CareFusion

Pyxis® MedStation® 3500 System

Console User Guide

Domestic

May 2010

Part Number: 127619-02

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CareFusion Corporation
San Diego, CA
United States

800.367.9947
carefusion.com

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Changes in equipment, software, or procedures occur periodically; information describing these changes will be included in future editions of the manual.

The information in this document is subject to change and does not represent a commitment on the part of CareFusion™ to provide additional services or enhancements.

Documentation provided with this product might reference product not present in your facility or not yet available for sale in your area.

Information to User

Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Canadian Notice (Avis Canadien)

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Contents

Preface ix

Chapter 1—System Overview

The Total Medication Solution 2
Unit-Dose Workflow 3
MedStation System Components 4
Network Information 5
    Comprehensive Reporting 6
System Communication 7
    Interface Options 7

Chapter 2—Console Basics

Getting Started 10
    Navigating the Standby Screen 10
    Logging On 11
    Logging Off 11
    Changing Your Password 11
Using the Console 12
    Menu Bar 12
    Features and Functions 13
        Mouse 13
        Keyboard 13
        Quick Key 14

Command Button 15
Option Button 15
Check Box 15
Scroll Bar 15
Drop-Down List 15
Search Box 15
Spin Box 16
Confirmation Screen 16
Pick List 16
Text Field 16
Online Help 16

Chapter 3—Setting Up the System

Devices 18
Accessing the Devices List 18
Adding a Station or Other Device 19
Beginning the Process 19
Entering the General Settings 20
Entering the Communication Settings 24
Entering the Settings for Profile Mode 25
Entering the Hardware Settings 27
Activating a CDC 29
Entering the Advanced Communication Settings 30
Entering Station Privileges for Temporary Users 31
Entering Medication Privileges for Temporary Users 34
Completing the Process 34
Editing a Station or Other Device 35
Deleting a Station or Other Device 35
Changing the Device Type 36
Changing the Name of a Device 36
Taking a Device In or Out of Service 37
Formulary Management 38
Remove Warning Overview 38
Accessing the Formulary List 39
Adding a Formulary Item 40
Editing a Formulary Item 44
Deleting a Formulary Item 44
Formulary Equivalencies 46
Creating an Equivalency 46
Viewing an Equivalency 48
Editing an Equivalency 48
Deleting an Equivalency 49
Expanding an Equivalency 49
Variable Dose 50
Adding a Variable Dose 50
Editing a Variable Dose 53

Deleting a Variable Dose 54
Combination Dose 55
Adding a Combination Dose 55
Editing a Combination Dose 58
Deleting a Combination Dose 58
Kits 59
Adding a Kit 59
Editing a Kit 61
Deleting a Kit 62
Users 63
Creating a Template for User Privileges 63
Adding a User 66
Beginning the Process and Assigning Areas to a User 66
Assigning Privileges from a Template 68
Assigning Console Privileges to a User 68
Assigning Station Privileges to a User 70
Assigning Medication Privileges to a User 73
Filtering the Users List 74
Updating Information for an Existing User or Group of Users 75
Updating Information for One User 75
Updating a User-Privilege Template 75
Deleting a User 76
Deactivating a User-Privilege Template 76
Patients 77
Adding a Patient File 78
Editing a Patient File 82
Discharging a Patient 82
Filtering the List of Patients 83
Areas 84
Adding a Nursing Unit 84
Adding an Area 85
Adding or Removing a Nursing Unit to or from an Area 86
Deleting an Area 86
Deleting a Nursing Unit 86
Clinical Data 87
Predefined Clinical Data Categories (CDCs) 87
Adding a CDC 90
Editing a CDC 91
Using a CDC Response 92
Adding a Response for a CDC 92
Adding a Multiple-Response List 93
Editing a Multiple-Response List 94
Deleting a Response from a Multiple-Response List 95
Site-Specific Options 96
Specifying Demographic Information 96
Specifying System Options 97

Configuring an Attention Notice (Bulletin) 99
Activating an Optional Type of Attention Notice 100
Addressing an Unsolicited Attention Notice 101
Report and Maintenance Options 101
Selecting Report Options 102
Specifying Maintenance Options 103
Running a Maintenance Task 106
Customizing the Console Name 106
Viewing or Modifying a Medication Warning 107
Pharmacy Configuration 109
Customizing a Security Group Name 109
Customizing an Override Group Name 111
Adding or Changing a Medication-Classification Name 111
Renaming a Medication Classification 112
Adding a Medication Classification 112
Deleting a Medication Classification 113
Adding or Modifying a Discrepancy-Resolution Reason 113
Adding a Discrepancy-Resolution Reason 114
Editing a Discrepancy-Resolution Reason 114
Deleting a Discrepancy-Resolution Reason 115
Adding, Updating, or Deleting a Formulary or Station List 115
Adding an Item to a List 115
Editing a List 116
Deleting an Item from a List 117
Maintaining Scan Codes 118
Adding a Scan Code 119
Editing a Scan Code 120
Deleting a Scan Code 120
Communication Status 121
Viewing Specific Communication Information 121
Changing the Refresh Rate 125

Chapter 4—Utilities

Using Virtual Files Edit to Define Communication Ports 128
Updating Information Globally 129
Updating the Formulary Globally 129
Updating Device Information Globally 132
Updating User Information Globally 137
Archiving Transactions 140
Viewing or Deleting the List of Archive Files 140
Selecting and Archiving Data 141
Copying Archive Files to Media 143
Scheduling Archive Maintenance 144

Chapter 5—Inventory

Assigning a Medication to a Pocket 146

Replacing or Editing a Loaded Medication 152
Clearing a Pending Medication 153
Making a Pocket Unavailable 154

Chapter 6—Reports

Available Reports 158
Report Descriptions 159
Generating a Report 163
Batch Reports 165
    Adding a Batch Report 165
    Viewing the List of Batch Reports 167
    Editing a Batch Report 167
    Deleting a Batch Report 168
    Enabling or Disabling a Batch Report 168
    Printing a Batch Report 168
Viewing Reports Queued for Printing 169

Appendix A—Troubleshooting

Attention Notice (Bulletin) 172
    Can’t Communicate Attention Notice 173
        Same Station Attention Notice 173
        Different Station Attention Notice 174
Using Brain Transplant to Restore a Database 175
        Checking the Communication Status of a Station 175
        Running a Brain Transplant 176
Communication Problem with Procar 177
ADT Communication Problems 178
    Patient or Patient Order Not Displayed at the Console 179
    Patient Billing Information Problems 179
Report Does Not Include Correct Data 180
Facility Power Outage 181
Console Printer Not Working 182
Remote Diagnostics 183
User Cannot Access a Medication 184

Appendix B—Management and Monitoring Recommendations

Security Recommendations 186
    General Recommendations 186
    Controlled Medications 187
System Configuration Recommendations 188
    Drawer Configuration and Medication Location 188
    Control the Station Formulary List 189
    Order Entry and Verification 189
    Medication Distribution 190

Glossary 191

Index 201

Preface

This guide provides information on how to set up, use, and maintain the Pyxis® MedStation® 3500 System console.

This guide does not cover service and repair procedures. It focuses on the daily use, minor maintenance, and troubleshooting of the system.

For information about the product that is not covered in this document, call the Technical Support Center for Pyxis® products at **800.727.6102**.

Defined Terms

The following table identifies the defined terms used throughout this document for certain products and product features:

Product/Feature	Defined Term
Pyxis® Anesthesia System 3500 secure medication and inventory management system	Anesthesia System
Pyxis® BioID fingerprint identification system	BioID
Pyxis® Connect nurse monitor system Pyxis® Connect scan station	Connect
Pyxis CUBIE® computerized unit based on inventory exchange system	CUBIE pocket
Pyxis® MedStation® 3500 automated medication management system	MedStation system
Pyxis® MiniDrawer secure medication dispensing pockets	MiniDrawer
Pyxis® Procar	Procar
Pyxis® SMART Remote Manager temperature-sensitive medication dispensing and monitoring system	SMART Remote Manager
Technical Support Center for Pyxis® products	TSC

Conventions

This guide uses the following conventions:

- The names of document titles, cross-references, and text that requires emphasis are formatted in *italics*.
- The names of buttons, menu commands, options, icons, file names, and folders are formatted in **bold**.
- User input is formatted in **`Courier bold`**.
- Programming code is formatted in `Courier fixed width`.

NOTE
Notes contain supplementary information or emphasize a point or procedure.

CAUTION
Caution indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. Caution is also used to alert against unsafe practices that could result in unpredictable results or data loss.

Equipment Markings and Symbols

Several symbols are used to convey visual messages on the equipment. The symbols follow the International Organization for Standards (ISO) format.

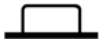
General hazard—Loss, injury, or damage may occur. Refer to the accompanying documents or the adjacent text.

Shock hazard—Shock hazard. Refer servicing to qualified service personnel.

Tip Over Hazard—Moving equipment requires special attention to avoid tipping it over and injuring an individual.

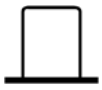
I

On Position—Number 1 or letter I. Indicates the switch position for turning on the power supply. For push-button switches, the following symbol may also be used:



O

Off Position—Number 0 or letter O. Indicates the switch position for turning off the power supply. For push-button switches, the following symbol may also be used:



Directive 2002/96/EC—Waste electrical and electronic equipment; not for municipal waste.

RoHS

Directive 2002/95/EC—Restriction of the use of certain hazardous substances in electrical and electronic equipment. (International only)

Federal Communications Commission

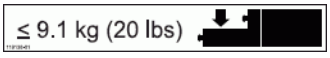
Refer to documentation.

Canadian Standards International, Inc.

Indicates conformance to European Economic Area (EEA) directives for essential health and safety requirements.

IPX0

No protection against ingress of fluids.



Maximum Weight—Maximum weight allowed for drawer contents. Do not overload the drawer.

Overview of This Guide

This guide includes the following information about the console.

- ***Chapter 1, System Overview***—Provides an overview of system features and components, and the system's network configuration.
- ***Chapter 2, Console Basics***—Explains how to use the console and includes procedures for logging on and off the system.
- ***Chapter 3, Setting Up the System***—Describes how to set up system information unique to your facility, such as station names and options, users, patients, and the formulary.
- ***Chapter 4, Utilities***—Describes how to use system management functions at the console.
- ***Chapter 5, Inventory***—Describes how to use the Inventory feature to manage your facility's inventory as it moves from the Pharmacy out to the patient.
- ***Chapter 6, Reports***—Provides reports, report descriptions, procedures for generating reports, and batch reports information that can help you to monitor and manage your system.
- ***Appendix A, Troubleshooting***—Provides remedies to potential problems involving the console and its components.
- ***Appendix B, Management and Monitoring Recommendations***—Provides security recommendations, system configuration recommendations, and examples of controlled substance procedures for operating rooms (ORs) and anesthesiology in facilities where the MedStation system is used.
- ***Glossary***—Defines system terminology.
- ***Index***

Chapter 1
System Overview

The MedStation system automates the distribution, management, and control of medications. The MedStation system includes a network of secure storage stations located in patient-care areas throughout the facility. Each station is controlled by its own microprocessor and functions similar to an automated bank-teller machine. This section includes the following topics:

The Total Medication Solution *2*

Unit-Dose Workflow *3*

MedStation System Components *4*

Network Information *5*

System Communication *7*

The Total Medication Solution

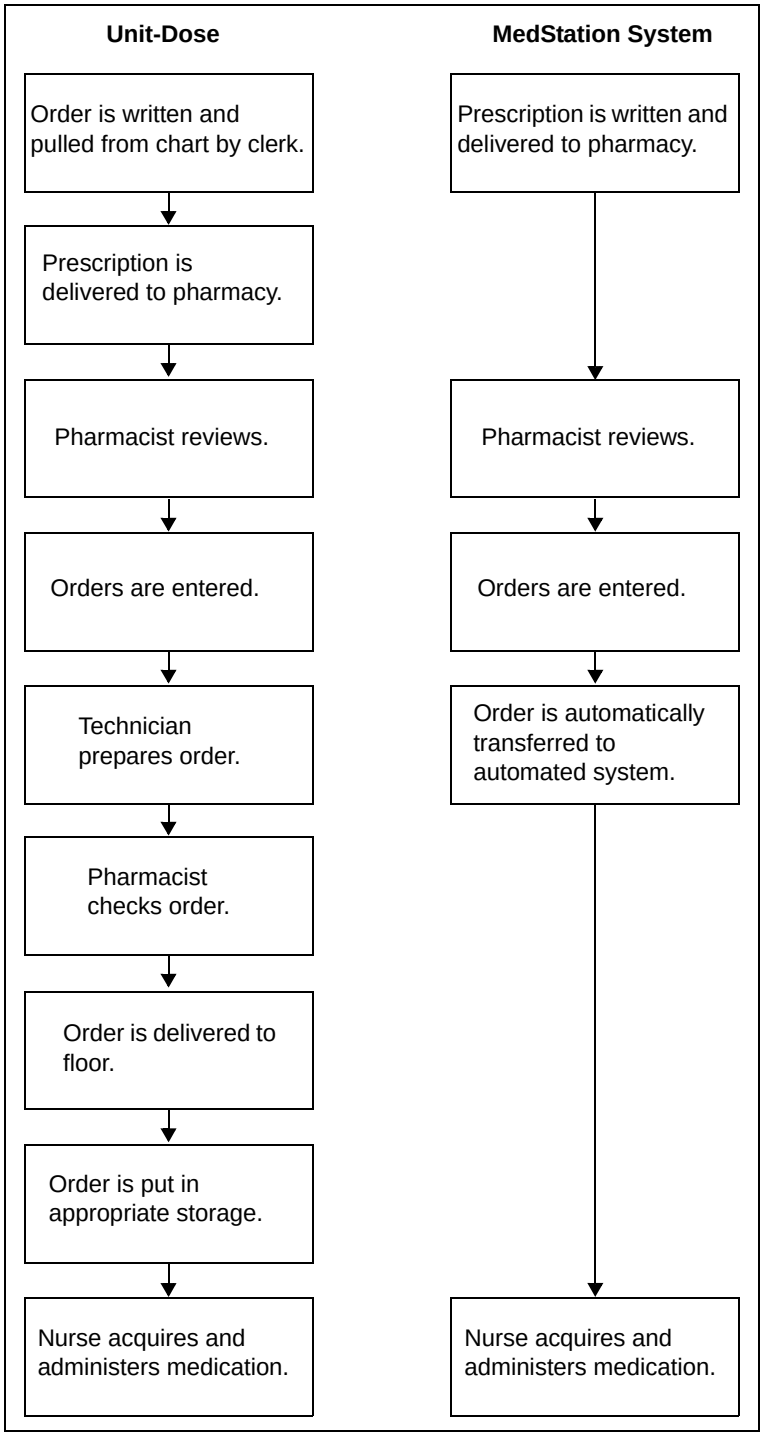
The MedStation system allows a pharmacy to store and track a range of medications and floor-stock items. Depending on your needs, the MedStation system can manage:

- Controlled medications
- Ward stock
- Pro re natas (PRNs) (profile mode recommended)
- First doses (profile mode recommended)
- Some IV solutions and sets
- Up to 95% of all medications (profile mode only)

The actual amount of medication storage depends on your station configurations and other factors. The MedStation system is flexible and has many configuration options to accommodate your needs and requirements.

Unit-Dose Workflow

Most pharmacy and nursing managers understand the benefit of having medications available at all times on the nursing unit. The following flowchart represents the differences between the traditional unit-dose system and the MedStation system. The MedStation system is able to reduce nine identified points of potential time delays and errors down to a manageable five.



MedStation System Components

The MedStation system is custom-configured for your facility's needs and for the way you do business. The MedStation system components include the following:

- **Console (one or more)**—The console is the central controller and clearinghouse for all stations. Network connections provide the communications path between the components. The console is usually located in the pharmacy and stations are located throughout the facility.

  The console provides the management interface to enter and collect information. It performs the following functions:

  - Communicates data to and updates activity information in all the stations.
  - Maintains copies of all patient, user, formulary, and activity information used to generate pharmacy reports.

  In some facilities, an additional computer, monitor, and keyboard can be added in a second location as another console access point. This is also known as a console workstation.

  Procar, also a part of the console subsystem, is responsible for interface communications, including the admissions, discharge, and transfer (ADT) and billing information and, if you use profile mode, the pharmacy software system link (patient orders and other pharmacy profile information). CareFusion representatives configure and install the MedStation system for you.

NOTE
The MedStation system communications hardware and software interfaces are proprietary.

- **Stations (one or more)**—The stations are the clients in the setup. They provide secure and reliable storage for medications of all types. They communicate with the console, receiving patient, order (profile mode only), and inventory information, while continuously reporting all medication transactions. Stations come in a variety of configurations, with a selection of configurable drawers and doors to meet the needs of the various areas.
- **Printer**—The console includes a high-speed laser printer for printing reports.
- **Optional Component (Connect)**—The MedStation system incorporates the Connect product. The nurse-monitor station is a tool used outside the pharmacy, on each unit where a scan station is placed, to monitor the status of orders in the Connect system. The nurse-monitor station software is usually installed on computers in the nursing unit and used by nurses to track orders that have been scanned from particular locations. Nurses can check the status of an order at the same station from which they attempted to remove a medication. If a nurse discovers that a new drug is not yet on the patient's profile, he or she can log on to Connect from the MedStation system to check the status of the order.

Network Information

Procar translates patient information from the facility's host information system into a usable format for the MedStation system. It serves as a connection between the console and the facility's ADT, billing, and clinical (patient-profile) pharmacy systems.

NOTE
Some hospital or pharmacy vendors require additional hardware and software to accomplish this interface. Your CareFusion representative works with you to determine the requirements for your facility.

The communications link between the console and the stations is interactive. The console receives patient information from the facility's information system (ADT), correlates it with the correct nursing unit and area, and sends it to the appropriate stations.

NOTE
CareFusion provides long-term data-archive and reporting systems to track inventory and clinical data. For more information, contact your CareFusion representative.

The console communicates with each station after a specified time interval depending on setup and the amount of activity. Information is automatically retrieved and subsequently stored when any change in status, such as medication removal, occurs. The activities are then forwarded to the facility's billing system via Procar.

Comprehensive Reporting

Many facilities have numerous stations located throughout a variety of patient-care areas, so comprehensive and accurate reporting is critical to the pharmacist and system manager.

The console that is located in the pharmacy retains up to 31 days of transaction data for all stations, including:

- Medication removals and returns.
- Wasted medications.
- Refill activities.
- Discrepancy-resolution information.
- Inventory verification.
- Formulary load.
- Patients and users that have been added, updated, and removed.

Reports on every aspect of the MedStation system—including pocket accesses, inventory, patient ADT, orders (profile mode only), and formulary—are available from the console. Data can be sorted and printed in a variety of reports and kept as a permanent record of medication usage.

Each station can generate summary reports of all transactions for that station for up to the most recent 32 hours.

To store information electronically, or to generate custom reports, you can archive the console data and import the data into various database and spreadsheet programs. For specific information on archiving, see *Utilities* on page *127*.

System Communication

You can implement a communications system to fit your needs and the layout of the facility. The configurable communications feature allows communications via network methods. A CareFusion applications engineer works with you to integrate the MedStation system with your telecommunications system.

The required communications links in MedStation system installation include:

- A Procar that interfaces the console to the hospital or pharmacy computer for ADT, billing, and patient-profile information.
- A communications component that links the console to the network of stations.

For station communications, network protocols are used. For interface communications, the same options apply, depending on the system-interface method supported by the hospital-system vendor. The preferred method of network communications is Transmissions Control Protocol/Internet Protocol (TCP/IP) over Ethernet.

NOTE
At least one dedicated analog telephone line is required for the console for support and diagnostic purposes.

Interface Options

While the MedStation system can be operated as a stand-alone turnkey system, significant value and operating efficiencies are added by using various interfaces with your hospital- and pharmacy-information systems. CareFusion will collaborate with any hospital-information system vendor to complete these interfaces.

There are five basic interface options:

- **ADT interface**—Although ADT information can be manually updated, the volume of information necessitates the use of a real-time electronic interface. The ADT interface between the console and the facility's information system is typically a one-way source of information, coming from one of several potential ADT sources. These sources include a printer "splice" interface into an existing line from your information system to your pharmacy printer, or any of the communications methods discussed in *System Communication* on page *7*. The console receives ADT information, routing it to the appropriate stations.
- **Billing interface**—A billing interface eliminates the need to enter individual billing transactions manually into the billing system. CareFusion can create an interface that allows you to format and send these transactions directly to your billing system.

- **Pharmacy-profile interface**—The MedStation system offers an interface to the pharmacy computer system, which gives providers immediate point-of-use access to patients' medications via their medication profiles, while saving a number of dispensing steps for the pharmacy. Upon medication removal, information regarding usage and inventory is automatically routed back to the pharmacy system. This interface can also include real-time formulary and stock-location updates between the pharmacy system and the MedStation system.
- **Medication-charting interface**—As medications are withdrawn from stations, all information routinely required for the medication-administration record is passively collected. The MedStation system has the ability to pass this information electronically to automated nurse-charting systems. Additional data fields in the Remove and Return processes collect information such as injection sites, observations, and other medication- and station-specific data. Configure the information to meet your nurse-charting vendor specifications.
- **Wholesaler interface**—CareFusion has the ability to pass medication usage information directly to your wholesaler. A separate computer connected to the console interfaces with the wholesaler's computer. More information regarding the wholesaler interface is available from your CareFusion representative and your wholesaler.

Chapter 2
Console Basics

This section includes the following topics:

Getting Started *10*

Using the Console *12*

Getting Started

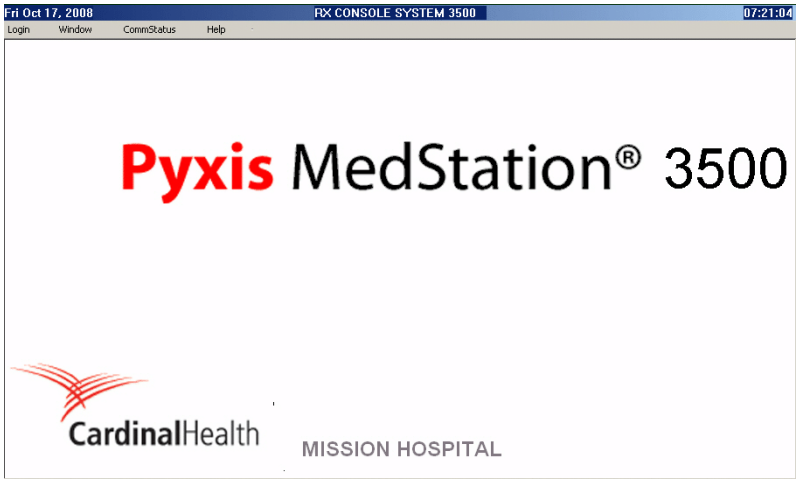
This section provides an overview of how to access the console user interface. It includes the following topics:

- *Navigating the Standby Screen* on page *10*
- *Logging On* on page *11*
- *Logging Off* on page *11*
- *Changing Your Password* on page *11*

NOTE
The examples used throughout this guide show screens with full access privileges and most station options turned on. The screens you see on your system might vary depending on your access privileges and option settings.

Navigating the Standby Screen

The standby screen is the default console screen and is your entry point into the console. After a predetermined time without keyboard activity, the console reverts to the standby screen even if you have not logged off. However, you should always log off when you leave the console to ensure that transactions are not performed by other users using your logon ID.



Logging On

When no one is logged on to the console, the standby screen displays the Login, Window, CommStatus, and Help menu options. Your system administrator provides you with a user ID and a first-time password.

1. In the standby screen, select **Login** in the menu bar, click the screen, or press **Enter**.
2. In the Console User Login screen, enter your user ID and password, and click **OK**.

The menu bar appears.

Logging Off

Log off before stepping away from the console.

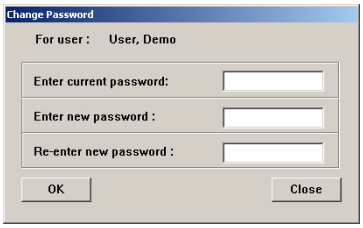
➤ Select **Logoff**.

The standby screen appears.

Changing Your Password

Before you can access the console, you must have a password. Your system administrator assigns a temporary password to you.

1. Select **Change Password**.
2. In the Change Password screen, enter your current password and your new password.



3. In the **Re-enter new password** box, enter your new password again.
4. To save the new password, click **OK**.

   The standby screen appears.

Using the Console

This section includes the following topics:

- *Menu Bar* on page *12*
- *Features and Functions* on page *13*

NOTE
In some of the screens that you will encounter throughout the product, yellow is used to highlight fields that you are required to complete.

Menu Bar

After logging on to the console, a menu bar appears. The menu bar provides access to all the functions available to you, based on your user access privilege level. Functions are grouped into the following menu categories:

- **Inventory**—Assign medications to station pockets, replace medications or assign more medications to pocket, or make pockets unavailable.
- **Reports**—Access Inventory reports, Activity reports, System Activity reports, and System reports. The Reports option also allows you to view the print queue and to add to or edit the list of batch reports.
- **System Setup**—Customize your system site information and selections lists, and define all system components such as pharmacy configuration, site-specific options, devices, formulary, users, patients, and areas.
- **Utilities**—Globally edit your formulary, devices, and users; archive data.
- **Change Password**—Change your password.
- **Window**—Turn display of the Attention Notices pane and XQ Viewer pane on and off. Because the XQ Viewer is resource-intensive, CareFusion recommends using it only as a support tool; that is, do not leave it open during normal operation.
- **Help**—Access Online Help to get information about the console.
- **CommStatus**—View the communication status between all non-console devices including stations and Procars.
- **Logoff**—Log off the console. To prevent unauthorized use of the system, use Logoff whenever you step away from the console.

Features and Functions

This section includes the following topics:

- *Mouse* on page *13*
- *Keyboard* on page *13*
- *Quick Key* on page *14*
- *Command Button* on page *15*
- *Option Button* on page *15*
- *Check Box* on page *15*
- *Scroll Bar* on page *15*
- *Drop-Down List* on page *15*
- *Search Box* on page *15*
- *Spin Box* on page *16*
- *Confirmation Screen* on page *16*
- *Pick List* on page *16*
- *Text Field* on page *16*
- *Online Help* on page *16*

Mouse

You can use the mouse to access menus and menu options. As you drag the mouse along the mousepad, the cursor moves along the screen, allowing you to select menus, menu options, and boxes (fields) in screens.

The mouse has a left and right button. Unless otherwise stated, when you are instructed to click a button, use the left button.

- **Click**—Click the left button once.
- **Double-click**—Click the left button twice, in rapid succession.

Keyboard

Use the keyboard to enter information into the system. If you make a mistake, press the **Backspace** key to erase keystrokes.

The following table lists keyboard keys and the functions they perform:

Keys	Function
Up arrow	Scrolls up a line in a list.
Down arrow	Scrolls down a line in a list.
Backspace	Deletes previous character in a box.
Tab	Moves forward to the next available box.

Keys	Function
Shift+Tab	Moves back to the previous box or choice.
Del	Deletes one character forward in a box.
Home	Takes you to the top item in a list.
End	Takes you to the bottom item in a list.
Enter	Accepts entries and clears open screens.
Esc	Quits the current screen.

Quick Key

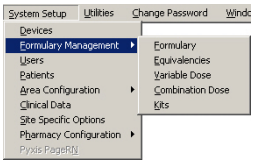
In addition to accessing menus using the mouse, you can use quick keys to access menus, menu options, and on-screen buttons. This involves using the Alt key, the first letter of the menu name, followed by the first letter of the menu option (or whichever letter in the name that is underlined).

To display quick keys

➤ To toggle the display of quick keys (that is, to hide or show the underlined letters), press the **Alt** key.

To use a quick key

1. While holding down the **Alt** key, enter the underlined letter of the applicable item.



2. To select an option from the open menu, release the **Alt** key, and enter the underlined letter of the desired option.

NOTE

You can also activate on-screen buttons using quick keys in the same way. Hold down the Alt key and enter the on-screen button's underlined character. For example, to activate a Save button, you would hold down the Alt key and press S.

Command Button

A command button lets you accept and cancel changes and execute a selected option. The following table lists a few examples:

Button	Description
Accept	Accepts entries and settings.
Cancel	Cancels the current operation or entry, and returns to the previous screen or the menu bar.
Close	Closes the screen.
Continue	Moves forward in the current process.
Next	Proceeds to the next item.
Save	Accepts entries, saves changes, and completes the activity. On some screens this button also closes the screen.
Select	Opens the screen for the highlighted item.

Option Button

An option button allows you to choose between mutually exclusive options. Of the two or more option buttons in a group, only one is active (selected) at any one time. When selected, an option button is black.

Check Box

A check box appears adjacent to an option, allowing you to activate or deactivate the option. You can select one, a few, or all options listed. When the option is selected, the box contains a check mark. To clear the selection, click the box again.

Scroll Bar

Scroll through the list in one of the following ways:

- Click the up and down arrows. The arrows in the scroll bar are used to move through lists.
- Use the up and down arrows on the computer keyboard and scroll one item at a time.

Drop-Down List

Click the top arrow to display a list of options.

Search Box

Use search boxes to find specific text in a pick list. Search boxes are labeled to indicate the pick-list field on which the search is performed.

To search for an item in a pick list, place the cursor in the appropriate search box and type the first character or first few characters of the item that you are searching for. This causes the cursor in the list box to move to the first item that

matches the characters in the list box. If no items match, the cursor moves to the item that most closely matches the characters.

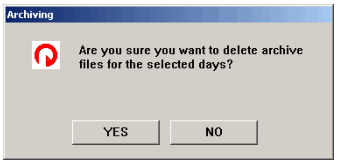
Spin Box

Spin boxes work like counters—you increase the field's value by clicking the up-arrow, and decrease the field's value by clicking the down arrow. You can also highlight the value in the field and type in a new value.

Confirmation Screen

Verify a confirmation screen in one of the following ways:

- To confirm the action, click **YES**.
- To cancel the action, click **NO**.



Pick List

Pick lists are lists of items you can select.

To select one item in a list

➤ Click the desired item.

The item is highlighted.

To select multiple items in a list

➤ Click and hold down the **Ctrl** key and highlight each item.

Text Field

This section describes how to enter or delete text from a text field.

To enter text

1. Select the applicable field.
2. Enter the text using the keyboard.

To delete text in a box (field)

➤ Do one of the following:

- Highlight the data in the box by double-clicking the text, and press **Delete** or retype the correct data.
- Place the cursor following the text to delete, and press **Backspace**.

Online Help

Help is located in the menu bar under Help.

Chapter 3
Setting Up the System

When you configure the console, you enter information unique to your facility, such as users, patients, and formulary. This section includes the following topics:

Devices *18*

Formulary Management *38*

Formulary Equivalencies *46*

Variable Dose *50*

Combination Dose *55*

Kits *59*

Users *63*

Patients *77*

Areas *84*

Clinical Data *87*

Site-Specific Options *96*

Pharmacy Configuration *109*

Maintaining Scan Codes *118*

Communication Status *121*

Devices

Devices are components that work as part of the MedStation system and can include the stations in your facility, Anesthesia System, and Procar.

Because needs and processes might vary from one nursing unit to another, involve the nursing staff for each nursing unit when setting device options.

This section includes the following topics:

- *Accessing the Devices List* on page *18*
- *Adding a Station or Other Device* on page *19*
- *Editing a Station or Other Device* on page *35*
- *Deleting a Station or Other Device* on page *35*
- *Changing the Device Type* on page *36*
- *Changing the Name of a Device* on page *36*
- *Taking a Device In or Out of Service* on page *37*

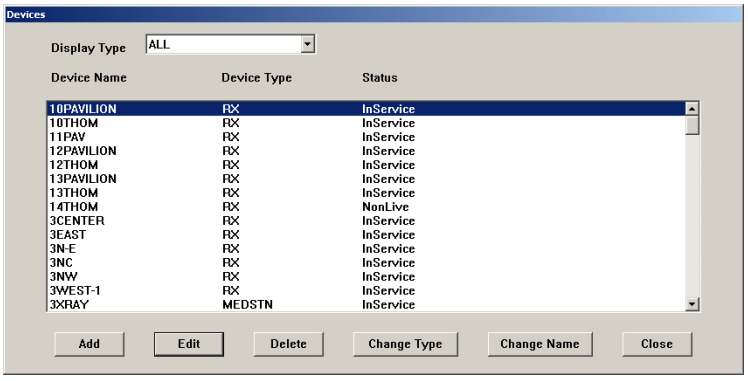
NOTE
You can update information globally. For more information, see *Updating Information Globally* on page *129*.

Accessing the Devices List

The following procedure explains how to view the list of devices in your facility.

1. Select **System Setup > Devices**.

   The Devices screen appears.



   This screen includes the following options:

   - **Add**—Adds a station (or other device) to the system.
   - **Edit**—Updates an existing device.
   - **Delete**—Deletes an existing device.
   - **Change Type**—Changes the Device Type from non-profile to profile.

- **Change Name**—Changes the name of the device (use with caution).
- **Close**—Dismisses the screen.

2. To display devices of a specific type, select the applicable type from the Display Type list.
3. To return to the standby screen, click **Close**.

Adding a Station or Other Device

To add a new station or other device to the system, complete the steps outlined in the following topics:

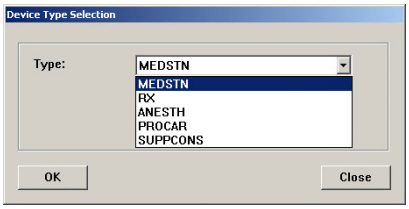
- *Beginning the Process* on page *19*
- *Entering the General Settings* on page *20*
- *Entering the Communication Settings* on page *24*
- *Entering the Settings for Profile Mode* on page *25*
- *Entering the Hardware Settings* on page *27*
- *Activating a CDC* on page *29*
- *Entering the Advanced Communication Settings* on page *30*
- *Entering Station Privileges for Temporary Users* on page *31*
- *Entering Medication Privileges for Temporary Users* on page *34*
- *Completing the Process* on page *34*

Beginning the Process

The following procedure explains how to start the process of adding a new station or other device to the system.

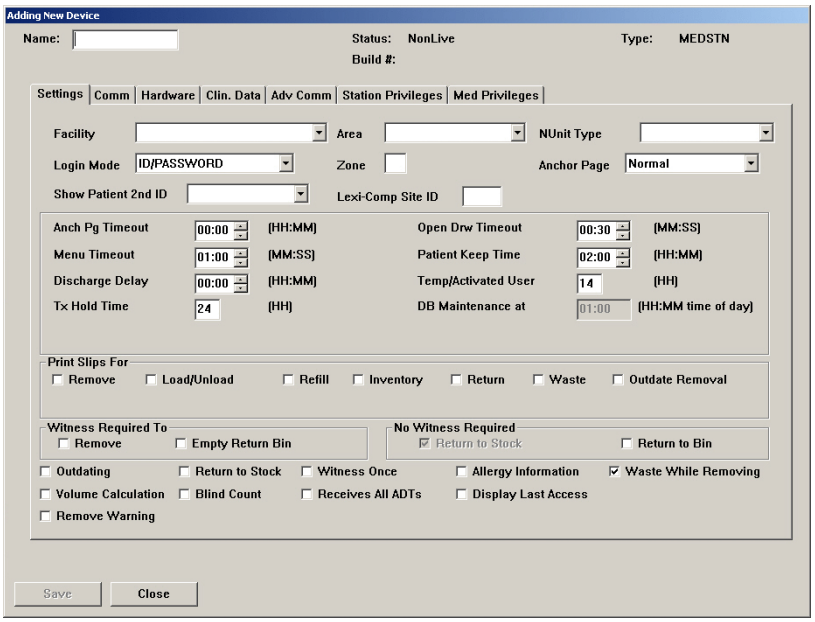
1. Select **System Setup > Devices**.
2. In the Devices screen, click **Add**.
3. In the Device Type Selection screen, select the type:
   - **MEDSTN**—A station operating in non-profile mode.
   - **RX**—A station operating in profile (Rx) mode.
   - **ANESTH**—An Anesthesia System station. Requires the assistance of a CareFusion representative.
   - **PROCAR**—A computer that facilitates communications between the console and the facility's information system for ADT, medication inventory usage, and patient clinical orders (when in profile mode).
   - **SUPPCONS**—A Pyxis® SupplyCenter™ enterprise inventory and data management system console. Customers with Pyxis® DuoStation

automated medication and supply management system will need to configure this device type to facilitate synchronization of users.



4. Click **OK**.

   The Adding New Device screen appears. Depending on the type you selected in step 3, the options that you see on each of the tabs will vary.



5. Complete the steps outlined in the next section, *Entering the General Settings*.

Entering the General Settings

This section describes how to complete the Settings tab.

1. Complete the **Name** box.

   The following sections appear at the top of the screen, but only the name information can be entered.

   - **Name**—Enter up to 10 alphanumeric characters for the name. The name of the nursing unit is commonly used.
   - **Status**—Displays the current status of the station, which might include InService, OutofService, BrainTxPlant, Pending InService, Pending OutofService, or NonLive.

- **Build #**—Displays the version number of the console software. A CareFusion representative might ask for the build number when assisting you with your system.
- **Type**—Displays the type of device.

2. Enter the following information in the first section:
   - **Facility**—Select the facility with which the station is associated. This field is used primarily by hospitals with affiliations or those that have merged and are made up of more than one hospital or nursing home.
   - **Area**—Select the area to identify which users have access to this station and which patients are displayed at this station.
   - **NUnit Type**—Select the nursing unit where this station is to reside.
   - **Login Mode**—Select the type of logon required for this station:
     - **ID/PASSWORD**—Requires users to log on with a user ID and password.
     - **ID/BIO**—Requires users to log on with a user ID and biometric ID.
   - **Zone**—Enter a code that relates to a specific region of the facility, such as an entire floor, building, or wing. Stations within that region are assigned the same zone to facilitate inventory tasks. Many console reports print information sorted by zone.
   - **Anchor Page**—Select the setting that controls how long the station remains accessible from the Pick a Med or Pick a Patient screen without going through a logon process.
   - **Show Patient 2nd ID**—If your facility uses a second form of ID, select the applicable item from the list.
   - **Lexi-Comp Site ID**—For more information, contact your CareFusion representative.
   - **InService/OutofService**—Allows you to change the service status of the displayed station. (This option appears after you save the current information.)
   - **Brain Transplant**—Restores a station's database from an error condition, such as a corrupted file, which prevents the station from operating correctly. (This option appears after you save the current information.)
3. Set the timeout options, as necessary:
   - **Anch Pg Timeout**—In hours (0–99) and minutes (0–59), enter the time after which the Anchor Page expires and the user is logged off due to keyboard inactivity. This option works in conjunction with the Anchor Page option.
   - **Menu Timeout**—In minutes (0–99) and seconds (0–59), enter the time after which the user is logged out due to lack of activity at the station. Depending on the location, security, and intended use for this station, you might want to make the timeout duration short (30 seconds) or long (5 minutes).

- **Discharge Delay**—In hours (0–99) and minutes (0–59), enter the time to keep a patient's information accessible at the station after that patient is discharged. This ensures that care providers can access a patient's medications for some time after the discharge is processed in the ADT system.
- **Tx Hold Time**—Enter the number of hours (1–32) transaction information is held at the station to appear on station reports. After the specified period of time, transaction information is purged from the station; all transaction information is always sent to and maintained by the console for up to 31 days.
- **Open Drw Timeout**—In minutes (0–99) and seconds (0–59), enter the time after which the station beeps and the user is logged off because a drawer is left open and there is no keyboard or monitor activity.
- **Patient Keep Time**—In hours (1–99) and minutes (0–59), enter the time to retain a temporary patient record that was manually added at the station. (Does not apply to permanent patient records.)
- **Temp/Activated User**—Enter the number of hours (0–99) temporary users remain active after they are created at the station. This feature is used for users for areas other than their primary areas. To allow time for shift changes, enter a value that is slightly longer than the longest shift on the unit.
- **DB Maintenance at**—Indicates at what time the system checks for expired users and discharged patients, and deletes them. (This information is set on the Maintenance tab of the Site Information screen.)

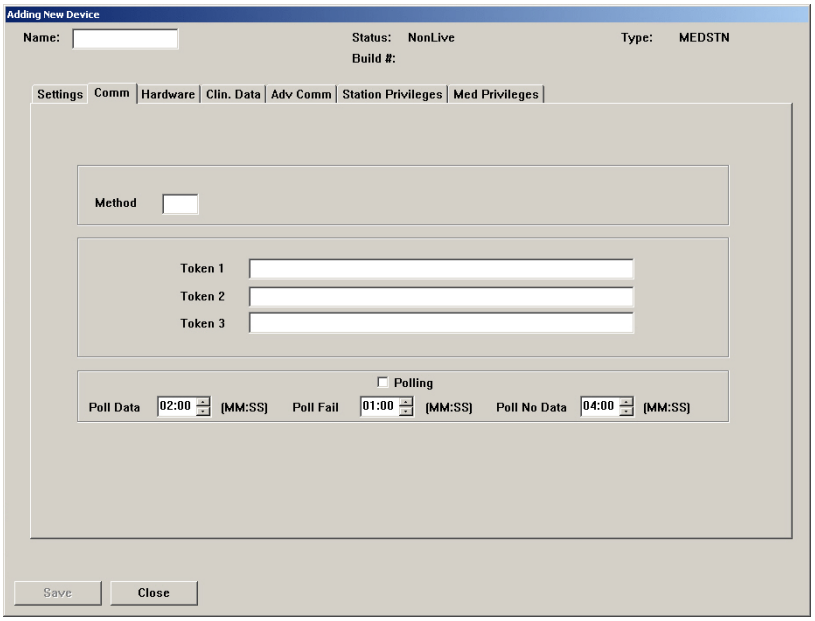
4. In the Print Slips For section, select the check boxes for the applicable options:
   - **Remove**—Prints slips when medications are removed.
   - **Load/Unload**—Prints slips when medications are loaded or unloaded.
   - **Refill**—Prints slips when medications are refilled.
   - **Inventory**—Prints slips when medications are inventoried.
   - **Return**—Prints slips when medications are returned.
   - **Waste**—Prints slips when medications are wasted.
   - **Outdate Removal**—Prints slips when medications are outdated upon removal.
5. In the Witness Required To section, select the check boxes for the applicable options:
   - **Remove**—Requires a witness for a medication removal.
   - **Empty Return Bin**—Requires a witness when the bin is emptied.
6. In the No Witness Required section, select the check boxes for the applicable options:
   - **Return to Stock**—Eliminates the requirement for a witness when a medication is returned to stock.
   - **Return to Bin**—Eliminates the requirement for a witness when a medication is returned to the Return Bin.

7. In the last section, select the check boxes for the applicable options:
   - **Outdating**—Assists with managing the expiration time of the medications stored in the specified station. Prompts the user to enter the appropriate expiration date for the pocket when refilling the medication. Later, when a user removes the medication, the station then determines whether the outdate time for the pocket is within the current month. If so, a message warns the user to verify that the expiration date on the medication being administered, because the pocket might contain outdated medications. During a Refill and Load, the medications being added to the station affect the expiration date, the system prompts the user to change the expiration date.
   - **Return to Stock**—Users can return unused medications in their original, unopened packages to the drawer and pocket from which they were removed. When disabled, return items to the Return Bin. Use the Formulary menu at the console to assign individual medications the Return to Stock option.
   - **Witness Once**—Prompts only once for a witness for all the medications on the list, rather than prompting for a witness on each medication.
   - **Allergy Information**—Displays allergy information at the station. This information displays only if your facility ADT interface provides allergy information.
   - **Waste While Removing**—Wastes during the remove process. Prompts the user to confirm whether to administer the full amount.
   - **Volume Calculation**—Allows you to convert strength units to volume units upon removal of a medication.
   - **Blind Count**—Provides the option to have count verification require you to enter the quantity blind instead of showing you the expected beginning count and asking you to confirm or correct it.
   - **Receives All ADTs**—Normally, only the ADT information for a station's area is sent to a station. If all ADT information is sent to this station, select this option. Application of this feature might be limited to certain areas, such as an OR or post-anesthesia care unit (PACU).
   - **Display Last Access**—Transmits throughout the MedStation system to all stations where the patient appears. For best performance, stations that receive all ADT should have Display Last Access turned off.
   - **Remove Warning**—Displays a screen advising that the requested medication should not be removed because it is too early or too late compared to the order dose time, or too close compared to the previous removal.
8. Complete the steps outlined in the next section, *Entering the Communication Settings*.

Entering the Communication Settings

This section describes how to complete the Comm tab.

1. Click the **Comm** tab.



2. In the **Method** box, type **XT**.

   This indicates the method by which the device communicates with the console.

NOTE
For other communication methods, contact the TSC.

3. In the token section, enter the applicable information:
   - **Token 1**—Specify the IP address.
   - **Token 2**—Specify a network number.
   - **Token 3**—Reserved for user-defined (UA) methods.
4. If you want the console to poll each station for transactions or activities that need to be reported, select the **Polling** check box, and indicate when the following should occur:
   - **Poll Data**—If the console sends or receives data for this station in a previous session, specify how often it polls this station.
   - **Poll Fail**—If polling fails, specify how soon the console retries polling.
   - **Poll No Data**—If the console sends or receives no data to this station in the previous session, specify how soon the console polls this station.

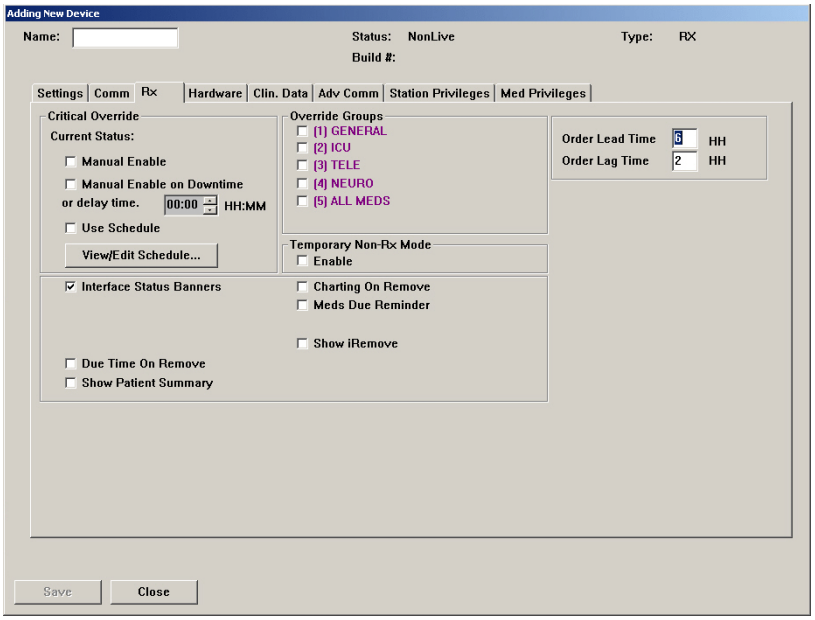
   If this station has no transactions, the console passes information to the station and continues querying the next station. This cycle of polling is continuous until you turn it off. Generally, you would not turn off polling unless so advised by a CareFusion representative or during testing, maintenance, or an out-of-service situation.

5. To save the information that you have entered up to this point and ensure that you can add drawers when you reach the section on entering hardware-related information, do the following:
   a. Click **Save**.
   b. In the confirmation screen that appears, click **OK** to continue.
   c. In the Devices screen, select the device that you created, and click **Edit**.
6. Do one of the following:
   - If the selected station is being used in profile mode, complete the steps outlined in the next section, *Entering the Settings for Profile Mode*.
   - If the selected station is not being used in profile mode, skip to *Entering the Hardware Settings* on page *27*.

Entering the Settings for Profile Mode

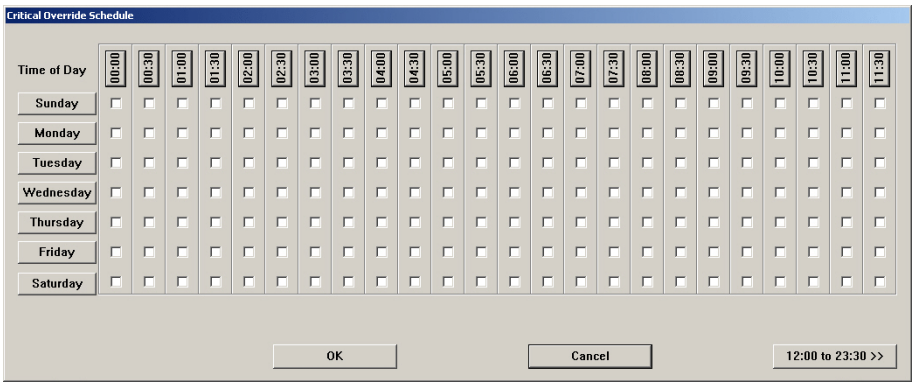
This section describes how to complete the Rx tab, which appears only on stations in profile mode.

1. Click the **Rx** tab.



2. In the Critical Override section, select the check box for the applicable option (you can only select one option):
   - **Manual Enable**—To allow users access to all medications loaded at this station, select this option. If you are not using the Manual Enable on Downtime or delay time feature, select this option as part of your backup procedure in the event that the profile system is down or behind for an extended period. This option automatically enables critical override immediately. The next option is not available until a predetermined time has passed.

- **Manual Enable on Downtime or delay time**—To allow users access to all medications loaded at this station when the station is unavailable, select this option. Enter the number of hours and minutes after which the profile interface is down or delayed that the station automatically goes into critical override.
- **Use Schedule**—To schedule a time during which a station in profile mode automatically goes into critical override mode, select this check box, and click **View/Edit Schedule**. In the Critical Override Schedule screen, select the applicable options, and click **OK**. For example, schedule the station for critical override when the pharmacy is closed.



3. In the Override Groups section, select the check boxes for the applicable options.

   For a user to override a patient's profile at this station when not in a critical override, select at least one of these override groups. This group must match the override group of both the user, formulary item, and pocket.

4. Update the lead and lag time, as necessary:
   - **Order Lead Time**—Enter the number of hours (from 0–99) *before* the start time that an order is made active at the station. (This applies to new orders.)
   - **Order Lag Time**—Enter the number of hours *after* the stop time that an order remains active at the station. (This applies to discontinued orders.)
5. If you are planning to enable profile mode at the station in the near future, but you currently want the station to receive orders but not display them, select the **Enable** check box in the Temporary Non-RX Mode section.

   Until you clear this check box, the station behaves like a standard station (that is, no profile feature), giving the users access to all medications at the station.

6. Select the applicable options:
   - **Interface Status Banners**—Select to display interface status banners if the profile interface is down or delayed.
   - **Due Time On Remove**—Select to display the Dose Times screen at the station every time a scheduled medication is removed. The nurse must subsequently indicate which dosage is being removed.
   - **Show Patient Summary**—Select to display an overview of patient information when using the Patient Summary option at the station.

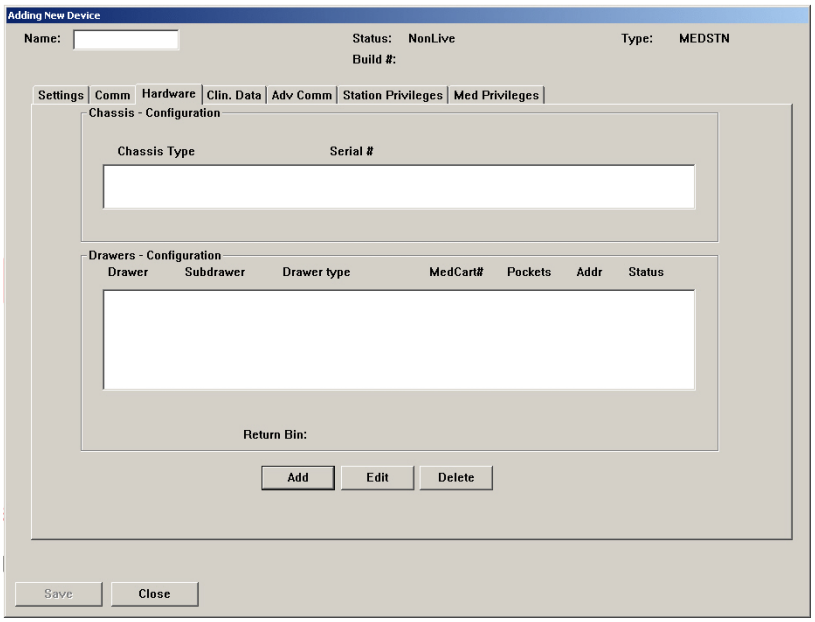
- **Charting On Remove**—Select to chart when medications are removed. Removal time is the administration time.
- **Meds Due Reminder**—Select to be reminded when scheduled medications are due. When the Meds Due Reminder feature is enabled at the console, a Meds Due Reminder screen appears on the station at the end of the medication-removal process. This screen reminds the nurse which scheduled medications are due within the user-defined time frame. (The nurse selects the time frame as a user preference.) For more information, refer to the *Using the Meds Due Features for the Pyxis® MedStation® System Best-Practice Guide*, which is available via the Customer Connection page on the CareFusion web site.
- **Show iRemove**—Select to use the system via the Internet or if the system is set up in an optometry clinic.

7. Complete the steps outlined in the next section, *Entering the Hardware Settings*.

Entering the Hardware Settings

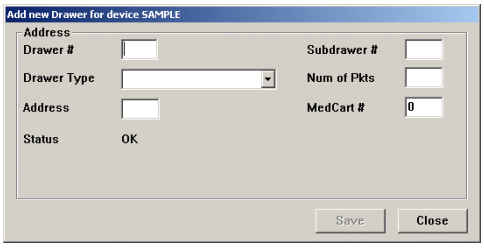
This section describes how to complete the Hardware tab.

1. Click the **Hardware** tab.



2. Click **Add**.

3. In the Add New Drawer for Device screen, enter the applicable information.



   - **Drawer #**—Enter the drawer number.
   - **Drawer Type**—Select the drawer type from the list. Drawer types include bin, matrix, mini, remote stock, and shelf. For more information, see drawer descriptions in the *Glossary* on page *191*.
   - **Address**—Enter the drawer address (location).
   - **Status**—This box displays the current status of the drawer.
   - **Subdrawer #**—Enter the subdrawer number.
   - **Num of Pkts**—Set the number of pockets for the drawer.
   - **MedCart#**—This box is reserved for future use.

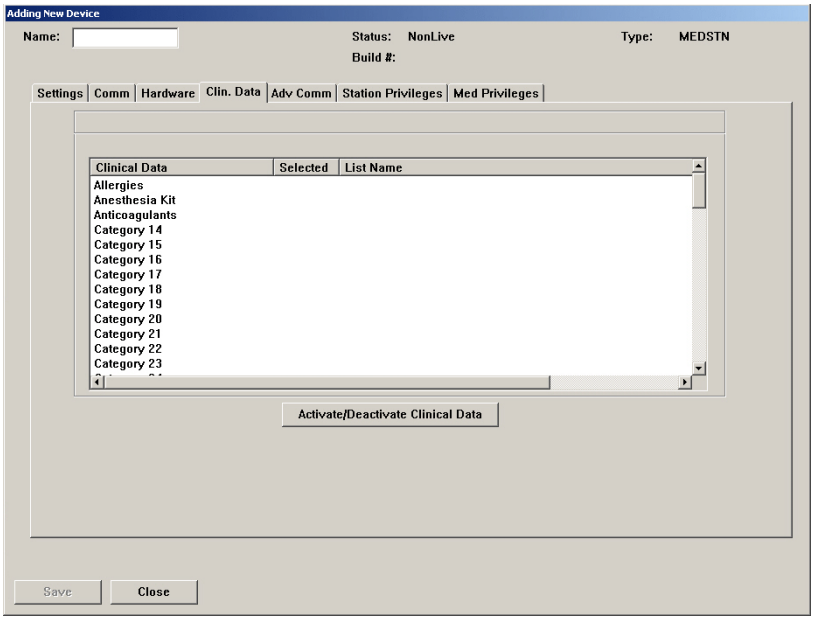
4. When you are finished, click **Save**.
5. Complete the steps outlined in the next section, *Activating a CDC*.

Activating a CDC

The Clin. Data tab is where you activate or deactivate clinical data categories (CDCs). You must set up CDCs at the Clinical Data menu so that they are available for activation and deactivation at the station. (For more information, see *Clinical Data* on page *87*.) You can activate up to 200 CDCs per station. However, a maximum of four categories are allowed per Remove, Return, or Waste transaction for each medication.

1. Click the **Clin. Data** tab.

   The Clin. Data tab appears, listing all CDCs that have been defined in Clinical Data.



2. Select the CDC to activate, and click **Activate/Deactivate Clinical Data**.

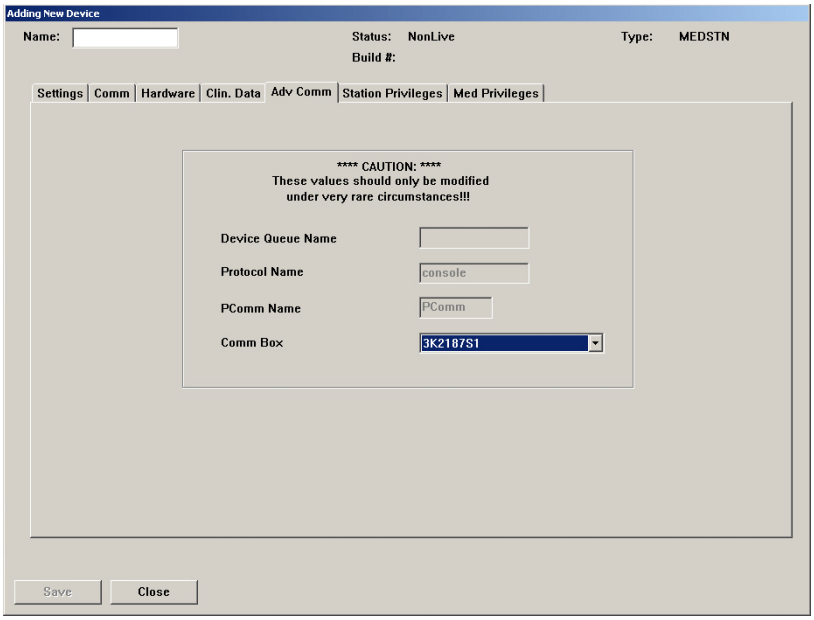
   When activated, the word Yes appears in the Selected column for the chosen CDC. If deactivated, no information appears in the Selected column for the chosen CDC.

3. When you are finished, click **Save**.
4. Complete the steps outlined in the next section, *Entering the Advanced Communication Settings*.

Entering the Advanced Communication Settings

Changing the options on the Adv Communications tab affects station communication and message processing.

CAUTION
Contact your CareFusion representative before making changes to these settings. If your site requires more than one computer in your console configuration, a representative might direct you to change the value of the Comm Box field.



To continue the setup process

➤ Complete the steps outlined in the next section, *Entering Station Privileges for Temporary Users*.

Entering Station Privileges for Temporary Users

This section describes how to complete the Station Privileges tab. Station privileges are those associated with the temporary users that are added at the station.

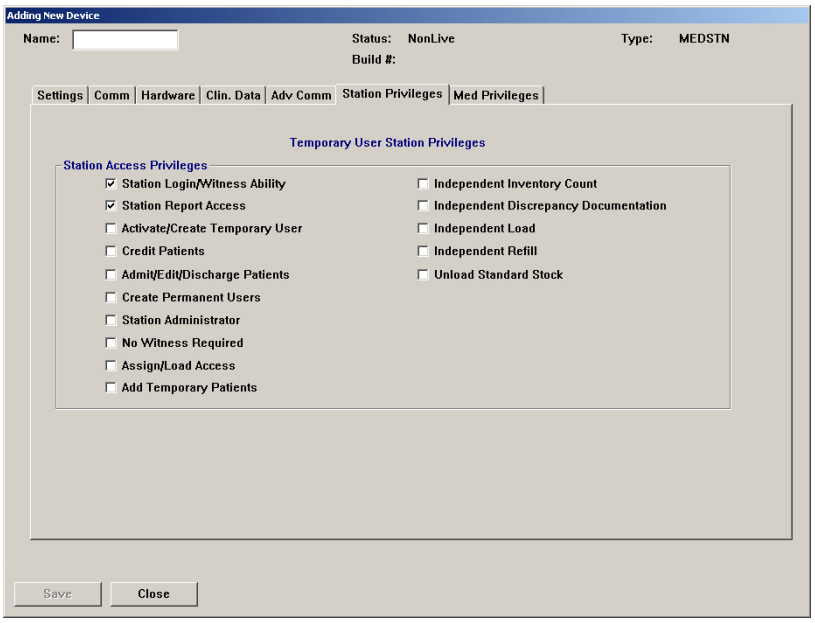
The following table provides examples of users and some of the privileges they might need:

Enable This Privilege	For
Station Login/Witness Ability	Users who can act as witnesses to the following procedures, but who do not have the authority to perform them: • Wasting a medication. • Returning an item. • Completing an inventory. • Documenting a discrepancy. • Recovering a drawer. • Emptying the Return Bin. • Print reports of their own transactions.
Activate/Create Temporary User	Charge nurses or other users who can grant another user temporary access to a station.
Admit/Edit/Discharge Patients	Users who: • Reconcile patients at the station. • Update patient information. • Add patients to the census that are not usually entered through the facility's patient admitting system. (In most cases, ADT information is managed through the electronic interface between the facility's system and the MedStation system.)
Station Administrator	Users who: • Have completed the MedStation System Manager training. • Are responsible for off-hours troubleshooting support of the station, such as a third-shift pharmacist or nursing supervisor.

Each station privilege has unique properties. All are mutually exclusive, with the exception of the Station Login/Witness Ability privilege. If the user is given any privilege other than this one, the user automatically gets the Station Login/ Witness Ability privilege. Otherwise, assign each privilege individually.

To set the privileges for a station

1. Click the **Station Privileges** tab.



2. Select the applicable options:
   - **Station Login/Witness Ability**—Allows limited access to the station with no ability to access drawers. Give users this level of access to allow them to act as witnesses. Users with this access can change their passwords and print their activity transactions.
   - **Station Report Access**—Users can run any report at the station. Users without this privilege can run reports that are limited to their own activities and discrepancies at that station.
   - **Activate/Create Temporary User**—A permanent user can activate the password of a temporary user (typically a float nurse) on a station to which he or she does not usually have access. A temporary user has access for up to 99 hours, depending on the time period defined on the Settings tab. For more information, see *Entering the General Settings* on page *20*.
   - **Credit Patients**—Users can credit a patient when wasting a complete dose of a medication. This situation might arise if a medication package is damaged or contaminated. Give patients a starting credit of 0.
   - **Admit/Edit/Discharge Patients**—Users can admit, update, or discharge patients at the station. Users with this privilege have a Patients button in the Main Menu at the station that permits access to this feature.
   - **Create Permanent Users**—Users can create permanent users at the station. Differs from the Activate/Create Temporary User privilege in that permanent users do not have a time limit. Permanent users can assign any station or medication privilege that they themselves have to users they create. Users with this privilege automatically have both the Station/Login Witness Ability and the Activate/Create Temporary User privilege.

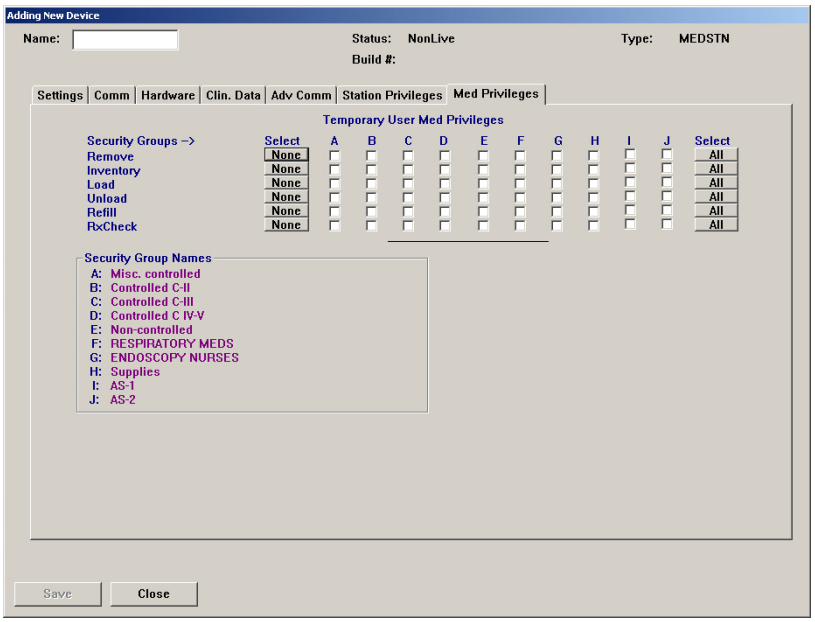
- **Station Administrator**—Users can perform initial setup and ongoing troubleshooting of the station. With this privilege, users can add, modify, and delete devices, which includes changing the drawer style and number of pockets, shutting down the station, placing the station in or out of service, altering communications, calibrating the touch screen, and transplanting data. At stations running in profile mode, these users can enable and disable critical override.
- **No Witness Required**—Users can waste, return, or inventory medication without a witness even though the selected medication's security group requires a witness.
- **Assign/Load Access**—Users can select a pocket for a medication and to place the medication physically into that pocket. This option does not apply to MiniDrawers.
- **Add Temporary Patients**—Users can add temporary patients at the station.
- **Independent Inventory Count**—Users can inventory medications without a witness. The user can recover a failed drawer and conduct the subsequent inventory of that drawer without a witness, assuming the user has access to all medication security groups of the medications in that drawer.
- **Independent Discrepancy Documentation**—Users can document discrepancies at the station without a witness. Otherwise, all discrepancy resolutions require a witness. The user must have access to the discrepancy medication's security group to document the discrepancy.
- **Independent Load**—Users can load a medication that requires Rx Check without having an authorized user check the medication.
- **Independent Refill**—Users can refill a medication that requires Rx Check without having an authorized user check the medication.
- **Unload Standard Stock**—Shows which items are standard stock in the Unload list. Users confirm before proceeding. Users without this privilege cannot unload medications unless they clear the Standard Stock setting in Inventory.

3. When you are finished, click **Save**.
4. Complete the steps outlined in the next section, *Entering Medication Privileges for Temporary Users*.

Entering Medication Privileges for Temporary Users

Medication privileges are associated with temporary users that are added at a station. When you set up your formulary, you specified a security group for each medication. Temporary user medication privileges are based on the security group of the medication.

1. Click the **Med Privileges** tab.



NOTE
The MedStation system provides 10 default security group names (A-J). Groups I and J are used with Anesthesia System. To rename groups at the console, select System Setup > Pharmacy Configuration > Security Group Names.

2. In the Temporary User Med Privileges section, select the groups to which temporary users can have access at the station.

   Users can access override medications whose formulary items and pockets have the same override group as you select here. If you do not activate any override groups, temporary users are unable to access override medications.

   - To select all groups, click **All**.
   - To clear all security groups for a particular function, click **None**.

3. Complete the steps outlined in the next section, *Completing the Process*.

Completing the Process

The following procedure explains how to finish adding a station or other device.

1. After you are finished entering the information on the various tabs, click **Save**.
2. In the confirmation screen that appears, click **OK** to continue.
3. To return to the standby screen, click **Close**.

Editing a Station or Other Device

This section describes how to update units by using the Editing Device screen. The contents of this screen can vary based on the type of device you are updating. For information about updating devices globally, see *Updating Device Information Globally* on page *132*.

1. Select **System Setup > Devices**.
2. In the Devices screen, select the applicable device, and click **Edit**.

   The Editing Device screen for the selected device appears with the Settings tab selected.
3. Update the applicable information on each tab.

   For information on the tabs and their options, use the information provided in *Adding a Station or Other Device* on page *19*.
4. Click **Save**.
5. In the confirmation screen that appears, click **OK** to continue.
6. To return to the standby screen, click **Close**.

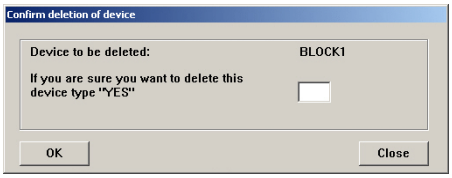
Deleting a Station or Other Device

The following procedure explains how to delete a station or other device from the system.

1. Make sure that you run all applicable reports for the device that you intend to delete.

CAUTION
After you delete the device, you will not be able to retrieve information about it.

2. Select **System Setup > Devices**.
3. In the Devices screen, select the device name, and click **Delete**.
4. In the confirmation screen that appears, type **yes** in the box, and click **OK** to continue.



5. In the next confirmation screen that appears, click **OK** to continue.
6. To return to the standby screen, click **Close**.

Changing the Device Type

The following procedure explains how to change the Device Type, which is commonly used to change a station to profile (Rx) mode. The current Device Type determines what options are available to you for changes (for example, if the type is currently RX, the system displays MEDSTN and ANESTH as options).

1. Select **System Setup > Devices**.
2. In the Devices screen, select the device, and click **Change Type**.
3. In the Device Type Selection screen, select the applicable **Type**, and click **OK**.
4. In the confirmation screen that appears, click **YES** to continue.
5. To return to the standby screen, click **Close**.

Changing the Name of a Device

The following procedure explains how to change the name of a station or other device.

1. If you are changing the name of a station, resolve all discrepancies before continuing.

CAUTION
Do not change the station name unless absolutely necessary. Doing so deletes unresolved discrepancies if you do not resolve them first.

2. Select **System Setup > Devices**.
3. In the Devices screen, select the device name to change, and click **Change Name**.
4. In the confirmation screen that appears, click **YES** to continue.
5. In the Device New Name screen, enter the new name, and click **Save**.

6. In the confirmation screen that appears, click **OK** to continue.
7. To return to the standby screen, click **Close**.

Taking a Device In or Out of Service

The following procedure explains how to take a station out of service or put it back in service. If you take a device out of service, all communication between the console and the device is stopped after the device is out of service.

1. Select **System Setup > Devices**.
2. In the Devices screen, select the device whose status you want to change, and click **Edit**.

NOTE
Take a station in or out of service only under the direction of a CareFusion representative.

3. In the lower-right corner of the Editing Device screen, click **In Service/Out of Service**.
4. In the confirmation screen that appears, click **YES** to continue.

   On the Devices screen, the Status column indicates a pending status and then a final status within 10 seconds of clicking In Service or Out of Service.

   If the device was in service, the Status changes to PendingOutOfSvs. If the device was out of service, the Status changes to PendingInSvs.
5. In the confirmation screen that appears, click **OK** to continue.
6. To return to the standby screen, click **Close**.

Formulary Management

Use the Formulary option to enter and update your facility's formulary. The console also allows you to define degrees of control over the security and clinical data associated with each formulary item.

There are two methods for adding formulary items: manually at the console (for a small number of items) and downloaded via a computer interface from your pharmacy computer system.

This section includes the following topics:

- *Remove Warning Overview* on page *38*
- *Accessing the Formulary List* on page *39*
- *Adding a Formulary Item* on page *40*
- *Editing a Formulary Item* on page *44*
- *Deleting a Formulary Item* on page *44*

NOTE
You can update information globally. For more information, see *Updating Information Globally* on page *129*.

Remove Warning Overview

There are two device settings that affect Remove Warning. The first is the Remove Warning check box on the Settings tab (this directly affects the Too Close warning, which is for both profile and non-profile mode). The second is the Due Time On Remove check box on the Rx tab. Due Time On Remove gives the dosing times for profile orders.

The Too Early and Too Late warnings are then derived by comparing the following:

- The current time.
- The three offsets in Default Remove/Admin. +/- Times.
- The list of eligible items in the list as determined by the rules that govern due times.

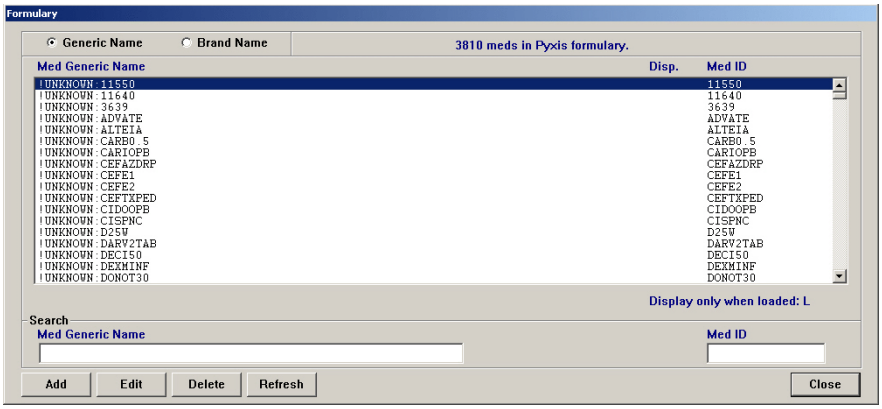
If Remove Warning is turned on and Due Time On Remove is turned off, you get the Too Close warning when the medication currently being removed has been previously removed within the parameter set at the console. Likewise, if Remove Warning is turned on and the device is in non-profile mode, you also get the Too Close warning.

Accessing the Formulary List

The following procedure explains how to view the list of formulary items.

1. Select **System Setup > Formulary Management > Formulary**.

   The Formulary screen appears, displaying all medications in the formulary. The list is displayed in alphabetical order based on the generic name.



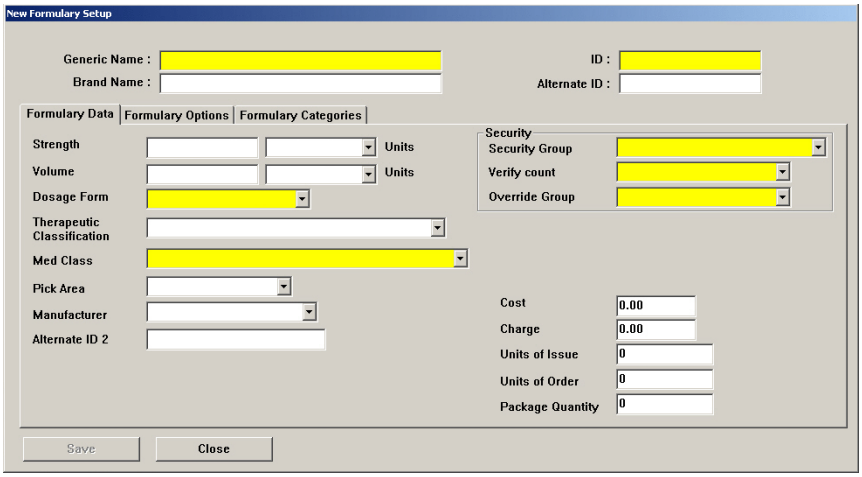
2. To display the list in a different order or to search for a specific item, use the applicable option:
   - **Generic Name**—Click to display items by their generic names (the default).
   - **Brand Name**—Click to display items by their brand names.
   - **Med Generic Name**—When viewing medications by Generic Name, begin typing the generic name of the item for which you are searching. As you type, the system attempts to match the item character by character to your entry.
   - **Med Brand Name**—When viewing medications by Brand Name, begin typing the brand name of the item for which you are searching. As you type, the system attempts to match the item character by character to your entry.
   - **Med ID**—Begin typing the medication ID (med ID) of the item for which you are searching. As you type, the system attempts to match the item character by character to your entry.
   - **Refresh**—Click to refresh the contents of the list.
3. To return to the standby screen, click **Close**.

Adding a Formulary Item

This section describes how to add a formulary item.

1. Select **System Setup > Formulary Management > Formulary.**
2. In the Formulary screen, click **Add**.

   The New Formulary Setup screen appears with the Formulary Data tab selected. The fields at the top of the screen remain visible regardless of the current tab.



3. In the upper section of the screen, enter the following:
   - **Generic Name**—Enter an alphanumeric generic name (up to 30 characters) for the formulary item.
   - **Brand Name**—Enter an alphanumeric trade name (up to 30 characters) for the formulary item.
   - **ID—**Enter a unique alphanumeric med ID (up to 15 characters).
   - **Alternate ID**—If required by your site, enter a 15-character alternate ID for the medication.

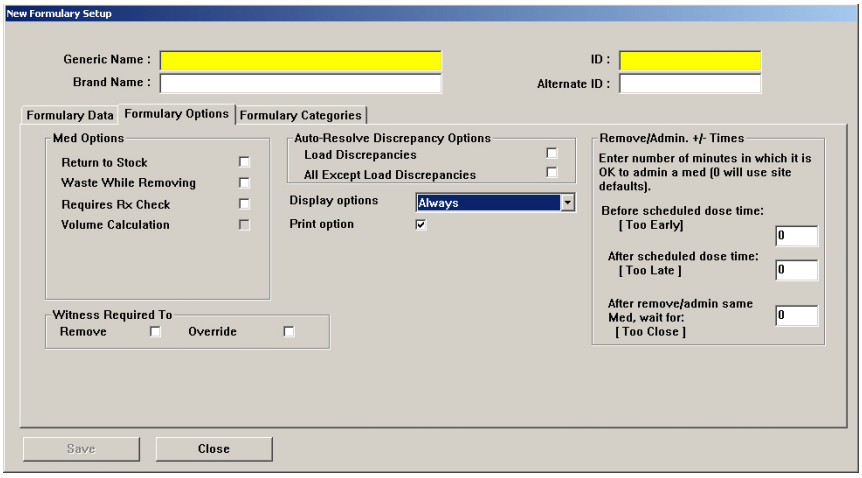
NOTE
Enter data on all tabs before saving unless you plan to edit your formulary globally after entering it. If you save before you are finished, use the Edit button on the Formulary screen to continue entering information.

4. Complete the applicable fields:
   - **Strength**—Describe the amount of the medication per unit. You can enter up to three decimal places (for example, 0.125).
   - **Strength Units**—Select a unit of strength.
   - **Volume**—Enter the fluid volume of the medication. This field is required only when the medication is a fluid.
   - **Volume Units**—Select a unit of volume.
   - **Dosage Form**—Select the dosage form of the medication.

- **Therapeutic Classification**—Select the therapeutic classification, which identifies the category of the medication according to use. One such classification system has been published by the American Hospital Formulary Service (AHFS).
- **Med Class**—Select the medication classification (med class). The class is used for sorting of medications in reports.
- **Pick Area**—Select the pharmacy location where the medication is stored for station replenishment. Required for use with the Pyxis PAR$_X$® pharmacy auto-replenishment system.
- **Manufacturer**—Select the manufacturer of the medication.
- **Alternate ID 2**—Enter a 22-character, alphanumeric med ID that functions as an additional identification for the medication.
- **Security Group**—Select the security group. The security group determines which users can access this medication. For a user to have access to a medication, the user's security group must match the medication's security group.
- **Verify count**—Select ON if you want to require the user to count the medications in the pocket each time the pocket is accessed. You can also select With Blind Count ON, which asks how many medications are in the pocket, or At/Below Min to require a medication count when the inventory level reaches the minimum specified for the loaded.

  Enable Blind Count at the device to use the Blind Count option when a medication is removed. Quantities are not displayed, as recorded in the database, when the user performs a count verification before removing items.
- **Override Group** (profile mode only)—Enter the override group to which this medication is assigned. Only users assigned the same override group can access this medication.
- **Cost**—Enter the acquisition cost of this medication.
- **Charge**—Enter the amount charged to the patient.
- **Units of Issue**—Enter the number of units of medication per refilling package.
- **Units of Order**—Enter the supplier's package size used for ordering.
- **Package Quantity**—Enter the number in the supplier's package.

5. Click the **Formulary Options** tab.

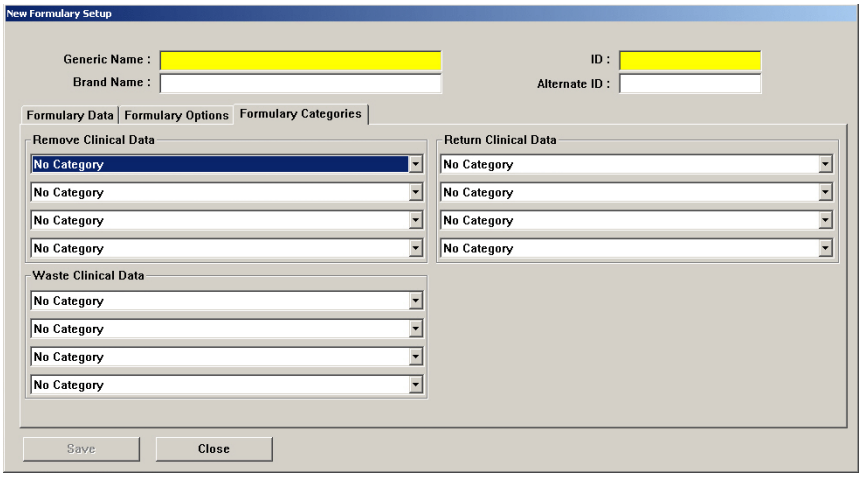


6. Complete the applicable fields:
   - **Return to Stock**—Select this option to allow users to return an unused medication still in its original package to the pocket from which it was removed.
   - **Waste While Removing**—Select this option to allow users to waste an unneeded portion of this medication during the Remove process.
   - **Requires Rx Check**—Select this option to activate a menu button that displays at the station indicating that another user must check this medication whenever it has been loaded or refilled by an individual whose security group requires a second person to check their work. This is a tool for auditing the refill and load processes. An icon also appears to warn the nurse that a medication is being removed before the pharmacist check takes place.
   - **Volume Calculation**—Select this option to allow users to calculate the volume of a medication needed for the ordered dose. Enter the strength and volume units in the formulary data field to make this option available.
   - **Remove**—Select this option to require a witness to enter an ID and password during the Remove process for designated medications.
   - **Override** (profile mode only)—Select this option to require a witness to enter an ID and password when a user tries to remove this medication for a patient when no order exists.
   - **Load Discrepancies**—Select this option to indicate that users are not required to resolve discrepancies that are created when loading this medication. The load discrepancy appears on the Discrepancy report as closed (documented).
   - **All Except Load Discrepancies**—Select this option to indicate that users are not required to resolve discrepancies that are created for this medication during all station activities, except when they are being loaded. The discrepancy appears on the Discrepancy report as closed (documented).

- **Display options** (profile mode only)—To display the medication in the medication profile list at the station regardless of whether it is loaded, select **Always**. (It is also eligible to appear on the Ordered Meds Not Loaded report.) To display the medication on the station profile list only when it is loaded, select **Only When Loaded** (this also renders the item ineligible for display on the Ordered Meds Not Loaded report).
- **Print option**—Select this option to print the medication on Ordered Meds Not Loaded bulletins and reports, as necessary. This eliminates the printing of medications that are displayed in the patient profile, but not loaded in the station. When selected, the medication is not printed on bulletins.

7. Enter the Remove/Admin +/- Times, in minutes, as necessary (leave 0 in any warning box that you have set globally and want to default to the system-wide setting):
   - **Before scheduled dose time [Too Early]**—Enter the number of minutes ahead of the scheduled dose time during which it is okay to administer a medication. If the medication is removed prior to this timeframe, the system displays the Too Early warning at the station and hand-held devices.
   - **After scheduled dose time [Too Late]**—Enter the number of minutes after the scheduled dose time during which it is okay to administer a medication. If the medication is removed after this timeframe, the system displays the Too Late warning at the station and hand-held devices.
   - **After remove/admin same Med, wait for [Too Close]**—Enter the number of minutes after the last time the medication was removed during which the medication cannot be administered again. If the medication is removed during this timeframe, the system displays the Too Close warning at the station and hand-held devices.
8. Click the **Formulary Categories** tab, and select the Clinical Data Categories, as needed.
   - **Remove Clinical Data**—Select up to four categories for Remove transactions.
   - **Waste Clinical Data**—Select up to four categories for Waste transactions.
   - **Return Clinical Data**—Select up to four categories for Return transactions.

NOTE
The order in which you select the CDCs determines the order in which the clinical data is requested at the station when the medication is removed, returned, or wasted.



9. Click **Save**, and then click **OK**.
10. To return to the standby screen, click **Close**.

Editing a Formulary Item

With appropriate user privileges, you can modify formulary items. For information about updating the formulary globally, see *Updating the Formulary Globally* on page *129*.

1. Select **System Setup > Formulary Management > Formulary.**
2. In the Formulary screen, select the applicable medication, and click **Edit.**
3. In the View/Modify Formulary screen, update the applicable information, and click **Save**.
4. In the confirmation screen that appears, click **YES** to continue.
5. In the second confirmation screen that appears, click **OK** to continue.
6. To return to the standby screen, click **Close**.

NOTE
For Anesthesia System, all pended items must be loaded prior to performing any edits/global edits on those pended items.

Deleting a Formulary Item

This section describes how to delete a formulary item.

1. Select **System Setup > Formulary Management > Formulary.**
2. In the Formulary screen, select the applicable medication, and click **Delete.**

3. In the confirmation screen that appears, click **YES** to continue.
4. In the second confirmation screen that appears, click **OK** to continue.
5. To return to the standby screen, click **Close**.

Formulary Equivalencies

Formulary equivalencies allow a pharmacist to define a certain strength of a formulary item as equivalent to multiples of another strength of the same generic item. Equivalencies allow you to remove a dose for a patient even if the ordered strength is not loaded at the station and eliminate the need to stock a rarely used strength in a specific station or throughout the facility.

This section includes the following topics:

- *Creating an Equivalency* on page *46*
- *Viewing an Equivalency* on page *48*
- *Editing an Equivalency* on page *48*
- *Deleting an Equivalency* on page *49*
- *Expanding an Equivalency* on page *49*

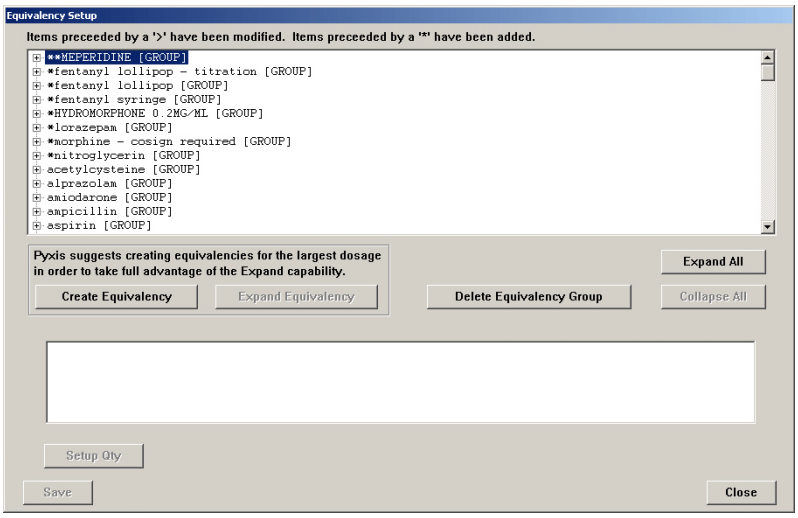
Creating an Equivalency

The following rules apply when creating equivalencies:

- Equivalencies are defined as multiple units of the same formulary line item, not as a combination of multiple formulary line items. For example, defining one tablet each of Amitriptyline 25 milligrams (mg) and 50 mg as an equivalency to one tablet of Amitriptyline 75 mg is not allowed. However, three tablets of 25 mg are defined as equivalent to 75 mg.
- Equivalencies are established only between formulary items of the same generic name defined in the console formulary. To define a combination of generically different formulary items, define a combination dose instead of an equivalency.
- Equivalencies might not contain variable-dose or combination-dose members.

To create an equivalency

1. Select **System Setup > Formulary Management > Equivalencies**.
2. In the Equivalency Setup screen, click **Create Equivalency**.



3. In the Select Med for Equivalency Creation screen, select a medication on which to base your equivalency.

   CareFusion suggests creating equivalencies for the medication with the greatest strength to take advantage of the Expand feature.

   An equivalency group is created for the item that you selected. Candidates for the equivalency (items with the same generic name and unit strength, mg, mEq, and so on) and medication classification appear in the list at the bottom of the screen. Generally, equivalent items must have a strength other than zero defined in the formulary to appear as candidates.

4. Click **Select**.
5. In the bottom section of the screen, select the medication.
6. Click **Setup Qty**.

   The Equivalency Verification message box appears, suggesting the equivalency relationship. If the dosage forms, strengths, strength units, or medication classes of the two formulary line items do not match, a warning appears.

7. To continue, click **Accept Equivalency**.
8. To save your equivalencies, click **Save**, and then click **OK**.

   After you have created equivalencies, you can view, edit, delete, or expand them as needed.

9. To return to the standby screen, click **Close**.

Viewing an Equivalency

This section describes how to view an equivalency.

1. Select **System Setup > Formulary Management > Equivalencies**.
2. In the Equivalency Setup screen, click the plus sign for the group whose details you want to view.

NOTE
Modified items in the list are preceded by a > symbol and added items are preceded by a * symbol for easy identification.

3. To return to the standby screen, click **Close**.

Editing an Equivalency

This section describes how to update an equivalency.

1. Select **System Setup > Formulary Management > Equivalencies**.
2. In the Equivalency Setup screen, select the equivalency that you want to update.
3. Click **Edit Equivalency**.

   Equivalencies appear in the lower section of the screen.
4. Select a medication on which to base your equivalency.
5. To create an equivalency, select a medication from the list.
6. Click **Setup Qty**.

   The Equivalency Verification message box appears, suggesting the equivalency relationship. If the dosage forms, strengths, strength units, or medication classes of the two formulary line items do not match, a warning appears.
7. To continue, click **Accept Equivalency**.
8. Click **Save**, and then click **OK**.
9. To return to the standby screen, click **Close**.

Deleting an Equivalency

This section describes how to delete a specific equivalency, an equivalency group, and a medication within an equivalency.

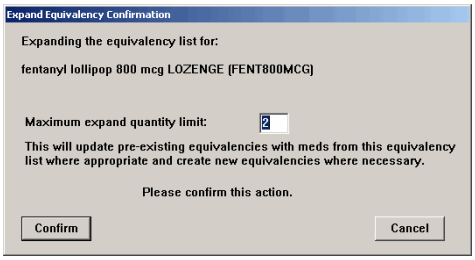
1. Select **System Setup > Formulary Management > Equivalencies**.
2. In the Equivalency Setup screen, do one of the following:
   - To delete an individual equivalency, select the equivalency, and click **Delete Equivalency**.
   - To delete an equivalency group, select the group, and click **Delete Equivalency Group**.
   - To delete a medication within an equivalency, select the medication, and click **Delete Equivalent Med**.
3. In the confirmation screen that appears, click **Confirm** to continue.
4. Click **Save**, and then click **OK**.
5. To return to the standby screen, click **Close**.

Expanding an Equivalency

The Expand Equivalency feature allows the system to create additional equivalencies between selected items within the same equivalency automatically.

1. Select **System Setup > Formulary Management > Equivalencies**.
2. In the Equivalency Setup screen, click the plus sign for the applicable equivalency group.
3. In the detailed list of items that comprise the group, select the medication for which you want to create another equivalency, and then click **Expand Equivalencies**.

   An Expand Equivalency Confirmation screen appears. The Maximum Expand Quantity Limit default is two.



4. If desired, change the maximum expand quantity limit.
5. Click **Confirm**, and then click **Close**.
6. To return to the standby screen, click **Close**.

Variable Dose

The Variable Dose feature allows the pharmacist to address the issue of range dosing by defining dosage choices for the care provider based on a single order. To accomplish this, create a formulary line item in both the pharmacy computer system and the console. Using variable-formulary doses creates the formulary line item. This section includes the following topics:

- *Adding a Variable Dose* on page *50*
- *Editing a Variable Dose* on page *53*
- *Deleting a Variable Dose* on page *54*

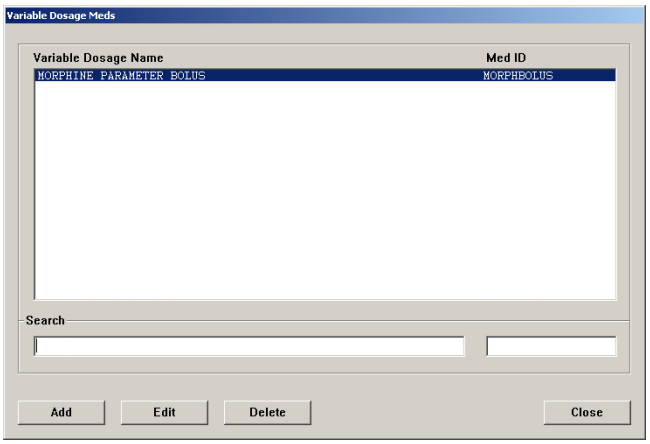
Adding a Variable Dose

The following rules apply when creating a variable dose:

- The nurse can access the ordered dose if one or more members of the variable dose are available at the station, whether or not all members are present. The station displays a message if any individual members are not available.
- Variable doses cannot contain combination doses as members.
- Variable doses can contain formulary equivalencies if the variable dose contains only one member and an equivalency has been set up for that member.
- For best results, load all members of a variable dose in stations where that medication is used.

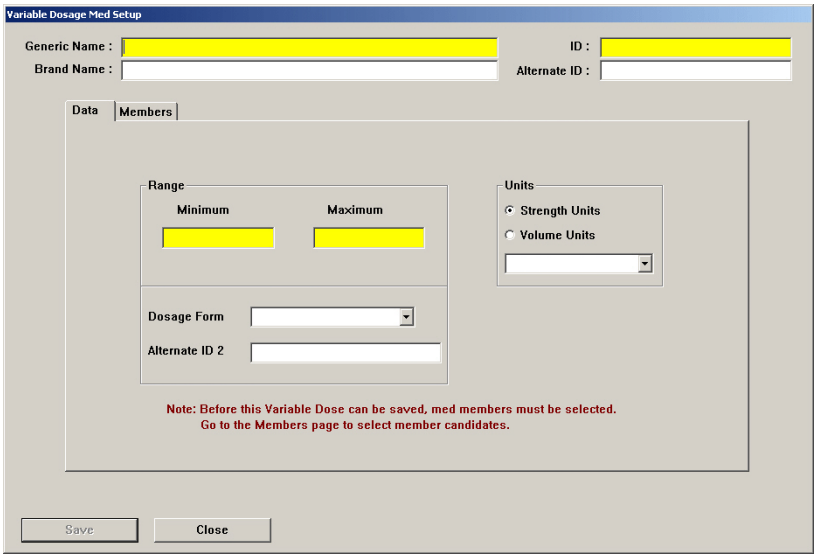
To add a variable dose

1. Select **System Setup > Formulary Management > Variable Dose**.



2. In the Variable Dosage Meds screen, click **Add**.

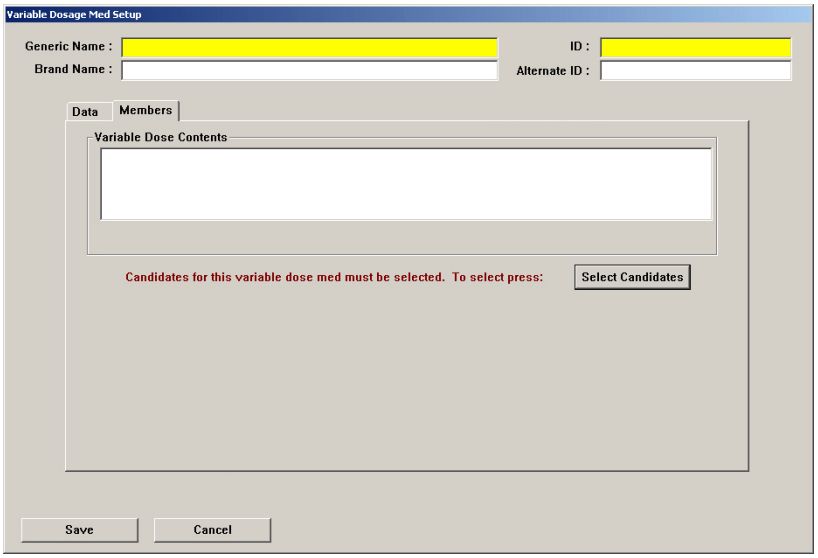
   The Variable Dosage Med Setup screen appears with the Data tab selected.



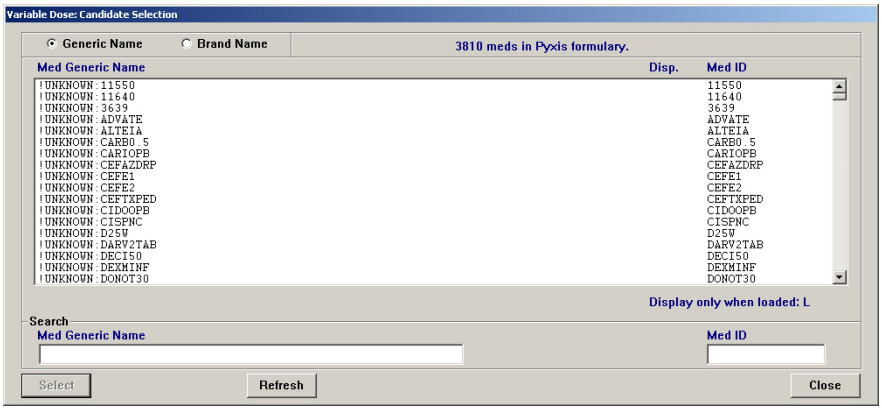
3. Enter the details for the medication:
   - **Generic Name**—Enter an alphanumeric generic name (up to 30 characters) for the variable dosage.
   - **Brand Name**—Enter an alphanumeric trade name (up to 30 characters) for the variable dosage.
   - **ID**—Enter a unique alphanumeric med ID (up to 15 characters).
   - **Alternate ID**—If required by your site, enter a 15-character alternate ID for the variable dose.

NOTE
The formulary ID is the same in the console as in the pharmacy system.

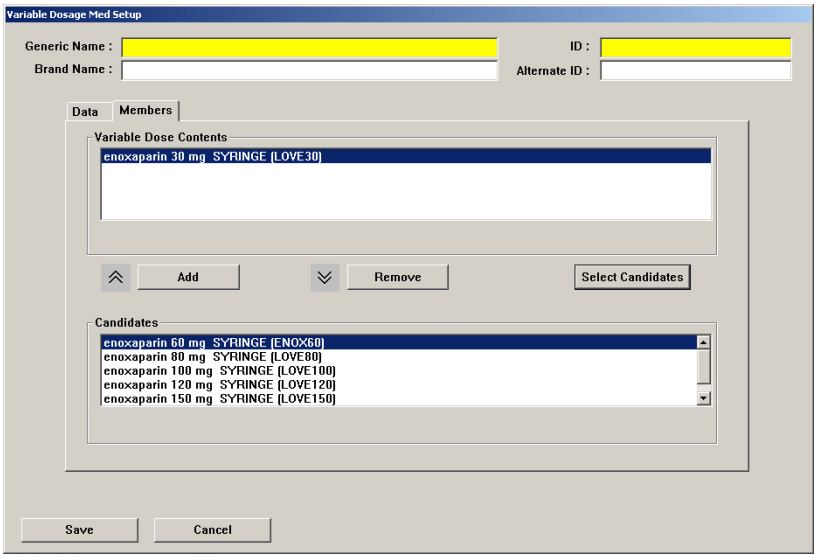
4. Enter the Range details:
   - **Minimum**—Enter the minimum dosage range.
   - **Maximum**—Enter the maximum dosage range.
5. Select the appropriate Units for the dosage:
   - **Strength Units**—Select to measure the variable dose in Strength Units.
   - **Volume Units**—Select to measure the variable dose in Volume Units.
6. Select the appropriate strength or volume unit from the associated list.
7. Complete the following:
   - **Dosage Form**—Select the dosage form for the variable dose.
   - **Alternate ID 2**—Enter an alphanumeric med ID (up to 15 characters) that functions as an additional identification for the medication.
8. To select formulary items as choices for the variable dose, click the **Members** tab.



9. Click **Select Candidates**.
10. In the Variable Dose: Candidate Selection screen, select a formulary item that is within the desired range from the formulary list, and then click **Select**.



11. In the Variable Dosage Med Setup screen, select a candidate to add to the variable dose, and click **Add**.



12. To save the variable-dose definition, click **Save**.

    The Variable Dosage Meds screen appears.

13. To return to the standby screen, click **Close**.

Editing a Variable Dose

The following procedure explains how to update a variable dose.

1. Select **System Setup > Formulary Management > Variable Dose**.
2. In the Variable Dosage Meds screen, select or search for the item that you want to change, and then click **Edit**.
3. In the Variable Dose Med Setup screen, make the required changes to the information on the Data and Members tabs, as necessary.
4. Click **Save**.

   The Variable Dosage Meds screen appears.

5. To return to the standby screen, click **Close**.

Deleting a Variable Dose

The following procedure explains how to delete a variable dose.

1. Select **System Setup > Formulary Management > Variable Dose**.
2. In the Variable Dosage Meds screen, select or search for the item that you want to remove, and then click **Delete**.
3. In the confirmation screen that appears, click **YES** to continue.
4. In the second confirmation screen that appears, click **OK** to continue.

   The Variable Dosage Meds screen appears.
5. To return to the standby screen, click **Close**.

Combination Dose

Combination doses allow the pharmacist to define cases where more than one item obtained from the station fulfills a single ordered dose. To accomplish this, create a formulary line item in both the pharmacy computer system and the console.

- *Adding a Combination Dose* on page *55*
- *Editing a Combination Dose* on page *58*
- *Deleting a Combination Dose* on page *58*

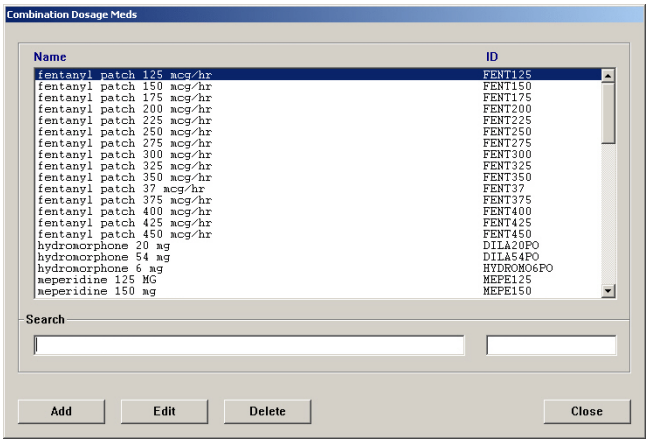
Adding a Combination Dose

The following rules apply when creating a combination dose:

- All members of a combination dose must be present and available in the station for the nurse to access the dose. Therefore, do not define combination doses that contain members that are not routinely stored in a station.
- Combination doses do not have to contain formulary equivalency or variable doses as members. Do not use this method for adding formulary equivalencies or variable doses.

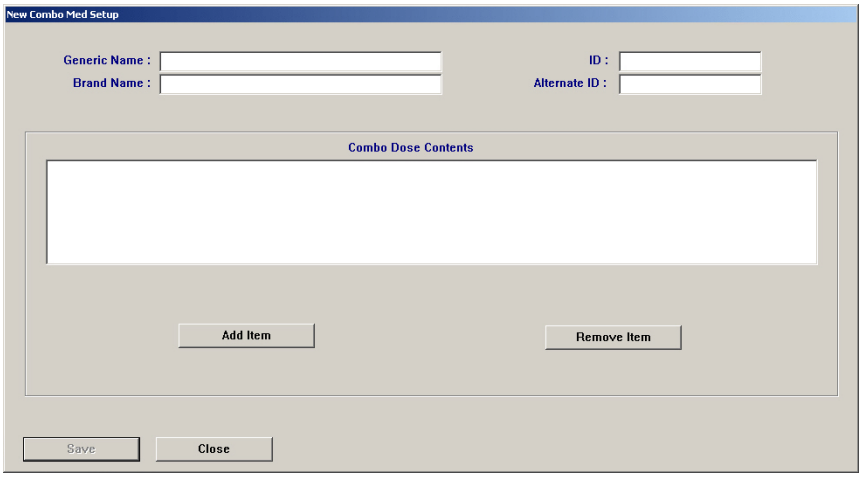
To add a combination dose

1. Select **System Setup > Formulary Management > Combination Dose**.
2. In the Combination Dosage Meds screen, click **Add**.



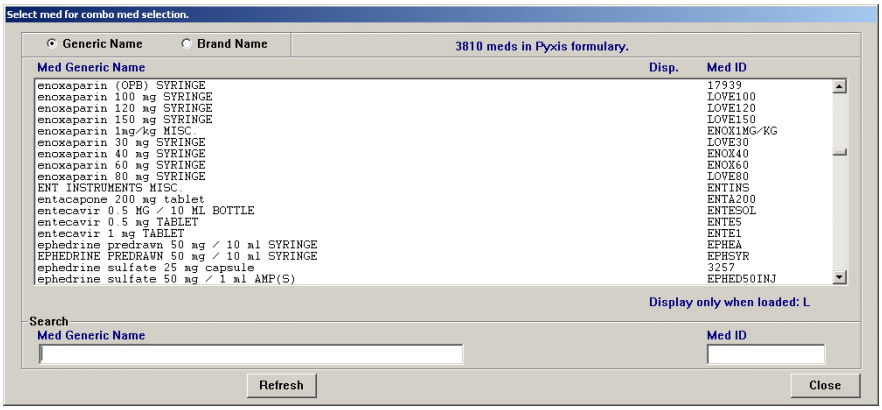
3. In the New Combo Med Setup screen, enter the Generic Name and ID for the combination dose.

NOTE
The Generic Name and unique ID are required. The Brand Name and Alternate ID are optional.



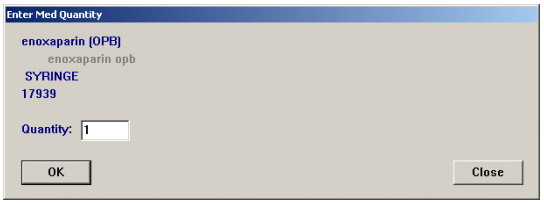
4. Click **Add Item**.

   The Select Med for Combo Med Selection screen appears.

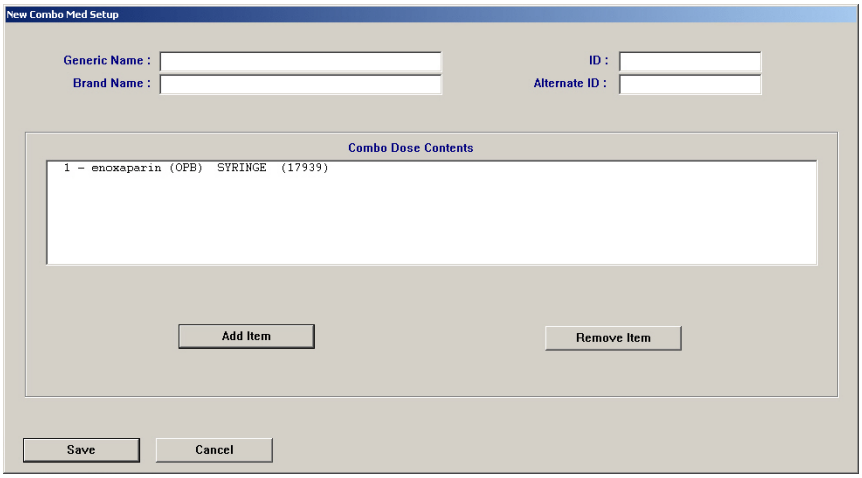


5. Select or search for the medication to assign to the combination dose, and then click **Select**.

6. In the Enter Med Quantity screen, enter the quantity of the item needed as part of the combination dose, and click **OK**.



The New Combo Med Setup screen appears with the members in the Combo Dose Contents section.



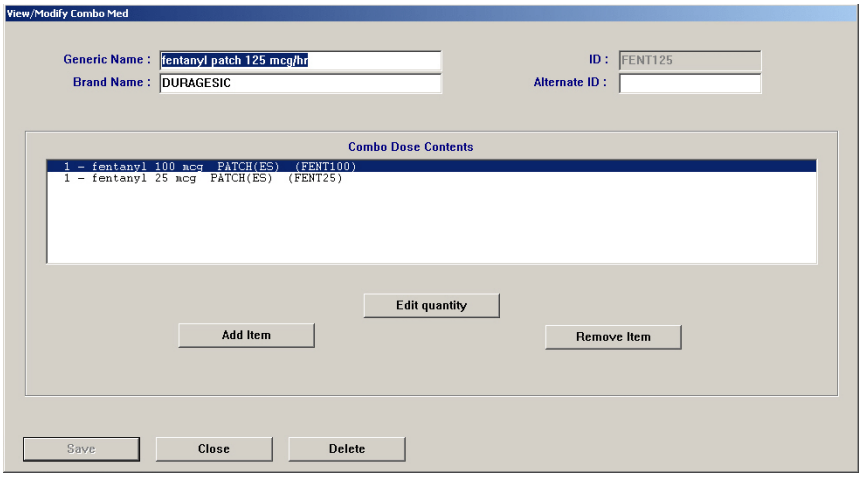
7. If you need to change the quantity of a member, do the following:
   a. Select the member, and click **Edit Quantity**.
   b. Make the applicable changes, and click **OK**.
8. Click **Save**.
9. In the confirmation screen that appears, click **OK** to continue.

   The Combination Dosage Meds screen appears.
10. To return to the standby screen, click **Close**.

Editing a Combination Dose

The following procedure explains how to update a combination dose.

1. Select **System Setup > Formulary Management > Combination Dose**.
2. In the Combination Dosage screen, select or search for the combination dose to update, and click **Edit**.
3. In the View/Modify Combo Med screen, use the following, as applicable:
   - **Add Item**—Add another item to the combination dose.
   - **Edit quantity**—Change the quantity of the selected item.
   - **Remove Item**—Remove the item from the combination dose.



4. Click **Save**.
5. In the confirmation screen that appears, click **OK** to continue.

   The Combination Dosage Meds screen appears.
6. To return to the standby screen, click **Close**.

Deleting a Combination Dose

The following procedure explains how to delete a combination dose.

1. Select **System Setup > Formulary Management > Combination Dose**.
2. In the Combination Dosage Meds screen, select or search for the combination dose, and then click **Delete**.
3. In the confirmation screen that appears, click **YES** to continue.
4. In the second confirmation screen that appears, click **OK** to continue.

   The Combination Dosage Meds screen appears.

Kits

The Kits feature allows you to define a grouping of medications to be removed with a single selection and assign it to an area in your system. All stations in the area to which you assign the kit display the kit.

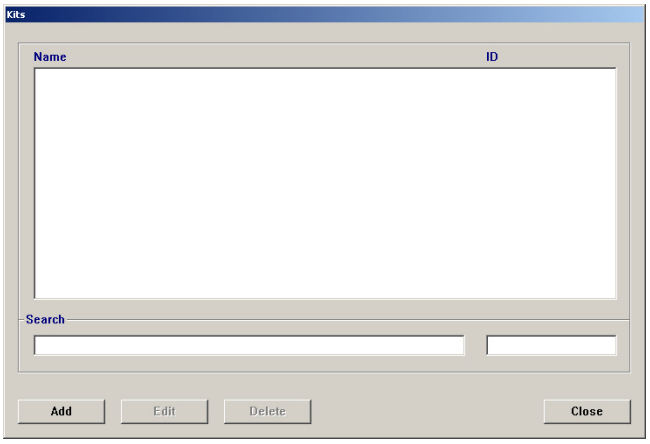
This section includes the following topics:

- *Adding a Kit* on page *59*
- *Editing a Kit* on page *61*
- *Deleting a Kit* on page *62*

Adding a Kit

The following procedure explains how to add a kit.

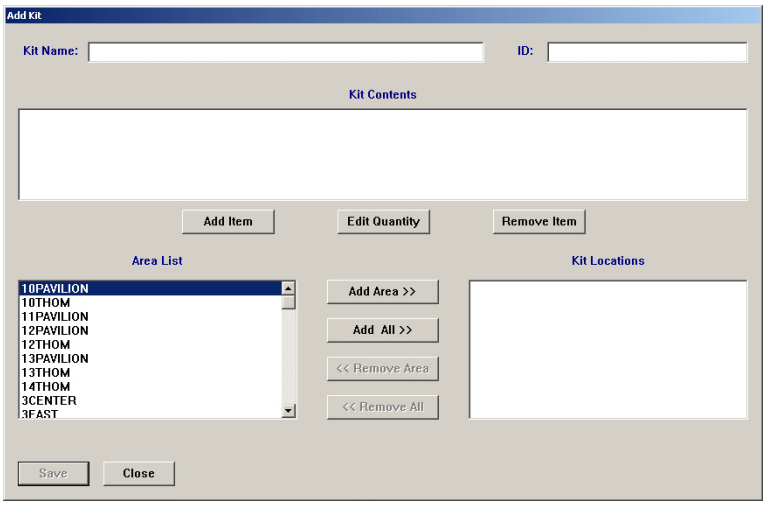
1. Select **System Setup > Formulary Management > Kits**.



2. In the Kits screen, click **Add**.

3. In the Add Kit screen, enter the **Kit Name** and **ID**.

NOTE
Kit IDs are unique. When you enter a duplicate ID, the system prompts you to change the ID.



4. To add items to the kit, complete the following steps:
   a. Click **Add Item**.
   b. In the Select Med to Add to Kit screen, select a formulary item to add to the kit, and click **Select**.

      The Enter Med Quantity screen appears, allowing you to confirm your selection and enter the quantity to include in the kit. The quantity defaults to one.
   c. Enter the applicable **Quantity**, and click **OK**.
   d. Repeat steps b and c until all applicable items have been added.
   e. To return to the Select Med to Add to Kit screen, click **Close**.
5. To designate what areas the kit should be available in, do one of the following:
   - To add a specific area, select the area, and click **Add Area**.
   - To add all areas, click **Add All**.

   The names of the areas that you selected move to the Kit Locations list. The kit is available only to those areas.
6. Click **Save**.
7. In the confirmation screen that appears, click **OK** to continue.
8. To return to the Kits screen, click **Close**.
9. To return to the standby screen, click **Close**.

Editing a Kit

You can add or remove items from a kit, change the quantity of a formulary item included in a kit, or change the areas where a kit is accessible.

1. Select **System Setup > Formulary Management > Kits**.
2. In the Kits screen, select the applicable kit, and click **Edit**.
3. To add items to the kit, do the following:
   a. In the View/Modify Kit screen, click **Add Item**.
   b. In the Select Med to Add to Kit screen, select a formulary item to add to the kit, and click **Select**.
   c. In the Enter Med Quantity screen, enter the applicable **Quantity**, and click **OK**.
   d. To add additional items, repeat steps b and c.
   e. To return to the Select Med to Add to Kit screen, click **Close**.
   f. To return to the View/Modify Kit screen, click **Close**.
4. To change the quantity of an item in the kit, do the following:
   a. In the View/Modify Kit screen, select the item in the **Kit Contents** list, and click **Edit Quantity**.
   b. In the Enter Med Quantity screen, enter the applicable **Quantity**, and click **OK**.
5. To remove an item from the contents of the kit, do the following:
   a. Select the item to remove, and click **Remove Item**.
   b. In the confirmation screen that appears, click **Yes** to continue.
   c. In the second confirmation screen that appears, click **OK** to continue.
6. To change the areas associated with the kit, do any of the following:
   - To add an area, select the area, and click **Add Area**.
   - To add all areas, click **Add All**.
   - To remove one area, select the area, and click **Remove Area**.
   - To remove all areas, click **Remove All**.
7. Click **Save**.
8. In the confirmation screen that appears, click **OK** to continue.

   The Kits screen appears.
9. To return to the standby screen, click **Close**.

Deleting a Kit

The following procedure explains how to delete a kit.

1. Select **System Setup > Formulary Management > Kits**.
2. In the Kits screen, select the applicable kit, and click **Delete**.
3. In the confirmation screen that appears, click **YES** to continue.
4. In the second confirmation screen that appears, click **OK** to continue.
5. To return to the standby screen, click **Close**.

Users

A user is anyone who has access to the console or the station (or both). If you have system administrator console privileges, the Users option on the System Setup menu lets you create or modify users and define or modify their privileges, including the nursing unit areas to which they have access. You can also create templates to simplify the process of creating users that have the same privileges.

This section includes the following topics:

- *Creating a Template for User Privileges* on page *63*
- *Adding a User* on page *66*
- *Filtering the Users List* on page *74*
- *Updating Information for an Existing User or Group of Users* on page *75*
- *Deleting a User* on page *76*
- *Deactivating a User-Privilege Template* on page *76*

NOTE
You can update information globally. For more information, see *Updating Information Globally* on page *129*.

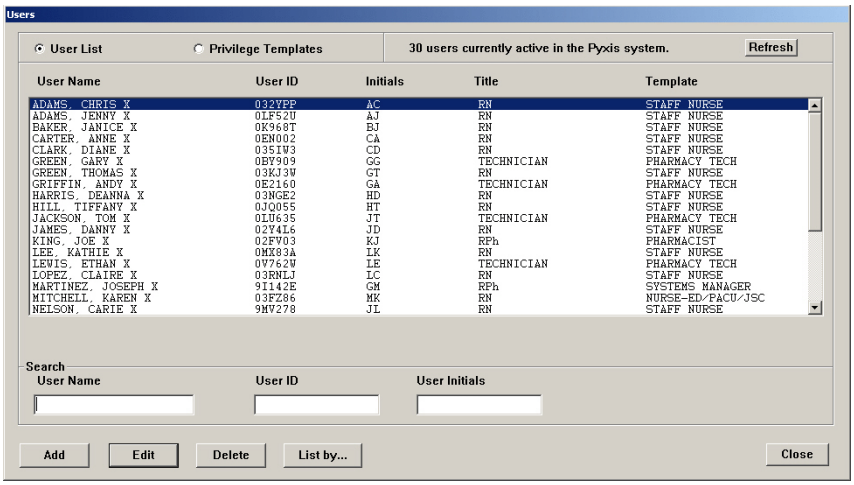
Creating a Template for User Privileges

If you have a group of users you would like to define as having the same privileges, templates save you the time of reentering the same privileges for each user in the group.

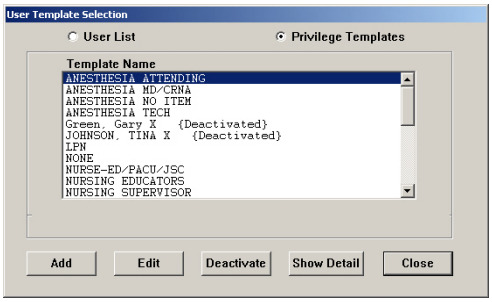
NOTE
Privilege templates do not contain area information. Enter area information individually for each user.

To create a template

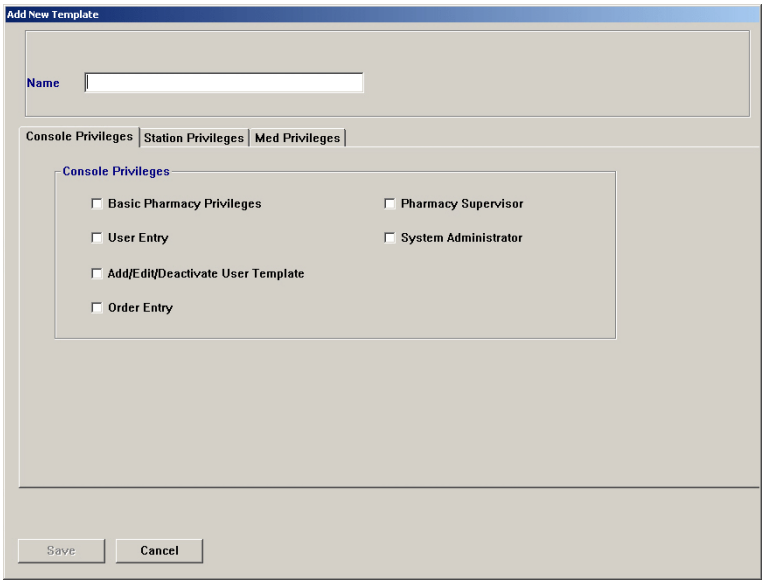
1. Select **System Setup > Users**.
2. At the top of the Users screen, click **Privilege Templates**.



3. In the User Template Selection screen, click **Add**.



4. In the Add New Template screen, enter a name for the template.

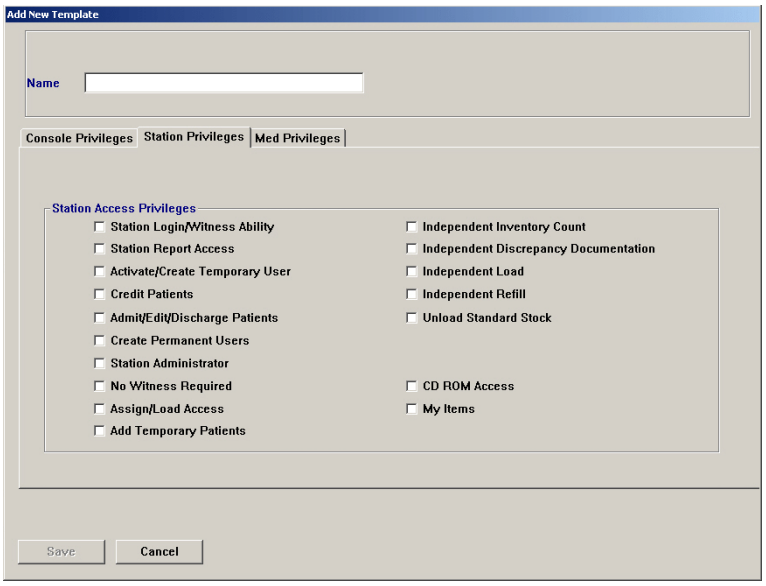


5. On the Console Privileges tab, select the applicable options.

   For more information about these options, see *Assigning Console Privileges to a User* on page *68*.

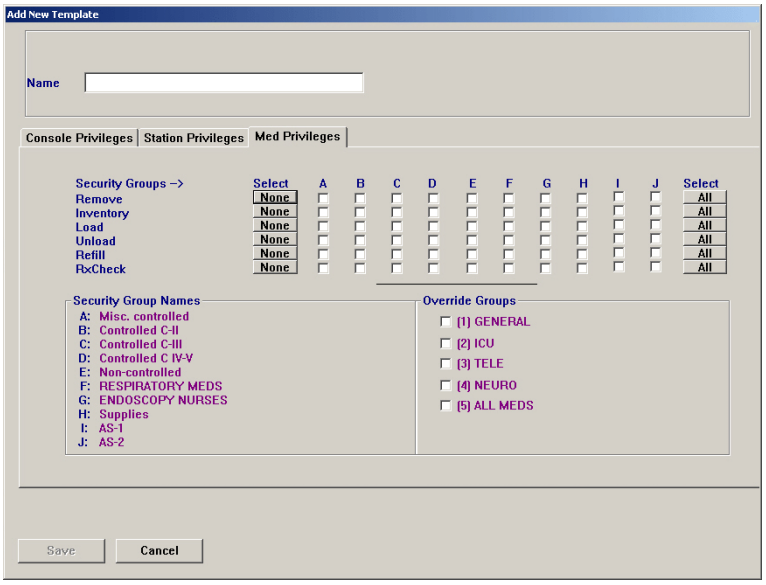
6. Click the **Station Privileges** tab, and select the applicable options.

   For more information about these options, see *Assigning Station Privileges to a User* on page *70*.



7. Click the **Med Privileges** tab, and select the applicable options.

   For more information about these options, see *Assigning Medication Privileges to a User* on page *73*.



8. Click **Save**.

9. In the confirmation screen that appears, click **OK** to continue.

10. To return to the User Template Selection screen, click **Close**.

    Your new template appears in the User Template Selection screen.

11. To return to the standby screen, click **Close**.

Adding a User

This section describes how to add a user. The information for each tab is described separately. This section includes the following topics:

- *Beginning the Process and Assigning Areas to a User* on page *66*
- *Assigning Privileges from a Template* on page *68*
- *Assigning Console Privileges to a User* on page *68*
- *Assigning Station Privileges to a User* on page *70*
- *Assigning Medication Privileges to a User* on page *73*

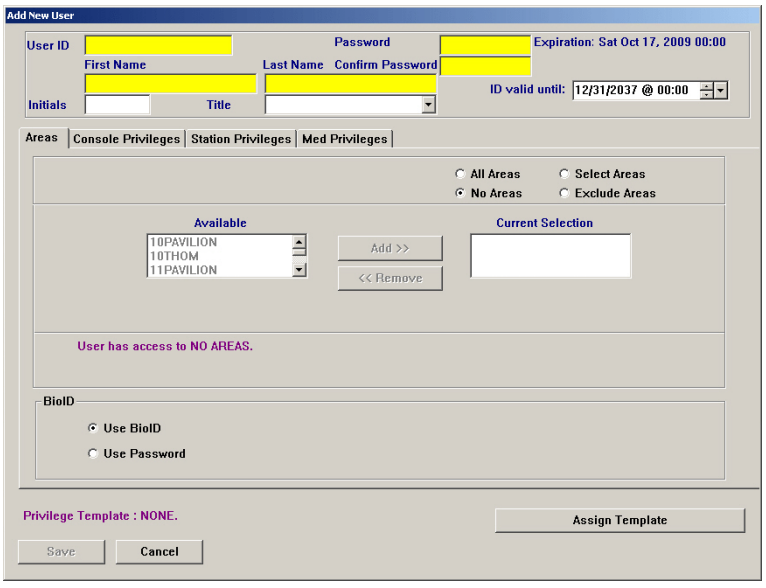
NOTE
When adding a user, you can assign only those privileges that have been assigned to you.

Beginning the Process and Assigning Areas to a User

This topics describes how to initiate the addition of a user to the system.

1. Select **System Setup > Users**.
2. In the Users screen, click **Add**.

   The Add New User screen appears with the Areas tab selected.



3. In the upper section of the screen, complete the following fields:
   - **User ID**—Enter a unique user ID (up to 10 characters).
   - **First Name**—Enter the user's first name (up to 20 characters).
   - **Last Name**—Enter the user's last name (up to 20 characters).

NOTE
Although you can enter up to 20 characters in the First Name and Last Name fields, the system limits the combined total to 20 characters. The result stored in the database might include a truncated version of the first name.

   - **Password**—Enter a temporary password for the user. The characters you type display as asterisks.
   - **Confirm Password**—Enter the temporary password again.
   - **ID valid until**—Select the date and time at which the account expires.
   - **Initials**—Enter the user's initials.
   - **Title**—Select the user's job title.
4. On the Areas tab, do one of the following:
   - To provide access to all areas in the system (for example, for a pharmacy employee that refills or loads medications at any station), click **All Areas**.
   - To prevent a user from having permanent access to any area (for example, for float nurses who will be activated at a specific station for a specific area when they are on duty), click **No Areas**.
   - To select up to six specific areas that the user can access, click **Select Areas**, select the areas in the **Available** list, and click **Add**.
   - To select up to six specific areas that the user cannot access (the user will be able to access all remaining areas), click **Exclude Areas**, select the areas in the **Available** list, and click **Add**.
5. In the BioID section of the Areas tab, indicate whether the user must log on with a user ID and biometric ID (click **Use BioID**) or with a user ID and password (click **Use Password**).
6. Do one of the following:
   - To assign a predefined set of privileges, complete the steps outlined under *Assigning Privileges from a Template* on page *68*.
   - To assign privileges on an individual basis, skip to *Assigning Console Privileges to a User* on page *68*.

Assigning Privileges from a Template

After you create a template based on user privileges, you can define a new user and load the template privileges so that the privileges are automatically set up for the new user.

1. In the lower section of the Add New User screen, click **Assign Template**.
2. In the User Template Selection screen, select the applicable template, and click **Select**.

   This loads all the privileges defined in the template into the fields for the new user. The name of the applicable template appears above the Save and Cancel buttons.
3. Click **Save**.

   The user is added and a blank Add New User screen is provided so that you can continue adding users.
4. To return to the Users screen, click **Close**.
5. To return to the standby screen, click **Close**.

Assigning Console Privileges to a User

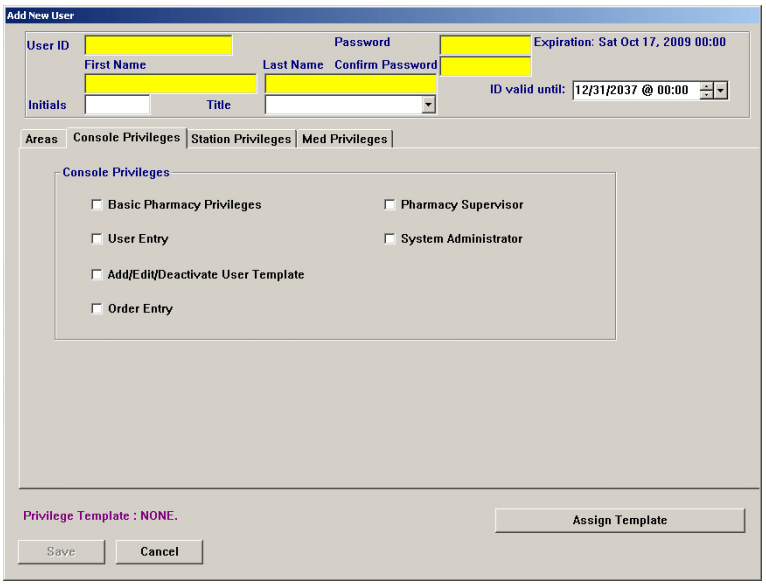
The console privileges are mutually exclusive, with the exception of Basic Pharmacy Privileges, which allows the user to log on. If any of the other console privileges are given to a user, Basic Pharmacy Privileges are automatically given.

The following table provides examples of users and some of the console privileges that they might need:

Enable This Privilege	For
Basic Pharmacy Privileges	Most pharmacy users.
User Entry	One pharmacist on each shift to assure 24-hour coverage.
Pharmacy Supervisor	A user who manages the MedStation system clinical information including formulary, kits, pharmacy configuration, clinical data categories, security groups, discrepancy documentation reasons, override groups (profile mode only), and formulary classifications.
System Administrator	A user who is authorized to: • Add, modify, and delete devices (including changing the drawer style and number of pockets for a matrix drawer). • Place a station in or out of service. • Alter station-to-console communications. • Transplant data.

To assign the privileges

1. Click the **Console Privileges** tab.



2. Select the applicable options:
   - **Basic Pharmacy Privileges**—Users can access the Inventory menu, assign medications to pockets that are not granted through medication privileges, add and modify formulary items, and access reports and the archival feature.
   - **User Entry**—Users can add, edit, or delete user-access privileges and user templates. Users can assign privileges to others that they themselves have at the console.
   - **Add/Edit/Deactivate User Template**—Users can create, modify, or delete a template at the console. When disabled, users see the Show Detail button, which allows them to view the privileges associated with a template prior to assigning that template to a user.
   - **Order Entry**—Users can add, edit, and delete patient orders at the console. Normally, with a profile interface, all order additions, modifications, and deletions are done through the pharmacy information system and are electronically transferred to the MedStation system. The Order Entry privilege is available on devices in profile mode.
   - **Pharmacy Supervisor**—Users can manage all clinical information at the console. It also allows users to perform global edits on the formulary and run the autoload function at the console for all medications that have security access. If running in profile mode, users with this privilege can create equivalencies, combination doses, and variable-dose medications.

- **System Administrator**—Users can add, modify, and delete devices, including changing the drawer style and number of pockets for a matrix drawer, placing a station in or out of service, altering station-to-console communications, and running brain transplants. This user can add, edit, or delete area information and identify the users who can log on to each station, modify attention notices, and set Site Specific Options.

3. Complete the steps outlined in the next section, *Assigning Station Privileges to a User*.

Assigning Station Privileges to a User

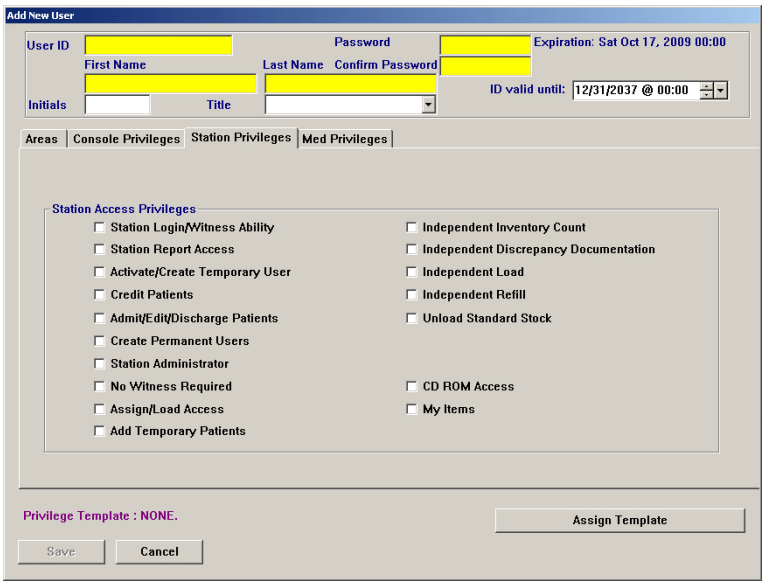
Station privileges are those associated with only the station. Each privilege has unique properties, which are mutually exclusive with the exception of Station Login/Witness Ability. If the user is given any privilege other than this one, the user automatically gets Station Login/Witness Ability. Assign remaining privileges on an individual basis.

The following table provides examples of users and some of the privileges they might need:

Enable This Privilege	For
Station Login/Witness Ability	Users who can act as witnesses to the following procedures, but who do not have the authority to perform them: • Wasting a medication. • Returning an item. • Completing an inventory. • Documenting a discrepancy. • Recovering a drawer. • Emptying the Return Bin.
Activate/Create Temporary User	Charge nurses or other users who can give another user temporary access to a station.
Admit/Edit/Discharge Patients	Users who: • Reconcile patients at the station. • Update patient information. • Add patients to the census that are not usually entered through the facility's patient admitting system. (In most cases, ADT information is managed through the electronic interface between the facility's system and the MedStation system.)
Station Administrator	Users who: • Have completed the MedStation System Manager training. • Are responsible for off-hours troubleshooting support of the station, such as a third-shift pharmacist or nursing supervisor.

To assign the privileges

1. Click the **Station Privileges** tab.



2. Select the applicable options:

   - **Station Login/Witness Ability**—Users can act as witnesses, and provides limited access to the station with no ability to access drawers. Users can change their passwords and print their activity transactions; all other station functions are unavailable.
   - **Station Report Access**—Users can run any report at the station. Users without this privilege can only run reports that are limited to their own activities and discrepancies at that station.
   - **Activate/Create Temporary User**—Users can activate another user's ID and password on a station to which that user does not normally have access. Users would then use their own ID, password, and privileges at the station for temporary access.

     With this privilege, users can create a temporary ID and password for someone who does not have access to the station system in the facility. The temporary user has access for up to 32 hours, depending on the time period defined on the Settings tab for the device.
   - **Credit Patients**—Users can credit the patient when wasting a complete dose of a medication. This situation might arise if a medication package is damaged or contaminated. Patients are automatically credited when medications are returned to the station through the Return feature—either to the original pocket or to the Return Bin.
   - **Admit/Edit/Discharge Patients**—Users can admit, edit, or discharge patients at the station. Users with this privilege have a Patients button in the Main Menu at the station.

- **Create Permanent Users**—Users can create permanent users at the station. This privilege differs from the Activate/Create Temporary User privilege described earlier in that permanent users do not have a time limit. Users with this privilege can assign any station and medication privilege that they themselves have to users that they create.

  Users with this privilege automatically have both the Station/Login Witness Ability and the Activate/Create Temporary User privilege.
- **Station Administrator**—Users can modify device settings, including changing the drawer style and number of pockets, shutting down a station, placing a station in or out of service, altering communications, calibrating a touch screen, and transplanting data. If the system uses profile mode, users can also turn critical override on or off for a station.
- **No Witness Required**—Users can waste, return, or inventory medication without a witness even though the selected medication's security group requires a witness.

  Exceptions to the No Witness Required privilege are:

  - A user with Independent Inventory Count privilege can inventory without a witness.
  - When a station has the Witness Required To/Empty Return Bin option enabled, all returns to the return bin require a witness.
  - A user with the Independent Discrepancy Documentation privilege can perform discrepancy documentation without a witness.
  - When a medication has the Override option activated on the Formulary Options tab, a witness is required (profile mode only).
- **Assign/Load Access**—Users can select a pocket for a medication and to place the medication physically into that pocket. This option does not apply to MiniDrawers.
- **Add Temporary Patients**—Users can process items for a patient who is not in the station's patient database (typically occurs because ADT is behind or if the patient is visiting from another unit).
- **Independent Inventory Control**—Allows an inventory count without a witness. The user can recover a failed drawer and conduct the subsequent inventory of that drawer without a witness, assuming that the user has access to all medication security groups of the medications in that drawer.
- **Independent Discrepancy Documentation**—Users can document discrepancies at the station without a witness. Otherwise, all discrepancy resolutions require a witness. The user must have access to the discrepancy medication's security group to document the discrepancy.
- **Independent Load**—Users can load a medication that requires Rx Check without having another user check the medication.
- **Independent Refill**—Users can refill a medication that requires Rx Check without having another user check the medication.
- **Unload Standard Stock**—Standard functionality prohibits users from unloading a standard stock item by filtering them out of the Unload list unless another item is pending to replace it, or the user has this privilege.

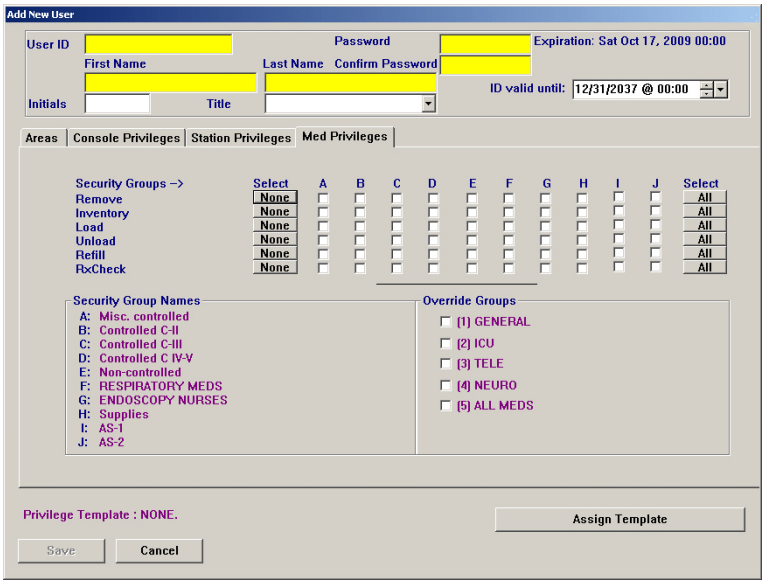
- **CD ROM Access**—Allows access to the CD-ROM, which can also play music CDs. You can connect head phones or small speakers directly to the CD player. The CD stops when the user logs out of the system. (This option applies to Anesthesia System.)
- **My Items**—Users can maintain a virtual remote stock of items necessary for administering medications to patients. The user selects items to remove from the loaded items list and physically removes them. The My Items list displays a list of items removed, along with the removed quantity of each. The message type for Remove Items is SVU, which represents "station vend to user" (unique to Anesthesia System). After an item is in the My Items list, it can be issued to a patient, transferred to another user, returned, or wasted.

3. Complete the steps outlined in the next section, *Assigning Medication Privileges to a User*.

Assigning Medication Privileges to a User

The following procedure explains how to assign medication privileges.

1. Click the **Med Privileges** tab.



2. In the Security Groups section, select the applicable group for each function listed.
   - To select all groups for a particular function, click **All**.
   - To clear all security groups for a particular function, click **None**.

NOTE
The Security Group Names legend indicates what each group represents. The console provides you with eight default names (A–H). Groups I and J are reserved for Anesthesia System.

3. Select the override groups that the user can access at the station.

4. After you have finished adding the medication privileges, click **Save**.

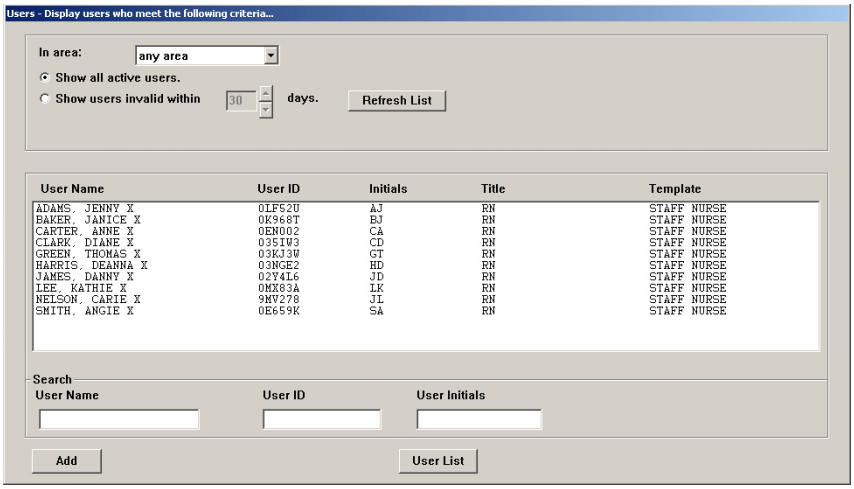
   The user is added and a blank Add New User screen is provided so that you can continue adding users.

5. To return to the Users screen, click **Close**.
6. To return to the standby screen, click **Close**.

Filtering the Users List

If many users are defined, you might find it useful to display only a subset of them, such as only those in a particular area.

1. Select **System Setup > Users**.
2. In the Users screen, click **List by**.
3. In the Users – Display Users Who Meet the Following Criteria screen, do any of the following:
   - To display users in a specific area, select the area from the **In area** list.
   - To display all active users, click **Show all active users**.
   - To display all users whose logon expires within a specific number of days, click **Show users invalid within**, and indicate the number of days.
   - To search for a user by name, ID, or initials, enter the information in the applicable box in the Search section.



4. To return to the Users screen, click **User List**.
5. To return to the standby screen, click **Close**.

Updating Information for an Existing User or Group of Users

This section describes how to update information for a user using either individual selections or by updating the applicable template. (For information about updating user information globally, see *Updating User Information Globally* on page *137*.) This section includes the following topics:

- *Updating Information for One User* on page *75*
- *Updating a User-Privilege Template* on page *75*

NOTE
When modifying information for a user or template, you can assign only those privileges that have been assigned to you.

Updating Information for One User

The following procedure explains how to update the information for an existing user. (Additional options might be available for update via the Global Edits option. For more information, see *Updating User Information Globally* on page *137*.)

1. Select **System Setup > Users**.
2. In the Users screen, select the applicable user, and click **Edit**.
3. Update the applicable information on each tab.
4. Click **Save**.
5. To return to the standby screen, click **Close**.

Updating a User-Privilege Template

The following procedure explains how to update the information for an existing template.

CAUTION
Modifying a template affects privileges for all users assigned to that template.

To update a template

1. Select **System Setup > Users**.
2. In the Users screen, click **Privilege Templates**.
3. In the User Template Selection screen, select the applicable template, and click **Edit**.

NOTE
The Show Detail button provides a way to view the Privilege Template. You can view the template but cannot make any changes.

4. In the Edit Template screen, update the applicable information on each tab.

5. Click **Save**.
6. In the confirmation screen that appears, click **OK** to continue.
7. To return to the standby screen, click **Close**.

Deleting a User

The following procedure explains how to delete a user.

1. Select **System Setup > Users**.
2. In the Users screen, select the applicable user, and click **Delete**.
3. In the confirmation screen that appears, click **YES** to continue.
4. To return to the standby screen, click **Close**.

Deactivating a User-Privilege Template

The following procedure explains how to deactivate a privilege template.

1. Select **System Setup > Users**.
2. In the Users screen, click **Privilege Templates**.
3. In the User Template Selection screen, select the applicable template, and click **Deactivate**.

NOTE

- The Show Detail button provides a way to view the template.
- A Privilege Template cannot be deactivated if it is assigned to users.

4. In the confirmation screen that appears, click **YES** to continue.

   The User Template Selection screen appears.
5. To return to the standby screen, click **Close**.

Patients

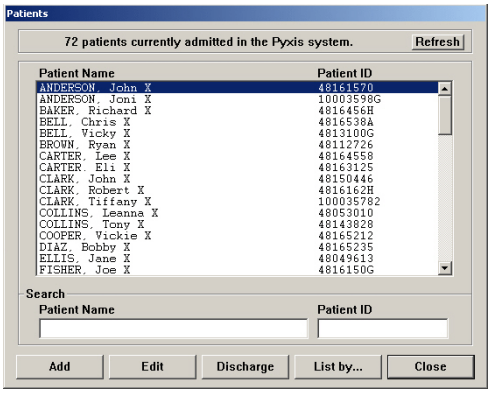
Usually, additional patient files and updates to existing files come via your facility's ADT computer interface or pharmacy profile interface (if the profile mode is activated). However, there are procedures that you can perform using the MedStation system to use existing files. Patient information is entered by your facility. Information can be entered for temporary patients at the station, not the console. This section includes the following topics:

- *Adding a Patient File* on page *78*
- *Editing a Patient File* on page *82*
- *Discharging a Patient* on page *82*
- *Filtering the List of Patients* on page *83*

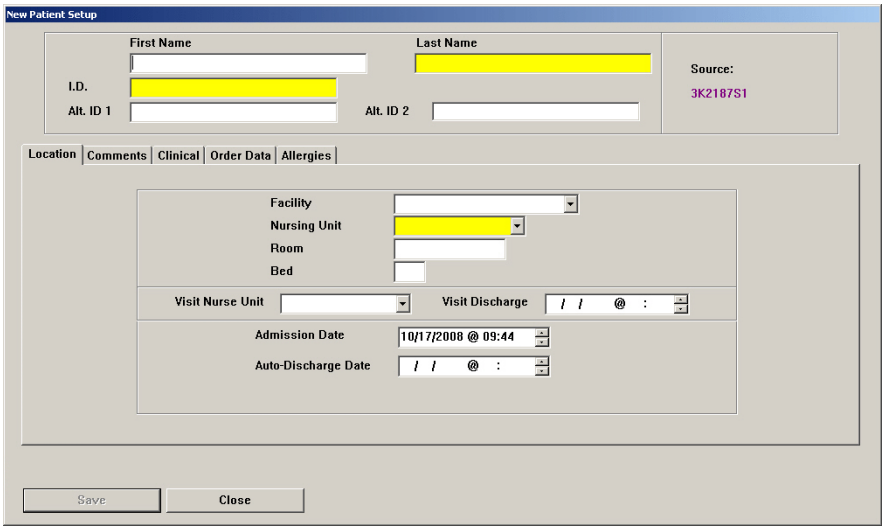
Adding a Patient File

The following procedure explains how to create a patient's record.

1. Select **System Setup > Patients**.
2. In the Patients screen, click **Add**.



The New Patient Setup screen appears with the Location tab selected.

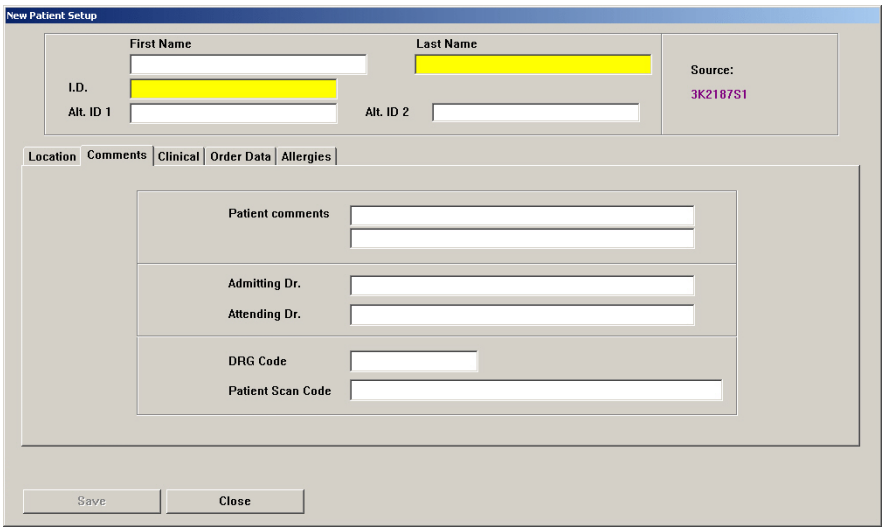


3. In the upper section of the screen, enter the following:
   - **First Name**—Enter the patient's first name (up to 20 characters).
   - **Last Name**—Enter the patient's last name (up to 20 characters).

NOTE
Although you can enter up to 20 characters in the First Name and Last Name fields, the system limits the combined total to 30 characters. The result stored in the database might include a truncated version of the first name.

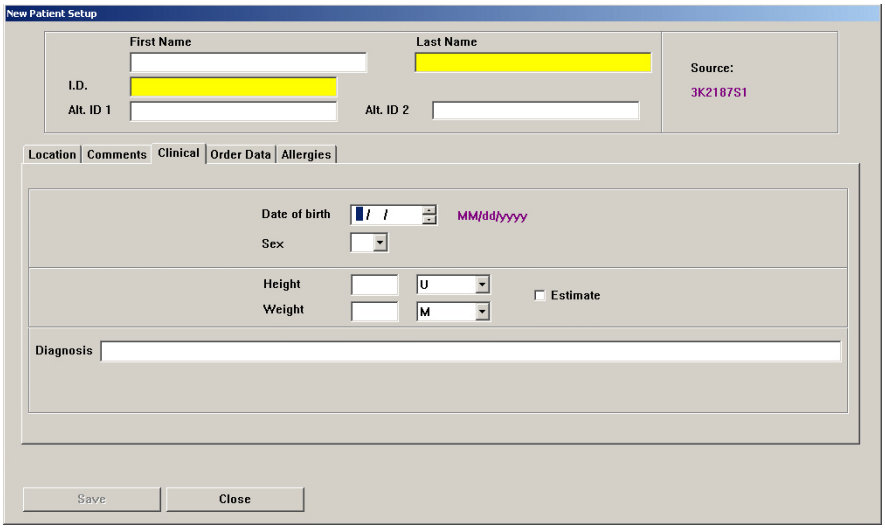
   - **I.D.**—Enter the patient's unique ID, usually the account number or medical record number.
   - **Alt. ID 1**—If your facility requires an alternate ID, enter it here.
   - **Alt. ID 2**—If your facility requires a second alternate ID, enter it here.

4. On the Location tab, enter the following:
   - **Facility**—Select the facility that the station and patient are associated with. This field is used primarily for facilities with affiliations or those that have merged and are made up of more than one hospital or nursing home.
   - **Nursing Unit**—Select unit where the patient is located.
   - **Room**—Enter the room number where the patient is located.
   - **Bed**—Enter the bed where the patient is located.
   - **Visit Nurse Unit**—Select the nursing unit where the patient is temporarily located.
   - **Visit Discharge**—Enter the date and time at which the patient visit to the temporary location is expected to end.
   - **Admission Date**—Enter the date and time that indicates when the patient was admitted to the facility (the default is the current date and time).
   - **Auto-Discharge Date**—Enter the date and time at which the patient is expected to be discharged from the original room and bed (the default is one year).
5. Click the **Comments** tab.

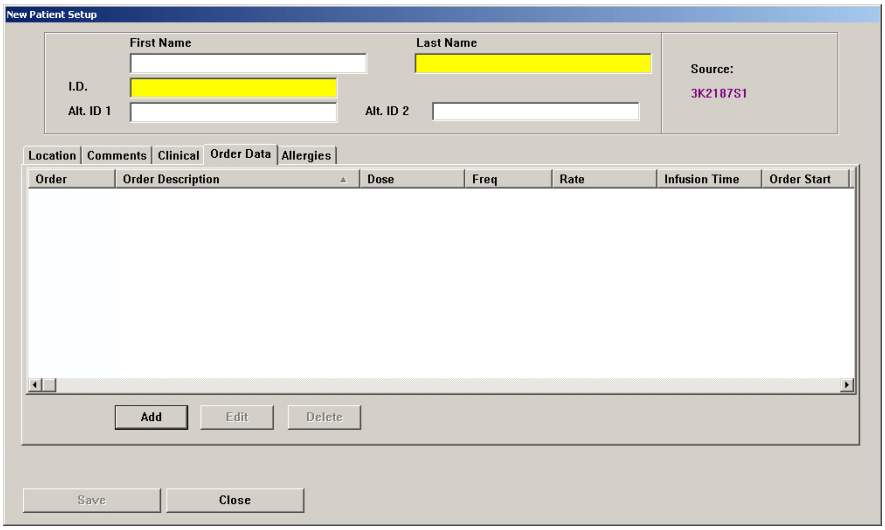


6. Enter the following:
   - **Patient comments**—Enter any relevant comments regarding this patient (for example, no visitors or hearing impaired).
   - **Admitting Dr.**—Enter the name of the admitting physician.
   - **Attending Dr.**—Enter the name of the attending physician.
   - **DRG Code**—Enter the diagnosis-related group (DRG) code.
   - **Patient Scan Code**—Enter this information by scanning it or typing it.

7. Click the **Clinical** tab.

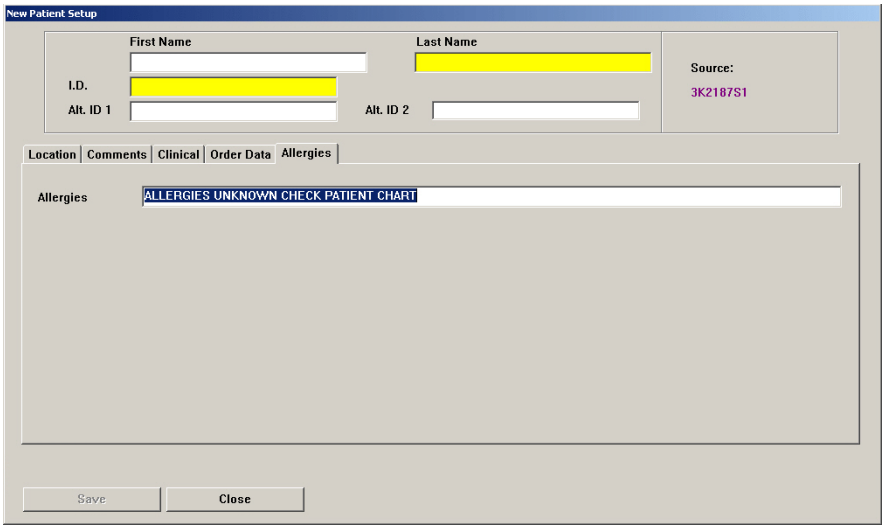


8. Enter the applicable information.
   - **Date of birth**—Enter the date of birth in mm/dd/yyyy format.
   - **Sex**—Select male (M), female (F), or unknown (U).
   - **Height**—Enter the patient's height and select the applicable measurement unit.
   - **Weight**—Enter the patient's weight and select the applicable measurement unit.
   - **Estimate**—If the height and weight are unverified, select this box.
   - **Diagnosis**—Enter a text-based description of the patient's condition.
9. Click the **Order Data** tab.



10. To add an order, do the following:
    a. Click **Save**, and then click **OK** when the confirmation screen appears.
    b. In the New Order Setup screen, enter the following:
        - **Order**—Determined by your facility.
        - **Order Description**—Enter the order description.
        - **Dose**—Enter the prescribed dose.
        - **Freq**—Enter the dosing interval or frequency. If applicable, indicate PRN as part of the interval text. If the order is for a large volume parenteral (continuous IV drips), enter the rate of administration as the interval text (for example, BID, Q6H PRN, QOD, 125ML/HR).
        - **Rate**—Enter the prescribed rate.
        - **Infusion Time**—Enter the prescribed infusion time.
        - **Order Start**—Enter the date and time that the order is to begin. The start time is normally the date and time of the first scheduled dose for scheduled medications, or the current time for PRN and statim (STAT) medications. Highlight the value to change (month, day, or hour) and type a new value. Optionally, you can use the up or down arrows to increase or decrease the value, respectively.
        - **Order Stop**—Enter the date and time that the order is to end. For PRN orders, the stop time is often an automatic stop time based to facility policy. For scheduled medication orders, the stop time is normally the date and time of the last scheduled dose as defined by the automatic stop-time policy of the facility. If a specific duration is ordered for IV drips, reflect this duration in the stop time. Highlight the value to change (month, day, or hour), and type a new value. Optionally, you can use the up or down arrows to increase or decrease the value, respectively.
    c. When you are finished, click **Save**.
11. To sort the data displayed on the Order Data tab, click the applicable column heading.

12. Click the **Allergies** tab.



13. In the Allergies box, enter any known allergies (the default messages indicates that allergies are not known).
14. Click **Save**.
15. In the confirmation screen that appears, click **OK** to continue.
16. To return to the standby screen, click **Close**.

Editing a Patient File

The following procedure explains how to update a patient's record.

1. Select **System Setup > Patients**.
2. In the Patients screen, select the applicable patient, and click **Edit**.
3. In the View/Modify Patient screen, update the applicable information.

   For information regarding the various tabs and fields, see *Adding a Patient File* on page *78*.
4. Click **Save**.
5. To return to the standby screen, click **Close**.

Discharging a Patient

The following procedure explains how to discharge a patient.

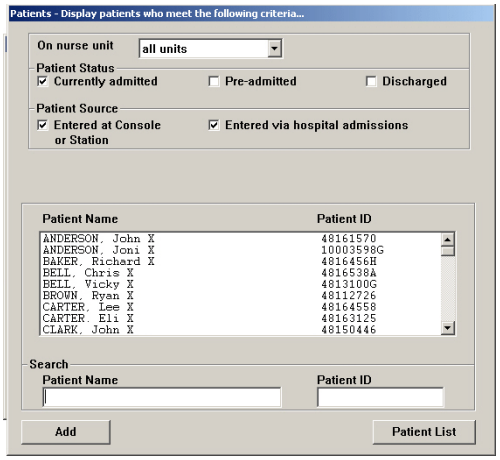
1. Select **System Setup > Patients**.
2. In the Patients screen, select the applicable patient, and click **Discharge**.
3. In the confirmation screen that appears, click **YES** to continue.
4. To return to the standby screen, click **Close**.

Filtering the List of Patients

Filtering provides a way to display only a subset of patients if you have many patients.

1. Select **System Setup > Patients**.
2. In the Patients screen, click **List by**.
3. In the Patients – Display Patients Who Meet the Following Criteria screen, select the criteria by which you want to filter which patients appear.

   The screen automatically refreshes to display the applicable patients as you continue to select criteria.



4. To return to the complete list of patients, click **Patient List**.
5. To return to the standby screen, click **Close**.

Areas

Areas define the geographic locations (usually nursing units or groups of nursing units) associated with stations and users. You must assign each station and user-defined device in the MedStation system to an area.

WARNING
Any changes made to patient care areas and/or nursing units may result in erroneous data and could impact station performance. Contact your local Pyxis support specialist for guidance prior to making any changes.

This section includes the following topics:

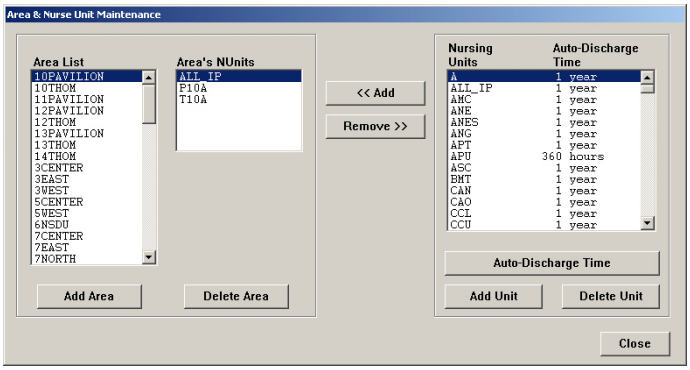
- *Adding a Nursing Unit* on page *84*
- *Adding an Area* on page *85*
- *Adding or Removing a Nursing Unit to or from an Area* on page *86*
- *Deleting an Area* on page *86*
- *Deleting a Nursing Unit* on page *86*

NOTE
The Room & Bed option listed in the System Setup > Area Configuration menu is not used. However, you can assign a room and bed number to a patient (for more information, see *Adding a Patient File* on page *78*).

Adding a Nursing Unit

Nursing units are normally created automatically when an ADT interface is activated. If nursing units do not exist in the system, you must create them manually before you can define areas.

1. Select **System Setup > Area Configuration > Areas**.
2. In the Area & Nurse Unit Maintenance screen, click **Add Unit**.

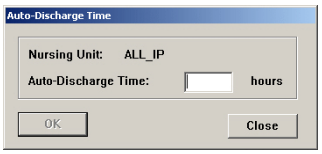


3. In the Add Nursing Unit screen, enter a name for the unit, and click **OK**.

   The new unit appears in the Nursing Units section of the Area & Nurse Unit Maintenance screen.

4. To change the auto-discharge time (the default is one year), do the following:
   a. Select the nursing unit, and click **Auto-Discharge Time**.
   b. In the Auto Discharge Time screen, enter the auto-discharge time in hours, and click **OK**.

NOTE
Clearing an existing value sets the value back to one year.

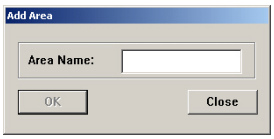


5. To return to the standby screen, click **Close**.

Adding an Area

The following procedure explains how to add an area.

1. Select **System Setup > Area Configuration > Areas**.
2. In the Area & Nurse Unit Maintenance screen, click **Add Area**.
3. In the Add Area screen, enter a name for the area (up to 10 characters), and click **OK**.



   The new area appears in the Area List section of the screen, and the system highlights it because you must assign nursing units to it before you can save it.

4. In the **Nursing Units** list, select the units that you want to assign to the selected area, and click **Add**.

   The selected unit is listed in the Area's NUnits section of the screen.

5. Click **Save Area**.
6. To return to the standby screen, click **Close**.

Adding or Removing a Nursing Unit to or from an Area

You can assign up to six nursing units to an area.

1. Select **System Setup > Area Configuration > Areas**.
2. In the Area List section of the Area & Nurse Unit Maintenance screen, select the applicable area.

   The nursing units currently associated with the area are shown in the Area's NUnits list.
3. To add units to the selected area, select the units from the **Nursing Units** list, and click **Add**.
4. To remove units to the selected area, select the units from the **Area's NUnits** list, and click **Remove**.
5. Click **Save Area**.
6. To return to the standby screen, click **Close**.

Deleting an Area

The following procedure explains how to delete an area.

1. Select **System Setup > Area Configuration > Areas**.
2. In the Area List section of the Area & Nurse Unit Maintenance screen, select the applicable area, and click **Delete Area**.
3. In the confirmation screen that appears, click **YES** to continue.
4. To return to the standby screen, click **Close**.

Deleting a Nursing Unit

The following procedure explains how to delete a nursing unit.

1. Select **System Setup > Area Configuration > Areas**.
2. In the Nursing Units section of the Area & Nurse Unit Maintenance screen, select the applicable unit, and click **Delete Unit**.
3. In the confirmation screen that appears, click **YES** to continue.
4. To return to the standby screen, click **Close**.

Clinical Data

At the console, you can configure formulary items to require the user to enter clinical data (such as route of injection, observations, and evaluation data) when removing, returning, or wasting an item.

When a user returns, removes, or wastes an item, a list of clinical data selections might appear at the station. The user selects one or more responses or types a response, depending on how the category is defined.

Clinical data is passed directly to an automated charting system as part of the charting transaction.

You can create original clinical data categories and responses or use the pre-defined clinical data categories.

This section includes the following topics:

- *Predefined Clinical Data Categories (CDCs)* on page *87*
- *Adding a CDC* on page *90*
- *Editing a CDC* on page *91*
- *Using a CDC Response* on page *92*
- *Using a CDC Response* on page *92*

NOTE
Before configuring a formulary item, add CDCs.

Predefined Clinical Data Categories (CDCs)

There are 33 predefined CDCs. Use predefined CDCs to save time and effort in implementation.

The following table describes the predefined CDCs and their responses:

Predefined CDC	Text	Responses
Allergies	Check Allergies	• (CALL RPh) possible allergy • (DO NOT GIVE) has allergy • (OKAY) not allergic
Anesthesia Kit	Do not return kit here	Return to USED KIT pocket
Anticoagulants	Anticoagulant sticker req.	Anticoagulant sticker placed on front of chart
Central Line	Infuse through central line only	• (CANCEL REMOVE) No central line • (OKAY) Pt has central line
Chemotherapy	Chemotherapy handling precautions	(OKAY) will handle safely

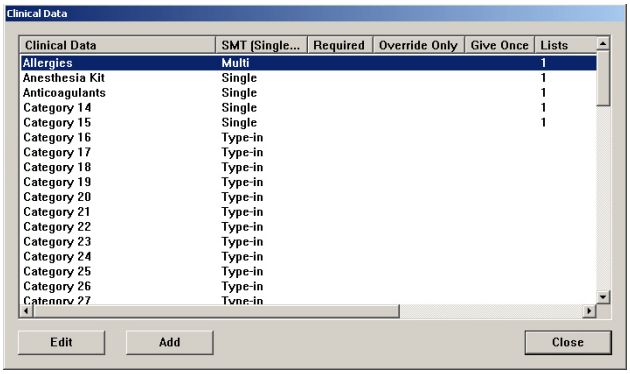
Predefined CDC	Text	Responses
Do not crush	Do not crush	• (CALL RPh) pt has feeding tube • (OKAY) pt can swallow
Drug Interaction	Drug Interaction	Do not administer drug A if patient receiving drug B
Drug Protocol	Please refer to protocol ###	
Heparin	Has Patient Received Lovenox?	If not, ADMINISTER If so, CANCEL & CALL PHARMACY
Heparin Flush	Use NS for routine line flush	(OKAY) heparin is indicated not NS
Hx seizures/renal failure	Hx seizures/renal failure	• (CANCEL –Page RPh) Seizure/Renal • (OKAY TO GIVE) No history
Hypaque allergy	Allergic to Iodine/Contrast?	• (Call RPh) possible allergy • (DO NOT GIVE) Has allergy • (OKAY TO GIVE) No allergy
INR	What is current INR?	(Type in response)
INR	INR	• <1.5 Give dose and call MD • 1.5-2.0 (OKAY TO GIVE) • >2.0 Hold dose and call MD
IV push rate	Give IV push over XX minutes	
Lidocaine PF	Is it preservative free?	• (CALL PHARMACY) mis-filled med • (OKAY TO GIVE) No preservative
Magnesium alert	For Eclamptic seizure tx only	• (DO NOT GIVE) cancel remove • (OKAY) usual dose = 4 Grams
Maximum Use per day	Maximum is 4G/day	• (CANCEL) total >4g in 24 hours • (OKAY) total <4g in 24 hours
Must dilute	Must be diluted before use	(OKAY) I will dilute
Only IM	Only IM	(OKAY) I will give IM
Override Documentation	Remember to document reason for override in Patient Chart	

Predefined CDC	Text	Responses
Override Reason	Reason for override	• Not an emergency, will wait • Code 90Acute pain • HR/BP outside limits • Nauseated • Allergic Reaction • Antidote/reversal agent
Override Reason (problem assessment period)	Reason for override	• New admission and pharmacy closed • Patient emergency • MD verbal order and MD at bedside • Pharmacy took >1 hour to profile order
Pain Scale	Pain Scale	1 2 3 4 5
Paralytics	Is Pt on ventilator?	• (CANCEL REMOVE) not on ventilator • (OKAY TO GIVE) Pt on ventilator
PCN allergy	Do not give if pen allergic	• (CALL RPh) possible allergy • (DO NOT GIVE) has allergy • (OKAY) not allergic
Reason for use	Reason for use	• For pain • For temperature
Removed For	Removed on behalf of	• Dr. John Brown • Dr. Peter Jones • Dr. Mary Smith
Return	Reason for Return	• Pt off floor • Pt asleep • Pt nauseated • Pt refused • Titrated dose
Return Bin	Don’t return to bin	OKAY I need to waste
Route of Admin	Route of Admin	• IV • IM
Used Anesthesia Kit	Is anesthesia record included?	YES anesthesia record inside
Vancomycin DUE	Reason for vancomycin order	MRSA Penicillin allergic

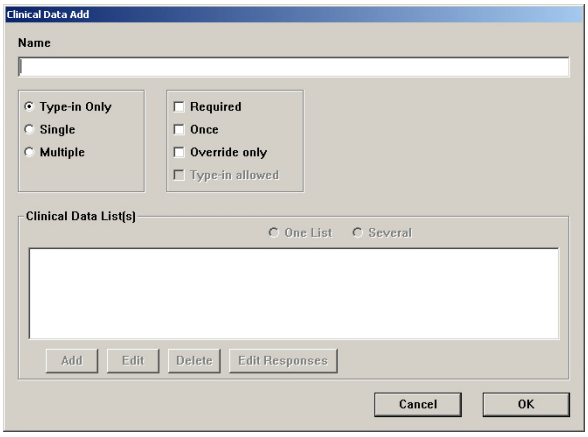
Adding a CDC

After the MedStation system is installed, you can define new CDCs.

1. Select **System Setup > Clinical Data**.
2. In the Clinical Data screen, click **Add**.



3. In the Clinical Data Add screen, enter a name for the CDC.



4. Select the applicable category:
   - **Type-in Only**—Displays a free-form text box, into which the user types a response.
   - **Single**—Displays a list of responses. The user selects one item from the response list when removing, wasting, or returning the medication.
   - **Multi**—The user can select from one to three responses from the list when removing or returning a medication.

NOTE
If you want to create predefined responses, you must select Single or Multi to ensure that the Add button appears on the Clinical Data Edit screen when you are reading to create the responses.

5. To require the user to enter clinical data, select **Required**.

NOTE
Clearing the Required check box allows the user to bypass entering clinical data.

6. To allow the user to enter the clinical data (for example, doctor name) once when removing, wasting, or returning multiple medications for the same patient, select **Once**.

NOTE
Clearing the Once check box requires the user to enter clinical data for each medication that is removed or returned.

7. If the user enters the clinical data only when removing a medication via the override process or the patient's profile, select **Override only**.

NOTE
Clear the Override Only option to allow the user to enter clinical data for both profile and override transactions.

8. To allow the user to type in free-form text with a Single or Multi category type, select **Type-in allowed**.

NOTE
This is helpful when the correct option does not exist in the response list. This option does not apply to the Type-in category type.

9. If there is one response list for this CDC, select **One List**.
10. To define more than one list for this category, select **Several**.

NOTE
If you select Several, you must define a name for each list and the responses for each list name.

11. When you are finished, click **OK** to save your changes.
12. To return to the standby screen, click **Close**.

Editing a CDC

The following procedure explains how to update a CDC. (You can edit the predefined CDCs just as you would edit any other CDCs.)

1. Select **System Setup > Clinical Data**.
2. In the Clinical Data screen, select the CDC name, and click **Edit**.
3. In the Clinical Data Edit screen, update the applicable information (for more information, see *Adding a CDC* on page *90*).
4. When you are finished, click **OK** to save your changes.
5. To return to the standby screen, click **Close**.

Using a CDC Response

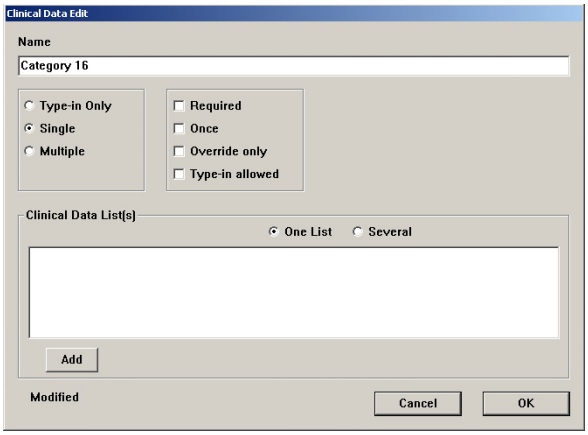
This section includes the following topics:

- *Adding a Response for a CDC* on page *92*
- *Adding a Multiple-Response List* on page *93*
- *Editing a Multiple-Response List* on page *94*
- *Deleting a Response from a Multiple-Response List* on page *95*

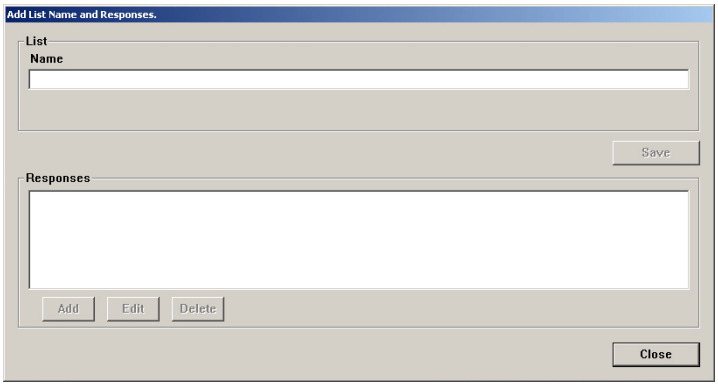
Adding a Response for a CDC

The following procedure explains how to add responses for a CDC.

1. Select **System Setup > Clinical Data**.
2. In the Clinical Data screen, select the CDC name, and click **Edit**.
3. In the Clinical Data Edit screen, select **One List**, and click **Add**.

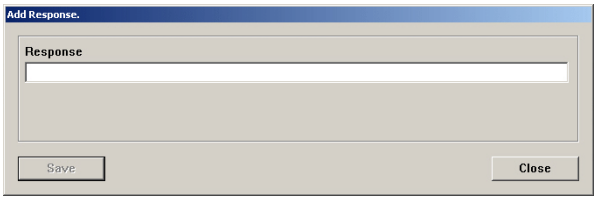


4. In the Add List Name and Responses screen, enter the name, and click **Save**.



5. In the confirmation screen that appears, click **OK** to continue.
6. In the Responses section, click **Add**.

7. In the Add Response screen, enter the response, and click **Save**.



8. Continue adding responses as necessary.
9. When the list of responses is complete, click **Close**.

   The Add List Name and Responses screen appears with the new responses listed.

10. Click **Close**.

    The Clinical Data Edit screen appears with the new item in the Clinical Data List section.

11. Click **OK**.
12. To return to the standby screen, click **Close**.

Adding a Multiple-Response List

For some CDCs, you might find it helpful to define multiple lists of responses. You must provide a name for each list and the responses that make up each list.

1. Select **System Setup > Clinical Data**.
2. In the Clinical Data screen, select the CDC name, and click **Edit**.
3. In the Clinical Data Edit screen, select **Multiple**, and click **Add**.
4. In the Add List Name and Responses screen, enter the Name in the List section, and click **Save**.
5. To enter response information, click **Add** in the Responses section.
6. In the Add Response screen, enter the applicable responses, and click **Save**.
7. Continue adding responses as necessary.
8. When the list of responses is complete, click **Close**.

   The Add List Name and Responses screen appears with the new responses listed.

9. Click **Close**.

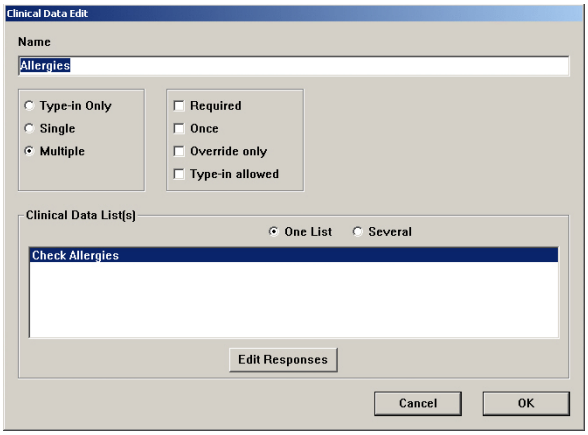
   The Clinical Data Edit screen appears with the new Clinical Data List.

10. Click **OK**.
11. Click **Yes** in the Categories screen, and then click **Close**.
12. To return to the standby screen, click **Close**.

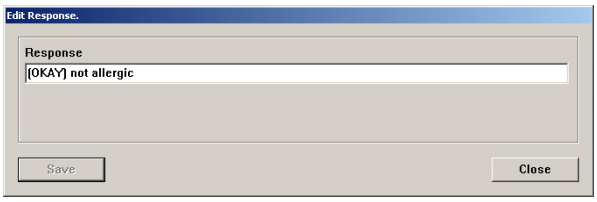
Editing a Multiple-Response List

The following procedure explains how to update response lists.

1. Select **System Setup > Clinical Data**.
2. In the Clinical Data screen, select the CDC name, and click **Edit**.
3. In the Clinical Data Edit screen, click **Edit Responses**.



4. In the View/Modify Responses screen, update the **Name**, if applicable.
5. Select the response to update, and click **Edit**.
6. In the Edit Response screen, update the response, and click **Save**.

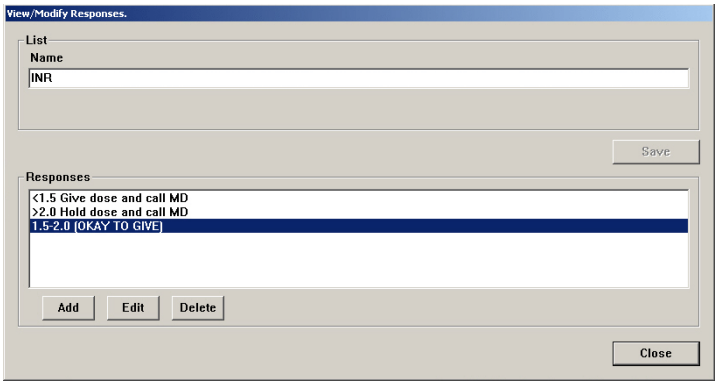


7. In the View/Modify Responses screen, click **Close**.
8. In the Clinical Data Edit screen, click **OK**.
9. To return to the standby screen, click **Close**.

Deleting a Response from a Multiple-Response List

The following procedure explains how to delete response lists.

1. Select **System Setup > Clinical Data**.
2. In the Clinical Data screen, select the CDC name, and click **Edit**.
3. In the Clinical Data Edit screen, click **Edit Responses**.
4. In the View/Modify Responses screen, select the response to remove, and click **Delete**.



5. In the confirmation screen that appears, click **YES** to continue.
6. To return to the Clinical Data Edit screen, click **Close**.
7. To return to the standby screen, click **Close**.

Site-Specific Options

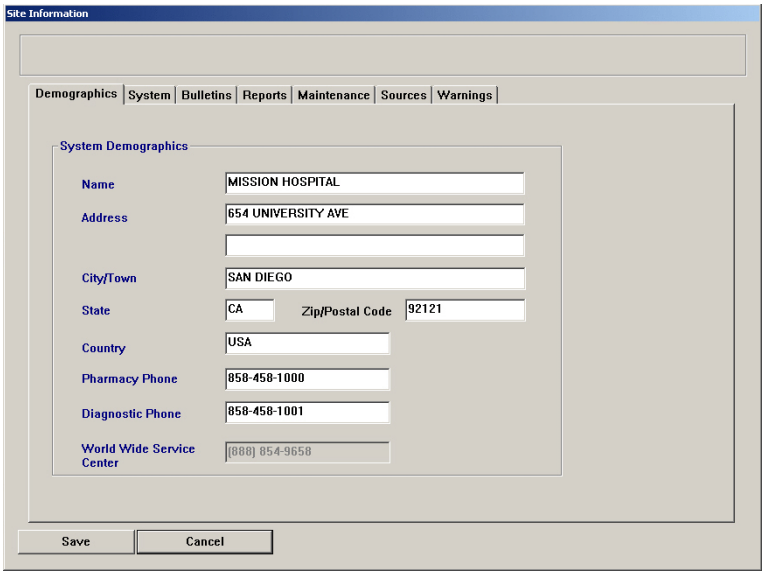
The MedStation system allows you to define information related to your facility's demographics, system options, and report and database maintenance options. The system uses this information for report headings and for various system options and default values. The site-specific options are listed as follows:

- *Specifying Demographic Information* on page *96*
- *Specifying System Options* on page *97*
- *Configuring an Attention Notice (Bulletin)* on page *99*
- *Report and Maintenance Options* on page *101*

Specifying Demographic Information

Use the Demographics tab to enter information about your facility.

1. Select **System Setup > Site Specific Options**.
2. On the Demographics tab of the Site Information screen, enter or update the demographic information about your facility.



3. On the same tab, enter your pharmacy's phone number and the phone number set up for remote diagnostics.

   This information is used by CareFusion to access your MedStation system should you have any questions or problems.

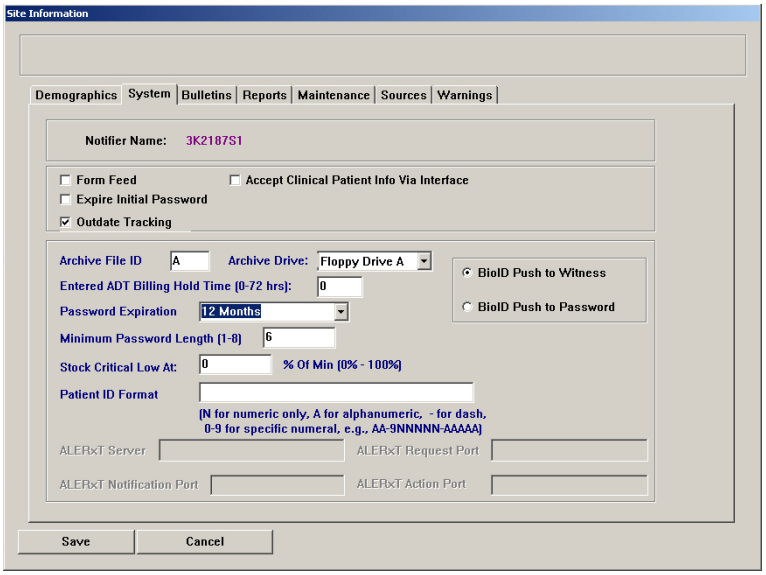
4. Click **Save**.
5. In the confirmation screen that appears, click **OK** to continue.

   The standby screen appears.

Specifying System Options

System Options are global settings and are not retroactive.

1. Select **System Setup > Site Specific Options**.
2. In the Site Information screen, click the **System** tab.



3. Enter the applicable information:
   - **Form Feed**—To advance the paper to the next page, select this box.
   - **Expire Initial Password**—To force the user to enter a new password during the first logon attempt, select this box.
   - **Outdate Tracking**—To allow expiration date tracking at Load, Refill, and Return to Stock, select this box. In addition to enabling this option, enable Outdate Tracking at the pocket level.
   - **Accept Clinical Patient Info Via Interface**—If your facility has an ADT interface that provides clinical patient information such as allergies, height, weight, sex, and age, select this box to allow the system to accept and display it. This information appears at both the console and station.
   - **Archive File ID**—For archive files. This identifier differentiates archive data from this system from other sources of archive data.
   - **Archive Drive**—Select the applicable drive for archiving.
   - **Entered ADT Billing Hold Time**—If your system has an automated billing interface, enter the number of hours that the interface computer (Procar) holds charges for manually entered patients. This allows you to edit the patient data and pass the charges with the updated patient information. Set the value to 0 to prevent the ADT and billing information from being held.
   - **Password Expiration**—Indicates the length of time that the password remains valid after the first log on or after a user changes his or her password. This expiration time affects both the console and all stations.

- **Minimum Password Length**—This affects only new passwords, not existing ones. Typically, the length is at least three characters.
- **Stock Critical Low At**—Percentage of the minimum value to queue a warning.
- **Patient ID Format**—If your facility uses a specific format for patient ID, enter the format's template here. If you enter a value here, you are warned if you do not follow this template when you manually enter a patient ID at the station or console.
- **BioID Push to Witness**—Require a witness to verify that the identity of users who failed to log on successfully with BioID.
- **BioID Push to Password**—Require a user to scan his or her fingerprint after a failed BioID logon attempt.
- **ALERxT Server**—Not used.
- **ALERxT Notification Port**—Not used.
- **ALERxT Request Port**—Not used.
- **ALERxT Action Port**—Not used.

4. Click **Save**.
5. In the confirmation screen that appears, click **OK** to continue.

   The standby screen appears.

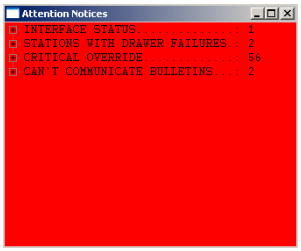
Configuring an Attention Notice (Bulletin)

Attention notices are displayed at the console and are a quick way for getting critical information. If you set them to display, you should designate someone to check the console screen periodically.

NOTE
An attention notice displays on the console screen. A bulletin is an attention notice that prints from the printer.

Attention notices are preceded by a plus (+) or a minus (-) sign. Those preceded by a plus sign have subentries. Click the plus sign to view the subentries. The number to the right of the attention notice indicates the number of notices of that type. The following background colors are also used:

- **Yellow**—Indicates that a stockout has occurred, an RxCheck is required, an item is critically low, a critical override has occurred, or bulletins have been posted.
- **Orange**—Indicates that an interface is behind on processing interactions, that communication with a device is unavailable, or that a device has a drawer failure.
- **Red**—Indicates that an interface is unavailable or disk space is running low.



The attention notices (bulletins) topics are as follows:

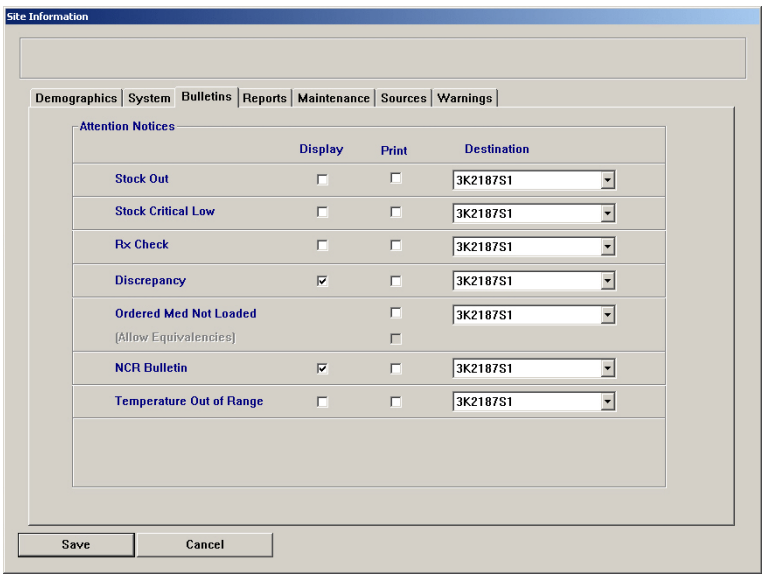
- *Activating an Optional Type of Attention Notice* on page *100*
- *Addressing an Unsolicited Attention Notice* on page *101*

Activating an Optional Type of Attention Notice

You can toggle the display of the following types of notices: Stock Out, Stock Critical Low, Rx Check, Discrepancy, Ordered Med Not Loaded, NCR Bulletins, and Temperature Out of Range.

To activate optional attention notices

1. Select **System Setup > Site Specific Options**.
2. In the Site Information screen, click the **Bulletins** tab.



3. Select one or more of the check boxes to display (shown on the screen) or print notices for the following situations:
   - **Stock Out**—Displays a medication that is stocked out and when (sorted by device).
   - **Stock Critical Low**—Displays the medication that has reached low capacity and should be refilled.
   - **Rx Check**—Shows what medication needs an Rx Check and when it last needed it (sorted by device).
   - **Discrepancy**—Shows quantity of discrepancy sorted by medication name, device, drawer, and time.
   - **Ordered Med Not Loaded**—Available in profile mode. Identifies ordered medications not loaded, followed by the order dose, route, frequency text, note, order number, valid (start and stop times for an order), patient name and ID, location, room/bed, and stations where the medication is not loaded or is pending load.
   - **Allow Equivalencies**—Notifies that an equivalency can be administered. Use in conjunction with the Ordered Med Not Loaded option. This box is dimmed until Ordered Med Not Loaded is selected.

- **NCR Bulletin**—Used to notify the customer if an issue had arisen with the billing port.
- **Temperature Out of Range**—Notifies the user that the SMART Remote Manager's temperature is out of range.

4. Click **Save**.
5. In the confirmation screen that appears, click **OK** to continue.

   The standby screen appears.

Addressing an Unsolicited Attention Notice

Unsolicited attention notices, unlike the optional ones in the previous section, are notices that you do not request. They are displayed whenever a special condition occurs, such as a communications failure.

The following table lists the types of unsolicited attention notices:

Attention Notice	Description
Can't Communicate	Shows an attention notice that includes: • The last time the device linked to the console. • The station that stopped communication.
Drawer Failures	Shows the following failure information: • Drawer/cube/pocket number. • The time of the failure. • The name of the device where the failure occurred.
Console Modules Down	Lists the console modules that are not running.

Report and Maintenance Options

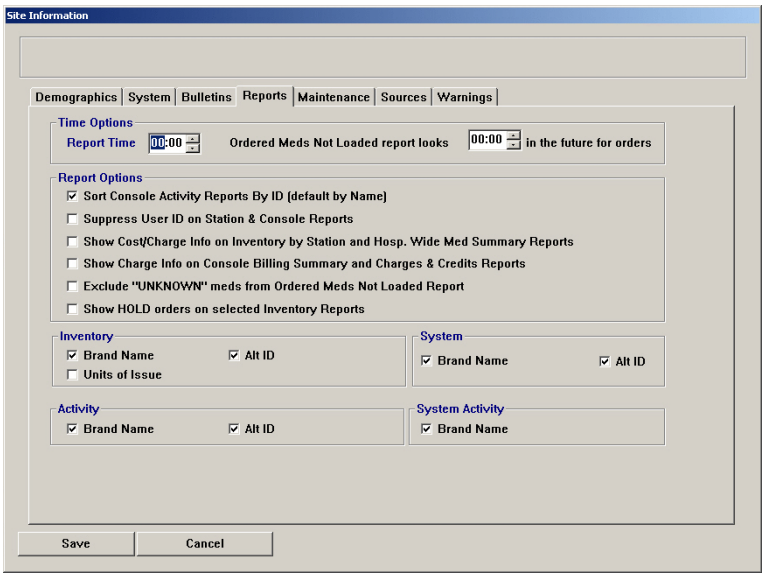
The report and maintenance options are as follows:

- *Selecting Report Options* on page *102*
- *Specifying Maintenance Options* on page *103*
- *Running a Maintenance Task* on page *106*
- *Customizing the Console Name* on page *106*
- *Viewing or Modifying a Medication Warning* on page *107*

Selecting Report Options

The following procedure explains how to select reporting options.

1. Select **System Setup > Site Specific Options**.
2. In the Site Information screen, click the **Reports** tab.



3. In the Time Options section, complete the following:
   - **Report Time**—Enter the time at which the reporting period should begin, that is, the start time of the 24-hour reporting period for all console reports. Note that this is not the time the report begins generating, but the beginning of the time frame covered by the report.
   - **Ordered Meds Not Loaded report looks ___ in the future for orders**—Enter the number of hours and minutes into the future that the report should consider when identifying medication orders that have been requested but are not loaded at the station.
4. In the Report Options section, select the check box for any of the following to ensure that these steps are always taken when the applicable report is generated:
   - **Sort Console Activity Reports By ID**—Sort all Activity reports by the med ID.
   - **Suppress User ID on Station & Console Reports**—Hide user IDs on all station and console reports.
   - **Show Cost/Charge Info on Inventory by Station and Hosp.Wide Med Summary Reports**—Display cost and charge information on the Inventory By Station and Hospital Wide Med Summary reports.
   - **Show Charge Info on Console Billing Summary and Charges & Credits Reports**—Display charge information on the Billing Summary and Charges & Credit reports.

- **Exclude "UNKNOWN" meds from Ordered Meds Not Loaded Report**—Do not display medications whose name is identified as UNKNOWN on the Ordered Meds Not Loaded report.
- **Show HOLD orders on selected Inventory Reports**—Include orders that are on hold on the Inventory reports.

5. In the Inventory, System, Activity, and System Activity sections, select the check boxes for information that you want to display every time on any report in that category:
   - **Brand Name**—Displays the medication's brand name.
   - **Alt ID**—Displays the medication's alternate ID.
   - **Units of Issue**—Displays the item's number of units of medication per refilling package.
6. Click **Save**.
7. In the confirmation screen that appears, click **OK** to continue.

   The standby screen appears.

Specifying Maintenance Options

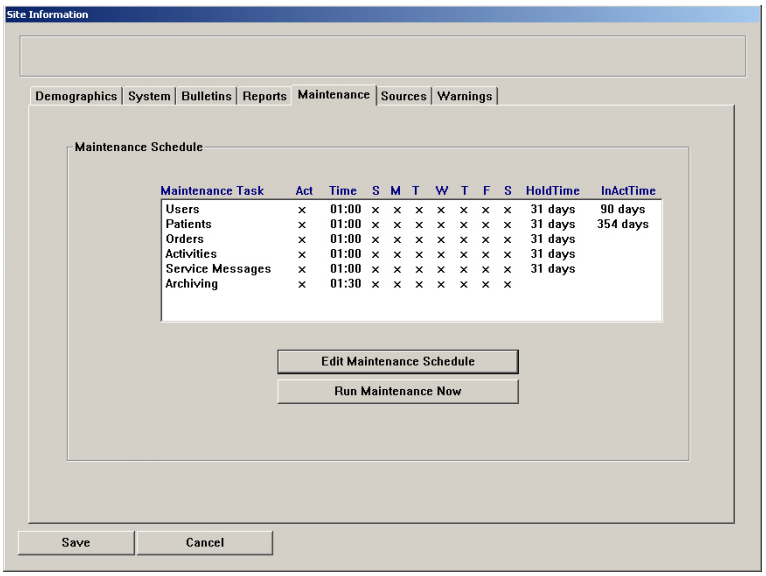
Use the Maintenance page to specify the time period of data available to console reports, and the maintenance schedule for each maintenance task. You can also use it to begin running maintenance at any time, even if it is not scheduled.

NOTE
Do not change the Maintenance options without assistance from a CareFusion representative.

Option	Description
Users	Deletes expired users from the system.
Patients	Searches the database for patients that have had no transactions for a period longer than that specified in the Discharge if Inactive for field described later in this section. Patients that have been inactive for longer than this time are discharged. This task also deletes discharged patients that have been in the database longer than the hold time.
Orders	Profile mode only.
Activities	Transaction activities that have been in the database longer than the hold time are deleted.
Service Messages	Service messages that have been in the database longer than the hold time are deleted.
Archiving	Generates new archive files, deletes old archive files from the hard drive, and updates the archive file Date field in the Archiving screen. For more information on this process, see *Scheduling Archive Maintenance* on page *144*.

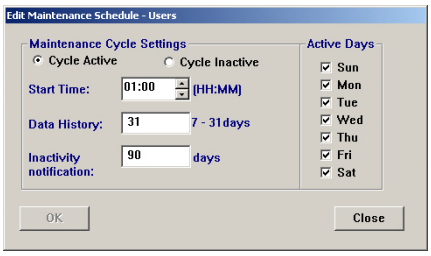
To specify maintenance options

1. Select **System Setup > Site Specific Options**.
2. In the Site Information screen, click the **Maintenance** tab.
3. To edit the schedule or options of a maintenance task, select the task name in the Maintenance Schedule section.



4. Click **Edit Maintenance Schedule**.

   The applicable Edit Maintenance Schedule screen appears, showing the maintenance schedule and options for the selected task. This screen varies slightly depending on which maintenance task you selected.



5. In the **Start Time** box, enter the time that the maintenance cycle should begin.
6. If applicable, in the **Data History** box, enter the number of days to include in the maintenance cycle (from 7 to 31).

7. To indicate when the task should run, select the applicable **Active Days** check boxes.

NOTE

- The task runs on the days that you specify, unless you indicate that the cycle is inactive. A maintenance cycle is inactive if you select Cycle Inactive. This means that the maintenance cycle does not run, but allows you to keep the settings for future use.
- Select Cycle Active to run the cycle at the time and days specified.

8. If applicable, do the following:
   - **Discharge if inactive** (Patients maintenance)—Enter the number of days after which patients without transactions are discharged from the facility. Set this value greater than or equal to the activities hold time set at the Devices screen.
   - **Inactivity notification** (Users maintenance)—Enter the number of days after which a service message is logged for users who have not performed any transactions. To review a list of service messages, run the Service Messages report. If a service message is listed that indicates a specific number of users have been inactive for a specific number of days, you can then run the Users report using the User Last Access parameter to produce a detailed list of inactive users. (For more information, refer to the *Pyxis® MedStation® System Console Reports Booklet*.)
9. To save your changes, click **OK**, and then click **Save**.
10. In the confirmation screen that appears, click **OK** to continue.

    The standby screen appears.

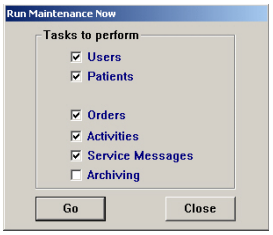
Running a Maintenance Task

Rather than waiting for the scheduled time for a particular maintenance task, you can choose to run it immediately.

NOTE
Do not change the Maintenance options without assistance from a CareFusion representative.

To run a maintenance task

1. Select **System Setup > Site Specific Options**.
2. In the Site Information screen, click the **Maintenance** tab.
3. Click **Run Maintenance Now.**
4. In the Run Maintenance Now screen, select the maintenance tasks, and click **Go**.



5. To return to the standby screen, click **Cancel**.

Customizing the Console Name

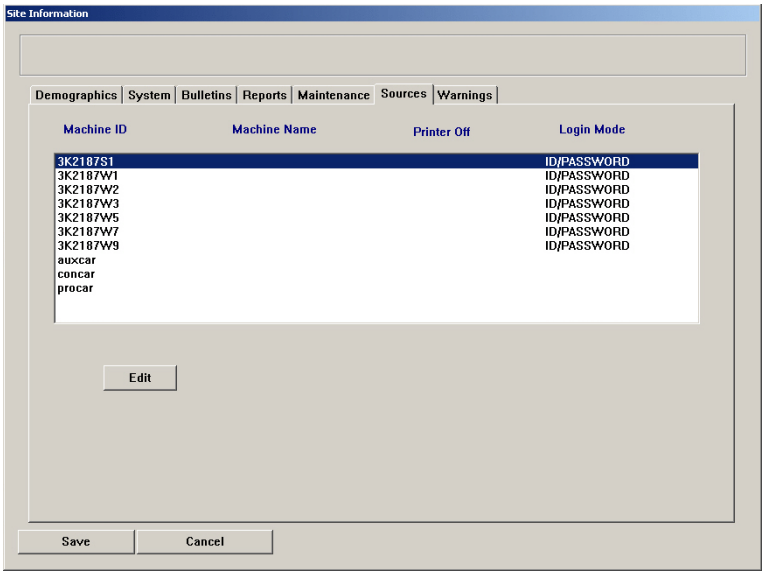
The Sources page allows you to provide an alias for the console. This alias name is the name that appears in selection lists or reports.

NOTE
Do not change the Maintenance options without assistance from a CareFusion representative.

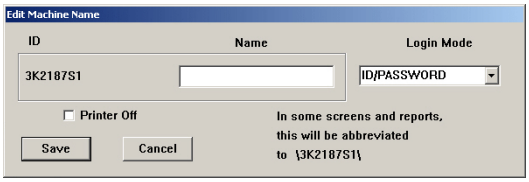
To customize the console name

1. Select **System Setup > Site Specific Options**.
2. In the Site Information screen, click the **Sources** tab.

3. Select the console whose name you want to change, and click **Edit**.



4. In the Edit Machine Name screen, update the name of the console, and click **Save**.



5. Click **Save** again.
6. In the confirmation screen that appears, click **OK** to continue.

   The standby screen appears. The new name will appear in reports and selection lists that identify console names.

Viewing or Modifying a Medication Warning

The purpose of the warning is to inform you that the requested medication should not be removed because it would be too early or too late compared to the order dose time, or too close compared to the previous removal. Too Close screen warnings display for non-profile stations because the warning is comparing removal times to that of the previous removal, rather than to the due time of the medication.

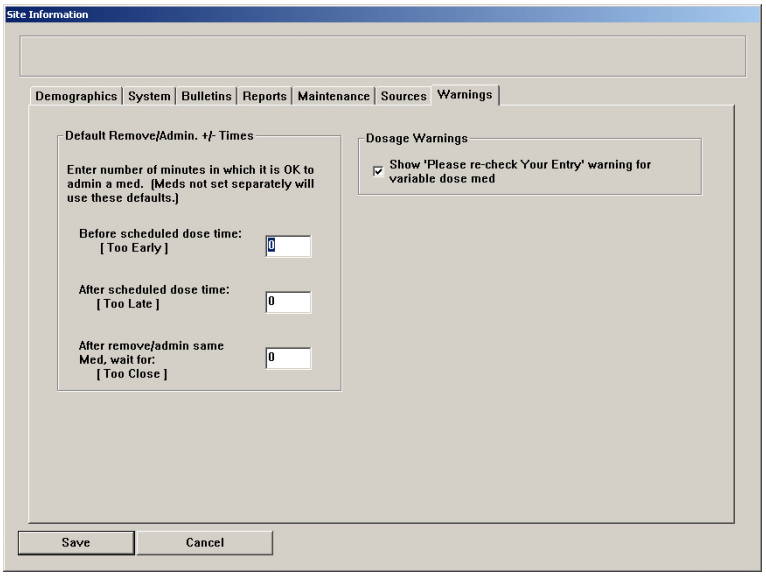
Too Early and Too Late display at profile stations. Although a user might have administered the medication, the warning is more specific to the formulary order. With this warning functionality, a dose time list appears after you select the medication. This list defaults to the most current dose time, but also shows other available dose times that have already been removed, are past due, or are scheduled.

These settings can be overridden by settings on the Formulary tab for individual medications.

To view or modify system-wide warnings

1. Select **System Setup > Site Specific Options**.
2. In the Site Information screen, click the **Warnings** tab.
3. In the **Default Remove/Admin. +/- Times** section, enter the facility-wide value for the type of warnings that you want to set system-wide.

   Leave 0 in the box for any warning you do not want to set system-wide.



4. In the Dosage Warnings section, clear the **Show 'Please re-check Your Entry' warning for variable dose med** check box if you do not want the station to warn users when they remove a variable dose that exceeds the strength allowed by the order.
5. Click **Save**.
6. In the confirmation screen that appears, click **OK** to continue.

   The standby screen appears.

Pharmacy Configuration

You can customize the contents of some of the pick lists from which you select data on the console or station. Thus you can use terminology that is familiar and in practice at your hospital or pharmacy, or that is based on your policies and procedures. For example, your facility might prefer specific terminology for security groups, override groups, formulary classifications, discrepancy resolution reasons, and other formulary data fields. If your facility does not currently have a standard for naming these items, this section describes how you can establish them.

This section includes the following topics:

- *Customizing a Security Group Name* on page *109*
- *Customizing an Override Group Name* on page *111*
- *Adding or Changing a Medication-Classification Name* on page *111*
- *Adding or Modifying a Discrepancy-Resolution Reason* on page *113*
- *Adding, Updating, or Deleting a Formulary or Station List* on page *115*

Customizing a Security Group Name

Each formulary item defined in the console must have one of 10 security groups associated with it.

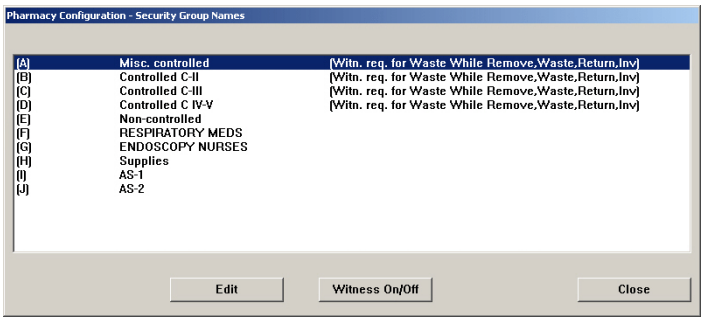
This security group is a tool for controlling which medications your users access when you assign them security group privileges. For example, if a user wants to remove a medication, and the medication is assigned to security group A (associated with Schedule II drugs), the user needs access to security group A. The system is installed with default security group names, which you can rename to customize your system.

NOTE
Override groups are used without a pharmacist-verified order and based on the patient situation or condition.

To rename the default security group name

1. Select **System Setup > Pharmacy Configuration > Security Group Names**.

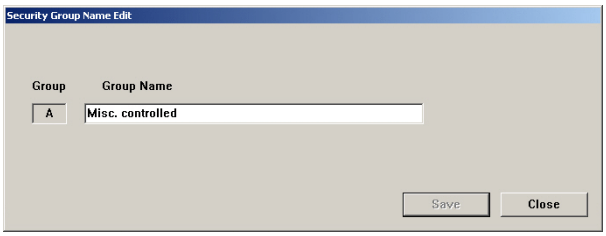
   The Pharmacy Configuration – Security Group Names screen appears with the names of the default or existing security group names appear.



   If a witness is required for a security group, the words *[Witn. req. for Waste While Remove, Waste, Return, Inv]* appear to the right of that security group. This means a witness is required when wasting, returning, and inventorying medications.

NOTE
To toggle a security group's witness required field on or off, select the security group name, and then click the Witness On/Off button.

2. Select the security group name, and click **Edit**.
3. In the Security Group Name Edit screen, enter the new name (up to 20 characters) in the **Group Name** box, and click **Save**.



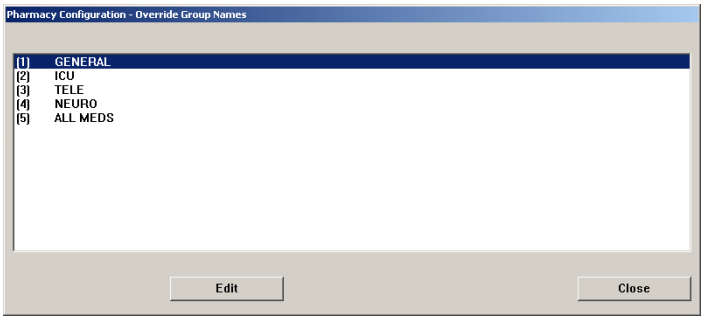
4. To return to the standby screen, click **Close**.

Customizing an Override Group Name

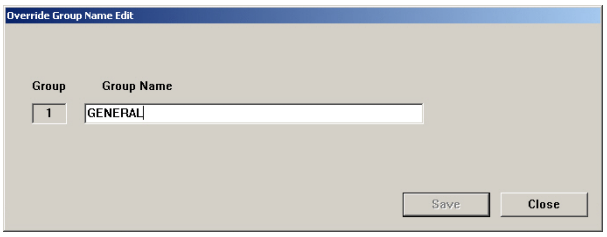
When running the console, you can customize the names of override groups. An override group is assigned to medications in the formulary. You can also assign override groups to stations, pockets, and users. This topic describes how to customize override group names.

1. Select **System Setup > Pharmacy Configuration > Override Group Names**.

   The Pharmacy Configuration – Override Group Names screen appears, displaying the names of the default or existing override groups in a list.



2. Select a name to update, and click **Edit**.
3. In the Override Group Name Edit screen, enter the new name in the **Group Name** box, and click **Save**.



4. To return to the standby screen, click **Close**.

Adding or Changing a Medication-Classification Name

The system is installed with default classification names (Drug Enforcement Administration [DEA] classifications), which you can change to customize your system. You can also add new medication classifications. You can sort reports by medication classification.

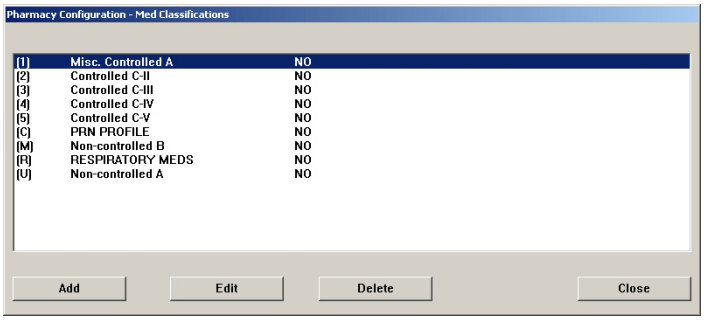
- *Renaming a Medication Classification* on page *112*
- *Adding a Medication Classification* on page *112*
- *Deleting a Medication Classification* on page *113*

Renaming a Medication Classification

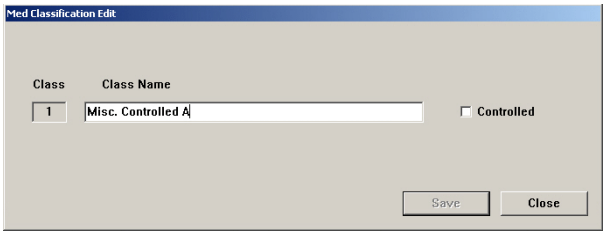
The following procedure explains how to change the name of a medication classification.

1. Select **System Setup >Pharmacy Configuration > Med Classifications**.

   The Pharmacy Configuration – Med Classifications screen appears, listing all medication classifications currently defined.



2. Select the classification that you want to rename, and click **Edit**.
3. In the Med Classification Edit screen, enter the new medication-classification name in the **Class Name** box, and click **Save**.

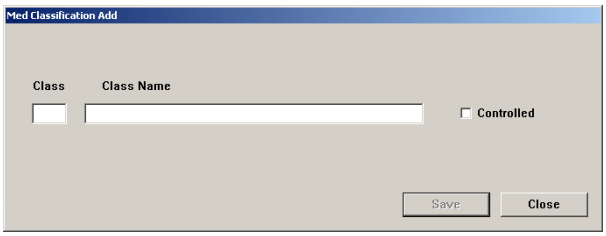


4. To return to the standby screen, click **Close**.

Adding a Medication Classification

The following procedure explains how to add a medication classification.

1. Select **System Setup >Pharmacy Configuration > Med Classifications**.
2. In the Pharmacy Configuration – Med Classifications screen, click **Add**.
3. In the Med Classification Add screen, enter a character for the medication classification in the **Class** box.



4. Enter the new medication-classification name in the **Class Name** box, and click **Save**.

5. If the medication belongs to the class of controlled drugs, select **Controlled**.
6. To return to the standby screen, click **Close**.

Deleting a Medication Classification

You can delete new classifications but not preinstalled ones. The following procedure explains how to delete a medication classification that your facility has added.

1. Select **System Setup >Pharmacy Configuration > Med Classifications**.
2. In the Pharmacy Configuration – Med Classifications screen, select the applicable classification, and click **Delete**.
3. In the confirmation screen that appears, click **YES**.
4. To return to the standby screen, click **Close**.

Adding or Modifying a Discrepancy-Resolution Reason

The MedStation system is installed with default discrepancy-resolution reasons that you might find useful in your system. These reasons appear at the station for you to choose from when resolving discrepancies. You can add to this list of reasons or modify existing reasons based on your facility's policies and procedures. The changes you make appear at the stations.

When compiling your list of reasons, remember that the first seven reasons are visible at the station without scrolling. Also, regardless of how many reasons you add, the care providers have the option of typing in their own reasons at the station.

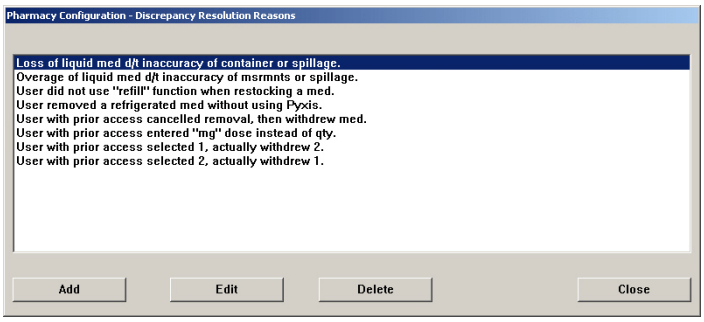
This section includes the following topics:

- *Adding a Discrepancy-Resolution Reason* on page *114*
- *Editing a Discrepancy-Resolution Reason* on page *114*
- *Deleting a Discrepancy-Resolution Reason* on page *115*

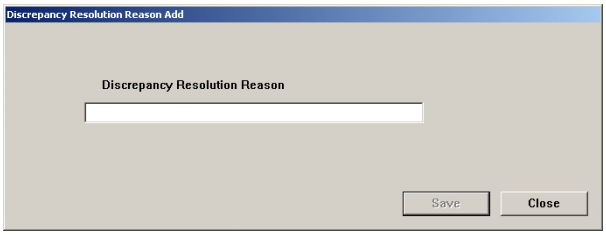
Adding a Discrepancy-Resolution Reason

The following procedure explains how to add a reason.

1. Select **System Setup >Pharmacy Configuration > Discrepancy Resolution Reasons**.
2. In the Pharmacy Configuration – Discrepancy Resolution Reasons screen, click **Add**.



3. In the Discrepancy Resolution Reasons Add screen, enter the new reason (up to 60 characters) in the **Discrepancy Resolution Reason** box, and click **Save**.

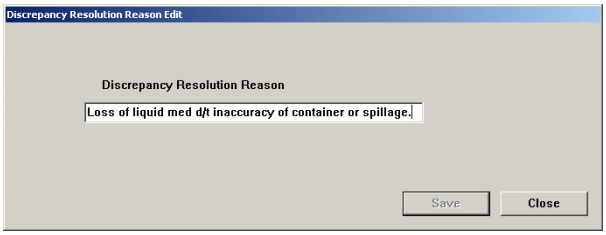


4. To return to the standby screen, click **Close**.

Editing a Discrepancy-Resolution Reason

The following procedure explains how to a update reason.

1. Select **System Setup >Pharmacy Configuration > Discrepancy Resolution Reasons**.
2. In the Pharmacy Configuration Discrepancy Resolution Reasons screen, select the applicable reason, and click **Edit.**
3. In the Discrepancy Resolution Reasons Edit screen, update the text in the **Discrepancy Resolution Reason** box with your new reason, and click **Save**.



4. To return to the standby screen, click **Close**.

Deleting a Discrepancy-Resolution Reason

The following procedure explains how to a delete reason.

1. Select **System Setup >Pharmacy Configuration > Discrepancy Resolution Reasons**.
2. In the Pharmacy Configuration Discrepancy Resolution Reasons screen, select the applicable reason, and click **Delete**.
3. In the confirmation screen that appears, click **YES**.
4. To return to the standby screen, click **Close**.

Adding, Updating, or Deleting a Formulary or Station List

When you define or modify a formulary item or a station, certain fields require you to make a selection from a list of choices. The console allows you to customize the contents of the lists.

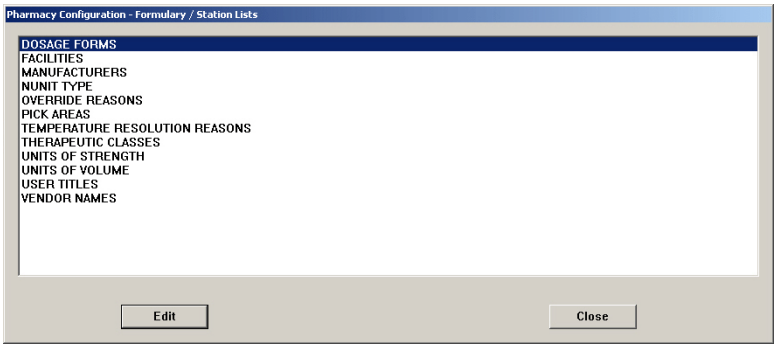
Examples of customized lists are units of measure or volume, manufacturers of medications, nursing unit types, pick areas, and therapeutic classes.

- *Adding an Item to a List* on page *115*
- *Editing a List* on page *116*
- *Deleting an Item from a List* on page *117*

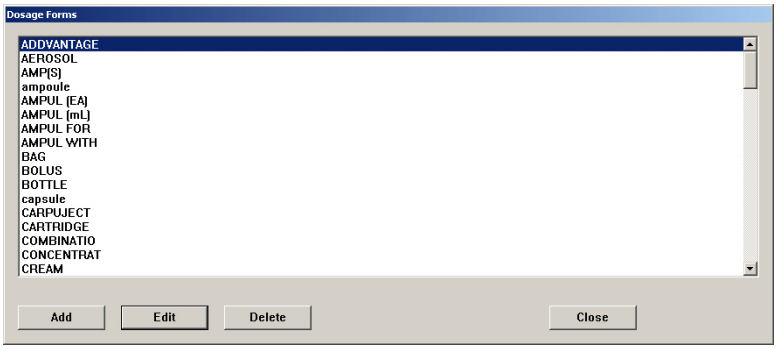
Adding an Item to a List

The following procedure explains how to add items to a list.

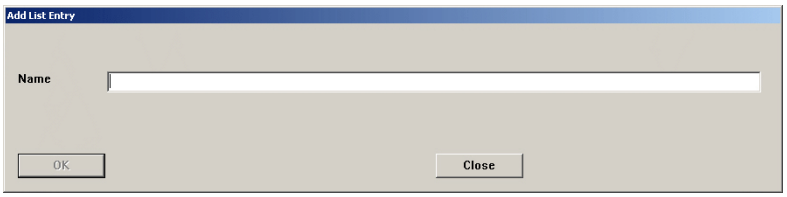
1. Select **System Setup > Pharmacy Configuration > Formulary/Station Lists**.
2. In the Pharmacy Configuration – Formulary/Station Lists screen, select a list name, and click **Edit**.



3. In the screen that appears (the name depends on the item that you selected in the previous step), click **Add** to add an item to the list.



4. In the Add List Entry screen, enter the new item, and click **OK**.

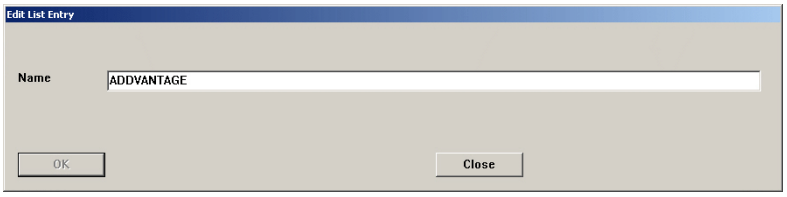


5. To return to the standby screen, click **Close**.

Editing a List

The following procedure explains how to update a list.

1. Select **System Setup >Pharmacy Configuration > Formulary/Station Lists**.
2. In the Pharmacy Configuration – Formulary/Station Lists screen, select an item, and click **Edit**.
3. In the screen that appears (the name depends on the item that you selected in the previous step), select the applicable item, and click **Edit**.
4. In the Edit List Entry screen, update the applicable information, and click **OK**.



5. To return to the standby screen, click **Close**.

Deleting an Item from a List

The following procedure explains how to delete a list item.

1. Select **System Setup > Pharmacy Configuration > Formulary/Station Lists**.
2. In the Pharmacy Configuration – Formulary/Station Lists screen, select the list name containing the item to delete.
3. In the list that appears, select the item that you want to remove, and click **Delete**.
4. In the confirmation screen that appears, click **Yes** to continue.
5. To return to the standby screen, click **Close**, and then click **Close** again.

Maintaining Scan Codes

If the scan codes option is enabled, you can use scan codes to set up links (cross-references) between the manufacturer National Drug Code (NDC) numbers (and other bar codes) and the IDs used in the MedStation system. By creating these links, you can use different vendors for the same medication. This helps increase patient safety by ensuring that medications are picked using the NDC.

The Scan Code screen lists all items in the table by scan code number within generic medication name. The table also includes a quantity and a vendor name for each item. Scan codes and med IDs have a many-to-one relationship: multiple scan codes can map to the same med ID.

Scan Code Maintenance allows you to enter the scan code manually or scan the bar code from the medication packaging.

When you add a new scan code or edit the fields for quantity or vendor name, the console sends a message to the stations and Procar, which updates their respective local tables. When you delete a scan code, the console sends a message to the stations and Procar, which delete the code from their scan codes tables.

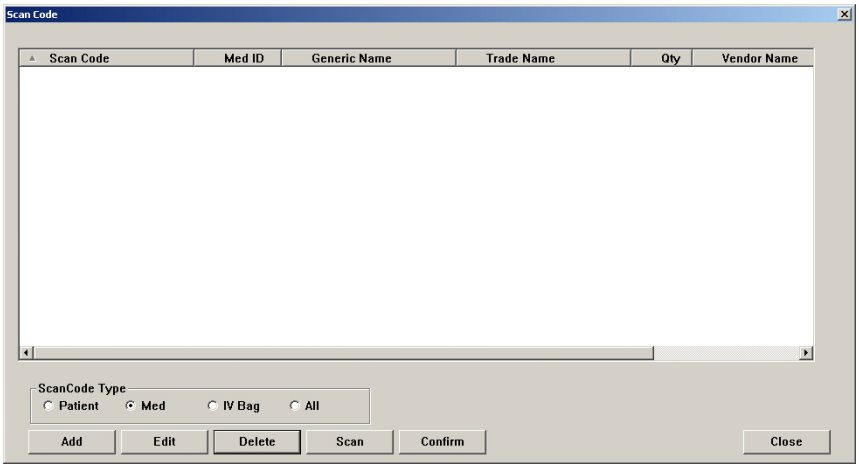
This section includes the following topics:

- *Adding a Scan Code* on page *119*
- *Editing a Scan Code* on page *120*
- *Deleting a Scan Code* on page *120*

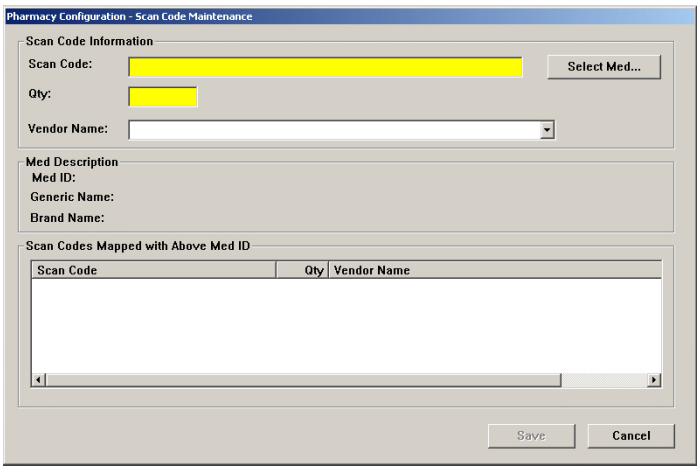
Adding a Scan Code

The following procedure explains how to associate a scan code with a formulary item.

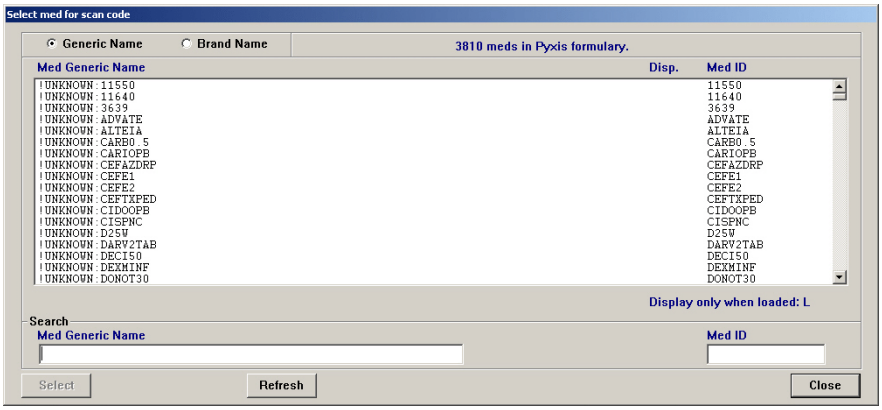
1. Select **System Setup > Pharmacy Configuration > Scan Code Maintenance**.
2. In the ScanCode Type section of the Scan Code screen, select a type:
   - **Patient**—Select if you are scanning a patient ID.
   - **Med**—Select if you are scanning a medication.
   - **IV Bag**—Select if you are scanning an IV bag.
   - **All**—Select if you are scanning each of the previous items.



3. Click **Add**.
4. When the Pharmacy Configuration – Scan Code Maintenance screen appears, click **Select Med**.



5. In the Select Med for Scan Code screen, locate and highlight the medication to which you are assigning a scan code, and then click **Select**.



6. When the Pharmacy Configuration – Scan Code Maintenance screen reappears, scan or manually enter the new code.

   The screen that appears depends on the type of scan code you selected.

7. Click **Save**.
8. To return to the standby screen, click **Close**.

Editing a Scan Code

After a scan code is assigned to a formulary item or med ID in the scan codes table, you can edit the quantity and vendor name fields but not the scan code or the med ID in the record.

1. Select **System Setup > Pharmacy Configuration > Scan Code Maintenance**.
2. In the Scan Code screen, select the applicable item, and click **Edit**.
3. When the Pharmacy Configuration – Scan Code Maintenance screen appears, update the applicable information, and click **Save**.
4. To return to the standby screen, click **Close**.

Deleting a Scan Code

To change the association of a scan code to a med ID, you have to delete the scan code record from the table and add it with the new association.

1. Select **System Setup > Pharmacy Configuration > Scan Code Maintenance**.
2. In the Scan Code screen, select the applicable item, and click **Delete**.
3. In the confirmation screen that appears, click **YES** to continue.
4. To return to the standby screen, click **Close**.

Communication Status

The Communication Status (CommStatus) menu allows you to view information about the communication between the console and the attached devices, including stations. This feature is used mainly by CareFusion representatives for troubleshooting. However, a representative might ask you to access this option to review information.

This section includes the following topics:

- *Viewing Specific Communication Information* on page *121*
- *Changing the Refresh Rate* on page *125*

Viewing Specific Communication Information

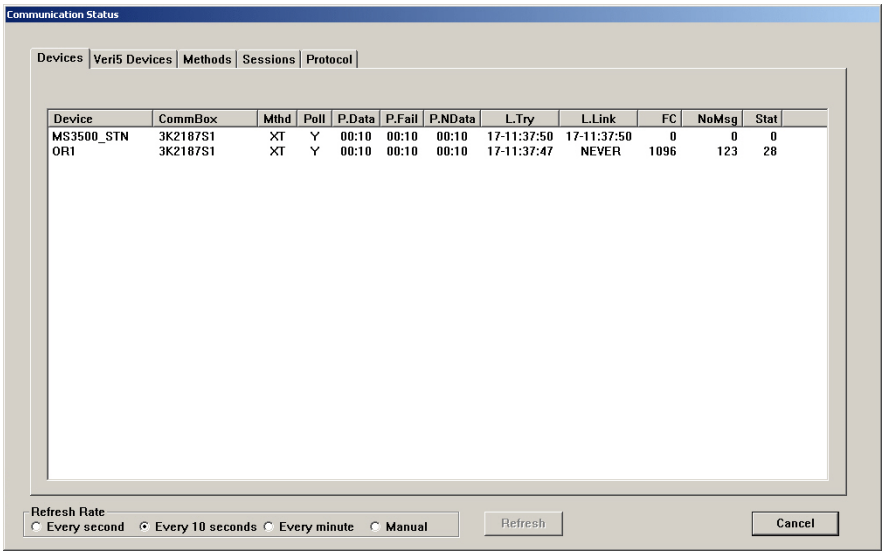
The following procedure explains how to view information about the station and console communications.

1. Select **CommStatus**.
2. Click the applicable tab, depending on which information you want to view.

   The following describes the information available for each tab:

   - **Devices**—Displays a list of devices with which the console is communicating.

NOTE
A device is any piece of equipment that communicates directly with the console, such as a station. For each device listed, this option specifies the last time it communicated with the console (if ever) and how many messages are queued for the console.

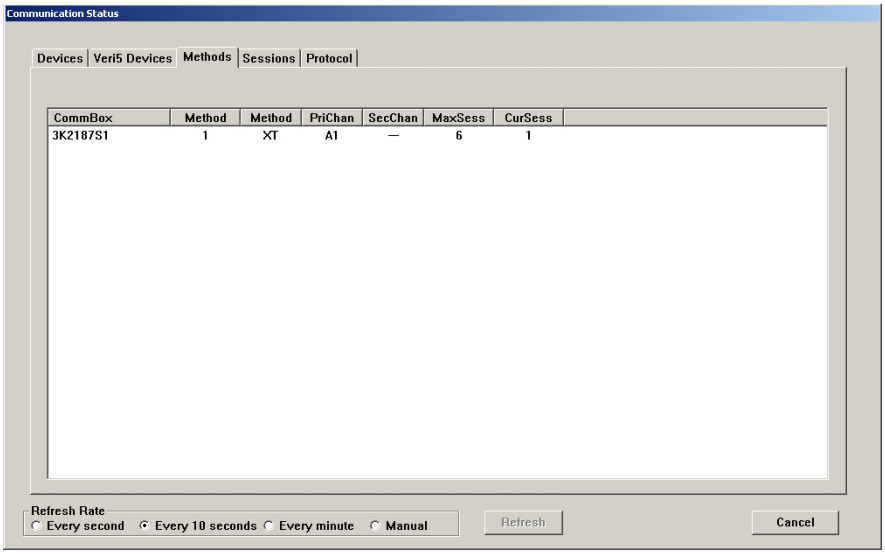


The fields are:

- **Device**—Identifies a device. A device is any piece of equipment which communicates directly with the console, such as a station.
- **CommBox**—Specifies which communications PC this device is configured to communicate with.
- **Mthd**—The communication method of the device.
- **Poll**—This field indicates two values. The Y or N indicates whether polling is on or off. The numeric value is the number of seconds between the last poll and the next poll.
- **P.Data**—Indicates the interval used to poll data from stations. Interval is normally set at two minutes, zero seconds.
- **P.Fail**—Indicates the interval used to poll data from an unresponsive station.
- **P.NData**—Indicates the interval used to poll data from stations when the console does not have data to send it.
- **L.Try**—The day and time the device was last polled by the console.
- **L.Link**—Last day and time the device successfully linked with the console.
- **FC**—Indicates the failure count. The number of successive times that communication has failed between the device and the console. A high count indicates something more than an occasional or incidental communication failure and requires your immediate attention.
- **NoMsg**—The number of messages that the console has temporarily stored on disk for transmission to the device. This number is normally zero, but it might increment if overall traffic is heavy or if the stations are offline.
- **Stat**—Indicates how many messages are in the queue that have not cleared yet.

- **Veri5 Devices**—Not used.

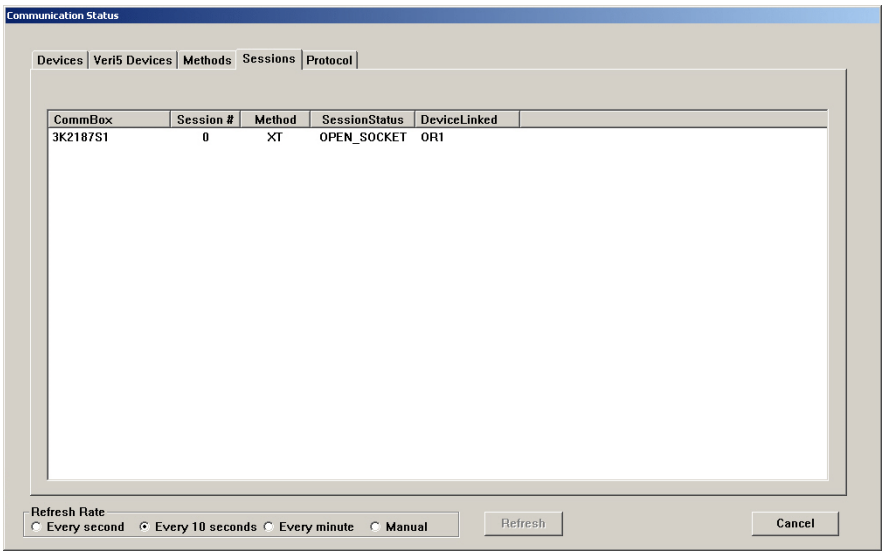
- **Methods**—Displays the status of the communication methods in use.



The fields are:

  - **CommBox**—Specifies which communications PC this device is configured to communicate with.
  - **Method**—Indicates the type of method.
  - **Method**—Shows specific information about the method level.
  - **PriChan**—Primary channel for communication for this method, such as a communications (COM) port or network adapter number.
  - **SecChan**—Secondary channel for communication for this method, and is not currently supported.
  - **MaxSess**—Maximum number of sessions allowed for this method.
  - **CurSess**—Number of sessions that are currently active.

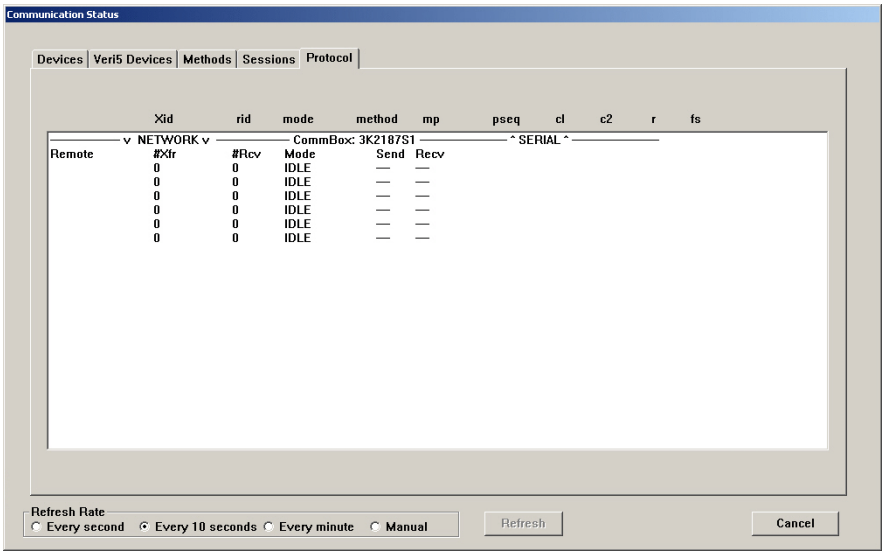
- **Sessions**—Displays the session status for all methods.



The fields are:

- **CommBox**—Specifies which communications PC this device is configured to communicate with.
- **Session #**—Displays the number of active communication sessions between devices.
- **Method**—Method type.
- **SessionStatus**—Current stage in the session for this device.
- **DeviceLinked**—Identifies a device. A device is any piece of equipment which communicates directly with the console, such as a station.

- **Protocol**—Displays the network communication.



The fields are:

- **Xid**—Name of the device polled.
- **rid**—Name of the device that is polling, usually the console.
- **mode**—Current step in the protocol.
- **method**—Method used.
- **mp**—The first few characters of the message being sent.
- **pseq**—Packet sequence, the number of messages transmitted during the session.
- **c1**—First transmission retry counter that increments when a message packet transmission has an error. The packet is retransmitted until it is error-free or fails seven times and must abort.
- **c2**—Second transmission retry counter that increments when a message packet transmission has an error. The packet is retransmitted until it is error-free or fails seven times and must abort.

- **r**—Indicates the direction of transmission: T indicates communications to the polled device. F indicates communications from the device.
- **fs**—Finish status. The coded result of the last poll.

3. To return to the standby screen, click **Cancel**.

Changing the Refresh Rate

The following procedure explains how to change the rate at which the information is updated.

1. Select **CommStatus**.
2. In the Refresh Rate section of the view-only Communication Status screen, select the applicable setting: Every second, Every 10 seconds, Every minute, or Manual.
3. To return to the standby screen, click **Cancel**.

Chapter 4
Utilities

This section includes the following topics:

Using Virtual Files Edit to Define Communication Ports *128*

Updating Information Globally *129*

Archiving Transactions *140*

Using Virtual Files Edit to Define Communication Ports

Under the direction of a CareFusion representative, you can use the Virtual Files Edit feature to create the methods.cfg file for defining communication ports.

CAUTION
Do not use Virtual Files Edit without the assistance of a CareFusion representative.

Updating Information Globally

Editing the fields globally saves you the time of manually and separately editing each medication or station or user.

With the MedStation system, you can control medication access by security group (and, if profile mode is used, also by override level). This provides you with an added layer of flexibility.

NOTE
For Anesthesia System, all pended items must be loaded prior to performing any edits/global edits on those pended items.

This section includes the following topics:

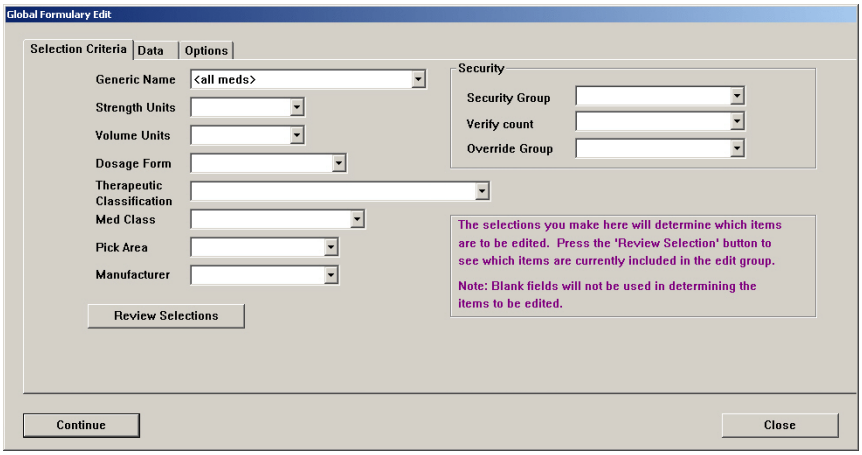
- *Updating the Formulary Globally* on page *129*
- *Updating Device Information Globally* on page *132*
- *Updating User Information Globally* on page *137*

Updating the Formulary Globally

Editing multiple medications requires you to specify the medications to edit, specify the new values for formulary data fields, specify the new values for formulary options, and apply the changes. For more information about these settings, see the applicable section under *Adding a Formulary Item* on page *40*.

1. Select **Utilities > Global Edits > Formulary**.

   The Global Formulary Edit screen appears with the Selection Criteria tab selected.

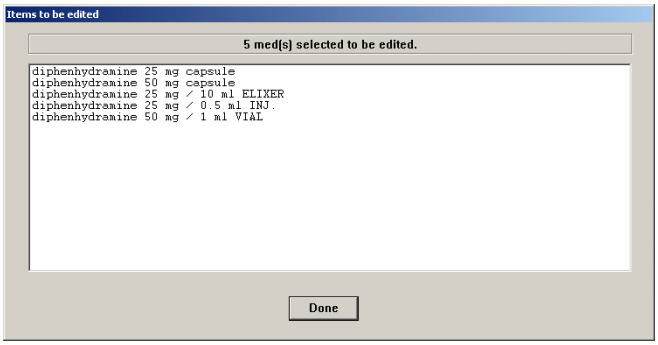


2. For each of the fields shown in the screen, select the values that determine the medications to edit.

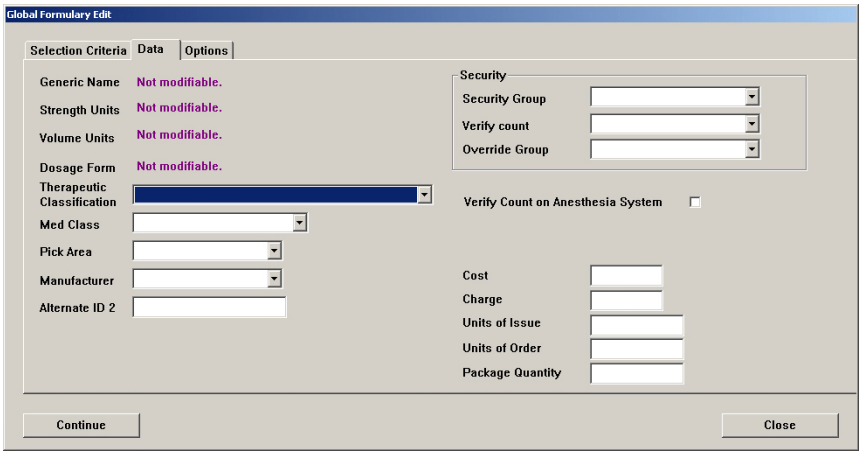
NOTE
The values that you enter in the Selection Criteria tab determine which medications are updated.

3. To see a list of the medications that will be updated based on your selection criteria, click **Review Selections**.

   The Items to be Edited screen appears.



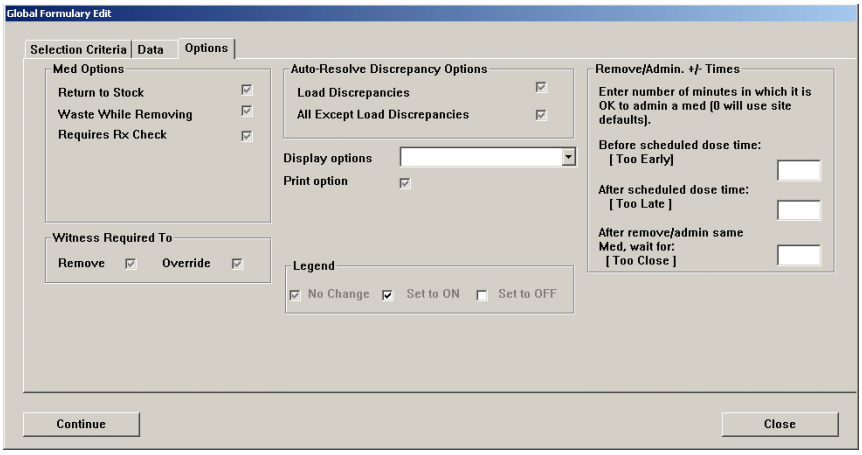
4. When you have finished reviewing the selections, click **Done**.
5. If the list of medications to be updated is not what you expected, modify the selections you made in step 2; otherwise, proceed to the next step.
6. Click the **Data** tab.



7. Enter the new values for the fields on this tab.

NOTE
The values you enter become the new values for all medications selected based on the Selection Criteria tab.

8. Click the **Options** tab.



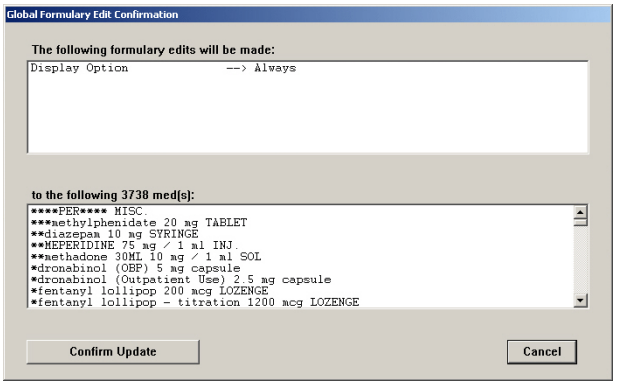
9. Enter the new values for the fields on this tab.

NOTE

- Note the Legend section at the bottom of the screen—each check box can have three values (instead of the usual two values): On, Off, or No Change. No Change means that the field retains its current value and is not affected by the edit.
- The values you enter become the new values for all medications that you selected based on the Selection Criteria tab.

10. Click **Continue**.

    The Global Formulary Edit Confirmation screen appears, indicating the changes to apply and the list of medications to which to apply the change.

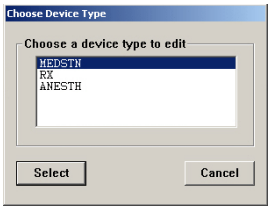


11. To apply the changes, click **Confirm Update**.
12. In the confirmation screen that appears, click **OK** to continue.
13. In the second confirmation screen that appears, click **OK** to continue.
14. To return to the standby screen, click **Close**.

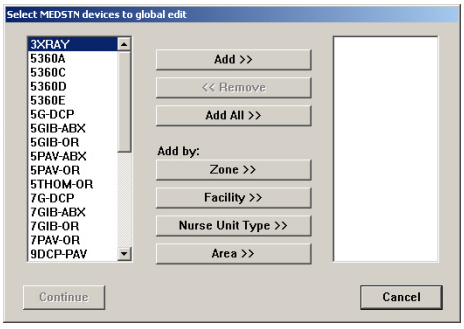
Updating Device Information Globally

Global editing of devices provides a way of updating selected devices. The system generates the normal configuration message to each device that is involved. For more information about these settings, see the applicable section under *Adding a Station or Other Device* on page *19*.

1. Select **Utilities > Global Edits > Devices**.
2. In the Choose Device Type screen, select the type of device to update.

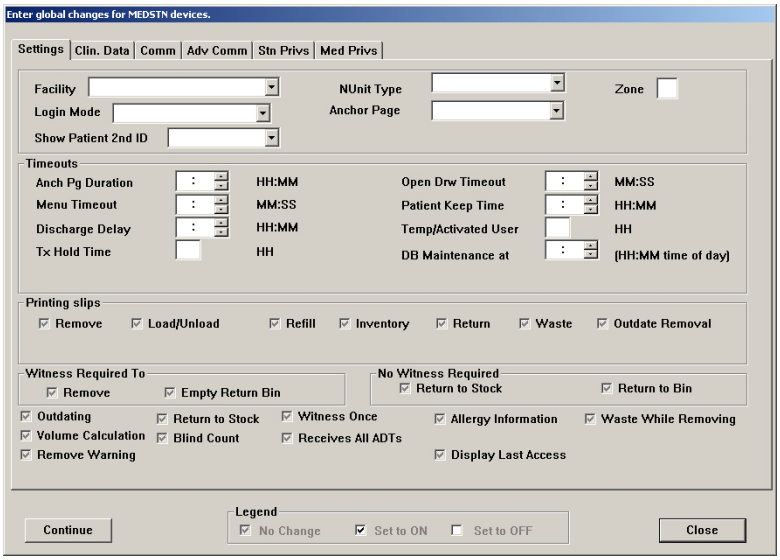


3. In the Select <Type> Devices to Global Edit screen, do one of the following:
   - Select the device names in the list on the left, and click **Add** to move the selected items to the column on the right.
   - Use the **Zone**, **Facility**, **Nurse Unit Type**, or **Area** buttons to access a list of devices sorted based on the button, select the applicable zone, facility, nursing unit, or area, and click **Select**. The corresponding devices are added to the column on the right.



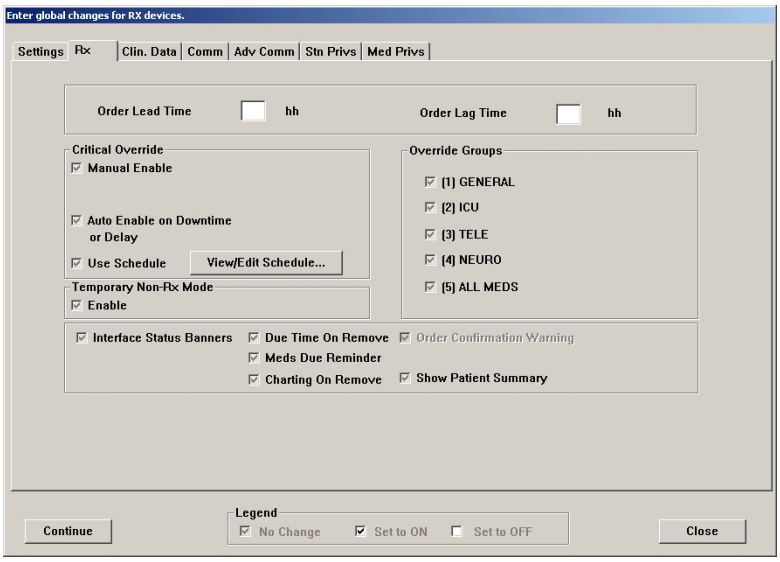
4. When you have finished selecting devices, click **Continue**.

5. In the Enter Global Changes for <Type> Devices screen, make the applicable changes on the Settings tab.

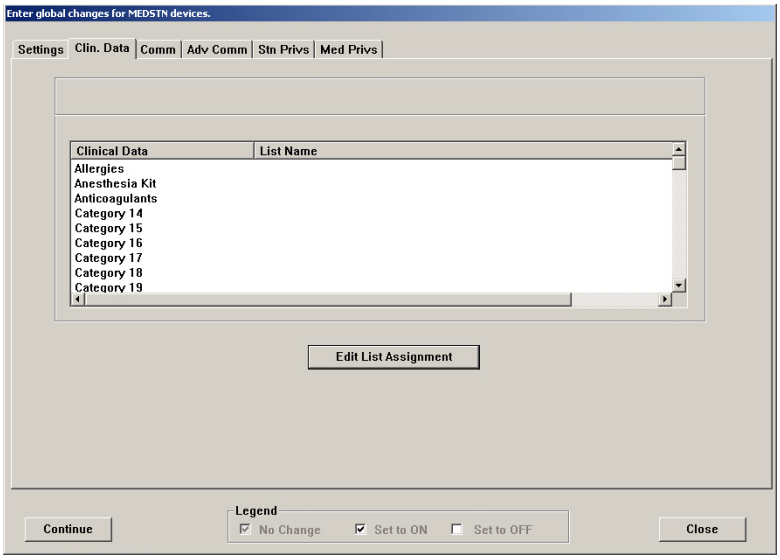


6. If you are updating stations that use profile mode, click the **Rx** tab, and make the applicable changes.

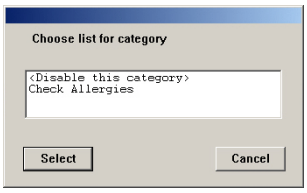
CAUTION
If you are selecting (enabling) the Manual Enable check box for the Critical Override, be aware that the Auto Enable on Downtime or Delay check box will be cleared and the value will be set to 0. If you subsequently disable a critical override manually, you must select Auto Enable on Downtime or Delay and enter a value (for example, 20 minutes) to ensure that the downtime entry is not empty.



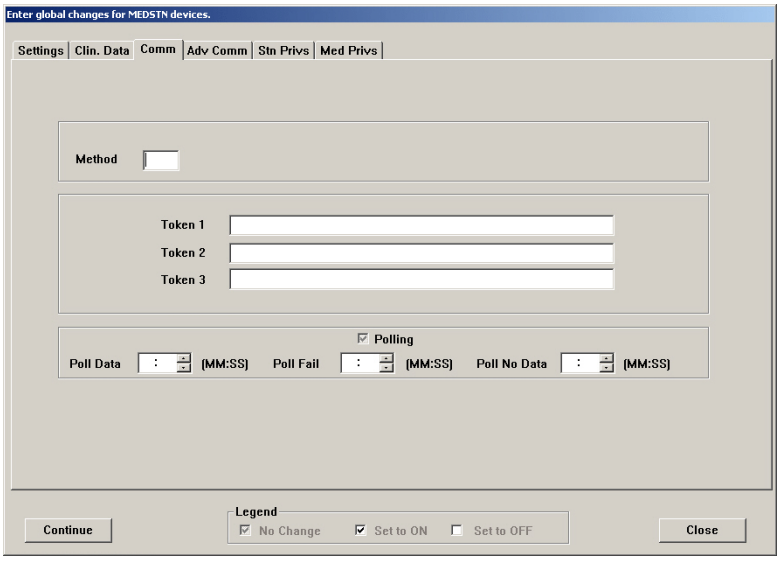
7. Click the **Clin. Data** tab, and make the applicable changes.



8. To activate (or deactivate) a clinical data category, select the category name, and click **Edit List Assignment**.
9. Select the applicable information, and click **Select** to add the definition to the List Name column.

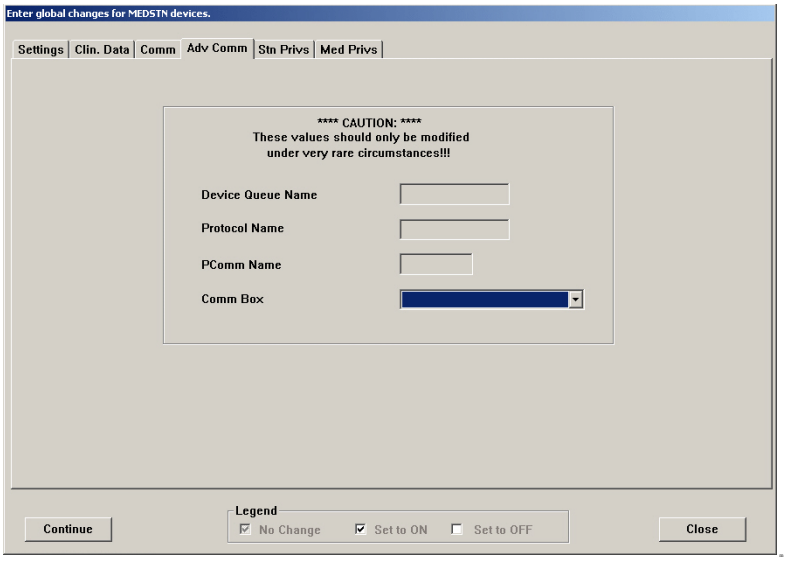


10. Click the **Comm** tab, and make the applicable changes.

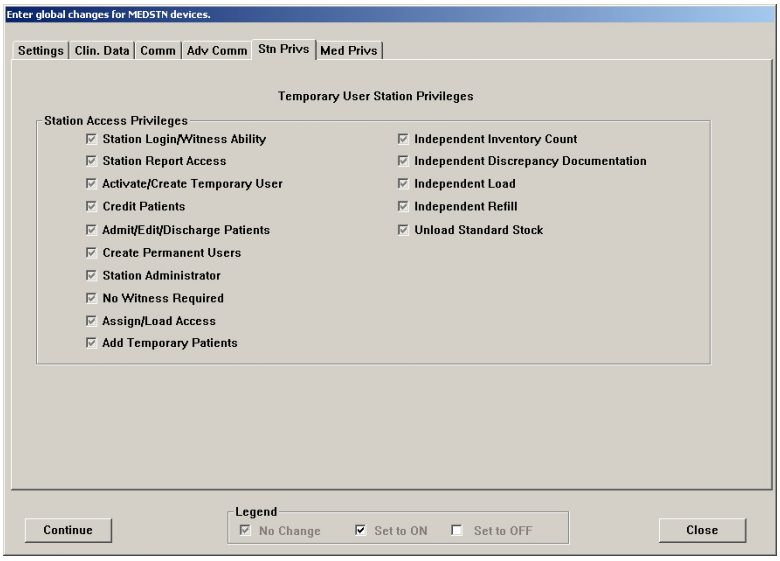


11. If a CareFusion employee has instructed you to do so, click the **Adv Comm** tab, and make the applicable changes.

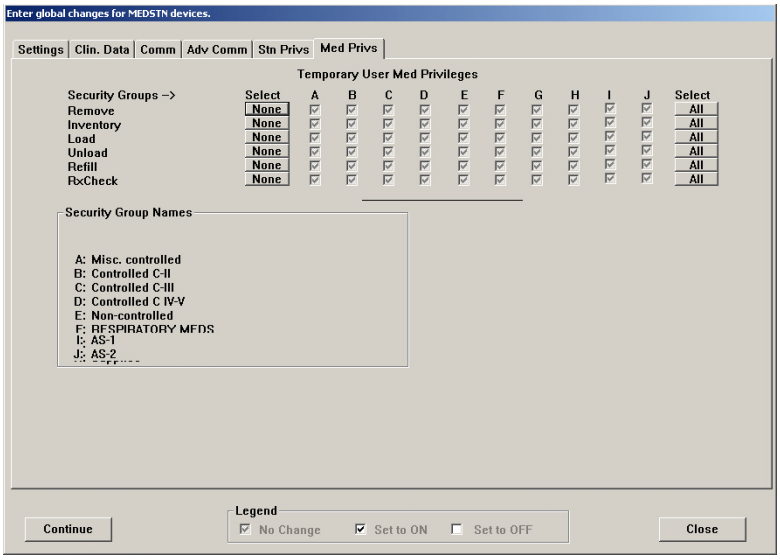
CAUTION
Do not change the information in this screen unless directed to do so by a CareFusion representative. This screen affects station communication and message processing.



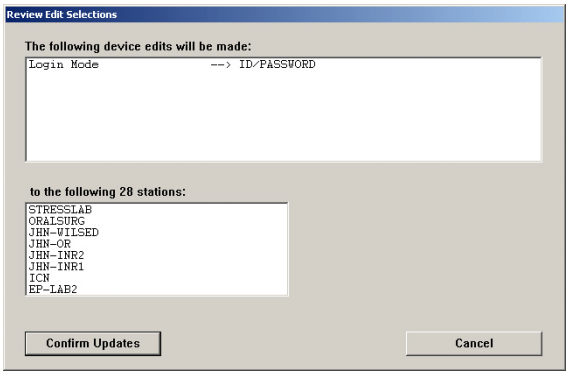
12. Click the **Stn Privs** tab, and make the applicable changes.



13. Click the **Med Privs** tab, and make the applicable changes.



14. When you are finished, click **Continue**.
15. In the Review Edit Selections screen, verify that the changes are correct, and then click **Confirm Updates**.



16. In the confirmation screen that appears, click **OK** to continue.

    The standby screen appears.

Updating User Information Globally

The following procedure explains how to update selection criteria for multiple users. For more information about these settings, see the applicable section under *Adding a User* on page *66*.

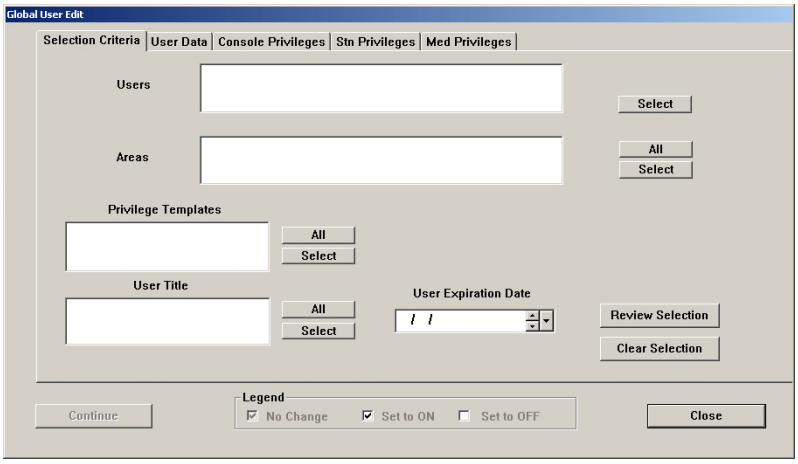
CAUTION
If you update user information globally for users who are assigned to a template, be aware that the update removes the template assignment.

To update user information globally

1. Select **Utilities > Global Edits > Users**.

   The Global User Edit screen appears with the Selection Criteria tab selected.

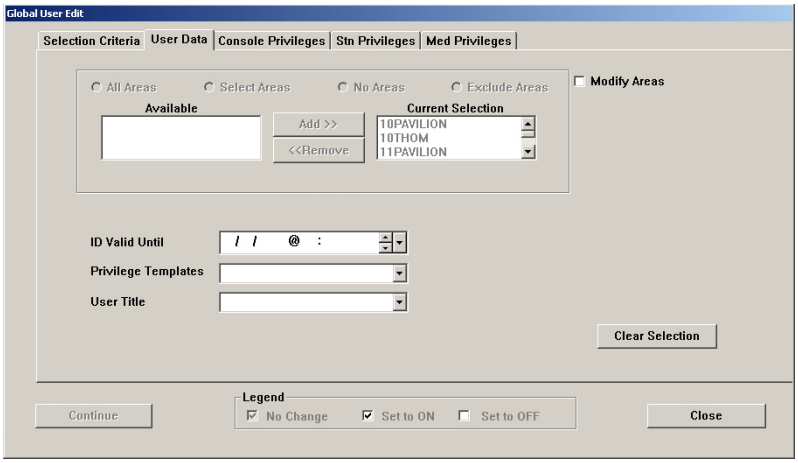
NOTE
- Note the Legend section at the bottom of the screen. Each check box can have three values (instead of the usual two values): On, Off, or No Change. No Change means that the field retains its current value and is not affected by the edit.
- The Clear Selection button clears the screen.



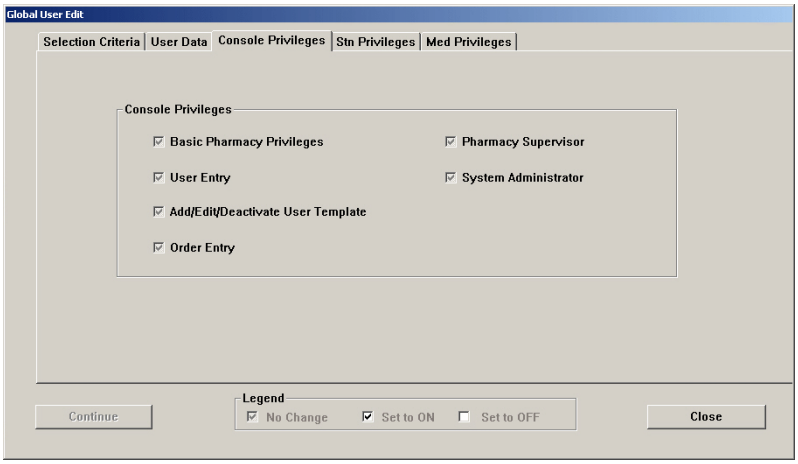
2. In the Users section, click **Select** to choose users.
3. In the Areas section, click **Select** or **All** to edit areas.
4. In the Privilege Templates section, click **Select** or **All** to edit templates.
5. In the User Title section, click **Select** or **All** to edit the user title.
6. In the User Expiration Date section, enter the date on which the logon information expires.

NOTE
You can only use the User Expiration Date section to extend the expiration date for a user whose account has expired.

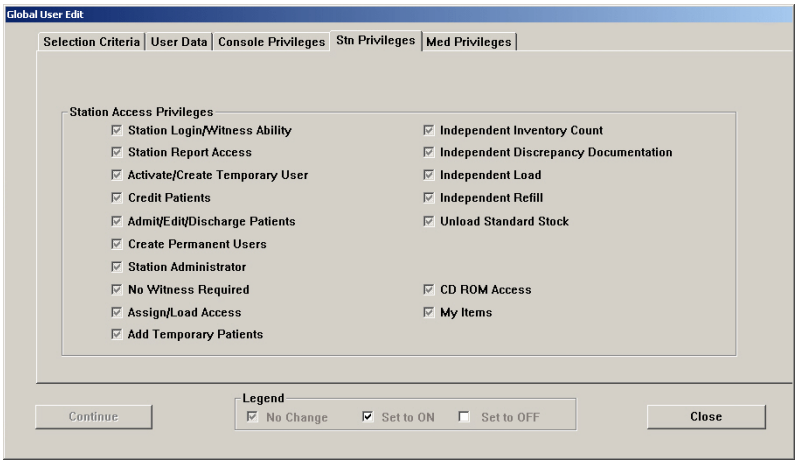
7. To review the list of users who match the selected criteria, click **Review Selection**, review the list of users, and click **Done**.
8. Click the **User Data** tab, and make the applicable changes.



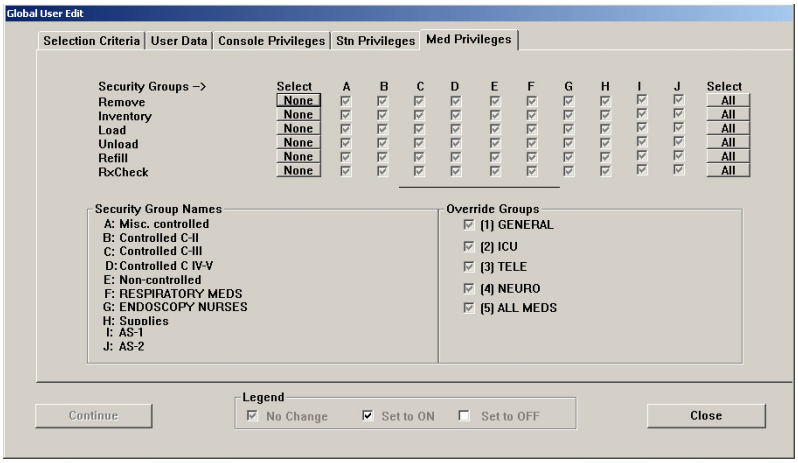
9. Click the **Console Privileges** tab, and make the applicable changes.



10. Click the **Stn Privileges** tab, and make the applicable changes.



11. Click the **Med Privileges** tab, and make the applicable changes.



12. When you are finished, click **Continue**.
13. In the Global Edit Confirmation screen, verify that the changes are correct, and then click **Confirm Updates**.
14. In the confirmation screen that appears, click **OK** to continue.
15. To return to the standby screen, click **Close**.

Archiving Transactions

The MedStation system allows you to archive up to 31 days of transaction activity data in 24-hour increments. The data is stored in comma-delimited format, with character fields enclosed in quotes. You can specify both the types of archive files to create and the transaction fields to archive.

You can configure the console's archive maintenance to store up to 31 days of transaction data from which it generates console reports. You can also import archived data into a spreadsheet, relational database, or other form of third party software. This allows you to report more than 31 days of data.

The Archive function can create six types of files for each day that is archived:

- A header file (suffix.HDR)
- Pocket access transactions (suffix.PYX)
- User modification transactions (suffix.UTX)
- Resolved discrepancies file (suffix.DTX)
- Clinical data responses file (suffix.CDC)
- Legend of codes file (suffix.KEY)

This section includes the following topics:

- *Viewing or Deleting the List of Archive Files* on page *140*
- *Selecting and Archiving Data* on page *141*
- *Copying Archive Files to Media* on page *143*
- *Scheduling Archive Maintenance* on page *144*

Viewing or Deleting the List of Archive Files

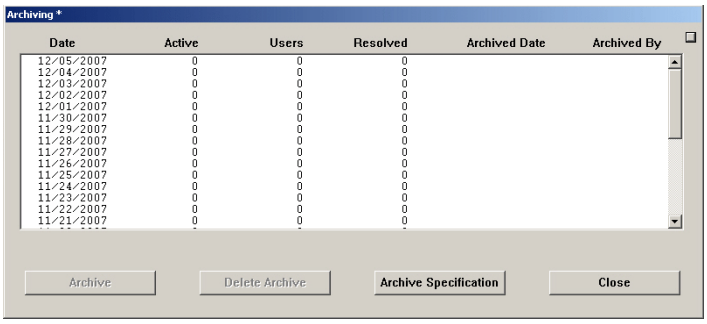
After you have activated archive maintenance, 31 days of archive files are automatically created and saved on the hard drive when the next maintenance cycle completes. You can view which archive files currently exist and delete archive files that you would like to have recreated in the next maintenance cycle. You cannot see the archive files, just the dates that correspond with those archives.

Field	Information
Date	The date that the transactions in the archive file occurred.
Active	The number of records in the activity transaction file (.PYX).
Users	The number of records in the user transaction file (.UTX).
Resolved	The number of records in the discrepancy transaction file (.DTX).
Archived Date	The date that the archive file was written.
Archived By	Specifies who copied the particular archive file.

To view an archive file

➤ Select **Utilities > Archiving**.

The Archiving screen appears. The dates of the archived files are shown, not the specific files.



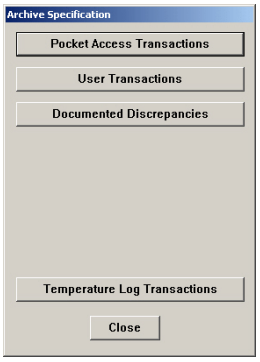
To delete a specific archive file

1. Select **Utilities > Archiving**.
2. In the Archiving screen, select the archive file to delete by clicking the date.
3. Click **Delete Archive**.
4. In the confirmation screen that appears, click **YES** to continue.
5. To return to the standby screen, click **Close**.

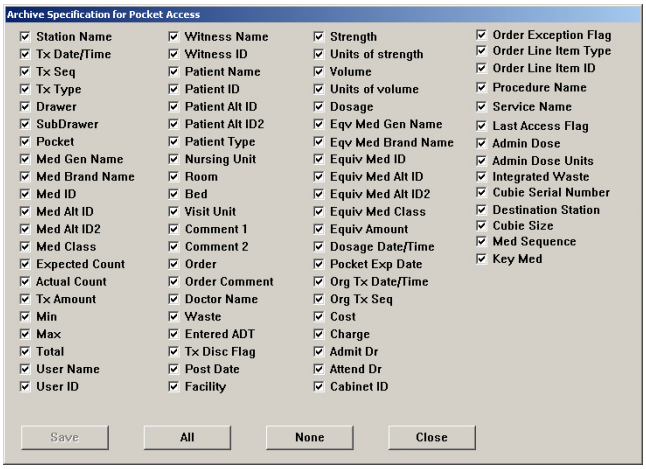
Selecting and Archiving Data

The following procedure explains how to select and archive various transactions.

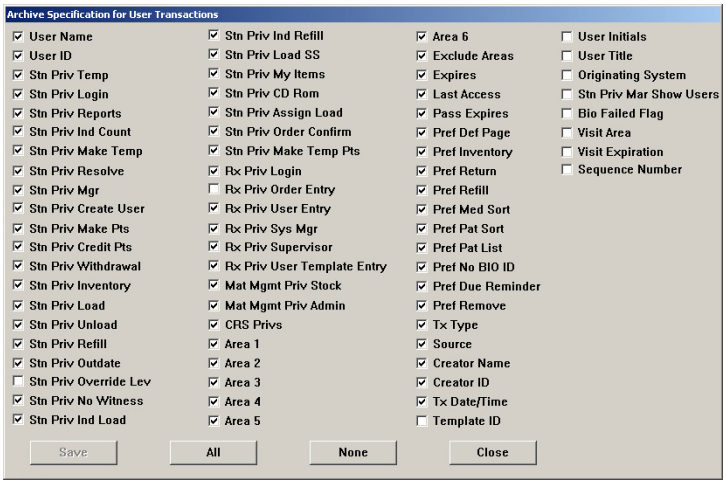
1. Select **Utilities > Archiving**.
2. In the Archiving screen, click **Archive Specification**.
3. In the Archive Specification screen, click **Pocket Access Transactions**.



4. In the Archive Specification for Pocket Access screen, select the transactions that you want to archive (all options are selected by default), and click **Save**.

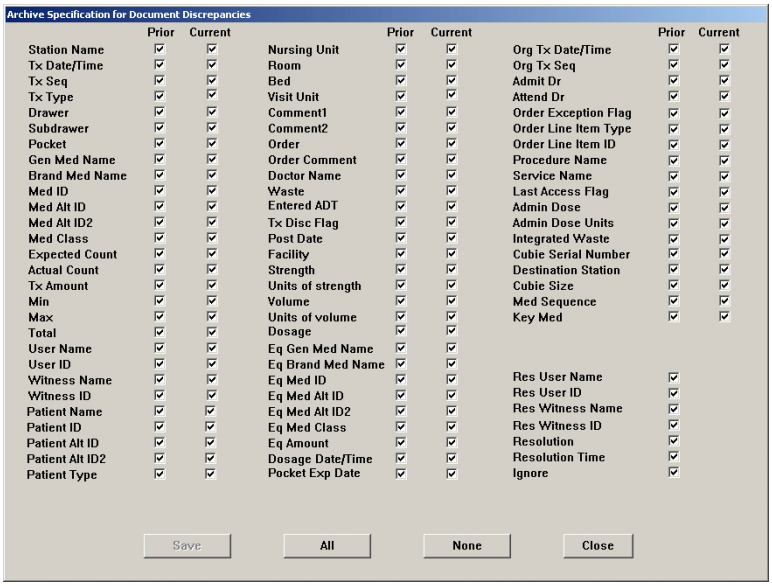


5. In the Archive Specification screen, click **User Transactions**.
6. In the Archive Specification for User Transactions screen, select the transactions that you want to archive (all options are selected by default), and click **Save**.

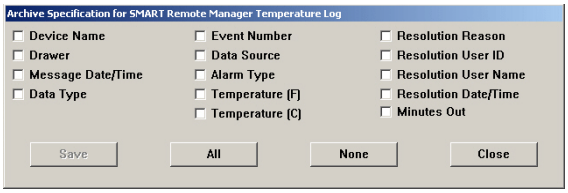


7. In the Archive Specification screen, click **Document Discrepancies**.

8. In the Archive Specification for Document Discrepancies screen, select the transactions that you want to archive (all options are selected by default), and click **Save**.



9. In the Archive Specification for SMART Remote Manager Temperature Log screen, select each field of the log that you want to archive, and click **Save**.



10. In the confirmation screen that appears, click **OK** to continue.
11. In the Archive Specification screen, select one or more files to archive, and click **Archive**.
12. In the confirmation screen that appears, click **YES** to continue.

    The file is archived.
13. In the second confirmation screen that appears, click **OK** to continue.
14. To return to the standby screen, click **Close**.

Copying Archive Files to Media

To prevent the possible introduction of a computer virus into the MedStation system, always use new disks. If you must recycle disks, reformat the disk, and run an antiviral program on it prior to use. CareFusion recommends that you use disks available from CareFusion because these are high-quality disks that have been rigorously tested to ensure their suitability and reliability.

1. Select **Utilities > Archiving**.

2. In the Archiving screen, select one or more files to archive.

   The Archive button becomes active.

3. Click **Archive**.
4. In the confirmation screen that appears, click **Yes** to continue.

   The file is archived.

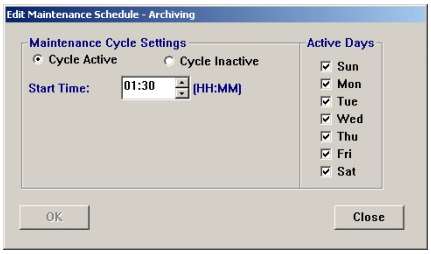
5. In the second confirmation screen that appears, click **OK** to continue.
6. To return to the standby screen, click **Close**.

Scheduling Archive Maintenance

The MedStation system allows you to specify the maintenance schedule for the archiving task. You can also begin running maintenance at any time, even if it is not scheduled.

1. Select **System Setup > Site Specific Options**.
2. In the Site Information screen, click the **Maintenance** tab.
3. In the Maintenance Schedule section, select **Archiving**, and click **Edit Maintenance Schedule**.
4. In the Edit Maintenance Schedule screen, enter the time that the maintenance cycle should begin in the **Start Time** box.

   Because archive files are generated for the previous day, the start time should provide time for all transactions to communicate down to the console so as to be included in the archive file.



5. To indicate when the task should run, select the applicable **Active Days** check boxes.

NOTE

- Archiving runs on the days you specify, unless you indicate that the cycle is inactive. A maintenance cycle is inactive if you select Cycle Inactive. This means that the maintenance cycle does not run, but allows you to keep the settings for future use.
- Select Cycle Active to run the cycle at the time and days specified.

6. To save your changes, click **OK**, and then click **Save**.
7. When the confirmation message appears, click **OK** to continue.
8. To return to the standby screen, click **Close**.

Chapter 5
Inventory

Use the Inventory feature to manage your facility's inventory as it moves from the pharmacy out to each station. After you set up your inventory, you can use inventory reports to gain information about medication usage and make decisions before refilling, unloading, replacing, and editing station and pocket contents.

This section includes the following topics:

Assigning a Medication to a Pocket *146*

Replacing or Editing a Loaded Medication *152*

Clearing a Pending Medication *153*

Making a Pocket Unavailable *154*

Assigning a Medication to a Pocket

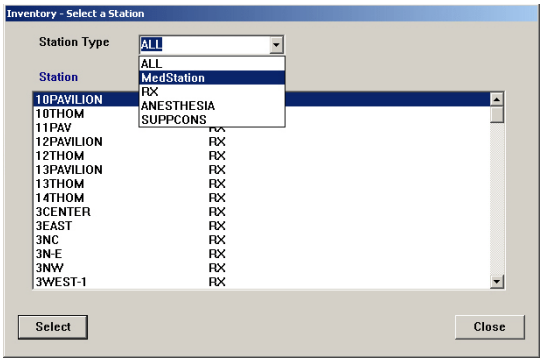
You initially set up your inventory by assigning formulary items to specific pockets and stations. You also set up planned inventory counts and individual pocket options. After initial setup, you can assign formulary items to empty pockets.

CAUTION
Under testing conditions with an empty station, the temperature of certain locations within a station might reach up to 4.5°C (8°F) above ambient temperature in the room. Be aware of this when storing temperature-sensitive products.

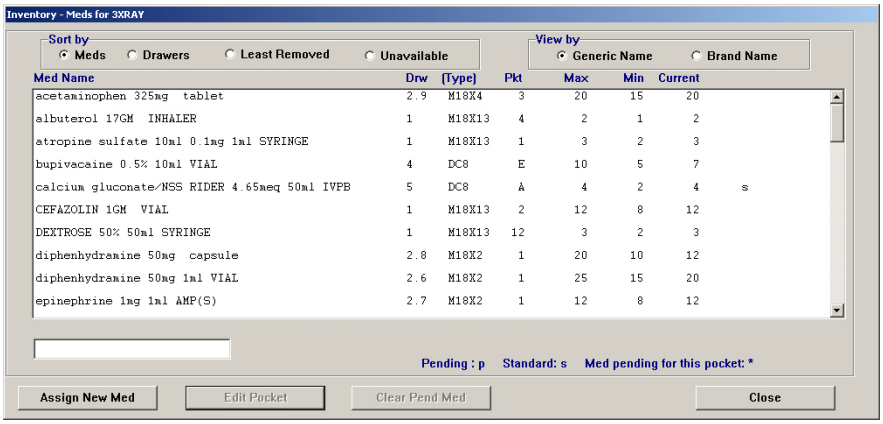
To assign a medication to a pocket

1. Select **Inventory > Station Inventory**.
2. In the Inventory – Select a Station screen, select the station that you want to load medications into, and click **Select**.

   You can limit the number of stations displayed by selecting a Station Type first.

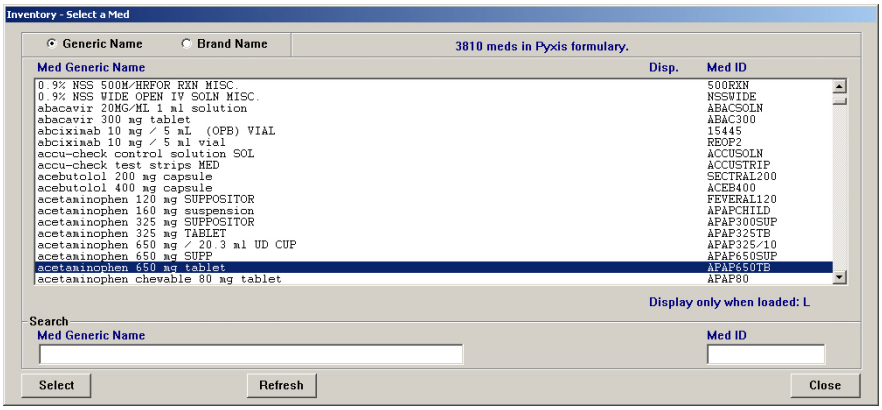


   The Inventory – Meds For screen appears showing the medications that are currently loaded or pending in the selected station.

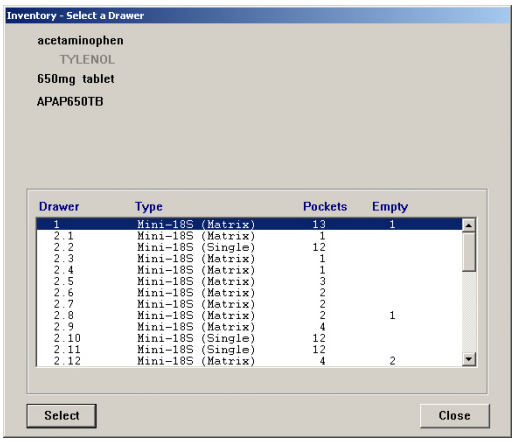


3. Click **Assign New Med**.

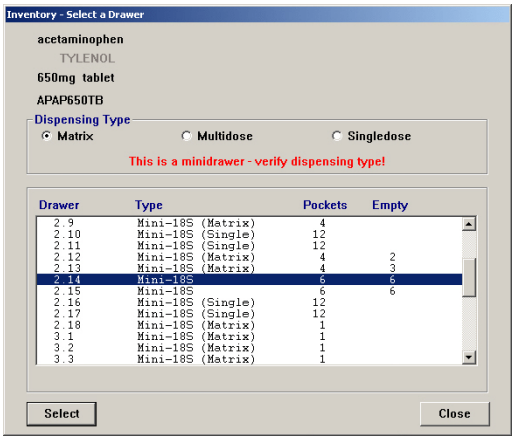
4. In the Inventory – Select a Med screen, select the medication, and click **Select**.



5. In the Inventory – Select a Drawer screen, select the drawer to assign the medication to, and click **Select**.

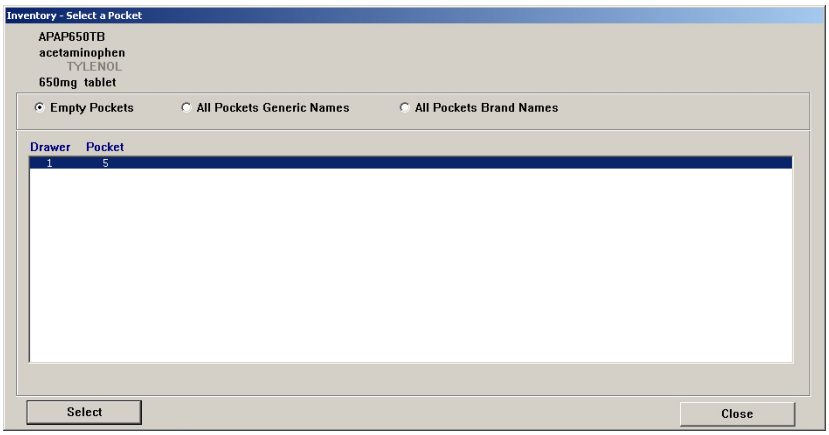


6. If you selected a MiniDrawer, do the following when the next Inventory – Select a Drawer screen appears:
   a. If the MiniDrawer does not currently have any pending or loaded medications, select one of the following types of dispensing drawers:
      - **Matrix**—The drawer is treated as a regular matrix drawer—each pocket is assigned a different medication.
      - **Multidose**—All pockets in the drawer are assigned the same medication and each pocket can contain a varied quantity of that medication.
      - **Singledose**—All pockets in the drawer are assigned the same medication, and each pocket can contain no more than one medication.



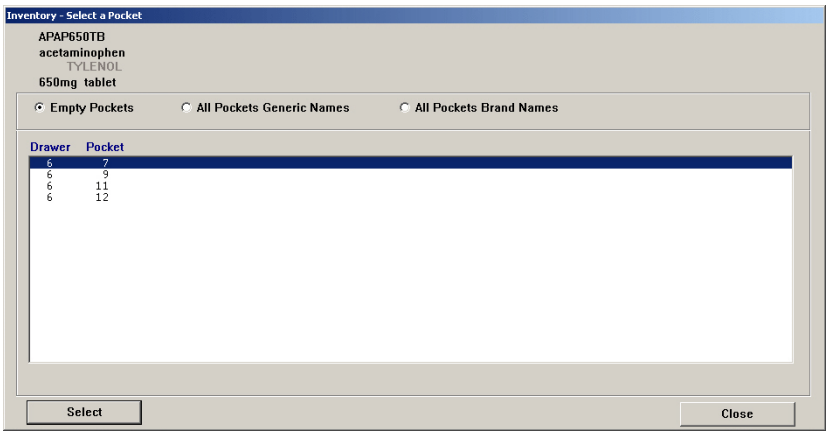
NOTE
If the MiniDrawer has pending or loaded medications, it will be preconfigured as a matrix multi-drawer or single drawer.

   b. Click **Select**, and then click **YES** when the confirmation screen appears.
   c. If you selected Matrix for this MiniDrawer, select the applicable pockets when the Inventory – Select a Pocket screen appears, and then click **Select**.



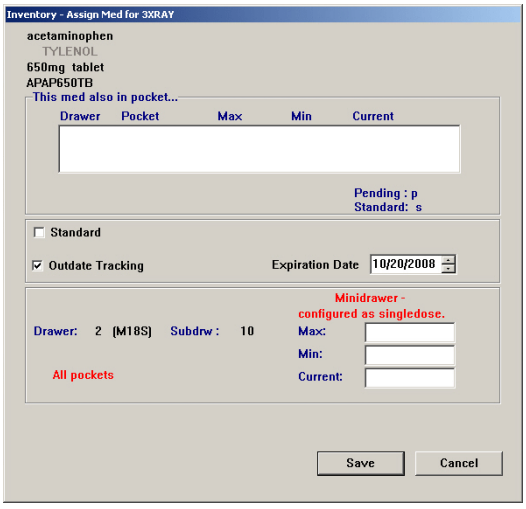
7. If you selected a different type of drawer (not a MiniDrawer), select the pocket to load the medication into when the Inventory – Select a Pocket screen appears, and click **Select**.

NOTE
You can sort the pockets list by clicking the appropriate button—by Empty Pockets (in the selected drawer), by All Pockets Generic Names, or by All Pockets Brand Names. If you are using a matrix drawer, sorting by All Pocket Generic Names allows you to view which medications are sharing the drawer.



8. When the Inventory – Assign Med For screen appears (the information displayed in this screen varies based on the type of drawer that you selected), select the **Standard** check box if this is a standard medication.

NOTE
A standard medication is a medication that remains loaded in the station at all times. (You might determine this information based on past usage.) If a user attempts to unload it at the station, the station displays a warning.



9. If applicable, select an Override Group from the list.

NOTE
Users with the same override group selected here have access to the medication in this pocket. This field defaults to Use Med Setting, which means you can cause the pocket's override group to automatically match that of the formulary item. (This does not display for medications loaded in another station.)

10. To enable the system to check the expiration date of the medications stored in this station and pocket, select the **Outdate Tracking** check box.

    You might want to use Outdate Tracking for:

    - Medications that are used infrequently, to ensure that expired medications do not remain available for administration.
    - Expensive medications, to ensure that they are not wasted.

    The system sets up a default date (the current month) indicating when the medication is considered expired. You can change this date, if desired.

NOTE
The station subsequently uses this expiration date to determine whether the outdate (expiration date) for this pocket is within the current month. If it is, a message displays at the station to warn the user that the pocket being accessed might contain outdated medications, and that the expiration date on the medication they administer should be verified.

11. If applicable, select the **Remove Fractional Units** check box.

NOTE
Most medications do not need the Remove Fractional Units feature. Enable the feature for multi-dose elixirs where nurses might remove 7.5 CCs, for example, of a 15 mg dose. This feature is also necessary in pediatric units.

12. Assign the **Max**, **Min**, and **Current** values:
    - **Max**—The maximum number of this medication loaded in the pocket.

      Be careful not to load the pocket so full that medication packages protrude above the rim of the pocket. This might prevent the drawer from opening.
    - **Min**—The count or level at which the medication should be refilled. This level is an important threshold in Inventory reports and messages.
    - **Current**—The actual number of this medication that you intend to load in this pocket.

NOTE

- A rule of thumb is to initially set the Min level at 40% of the Max and then adjust it accordingly as you see how fast a certain medication is being depleted.
- Another method is to determine your average daily (or hourly) need for the medication for the period of time between normal station refills and set the Max count and Min to cover that need.
- What you actually load in the pocket at the station, however, supersedes the number you enter here.
- For a Singledose drawer, the values are no greater than the number of pockets in the drawer.

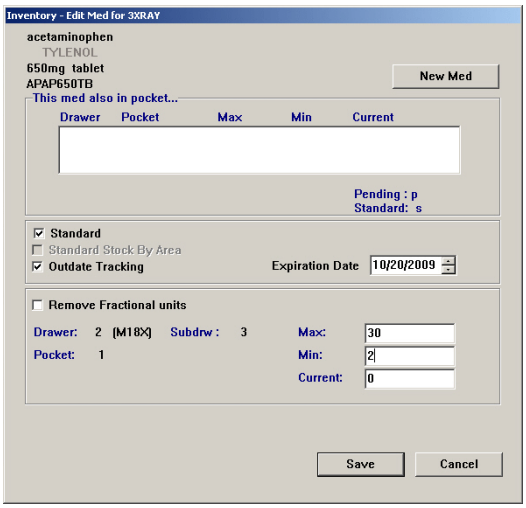
13. To save your changes and return to the Inventory – Meds For screen, click **Save**.

Replacing or Editing a Loaded Medication

The replacing a loaded medication function allows you to replace a loaded medication during initial inventory setup (or later) because it is not often used at the particular station, there are currently no orders for it, or it was loaded in error. The editing a loaded medication function allows you to view or change the Max and Min level of the pocket, or view or change pocket options such as Standard Med or Outdate Tracking.

1. Select **Inventory > Station Inventory**.
2. In the Inventory – Select a Station screen, select the station to load the medications, and click **Select**.
3. In the Inventory – Meds For screen, select the name of the medication to replace or edit, and click **Edit Pocket**.

   The Inventory – Editing Med For screen appears.



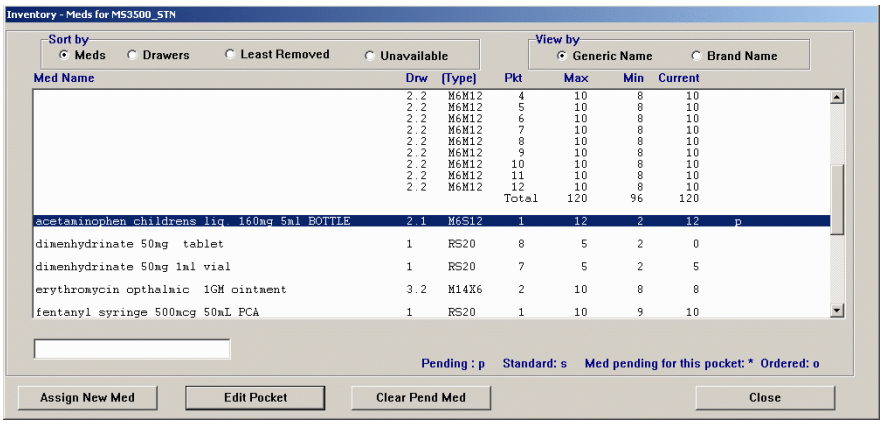
4. If you want to replace the current medication with another, do the following:
   a. Click **New Med**.
   b. In the Inventory – Select a Med screen, select the new medication, and click **Select**.
5. Update the applicable information in the Inventory – Editing Med For screen, click **Save**.

   The Inventory – Meds For screen appears.

Clearing a Pending Medication

Clearing a pending medication allows you to cancel the assignment of a medication to a station that has not yet been physically loaded.

1. Select **Inventory > Station Inventory**.
2. In the Inventory – Select a Station screen, select the station to load the medications, and click **Select**.
3. In the Inventory – Meds For screen, select the name of the pending medication to clear (identified by a "p" in the last column), and click **Clear Pend Med**.



4. In the confirmation screen that appears, click **YES** to continue.

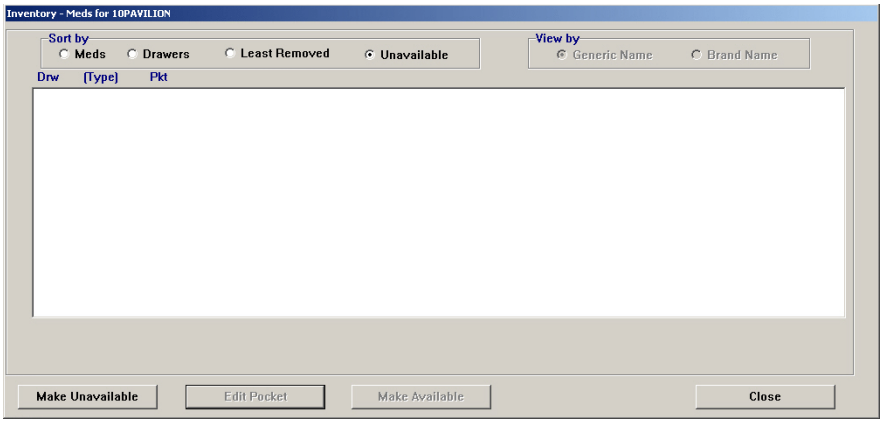
   The Inventory – Meds For screen appears.

Making a Pocket Unavailable

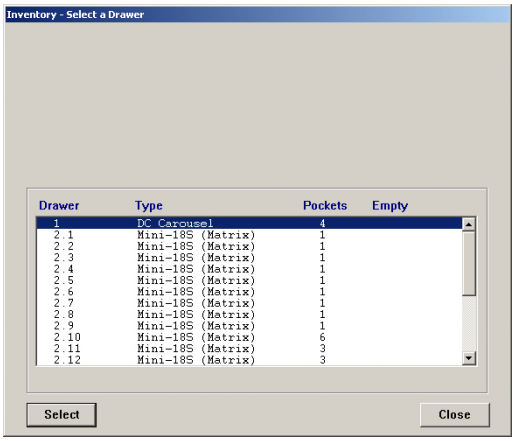
Use this feature for pockets that no longer exist in modified matrix drawers, or for the Return Bin.

1. Select **Inventory > Station Inventory**.
2. In the Inventory – Select a Station screen, select the station with medications to make unavailable, and click **Select**.
3. In the Inventory – Meds For screen, click **Unavailable** in the Sort by section of the screen.

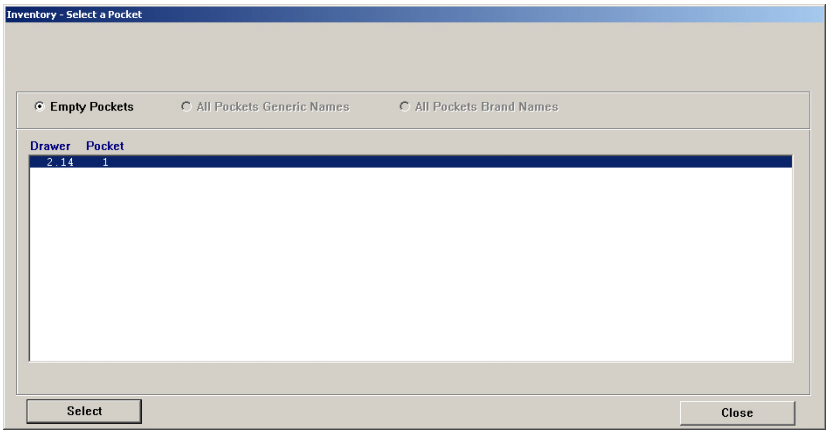
   If any pockets are already unavailable, they are shown in the list.



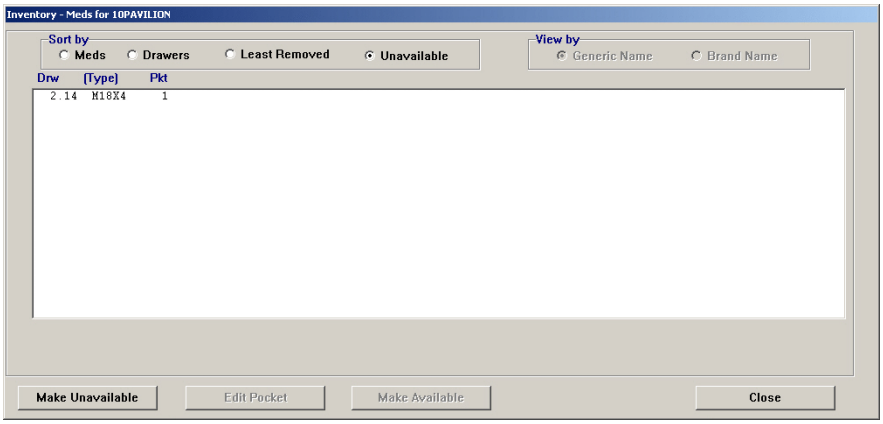
4. Click **Make Unavailable**.
5. In the Inventory – Select a Drawer screen, select the drawer that contains the pocket that you want to make unavailable, and click **Select**.



6. In the Inventory – Select a Pocket screen, select the pocket that you want to make unavailable, and click **Select**.



The Inventory – Meds For screen displays the pocket that you have made unavailable.



Chapter 6
Reports

The console provides reports to help you manage and monitor your system. This section includes the following topics:

Available Reports *158*

Report Descriptions *159*

Generating a Report *163*

Batch Reports *165*

Viewing Reports Queued for Printing *169*

Available Reports

The Reports feature allows you to view or print system information. You can group, sort, and filter the information to meet your reporting needs. You can also print or view the reports on screen.

Report types are divided into four categories, based on the information that they provide:

- **Inventory**—The Inventory reports provide a detailed account of the status of inventory throughout the system, allowing effective inventory management. You can generate these reports for specific stations or for all stations. Depending on the report selected, you can also generate them by zone, area, item name, item ID, and door and bin.
- **Activity**—Activity reports are a comprehensive group of records that detail all user interactions with the system (a transaction history) for specific stations. Activity reports include specific information on all accesses, charges and credits, loading and unloading, discrepancies in the system, and refill activities. Use these reports to get an overall view of how your particular station is functioning, and how to improve its usage.
- **System Activity**—System Activity reports monitor and track system-wide activity of the MedStation system. You can determine which users have been modified and by whom, and track system access. These reports help you maintain both the security and consistency of the MedStation system in your facility.
- **System**—System reports provide you with a snapshot of what your system contains at the time that you run the report. For example, you can run a Formulary report, which lists all formulary items in the system and their options, or you can run a Clinical Data Categories report, which lists all clinical data categories currently defined, and any associated lists.

Report Descriptions

The following table, which is listed in alphabetical order, describes the reports available in each category:

Category	Name	Description
Inventory	All Orders By Med	Identifies all patients who have ordered a medication.
	Empty Pockets	Locates all (or selected) drawers that contain empty pockets or that do not have medications assigned to them.
	Hospital Wide Med Summary	Identifies pockets containing specific medications.
	Inventory By Station	Produces a complete inventory by station, by drawer, including those items that are below minimum or in excess of maximum counts.
	Loaded Med W/O Orders	(Also known as Loaded Meds Without Orders) Provides a summary of loaded medications that do not have orders associated with them and those that would be good candidates for unloading if more space is needed.
	Meds Ordered & Below Min	Provides a summary of medications ordered with inventory at or below the minimum set for the medication, which helps you identify ordered medications that are due for a refill.
	Meds Without Removals	Identifies all (or specific) stations that contain medications that are seldom or never used.
	My Items Aging	Lists the inventory of My Items for selected users or all users (only available for Anesthesia System).
	Ordered Meds Not Loaded	Consists of two reports: one that includes equivalencies and one that does not. Provides a summary of ordered medications (sorted by area) that are not loaded and might need to be loaded immediately.
	Outdated Inventory	Shows any pockets that might contain expired medications based on the expiration dates entered for the medications when the pockets were loaded or refilled.
	Refill Pick & Delivery	(Also known as Refill - Pick and Refill - Delivery) Consists of two reports: one for picking medications to refill and one for delivery of the medications. The pick report lists the total quantity of each medication that needs to be pulled for the entire facility, while the delivery report identifies how much needs to be delivered and where.
	Stock Management Worksheet	Provides a worksheet by area, listing empty pockets, ordered medications not loaded, and pockets that have not been accessed since the date you specified.
	Stock Out Summary	Identifies medications whose quantities have reached zero.

Category	Name	Description
Activity	All Station Events	There are many reasons why you might run this report. The following lists several examples: • To comply with federal and state regulations, run this report for all narcotic transactions and retain the reports for your records. • To support investigation of unresolved discrepancies. • To view CDC responses for versions of the MedStation system prior to 4.1. • To complete an audit.
	Billing Summary	Summarizes billing by patient (or other sort order) rather than by individual transaction.
	Charges & Credits	Provides a comprehensive list of all charges and credits for one or more patients or stations.
	Clinical Data Categories	Lists all CDC responses.
	Discrepancies	(Also known as All Discrepancies) Lists all unresolved (open) and all resolved (closed) discrepancies.
	Inventory Verification	Provides a list of all inventory at one or more stations.
	Loading & Unloading	Indicates how much pharmacy activity is spent loading and unloading a medication.
	Med Refill Activities	Tracks frequency of medication refills to help you determine if minimum and maximum levels are set appropriately.
	Outdated Med Removal	Lists the types and numbers of medications being outdated at the stations.
	Profile Override	Lists all Profile Override transactions that occurred during the specified time frame.
	Remove Warnings	Lists all remove warnings (Too Early, Too Late, and Too Close) that were overridden and the response that was entered to support the override.
	Return Bin Activity	Lists transactions for the return bin.
	Returns And Wastes	Lists Return and Waste transactions. It also links a transaction with its previous Remove transaction, if Remove was used.
	Rx Refill & Load Verification	If your facility uses the Rx Check feature in the MedStation system, run this report on a regular basis to track the quality of your refill activities for medications selected for Rx Check.
	Transfer From/To User	Lists medications removed from one user's My Items list and transferred (added) to another user's My Items list (available only for Anesthesia System).

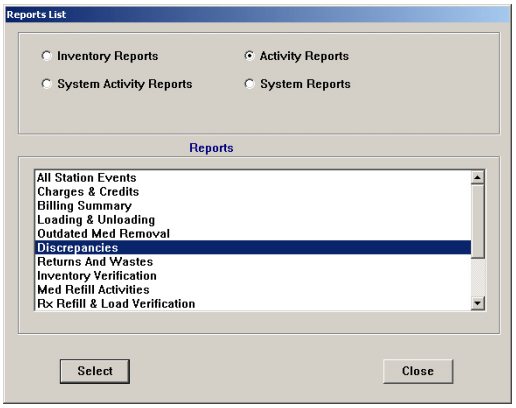
Category	Name	Description
System Activity	BioID Global	(Also known as BioID Global Info) Tracks BioID logon activity and statistics by station.
	BioID User Activity	Tracks BioID logon activity and statistics by user.
	BioID - Users Not Registered	Lists users who have not registered their BioID.
	Console & Station Activity Log	Lists all access activity, in chronological order, at one or more stations.
	Entered ADT Information	Tracks admission, discharge, and transfer (ADT) information entered through any station. This includes all patients whose information was entered manually.
	Login Activities	Tracks all successful logon attempts by users. Also includes users who log on as witnesses.
	Service Messages	Lists all service messages that occurred during the specified days.
	SMART Remote Mgr Temperature Log	Lists temperature ranges, and documents out-of-range and resolution reasons.
	User Modification Information	Lists all changes in user security during a specific date range. This includes the addition of temporary users and standard users, as well as the modification of information for existing users.

Category	Name	Description
System	Archive Specifications	Lists the fields selected for archiving within the three file types: Pocket Access, User Transactions, and Documented Discrepancies.
	Areas	Lists all areas, the nursing units assigned to those areas, and the automatic discharge time of each nursing unit.
	Attention Notices	Prints a copy of all current attention notices in addition to displaying them on the console.
	Batch List	(Also known as Batch Report List) Lists all currently defined batch reports.
	Clinical Data	Provides all clinical data categories, category lists, and category options.
	Combination Dose Groups	Lists all Combination Dose Groups defined in your formulary.
	Devices	Lists all devices in the system and configuration options.
	Equivalencies	Lists all equivalencies defined in your formulary.
	Formulary	Lists all formulary items in the system and their configuration options at the time the report is run.
	Formulary Links	Lists each formulary item and its association with kits. If profile mode is activated, the report also includes associations with equivalencies, variable doses, and combination doses.
	Kits	Lists all kits defined at the console.
	Override Groups	Lists the override group for each medication at a station. Also lists users and their override groups.
	Patient Profiles	Provides summary or detail of orders.
	Patients	Lists and describes all patients in the system.
	Pharmacy Configuration	Lists security levels, medication classes, discrepancy resolution reasons, and station and formulary lists.
	Profile History	Shows each order for the patient as originally entered, including a history of any modifications made to each order during a specified time interval. The report shows what was changed (by whom and when), and if the change was via the host or from the console. The report also lists expired orders.
	Site Specific Options	Provides information such as facility demographics, system options, and report and maintenance options. The information presented represents what was defined using the Site Specific Options in the System Setup menu.
	SMART Remote Mgr Configuration	(Also known as Device Temperature Configuration) For each SMART Remote Manager device and drawer, this report displays temperature extremes, polling interval, and last calibration date.
	Statistics	(Also known as System Statistics) Provides system statistics such as the number of medications in the formulary, the number of users, the number of patients, and the number and types of devices.
	Users	Lists all users, their configuration options, and the last date of access. Review this report to ensure that all required users are currently in the system, and to ensure that all terminated employees are removed from the system.
	Variable Dose Groups	Lists all Variable Dose Groups defined in your formulary.
	XQ Messages	Lists all transaction messages currently in the XQ message queue.

Generating a Report

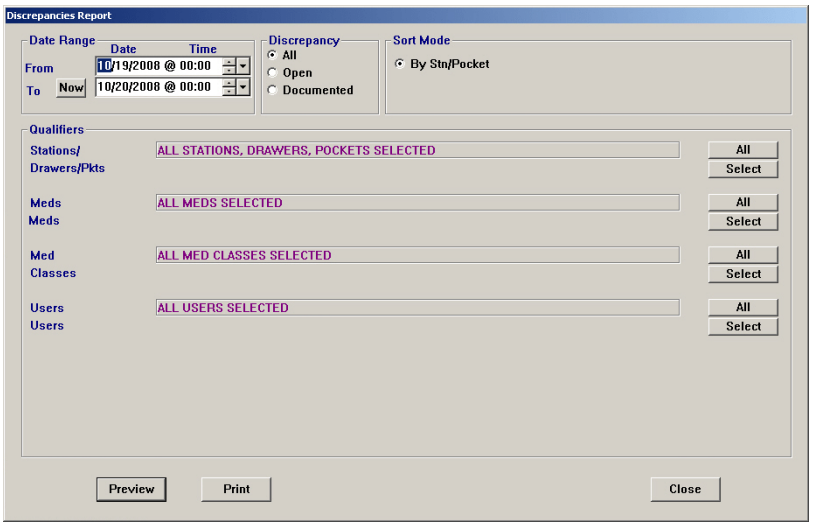
The screens represented here are a sample of one report selection. Your screens might look different depending on the report that you select, however the workflow is similar.

1. Select **Reports > Run Reports**.
2. In the upper section of the Reports List screen, select a category.



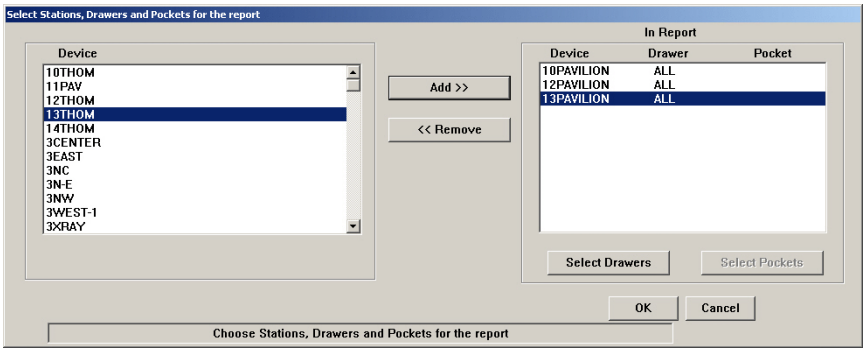
3. In the corresponding list of reports, select the applicable report, and click **Select**.

   The screen for the selected report appears; the screen that you see varies depending on the report that you selected. Note that the system defaults each qualifier to All.



4. Select the applicable options.

5. If applicable, click **Select** for each qualifier, select the applicable information in the screen that appears, and click **OK** to return to the main screen.



6. To view the report information on the screen, click **Preview.**

   The report appears on the screen. To move forward and backwards through a multi-page report, click the scroll bar.

7. To print the report, click **Print**, and then click **OK** when the confirmation screen appears that indicates that the report has been added to the queue.
8. To return to the previous screen, click **Exit**.
9. To return to the standby screen, click **Close**.

Batch Reports

The Batch Reports option is issued to generate routine reports automatically in accordance with a selected schedule.

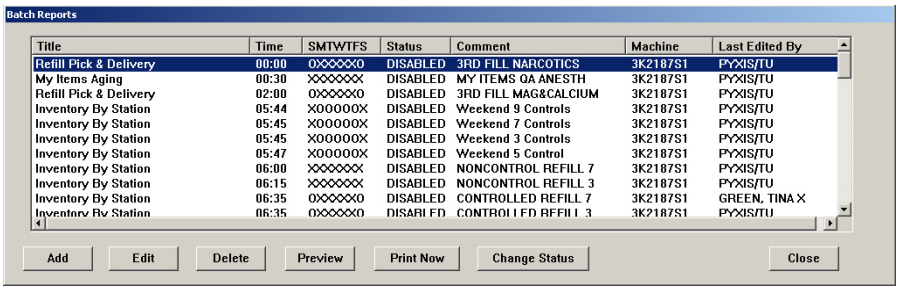
This section includes the following topics:

- *Adding a Batch Report* on page *165*
- *Viewing the List of Batch Reports* on page *167*
- *Editing a Batch Report* on page *167*
- *Deleting a Batch Report* on page *168*
- *Enabling or Disabling a Batch Report* on page *168*
- *Printing a Batch Report* on page *168*

Adding a Batch Report

The following procedure explains how to create batch reports.

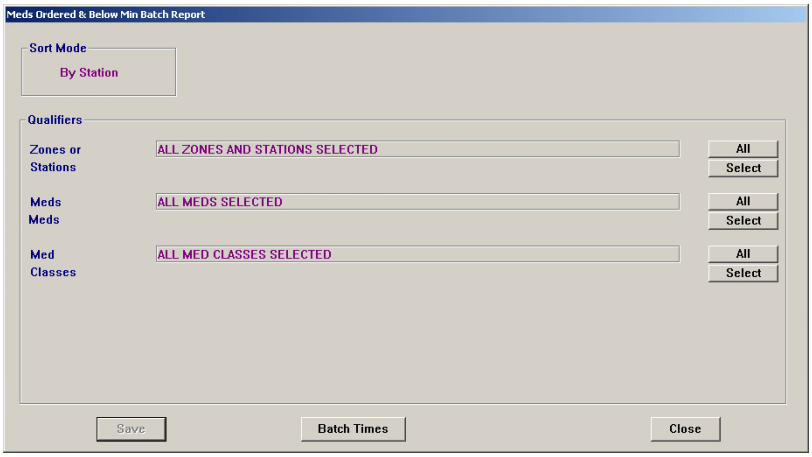
1. Select **Reports > Batch Reports**.
2. In the Batch Reports screen, click **Add**.



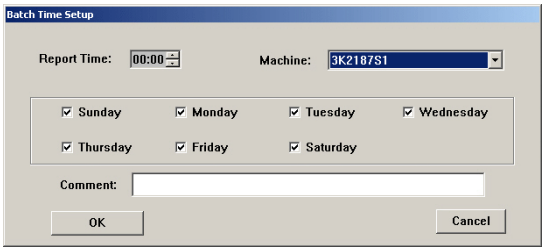
3. In the upper section of the Reports List screen, select the applicable category.

4. In the corresponding list of reports, select the applicable report, and click **Select**.

   The screen for the selected report appears; the screen that you see varies depending on the report that you selected. Note that the system defaults each qualifier to All.



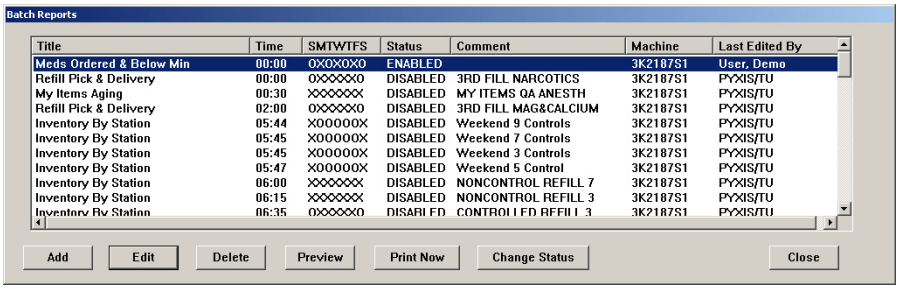
5. Select the applicable options, and use the **Select** buttons to configure each qualifier.
6. When you are finished customizing the report, click **Batch Times**.
7. In the Batch Time Setup screen, specify the time and days on which the report should run.



8. Select the machine—console or printer—where the report is to print.
9. In the **Comment** box, enter a comment that helps differentiate this batch report from another report that you or someone else created, and click **OK**.

10. In the report screen, click **Save**.

    The Batch Reports screen lists the report that you have set up.



    The report automatically queues up for printing at the specified day and time. It does not interrupt the printing of a report in progress, nor does it interrupt a user who is logged on to the system at the same time.

11. To return to the standby screen, click **Close**.

Viewing the List of Batch Reports

The following procedure explains how to view a list of existing batch reports.

1. Select **Reports > Batch Reports**.

   The Batch Reports screen lists the jobs that have been set up.

2. To return to the standby screen, click **Close**.

Editing a Batch Report

The following procedure explains how to update existing batch reports.

1. Select **Reports > Batch Reports**.
2. In the Batch Reports screen, select the job that you want to update, and click **Edit**.

   The screen for the applicable report appears.

3. Select the applicable options, and use the **Select** buttons to configure each qualifier.
4. When you are finished updating the customized report options, click **Batch Times**.
5. In the Batch Time Setup screen, update the time and days on which the report should run.
6. If applicable, select a different console or printer where the report is to print.
7. In the **Comment** box, update the information, and click **OK**.
8. In the report screen, click **Save**.

   The Batch Reports screen lists the report that you have set up.

9. To return to the standby screen, click **Close**.

Deleting a Batch Report

The following procedure explains how to delete batch reports.

1. Select **Reports > Batch Reports**.
2. In the Batch Reports screen, select the applicable report, and click **Delete**.
3. In the confirmation screen that appears, click **YES** to continue.
4. To return to the standby screen, click **Close**.

Enabling or Disabling a Batch Report

You can temporarily disable a batch report if you do not use it often. Disabling a batch report rather than deleting it is sometimes preferred if the qualifiers it contains are very specific or complex and would take a substantial time to redefine.

1. Select **Reports > Batch Reports**.
2. In the Batch Reports screen, select the applicable report job, and click **Change Status**.

   This button works as a toggle. It changes the Status from ENABLED to DISABLED and back again.
3. To return to the standby screen, click **Close**.

Printing a Batch Report

The following procedure explains how to print a batch report.

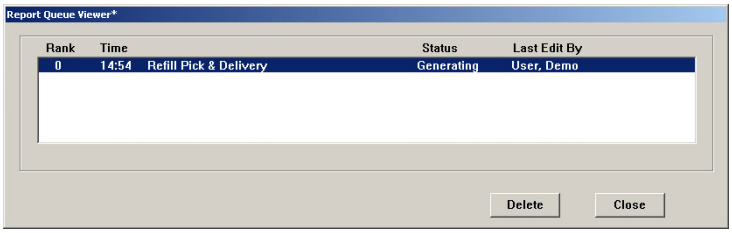
1. Select **Reports > Batch Reports**.
2. In the Batch Reports screen, select the applicable report, and click **Print Now**.
3. In the confirmation screen that appears, click **OK** to continue.
4. To return to the standby screen, click **Close**.

Viewing Reports Queued for Printing

You can use the Report Queue Viewer to see which reports are currently waiting to be printed, whether they were generated manually or via a batch job. You can also delete a report from this screen.

1. Select **Reports > Report Queue Viewer**.

   The Report Queue Viewer screen appears. It lists all reports currently waiting to print.



2. To delete a job from the queue, select it, and click **Delete**.
3. To close the viewer, click **Close**.

Appendix A
Troubleshooting

Problems occurring at the console can be the result of a variety of causes, including user input error, communications problems, power loss, and corrupt files or data. This section offers remedies to potential problems involving the console and its components. This section includes the following topics:

Attention Notice (Bulletin) *172*

Using Brain Transplant to Restore a Database *175*

Communication Problem with Procar *177*

ADT Communication Problems *178*

Report Does Not Include Correct Data *180*

Facility Power Outage *181*

Console Printer Not Working *182*

Remote Diagnostics *183*

User Cannot Access a Medication *184*

Attention Notice (Bulletin)

Attention notices are displayed at the console screen when the MedStation system detects certain types of problems. Bulletins are the printed version of attention notices, if your system was configured to do so in the Site Specific Options feature. The most common examples of these notices including the following:

- **Interface Status**—Notifies the user when the console is not communicating with the facility's host system or messages from the host system are delayed.
- **Stockouts**—Stockout notices list the medication, the station, and the time the that stockout occurred. The notice disappears when the medication is refilled.
- **Stock Critical Low**—The system determines that the quantity of items in a pocket should be designated as "critically low" based on a percentage of the pocket's "minimum stock" value.
- **Stations with Drawer Failures**—Indicates when a drawer fails to open properly.
- **Unresolved Discrepancies**—If a discrepancy occurs at the station during a remove or an inventory, that discrepancy is recorded at the console as an attention notice. It remains on the screen until either the discrepancy is resolved or after 31 days have passed.
- **Critical Override**—Allows a user to a remove formulary items without an order when the override group to which the item and user are assigned is not enabled on the station.
- **Special Attention Notices**—Produces a report that contains attention notices in effect at the time the report is generated.

The following notices appear on the console when a system problem occurs:

- **Can't Communicate Bulletin**—If a particular station has not successfully linked to the console for a period of 20 minutes and a minimum of 3 fail counts have been registered, the Can't Communicate attention notice displays. This notice remains until the station successfully links to the console or until the station's polling option is turned off.
- **Console Module Down**—If one of the console modules is not running, an attention notice displays describing which module is not running. Sometimes modules that stop running can restart themselves.
- **Drawer Failure**—If one or more drawers at any station has failed, an attention notice displays. Successfully recovering all failed drawers clears this notice.

Can’t Communicate Attention Notice

If your screen is displaying attention notices stating that the console has failed to communicate with a station, try the solutions described in this topic.

NOTE
To ensure maximum system performance, always close the Communication Status screen after reviewing the information needed. The Communication Status screen should not be left open and active when not needed.

To determine your communication method

1. In the menu bar at the console, select **CommStatus**.

   Note whether XT follows the station name (the station name appears in the Device column). XT refers to a TCP/IP Token-Ring or Ethernet communication system.

2. Wait 30 minutes to see if the attention notice still appears.

   If so, does it refer to the same station or a different station?

   - If the notice remains for the same station, go to *Same Station Attention Notice* on page *173*.
   - If an attention notice displays for a different station, see *Different Station Attention Notice* on page *174*.

Same Station Attention Notice

If the communication problem is occurring at only one station, follow these steps:

1. Familiarize yourself with the communication device located next to the console.
   - Call the nursing unit where the station is located to find a user who is willing to spend five to 10 minutes troubleshooting with you.
   - Have the other user look at the station and confirm that the clock in the upper-right corner is working. If it has stopped, the station must be unplugged and rebooted.
   - If you are unable to find someone, you might need to make several round trips between the station and console to localize the problem.
   - Have your information systems (IS) department check the network connection to the station.
2. Make sure that the communication device has power.

   Check behind the station to see if red lights (at least one) are illuminated. If no lights are illuminated, the device’s power cord has probably become unplugged. Reconnect the power cord.

3. Determine whether the communication link has been reestablished.

   In the menu bar at the console, select CommStatus. Look for the station that caused the attention notice under Device. The next time the station is polled (under Last Polled), watch the failure count (FC) column for that station. If the FC is already zero or becomes zero after polling, communication has been reestablished. If the FC increments by one and does not return to zero, continue with the next step.

4. Check the CommStatus screen again.

   If the FC continues to increment and does not return to zero, contact the TSC.

Different Station Attention Notice

If communications problems are occurring at several stations, the problem might be console-related. A Recommended Standard (RS) communication problem at a station is also a possibility.

1. Verify that the communication device has power.

   For information about checking all the connections, see the earlier section, *Same Station Attention Notice* on page *173*.

2. Verify whether the data cable is properly connected.

   The data cable connects the communication device with the console. Gently wiggle each end of the line while carefully clicking them into their sockets.

3. Verify whether the communication link has been reestablished.

   a. In the menu bar at the console, select **CommStatus**.

   b. Look for the stations in the **Device** column. The next time the stations are polled (under Last Polled), watch the FC. If the FCs are already zero or become zero after each polling, communication is being reestablished. If the FCs continue to increment by one, contact the TSC.

4. If you are using the XT network mode of communications, you might want to get your information systems (IS) department involved as soon as possible to have them check the network connection to the station.

Using Brain Transplant to Restore a Database

A brain transplant restores a station's database from an error condition, such as a corrupted file, which prevents the station from operating correctly. A brain transplant is the process of copying and rebuilding the station's unique database from the console, where it has been continuously updated and saved with every poll of the station. A complete brain transplant involves taking the station out of service for a period of time. Depending on the station's database, this could take 15 minutes to two hours or longer.

Any number of error conditions at the station could signal the need for a brain transplant, but you should always consult with a CareFusion representative prior to initiating one, because some error conditions might be the result of something less dramatic and could be corrected with more conventional means.

This section includes the following topics:

- *Checking the Communication Status of a Station* on page *175*
- *Running a Brain Transplant* on page *176*

Checking the Communication Status of a Station

The following procedure explains how to check the station's communication status.

1. In the menu bar at the console, select **CommStatus**.

   The Communications Status screen appears. For more information, see *Communication Status* on page *121*.

   A value other than 0 in the column labeled FC (fail count) indicates a potential communications problem between the console and the station.

   If the FC is 0 and Last Poll and Last Link are each within a few seconds of the current time, you might need to transplant data back to the station.

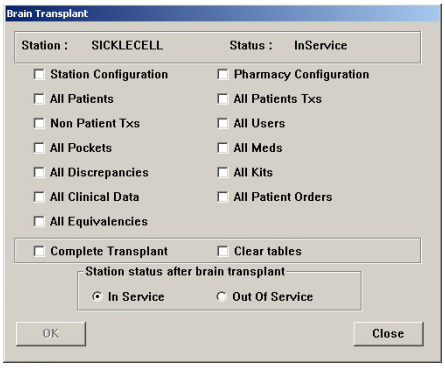
2. Contact the TSC for assistance.

   If the station has not experienced catastrophic data loss, there are brain transplant options which restores the data for a particular table that might have missing data. Depending on circumstances, you might be advised to use one of these other choices to update or correct a specific piece of the database, or if the data loss is more severe, you might be advised to do a complete brain transplant.

Running a Brain Transplant

Use the following procedure only under the direction of a CareFusion representative.

1. In the menu bar at the console, select **System Setup > Devices**.
2. In the Devices screen, select the device that requires the transplant, and click **Edit**.
3. In the Editing Device screen, click **Brain Transplant**.
4. In the Brain Transplant screen, select the applicable information, following the guidance of a CareFusion representative.
   - If the station has not experienced catastrophic data loss, the representative might advise you to perform a partial brain transplant, selecting only some of the options to update or correct a specific piece of the database.
   - If the data loss is more severe, the representative might advise you to do a complete transplant of the station.



5. In the Station Status After Brain Transplant section, select the applicable option, and click **OK**.
6. In the confirmation screen that appears, click **OK**.

   The console restores the station tables with data from the console database. The Devices screen displays the status of the station as BrainTxPlant.
7. To close the screens, click **Close**, and then click **Close** again.
8. When the station comes back into service, check the Communications Status screen (as described earlier in this process) to ensure that the FC is zero.
9. Check that the Last Poll and Last Link are each within a few seconds of the current time to make sure that the times are current.

Communication Problem with Procar

Some interface protocols can cause Procar to stop communicating with the console for a specified period of time. If this is the case, communications are resumed after the protocol completes. If something seems uncharacteristically wrong at any time during the process, contact the TSC.

1. Determine whether the Procar has power:
   - If the Procar power light is on, go to step 2.
   - If the light is dimmed, check the following:
     - Press the power button. It might have been turned off accidentally.
     - Make sure that the power cord is plugged into a socket and into the back of the Procar.

NOTE
Do not unplug or power off Procar unless directed to do so by a CareFusion representative.

     - If power resumes, go to step 2.
     - If power still does not resume, contact the TSC.
2. Check the communication status between the console and the Procar:
   a. Select **CommStatus**.
   b. In the Communication Status screen, check the Procar device.

      If the FC number continues to increment by one each time the device is polled, the communication problem still exists. In this instance, check the connection between the console and the Procar.
3. Check the Communication Status screen again.
   - If the FC number goes to zero, the device has successfully linked and should continue to run successfully.
   - If the FC number continues incrementing (does not go to zero), contact the TSC.

ADT Communication Problems

If you receive a call from a nursing unit stating that a patient's name is not showing up on the station:

1. Determine whether the patient was recently admitted or transferred to the unit.

   If so, it is likely that he patient's information will be sent to the station soon. Ask the nurse for the patient's identification number for reference. The nurse can enter the patient's information at the station using the Add Patient function (if the nurse has the privilege).

2. Determine whether the patient is listed at the console.
   a. In the menu bar at the console, select **System Setup > Patients**.
   b. In the Patients screen, enter the patient's name.
   c. If the patient's data is at the console (with the correct nurse unit) but has not shown up yet at the station, troubleshoot for a communications problem.
   d. If the patient is not found, select **List by**, and then select **Discharged**. Type the patient name in the search box to locate the patient information.
   e. If the patient is not listed on the console and you suspect the ADT interface, see *Patient or Patient Order Not Displayed at the Console* on page *179*.

Patient or Patient Order Not Displayed at the Console

If a patient's data does not show up at the console, troubleshoot first for a communications problem with Procar.

1. Determine whether the interface is behind.

   Look at the attention notices at the console, or the Interface is Down message at the station. Try waiting a few minutes. If the interface is behind, not down, for example, because the host computer is doing a backup, the patients and orders might show up soon.

2. Check the status of the Procar device.

   a. In the menu bar at the console, select **CommStatus**.

   b. In the Communication Status screen, check the Procar device.

      If the FC field is greater than zero, the communication link between Procar and the console is suspect.

3. Call the IS department to find out whether the mainframe is or was shut down.

   Explain that you believe that the ADT interface link between your MedStation system and the mainframe might not have been initialized. Ask them to reset the port to the MedStation system to restart the interface after normal operations resume.

4. If you have a special box that translates data from the mainframe, such as a Malibu or PQ-6 Black Box, check to see that the power cord is connected and that its power light is illuminated.

5. After securing the power cord and resetting the port, if the patient record still has not shown up on the console, contact the TSC.

NOTE
Do not unplug or power off Procar unless directed to do so by the TSC.

Patient Billing Information Problems

Go through the troubleshooting process, as explained in the *Patient or Patient Order Not Displayed at the Console* on page *179*.

Report Does Not Include Correct Data

At the report's heading, check the parameters selected to create the report. Make sure that all the parameters cover the specific data set that you intended.

If the report does not include data from the past few hours, change the To time parameter to NOW. This enters the current time into the time selection and causes the most current data to print.

If data for a particular station is missing, confirm that communication is current to that station by following the procedure for troubleshooting communications in *Can't Communicate Attention Notice* on page *173*. If everything appears current and the data is still incomplete, contact the TSC.

Facility Power Outage

In the unlikely event of a catastrophic power failure, including your facility's emergency power generator, the uninterruptible power supply (UPS) device included with the console provides enough power to complete currently processing tasks and effect an orderly shutdown of the console.

The console printer should never be plugged into the UPS. If it is, immediately turn the printer off and unplug it. When power is restored, plug the printer into a wall outlet.

Console Printer Not Working

If you experience problems with the console printer, follow these steps:

1. Determine whether the printer has power.

   Check that the power line to the printer is connected at both ends. If it is a laser printer, the LED panel on the top of the printer should display READY on the panel.

2. Determine whether the printer is out of paper.

   Normally when a printer runs out of paper, it signals you with a beep. If it is a laser printer, the LED panel on the top of the printer displays a message stating that the printer is out of paper.

3. Determine whether the printer is offline.

   Press the **On-Line** or **Select** button (depending on the printer model) on the front panel.

4. Make sure that all covers are seated properly.
5. Turn off the printer's power, and turn it on again.
6. If the paper is feeding, but nothing is printing, determine whether the ink ribbon or toner need to be replaced.

   The ink might have been used up. Replace the ink ribbon and try running the report again. If it is a laser printer, the LED panel displays TONER LOW, indicating that the toner cartridge on the printer should be replaced.

7. Check the communication line between the printer and console.

   Gently wiggle the communication line at the printer and console connections. Try running the report again.

8. If the preceding steps do not fix the printer, contact the TSC.

Remote Diagnostics

On rare occasions, a problem occurs that defies explanation, and troubleshooting procedures fail to pinpoint what is occurring or how it can be fixed. Sometimes the most direct fix is to use remote diagnostics, a process whereby a CareFusion representative dials in to the console computer. The representative:

- Has access to the computer's operating system level where testing can be accomplished using sophisticated software tools.
- Has sophisticated software diagnostic tools and repair options at hand, including, if necessary, the combined experience and skills of the entire Customer and Technical Support group.

If the TSC determines that remote diagnostics are necessary, you might be asked to help initiate the process. If so, you must be at the console and have a phone within reach. The TSC representative walks you through the steps required to prepare the console or Procar computer for remote access.

User Cannot Access a Medication

You might get a call from a nurse, pharmacy technician, or other station user who says he or she cannot access a medication that is loaded in the station. Verify that the desired medication does not appear shaded. If the medication is shaded, the medication is one of the following:

- Not loaded at the station.
- Out of stock.
- Not accessible to the user due to lack of security privileges for the medication.
- In a failed drawer.
- A one-time order that has already been removed.
- On an order that is on hold.

Security groups also affect which medications your users can access. You assign security groups during formulary and user definition. For a user to access a medication in a station, the user's security group assignment must match the medication's security group.

Appendix B
Management and Monitoring Recommendations

The MedStation system is designed to help support the facility's quality assurance efforts, as well as to aid the facility in meeting the expectations or requirements of accrediting and regulatory agencies, such as The Joint Commission, the DEA, the state board of pharmacy and the state bureau of drug control. This information is purely advisory and final recommendations should be tailored to the institution's individual needs. This section includes the following topics:

Security Recommendations *186*

System Configuration Recommendations..... *188*

Security Recommendations

This section includes the following topics:

- *General Recommendations* on page *186*
- *Controlled Medications* on page *187*

General Recommendations

The following list provides some general guidelines:

- Maintain a strict procedure for assignment of user IDs and initial passwords. Include in the procedure a description of how a user gets a password if it is forgotten.
- Assign each user a unique temporary password upon initial use of the system.
- Assign access to controlled drugs only to authorized personnel.
- Restrict the ability to create temporary users to as few persons as possible and closely monitor temporary user creation.
- Limit the assignment of station access in All Areas to only those individuals who require this level of access.
- Instruct and permit users to change password immediately if password confidentiality is compromised. Consider requiring password changes on a periodic basis.
- Maintain a system to immediately remove users upon termination of employment along with a regular review of users by each area manager.
- Depending on state requirements, consider making stations and auxiliaries stationary by fastening them to the wall.
- Avoid keeping emergency medications (such as the crash cart) exclusively in the stations because this might compromise user accountability during an emergency situation.
- Store the station keys for emergency access in the pharmacy safe or vault and account for them on a regular basis. Maintain a system of accountability for access to the keys.
- Remain with the CareFusion representative at a station at all times when it is necessary for the technician to access drawers. Reinventory controlled substances in the station upon completion of service.
- Maintain a log of required MedStation system service along with a permanent file of all MedStation system service records (copy provided by the CareFusion representative).
- Consider the need to shred printouts based on facility confidentiality procedures.

Controlled Medications

The following list provides guidelines for working with controlled medications:

- Use individual pocket access (MiniDrawers, CUBIE pockets, or carousel drawers) for all controlled drugs (Schedule II-V).
- If necessary, store refrigerated controlled substances in a locked refrigerator (for example, SMART Remote Manager).
- Place keys in a carousel drawer in the station to control and document key access.
- Load all controlled drugs into stations, even special patient-specific orders.
- Inventory controlled drugs in each station on a periodic basis (for example, weekly).
- Activate the Verify Count option for all formulary items that are controlled substances.
- Maintain a system utilizing stations for controlled substance drips, including PCAs, which meets state requirements.
- Archive MedStation system data and maintain a hard copy of console and station reports as required to comply with state and federal requirements.
- Implement and enforce facility policies and procedures to handle discrepancies involving all controlled substances.

System Configuration Recommendations

This section includes the following topics:

- *Drawer Configuration and Medication Location* on page *188*
- *Control the Station Formulary List* on page *189*
- *Order Entry and Verification* on page *189*
- *Medication Distribution* on page *190*

Drawer Configuration and Medication Location

The following list provides guidelines for configuring drawers and deciding where to place medications:

- Consider using individual pocket access (MiniDrawers, CUBIE pockets, or carousel drawers) for most medications, restricting the use of matrix drawers to floor stock medications, over-the-counter drugs, and those medications which have minimal, if any, clinical risk.
- Consider keeping internal and external preparations clearly separated.
- Avoid placing medications with similar appearance or similar names in the same matrix drawer and certainly not in proximate pockets.
- Separate injectable drugs as much as possible, especially those in similar containers (for example, vials).
- Place more commonly used medications in top drawers for easy access.
- Emergency medications (such as code blue items) should not be kept exclusively in stations.

Control the Station Formulary List

The following list provides guidelines for managing the formulary list:

- If distributing nearly all medications via the MedStation profile-mode system, consider activating the Display options with a value of ALWAYS at the console for the entire formulary.

  Virtually all ordered medications appear in the patient's profile at the station when entered/verified by pharmacy regardless of whether or not they are loaded. Nursing is then aware that the order has been entered/verified by pharmacy. Only ordered medications with Display Options set to ALWAYS appear on the Ordered Meds Not Loaded report at the console that is located in the pharmacy.

- If distributing a limited number of formulary medications via the MedStation profile-mode system such as controlled substances and floor stock, consider setting the Display options to Always for routine facility-wide items and to Only When Loaded for the remainder of items (that is, nursing unit specific).

  Only those ordered medications loaded at the station display in the patient's profile when entered or verified. (The "Med not loaded" message seldom appears.)

Order Entry and Verification

The following list provides guidelines for entering and verifying orders:

- Configure the host pharmacy system to send orders to the MedStation profile-mode system console only upon entry or verification by a pharmacist.
- The nurse should also verify that the pharmacy order (medication, dose, route, schedule) appearing on the station against the written patient record at the time of removal.
- Always consult the original physician's written order for clarifications on medication therapy.

Medication Distribution

Often, no specific regulations or recommendations related to the management of automated distribution systems exist. If this is the case, consider the following approaches, which are based on common practices of other users of the MedStation system:

- Technicians pick and prepare medications for load or refill into a station under the supervision of a registered pharmacist. The pharmacist checks medications prepared by a technician before they are placed into a station.
- Stations are physically loaded or refilled by trained technicians. For certain medications with the RxCheck feature enabled, the system prompts for a another user to check the pocket after it has been loaded or refilled.
- Nurses are instructed to report any suspected load or refill error to pharmacy. The exact procedure for reporting is defined.
- Pharmacists maintain an ongoing quality monitoring program to review technician load/refill activities.

Example quality monitoring process for the pharmacist:

- Following technician load/refill activities, periodically print Loading and Unloading and Med Refill reports.
- Compare the Med Refill report activities with the Refill Pick and Delivery report used by the technician.
- Monitor load and refill accuracy for medications requiring RxCheck. On an ongoing basis, check other pockets randomly to verify that the correct medication has been refilled/loaded into the correct pocket and keep records of such inspections.
- Pay extra attention to load, refill, and Rx Check activities of newly trained personnel.

Glossary

Admissions, Discharge, and Transfer (ADT)

Records for a patient or group of patients. The ADT information is sent from the facility's computer system to the console via Procar.

Bin

Bins are open trays, 4 inches tall and 23 inches deep, in a variety of widths used to organize and control storage in a large auxiliary.

Bin Drawer

A flexible matrix drawer that is twice the height of a single drawer and can be configured as one large bin. A bin drawer is useful for storing large items such as IV bags.

BioID

A feature that confirms a users' identity by checking the user's logon ID and fingerprint. This physical user verification eliminates the use of passwords or swipe cards that can be lost, stolen, or shared with unauthorized individuals.

Blind Count

Blind Count is a device and formulary option that requires the user to confirm inventory counts. The user is not prompted with the current inventory level.

Brain Transplant

A metaphor for the procedure of using the console's up-to-date stored information to restore or correct a station's database.

Carousel Drawer

A circular drawer that is separated into 2, 4, 6, 8, or 12 pie-shaped pockets. These drawers are used for protecting controlled substances because only the one pocket containing the selected medication is revealed whenever the drawer is opened. The 6-pocket drawer includes a return bin.

Clinical Data

Clinical data might be required when removing a medication, for example, for patient location or blood sugar level. This option is set at the console for specific medications.

Clinical Data Categories (CDCs)

Present or gather information from nursing. Formulary items can be configured at the console to require the nurse to enter clinical data (such as route of injection, observations, and evaluation data) for a medication when it is removed, returned, or wasted.

Combination Dose

Combination doses require the removal of more than one item to fulfill the medication order, for example, cefazolin 1 gram Add-Vantage and the D-5-W 50 ml Add-Vantage minibag.

CUBIE Pockets

These pockets are separated into two half-height drawers designed to occupy one regular drawer slot. CUBIE pockets have three available pocket sizes that can be configured by the customer. These pockets are ideal for any type of controlled or non-controlled medication, and provide single drug access.

Discrepancy

During a medication count verification, if the amount found does not match the amount expected by the system, a discrepancy exists.

Equivalency or Equivalent Dose

An equivalent dose is a certain strength of a formulary item defined by the pharmacist as equivalent to multiples of another strength of the same generic item. For example, two 40 mg furosemide tablets might be defined as equivalent to one 80 mg furosemide tablet.

Facility

A facility code entered at the Station Configuration screen at the console to identify multiple facilities for billing.

Formulary

A database of all pharmaceuticals used by the facility in the MedStation system. The formulary must be created and maintained by pharmacy personnel for medications to be loaded and refilled in the stations.

Frequency

The ordered interval for the medication as received from the host pharmacy system.

Global Edit

A feature at the console which allows you to modify multiple stations, users, or formulary items at the same time.

Interface

Refers to the translation of information from a facility's computer system to the MedStation system. Information obtained through the interface includes patient admissions, discharges, transfers, billing data, and pharmacy profile.

Inventory

Includes medications that are selected to be loaded into a station from the master, or console, formulary. The inventory process is used to count and verify medications.

Kit

A group of medications defined in the system that are commonly used together to treat a patient, usually in association with a specific procedure or treatment. Also refers to the kit feature which is used to create and edit kits at the console or station.

Large Auxiliary

A large auxiliary has the same width and depth as the station, but is 78 inches tall and has four transparent doors. Two, three, or all four doors can be connected together as one, allowing storage and access for bulky supplies or tall items. This modular unit is connected to a station, thus becoming a physical extension of the station. Auxiliary units contain no screen, printer, or disk drive, and are intended for storing additional medications and, depending on the model, bulky medications.

Lead and Lag Times

When an order is created for a patient, it has associated start and stop times, which determine the period of time that the order is active. Access lead and lag times extend the period that an order is active. Access lead is the number of hours (from 0–24) before the start time that an order is active.

Load Medications

Process of loading medications into the station after the inventory has been set up or modified.

Maintenance

This process occurs every 24 hours, usually late at night, to purge unneeded data from the console databases.

Matrix Drawer

An uncovered station drawer with adjustable pocket separators which allow you to alter the size of pockets after the station arrives at the site. These drawers are usually used for stock, PRN, or non-controlled substances. Up to 48 pockets are available.

Matrix Mode (MiniDrawer)

The drawer is treated as a regular matrix drawer. Each pocket can be assigned a different medication. This mode maximizes the number of different medications stored in the drawer.

Medication Charting

Medication-charting information is routinely collected when medications are removed from the station. The system has the ability to pass this information electronically to nurse-charting systems. These fields include injection sites, observations, and other medication-specific data.

Min Level

The minimum level, an important trigger number, is the optimum stock level that you designate to indicate when a specific medication should be refilled. If a medication's stock falls at or below the minimum level, it shows up in the pharmacy reports for refill. The minimum levels can be adjusted to reflect changing patterns of usage and demand.

MiniDrawer

Two configurations of MiniDrawers are available, each fitting in one drawer slot. The 6-tray MiniDrawer (1–6) has basic pocket dimensions of 8 inches wide by 1.33 inches high. The 18-tray MiniDrawer (1–18) has basic pocket dimensions of 2.48 inches wide by 1.33 inches high. Various pocket configurations (1, 2, 3, 4, 6, 12) are available within the 6-tray and 18-tray MiniDrawers. Three dispensing modes are available: single-dose, multi-dose, and matrix.

Multi-Dose Mode (MiniDrawer)

All pockets in the drawer must be assigned the same medication and each pocket can contain a varied quantity of that medication. This type reduces the number of medications the nurses must count. When a pocket is emptied, the drawer opens to the next pocket.

Order

A medication that has been prescribed by a doctor and approved by the pharmacy for a specific patient. Orders are usually entered into a pharmacy order-entry system and sent through an interface to the console. The orders appear at the appropriate station based on the start time for the order and the lead time specified for the station.

Order Notes

Additional order details or directions received from the host pharmacy system.

Outdate

The process of removing expired medications from the station.

Override

Override is the process by which a nurse removes a medication from a station for a patient that is not part of the patient's profile. This is done using the Override button at the profile station. Whenever a patient's profile is overridden, this information appears on the transaction slip and on various reports. Sometimes a witness is required to allow a patient's profile to be overridden.

Patient Profile

See *Profile Mode*.

Pending Medications

Medications that have been assigned at the console to station pockets, but have not been physically loaded.

Pocket

The basic storage unit, a space in a drawer containing one medication. carousel drawers can contain 2, 4, 6, 8, or 12 pockets. Matrix drawers can contain up to 48 defined pockets.

Polling

Refers to the continuous communication between the console and the station. The console polls all stations with Polling enabled, in turn, providing updated information to the appropriate station and gathering information from the station as actions, such as removing medications, are taken.

Procar Computer

A PC connected to the console. It is responsible for interface communications, including the pharmacy software system link (patient orders and other pharmacy profile information), admissions, discharges, transfers, and billing information. The interface communications software is developed, configured, and installed by CareFusion technicians to coincide with the installation of the MedStation system.

Profile Mode

Profile (Rx) mode is available on the MedStation system. The patient medication profile is a source of information for the pharmacist and the nurses that consolidates all information about a patient's drug therapy. The profile helps the pharmacist monitor drug distribution, prevent potential drug interactions, and bill medication charges. Nurses also use the profile to schedule medication administration.

Quick Keys

Key sequences (such as Alt+M) that are used to perform functions in the system. To use a Quick Key, simultaneously press Alt and the underlined letter on the screen.

Recommended Standard (RS)

Refers to a communication method for linking remote stations to the console.

Refill

A procedure designed to replenish inventory in the stations.

Remote Stock

Items managed by the MedStation system but stored outside the station.

Remove by Time

Allows the nurse to remove medications for a patient based on the scheduled time of administration. It is dependent on dosing times provided through an interface with the host pharmacy system.

Return

This procedure allows you to return a medication and credit the charge to the patient. Returns go into a Return Bin and are not available for redispensing. Returns of controlled substances usually require a witness.

Return Bin

A reserved pocket in a drawer that has a one-way door. Use it to return unused medications in tamper-evident packaging.

Return to Stock

This option, set at the console by the system manager for each medication, allows a medication to be returned to its original pocket. Return to Stock can be turned on or off for a station.

Route

The route is the method of administration (PO – by mouth, IM – intramuscularly, TOP – topically) for an ordered medication as received from the host pharmacy system.

Rx Check

A process where refilled and newly loaded medications are checked at the station by a pharmacist or another designated person.

Rx Mode

See *Profile Mode*.

Security Group

Each formulary item defined in the MedStation system must have one of 10 security groups associated with it. The security group is a tool you can use to control which medications your users can access when you subsequently assign them security group privileges.

Shelf

The adjustable, heavy-duty wire frame used in a large auxiliary. A large auxiliary can be configured with up to 12 shelves.

Single-Dose Mode (MiniDrawer)

The single-dose mode is one of three dispensing modes available for a MiniDrawer configuration. All pockets in the drawer must be assigned the same medication, and each pocket can contain no more than one medication. This type is used to allow access to only the number of doses requested.

Standard Stock

Standard stock consists of standard medications that are frequently used in the clinical setting where the station is located. Standard stock medications are kept in the station at all times.

Start Time

When an order is created for a patient, it has associated start and stop times. The start time controls when the ordered medication is displayed in the patient's profile at the station (when the order becomes active).

Station

A cabinet device that stores medications and supplies and allows the removal of such items through a computerized inventory and ADT system. It is connected through a communication link with the console.

Stop Time

When an order is created for a patient, it has associated start and stop times. The stop time controls when the ordered medication is deleted from the patient's profile at the station (when the order is no longer active).

System Administrator

A key individual, usually a pharmacy manager or other pharmacy worker, who is responsible for the MedStation system.

System Manager

A nurse or pharmacist who has attended a comprehensive training class offered by CareFusion and is responsible for configuring the MedStation system to meet the needs and goals of the facility.

Temporary User

An individual set up at the station and with access privileges that expire in 12 hours. This is useful in situations where permanent user privileges cannot be quickly set up at the console or where you do not want permanent access.

Transaction Queue (XQ)

The accumulation of messages waiting to be communicated to the console, station, or Procar computer.

Tray

The component of the MiniDrawer that contains pockets.

Uninterruptible Power Supply (UPS)

A power storage device connected between the console and wall electrical outlet. It detects power loss from the outlet and immediately provides the console with approximately 15 minutes of power. The UPS beeps continuously to warn of the power failure.

Variable Dose

Allows the pharmacist to address the issue of range dosing by defining dosage choices for the nurse based on a single order. For example, to fulfill an order for Morphine Sulfate 4–10 mg injection (Inj), the nurse must select from 4 mg, 8 mg, or 10 mg syringes depending on the patient's pain level. A variable dose of Morphine Sulfate 4–10 mg Inj allows the nurse to select any one of the defined sizes stocked at the station.

Verify Calc

This feature prevents medication errors that could occur from math errors by a nurse in calculating strength/volume. Pediatric doses typically use liquids, so math errors can easily occur. For example, if Tylenol is packaged as 325 mg per 100 ml, how much liquid should be injected for an order of 65 mg? Verify Calc shows two proportional fractions on the screen. The first fraction is 325 mg/100 ml. The second fraction is where you provide your input. If you type in 65 mg, 20 ml is immediately shown as **Your Calculated Volume**. Vice versa if you know the milliliters, but need to know how many milligrams. If you then input 20 ml, **Your calculated mg = 65** is shown instead.

Verify Count

A Device and Formulary option that requires the user to confirm inventory levels of identified medications.

Volume Calculation

When the Volume Calculation option is set at the console for a particular formulary and device, the Verify Calc button appears at the bottom of the Remove screen. By touching Verify Calc, you can automatically calculate the correct strength or volume. For example, if Tylenol with codeine is packaged as 120 mg per 10 ml, how much liquid should you administer for an order of 15 mg? Touch Verify Calc. When the Volume Calculation screen appears enter the ordered milligrams. The system dynamically calculates the volume, 1.25 in this example, which appears on the screen. After touching Continue, the calculated value displays on the Remove screen and print slip. Calculated results always drop trailing zeros (but show a leading zero if calculated value < 1). Standard display is to three decimal places.

Waste

The process for discarding a medication might require a nurse witness for controlled substances.

Waste While Removing

This option is set at the console by the system manager for each medication and allows medications to be partially or fully wasted during removal.

Witness

Discrepancies at the station and certain kinds of access (for example, to override a patient's profile) require a witness to observe the transaction. Any user with access to the station can act as a witness. Some access privileges allow the resolution of discrepancies without a witness.

XQ

See *Transaction Queue (XQ)*.

Index

A

Activity report 158
- All Station Events 160
- Billing Summary 160
- Charges & Credits 160
- Clinical Data Categories 160
- Discrepancies 160
- Inventory Verification 160
- Loading & Unloading 160
- Med Refill Activities 160
- Outdated Med Removal 160
- Profile Override 160
- Remove Warnings 160
- Return Bin Activity 160
- Returns And Wastes 160
- Rx Refill & Load Verification 160
- Transfer From/To User 160

add
- area 85
- batch report 165
- clinical data category (CDC) 90
- clinical data category (CDC) response 92
- clinical data category (CDC) response list 93
- combination dose 55
- discrepancy-resolution reason 114
- equivalency 46
- formulary item 40
- item to a formulary or station list 115
- kit 59
- medication classification 112
- nursing unit 84
- nursing unit to area 86
- patient 78
- scan code 119
- station or other device 19
- user 66
- user-privilege template 63
- variable dose 50

admissions, discharge, and transfer (ADT)
- interface 7
- troubleshoot 178

All Orders By Med report 159

All Station Events report 160

archive
- copy file to media 143
- delete list of files 140
- schedule maintenance 144
- select data 141
- transaction data 140
- view list of files 140

Archive Specifications report 162

area

add 85
add or remove nursing unit 86
delete 86
Areas report 162
attention notice 99
optional 100
troubleshoot 172
unsolicited 101
Attention Notices report 162

B

Batch List report 162
batch report
create 165
delete 168
enable or disable 168
print 168
update 167
view list of 167
billing
interface 7
troubleshoot 179
Billing Summary report 160
BioID - Users Not Registered report 161
BioID Global report 161
BioID User Activity report 161
brain transplant 175
bulletin 99
optional 100
troubleshoot 172
unsolicited 101
button
command 15
option 15

C

change
device type 36
password 11
station or device name 36
Charges & Credits report 160
charting interface, medication 8
check box 15
classification, medication 111
clinical data 87
Clinical Data Categories report 160
clinical data category (CDC)
activate or deactivate 29
add 90
delete 92
predefined 87
response list
add 93
delete 95
update 94
response, add 92
update 91
Clinical Data report 162
collecting data 87
combination dose
add 55
delete 58
update 58
Combination Dose Groups report 162
command button 15
CommStatus 121
communication
check status 175
status 121
system 7
troubleshoot 177, 178
components 4
configure
name
medication class 111
override group 111
security group 109
recommendation for system 188
confirmation screen 16
Console & Station Activity Log report 161
console, name of 106
controlled substance, recommendation 187
copy archive file to media 143
create
archival data 141
area 85
batch report 165
clinical data category (CDC) 90
clinical data category (CDC) response 92
clinical data category (CDC) response list 93
combination dose 55
discrepancy-resolution reason 114
equivalency 46
formulary item 40
kit 59
medication classification 112
nursing unit 84
scan code 119
user 66
user-privilege template 63
variable dose 50

D

data
- clinical 87
- select for archival 141
- transaction, archive 140

database, restore 175

deactivate
- clinical data category (CDC) 29
- option 15
- user-privilege template 76

delete
- area 86
- batch report 168
- clinical data category (CDC) 92
- clinical data category (CDC) response list 95
- combination dose 58
- discrepancy-resolution reason 115
- equivalency 49
- formulary item 44
- item from list 117
- kit 62
- list of archive files 140
- medication classification 113
- nursing unit 86
- nursing unit from area 86
- scan code 120
- station or other device 35
- user 76
- variable dose 54

demographics 96

device 4, 18
- access list 18
- add 19
- change name 36
- change type 36
- delete 35
- in or out of service 37
- update 35, 132

Devices report 162

discharge patient 82

Discrepancies report 160

discrepancy
- add resolution reason 114
- delete resolution reason 115
- update resolution reason 114

dose
- combination
  - add 55
  - delete 58
  - update 58
- variable
  - add 50
  - delete 54
  - update 53
- workflow 3

drop-down list 15

E

edit
- batch report 167
- clinical data category (CDC) 91
- clinical data category (CDC) response list 94
- combination dose 58
- device 35, 132
- discrepancy-resolution reason 114
- equivalency 48
- formulary 129
- formulary item 44
- globally 129
- item on list 116
- kit 61
- loaded medication 152
- medication warning 107
- name
  - medication classification 112
  - station or device 36
- patient 82
- scan code 120
- station 35
- user 75, 137
- user-privilege templates 75
- variable dose 53

Empty Pockets report 159

Entered ADT Information report 161

Equivalencies report 162

equivalency
- create 46
- delete 49
- expand 49
- update 48
- view 48

expand equivalency 49

F

features 13

filter
- list of users 74
- patient list 83

formulary
- access list 39
- add
  - item 40
  - item to list 115
- delete item 44
- delete item from list 117

equivalency
create 46
delete 49
expand 49
update 48
view 48
manage 38
Remove Warning overview 38
update 129
item 44
item on list 116
view item 44
Formulary Links report 162
Formulary report 162

G

global edit 129
device 132
formulary 129
user 137

H

help 16
Hospital Wide Med Summary report 159

I

information, network 5
interface
admissions, discharge, and transfer (ADT) 7
billing 7
medication charting 8
option 7
pharmacy profile 8
wholesaler 8
inventory
assign medication to pocket 146
clear pending medication 153
make pocket unavailable 154
replace loaded medication 152
update loaded medication 152
Inventory By Station report 159
Inventory reports 158
All Orders By Med 159
Empty Pockets 159
Hospital Wide Med Summary 159
Inventory By Station 159
Loaded Med W/O Orders 159
Meds Ordered & Below Min 159
Meds Without Removals 159
My Items Aging 159
Ordered Meds Not Loaded 159
Outdated Inventory 159
Refill Pick & Delivery 159
Stock Management Worksheet 159
Stock Out Summary 159
Inventory Verification report 160

K

keyboard 13
kit
add 59
delete 62
edit 61

L

list
drop-down 15
patient 83
Loaded Med W/O Orders report 159
Loading & Unloading report 160
log off 11
log on 11
Login Activities report 161

M

maintenance
option 103
run tasks 106
manage
formulary 38
system 185
Med Refill Activities report 160
medication
add classification names 112
assign to pocket 146
charting interface 8
classification name 111
clear pending 153
delete classification names 113
make pocket unavailable 154
replace 152
troubleshoot access 184
update 152
update classification name 112
warning, view or update 107
Meds Ordered & Below Min report 159
Meds Without Removals report 159
menu bar, use 12
mode 19
change 36
logon 21
profile 19, 25
modify
clinical data category (CDC) 91
clinical data category (CDC) response list 94
user-privilege template 75

warning 107
mouse 13
My Items Aging report 159

N

name
change station or device 36
console 106
medication classification 111
override group 111
security group 109
network information 5
non-profile 19
nursing unit
add 84
add to or remove from area 86
delete 86

O

online help 16
option
attention notice 100
component 4
interface 7
maintenance 103
report 102
site-specific 96
system 97
option button 15
Ordered Meds Not Loaded report 159
Outdated Inventory report 159
Outdated Med Removal report 160
override
documentation 88
group 41
name of group 111
reason 89
Override Groups report 162
overview
Remove Warning 38
system 1

P

password, change 11
patient
add 78
discharge 82
filter list 83
troubleshoot display of 179
update 82
Patient Profiles report 162
Patients report 162
pending medication, clear 153
pharmacy configuration
add
discrepancy-resolution reason 114
item to a formulary or station list 115
delete
discrepancy-resolution reason 115
item from list 117
medication-classification name 111
override-group name 111
security-group name 109
update
discrepancy-resolution reason 114
item on list 116
Pharmacy Configuration report 162
pharmacy profile interface 8
pick lists 16
pocket
assign medications to 146
make unavailable 154
power outage 181
print
batch report 168
reports 164
printer
included 4
troubleshoot 182
privilege
assign via a template 68
medication 34
station 31
Procar
included 18
troubleshoot 177
profile (Rx) mode 19, 25, 36
Profile History report 162
Profile Override report 160
profile, pharmacy interface 8

Q

queue, report 169
quick key 14

R

recommendation
security 186
system configuration 188
Refill Pick & Delivery report 159
remote diagnostics 183
remove 38
area 86

batch report 168
clinical data category (CDC) 92
clinical data category (CDC) response list 95
combination dose 58
discrepancy-resolution reason 115
equivalency 49
formulary item 44
item from list 117
kit 62
list of archive files 140
medication classification 113
nursing unit 86
nursing unit from area 86
scan code 120
user 76
variable dose 54
Remove Warning, overview 38
Remove Warnings report 160
rename medication classification 112
report 6
Activity 158
batch
create 165
delete 168
enable or disable 168
print 168
update 167
view list of 167
description 159
generate 163
Inventory 158
options 102
System 158
System Activity 158
troubleshoot 180
view queue 169
resolution
add for discrepancy 114
delete for discrepancy 115
update for discrepancy 114
Return Bin Activity report 160
Returns And Wastes report 160
run
maintenance tasks 106
report 163
Rx Refill & Load Verification report 160

S

scan code
add 119
delete 120
update 120
scroll bar 15
search boxes 15
security
name of groups 109
recommendation 186
Service Messages report 161
service station, in or out of 37
Site 96
Site Specific Options report 162
site-specific option
attention notice 99
console name 106
demographics 96
maintenance 103
report 102
system 97
SMART Remote Mgr Configuration report 162
SMART Remote Mgr Temperature Log report 161
spin box 16
standby screen 10
station 4, 18
access list 18
add 19
add items to list 115
change Device Type 36
change name 36
communication status 175
delete 35
delete item from list 117
in or out of service 37
update 31, 35
item on list 116
Statistics report 162
status
communication 121
station communication 175
Stock Management Worksheet report 159
Stock Out Summary report 159
system
communication 7
components 4
configuration, recommendation 188
features 13
option 97
overview 1
setup 17
System Activity reports 158
BioID - Users Not Registered 161
BioID Global 161
BioID User Activity 161
Console & Station Activity Log 161
Entered ADT Information 161

Login Activities 161
Service Messages 161
SMART Remote Mgr Temperature Log 161
User Modification Information 161
System reports 158
Archive Specifications 162
Areas 162
Attention Notices 162
Batch List 162
Clinical Data 162
Combination Dose Groups 162
Devices 162
Equivalencies 162
Formulary 162
Formulary Links 162
Kits report 162
Override Groups 162
Patient Profiles 162
Patients 162
Pharmacy Configuration 162
Profile History 162
Site Specific Options 162
SMART Remote Mgr Configuration 162
Statistics 162
Users 162
Variable Dose Groups 162
XQ Messages 162

T

template, user-privilege
assign 68
create 63
deactivate 76
update 75
text field 16
Transfer From/To User report 160
transplant, brain 175
troubleshoot
access to medication 184
attention notices and bulletins 172
billing 179
power outage 181
printer 182
Procar 177
report 180
use remote diagnostics 183

U

unit-dose workflow 3
update
batch report 167
clinical data category (CDC) 91
clinical data category (CDC) response list 94
combination dose 58
device 35, 132
discrepancy-resolution reason 114
equivalency 48
formulary 129
formulary item 44
globally 129
item on list 116
kit 61
medication warning 107
name of medication classification 112
patient 82
scan code 120
station 35
station or device name 36
user 75, 137
user-privilege template 75
variable dose 53
user
add 66
delete 76
edit 75
filter lists 74
update 137
User Modification Information report 161
user-privilege template
assign 68
create 63
deactivate 76
update 75
Users report 162
utilities 127

V

variable dose
add 50
delete 54
update 53
Variable Dose Groups report 162
view
equivalency 48
list
archive files 140
batch report 167
medication warning 107

W

warning 107
warnings 38
wholesaler interface 8
workflow, unit-dose 3

X

XQ Messages report 162