.9: Indicator Profile Definition form with selected Indicator



- 3 Right-click the Indicator and select **Indicator Inquiry**. The Indicator Definition form opens.

*Note:* Only user-defined Indicators can be viewed or modified from the Indicator Definition function; DataVision and CPMS Indicators cannot.

View the associated SPC chart options here.

The screenshot shows the 'Indicator Definition - C-BB: Total Patients Received Transfusion, by component' form. The fields are as follows:

- Code: TPBC
- Description: C-BB: Total Patients Received Transfusion, by component
- Rule Type: Count
- Title: Total Patients Transfused, by component
- Ref. Date: ENCOUNTER:End Date
- Provider: BLOOD BANK:COMPONENTS:Physician
- Crosstab: BLOOD BANK:COMPONENTS:Component
- Count: ENCOUNTERS
- SPC Chart Type: I Chart
- SPC Target Direction: Neutral
- Access Function: (empty)
- Indicator Restrictions: (empty)
- Conditions - If:
  - BLOOD BANK:COMPONENTS:Component Is Entered
  - And
  - BLOOD BANK:COMPONENTS:Units Transfused Is Entered

A callout points to the 'SPC Chart Type' field, indicating where to view the associated SPC chart options.

Figure 6.10: Indicator Definition form

- 4 You can view the SPC chart options for the selected Indicator.

## Viewing SPC Charts

When you analyze data for statistical process control and charting, the Midas+ application automatically chooses the most appropriate chart based on the type of Indicators you defined and the sample size. You can view the default chart or select an associated chart to display your Indicator or Indicator Profile.

► **To view an SPC chart:**

- 1 Open the **Compile Indicator Graphs** (or **Compile Indicator Profiles**) form.

The screenshot shows a web-based form titled 'Compile Indicator Graphs'. At the top, there are input fields for 'Start Month' (1/2012) and 'End Month' (12/2012). To the right of these is a 'Trend' dropdown menu set to 'Monthly'. Further right is a 'No. of Comparison Years' input field. Below these is a checkbox for 'Reference by Fiscal Year' which is unchecked. The main part of the form contains two tables. The first table is labeled 'Indicator' and has one row with the text 'C-CCM-CHF Assessment- Medication Non-Compliant'. The second table is labeled 'Facility' and has one row with the text 'Midas General Hospital'. To the right of the 'Facility' table is a checkbox labeled 'All Facilities' which is unchecked. On the far right of the form, there are three buttons stacked vertically: 'Show Graph', 'Show SPC Chart', and 'Close'.

Figure 6.11: Compile Indicator Graphs form (partial)

- 2 Enter the **Starting Month** and year (mm/yyyy).
- 3 Select the frequency for your data points from the **Trend** drop-down menu: monthly, quarterly, semiannually, or annually).
- 4 Enter the **Ending Month** and year (mm/yyyy).
- 5 Select one or more **Indicators** (or **Profiles**).
- 6 Select one or more sites in the **Facility** grid, or mark the **All Facilities** checkbox.
- 7 Click the **Show SPC Chart** button. An appropriate chart is displayed.

## Viewing Associated Types of Charts

You can also view one or more different types of charts that are associated with the default chart displayed. (See “Associated Chart Selections” on page 6.3.)

The menu bar on the SPC Charts form contains three drop-down menus for selecting charting options (Figure 6.12).

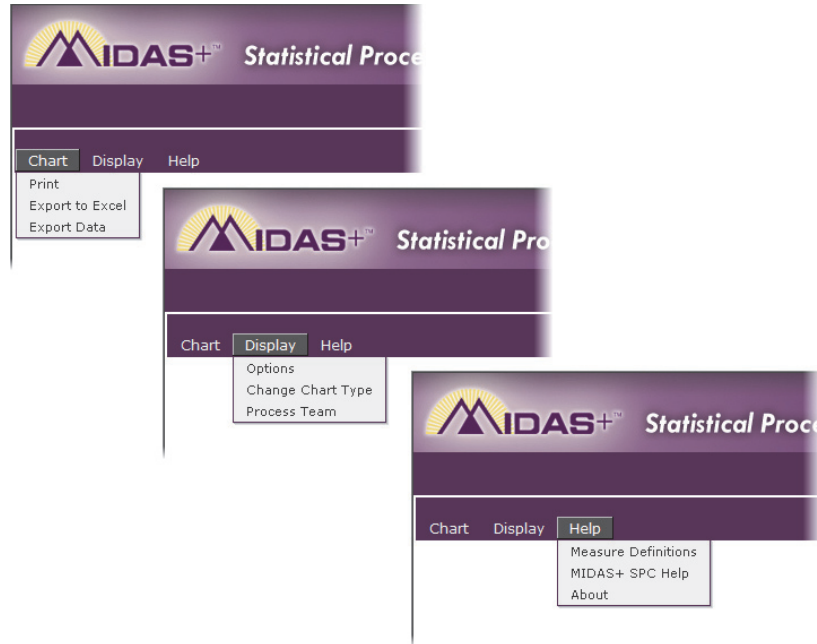


Figure 6.12: SPC Chart Menus

► **To view associated types of charts:**

- 1 From the **Display** drop-down menu, select **Change Chart Type**.
- 2 Click the associated chart type to display it.

## Customizing Chart Options

You can customize any displayed SPC chart using a variety of data presentation options.

► **To customize the presentation of the chart:**

- 1 Display the chart.
- 2 Select **Options** from the **Display** drop-down menu.

*Note:* The range of options varies according to the chart type you select.

- 3 Mark the desired checkboxes.

*Note:* If you mark the **Change background for out of control charts** checkbox, a drop-down menu lets you select a different background color.

- 4 You can add a customized subtitle to your chart by entering it into the **Subtitle** field. The default subtitle displays the facility name, date range, and whether the x-axis increments are expressed monthly, quarterly, semiannually, or annually ("FY" is displayed for Fiscal Year increments).

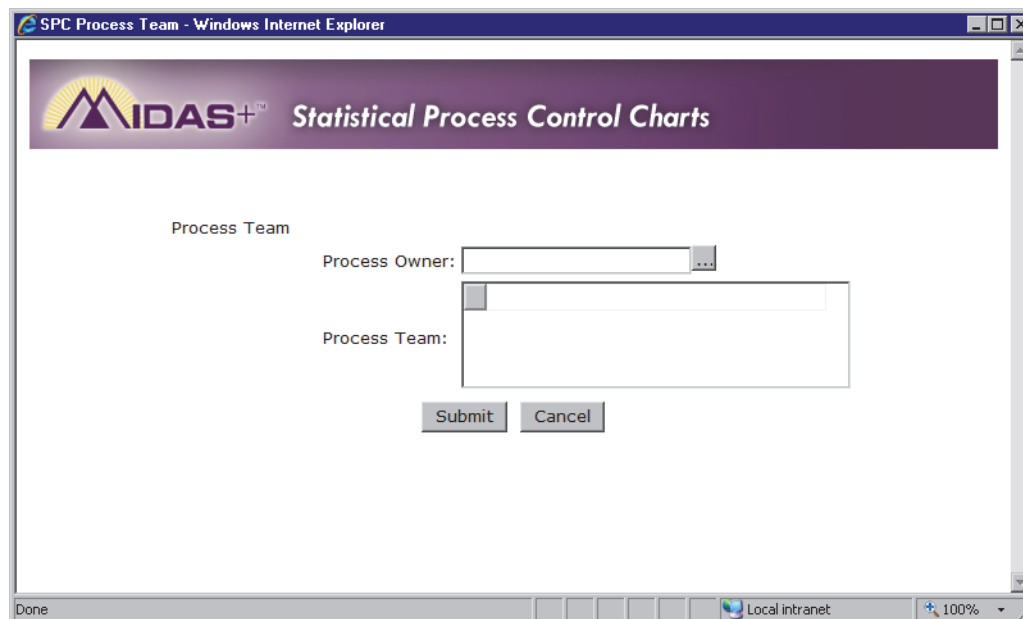
If you use certain types of symbols—for example, quotes ("), ampersands (&), and others—the subtitle may not display properly. View your final graph text to ensure that it displays as you intended, or make substitutions for the misprinted symbols.

## Process Team

It is helpful to specify a team and responsible lead person who have accountability for the process or outcome.

► **To view or enter members of the Process Team:**

- 1 Display the chart.
- 2 Select **Process Team** from the **Display** drop-down menu.

The screenshot shows a web browser window titled "SPC Process Team - Windows Internet Explorer". The page has a purple header with the "MIDAS+" logo and the text "Statistical Process Control Charts". Below the header, the form is titled "Process Team". It contains two input fields: "Process Owner:" and "Process Team:". The "Process Owner:" field is a small text box with a dropdown arrow. The "Process Team:" field is a larger text box with a dropdown arrow. Below these fields are two buttons: "Submit" and "Cancel". The browser's status bar at the bottom shows "Done", "Local intranet", and "100%".

- 3 In the **Process Owner** field, select a person responsible for the process from the Dictionary list of employees.
- 4 In the **Process Team** field, select a group involved with the process from the Dictionary list of employees. (You can use the "**Ctrl**+select" functionality to add multiple members.)

## Printing Charts

You can print a chart to any printer available to you.

► **To print a chart:**

- 1 Click **Chart** in the chart form's heading.
- 2 Select **Print** from the menu. The Print form is displayed.
- 3 Select the printer and any print options.
- 4 Click the **Print** button.

## Exporting Charts

You have two main exporting options for SPC data. You can export the chart and its data to Excel or you can export the raw data to another compatible third-party product at your workstation.

*Note:* The data you select to export to Excel may open in either a full-featured program (if you have it available at your workstation) or in a viewing-specific limited version of Excel. See your System Manager if you want to alter the default application for opening an .xls file.

### ► To export SPC chart data:

- 1 Click **Chart** in the chart form's heading.
- 2 Select one of the following:
  - If you want to export both the chart and its data table to Excel, click **Export to Excel**. Choose to then Open, Save, or Cancel exporting the file in the Excel application. (If Save is selected, make sure to select the folder you want to save the file in.)

You can only export data to Excel if you have it available at your workstation.

When compiling a Rate in SPC Charts and displayed in Internet Explorer, the Rate column displays values to the 1000th Place (e.g., 75.000). However, if the same SPC chart is exported to Excel, the number displays only in units ("75"—no decimals). However, you can restore the decimals within Excel using its Format functionality.

- If you want to export only the raw data of the chart to another compatible program, click **Export Data**. Enter a file name with its corresponding extension, and click **Export** or **Cancel**.

## Help Menu

The Help menu at the top of the Midas+ Statistical Process Control Charts form provides information about measures, SPC Help, and the developers of Midas+ SPC.

### Measure Definitions

If you have proper security level and access to Midas+ DataVision, selecting **Measure Definitions** displays detailed data about the chart's Measure.

### Midas+ SPC Help

Click **Help** to open Midas+ Online Help topics.

### About

Click **About** to display information about the SPC function and its developers.

## General SPC Chart Characteristics

Most of Midas+ SPC charts have common characteristics in how they present graphical information. A typical example of an X-bar chart is displayed in Figure 6.13.

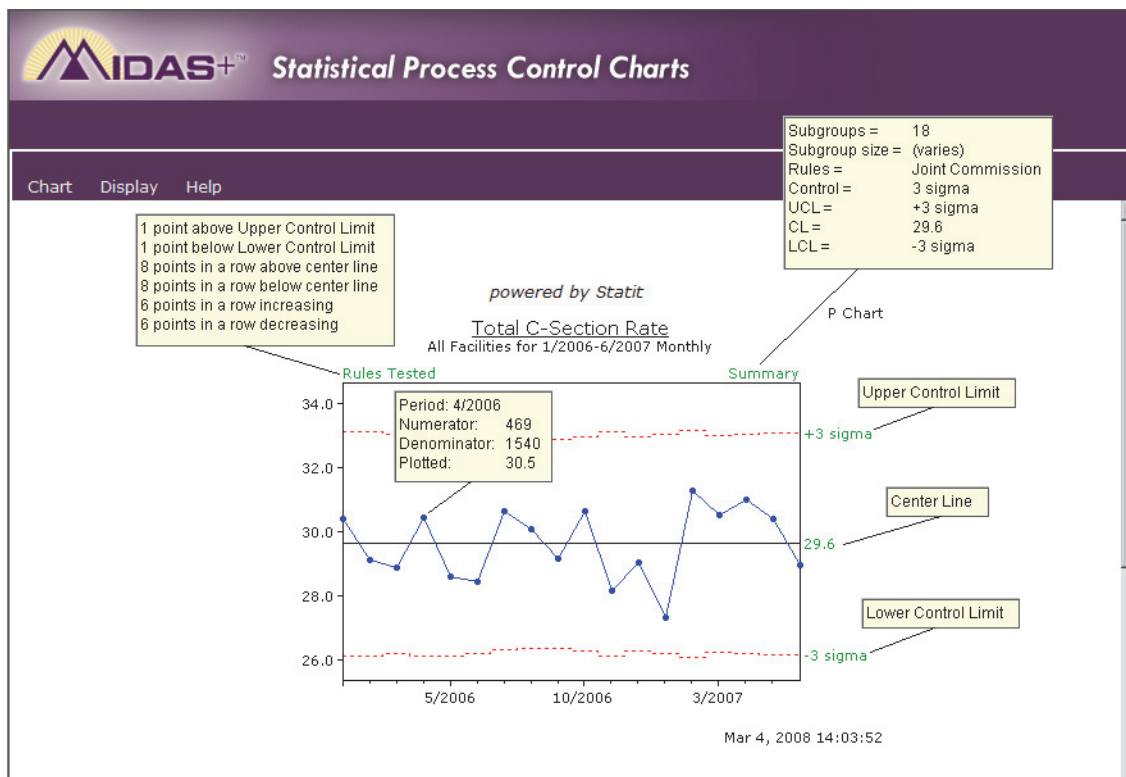


Figure 6.13: Typical SPC chart displaying hover data

As you hover your mouse pointer over the markings shown, the following descriptive data is displayed in pop-up boxes on this chart.

### Chart Markings

**Rules Tested** displays The Joint Commission (TJC) rules used in configuring a particular chart. These rules vary depending on the chart selected.

**Summary** displays the characteristics used in creating each chart and its data, based on subgroup size.

**Individual data points** are shown as a series of single chart points, where each point represents one event or a subgroup of events on the graph.

*Note:* If a data point has violated a Rule (indicated in red), hovering your mouse pointer over the point displays a pop-up with an explanation of the Rule Violation (Figure 6.14).

**Important:** *If there is no data for a given point (or time period), the charts generated omit that point from the calculations and graph. For example, if no patients were discharged in July for computing ALOS, the charts generated skip that month (rather than enter a "0" value and thus skew the overall data).*

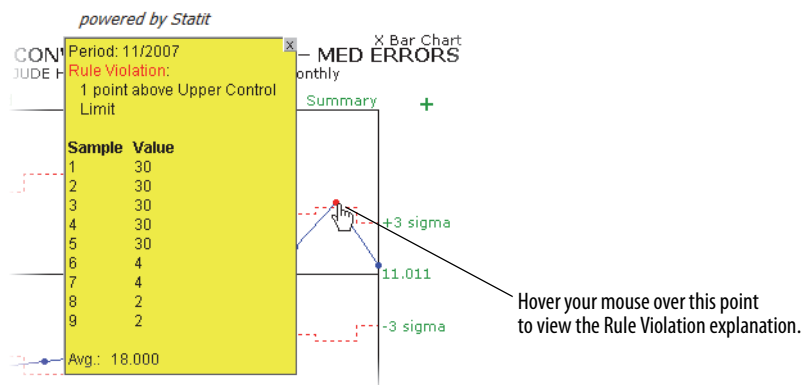


Figure 6.14: Example of Rule Violation data

### Y-axis Markings

**Upper Control Limit (UCL)** indicates the upper threshold beyond which the process is considered out-of-control for the SPC chart in use.

**Center Line (CL)** represents the mean, median, or mode associated with the points plotted, depending on the type of chart option chosen.

**Lower Control Limit (LCL)** indicates the lower threshold beyond which the process is considered out-of-control for the SPC chart in use.

On those types of SPC charts that display control limits, the magnitude of the control limits is based on the *subgroup size* (i.e., *number of events within the subgroup, designated as "N"*) and *value* of each event. The magnitude of the control limit is expressed as multiples of the standard deviation (designated as "sigma" or " $\sigma$ ") for each subgroup. The greater the value of N, the easier it is to identify a significant outlying point of special cause variation.

The following table shows the displayed control limit magnitude based on the subgroup size.

Table 6.1: Control Limits for Subgroups

Events per Subgroup (N)	Control Limit Magnitude (sigmas)
1*	$\pm 3.0^*$
2	$\pm 1.5$
3 - 4	$\pm 2.0$
5 - 9	$\pm 2.5$
$\geq 10$	$\pm 3.0$

\* Normally, control limits are not displayed for a graphical point that represents a subgroup consisting of only one data element; however, for continuity in certain cases, Midas+ SPC charts use a 3-sigma control limit as a default value.

## Special Information Options

If you click a specific data point on an active SPC chart, a number of options are available on a “Special Information for Period” form. These include comments, annotations, assignable causes, and process-defining options.

Figure 6.15: Special Information for Period form – all options displayed

The Special Information pertains to a specific moment or period in time (except for the Process Owner entry). The selected time period is displayed in the upper right corner of the form.

*Note:* If you change the time period selection within the same date range (for example, from Quarterly to Annually) for a given chart, all of the Special Instructions continue to be displayed.

A plus sign (+) to the left of a category indicates that there are additional subfields within that category. Click the “+” button to expand and display the subfields. Click the minus sign (-) to hide the subfields.

If you want to add Special Information, enter data in the following fields. This information is displayed on the chart after clicking **Submit**.

**Important:** *While the information is associated with the chart, it is also stored in Midas+ database, so any user accessing the same chart can see the Special Information.*

**Important:** *This Special Information also appears on all related chart types. If you want to edit this information, you must return to the original chart type and period, and re-enter the original chart parameters. If you change the Facility, the date range, or switch to a non-SPC chart type (Trend, Run, Median, or Box), the Special Information is not displayed.*



**Comment/Action Plan** Enter free-text comments or planning items. As new comments are subsequently added, the writer and entry time/date portion is updated to reflect only the last entry. A sample of the Comments field appears as follows:

Period	Comment(s)	Updated by
4/2005	AMI patients moved into new ICU in April, 2005.	ESTEN,ROBERT on 1/10/2008 1:34:04 PM

The Comment/Action Plan field is a helpful way to document a series of comments explaining the history of a process over time.

**Chart Annotation** Enter one line of free-text information about the selected data point. This data is represented by an Abbreviated Annotation note that is displayed at the data point on the chart.

*Note:* Annotation comments are not displayed on a printed report. If you want key information on a printed report, place it in the Comments/Action Plan field instead.

**Abbreviated Annotation** Enter a short free-text note. When the user hovers the mouse pointer on this Abbreviated Annotation note on the chart, a pop-up box displays the full message created in Chart Annotation.

*Note:* Instead of using a key word, another useful way to specify Abbreviated Annotations is to simply label them "Note 1", "Note 2", etc., which refers to the explanation in the Chart Annotation.

Hover your mouse pointer over the Abbreviated Annotation note to display Chart Annotation pop-up.

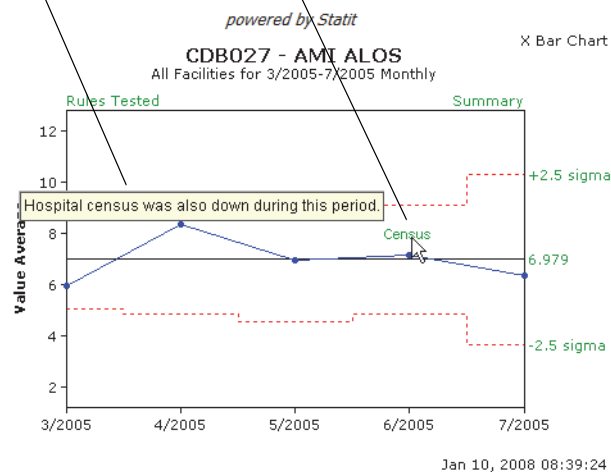


Figure 6.16: Chart Annotation

**Assignable Cause** If a data point is out of control (and violated a Rule) and there is an external reason for it, you can attribute an Assignable Cause to that data point. Assignable Cause is similar to a Chart Annotation; however, an assignable cause removes the data point from the calculations of the Control Limits and removes the

Limit lines from the chart for this time period. A red checkmark is also placed over the data point (Figure 6.17).

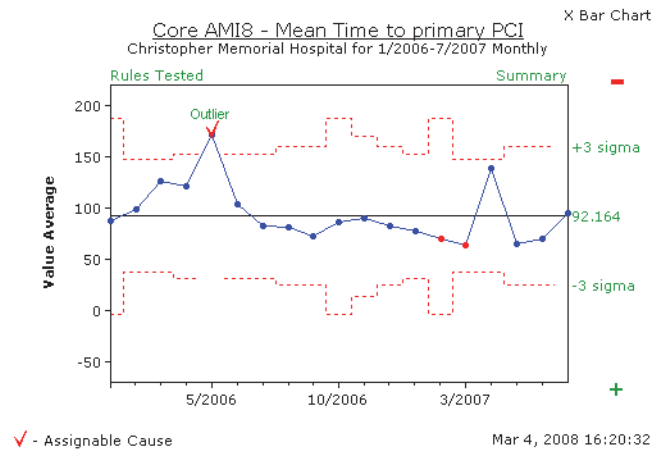


Figure 6.17: Assignable Cause notations

**Abbreviated for Assignable Cause** Enter a short free-text note. When the user hovers the mouse pointer on this Assignable Cause note on the chart, a pop-up box displays the full message created in Chart Annotation.

**Process Change** Select a data point on the graph to note a change in the process, and enter short description in the Process Change field. When you click **Submit**, the graph is divided (along the x-axis) at the selected period, and the prior process is labeled "Initial" by default (Figure 6.18). The prior and new processes each have Rules applied individually.

**Note:** It is helpful to completely describe the Process Change in **Comment/Action Plan**, so that the change details are displayed when the chart is viewed.

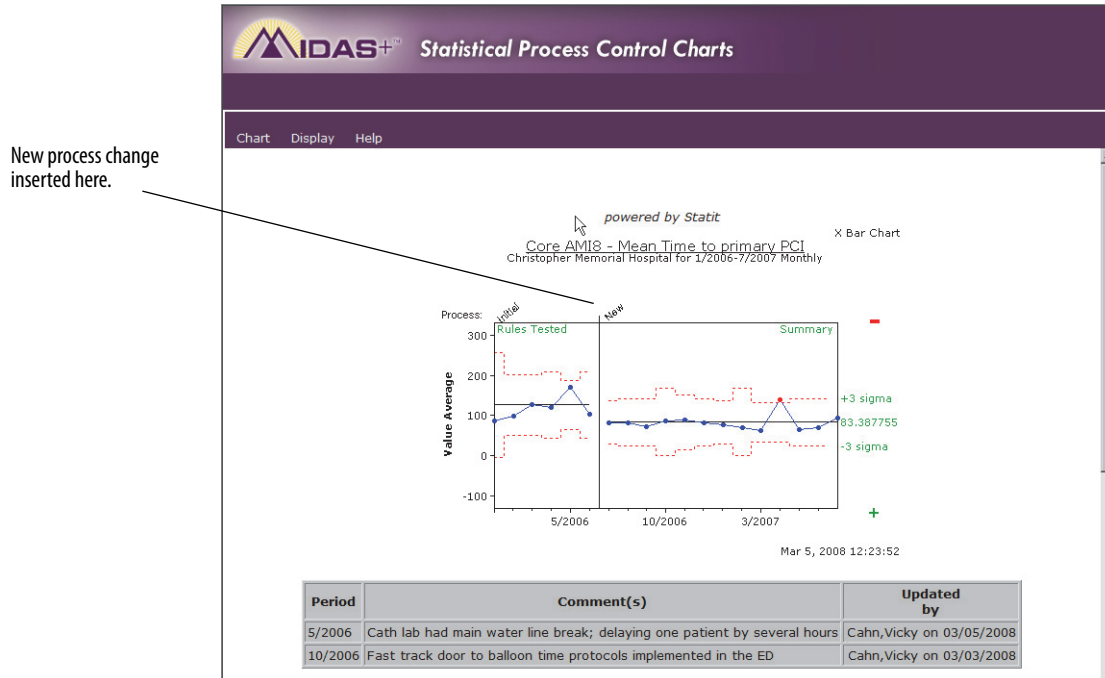


Figure 6.18: Process Change

For a selected chart point, you can click **Clear Process**, then the **Submit** button, to remove the inserted process change.

## Additional Display Options

You can also receive and alter the background information displayed on your chart using dockable windows and via a graph area menu.

### Dockable Chart Windows

The pop-up boxes on the chart can also be converted into dockable windows by right-clicking on the box.

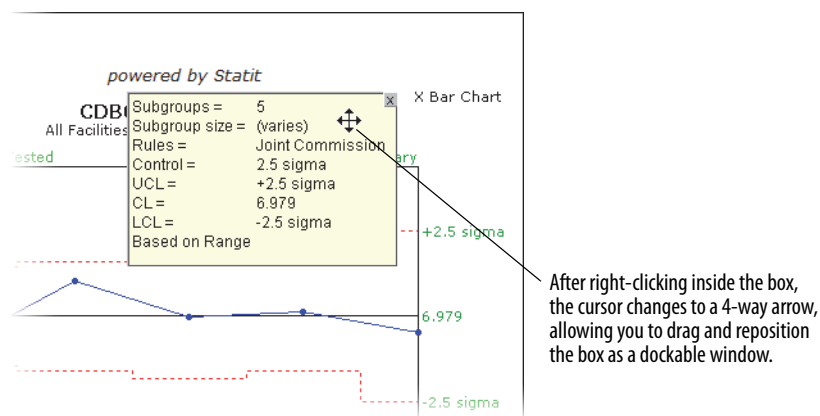


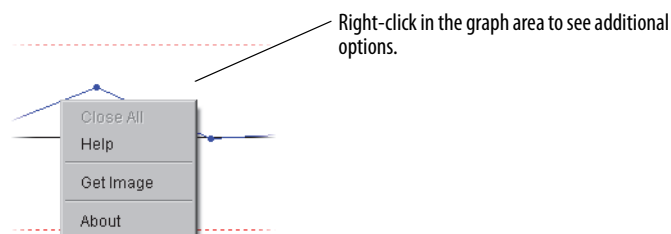
Figure 6.19: Pop-up box converts to dockable window

As a dockable window, you can reposition the box by dragging it to another location within the bounds of the chart. Click the “x” in the box’s upper right corner to close the window.

*Note:* The movable range of these dockable windows is limited to the chart borders.

### Graph Area Menu

If you right-click anywhere within the boundaries of the graph area, a context menu lets you choose from a list of options.



*Figure 6.20: Graph-line options*

**Help** offers tips on how to view and use background chart data (as authored by Statit).

**Get Image** displays a non-interactive graphic of the chart, which can be conveniently screen-captured or copied to another document. If you right-click in the Image area, other functional options may be available, depending on your type of Browser.

**About** provides information about the third-party interactive chart applet.

**Close All** closes all of the chart’s open pop-up boxes.

## Types of Midas+ SPC Charts

There are four primary types of SPC charts used in Midas+ applications: P charts, U charts, I charts, and X-bar charts. Each of these four has a number of associated charts that can be displayed to emphasize specific related parameters. Some of the chart types are not necessarily statistical process control charts, but can reveal other useful ways of viewing data.

When you choose to display your data in an SPC chart, the Midas+ application automatically opens the chart most appropriate for presenting your information. Alternatively, you can change the chart option to switch to another chart type.

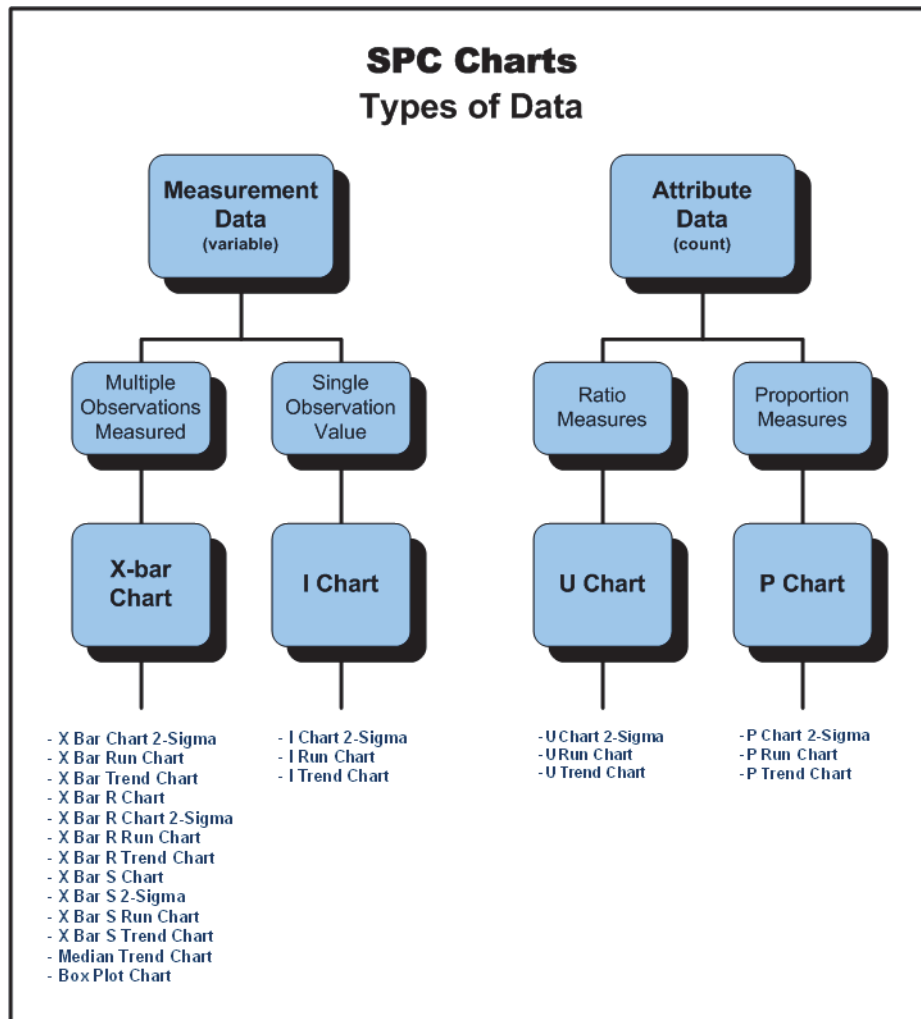


Figure 6.21: Four basic types of SPC Charts, with associated chart options

## P charts

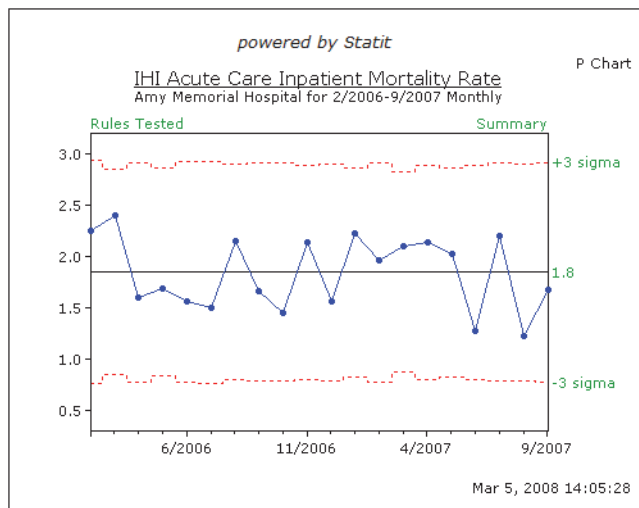


Figure 6.22: P chart

P charts have the following characteristics:

- Display *percentage* or *proportion* data
- Display (most commonly) *rates* computed by Midas+ SmarTrack
- All cases counted in the numerator are also part of the denominator
- Only one event or occurrence can be counted in the numerator
- All six of The Joint Commission Rules are tested
- Common Indicators displayed in a P Chart include:
  - Acute MI Mortality rates
  - CHF Readmission rates
  - C-section rates
  - % Acute MI patients with PTCA procedures
  - Frequency of Primary sepsis per 1000 Acute Care Admissions

The following are four associated charts listed in Change Chart Type of the Display menu.

### P charts

- P chart 2-sigma
- P chart
- P Run chart
- P Trend chart

## U charts

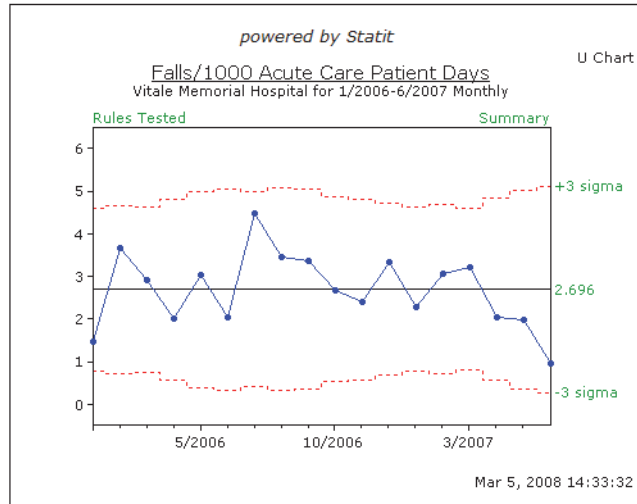


Figure 6.23: U chart

U charts have the following characteristics:

- Display *ratio* data
- Display (most commonly) *rates* computed by Midas+ SmarTrack in which the numerator is a totally separate population than the denominator
- All cases counted in the numerator can occur more than once
- Could theoretically be more than 100%
- All six of The Joint Commission Rules are tested.
- Common Indicators displayed in a U chart include:
  - Falls per 1000 patient days
  - Medication errors per 1000 patient days
  - Needle sticks per 1000 surgical procedures

The following are four associated charts listed in Change Chart Type of the Display menu.

### U charts

- U chart 2-sigma
- U chart
- U Run chart
- U Trend chart

## I charts

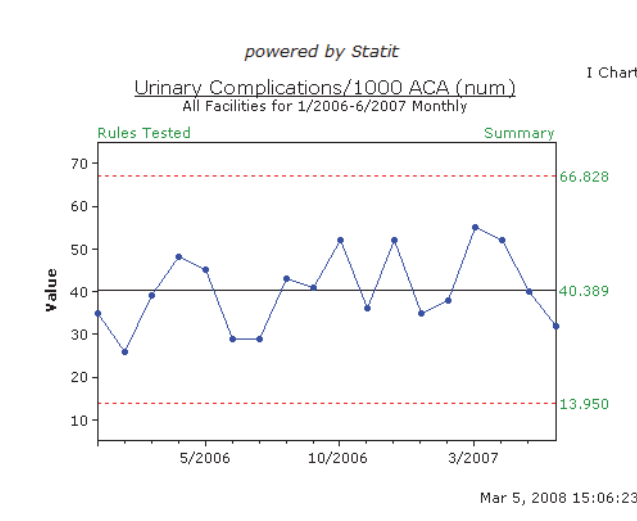


Figure 6.24: I chart

I charts (also called XmR charts) have the following characteristics:

- Display measurement data where only one value per reporting period was available
- Display (most commonly) *counts* computed by Midas+ SmarTrack in which the phenomenon of interest was simply being counted
- Also applicable for *manual Indicators* in Midas+ in which a single value per reporting interval was entered into Midas+
- All six of The Joint Commission Rules are tested.
- Common Indicators that would be displayed in a I Chart include:
  - Total number of total knee replacement procedures per month
  - Total cost for outpatient laparoscopic cholecystectomies per month
  - Total number of patient complaints per quarter
  - Total number of cases with one or more quality events

The following are the five associated charts listed in Change Chart Type of the Display menu.

### I charts

- I chart 2-sigma
- Individual chart
- I Run chart
- I Trend chart



## X-bar charts

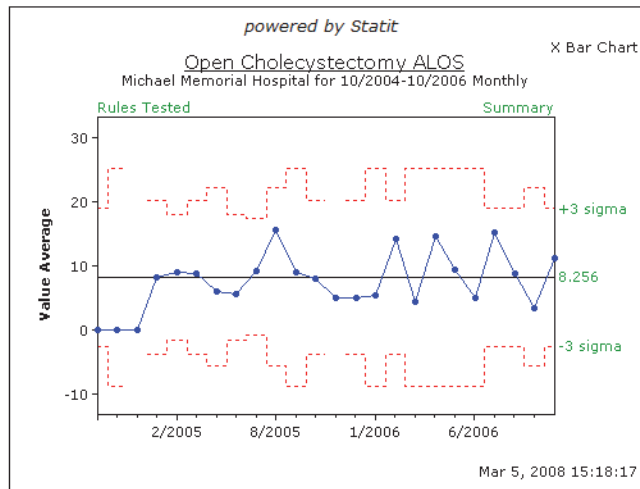


Figure 6.25: X-bar chart

X-bar charts have the following characteristics:

- Used in Midas+ SPC Charts as the default for LOS measures and other multiple observation measures
- All six of the Joint Commission Rules are tested.
- X-bar charts are a "simplified" version of both X-bar S and X-bar R charts, but only the X-bar chart is displayed.
- Removes the burden of interpreting S or R charts
- Often used when the audience is unlikely to understand the information in the S or the R chart, and when the data's significance focuses on the performance values in the X chart

*Note:* For example, X-bar charts may be useful in presenting ALOS for your inpatient population to your board of directors.

The following are associated charts listed in Change Chart Type of the Display menu.

### X-bar charts

- X-bar chart 2-sigma
- X-bar chart
- X-bar Run chart
- X-bar Trend chart
- Box Plot chart
- X-bar R chart 2-sigma\*
- X-bar R chart\*
- X-bar R Run chart\*
- X-bar R Trend\* chart
- Median chart
- X-bar S chart 2-sigma\*
- X-bar S chart\*
- X-bar S Run chart\*
- X-bar S Trend\* chart

\* These x-bar chart types are displayed as chart pairs, consisting of two related charts.

*Note:* When you display one of these chart pair sets in combination with other chart types in a multiple thumbnail presentation, you can double-click on the chart pair to separate them and view the details.

The drill-down limit for Indicators and Profiles in Care Management depends on the subgroup size, which is set by the site parameters chosen at your organization. The default subgroup size is 500 elements.

### X-bar S chart

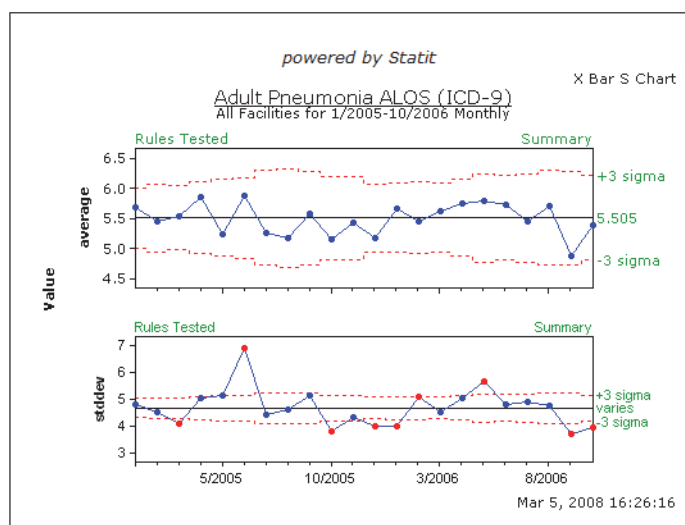


Figure 6.26: X-bar S chart

X-bar S chart pairs have the following characteristics:

- Displays measurement data that contain multiple observations within each data point, such as Average LOS or Median time of a population of patients
- All six of The Joint Commission Rules are tested.

- The X-bar S chart is a paired control chart:
  - The X-bar chart (top) tracks the differences between the averages values (subgroups) plotted on the chart.
  - The S chart (bottom) displays reflects the Standard Deviations within the subgroups, which is used to determine the control limits for both the X-bar and S chart.

**Important:** *The S chart should be interpreted first when reviewing the data. If the S chart shows an out-of-control signal, the X-bar chart is likely to be unreliable.*

**Important:** *Midas+ recommends that you always check the X-bar S Chart related to an X-bar Chart before you present your data in a single X-bar Chart.*

### X-bar R chart

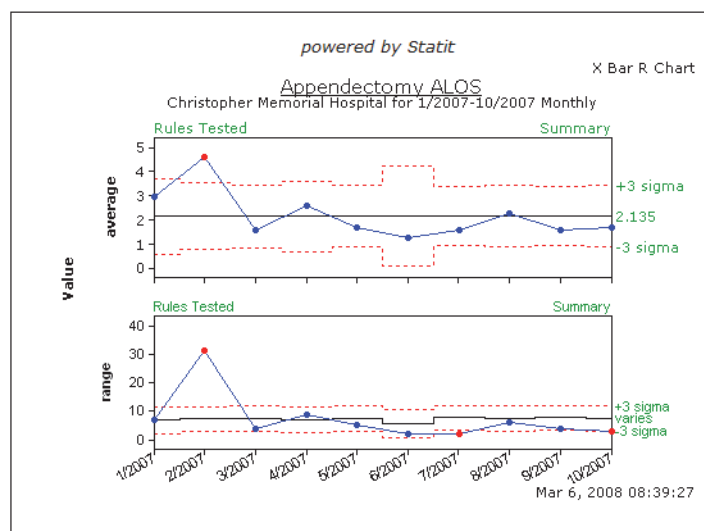


Figure 6.27: X-bar R chart

X-bar R chart pairs have the following characteristics:

- Used with measurement data when the subgroup sizes tend to be smaller:
  - Statit only runs X-bar R Charts when the subgroup size is 2 to 30. Subgroups with >30 observations or qualifying cases automatically default to a “revised” X-bar S chart.

*Note:* Although opinions differ, some experts agree that when the subgroup size is less than 10 (i.e., less than 10 data points), the X-bar R chart is the “better” chart to use. Furthermore, other experts recommend the use of X-bar S charts, rather than X-bar R charts, because the difference between the two are negligible (especially with healthcare data).

- All six of the Joint Commission Rules are tested.
- X-bar R charts calculate the *range* between each data point, rather than the Standard Deviation, which is used in the X-bar S chart.

**Important:** *The R chart should be interpreted first when reviewing the data. If the R chart displays an out-of-control signal, the X-bar chart is likely to be unreliable.*

## Median chart

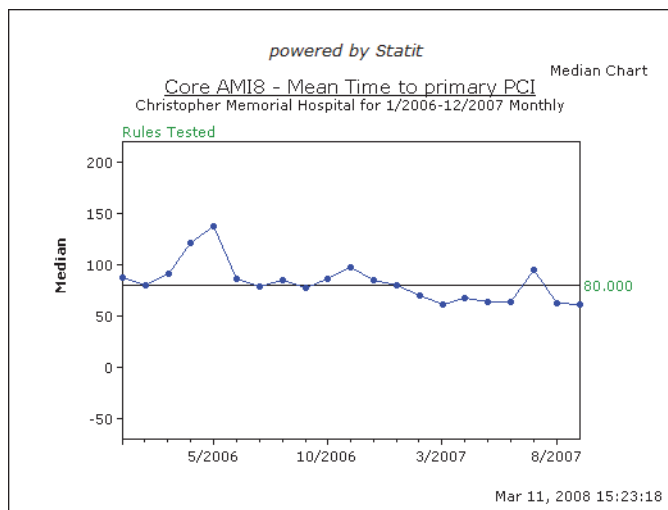
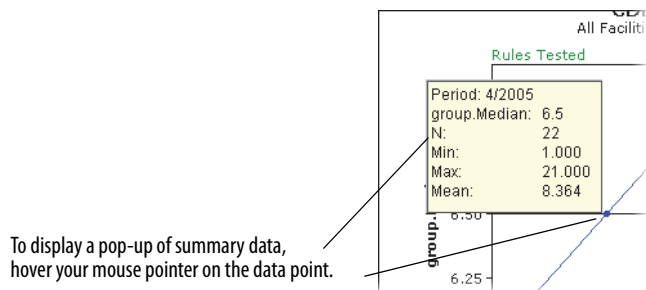


Figure 6.28: Median chart

Median charts have the following characteristics:

- Can be used to display measurement data, e.g. LOS data, that is typically skewed to the left
- Minimizes the affect of outliers
- More applicable for smaller subgroup sizes (< 25 cases per subgroup)
- Only two of The Joint Commission rules apply to highlight a trend in a median chart:
  - Six data points in a row increasing
  - Six data points in a row decreasing
- Each point on the chart represents the median of its associated subgroup.

Hovering your mouse pointer over a data point on the Median chart displays the detailed information used in deriving the data point's value.



To display a pop-up of summary data, hover your mouse pointer on the data point.

## Trend chart

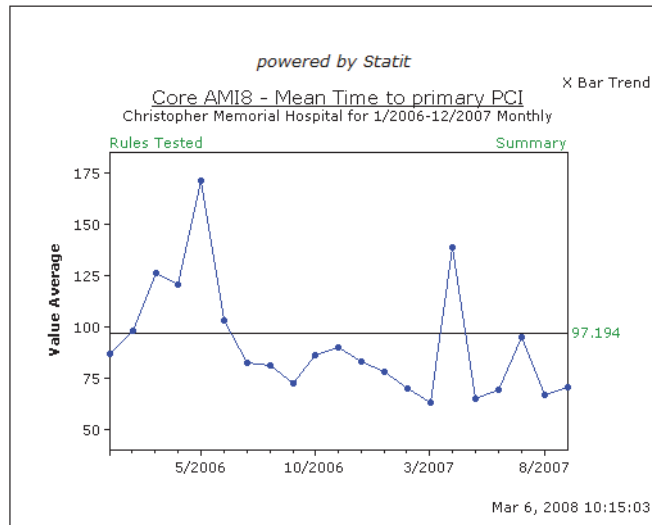


Figure 6.29: Trend chart example

Trend charts have the following characteristics:

- Plot values over time, but do not display upper and lower control limits on the chart
- Highlights data trends that are not necessarily obvious

*Note:* Trend charts help to communicate performance patterns to an audience that might otherwise dismiss the importance of the “data story” if they saw performance was within designated control limits.

- Only two of The Joint Commission rules apply to signal a trend:
  - Six data points in a row increasing
  - Six data points in a row decreasing
- Trend charts are also available for each specific data type:
  - P Trend (for proportion data)
  - U Trend (for ratio data)
  - I Trend (for single observation measurement data)
  - X-bar S, X-bar R, and X-bar Trend (for multiple observation measurement)

## Run chart

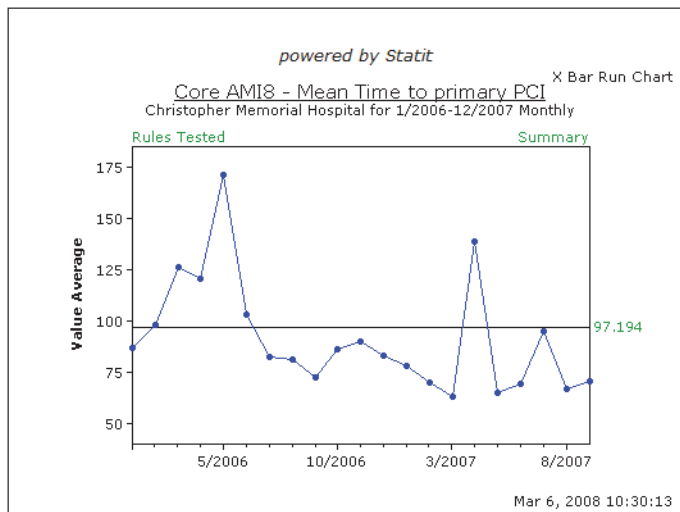


Figure 6.30: Run chart example

Run charts have the following characteristics:

- Similar to a Trend chart, they plot values around a center line but do not display control limits

*Note:* Run charts help to communicate performance patterns to an audience in a general manner without distracting them with how to interpret control limits.

- Useful for exploring the data patterns when a known threshold of performance is not yet established
- None of The Joint Commission Rules apply to run charts.
- Run charts are also available for each specific data type:
  - P Trend (for proportion data)
  - U Trend (for ratio data)
  - I Trend (for single observation measurement data)
  - X-bar S, X-bar R, and X-bar Trend (for multiple observation measurement)

## Box Plot chart

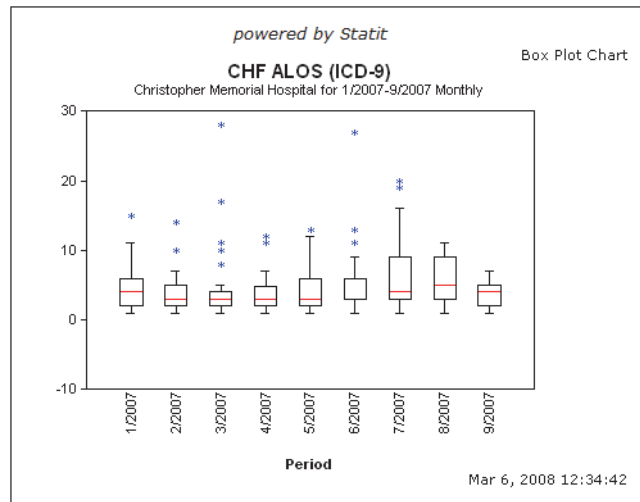


Figure 6.31: Box Plot chart

Box Plot charts have the following characteristics:

- Presents a quick way to summarize the location, spread, and “skewness” of a distribution
- Used for multiple-observation, continuous-variable data
- Helps to locate LOS outliers

As you hover your mouse pointer over each time period on the plot (either on the box or on one of the blue data “star” points), the Summary data for that period is displayed (Figure 6.32).

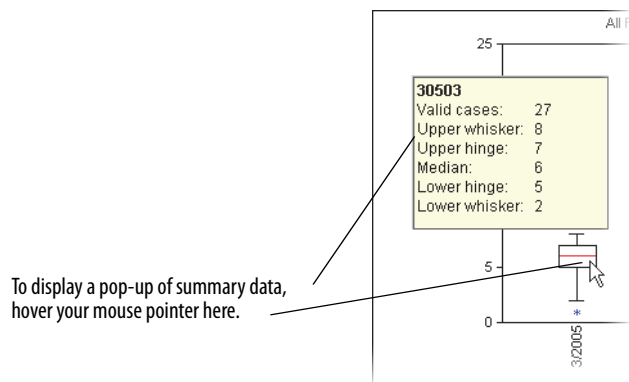


Figure 6.32: Box chart – period summary data

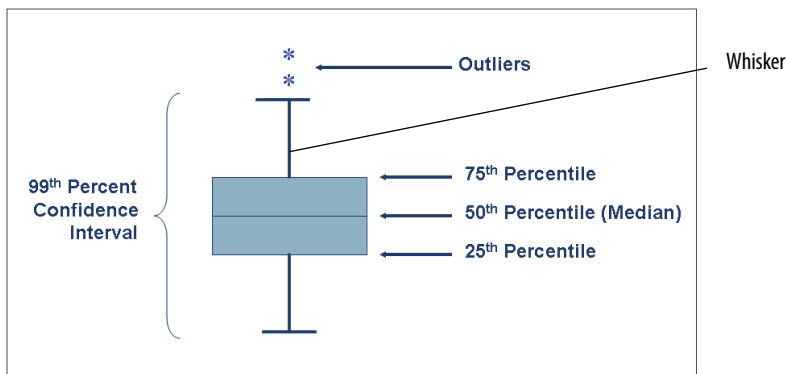


Figure 6.33: Box Plot chart details

In the Box Plot, the upper quartile (75th percentile) and the lower quartile (25th percentile) of the data are represented by the top and bottom of the rectangular box, respectively. Roughly 50% of the data are contained within the box. The median (50th percentile) is represented by a horizontal line segment within the box.

**Statistical Note:** If the median line cuts the box in half and the whiskers on either side extend about the same distance from the box, then the distribution is symmetrical. Lack of symmetry would indicate that the data may not have come from a normal distribution. This is important to know considering that many statistical tests assume a normal distribution is present. (A better indication of normality would be a probability plot of the data.) If the data are normally distributed, then roughly 99% of the data is contained between the two whiskers of the Box Plot.



## Section 7:

# Report Data Transfer

Use the Report Data Transfer function to compile a report of patients who qualify for a selected Indicator. The compiled patient list is displayed in a Microsoft Excel spreadsheet. Selected data elements from the Registration and Encounter modules serve as spreadsheet column headings.

### In this section:

#### **7.2** Using Report Data Transfer

## Using Report Data Transfer

Use Report Data Transfer to compile a list of patients who qualify for a selected Indicator. The list is displayed in a Microsoft Excel spreadsheet.

*Note:* The Report Data Transfer function only works with encounter-based Indicators or non-patient data that contain encounter or episode data. In other words, you cannot select an Indicator that collects data from Registrant from any other registration-level file (for example, Authorization episodes), nor can you select Manual Indicators. You can select rate-based Indicators. For information on using encounter- or episode-based Indicators for record selection criteria in ReporTrack, see the Midas+ Care Management ReporTrack User Manual.

► **To compile a report using the Report Data Transfer function:**

- 1 Select **Function > Reporting > Indicators > Report Data Transfer** from the main menu bar, or select **Report Data Transfer** from the SmartMenu. The Report Data Transfer form is displayed (Figure 7.1).

Figure 7.1: Report Data Transfer form

- 2 In the **Indicator** field, select the Indicator for which you want to compile a report of patients that qualify.

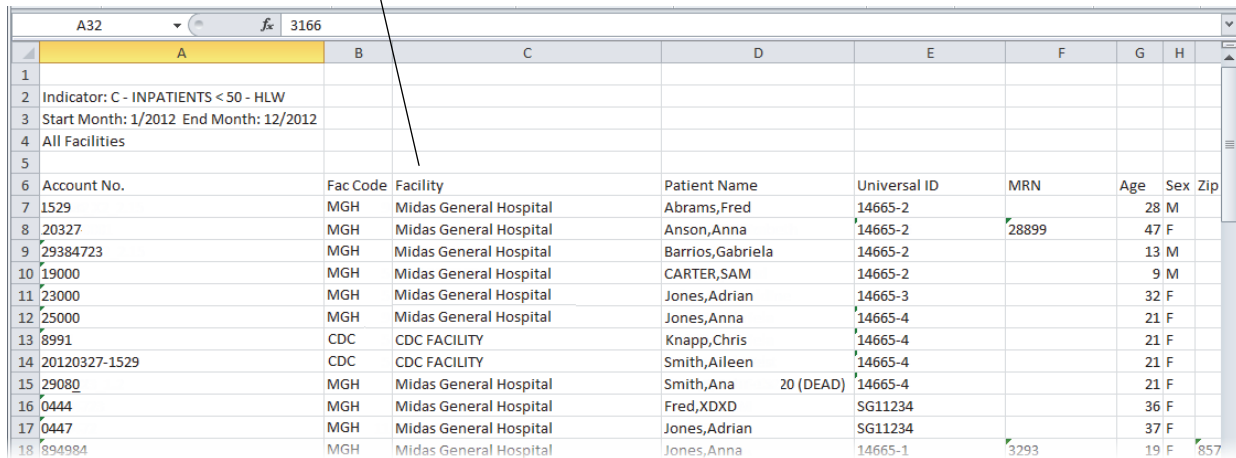
*Note:* To view the Indicator Definition, right-click the Indicator and select Indicator Inquiry.

- 3 In the **Start Month** field enter the starting month and year.
- 4 In the **End Month** field, enter the ending month and year.
- 5 In the **Facility** field, select individual facilities from which to view data, or mark the **All Facilities** checkbox to view data from all facilities.

*Note:* Depending on how your site's user definitions are set up, you may or may not have access to the data of all facilities. If this is the case, the **All Facilities** checkbox is deactivated (it appears dimmed). If your organization is a single facility site, it may have chosen to deactivate both the Facility button and the All Facilities checkbox.

- 6 Click **Compile**. The compiled data is displayed in an Excel spreadsheet (Figure 7.2). The system also creates a text file of the data and puts it in the Temp directory of your workstation. The file can be edited and saved as an Excel file or copied to a Microsoft Word file.

Column headings come from data elements in the Registration and Encounter modules of the Midas+ Care Management system.



	A	B	C	D	E	F	G	H
1								
2	Indicator: C - INPATIENTS < 50 - HLW							
3	Start Month: 1/2012 End Month: 12/2012							
4	All Facilities							
5								
6	Account No.	Fac Code	Facility	Patient Name	Universal ID	MRN	Age	Sex Zip
7	1529	MGH	Midas General Hospital	Abrams,Fred	14665-2		28	M
8	20327	MGH	Midas General Hospital	Anson,Anna	14665-2	28899	47	F
9	29384723	MGH	Midas General Hospital	Barrios,Gabriela	14665-2		13	M
10	19000	MGH	Midas General Hospital	CARTER,SAM	14665-2		9	M
11	23000	MGH	Midas General Hospital	Jones,Adrian	14665-3		32	F
12	25000	MGH	Midas General Hospital	Jones,Anna	14665-4		21	F
13	8991	CDC	CDC FACILITY	Knapp,Chris	14665-4		21	F
14	20120327-1529	CDC	CDC FACILITY	Smith,Aileen	14665-4		21	F
15	29080	MGH	Midas General Hospital	Smith,Ana 20 (DEAD)	14665-4		21	F
16	0444	MGH	Midas General Hospital	Fred,XDXD	SG11234		36	F
17	0447	MGH	Midas General Hospital	Jones,Adrian	SG11234		37	F
18	894984	MGH	Midas General Hospital	Jones,Anna	14665-1	3293	19	F 857

Figure 7.2: Report of patients in Microsoft Excel (partially illustrated)

#### System Manager:

- To use Report Data Transfer, Excel version 6.0 or higher must be installed on the user's workstation.

If your organization is a single facility site and has only one facility defined in the FACILITY Dictionary, the Site Parameter IND-SINGLE FACILITY can be set. This site parameter deactivates the Facility button and the All Facilities checkbox. To have this site parameter set, log in to [www.midasplus.com](http://www.midasplus.com) and submit a request for assistance through the Support Center.



# Appendix A:

## Indicator and Profile Restrictions and Added Security

You can secure your data with Indicator and Profile restrictions and with SmarTrack Worklist restrictions.

When restrictions are defined in the Indicator Definition or Indicator Profile Definition functions, only users with the matching security can access the Indicator or Profile through the reporting functions.

You can assign securities that allow users to have access to the Indicator Graphs and Indicator Profiles functions without having the ability to drill down to encounter-level data.

### In this appendix:

**A.2** Indicator and Profile Restrictions

**A.7** Indicator Drill-Down Restrictions

## Indicator and Profile Restrictions

Restricting access to Indicators and Profiles is a three-step process:

- 1 Define the restriction in the INDICATOR RESTRICTION Dictionary (#605).
- 2 Add Indicator (or Profile) restrictions to the definition of the Indicator or Profile.
- 3 Add Indicator restrictions to user definitions in the User Definition function.

### Points to Remember

The following conditions apply to Indicator and Profile restrictions:

- Indicator/Profiles that have at least one matching Indicator/Profile security in their definitions are accessible to users who have that same Indicator/Profile security defined in their user definition. If no security is defined for the Indicator/Profile, all users have access to it even if they have Indicator/Profile security defined in their user definition.
- If a user has no Indicator/Profile securities defined in his or her user definition, all Indicators/Profiles are accessible, even those with restrictions in their definitions.
- If both the user and the Indicator/Profile have restrictions, at least one of the user's restrictions and one of the Indicator/Profile's restrictions must match for the Indicator/Profile to be accessible to that user.
- A Profile is not restricted simply because it includes one or more restricted Indicators. Only those Profiles that are explicitly assigned restrictions are restricted.

### Defining the Restriction

The first step in restricting access to Indicators and Profiles is to define the restriction in the INDICATOR RESTRICTION Dictionary (#605).

*Note:* You must have the proper security levels to add Dictionary terms.

► **To define restrictions in the Indicator Restriction Dictionary:**

- 1 From the main menu, select **Function > System Management > Dictionaries > Dictionary Maintenance**, or select **Dictionary Maintenance** from the SmartMenu.
- 2 In the Select Dictionary field of the Dictionary Maintenance form, select the INDICATOR RESTRICTION Dictionary (#605). The Dictionary Maintenance – Indicator Restriction form is displayed.
- 3 Click **Add**. A second Dictionary Maintenance form is displayed (Figure A.1).



*Figure A.1: Dictionary Maintenance form – Indicator Restriction (partially illustrated)*

- 4 In the **Description** field, enter the description for the new term. The description can be for a specific Indicator or Profile (for example, Total Mortalities) or for a group of users (for example, Infection).

*Note:* The **Code** field defaults to the next available number, but you can change it if necessary.

- 5 Click **Save** to save the new term. You are returned to the preliminary INDICATOR RESTRICTION Dictionary Maintenance form.
- 6 Click **Close** to close the INDICATOR RESTRICTION Dictionary Maintenance form.

## Adding Restrictions to an Indicator Definition

Once you have defined the restrictions in the INDICATOR RESTRICTION Dictionary (#605), you can add them to Indicator (or Profile) Definitions.

### ► To add Indicator restrictions to an Indicator definition:

- 1 From the main menu bar, select **Function > Reporting > Indicator Definition**, or select **Indicator Definition** from the SmartMenu. The Indicator Definition form is displayed.
- 2 From the **Indicator to Edit** field, select an Indicator. In this example, the SmarTrack Indicator Definition form for Sums is displayed (Figure A.2).

The screenshot shows the 'Indicator Definition - Sum' form. The 'Description' field contains 'S-ENC-HCM TOTAL AVOIDABLE DENIED DAYS' and the 'Code' field contains '2083'. The 'Sum Field' is 'HCM AVOID/DENIED DAYS:Avoidable/Denied Days'. The 'Condition Logic' is set to 'AND'. The 'If:' section shows a condition 'HCM AVOID/DENIED DAYS:Type' with 'Has Value: Avoidable'. The 'If:' section also shows 'Module:Field: HCM AVOID/DENIED DAYS:Type' with 'Has Value' selected. The 'Ref. Date' is 'ENCOUNTER:End Date', 'Provider' is 'ENCOUNTER:Attending Physician', 'Crosstab' is 'ENCOUNTER:Facility', 'Title' is 'Total Avoidable Denied Days', and 'Access Function' is 'HCM AVOIDABLE/DENIED DAYS ENTRY'. The 'SPC Chart Type' is empty, 'SPC Target Direction' is 'Neutral', 'Display Symbol' is empty, 'Display Order' is 'After', and 'Active' is unchecked. A callout points to the 'Indicator Restrictions' button on the right side of the form.

Figure A.2: Indicator Definition – Sum form

- Click the **Indicator Restrictions** button. The Indicator Restrictions form is displayed (Figure A.3).

Figure A.3: Indicator Restrictions form

- In the Indicator Restrictions field, select Indicators from the INDICATOR RESTRICTION Dictionary (#605).
- To remove an Indicator restriction from the list, right-click the restriction and select **Cut Row** from the shortcut menu.
- Click **OK** to close the Indicator Restrictions form and return to the Indicator Definition form.

## Adding Restrictions to an Indicator Profile Definition

Once you have defined the restrictions in the INDICATOR RESTRICTION Dictionary (#605), you can add them to Indicator Profile (or Indicator) Definitions.

### ► To add restrictions to an Indicator Profile definition:

- From the main menu bar select **Function > Reporting > Indicator Profile Definition**, or select **Indicator Profile Definition** from the SmartMenu. The Indicator Profile Definition form is displayed.
- From the **Description** field, select an Indicator Profile. The Profile Restriction field is displayed on the form (Figure A.4).

Figure A.4: Indicator Profile Definition form



- 3 In the Profile Restriction field, select an entry from the INDICATOR RESTRICTION Dictionary (#605). Be aware that a Profile Restriction overrides an Indicator Restriction.

*Note:* To remove an Indicator restriction from the list, right-click the restriction and select **Cut Row** from the drop-down menu.

- 4 From the Indicator Profile Definition form, click **Save** to save your changes.

## Adding Restrictions to a User Definition

After you have added restrictions to Indicator (or Profile) Definitions, you can add them to user definitions.

### ► To add restriction levels to a user definition:

*Note:* You must have the proper security access to complete this procedure. For more information about assigning user definitions, see the Midas+ Care Management User Manual.

- 1 Select **Function > System Management > System/User Securities > User Definition** from the main menu bar, or select **User Definition** from the SmartMenu. The User Definition form is displayed (Figure A.5).

The screenshot shows the 'User Definition' form. The 'Name' field contains 'Morgan, Michelle', 'User ID' is 'MMM', and 'Password' is masked. The 'Employee' field shows 'Akers, Melissa'. The 'User' tab is active, showing options for password changes and patient level security. A list of roles is visible on the right side of the form.

Figure A.5: User Definition form

- 2 In the **Name** field, enter the user to whose user definition you want to add the Indicator restriction.

- 3 Select the **Indicators/Focus** tab to display the Indicator Restriction field (Figure A.6).

**User Definition**

Name: Morgan, Michelle User ID: MMM Password: \*\*\*\*\* Save

Copy From: Employee: Akers, Melissa Locked Out: ☐ Deactivate

User System Facilities Seeker Organizations Payers **Indicators/Focus** Worklist Case Manager E-mail Groups Comments Cancel

Indicator Restriction Focus Restriction

Case Mgmt Indicators \*

\* \*

Help

Figure A.6: User Definition form – Indicators tab

- 4 In the **Indicator Restriction** field, select one or more restrictions from the INDICATOR RESTRICTION Dictionary (#605) that you want to add to the user definition.
- Note:* To remove an Indicator restriction from the list, right-click the restriction, and select **Cut Row** from the shortcut menu.
- 5 Click **Save** to save your changes.
- 6 Click **Close** to close the User Definition form.

## Indicator Drill-Down Restrictions

When you grant users access to Indicator graphs or profiles, by default they also have security to drill down to the encounter-level data that underlies the graph or profile. If you want to restrict access to that encounter-level data, you must specifically remove their access. To do this, use the tree control on the System tab of the User Definition form (Figure A.7).

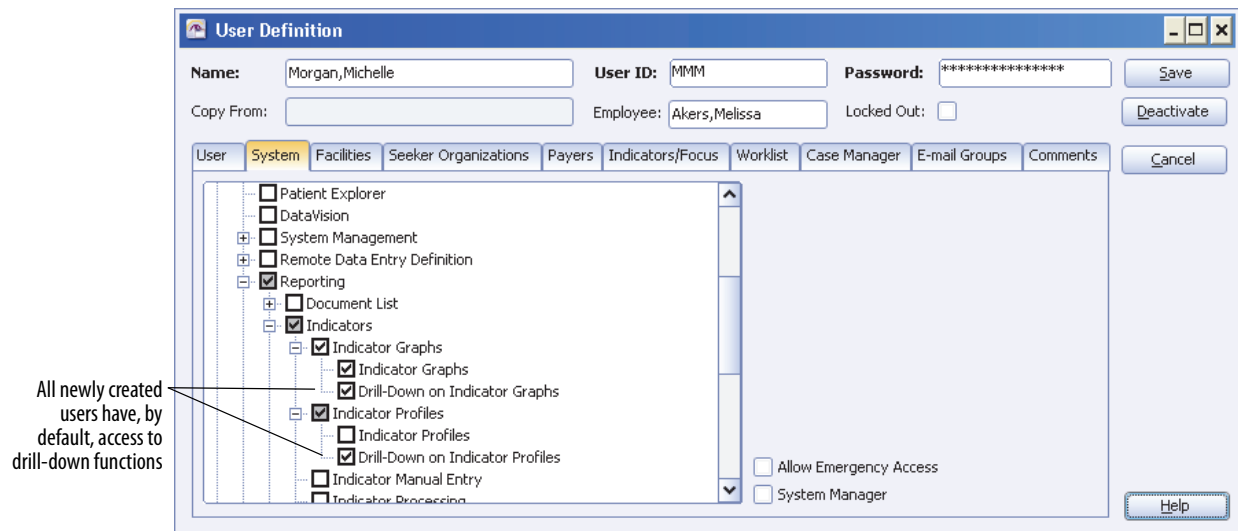
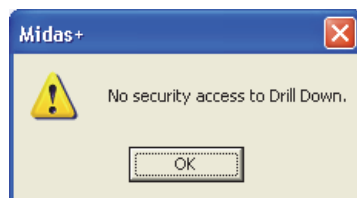


Figure A.7: User Definition form with drill-down default settings

To restrict drill-down access in the Indicator Graphs or the Indicator Profiles function, clear the corresponding Drill-Down checkbox.

If a user clicks to drill down on an Indicator and does not have the appropriate security, the following message is displayed:





## Appendix B: Naming Conventions

Your facility should develop a naming convention for your Indicator definitions. Good descriptions and titles help you remember what type of Indicator it is and what information it collects. This section gives you several guidelines for naming conventions.

### In this appendix:

#### **B.2** Describing and Titling Your SmarTrack Indicators

## Describing and Titling Your SmarTrack Indicators

Your entry in the **Description** field of an Indicator is used to look up the Indicator; the **Title** field is what is displayed on your compiled graphs and Profiles.

Your facility may want to implement a naming convention for the Description field that facilitates looking up the Indicator. You can make the Indicator easy to identify if you name it following a clear, concise, and consistent convention, such as one that integrates the following items, in the order presented:

- **The type of Indicator:** A single-letter abbreviation that stands for the type of Indicator, such as C for Count, R for Rate, and S for Sum, D for Days at Risk, and M for Manual Entry.
- **Primary source:** An abbreviation for the storage location of the monitored data, such as ENC for the Encounter module or RISK for the Risk module.
- **The data the Indicator collects:** Terms that help users remember the key information this Indicator gathers, such as MORTALITY for deaths or DX for diagnosis.
- **Initials (optional):** A person's initials. Though you might include your initials when in training, Midas+ discourages this option in a production environment. Where the use of initials is critical to identify the Indicator's author or intended user, add them only at the *end* of the description.

To make them more readable, separate the elements with dashes. The following example shows how you can use the preceding information to create a descriptive name for an Indicator:

- C-ENC-DX CHF for an Indicator that provides a count of encounters that include a diagnosis of CHF.

## Titling Your SmarTrack Indicators

In the Indicator Definition form (Figure B.1), your entry in the **Description** field is used to look up the Indicator. Your entry in the **Title** field is what is displayed on your compiled graphs and Profiles (Figure B.2). Therefore, your facility may want to use a naming convention for the Description field.

Because your entry in the Title field is displayed on your compiled graphs and Profiles, you may want to avoid abbreviations in this field.

*Note:* If you leave the Title field blank, the entry in the Description field is printed on your compiled graphs and Profiles.

Your entry in the **Description** field is used to look up the Indicator. Therefore, you may want to use a naming convention that aids lookup in this field.

**Description:** C-AD Acute Care Denials by Payer **Code:** 1411

Copy From:

**Count:** Multiples **Multiple:** HCM AVOID/DENIED DAYS

Condition Logic: ☒ AND ☐ OR ☐ Custom

If:

[-] HCM AVOID/DENIED DAYS:Type  
..... Has Value: Denial-Clinical  
..... Or: Denial-technical

If:

Module/Field: HCM AVOID/DENIED DAYS:Type

☒ Has Value ☐ Does Not Have Value ☐ Is Not Entered

Of Denial-Clinical  
Or Denial-technical  
Or MAC denial

**Ref. Date:** HCM AVOID/DENIED DAYS:Start Date **SPC Chart Type:** I Chart

**Provider:** HCM AVOID/DENIED DAYS:ATTRIBUTIONS:Physician **SPC Target Direction:** Neutral

**Crosstab:** HCM AVOID/DENIED DAYS:Payer **Display Symbol:**

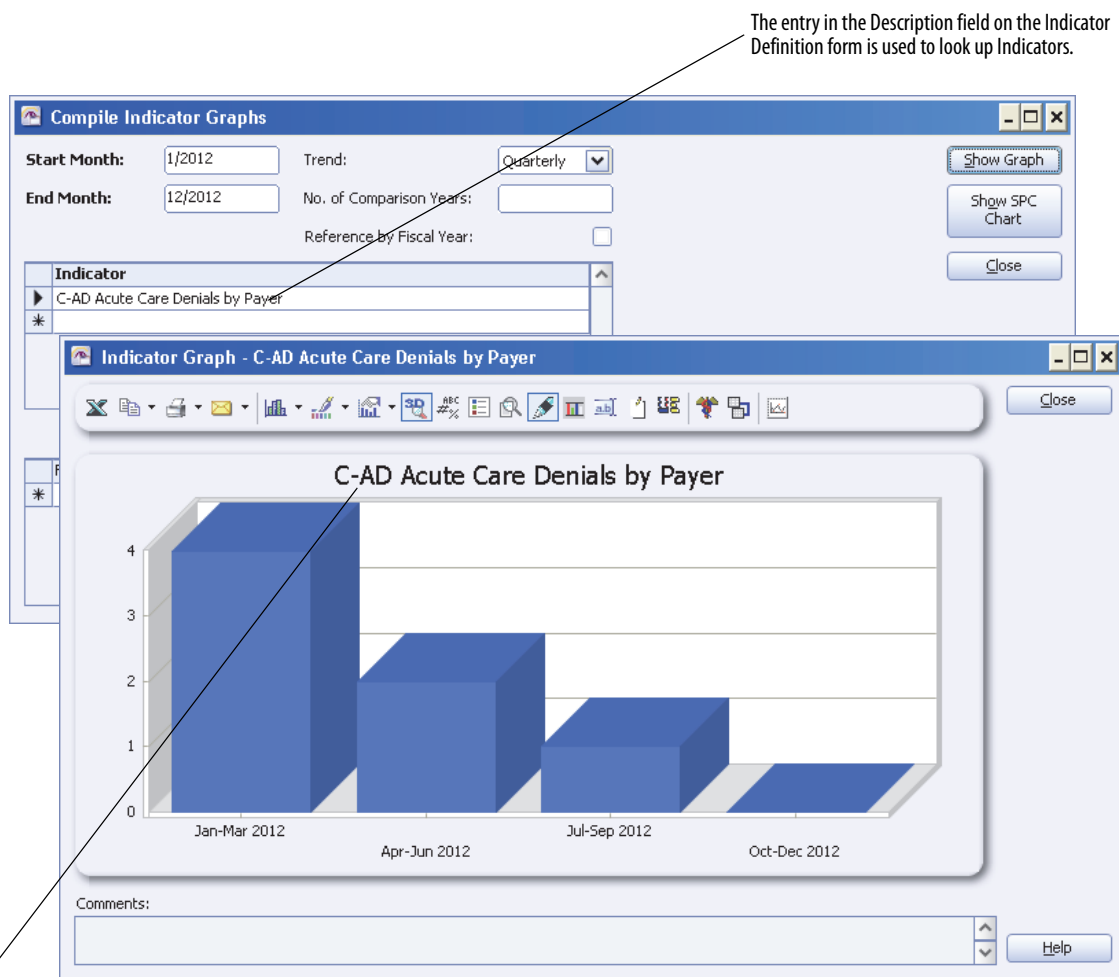
**Title:** Acute Care Denials by Payer **Display Order:** ☐ Before ☒ After

**Access Function:** HCM AVOIDABLE/DENIED DAYS ENTRY **Active:** ☒

In order to avoid duplicate Definitions with the same Title, but with different Codes, use a unique name for each Definition Title.

Your entry in the **Title** field is displayed by default on compiled graphs and profiles. Therefore, you might want to avoid abbreviations in this field. If you leave this field blank, the entry in the Description field is displayed.

Figure B.1: Indicator Definition form



What appears by default as the title on your Indicator graphs and Profiles is determined by the entry in the Title field on the Indicator Definition form.

Ref. Date:	HCM AVOID/DENIED DAYS:Start Date
Provider:	HCM AVOID/DENIED DAYS:ATTRIBUTIONS:Physician
Crosstab:	HCM AVOID/DENIED DAYS:Payer
Title:	Acute Care Denials by Payer
Access Function:	HCM AVOIDABLE/DENIED DAYS ENTRY

*Figure B.2: Graphs and Profiles with titles defined in the Title field*

For Indicator graphs, you can change the default title for graph printing by altering the graph's properties. For information about changing the graph title on the fly after the chart has been compiled, see "Edit Title" on page 4.10.



## Appendix C:

# SmarTrack Standard Reports

This section describes the SmarTrack Standard Reports.

**In this appendix:**

- C.2** Compiling the SmarTrack Definition Report
- C.5** Compiling the SmarTrack Worklist Summary
- C.7** Using the Print Preview Window

## Compiling the SmarTrack Definition Report

You can use the SmarTrack Definition report for listing SmarTrack Rule and Indicator information such as the Rule condition values, Indicator descriptions, type of Indicators, last accessed, and last processed dates and times.

► **To compile the SmarTrack Definition report:**

- 1 Select **Function > Reporting > Standard Reports** from the main menu bar, or select **Standard Reports** from the SmartMenu. The Compile Standard Reports form is displayed (Figure C.3).

*Figure C.1: Compile Standard Reports form – preliminary*

- 2 In the **Report** drop down list, select **SmarTrack Definition**.

The Compile Standard Report form changes to reflect your selection (Figure C.4).

*Figure C.2: Compile Standard Report form with SmarTrack Definition selected*

- 3 From the **Output Device** list, choose one of the following:
    - **Standard Window** (default): Displays the compiled report on your screen.
    - **Printer**: Opens a printer selection form. If you choose a fax machine as a printer, another form is displayed in which you should insert the fax number.
    - **File**: Allows you to save the Compiled report in a .txt format.
  - 4 Mark the **Print All Rules and Indicators** checkbox if you want to print the definitions of all SmarTrack Rules and Indicators.

*Note:* If your facility has a large number of Indicators and Rules, selecting Print All Rules and Indicators could impact the run time for this report. You can also limit the length of your report by selecting at least one date range in step 8.
  - 5 In the **SmarTrack Rules and Indicators** field, select the SmarTrack Rules and Indicators you want to include in this report.
  - 6 In the **Indicator Profiles** field, select the Profiles you want to include in this report. Each Indicator included in the Profile is included.
  - 7 Mark the **Print Display Properties** checkbox if you want to include all the definitions of the display properties for Indicator Profiles in the report. This checkbox is available only after making one or more entries in the Indicator Profiles field in Step 6.
  - 8 To tailor the results of your report, you can enter a date range into one or both of the following two areas:
    - For **Last Accessed/Loaded** Indicators and Rules, enter the **Start Date** and **End Date** for the date range in which Indicators were last accessed and Rules were last loaded. An example of an accessed Indicator is when viewing Indicator Graphs and Profiles. An example of loading a Rule is when viewing a user-defined Worklist. Indicators accessed and Rules loaded within the date range will be included in the report.
    - For **Last Processed** fields, enter the **Start Date** and **End Date** for the date range during which Indicators and Rules were last processed. Indicators and Rules processed within the date range will be included in the report.

*Note:* Last Accessed/Loaded and Last Processed data will display on your report (if it exists) even if you do not enter date ranges.
  - 9 To tailor the results of your report, you can enter the **Minimum** and **Maximum** range in the **# Days Accessed/Loaded** area for the number of days that Indicators were accessed and Rules were loaded. An example of an accessed Indicator is when viewing Indicator Graphs and Profiles. An example of loading a Rule is when viewing a user-defined Worklist. Indicators accessed and Rules loaded within the range of days entered will be included in the report.

*Note:* Qualifying conditions specified in steps 8 and 9 are inclusive; if more than one of the qualifying conditions are entered, the conditions will be considered an "or". For example, if Minimum days was entered as 7 and a date range for usage was entered, Indicators or Rules used in the date range or used seven days or more will appear.
- Important:** *The data elements that generate data for steps 8-9 didn't exist prior to v. 2012, thus, data produced in steps 8-9 will be as of your software installation date.*

- 10 Mark the **Display Condition Values** checkbox to list Rule conditions in the report that were entered in Indicator Definition.
- 11 Click **Compile** to compile the report and send it to the selected output device.
- 12 If you selected File from the Output Device list, the Save As dialog box is displayed. Do the following: In the **Save As** dialog box, navigate to or create the directory in which you want to locate the file. In the **File name** field, type the file name. Click **OK**.  
  
Your report will display results based on whether data exists for the criteria you entered.

## Compiling the SmarTrack Worklist Summary

You can use the SmarTrack Definition report for listing SmarTrack Rule and Indicator information such as the Indicator Description and type of Indicator.

► **To compile the SmarTrack Worklist Summary:**

- 1 Select **Function > Reporting > Standard Reports** from the main menu bar, or select **Standard Reports** from the SmartMenu. The Compile Standard Reports form is displayed (Figure C.3).

The image shows a software window titled "Compile Standard Reports". It contains three input fields: "Report:" with a dropdown arrow, "Report Type:" with a text field, and "Output Device:" with a dropdown arrow. To the right of these fields are two buttons: "Compile" and "Close".

Figure C.3: Compile Standard Reports form – preliminary

- 2 In the **Report** drop down list, select **SmarTrack Worklist Summary**. The Compile Standard Report form changes to reflect your selection (Figure C.4).

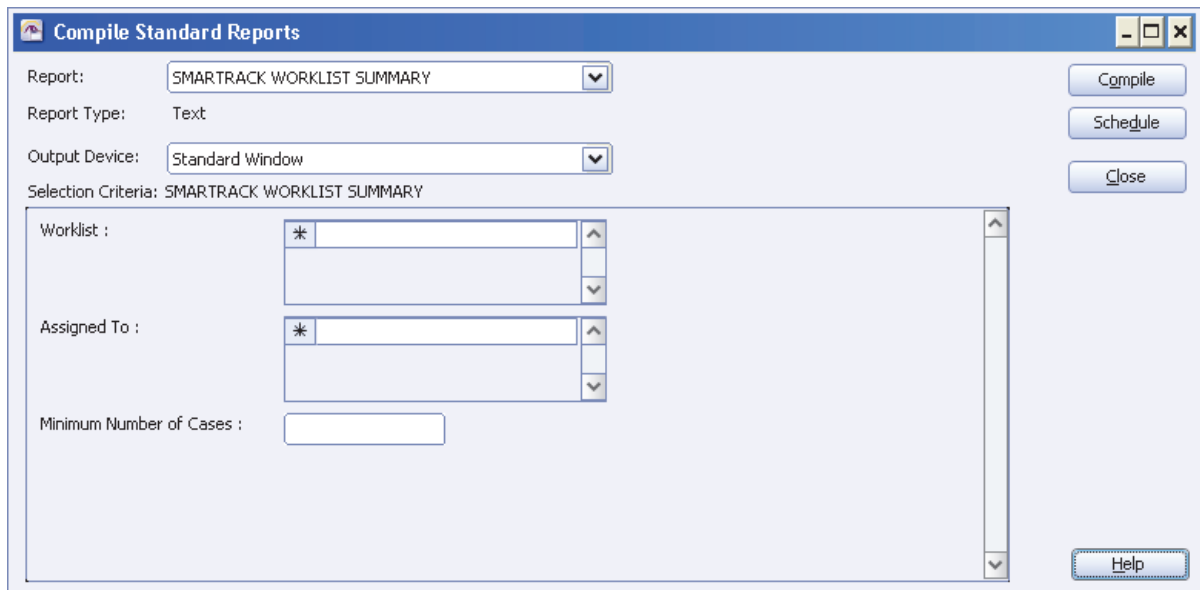
The image shows the same "Compile Standard Reports" window, but with more content. The "Report:" dropdown now displays "SMARTRACK WORKLIST SUMMARY". The "Report Type:" text field now contains "Text". The "Output Device:" dropdown now displays "Standard Window". Below these fields, the "Selection Criteria:" label is followed by "SMARTRACK WORKLIST SUMMARY". There are three more input fields: "Worklist :" with a search icon and a dropdown, "Assigned To :" with a search icon and a dropdown, and "Minimum Number of Cases :" with a text field. To the right of these fields are three buttons: "Compile", "Schedule", and "Close". A "Help" button is located at the bottom right of the window.

Figure C.4: Compile Standard Report form with SmarTrack Worklist Summary selected

- 3 From the **Output Device** list, choose one of the following:
  - **Standard Window** (default): Displays the compiled report on your screen.
  - **Printer**: Opens a printer selection form. If you choose a fax machine as a printer, another form is displayed in which you should insert the fax number.
  - **File**: Allows you to save the Compiled report in a .txt format.
- 4 In the **Worklist** field, select the SmarTrack Rule(s) you want to include in this report.
- 5 In the **Assigned To** field, select the Employee(s) whose assigned Worklists you want to report.
- 6 Enter the **Minimum Number of Cases** on which to report each Worklist Rule.
- 7 Click **Compile** to compile the report and send it to the selected output device.
- 8 If you selected File from the Output Device list, the Save As dialog box is displayed. Do the following: In the **Save As** dialog box, navigate to or create the directory in which you want to locate the file. In the **File name** field, type the file name. Click **Save**.

The report will display the following fields and values:

- Rule Description
- Rule Code
- Worklist Title
- Assigned to
- Last Saved By
- Blank Status (numeric value) - The entries in this count have no status entered. The blank entries are considered pending and included in the Pending Status count.
- Pending Status (numeric value) - The entries in this count have a "Pending" status.
- Complete Status (numeric value) - The entries in this count have a "Complete" status.
- Total Cases (numeric value) - This count is the sum of the above three fields (Blank Status, Pending Status, and Complete Status).

## Using the Print Preview Window

The Print Preview window (Figure C.5) is displayed when you choose **Window** as the output device in the Standard Reports form, you complete the fields in the form, and click **Compile**. (If you choose **Printer** as the output device in the Standard Reports form, the compiled report is sent directly to the selected printer, and the Print Preview window is *not* displayed.)

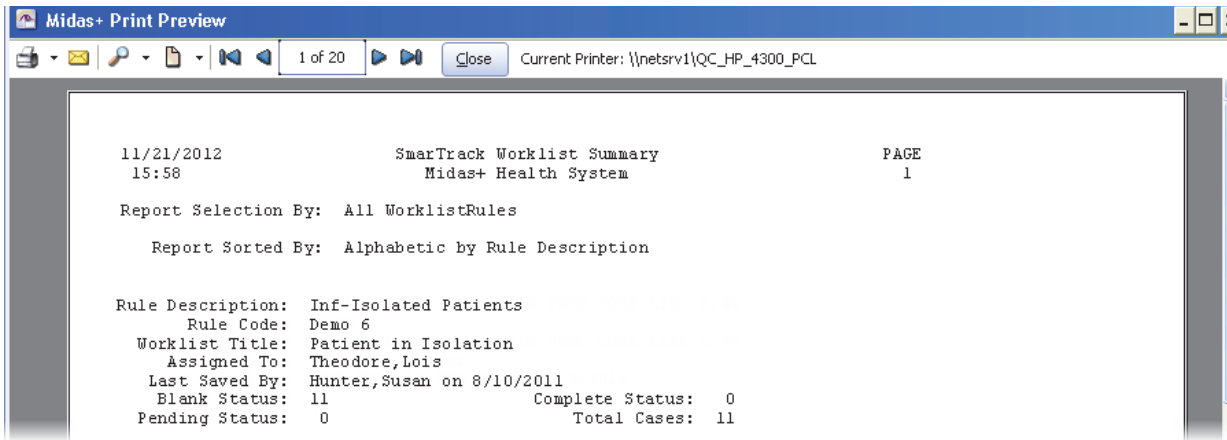
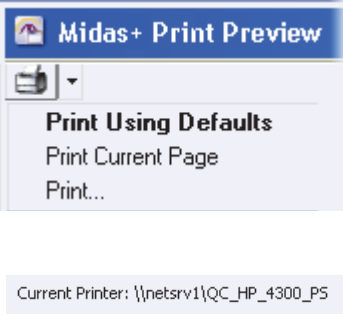



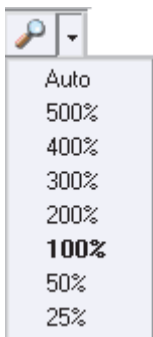
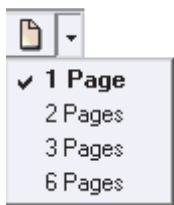
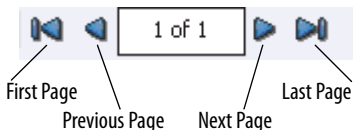

Figure C.5: Print Preview window (partially illustrated)

You have the following options in the Print Preview window (Table C.1):

Table C.1: Print Preview Window Options

Icon	Function
	<p><b>Print</b></p> <p>Click the print icon to print directly to the default printer or click the down-arrow and select one of the following options:</p> <p><b>Print Using Defaults</b></p> <p>Prints the report to the default printer (as does the icon).</p> <p><b>Print Current Page</b></p> <p>Prints the current page to the default printer.</p> <p><b>Print...</b></p> <p>Opens the Windows Print dialog to choose new printing options.</p> <p>The printer selected as the default is displayed in the upper right corner of the Midas+ Print Preview form.</p>
	<p><b>E-mail</b></p> <p>Clicking the E-mail icon displays the following message:</p> <p>“To attach this report to an e-mail, you will first save the report as a file. Once you have saved the report, your e-mail client will open a new message. The report file will not be attached to your e-mail message automatically. Before you send your message, you must attach the report file manually.” Click <b>OK</b> to display file folders from which to choose your attachment. Click <b>No</b> cancel any actions.</p> <p><i>Note:</i> The report is sent in .TIF graphic file format.</p>

**Table C.1: Print Preview Window Options**

Icon	Function
	<p><b>Zoom</b></p> <p>Click the drop-down arrow to display the magnification options. The default is 100%.</p>
	<p><b>Number of Pages to View</b></p> <p>Click this icon to display the drop-down menu's report view options. The report can be viewed by the following number of pages:</p> <ul style="list-style-type: none"> <li>1 Pages</li> <li>2 Pages</li> <li>3 Pages</li> <li>6 Pages</li> </ul> <p>The number of pages in the view is depicted on the icon.</p>
	<p><b>First, Last, Previous, and Next Page</b></p> <p>Use the blue arrows to view the First, Last, Previous, or Next Page.</p>
	<p><b>Close</b></p> <p>Click the Close button to close the form.</p>



# Index

## A

adding Indicator values **2.32**  
 adding restrictions  
     to a Profile definition **A.4**  
     to an Indicator definition **A.3**  
     to User Definition **A.5**  
 assignable cause **6.16, 6.17**

## B

Benchmark field **2.28**  
 bold **1.2**  
 box plot charts **6.31**

## C

Change background for out of control charts  
     checkbox **6.11**  
 changing crosstabs **5.18**  
 chart annotation **6.16, 6.17**  
 charts  
     exporting **6.13**  
     printing **6.12**

rules tested **6.14**  
 summary **6.14**  
 y-axis markings **6.15**  
*See also* Statistical Process Control (SPC)  
     charts  
 choosing ID types **4.21**  
 comment/action plan **6.16, 6.17**  
 compiling graphs from Profile data **5.27**  
 compiling SmarTrack Standard Reports **C.2**  
 compiling Standard Reports **C.5**  
 conventions  
     manual **1.2**  
     naming **B.1– B.4**  
 copying  
     Counts **2.13**  
     Days at Risk **2.42**  
     graph data **4.6**  
     Profile data **5.23**  
     Rates **2.32**  
     Sums **2.24**  
 Counts **2.4– 2.18**  
     copying **2.13**  
     defining **2.4– 2.10**

- deleting **2.14**
- examples of **2.17**
- using **2.15**
- Which Count to Count **2.15**
- Crosstab field **2.8, 2.22, 2.40, 4.17**
- Crosstab Variable field **5.4**
- crosstabs, changing **5.18**
- cross-tabulated variables **4.17**

## D

- Daily New field **3.9**
- Days at Risk **2.37– 2.49**
  - copying **2.42**
  - defining **2.38– 2.42**
  - deleting **2.42**
  - examples of **2.43– 2.49**
- Days field **2.39**
- Deactivating an Indicator Definition from Processing **2.56**
- Decimal Places field **2.28**
- defining
  - Counts **2.4– 2.10**
  - Days at Risk **2.38– 2.42**
  - Indicator Profiles **5.3– 5.5**
  - Indicators **2.1– 2.56**
  - Manual Indicators **2.50**
  - Rates **2.27– 2.31**
  - restrictions **A.2**
  - Sums **2.19– 2.24**
- deleting
  - Counts **2.14**
  - Days at Risk **2.42**
  - Rates **2.33**
  - Sums **2.24**
- describing and titling SmarTrack Indicators **B.2**
- Does Not Have Value option **2.6**
- drilling down to encounter-level data **4.19, 5.28– 5.32**
  - restrictions **4.22, 5.32, A.7**

## E

- encounter-level data, drilling down to **4.19, 5.28– 5.32**
- exporting data to Microsoft Excel **4.20, 5.20, 5.30**

## F

- fiscal year, compiling graphs by **4.4**
- fiscal year, compiling Indicator Profiles by **5.16**

## G

- graphs
  - accessing cross-tabulated variables **4.17**
  - compiling by fiscal year **4.4**
  - compiling from Profile data **5.27**
  - copying and pasting data **4.6**
  - drilling down to encounter-level data **4.19**
  - formatting **4.6– 4.18**
  - graphing data by provider **4.15**
  - Indicator **4.1– 4.22**
  - overview **1.5**
  - printing **4.6**

## H

- Has Value option **2.6**

## I

- I charts **6.2, 6.24**
- ID types, choosing **4.21**
- If area **2.6, 2.20, 2.39**
- Indicator Definition function **2.1– 2.56**
  - adding/subtracting Indicator values **2.32**
  - Days at Risk **2.37– 2.49**
  - Manual Indicators **2.50**
  - naming conventions **B.3**
  - Rates **2.27– 2.36**
  - Sums **2.19– 2.26**
- Indicator drill-down restrictions **A.7**
- Indicator Graph function **4.2**
- Indicator graphs **4.1– 4.22**
  - compiling **4.2**
  - formatting **4.6– 4.18**
- Indicator Manual Entry function **2.52– 2.55**
- Indicator Processing function **3.1– 3.11**
- Indicator Profile Definition function **5.3– 5.5**
- Indicator Profile function **5.11– 5.19**
- Indicator Profile Viewer **5.20**
- Indicator Profiles
  - displaying services, specialties, or providers **5.24**
  - printing **5.23**
  - working with **5.20– 5.27**

Indicator restrictions **A.1– A.7**  
 drill-down restrictions **4.22, 5.32, A.7**  
 Indicator Summaries processing **3.2**  
 Indicators, describing and titling **B.2**  
 Is Not Entered option **2.6**

## J

job queues, modifying **3.4**  
 jobs, starting/stopping **3.9**

## L

Last completed summary field **3.9**

## M

manual conventions **1.2**  
 Manual Indicators **2.50– 2.56**  
   defining **2.50**  
   entering data in **2.52– 2.55**  
 median chart **6.28**  
 Microsoft Excel  
   and Report Data Transfer **7.3**  
   exporting data to **4.20, 5.20, 5.30**  
 modifying the job queue **3.4**  
 Module:Field field **2.6, 2.20, 2.39**

## N

naming conventions **B.1– B.4**  
 Navigate button **4.22**  
 No. of Comparison Years field **4.2, 5.12**  
 Numerator field **2.28**

## P

P charts **6.2, 6.22**  
 pasting  
   graph data **4.6, 4.7**  
   Profile data **5.23**  
 Per field **2.28**  
 Print Preview window **C.7**  
 printing  
   graphs **4.6**  
   Profiles **5.23**  
 process change **6.16, 6.18**  
 process team **6.12**  
 processing Indicator Summaries **3.2**  
 processor, starting/stopping **3.9**

Profile restrictions **A.1– A.6**

Profiles

  adding restrictions to **A.4**  
   compiling **5.11– 5.19**  
   compiling by fiscal year **5.16**  
   copying and pasting data **5.23**  
   defining **5.3– 5.5**  
   drilling down on **5.28**  
   Indicator Profile Viewer **5.20**  
   overview **1.6**  
   printing **5.23**  
   working with **5.20– 5.27**

Provider field **2.8, 2.22, 2.40, 4.15, 5.13, 5.14**

## R

Rates **2.27– 2.36**  
   copying **2.32**  
   defining **2.27– 2.31**  
   deleting **2.33**  
   examples of **2.34– 2.36**  
 Reference by Fiscal Year checkbox **4.4, 5.17**  
 Reference Date  
   Ref. Date field **2.7**  
   using with Indicators **2.16**  
   Which Date to Reference **2.16**  
 Report Data Transfer function **7.1– 7.3**  
   overview **1.7**  
 reporting. See SmarTrack Reporting  
 restrictions **A.1– A.7**  
   adding to Indicator definitions **A.3**  
   adding to Profile definitions **A.4**  
   adding to User Definition **A.5**  
   defining **A.2**  
 run charts **6.30**

## S

site parameters  
   Days at Risk Calculation **2.37, 5.16, 5.17, 7.3**  
   graphing by fiscal year **4.4**  
   Indicator Profile Viewer **5.16**  
 SmarTrack Reporting  
   Indicator Definition **2.1– 2.56**  
   Indicator Graph function **4.2**  
   Indicator Processing **3.1– 3.11**  
   Indicator Profile Definition function **5.3– 5.5**  
   Indicator Profiles function **5.11– 5.19**  
   overview **1.5– 1.7**  
   Report Data Transfer function **7.1– 7.3**

SmarTrack security **A.1– A.7**

Standard Reports

compiling **C.2, C.5**

Print Preview window **C.7**

SmarTrack Standard Reports **C.1**

starting/stopping jobs **3.9**

Statistical Process Control (SPC) charts **6.2– 6.32**

accessing **6.4**

additional display options **6.19**

exporting **6.13**

help **6.13**

overview **6.2**

printing **6.12**

process team **6.12**

rules tested **6.14**

setting options **6.11**

special information options **6.16**

summary **6.14**

viewing **6.10**

y-axis markings **6.15**

Subtitle field **6.11**

subtracting Indicator values **2.32**

Sum field **2.20**

Sums **2.19– 2.26**

copying **2.24**

defining **2.19– 2.24**

deleting **2.24**

examples of **2.25**

## T

Title field in Indicator Definition **2.8, 2.22, 2.29, 2.40, 2.51, B.3**

Title field in Indicator Profile Definition **5.4**

trend charts **6.29**

## U

U charts **6.2, 6.23**

User Definition form **A.7**

User Definition, adding restrictions to **A.5**

## V

viewing Indicator Profiles **5.20**

## W

Weekly Update field **3.9**

Which Count to Count **2.15**

working with

Indicator graphs **4.6– 4.18**

Indicator Profiles **5.20– 5.27**

## X

X-bar charts **6.2, 6.25**

X-bar R chart pairs **6.27**

X-bar S chart pairs **6.26**