

# Pharmacy Process Manual

Health PEI

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## 1. Clinical Information System (CIS) Background Info

### 1.1 What is PharmNet?

PharmNet® utilizes applications designed for managing pharmacy operations. You can enter patient information, view results, enter various orders, work with batches, run reports, charge doses, credit doses, and enter one-time orders.

PharmNet is divided into four applications:



Pharmacy Med Manager – used to enter and modify orders as well as update patient demographics. From Med Manager, users may directly access the PowerChart application and the Charge Credit Application. Verification of orders occurs in Med Manager.



Pharmacy Batch Dispense – used to generate fill lists for designated dispense categories and locations (ie. PacMed and NonPacMed batches)



Pharmacy Batch Report – used to create and print routine reports. This is also used to print the cMAR in facilities where this is used and may be accessed through PowerChart.



Pharmacy Charge Credit – used to enter charges, credits, and one-time orders. This may now be accessed from the patient profile screen in Med Manager.

### 1.2 What Other Applications Make Up The CIS?

**These are the solutions we have purchased.**

- **Core - Powerchart**

Foundation of the electronic medical record that allows ordering, results viewing, etc by all patient care clinicians.

- **ERM - Registration**

The solution used to register patients for any service they receive within the hospitals.

- **Profile - Health Records**

A combined paper and electronic record of every patient encounter for any service within the hospital.

- **ESM - Scheduling**

The solution used to schedule patients for the many services offered within the walls of the hospitals.

- **Clinical Reporting**

Solution for initiating and processing clinical reports. A clinical report is a document containing patient demographics and clinical results.

- **Charge Services**

Solution for attaching pricing/charges to solutions being implemented. (This is not a financial solution).

- **Anatomic Pathology**

The solution for ordering, receiving, processing and documenting all Anatomic Pathology tests with results being available for viewing on-line or sent by paper.

- **Blood Bank**

The solution for all Blood Bank requests being ordered, received, processed and documented electronically.

- **Microbiology**

The solution for ordering, receiving, processing and documenting all Microbiology Lab tests with results being available for viewing on-line or sent by paper.

- **General Lab**

The solution for ordering, receiving, processing and documenting all General Lab tests with results being available for viewing on-line or sent by paper.

- **Clinical Supply Chain**

Solution for managing inventory of pharmaceuticals under the CIS system.

- **SurgiNet - Surgery**

The solution that will enable the OR to schedule electronically, access Clinical Documentation and have electronic preference cards.

- **CareNet - Clinical Documentation**

PowerForms provide us with a solid foundation for electronic clinical documentation.

Some examples of these PowerForms are:

- Drug Information
- Drug Monitoring
- Drug Therapy Management
- Methadone Patient Information Checklist
- Review of Medications

- **ED Triage & Tracking**

The solution that will give The Emergency rooms the ability to triage and track patient electronically, access to Clinical Documentation, and ED Documentation for Lab and Diagnostic Imaging Orders

- **Electronic Lab and DI Orders**

All units will enter electronic Lab & Diagnostic Imaging Orders and receive results electronically

- **Interfaces**

Solution for interfacing other systems with CIS. There are a number of interfaces that the team is implementing for example: RIS/PACS, and CCR

- **CPOE**

Computerized Provider Order Entry is the placing of orders from a list of orderables by physician, nurses, and other allied health professionals. Order sentences, CareSets, and PowerPlans are available to make this process as efficient as possible.

- **Message Centre**

Message Centre is the Cerner Millennium solution for managing workflow in the clinical office and in the acute care setting. Rather than having an unwieldy flow of hardcopy documentation being routed through your office and healthcare facility. Message Centre is electronic. It enables you to review or sign results, documents, and prescription requests, as well as working with telephone and other messages.

### 1.3 Windows Terms to Know

The following terms will be used frequently in this manual and in the class sessions.

**PC** – Personal computer.

**Cursor** – The flashing marker that will tell you where you are on the screen.

**Mouse** – A device used to move the cursor around on the screen.

**Viewing** – The ordering and result viewing program.

**Default** – Preset information in the system that automatically appears when you log in on to the system.

**Title bar** – Located at the top of the each window and is used to identify in which window you are currently working.

**Scroll bar** – Located on the right and bottom of some windows and is used to adjust the view on screen.

**Menu** – Displays a list of commands. Some of the commands have images next to them so you can quickly associate the command with the image. Menus are located on the menu bar at the top of the Viewing window.

**Context Menu** – Available when you right-click text, objects, or other items.

**Toolbar** – A toolbar can contain buttons with images (the same images you see next to corresponding menu commands), menus, or a combination of both.

**Maximize** – Located on the menu bar or title bar of the active window, it is used to maximize the window to a button on the Windows taskbar.

**Minimize** – Located on the menu bar or title bar of the active window, it is used to minimize the window to a button on the Windows taskbar.

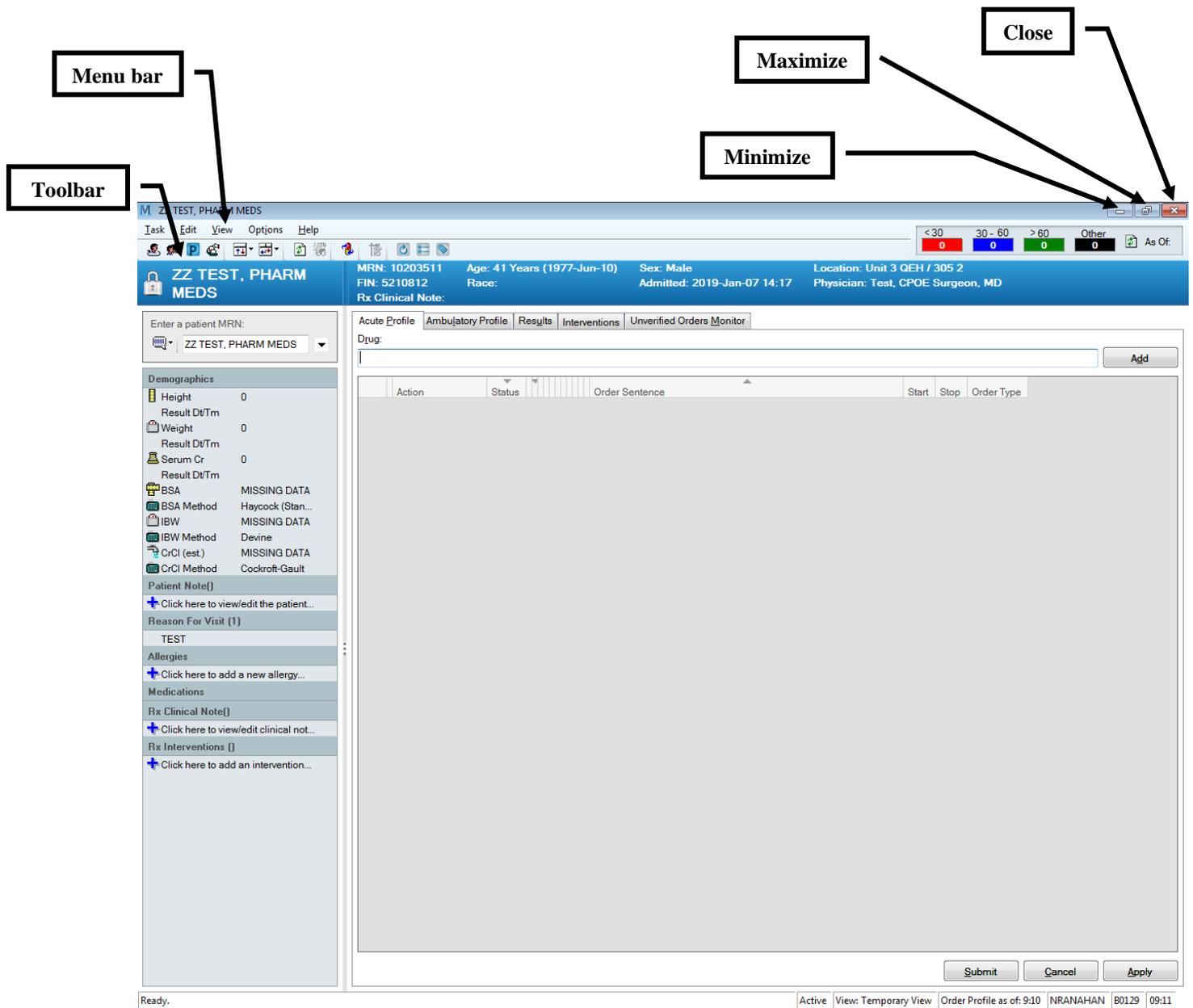
**Click** – To tap on a mouse button, pressing it down and then immediately releasing it. Note that clicking a mouse button is different from pressing (or dragging) a mouse button, which implies that you hold the button down without releasing it.

**Double-click** – Tapping a mouse button twice in rapid succession. Note that the second click must immediately follow the first; otherwise the program will interpret them as two separate clicks rather than one double-click.

**Click** – To click the left mouse button. When instructions call for a screen object to be clicked, a left-click is inferred.

**Right-click** – To click the right mouse button. A right-click opens a menu with a list of options.

PharmNet is based on the Microsoft Windows style. See the diagram below to review some basic terminology.



## 2. PharmNet – Getting Started With AppBar

### 2.1 Logging on to PharmNet

Pharmacy users will use the Application Toolbar (in other words, the Cerner AppBar) to access the PharmNet applications. The Cerner AppBar enables quick and easy access to PharmNet applications without having to log on each time you open a PharmNet application.

The Cerner AppBar has a separate box representing each application in PharmNet.

By moving the mouse over each box in the AppBar, you will see which application is represented.



### 2.2 Customize the Cerner AppBar

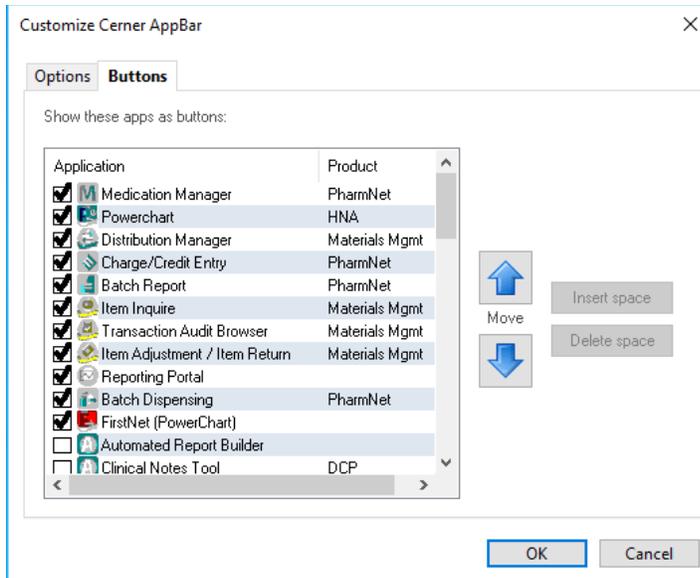
The first time that you use the AppBar in a new domain, you will have to customize your Cerner AppBar.

1. Double-click the Cerner AppBar icon.
2. At the Cerner Millennium® log-in box, type your user name in the User Name box.



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3. Press Tab to move the cursor to the Password box.
4. Type your password in the Password box and press Enter.
5. The Cerner AppBar will appear at the top of the screen.
6. Click the icon in the left corner of the Cerner AppBar .
7. Select Customize.
8. Open the Buttons tab.



9. Click the Product column header to sort the products by name.
10. Scroll down to find the PharmNet products.

11. Select the executables that you need. Some recommended applications include:

- Batch Report
- Charge/Credit Entry
- Medication Manager
- Powerchart
- Distribution Manager
- Item Inquire
- Transaction Audit Browser
- Item Adjustment/Item Return
- Reporting Portal
- Batch Dispensing
- FirstNet (Powerchart)

**Use the up and down arrows to change the order of the applications on the Cerner AppBar.**

12. The App Bar may be further customized by each user based on personal preferences including size of buttons and placement of the App Bar.
13. Press Enter to save and close.

## 2.3 Using the Cerner AppBar

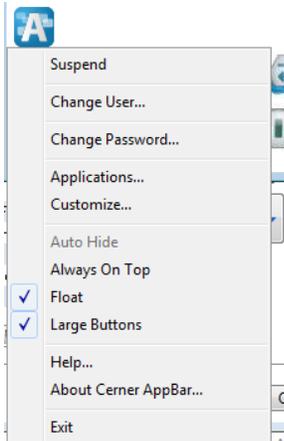
Once you have logged into the Cerner AppBar, you can access any of the PharmNet applications on your AppBar by clicking the appropriate application icon. You will not need to log into each application since you have already logged on to the Cerner AppBar.

## 2.4 Exit the Cerner Appbar

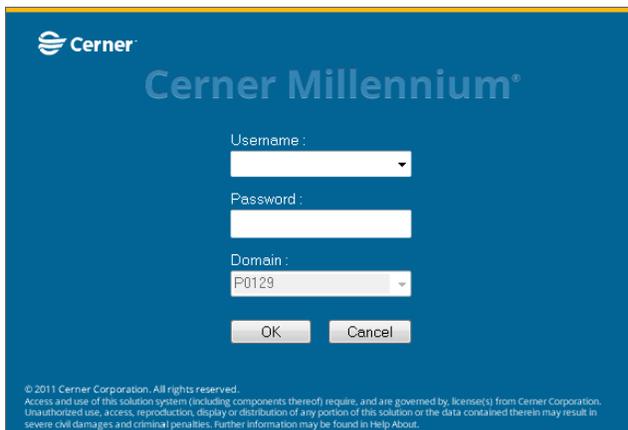
When you are ready to completely exit the Cerner Appbar, you perform an action called change user or suspend. The change user function will keep the log-on screen for the Cerner Appbar ready for the next user. The suspend user function will lock the computer for use until you return and re-enter your password.

If you choose suspend, your computer will be unavailable for use by another user. It will be “locked” by you.

1. Click the icon in the left corner of the Cerner Appbar .
2. Select Change User or Suspend.



3. If Change User is selected, the Cerner Appbar log-on screen will display for the next user.

A screenshot of the Cerner Millennium log-on screen. The screen has a blue background with the Cerner logo and 'Cerner Millennium' text. It features three input fields: 'Username' (a dropdown menu), 'Password' (a text box), and 'Domain' (a dropdown menu with 'P0129' selected). Below the fields are 'OK' and 'Cancel' buttons. At the bottom, there is a small copyright notice: '© 2011 Cerner Corporation. All rights reserved. Access and use of this solution system (including components thereof) require, and are governed by, license(s) from Cerner Corporation. Unauthorized use, access, reproduction, display or distribution of any portion of this solution or the data contained therein may result in severe civil damages and criminal penalties. Further information may be found in Help>About.'

4. If Suspend is selected, the log- on screen will display with your user name entered and the prompt at the password.

Resume Session - CPOEPNPHARM/B0129

**Cerner**  
**Cerner Millennium®**

Username :  
CPOEPNPHARM

Password :  
|

Domain :  
B0129

OK Cancel

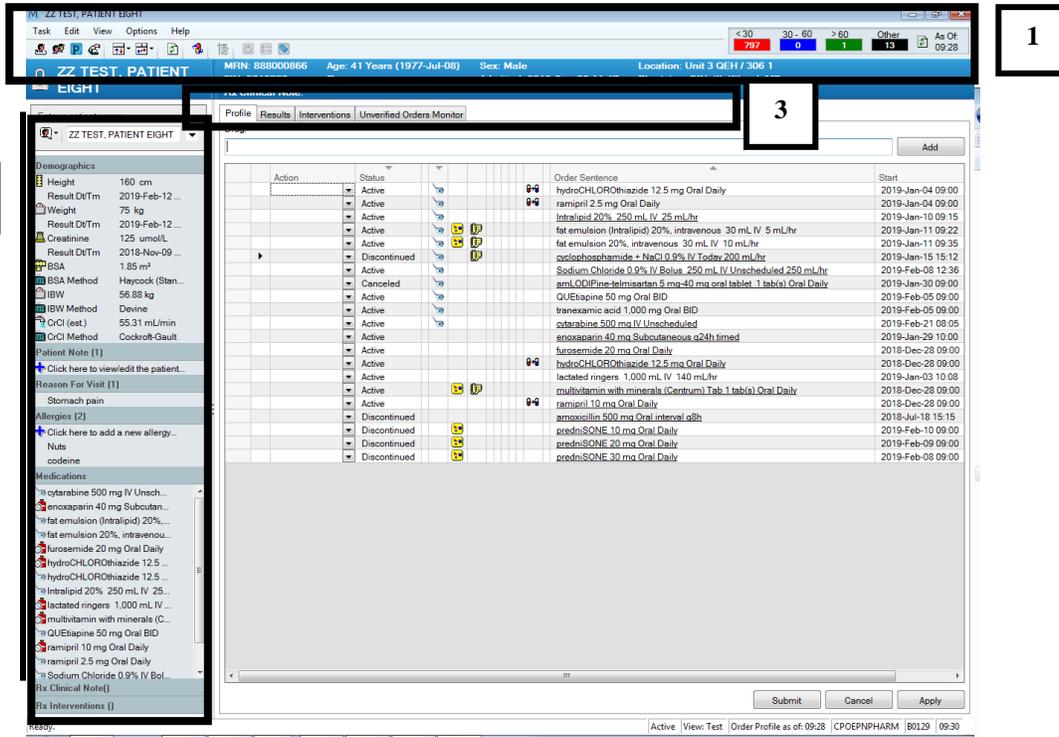
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### 3. Working with the Patient Information in Med Manager

#### 3.1 Pharmacy Med Manager Layout

PharmNet's Medication Manager is used to perform various tasks. Medication Manager assists you with the basic tasks of identifying a patient, selecting drugs or other pharmacy products, and entering, reviewing, and modifying orders.

This section covers the tasks to update and modify patient information.



The Pharmacy Med Manager screen is divided into three sections:

1. Icons/toolbar and menus that guide you to the different functions.
2. Patient information section, which includes: Encounter search, Demographics, Reason for Visit, Allergies.
3. Tabs that contain the functions order profile, results (users may prefer to view from Powerchart), interventions and unverified orders monitor

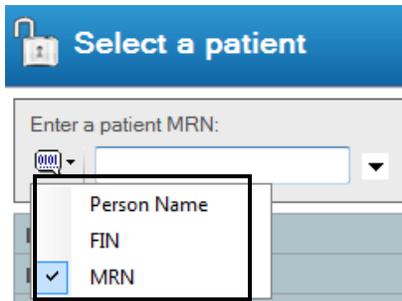
#### Tips:

- You can sort the Profile by clicking any of the column headers.
- Multiple Components IV have a + next to the medication name. Click on the + to expand the view.
- Orders from a different encounter appear UNDERLINED on the profile.
- The icon  indicates that a comment exists for the order

### 3.2 Perform Encounter Search

There are three primary ways to perform an encounter search. If you have the patient's name (or partial name), medical record number (MRN), or financial number (FIN), you can search using those parameters. In our system, FIN refers to the encounter number and the MRN refers to the Personal Health Number (PHN).

1. Open Med Manager
2. Use button with person face on it to change it to FIN or MRN (Person Name will automatically default).



3. Type last name, FIN, or MRN depending on the option that you selected

Using the patient name will give you all patients with that name as well as all encounters on the patient for whom you are searching. Any part of the last name comma first name may be used to search. This is the least specific search criteria.

Using the MRN will take you directly to the patient and you will see all encounters on the patient for whom you have searched.

Using the FIN will take you directly to the patient and encounter you want. This is the most specific search criteria.

4. Press Enter.
5. The Encounter search window opens. Select the correct encounter. You can use the Tab button to highlight the encounter.

Encounter Search

MRN/PHN: Last Name: zztest First Name: Middle Name: Sex: Birth Date: Historical MRN: Facility: Location: Search Reset

MRN/PHN	Full Name	Birth Date	Sex	Historical MRN
010202455	ZZ TEST, ADD PERSON ESM	2018-May-30	Male	
888000894	ZZTEST, STILLBORN NBF TWIN A	2018-Jun-20 09:57	Female	
888000899	ZZ TEST, NBF THREE	2018-Jul-13 14:00	Male	
888000897	ZZ TEST, NBF TWIN A	2018-Jul-14 20:00	Female	
888000898	ZZ TEST, NBF TWIN B	2018-Jul-14 20:00	Male	
888000896	ZZTEST, NBF MARY	2018-Jul-16 16:02	Female	
010202992	ZZ TEST, INTERFACE	2018-Aug-01	Male	
010203743	ZZTEST, NBF PATIENT	2018-Aug-20	Female	
010203016	ZZ TEST, NBF MOM	2018-Oct-08 09:24	Female	
010202851	ZZ TEST, NBFTEST1	2018-Oct-16 21:15	Female	
010202844	TEST, ZZ OCT 30 NAME	2018-Oct-22 11:50	Female	
010203099	ZZTEST, JACK FOUR	2018-Nov-15 00:30	Male	
010203065	ZZ TEST, MARY ONE	2018-Nov-15 09:45	Female	
010203073	ZZ TEST, MARTIN TWO	2018-Nov-15 09:50	Male	
010203081	ZZ TEST, MARTHA THREE	2018-Nov-15 10:00	Female	

Facility: Est Arrival Date Disch Date Reg Date Enc Type Patient Service Attending Physician

Facility	Est Arrival Date	Disch Date	Reg Date	Enc Type	Patient Service	Attending Physician
QEH			2018-Jan-11 10:01	Inpatient	Pediatrics	Test, CPDE Physician, MD
QEH	2018-Nov-22 23:59		2018-Nov-22 03:38	AMB/DP	Anesthesiology	
QEH	2018-Nov-22 23:59		2018-Nov-22 03:34	AMB/DP	Anesthesiology	
QEH				Inpatient		
QEH				Inpatient		

Patients

Encounters for selected patient. Looking for encounters without a discharge date is a quick way to narrow down the list

The top window displays patients in alphabetical order. The bottom window shows the encounters for the patient highlighted in top window. A patient may have more than one active encounter at a given time. The date in these windows may be sorted for ease of use by clicking the file header that you would like to sort by.

There are several encounter types in the system including inpatient, outpatient, recurring initial (used for outpatient chemotherapy), recurring follow up (used in conjunction with the recurring initial- meds will not be entered on this type of encounter), pre admit, and pharmacy (home meds).

6. Press Enter to close.

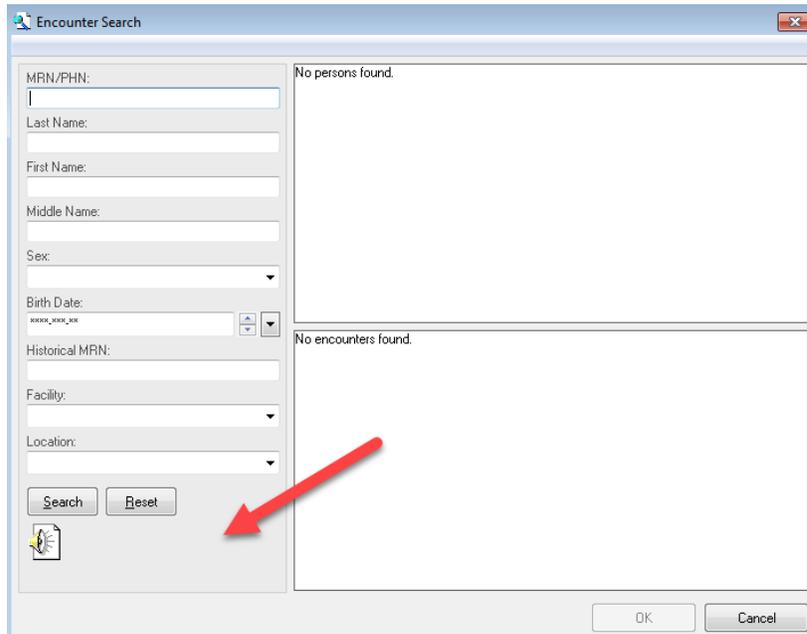
**TIP: Use a SHORTCUT to CHANGE PATIENT**

- Click on the  on the task bar:
- OR you can type the **CTRL + P** keys on your keyboard.

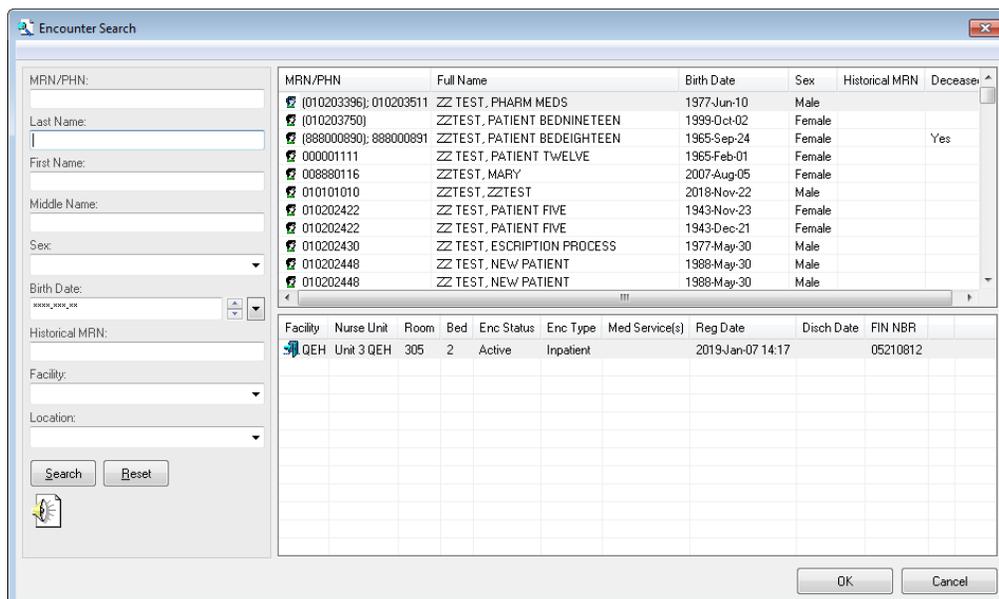
**IMPORTANT NOTE:**  
Choosing the correct ENCOUNTER is very important. Meds DO NOT CROSS ENCOUNTERS on the eMAR and the Orders tab. They may only be seen across encounters in Med List and Med Manager.

### 3.3 Customizing the Encounter Search Window

To adjust the available filters on the left, right click on the blank space at the bottom and choose <Customize Filters>. On the left you will see all available filters, on the right you will see the ones that are displayed in your encounter search window. Move those from right to left that you want to have displayed. You may use the up and down arrows on the right to put the filters in the order you prefer.



To adjust the columns that display in the encounter section (lower right space), right click and choose <customize encounter results>. Use the same process as above to move the filters you want to see over to the right column. Any you do not want may just be moved over to the left. Here are the recommended columns: **Facility, Nurse Unit, Room, Bed, Enc Status, Enc Type, Med Service, Reg Date, Disch Date, FIN NBR**



You also may want to ensure that <assume wildcards> is off. You will see this when you right click in the encounter window. If <assume wildcards> is on and you enter an MRN, the system returns any MRN that contains those numbers. For example, if I enter an MRN of 51262 and <assume wildcards> is ON, the system would return a patient with MRN 52162, 512621, and 512623 (just an example....not real numbers!). If <assume wildcards> is OFF, you would just get an exact match.

### 3.4 Encounter Type

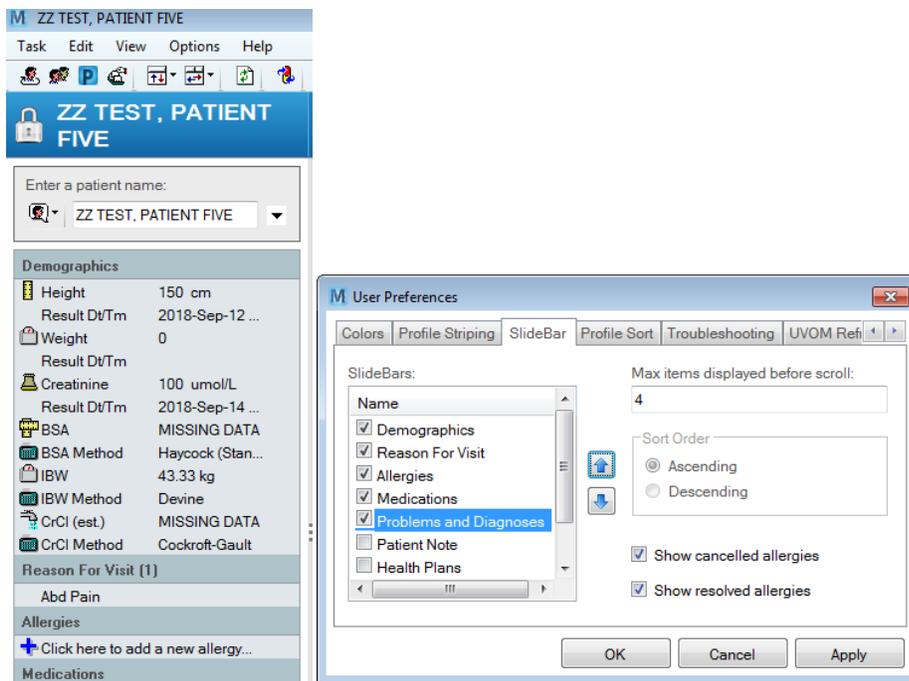
Enc Type (encounter type) is determined at the time of registration by the registration clerk or designated person. Enc type in Med Manager is the same as patient type in registration. Each encounter type has one or more patient services that may be assigned to it. Some encounter types also serve a very specific purpose. The following table outlines the basics of the encounter information.

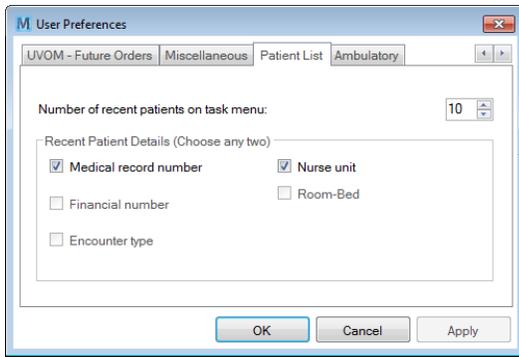
Encounter Type	Description	Examples of patient services	Purpose
AMB/OP	Ambulatory/outpatient encounter	Peds Clinic Asthma Education Diagnostic Imaging	Registration will occur in Cerner for all Ambulatory/OP locations.
Day Surgery	Day Surgery patients at QEH and PCH only	Surgery General (PCH and QEH) Surgery Oral (QEH) Surgery Plastic (QEH)	For registration and booking of day surgery patients.
Emergency	Emergency Medicine	Emergency Medicine	For patients being registered to ER
Inpatient	Inpatient encounter	General Medicine Unit 2	For registration of all inpatient encounters
Observation	Observation encounters	Labour and Delivery Pediatrics	For patients who require observation on a unit for 24 hours or less.
Pharmacy	Pharmacy encounter	Pharmacy Meds	This encounter type is specifically for patients receiving home meds from the pharmacy department. Prompt for registration to create this encounter will be notification by pharmacy. Patient will be discharged when pharmacy notifies registration that encounter may be discharged. Medications can be entered on this encounter but should NOT be charged out in Med Manager as there is no cost centre assigned.
Pre Admit	Pre admit encounter		Used for booking appointments in the future. Pharmacy may use this type in the case where a patient is booked to a unit (ex: oncology/Unit 1) and we are placing med orders in advance of their arrival. However, medications should NOT be charged out in Med Manager through this encounter as there is no cost centre assigned
Recurring Follow Up		Chemotherapy Oncology	Each time a patient has a subsequent visit to the oncology department, and they have an open recurring initial

			encounter, a recurring follow up will be created for the purpose of charge services. NO CLINICAL DATA SHOULD BE ENTERED ON THIS ENCOUNTER TYPE
Recurring Initial		Chemotherapy Oncology	This encounter is to be used for patients receiving oncology treatments so that the patient has an open encounter for the pharmacist to process meds on.
Specimen		Lab Pathology	This encounter type is used for specimens received in lab and processed via department order entry in the lab.

### 3.5 Customizing the Clinical Summary SlideBar

The Clinical SlideBar can be found on the left side of the patient profile. The SlideBar can be customized by clicking Options → User Preferences → SlideBar. Recommended settings are listed below. Patient Note, Rx Intervention and Rx Clinical Note should not be used.





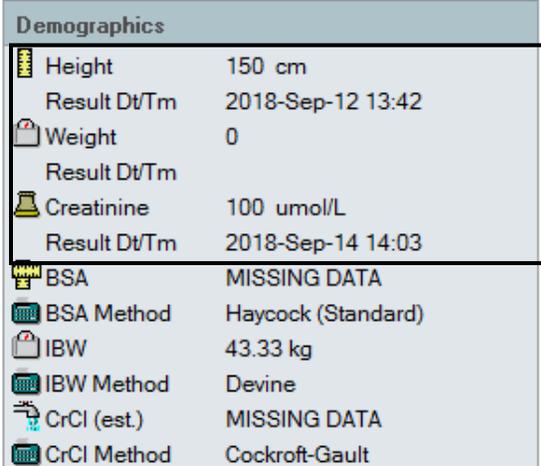
The Patient List tab will allow the ability to view history of recent searches (access by the dropdown area next to the patient name search).

### 3.6 Add/Review Demographics

The Demographics bar displays information on the patient's age, gender, height, weight, creatinine clearance, body surface area, and ideal body weight.

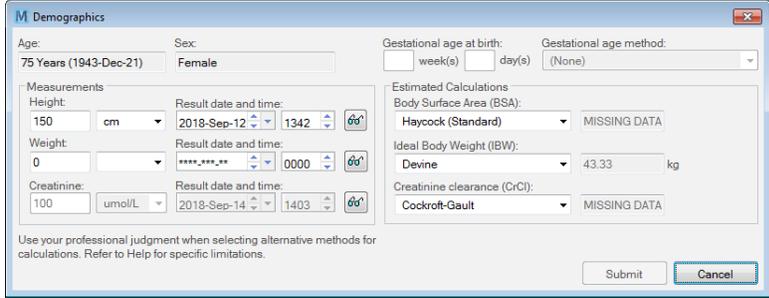
Use the demographics dialog box to enter basic information about a patient.

1. Open Medication Manager.
2. Search and find your patient.
3. Click anywhere inside the Demographics section.



Height, weight (as long as it is from within 30 days), and creatinine display from a previous encounter.

4. The Demographics box displays.



**IMPORTANT NOTE:** To ensure consistency across the system, please convert all height to centimeters and all weight to kilograms prior to adding to the demographic bar. This is very important to ensure consistent units flow to nursing flowsheets and graphs in PowerChart.

5. Add or modify the information as necessary.

- We have made the decision to not allow users to enter creatinine values. Therefore the only source of creatinine values will be from the Lab. That is why the box is dithered and the drop down is unavailable.

6. Press Alt + S or click on the Submit button to submit the information and close the window.

7. The updated demographics information will display in the Demographics area.

## 3.7 Explanation of Formula Used in MedManager

### 3.7.1 Calculating Body Surface Area (BSA)

The Body Surface Area (BSA) methods available in Pharmacy Medication Manager are the Haycock (standard), DuBois, Gehan/George, and Mosteller formulas.

#### Haycock formula

The Haycock formula is the standard method used to calculate BSA and is valid for patient's with heights between 30 and 200 centimeters and weight between 1 and 120 kilograms.

$$\text{BSA (M2)} = 0.024265 * (\text{Height in cm}) ^ 0.3964 * (\text{Weight in kg}) ^ 0.5378$$

#### DuBois & DuBois formula

The DuBois & DuBois formula can be used for patients whose height is between 100 and 200 centimeters and weight is between 20 and 110 kilograms.

$$\text{BSA (M2)} = 0.007184 * (\text{Height in cm}) ^ 0.725 * (\text{Weight in kg}) ^ 0.425$$

#### Gehan/George formula

The Gehan/George formula can be used for patients whose height is between 50 and 220 centimeters and weight is between 4 and 132 kilograms.

$$\text{BSA (M2)} = 0.02350 * (\text{Height in cm}) ^ 0.42246 * (\text{Weight in kg}) ^ 0.51456$$

#### Mosteller's formula

Mosteller's formula can be used for patients whose height is between 50 and 220 centimeters and weight is between 4 and 132 kilograms.

$$\text{BSA (M2)} = ((\text{Height in cm}) * (\text{Weight in kg}) / 3600) ^ 0.5$$

### 3.7.2 Calculating Estimated Creatinine Clearance (CrCl)

The Creatinine Clearance (CrCl) methods available in Pharmacy Medication Manager are the Cockcroft/Gault and Schwartz formulas. The Cockcroft/Gault formula is the default calculation method for adults between the ages of 18 and 92 years old. The Schwartz formula is the default calculation method for patients younger than 18 years old and greater than 6 months.

#### Cockcroft/Gault Formula

The Cockcroft/Gault method is appropriate for adults between 18 and 92 years old and 35 to 120 kg. **The formula calculates CrCl using the patient's Ideal Body Weight (IBW) by default.** This may be adjusted as clinically indicated so that the formula uses the patients' Actual Body Weight, or an Adjusted Body Weight. The est. CrCl is measured as ml/min.

Demographics

Age: 41 Years (1980-Dec-20) Sex: Female Gestational age at birth: week(s) day(s) Gestational age method: (None)

Measurements

Height: 185 cm Result date and time: ADT 2022-Mar-14 1132

Weight: 42 kg Result date and time: ADT 2022-Sep-08 1045

Creatinine: 65 umol/L Result date and time: ADT 2022-Sep-08 1045

Estimated Calculations

Body Surface Area (BSA): Mosteller 1.47 m<sup>2</sup>

Ideal Body Weight (IBW): Devine 75.2 kg

Creatinine clearance (CrCl): Cockcroft-Gault (Ideal Weight) 119.12 mL/min

Cockcroft-Gault (Ideal Weight)  
Cockcroft-Gault (Actual Weight)  
Cockcroft-Gault (Adjusted Weight)  
Schwartz - PEDS (2-18 yrs)  
Schwartz - PEDS term (<2 yrs)

Submit Cancel

Male: Estimated CrCl (ml/min) = (140-age) \* (ABW or IBW (kg)) / (72 \* Serum Creatinine Result (mg/dl))

Female: Estimated CrCl (ml/min) = 0.85 \* (140-age) \* (ABW or IBW (kg)) / (72 \* Serum Creatinine Result (mg/dl))

The Cockcroft/Gault formula calculation may not be accurate under any of the following conditions:

Patient is older than 92 years

IBW is less than less than 35 kg or greater than 120 kg

Serum Creatinine Result is very low or very high.

#### Schwartz Formula

##### Schwartz Formula – Pediatric (2-18 yrs)

Height range for this method: 40 – 200 cm

Creatinine range for this method: 25 – 800 umol/L

For male children between 13 and 18 years:

Estimated CrCl (ml/min/1.73m<sup>2</sup>) = 0.7\*Height (cm)/Serum Creatinine Result (mg/dl)

For female children between 13 and 18 years all children between 2 and 13 years:

Estimated CrCl (ml/min/1.73m<sup>2</sup>) = 0.55\*Height (cm)/Serum Creatinine Result (mg/dl)

### **Schwartz Formula – PEDS preterm (<2 yrs)**

Height range for this method: 1 – 100 cm  
Creatinine range for this method: 25 – 800 umol/L

For male or female infants:

$$\text{Estimated CrCl (ml/min/1.73m}^2\text{)} = 0.33 * \text{Height (cm)} / \text{Serum Creatinine Result (mg/dl)}$$

### **Schwartz Formula – PEDS term (<2 yrs)**

Height range for this method: 1 – 100 cm  
Creatinine range for this method: 25 – 800 umol/L

For male or female infants:

$$\text{Estimated CrCl (ml/min/1.73m}^2\text{)} = 0.45 * \text{Height (cm)} / \text{Serum Creatinine Result (mg/dl)}$$

### **3.7.3 Calculating Ideal Body Weight (IBW)**

The Ideal Body Weight (IBW) methods available in Pharmacy Medication Manager are the Traub and Devine formulas. The Devine formula is the default method for adults 18 years of age or older. The Traub formula is the default method for children 17 years of age or younger.

#### **Traub formula**

The Traub formula is the default method used for children between 1 and 17 years of age.

$$(\text{Height in centimeters (cm)} ^ 2) * 1.65/1000$$

#### **Devine formula**

The Devine formula is the default method used for adults 18 years old and older who are at least 60 inches tall.

$$\text{Male: IBW (kg)} = 50 + 2.3 (\text{Height in inches}-60)$$

$$\text{Female: IBW (kg)} = 45.5 + 2.3 (\text{Height in inches}-60)$$

### 3.8 Allergies

The source of truth for the allergy profile is the electronic record. If allergy discrepancies are noted or if additional information is discovered, it should be recorded in the allergy window.



#### Explanation of Symbols

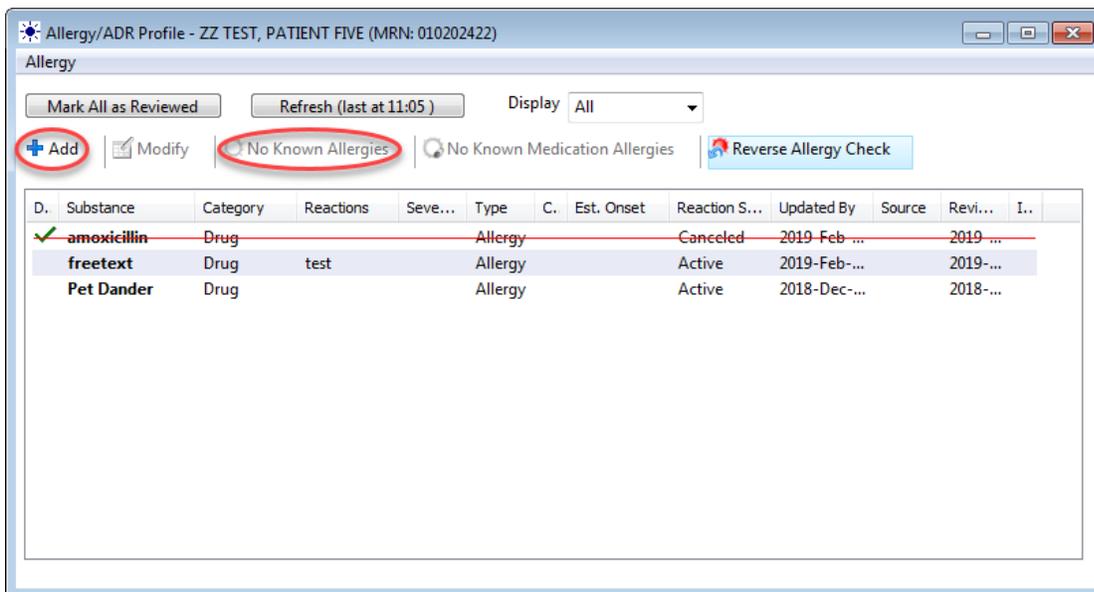
No symbol: The allergy is active. Multum checking will be performed.

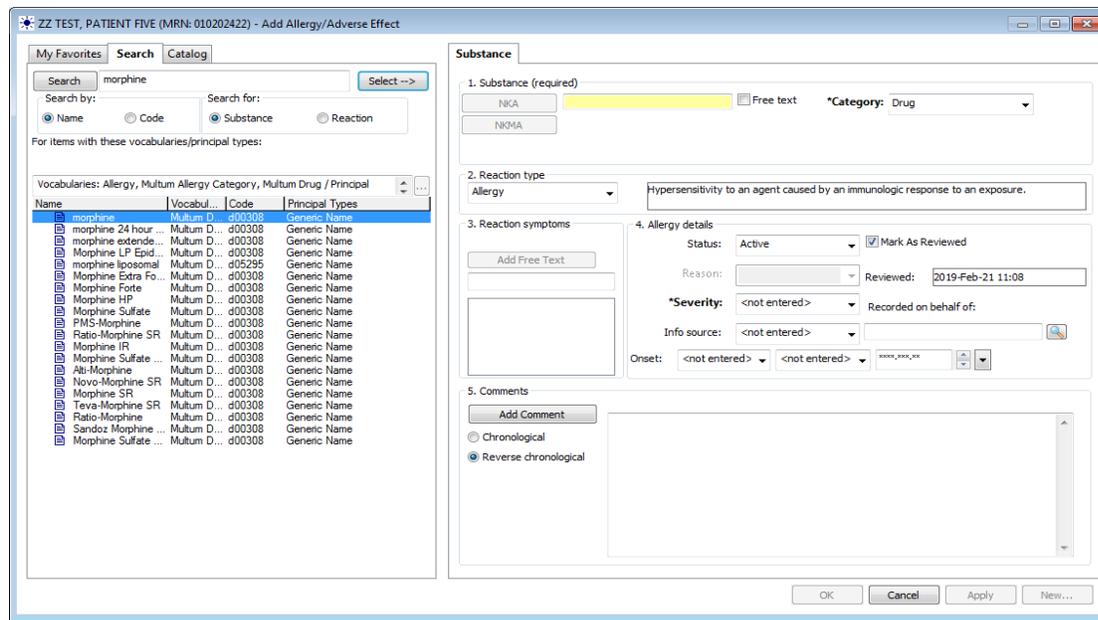
 (Pen in hand): Free-text allergy; no Multum checking will be performed.

 (blue circle with a line): The allergy has been cancelled and will no longer fire a Multum alert.

#### 3.8.1 Add an Allergy

1. In Med Manager, click the text that says 'Click here to Add a New Allergy'.
2. The Allergy/ADR Profile window displays.
3. If there are no known allergies, simply click the <No Known Allergies> button.
4. To add an allergy or side effect/intolerance, click the <Add> button. The Add Allergy/Adverse Effect window displays:





## Substance Search

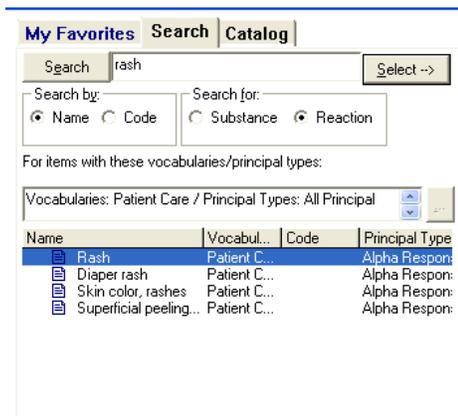
Under the Search tab, type allergen name in the Search box and click search or press enter. Double click on the correct substance to add it to the Substance field.

If the search returns multiple options, choose either the general term for the substance or the specific product to which the patient is allergic or intolerant. The only time the specific product should not be chosen is in the case where the product contains multiple ingredients but the clinical assessment of the patient reveals that the patient is only allergic to one component. For example: Patient has an allergic reaction to Tylenol #3, but takes acetaminophen regularly with no ill-effects. Enter the allergy as codeine.

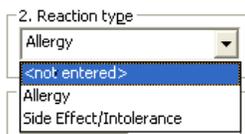
**Free text allergies should only be used where there is no codified value for the substance because they do not provide any clinical checking in the Multum database. Free text allergies can only be entered by Pharmacists.** If another clinician would like a pharmacist to enter a free-text allergy, a Pharmacy Action Form (PAF) will be sent to Pharmacy. The form should include the name of the allergen as well as details of the reaction. It should be signed by the clinician who is requesting the allergy be added. Another search for the codified allergens should be performed by the pharmacist. Once it's been determined that there is no codified allergen for the substance requested, a free-text allergy may be entered. Include the name of the clinician requesting the allergy be added in the 'Recorded on Behalf of' field.

5. Select the Category. This is now a required field when adding allergies through Powerchart. The category defaults to "drug" in Med Manager and MUST be changed to "Food" when entering a food allergy. Only food allergies entered with a category of "food" will do to Dietary.

6. Type the reaction symptom in the Search box and click <Search>. Double click the reaction in the list to select it. It is important to search the database for a codified reaction. If there is no codified reaction, a free-text reaction can be entered.



7. Enter the Reaction Type if known. **If the reaction type is not known, choose <not entered>.**



Reaction types include allergy, side effect, and intolerance. The Multum system does not distinguish between any of the reaction types, however, recording these details is intended to provide the end user with additional guidance when evaluating therapy. If additional information is known about the reaction type, it could be entered as a comment.

**Allergy:** Hypersensitivity to an agent caused by an immunologic response to an exposure.

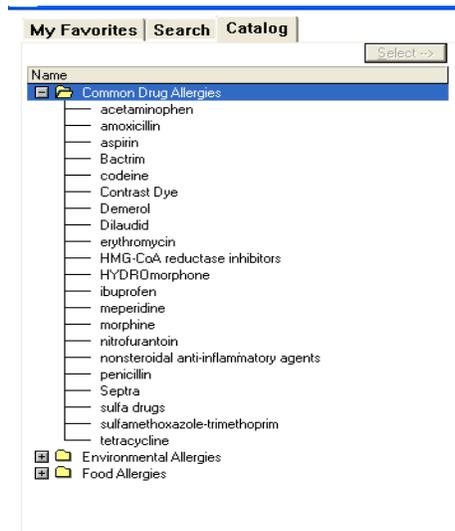
**Intolerance:** Hypersensitivity resulting in an adverse reaction upon exposure to an agent. This would not be an expected side effect.

**Side Effect:** An action or effect of a drug other than that desired. This type of effect would be expected based on clinical studies.

8. Enter other information about the reaction including Severity, Info Source, Onset, etc. if known. Click <Add Comment> to add a comment if appropriate, e.g. when changing the status of an allergy from active to canceled.

9. If you are finished entering allergies, you can click <OK> (or press Alt-O) and return to Med Manager. If you would like to add more allergies for this patient, Click <Apply> (or press Alt-A) to complete the current allergy and <New> (Alt-N) to add another one.

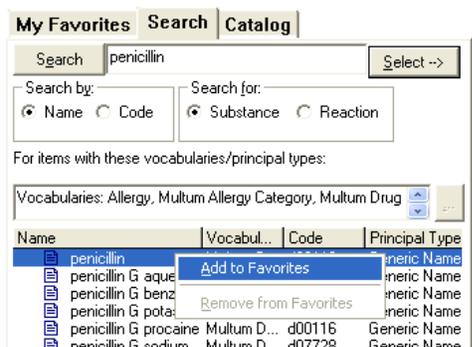
### 3.8.2 Using the Catalog Tab



Users can also use the Catalog tab to choose from some of the more common allergies:

### 3.8.3 Using the Favorites tab

Users can also build their own favorites folders if they like. When you search for and select an allergy, or if you want to move some of those in the catalog over to your favorites, simply right-click on the allergy and select 'Add to Favorites'.



The selected item will now appear under the My Favorites tab.

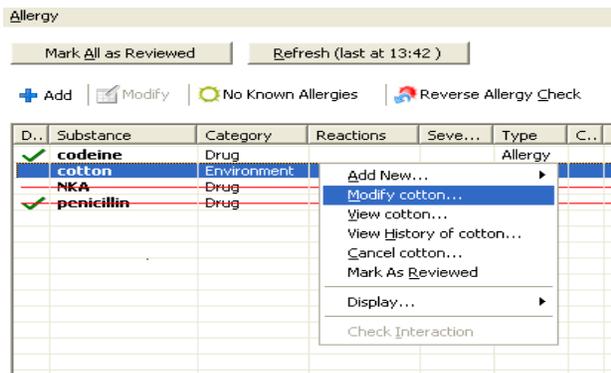


### 3.8.4 Reverse Allergy Checking

This functionality looks at the new allergy that has been added and performs a review of all the medications that are active on the patient's profile. Active orders include inpatient orders for the current encounter and medications by history in the current folder. The functionality may be set to fire automatically at the time of entering an allergy or, if desired, it can be accessed at any time by clicking the <Reverse Allergy Check> button.

### 3.8.5 Modifying an Allergy

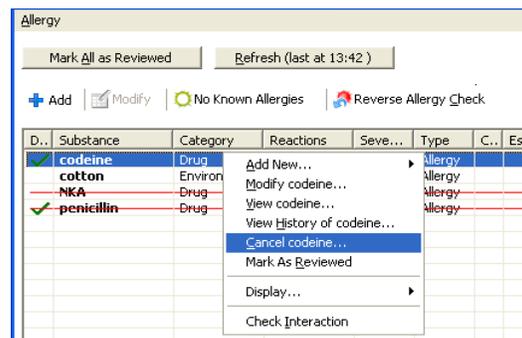
1. In the Allergy/ADR Profile window, right-click the allergy and select <Modify>



2. The Modify Allergy details window will display. Change the Allergy information as necessary.
3. Click <OK> (or press Alt-O) to save and close the window.
4. Close the Allergy/ADR Profile window and return to the main Medication Manager screen.

### 3.8.6 Cancel an Allergy

1. In the Allergy/ADR Profile window, right-click the allergy and select <Cancel>
2. The Cancel Allergy window will display.
3. Enter a reason in the using the <Reason> drop-down list. More information, if needed, can be typed in the <Comments> box.
4. Click <OK> (or press Alt-O) to save and close the window.
5. Close the Allergy/ADR Profile window and return to the main Medication Manager screen.



### 3.8.7 Updating No Known Allergy

#### Scenario:

Patient has NKA recorded. Another allergy is added (in this example, ASA). However the ASA is clarified and deemed to not be appropriate so it is cancelled.

#### Question:

How do you get NKA back on the patient profile, since it is not available in the search window?

#### Workflow:

In the allergy window, make sure that the display is set to "all". Right click on the NKA line and choose "Modify NKA"

The screenshot shows the allergy management interface. At the top, there are buttons for '+ Add', 'Modify', 'No Known Allergies', and 'Reverse Allergy Check', along with a 'Display:' dropdown set to 'All'. Below this is a table with columns: D., Substance, Category, Reactions, Seve..., Type, C., Est. Onset, Reaction S..., Updated By, Source, Revi..., and I... The table contains two rows: 'ASA' (Drug, Allergy, Canceled, 2013 Sep ...) and 'NKA' (Drug, Allergy, Canceled, 2013 Sep ...). A context menu is open over the 'NKA' row, showing options: Add New..., Modify NKA..., View NKA..., View History of NKA..., Cancel NKA..., Mark As Reviewed, Display..., and Check Interaction. Below the table, there are sections for '2. Reaction type' (set to Allergy), '3. Reaction symptoms' (with an 'Add Free Text' button), and '4. Allergy details'. The 'Status' dropdown is set to 'Canceled' and 'Mark As Reviewed' is checked. The 'Reason' dropdown is set to 'Canceled'. The 'Reviewed' date is '2013-Sep-18 10:22'. The 'Info source' is '<not entered>'. The 'Onset' section has two date pickers and a 'XXXX\_XXK\_XX' field.

Change the status from "Canceled" to "Active"  
Click OK.

### 3.9 Add a Patient Note

Since these notes are shared throughout the entire system, patient note is not the best place to record medication specific/pharmacy related notes. **Please do not use this field.** Patient notes may NOT be deleted once entered.

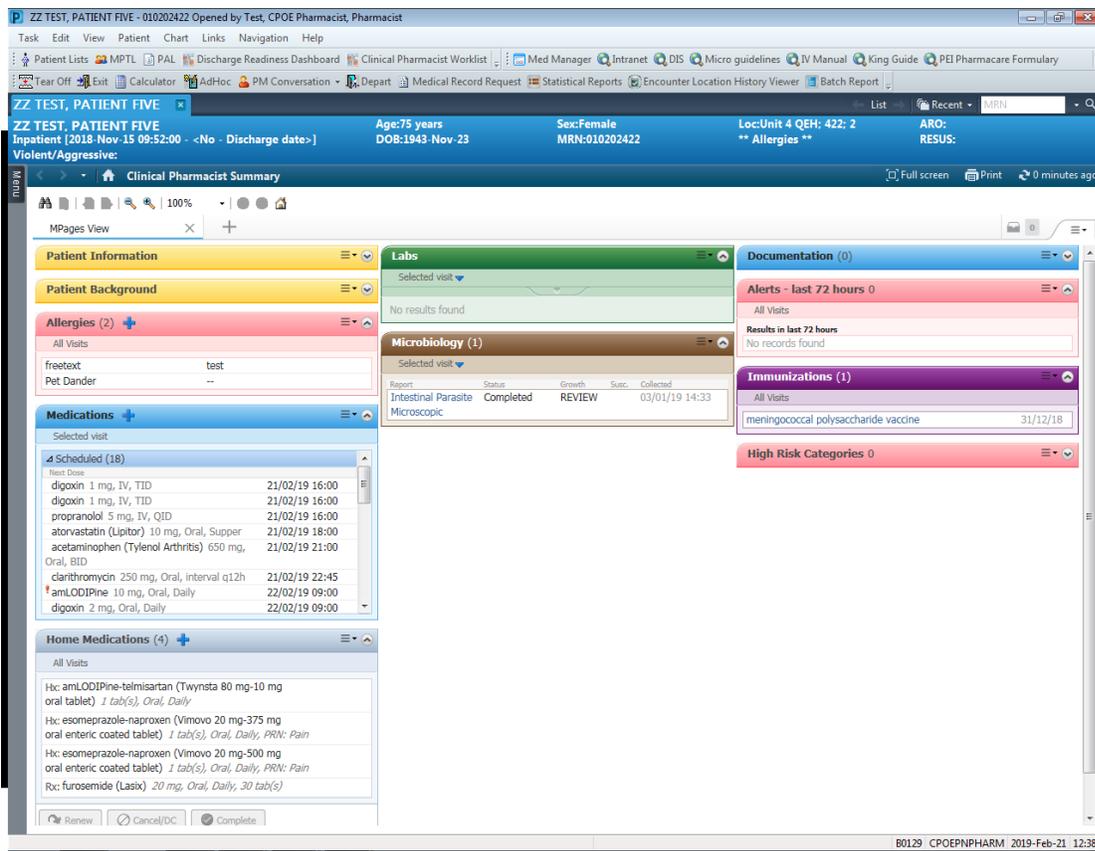
### 3.10 Reviewing Results

#### 3.10.1 Med Manager View

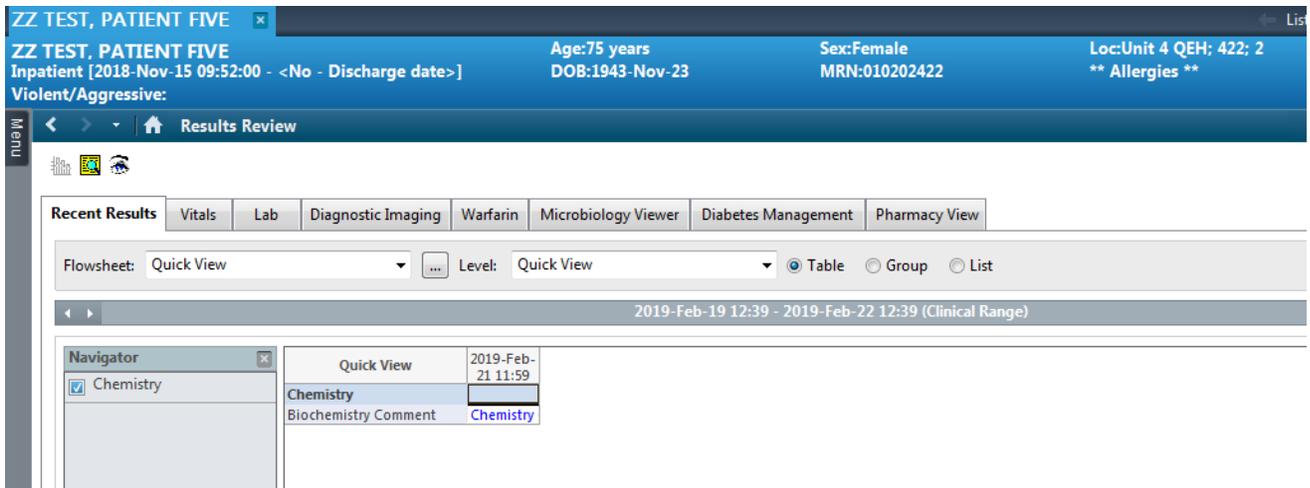
It is **not recommended** to use the results tab in Med Manager as it does not display units of measure. It is preferable to use the PowerChart View.

#### 3.10.2 Powerchart View

The Patient Care Summary tab shows an overview of the patient chart, including recent results:



From the Menu (on the left) you may choose the Results Review tab:



Results are contained in several tabs; Recent Results, Vitals, Lab, Diagnostic Imaging and several custom (by position) flowsheets. Recent Results is a summary of all types of results in one tab. In each of these tabs, all units of measure are automatically displayed with their corresponding value.

Each flowsheet is divided into three major sections:

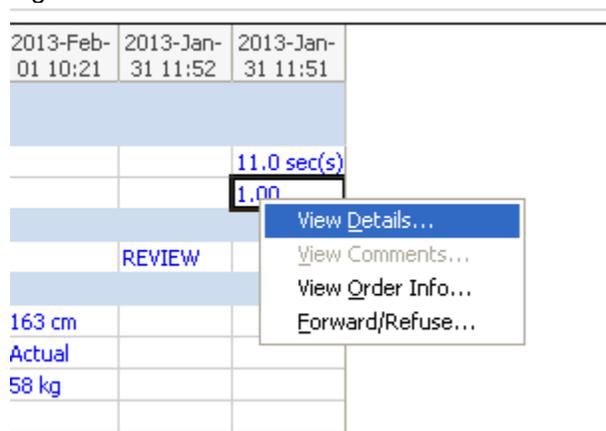
- The left section is the Navigator, which consists of a categories list. By selecting a category, you can immediately view its contents, which are displayed as values in the grid to the right.
- The right section is the Results display, which provides a two-dimensional view of events (tests, procedures, and documentation) against a time continuum.
- The Timeframe bar displays a selected date and time range and indicates the type of data view displayed. Right click on this bar to change the display range.

### 3.10.3 Reviewing Results

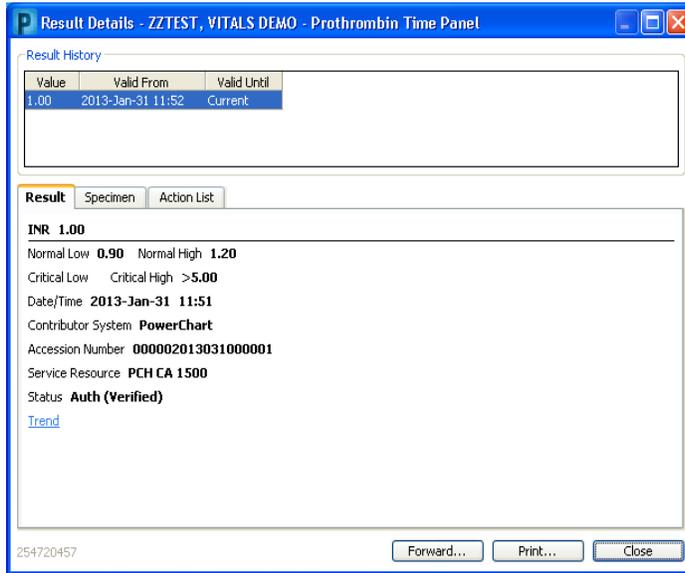
1. Search and select your patient.
2. Click the desired tab.
3. Notice the categories listed in the Navigator section.

***If you do not see details for a category in the Navigator, click the category. Use the scroll bar at the bottom of the screen to scroll right and left.***

4. Right-click a result and select <View Details>



5. The Result Details box displays.
6. Review the result details.

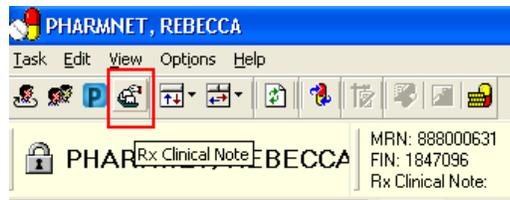


7. Click Close.

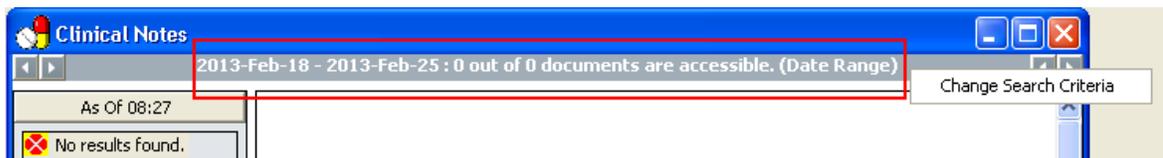
### 3.11 Review Documentation from PharmNet

From PharmNet, it is possible to view the same documents that are seen under the Documents tab in PowerChart.

Click on the <Rx Clinical Note> button in the top left-hand corner of the screen.

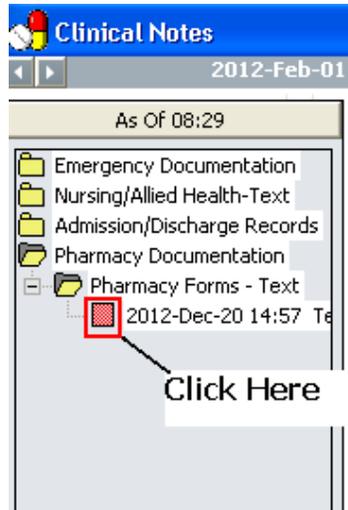


The Clinical Notes box will open. The Date Range can be changed by right-clicking on the Date Range bar.

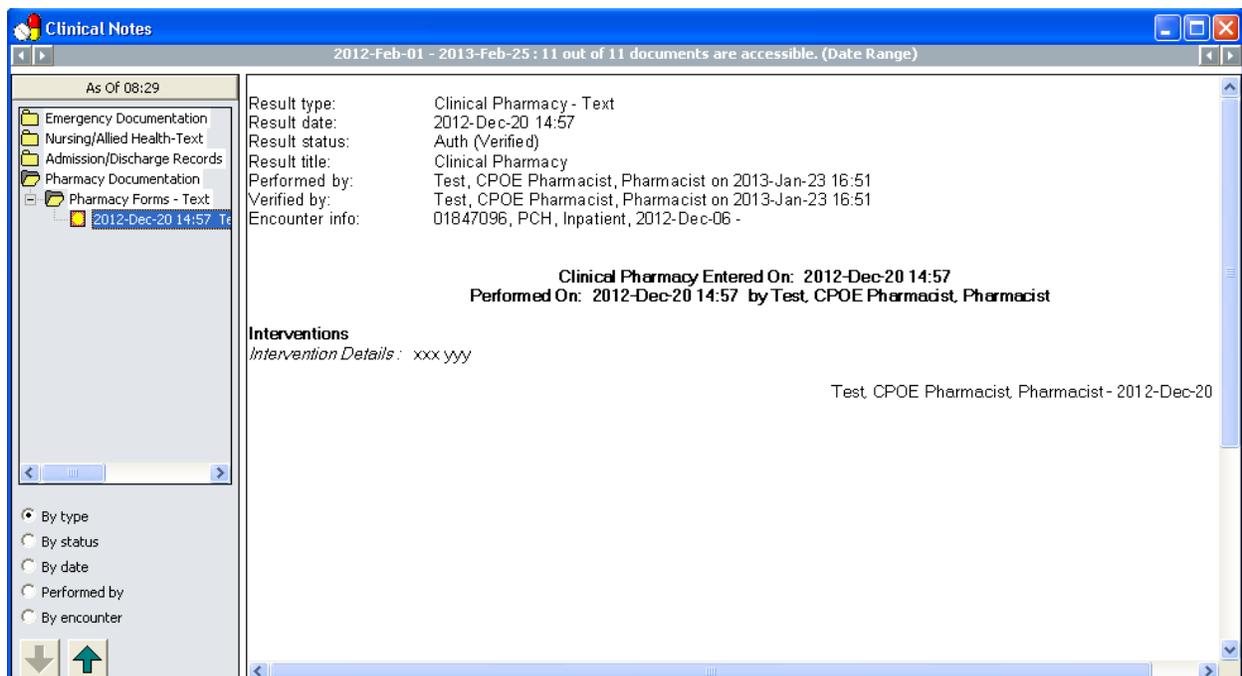


If there are any documents available, they will appear on the left hand side of the Clinical Notes box. It is possible to expand the list by clicking on the folder  and then the plus sign  beside the document name.

**Important:** To open a document, you must click on the colored box beside the document's name. Clicking on the document's name will not open the document.



The document selected can then be reviewed. It is not possible to print the document from Med Manager. To print the document, it will need to be opened under the Documents tab in PowerChart.



## 4. Med Order Details

### 4.1 Order Types

There are three main order types: medication, intermittent, and continuous.

#### 4.1.1 Medication

Medication orders consist of products other than IV sets, TPN, chemotherapy, etc, which are dispensed as medications from pharmacy. Examples of medication orders include tablets and capsules, oral medications, suppositories, and injectable meds that will be diluted on the floor.

The Medication Search window:

Profile | Results | Unverified Orders | Monitor

Drug:  
amoxicillin

You can search by description, mnemonic, generic, or brand.

The Product Selection screen will display. Select the appropriate medication and press Alt + O or click OK.

Product Search

Main | Settings

Identifiers:  
 Generic Name  Brand Name  Mnemonic  Description  
 Charge Number  NDC  Other: [ ]

Product type:  
 Product  IV Set  Order Set

Order type:  
 Medication  Intermittent  Continuous

Search for:  
morphine

Order	Mnemonic	Generic Name	Strength / Form	Description	Brand Name	1*	NDC
M	MOR201UD	morphine	20 mg / 1 mL Conc	morphine 20 mg/ml conc 1ml Ujd pkg [Flex]	Roxanol equiv	<input checked="" type="checkbox"/>	00054-3751-4
M	RDC20D	morphine	600 mg / 30 mL Conc	morphine 20 mg/ml conc 30ml bottle	Roxanol equiv	<input checked="" type="checkbox"/>	00054-3751-5
M	MOR200120	morphine	2400 mg / 120 mL Conc	morphine 20 mg/ml conc 120ml bottle	Roxanol equiv	<input checked="" type="checkbox"/>	00054-3751-5
M	MSPV01	morphine	1 mg Powder	morphine 100s Powder		<input checked="" type="checkbox"/>	00406-1321-55
M	MOR25	morphine	2 mg / 1 mL Soln	morphine 2 mg Inj		<input checked="" type="checkbox"/>	00074-1762-3
M	MOR45	morphine	4 mg / 1 mL Soln	morphine 4mg Inj		<input checked="" type="checkbox"/>	00074-1258-3
M	MOR85	morphine	8 mg / 1 mL Soln	morphine 8 mg Inj		<input checked="" type="checkbox"/>	00074-1258-3

The Settings tab can be used to change the number of results that will be returned for a search. The system defaults to twenty search results. We recommend changing this number to 200 so that you will receive the optimal number of results.

The New Med Order Window:

New Med Order

Drug: furosemide Dose: 20 mg Ordered as: Lasix

Drug Dose Ordered As

Route: Oral Frequency: Daily PRN doses:  PRN reason: (None) Physician: [ ]

Duration: 365 day(s) Start date: 2019-Feb-22 Time: 09:00 Stop date: 2020-Feb-22 Time: 08:59 Stop type: Soft Stop

Previous scheduled administration: \*\*\*\*-\*\*-\*\*-\*\* Next administration: 2019-Feb-23 09:00 Following: 2019-Feb-24 09:00 Remaining doses: 365

Order comments: Product notes:

Dosage form: Tab Communication type: Written Order priority: (None)

Dispense category: TAB/CAP Dispense from location: Pharmacy QEH Inventory Initial doses: 0 Initial quantity: 0

Billing formula: Pharmacy Price: \$0.00 Cost: \$0.00

Patient's own med  Auto calculate initial dose

Product... Printing... Comments... Order Type Link Info... Alert History... Rx Intervention

OK Cancel

<b>Field Dose</b>	<b>Order Entry</b> A default is built on products. At the time of entering an order in Med Manager this default may be changed to reflect the order. A free text dose may also be entered in this field.	<b>Order Verification</b> The dose comes from PowerChart as entered by the provider. Changing this dose at the time of verification creates a yellow triangle on the eMAR on all tasks after the change.
<b>Ordered as Synonym</b>	The most common brand name is usually defaulted on the product in Med Manager. This may be changed or removed (highlight and delete) at the time of placing the order.	This reflects the actual synonym chosen by the ordering provider when the order was placed. This SHOULD NOT be changed at the time of verification. *See note on bottom of pg. 32*
<b>Route</b>	Displays the default route of administration information and allows for selection of a value from the Route List or entry of a value for a route.	This reflects the route entered and SHOULD NOT BE CHANGED (unless the same product will be used ex going from Oral to NG with no change in product)
<b>Frequency</b>	Displays the frequency options for the order. The most common is defaulted on the products for Med Manager	This comes from the order sentence ordered by the provider in PowerChart. Changing this in Med Manager creates a yellow triangle on the eMAR. It also updates all prior not charted doses.
<b>Custom Button</b>	Opens the Frequency dialog box. This feature is used to change the administration times for an order without affecting the default frequency on any other order.	This is available for unverified orders. Shows up on the eMAR with a yellow triangle. Pharmacist is presented with the option to skip the next dose if it is too close to the last admin time.
<b>PRN Doses Checkbox</b>	Indicates that the order is PRN (As Needed).	If changed in Med Manager this DOES NOT create a yellow triangle on the eMAR. The task moves from the PRN section to the scheduled section. Pharmacist must acknowledge the next admin time in Med Manager.
<b>PRN Doses Box</b>	Allows entry of the number of doses to be sent when the product is ordered as PRN. Par dose values should typically be set to 0. Par dose values have been defined on a small number of products.	
<b>PRN Reason</b>	This is a drop down field that may be used in Med Manager if the reason is known.	This is a required field on order sentences coming from PowerChart. It has been defaulted on all inpatient sentences that have been built and may be changed by the ordering provider at the time of order entry. Changing this field in Med Manager DOES NOT create a yellow triangle on the eMAR.
<b>Physician Box</b>	Displays the name of the Physician responsible for the order and will automatically be defaulted by the system to the attending physician as displayed in the banner bar. You must change to the ordering physician on order entry if different.	If this is changed in Med Manager, there is NO yellow triangle on the eMAR. The original ordering physician is still on the order. The modify details in the history window of the eMAR show the new physician name.
<b>Start Date and Time</b>	Displays the projected start date and time of the order based on the frequency. This may be changed when entering a new order in Med Manager.	This field may not be changed when verifying or modifying an order in Med Manager unless the true start time of the order is known/confirmed and the first dose has not been charted
<b>Stop Date and Time</b>	Displays a stop date and time if duration has been specified.	Changing this when verifying/modifying the order creates a yellow triangle on the eMAR and changes the stop type to physician stop

<b>Stop Type List</b>	This field is used to define the stop type such as hard, no, physician, and soft. For our implementation, we are using soft stops and physician stops. Drugs with an MRA were given a soft stop representing the MRA policy. All other drugs were given a 365 soft stop. When the soft stop is reached, these orders will print on the stop order report and/or route to Message Centre.	If a physician specifies a duration on an order, the stop type will update to physician stop. This stop will drop off the eMar at the end of its course without routing to the Message Centre.
<b>Order Comments</b>	Displays order comments that have been defaulted/added to the order sentence when placing the order in PowerChart or from Special Instructions when converting a documented home med to an inpatient med.	Adding or removing an order comment DOES CREATE a yellow triangle on the eMAR if administrations have already been documented on that order.
<b>Product Notes Dosage Form</b>	Displays default notes that have been built on the product. Displays the dosage form for the order.	Adding or removing a product note DOES NOT cause a yellow triangle on the eMAR. If changed, this does not cause a yellow triangle on the eMAR. DO NOT CHANGE THE FORM as it will disrupt route-form compatibility.
<b>Communication Type</b>	Written- used when transcribing a written order. Does not route for co sign. Telephone- used when transcribing a telephone order. Routes for co sign. Verbal- used when transcribing a verbal order. Routes for co sign. Medical Directive- used when entering an order that is part of an approved medical directive. Does not route for co sign. Clinician- used when entering an order that is part of the ordering clinician's scope of practice. Does not route for co sign Physician co-sign- used in situations where a co signature is needed but the order is not telephone/verbal	This will come across as entered in PowerChart. If a physician is entering an order in PowerChart, the communication type box does not display. It is automatically written.
<b>Order Priority</b>	Displays the assigned priority for the order. Valid order priorities are None, Routine, and STAT. None and Routine have the same meaning. Now is no longer being used and is not available in PowerChart. Please do not choose this in Med Manager as it will display on the clinical display line and will also need to be removed if the order is copied.	This may not be added when modifying or verifying an order. If indicated on an order you will see it in this field (applied to first dose only). You may be prompted to review the next admin time if they are close together.
<b>Dispense Category</b>	Displays the default dispense category for the pharmacy product. Dispense categories determine workload, charging, label type and dispense quantity calculations.	May be changed/modified
<b>Initial Doses Box</b>	Displays the number of default doses that are calculated by the PharmNet system based on current time and the frequency selected.	May be changed/modified

<b>Initial Quantity Box</b>	Displays the calculated result of Initial Doses multiplied by Quantity per dose. For floor stock, the initial quantity will be zero because nothing will be dispensed.	May be changed/modified
<b>Billing Formula</b>	Always defaults to pharmacy. The other available option is no charge	May be changed/modified
<b>Order Price Box</b>	Displays the patient charge per dose. This value will always be the same as cost for initial doses unless a no charge billing formula is used.	n/a
<b>Order Cost Box</b>	Displays the pharmacy cost per dose.	n/a
<b>Product button</b>	Used to find information about the product.	If you need to change the product assigned to the order, click <Product> the <Prod Select>
<b>Printing Comments</b>	Prints a label to a designated printer. Allows the user to enter fill notes, Rx comments and User Defined Details.	Prints a label to a designated printer. This field will be orange if there are user defined fields that have been filled out at the time of order entry. If this field is blue, that means that fields have been modified.***IF FIELD IS ORANGE/BLUE THIS MUST BE CHECKED BY THE PHARMACIST WHEN VERIFYING THE ORDER***

**IMPORTANT NOTE:**  
Modifying the "ordered as" synonym after the order has been entered can have adverse and potentially life threatening consequences for the patient. Upon discharge reconciliation, the order will revert back to the original ordered as synonym but the dose will remain the same. This can lead to dosing errors particularly for volume meds, formulation changes and therapeutic interchanges.

Ex) Physician orders carbidopa-levodopa (Sinemet CR 200/50 oral tablet) i tab BID  
Pharmacy modifies the "ordered as synonym" (Sinemet CR 100/25 oral tablet) and modifies the dose to ii tabs BID

Upon discharge the "ordered as synonym" will REVERT back to (Sinemet CR 200/50 oral tablet BUT the DOSE WILL REMAIN THE SAME

Carbidopa-levodopa(Sinemet CR 200/50 oral tablet) ii tabs BID

**The patients' dose has BEEN DOUBLED upon discharge**

### 4.1.2 Intermittent

Intermittent intravenous orders consist of infusions given over shorter periods of time, whether administered only once or at regular intervals. Intermittent orders will be placed for chemotherapy orders. The set of attributes required to distinguish intermittent orders from other order types includes frequency, rate, infuse over value, and total volume.

When a pharmacy product is ordered as an intermittent order, the New Intermittent Order dialog box will be displayed. Note the values for Frequency, Total Volume mL, Rate mL/hr, and Infuse Over. We will use this functionality mainly for chemo orders, which are mixed in the pharmacy and leave the pharmacy labeled with the intermittent rate information. Where possible we have built chemo orders as IV sets to assist with order entry.

Vol	Drug	Dose	Ordered As
	Bleomycin	30 unit(s) / 2 each	bleomycin
<input checked="" type="checkbox"/>	Dextrose 5% in Water	50 mL	Dextrose and Water

Route: IV Piggybac Frequency: Daily PRN doses: PRN reason: (None) Physician: Abbott, Lewis  
Rate: 200 mL/hr Infuse over: 15 minute(s)  
Duration: (None) Start date: 2007-Jun-21 Time: 14:59 Stop date: 2007-Jun-28 Time: 14:58 Stop type: Physician Stop  
Order comments: Stable 14 days at room temperature Stable 28 refrigerated  
Dosage form: Solution Dispense category: CHEMO IV\_INT Billing formula: Pharmacy  
Communication type: Written Dispense from location: Pharmacy QEH Price: \$210.63 Cost: \$210.63  
Order priority: STAT Initial doses: 0 Initial quantity:  
Buttons: Update, Remove, Modify, Total volume mL: 50, Ingredient volume mL: 50, Product..., Printing..., Comments..., Order Type, Alert History..., Close  
Auto calculate initial dose:

### 4.1.3 Continuous

Continuous Intravenous orders consist of uninterrupted infusions given over a designated period of time that require additional supplies of the product or product to be sent at regular intervals. An example of a continuous order is TPN. The set of attributes required to distinguish continuous orders from other order types includes interval, rate, total volume, infuse over value, replace every value, and additive frequency.

When a pharmacy product is ordered as a continuous infusion, the New Continuous Order dialog box is displayed. Note the values for Frequency, Total Volume mL, Rate mL/hr, Infuse Over, and Replace Every.

We will use the continuous order type when we are preparing the order in the pharmacy and it leaves the pharmacy as a continuous order with appropriate rate information. For example, PCA, epidurals, and TPN.

## Continuous Order Screen Elements

Field	Description
Total volume mL Box	Displays the total volume of a Continuous order and allow for entry of a different value for total volume.
Rate ml/hr Box	Displays default rate information for Continuous orders and allows for entry of a rate.
Free Text Rate	Allows for entry of text to describe an administration rate that cannot be adequately expressed in ml/Hr. For example titratable IV medications.
Infuse Over Box and List Box	Displays default information about the period of time over which a Continuous order is infused.
Replace Every Box and List Box	Displays how frequently an IV bag should be replaced with a fresh bag for Continuous orders.
Additive Frequency Box and List Box	Displays the bag frequency options for Base Solution and Additive components of Continuous order types

## 4.2 Frequencies

Frequency refers to the portion of the order/order sentence which indicates the interval at which the medication should be administered, i.e. when do we give the medication to the patient?

### For example:

Take 1 tablet orally BID for 5 days – BID is the frequency

Inject 0.5 mL by intramuscular injection every 28 days for 6 doses – every 28 days is the frequency

Frequencies form a code set in the Cerner system which was designed, built, and is maintained by the pharmacy team. The same frequency code set is shared by all users of the system including physicians, nurses, labs, etc.

Each frequency has specific parameters associated with it that will then determine the start date and time of the order as well as the interval at which subsequent doses will be tasked for nurses to administer. When departmental order entry is completed in pharmacy, the frequency chosen will directly impact the display on the eMAR when it is in use.

### Important note: Frequency is not the same as duration/duration unit

- Frequency answers the question, when do we give the medication to the patient? It is expressed in units such as BID, q4h timed, interval q8h, Once, etc.
- Duration and duration unit answer the question, for how long should the patient receive the medication? This is expressed in units which include bag, day(s), dose(s), hr, minute(s), month(s), sec(s), week(s), year(s)

For example, in the order sentence Amoxicillin 500 mg orally TID for 10 day(s)

Frequency= TID

Duration and Duration unit= 10 day(s)

#### 4.2.1 Types of Frequencies

Schedule Type	Description	Start time and Effect on the eMAR
Scheduled	One or more times of day that can be assigned to tasks. Scheduled times can apply every day or to specific days of the week. Scheduled times are required when the interval between tasks is a multiple of days or weeks. (eg: Daily, BID, q8h timed, q7d, q28d)	<ul style="list-style-type: none"> <li>Start time for the first task is generated when the “next” dosing time is scheduled for that particular frequency.</li> <li><b>For example:</b> an order placed today at 1000 with a frequency of Daily will have its first task at 0900 tomorrow (if the frequency is defined as 0900 for medication). An order placed at 0700 with a Daily frequency will have the first dose at 0900 (unless a priority is chosen)</li> <li>Subsequent tasks are generated for each scheduled dosing time as defined in the frequency schedule.</li> <li>Tasks for these medication orders will appear on the scheduled tab of the eMAR.</li> <li>Tasks will continue to be generated until either a physician stop has been reached or an order action is taken on the order (eg void, cancel, discontinue)</li> <li>At the time of order entry, the entire order may be rescheduled to a new time for the life of the order.</li> <li>In Med Manager, pharmacists may select the “modify” order action and select the “custom” button to customize a frequency to non-standard times. Pharmacy will often receive calls from nursing or via the Pharmacy Patient Monitor to complete this task</li> </ul>
Interval	A fixed interval of time separates the tasks. Specify this frequency schedule by using a numeric value for the interval and selecting a time unit, such as minutes or hours. (e.g.interval q8h, q30m)	<ul style="list-style-type: none"> <li>Start time for the first task is generated at the current time rounded to the next 1 minute.</li> <li>Subsequent tasks are generated based on the start time and calculate forward based on the defined interval.</li> <li>Tasks for these medication orders will appear on the scheduled tab of the eMAR.</li> <li>Tasks will continue to be generated until either a physician stop has been reached or an order action is taken on the order (e.g. void, cancel, discontinue)</li> <li><b>For example:</b> an order placed at 0901 with a frequency of q30m will have its first task at 0902 and the next task at 0932. If a different start time is desired at the time of order entry, the start date and time may be specified and the interval will then calculate from that time forward.</li> </ul>
One Time (Once)	Single points in time, usually specified as once, used to identify treatments that are administered one time only. The once frequency has a specified time of day. (i.e. once, today)	<ul style="list-style-type: none"> <li>Start time for the first task is generated at the current time rounded to 1 hour.</li> <li>The orders appear on the scheduled section of the eMAR.</li> <li>Since these are one time tasks, after they have been charted on once, they will drop off the eMAR (i.e. grey out and go to the discontinued scheduled section).</li> <li>The task will go overdue 90 minutes after its scheduled time.</li> </ul>
Unscheduled	Use this frequency schedule when a specific time is not required for a task that can be completed when needed or within a time range. (e.g.: unscheduled, on call to OR)	<ul style="list-style-type: none"> <li>Start time for the first task is generated at the current time rounded to 1 minute.</li> <li>The orders appear on the unscheduled section of the eMAR.</li> <li>Since these are one time tasks, after they have been charted on once, they will drop off the eMAR (i.e. grey out and go to the discontinued unscheduled section).</li> <li>The task will NOT go overdue</li> </ul>

## 4.2.2 Frequency Features

- The system allows us to flex frequencies based on specific parameters such as facility, nursing unit, and specific pharmacy catalogue orderable.
- When an order is placed, the system first looks to see where the patient is registered (i.e. facility and nursing unit). The system then looks at the specific pharmacy catalogue orderable to see if there is a specific frequency built.
- If the med admin time differs from one unit to another (for example in pediatrics) and a patient is transferred, the administration times remain as those associated with the unit where the patient was located at the time of order entry. These orders would have to be manually updated to reflect the customizations specific to that unit. In Med Manager you can modify the order and re-enter the frequency. The admin time will then be updated as per the patient's current inpatient unit.
- For example, BID is set for 0900 and 2100
- Ritalin has been flexed such that if ordered BID it generates tasks at 0700 and 1400.

### Once vs Unscheduled

**Once:** Available for charting on by the nurse ONE time ONLY (goes to the discontinued section). Task goes overdue 90 minutes after the order has been placed. If PRN flag is added to the order, it goes to the PRN section of the eMAR and may be documented on ONE TIME ONLY.

**Unscheduled:** Intended for orders where the time of administration is not known. Available for charting on by the nurse one time only (goes to the discontinued section). Task does not go overdue. If PRN flag is added the order it goes to the PRN section of the eMAR and may be documented on MORE than one time. The PRN order will be active until the stop date is reached, the patient is discharged, or the order is discontinued.

## 4.3 PRN Orders

PRN (when needed) may be associated with any frequency to make the order appear on the eMAR on an as needed basis. PRN orders appear on the eMAR under the PRN tab and may be charted on as often as required.

If PRN is selected in PowerChart, a PRN reason is required to be entered. In PharmNet, the PRN reason is not required, however, to be consistent, PharmNet users should add a PRN reason whenever possible, ie when the reason is indicated on the order from the physician.

### ***PRN overrides the frequency settings for the order.***

For example: An order placed for Ativan 1 mg orally BID PRN will not have any scheduled times associated with it like a regular BID order would. Rather, it will be in the PRN section of the eMAR and it may be charted on as often as necessary by the nurse.

### ***PRN does not override the duration/duration unit(s) associated to an order.***

For example: An order placed for Ativan 1 mg orally BID prn for a duration of 2 doses will drop off the eMAR into the discontinued PRN section after 2 doses have been charted.

## 4.4 Pharmacy Order Priority

- The options for pharmacy order priorities are None, Routine, and Stat. All pharmacy orders have a default priority of Routine. Routine and None have the exact same meaning. Now is available in Med Manager but should not be used as it will display on the clinical display line and will cause a task to drop at current time if the order is copied.
- The preferred process for ordering a STAT order is to enter 2 separate orders, a one-time STAT plus a continuing order.
- A priority of STAT may be added to any frequency to make the order have a STAT priority. If STAT is attached as a priority to the order, the start time of the order will be current time. The order will display on the PAL for nursing with a red exclamation mark indicating an order of higher priority has been placed. The STAT order will appear in red on the eMAR.
- If an order priority is added to an order at the time of order entry the dosing schedule may need to be reviewed. For example, a BID order entered around 2PM will have the following alert:

Orders for Signature

Order Name	Status	Start	Details
naproxen	Order	2013-Feb-19 13:49	250 mg, Oral, Tab, BID, NOW, Start: 2013-Feb-19 13:49

Details for **naproxen**

Details | Order Comments

[Review Schedule](#) Remaining Administrations: 0 Stop: (Unknown)

- Clicking on <Review Schedule> gives you the opportunity to skip the next task, if appropriate:

Start Date/Time (First Administration):

2013-Feb-19 1349

Next administration:

2013-Feb-19 1800  Skip administration

Following administration:

2013-Feb-20 0900

- STAT medications should be given within 30 minutes of the time of the order, i.e. they should be considered overdue after current time plus 30 minutes
- Tasks for routine medication orders should be considered overdue in the Cerner system at 90 minutes after the task is due.

## 4.5 Stop Types for Pharmacy (Medication) Orders

3 stop types are available in the Cerner system:

- Soft stop
- Hard stop
- Physician stop

We are using soft stops and physician stops only in the system. Hard stops should be changed to a Physician Stop by the pharmacist at the time of verification.

Soft Stop	Physician Stop
<p>When the stop date and time is reached, medication DOES NOT drop off the eMAR</p> <p>Medication order routes to the physician Message Centre and Stop Order Report when stop is reached</p> <p>All medications have either an ASO (policy) or a 365 day default soft stop built on the pharmacy formulary products</p>	<p>When the stop date and time is reached, medication DOES drop off the eMAR</p> <p>Medication order DOES NOT route to the physician Message Centre of Stop Order Report.</p> <p>A physician stop occurs when at the time of order entry the duration and duration units are added and/or changed from what is defaulted on the order sentence (PowerChart) or what is defaulted as the ASO soft stop (PharmNet)</p>

## 4.6 Dispense categories

The dispense category associated with an order depends on the order type; medication, intermittent, or continuous. Products are built with a default order type and dispense category based on how they are most often used. If you change the order type of a product you must associate the order with an appropriate dispense category. The arrow to the right of the dispense category field in the order window will show you what dispense categories are available.

\*Dispense category determines the fill batch if in use and label format for each order. Dispense categories may also be used to group medications together for the purposes of reporting. Dispense categories also impact how much inventory will be decremented for a particular order.

<p align="center"><b>Medication (frequency; no rate, interval, or total volume)</b>                      All of the following dispense categories should be available in the drop down box beside the dispense category default for all medication type orders:  <b>DISPENSE CATEGORIES</b></p>		
ABBREVIATION	DESCRIPTION	EXAMPLE
Ambulatory Medication	Not used	None defaulted. Use when dispensing a

		medication as a home med (aranesp)
BULK	Bulk Products where only multiples of one unit is dispensed	Zovirax 5g cream Ventolin inhaler Amoxil suspension
BULK_REPACK	Bulk product repackaged into smaller sizes	Betaderm cream 454 g Compounding chemicals
CMPND	Medications compounded by pharmacy	All items compounded in pharmacy
INJ_Multiple dose	Inj where more than one dose is available for use in the pharmacy	None defaulted...more for later functionality
INJ_Single dose	Inj where multiples of one vial/amp are dispensed from the pharmacy	All non chemo vials/bags for injection.
INJ_Single dose - premix	Like Inj Single dose but used for piptaz premix bags	At PCH, inj single dose batches run for 3 and 4 day supplies, so a separate category was created for piptaz premixed bags to run daily
LIQUIDS	Oral/Topical Liquids	
METHADONE UNIT DOSE	For methadone being dispensed as a unit dose order	
NARC	Narcotic /Controlled/Targeted Drugs that are not counted	Benzos Barbiturates OTC Codeine products
NARC_CMPND	Narcotics compounded by pharmacy	Methadone Liquid Ritalin Liquid
NARC_COUNTED	Narcotic and Controlled Drugs that are counted	Narcotics and Controlled Drugs
ONCOLOGY_MED	Oncology oral meds	
OUTPATIENT	Medication with a Pass Med Label Type	To be used when dispensing outpatient meds
PASS	Medication with Pass Med Label	To be used when dispensing Pass Meds
PATCH/SUPP/MISC	Patches, supp, misc items for batch fill	Patches and Suppositories
SPECIAL ACCESS	Special Access Medications	Albendazole 200 mg tab Doxycycline 100 mg inj
TAB/CAP	Tablet/Capsules	All tabs and caps (not chemo or narcotics)
TAB/CAP Non PacMed	Tablet/Capsules that do not go in PACMED	
HH_categories ex) HH_TAB/CAP	Separate dispense categories built for Hillsborough Hospital orders for reporting purposes.	

<b>Continuous (rate, interval, total volume; no frequency)</b>	
All of the following dispense categories should be available in the drop down box beside the dispense category default for all continuous type orders:	
<b>ABBREVIATION</b>	<b>DESCRIPTION</b>
Ambulatory- sterile prep med	Medication dispensed to ambulatory sterile prep
CHEMO IV_CONT	Chemo via Continuous Infusion
CIVA_CONTINUOUS	Continuous infusions prepared in pharmacy
MED_CONTINUOUS	Use when you want a med label for a continuous order
MED_CONTINUOUS_BATCH	Use for a continuous med order that you want to qualify for the batch (e) sending a heparin 50 units/mL (500 mL) bag daily
ONCOLOGY IV_CONT	Chemo via continuous infusion

<b>Intermittent (rate, interval, total volume and frequency)</b>	
All of the following dispense categories should be available in the drop down box beside the dispense category default for all intermittent type orders (these will only be used when the intermittent medication is prepared in the pharmacy):	
<b>ABBREVIATION</b>	<b>DESCRIPTION</b>
CIVA_INTERMITTENT	Intermittent infusions prepared in pharmacy
MED_INTERMITTENT	Use when you want a med label for an intermittent order
ONCOLOGY_IV_INT	Chemo intermittent infusion

#### 4.7 Billing Formula

The price schedule or billing formula, associated with a product is set in Product Manager build tool. We have built only one formula; pharmacy which is the default for all orders.

## 4.8 Dispense From Location

The Dispense From Location allows the user to choose if stock will be dispensed from the Pharmacy Department, or as Ward Stock. **In most cases, the default Dispense From Location should NOT be modified.** If the Ward Stock location is chosen, no inventory adjustments will occur. If the Dispense From Location is an ADC (Pyxis) device, it is intended that the initial dose should be dispensed from the pyxis device. Interim/initial dose(s) will NOT be calculated to be dispensed from pharmacy inventory. However, subsequent doses will be sent in the batch/medication strip. IF the default Dispense from Location is a pyxis device AND the product has been set as wardstock for that unit, then ALL dispenses are intended to occur from the Pyxis device.

Clicking on the eyeglasses to the right of the Dispense From Location will allow you to see the product inventory at the patient's facility.

Note: Currently, it is not possible to track a unit's ward stock inventory unless it is located in an ADC. A blank QOH (quantity on hand) does not equate to zero quantity in a units' ward stock.

\* Route: IV

Duration: ( )

Last charted a 2023-Apr-04

Order comme

AVOID admin such as TPN administration

Dosage form: Injection

\* Dispense category: INJ\_Single dose

\* Billing formula: Pharmacy

Price: \$2.54 Cost: \$2.54

\* Dispense from location: Pharmacy QEH Inventory

Initial doses: 1 Initial quantity: 1

Check	Location	Label Description	QOH	Unit
<input checked="" type="checkbox"/>	Pharmacy QEH Inventory	ceftriaxone 2 g Inj	314	each
<input type="checkbox"/>	Unit 1 QEH	ceftriaxone 2 g Inj		
<input type="checkbox"/>	EDFTQEH	ceftriaxone 2 g Inj	12	each
<input type="checkbox"/>	EDCCQEH	ceftriaxone 2 g Inj	0	each
<input type="checkbox"/>	EDTRQEH	ceftriaxone 2 g Inj	7	each
<input type="checkbox"/>	EDOBSQEH	ceftriaxone 2 g Inj	30	each
<input type="checkbox"/>	PACUQEH	ceftriaxone 2 g Inj	0	each
<input type="checkbox"/>	SUBPACUQEH	ceftriaxone 2 g Inj	0	each
<input type="checkbox"/>	NRQEH	ceftriaxone 2 g Inj	0	each
<input type="checkbox"/>	ICU1QEH	ceftriaxone 2 g Inj	15	each
<input type="checkbox"/>	ICU2QEH	ceftriaxone 2 g Inj	9	each
<input type="checkbox"/>	PANDICUQEH	ceftriaxone 2 g Inj	0	each
<input type="checkbox"/>	EDRTUQEH	ceftriaxone 2 g Inj	12	each

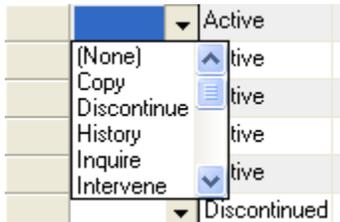
Product... Printing... Comments... Order Type Alert History... Rx Intervention

## 5. Profile Actions

### 5.1 Overview

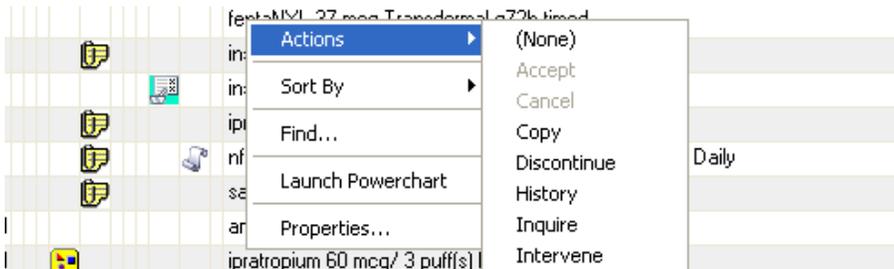
The Profile tab of the PharmNet Medication Manager is used to view, verify, or make changes to an existing order. Depending on the order's status, various profile actions are available. You can perform these actions by:

1. Selecting the  button in the profile actions cell and selecting an action

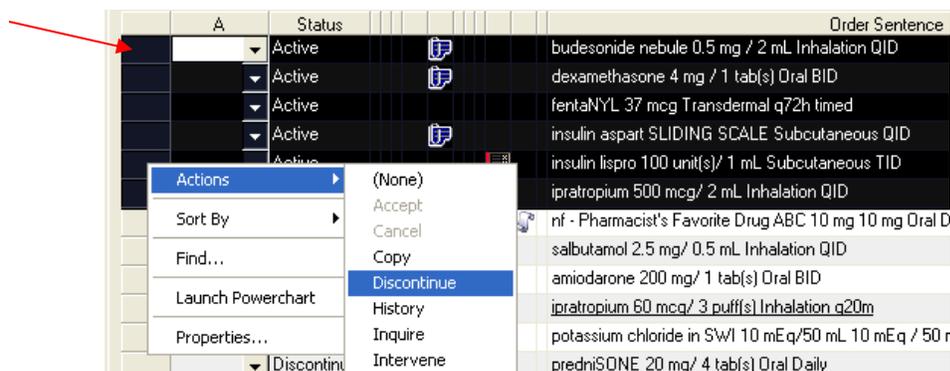


**TIP:** Once the window is highlighted, hitting the first letter of the action you want will bring you to that action. Use caution as there may be multiple actions beginning with the same letter (ex verify, void and renew)

2. Hovering over any point on the line which you want to perform a profile action, right clicking, select <Actions> and then select an action



The same profile action can be applied to multiple orders by left clicking in the box to the far left of the first order you want to include. While continuing to hold the left click, drag your mouse down to the last line you want to include. All the lines selected will be highlighted black. Now right click anywhere in the highlighted black section and select the action you wish to apply to the selected orders.



Discontin	Active			budesonide nebule 0.5 mg / 2 mL Inhalation QID
Discontin	Active			dexamethasone 4 mg / 1 tab(s) Oral BID
Discontin	Active			fentaNYL 37 mcg Transdermal q72h timed
Discontin	Active			insulin aspart SLIDING SCALE Subcutaneous QID
Discontin	Active			insulin lispro 100 unit(s)/ 1 mL Subcutaneous TID
Discontin	Active			ipratropium 500 mcg/ 2 mL Inhalation QID
Discontin	Active			nf - Pharmacist's Favorite Drug ABC 10 mg 10 mg Oral Daily
	Active			salbutamol 2.5 mg/ 0.5 mL Inhalation QID
	Discontinued			amiodarone 200 mg/ 1 tab(s) Oral BID

If the orders are not consecutive, the same action can be applied to the orders in a different way. Select the first line to be included by left clicking in the box to the far left, then while holding down the <Ctrl> key, left click all the other orders to be included.

A	Status			Order Sentence
Discontin	Active			budesonide nebule 0.5 mg / 2 mL Inhalation QID
	Active			dexamethasone 4 mg / 1 tab(s) Oral BID
Discontin	Active			fentaNYL 37 mcg Transdermal q72h timed
	Active			insulin aspart SLIDING SCALE Subcutaneous QID
Discontin	Active			insulin lispro 100 unit(s)/ 1 mL Subcutaneous TID
Discontin	Active			ipratropium 500 mcg/ 2 mL Inhalation QID
	Active			nf - Pharmacist's Favorite Drug ABC 10 mg 10 mg Oral Daily
Discontin	Active			salbutamol 2.5 mg/ 0.5 mL Inhalation QID

To perform the same action to all the medications on the profile, right click anywhere in the medication display area, select All Actions and then select the order action to applied to all the orders. The All Actions is also available by selecting Task by clicking it (located in the top left-hand corner) or <Ctrl> + <T>.

- Reschedule
- Resume
- Suspend
- Verify
- Void
- Pending Action ▶
- All Actions ▶
  - Accept All Orders on Profile
  - Discontinue All Orders on Profile
  - Reject All Orders on Profile
  - Resume All Orders on Profile
  - Suspend All Orders on Profile
  - Verify All Orders on Profile
- Link Orders ▶
- Unlink Orders

Task	Edit	View	Options	Help
Change Patient				Ctrl+P
Change Password				
Suspend User				
Accept All Orders on Profile				
Discontinue All Orders on Profile				
Reject All Orders on Profile				
Resume All Orders on Profile				
Suspend All Orders on Profile				
Verify All Orders on Profile				
Recent Patient List				▶
Exit				

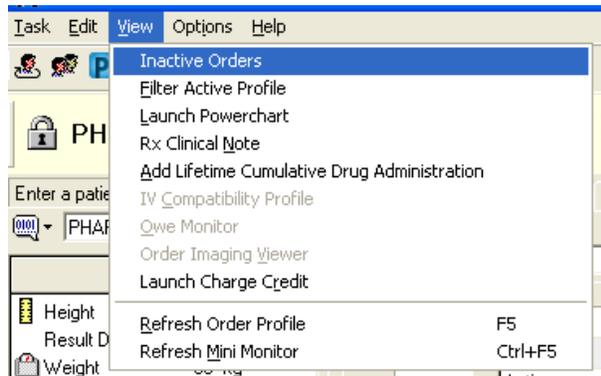
## 5.2 Profile Actions and How They Work

### 5.2.1 None

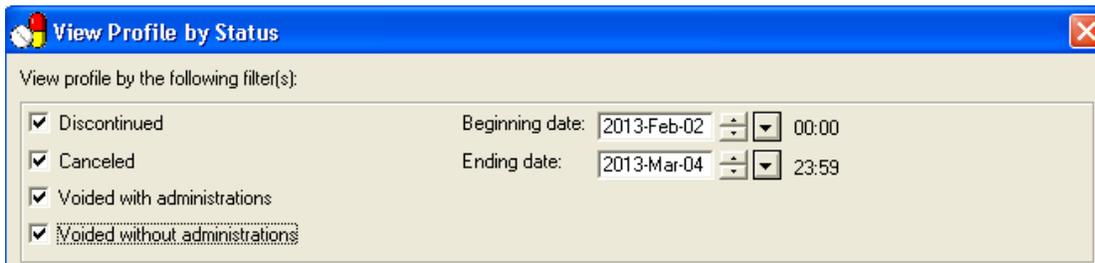
- Cancels a profile action selected in error

### 5.2.2 Copy

- Uses existing active, discontinued or voided orders as a template to create a new order.
- Orders can be copied from a previous encounter. To view all discontinued or voided orders for a patient (even orders from the previous encounter), go to View; Inactive orders.



- Set filters to include Discontinued, Canceled, Voiced with administrations, Voiced without administrations; set desired date range, then hit enter or click OK.



- Users may also toggle between Active and Inactive orders and View Profile by Status.

Action	Status	Order Sentence	Start	Stop	Order Type
	Active	peracillin-tazobactam 3.375 g IV interval q6h	2020-Mar-06 10:30	2020-Mar-10 10:29 (s)	MED
	Active	scubitril-valisarten 97 mg/103 mg 1 tab(s) Oral BID	2020-Mar-06 21:00	2021-Mar-06 20:59 (s)	MED
	Active	levonorgestrel 20 mg Oral Daily	2020-Mar-07 09:00	2021-Mar-07 08:59 (s)	MED
	Discontinued	acetylsalicylic acid 325 mg Oral Daily	2020-Feb-26 09:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	acetylsalicylic acid EC 81 mg Oral Daily	2020-Mar-07 09:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	atorvastatin 80 mg Oral Supper	2020-Mar-06 18:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	gabapentin alpha 50 mg Sublingual q2h PRN	2020-Feb-27 09:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	gabapentin alpha 50 mg Sublingual q2h PRN	2020-Feb-25 09:56	2020-Mar-06 10:23 (s)	CONT
	Discontinued	hydrochlorothiazide 25 mg Oral Daily	2020-Mar-07 09:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	metoprolol 25 mg Oral BID	2020-Feb-25 21:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	Neonatal IV Fluid 500 mL IV 45 mL/hr	2020-Mar-05 15:52	2020-Mar-06 09:42 (s)	CONT
	Discontinued	nt - Patient receives parenteral and/or oral chemotherapy at the PEICTC See...	2020-Mar-06 09:39	2020-Mar-06 10:23 (s)	MED
	Discontinued	nt - SUPER VITAMIN 1 tab Oral Daily	2020-Mar-07 09:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	norepinephrine + dextrose 5% in water IV 24 mL/hr [0.1 mcg/kg/min]	2020-Mar-05 15:37	2020-Mar-06 09:42 (s)	CONT
	Discontinued	pentoprazole + NaCl 0.9% IV 10 mL/hr [8 mg/hr]	2020-Mar-05 15:45	2020-Mar-06 09:42 (s)	CONT
	Discontinued	pentoprazole 80 mg IV Once	2020-Mar-05 16:00	2020-Mar-06 09:40 (s)	MED
	Discontinued	pentoprazole sodium 20 mg Oral Daily	2020-Mar-06 09:00	2020-Mar-06 09:40 (s)	MED
	Discontinued	quetiapine 150 mg Oral Bedtime	2020-Feb-26 21:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	rampiril 10 mg Oral Daily	2020-Mar-07 09:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	rampiril 5 mg Oral Daily	2020-Feb-26 09:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	rampiril 5 mg Oral Daily	2020-Feb-26 09:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	rampiril 5 mg Oral Daily	2020-Mar-06 09:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	scubitril-valisarten 49 mg/51 mg 1 tab(s) Oral BID	2020-Mar-06 21:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	Sodium Chloride 0.9% IV Solution 1,000 mL IV 100 mL/hr	2020-Mar-06 10:03	2020-Mar-06 10:23 (s)	CONT
	Discontinued	gabapentin 2,500 mg IV q2h PRN	2020-Feb-25 10:00	2020-Mar-06 10:23 (s)	MED
	Discontinued	gabapentin 7.5 mg Oral Bedtime	2020-Feb-25 21:00	2020-Mar-06 10:23 (s)	MED



## 5.2.4 History

- Review all actions and dispensing history for an order
- Within the History dialog box: The Action History, Dispense History and Verification History check boxes are selected by default to filter the history events that are displayed.

History Event	Date/Time	User	Doses
Order - 123434375	2013-Mar-01 14:09	Test, CPDE Physician, MD	
Rejected	2013-Mar-01 14:09	Test, CPDE Pharmacist, Pharmacist	
Verified	2013-Mar-04 13:00	Test, CPDE Pharmacist, Pharmacist	
Modify	2013-Mar-04 13:00	Test, CPDE Pharmacist, Pharmacist	
Modify	2013-Mar-04 13:01	Test, CPDE Pharmacist, Pharmacist	

Drug: methotrexate    Dose: 50 mg / 20 tab(s)    Ordered As: methotrexate

Total volume: N/A    Rate: N/A    Infuse over: N/A    Replace every: N/A  
 Frequency: q7d    Route: Oral    PRN: No    Par dose: 0  
 Dosage form: Tab    Start dt/tm: 2013-Mar-02 09:00    PRN reason:  
 Stop dt/tm: 2014-Mar-02 08:59    Billing formula: Pharmacy    Billing description: Cost of item  
 Stop type: Soft Stop    Price: Cost:  
 Duration:    Research account:  
 Dispense category: ONCOLOGY\_MED    Source order ID: N/A  
 Dispense from: Pharmacy PCH1    Communication type: Written  
 Physician: Test, CPDE Physician, MD    Order priority:  
 User defined details:    Contributor system: PowerChart  
 Link details:    TPN details: N/A  
 Total disp doses: 0    Patient's Own Med: No  
 Schedule exceptions: N/A

Alert History    Reprint Label    Product    View Notes    Workflow Hx    Close

- The History Event column will display all records of dispensing (initial dose, fill list, extra dose etc.), and all records order actions (order, verified, rejected, modify, pass etc.)

**NOTE:** Select the appropriate record for the history event you would like to look at to see the details for that action.

- View Product within history by activating the **Product** button or <Alt> + <P>. The Order Products dialog box will appear with details about the product or products in the order.

Product	QtyPerDose	QtyUnit	24HrPar	Manufacturer
methotrexate 2.5 mg Tab	5	tab(s)	0	Apotex Inc.

Close

- View Notes within history by activating the  button or <ALT> + <N>. The View Notes dialog box opens with the order details in the blue title bar and displays Rx comments, order comments, product notes and fill notes associated with the order.

**Rx comments**

**Order comments**  
2013-Mar-04 13:36 Test, CPOE Pharmacist, Pharmacist  
Appear face up on the eMAR

**Product note**  
2013-Mar-04 13:36 Test, CPOE Pharmacist, Pharmacist  
In Powerchart are known as MAR notes and can be found in the comments tab of the order info

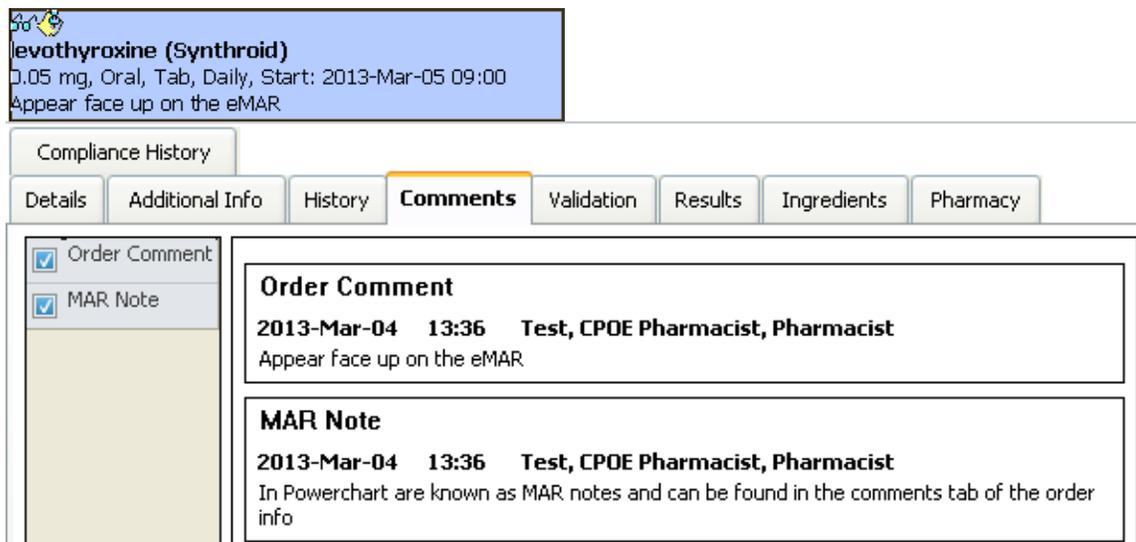
**Fill note**  
2013-Mar-04 13:36 Test, CPOE Pharmacist, Pharmacist  
Only appear on the one of the labels that prints for a batch fill

Rx comments are being used to record information for Pharmacy use only. Ex. pharmacist documentation of dose review where no intervention is needed. See section 9.1.2, verbal request to change med admin times, or assigning a specific dosage form due to a dye allergy.

- On the eMAR order comments appear on the medication line and if it is not completely viewable the RN can hover over the comment to view the complete comment in a pop up dialog box.

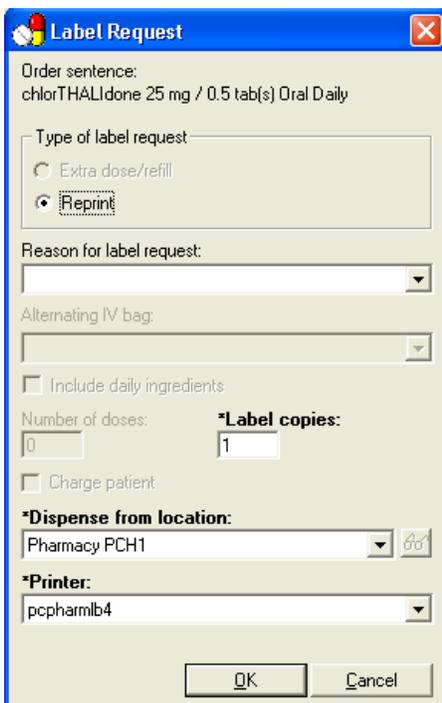
 <b>insulin aspart (SLIDING SCALE NovoRapid insulin)</b> SLIDING SCALE, Subcutaneous, Injection, QID, Routine, Start: 2013-Feb-28 16:00 BG <4 call MD 4.1 to 6 = 0 units 6.1 to 8 = 2 units 8.1...	<b>SLIDING SCALE</b> Previous admin could not be determined.	<b>SLIDING SCALE</b> Previous admin could not be determined.
<b>insulin aspart</b> <b>Blood Glucose, Capillary</b>	insulin aspart (SLIDING SCALE NovoRapid insulin)	
 <b>insulin lispro (HumaLOG)</b> 100 unit(s), Subcutaneous, Injection, TID, Start: 2013-Mar-01 11:00	SLIDING SCALE, Subcutaneous, Injection, QID, Routine, Start: 2013-Feb-28 16:00	
<b>insulin lispro</b> <b>Blood Glucose, Capillary</b>	BG <4 call MD 4.1 to 6 = 0 units 6.1 to 8 = 2 units 8.1 to 10 = 4 units 10.1 to 12 = 6 units 12.1 to 14 = 8 units 14.1 to 18 = 10 units 18.1 to 20 = 12 units > 20 call MD	
 <b>ipratropium (Atrovent inhalation solution)</b> 500 mcg ( 2 mL ), Inhalation, Solution, QID, Start:		

- Product notes (called MAR Note in the eMAR) for a particular medication are indicated by the  symbol on the medication line of the eMAR. These notes can be found in the comments tab of the order info or by clicking on the  symbol.



The screenshot shows the eMAR interface for a medication order. At the top, a blue box displays the medication name "levothyroxine (Synthroid)" and its dosage "0.05 mg, Oral, Tab, Daily, Start: 2013-Mar-05 09:00". Below this, a note says "Appear face up on the eMAR". The interface has several tabs: "Compliance History", "Details", "Additional Info", "History", "Comments", "Validation", "Results", "Ingredients", and "Pharmacy". The "Comments" tab is selected, showing a list of comments on the left and a detailed view on the right. The detailed view contains two entries: an "Order Comment" and a "MAR Note", both dated "2013-Mar-04 13:36" and attributed to "Test, CPOE Pharmacist, Pharmacist". The "Order Comment" text is "Appear face up on the eMAR". The "MAR Note" text is "In Powerchart are known as MAR notes and can be found in the comments tab of the order info".

- Reprint Label within history by selecting the appropriate record from the History event and clicking the  button or <ALT> + <R>.



The screenshot shows a "Label Request" dialog box with the following fields and options:

- Order sentence:** chlorTHALIdone 25 mg / 0.5 tab(s) Oral Daily
- Type of label request:**
  - Extra dose/refill
  - Reprint
- Reason for label request:** (Dropdown menu)
- Alternating IV bag:** (Dropdown menu)
- Include daily ingredients
- Number of doses:** 0
- \*Label copies:** 1
- Charge patient
- \*Dispense from location:** Pharmacy PCH1
- \*Printer:** pcpharmib4

Buttons for "OK" and "Cancel" are at the bottom.

- Alternatively, follow the procedures outlined in the Label profile action section of this manual to complete the label reprint request

- View Alert History

- Click on the **Alert History** button or <ALT> + <L> to view all the alerts fired for the order and the override reason selected if it was entered.

**Alert History**

PHARMNET, TRENT    MRN: 888000632    Age: 45 Years    Location: 1 / 143 1  
 FIN: 1846945    Gender: Male

Clinical Checking     Discern

Order sentence:  
 methotrexate 12.5 mg / 5 tab(s) Oral Thursday

	Ordered Drug	Alert Type	Alert Severity	Interacting Drug	Interacting Order Sentence	Alert Dt/Tm	Personnel Name	Override Reason
1	methotrexate	D	●	pantoprazole		2013-Mar-04 13:00	Test, CPOE Pharmacist, Pharmacist	Clinical Judgment
2	methotrexate	D	●	acetylsalicylic acid		2013-Mar-04 13:00	Test, CPOE Pharmacist, Pharmacist	Clinical Judgment

### 5.2.5 Inquire

- Review details for an existing order
- The Inquire Profile Action is valid for any order, regardless of its current status. The Inquire Order dialog box is read-only. To add, update or change order information, use the Modify profile action.

### 5.2.6 Intervene

- Interventions specific to a drug can be documented. Choose the action of <Intervene> from the dropdown list and click <Apply> or by clicking <Rx Intervention> during the Verify Process. This will launch PowerForms finder.

Intervene Active non-form  
 (None) continued amoxicilli  
 Copy tive enoxapa  
 Discontinue continued levothyrc  
 History tive PARoxel  
 Inquire Active acetamir

**TIP:**  
 Use the <Intervene> or <Rx Intervention> button in PharmNet when you would like to alert other Pharmacists that you have made an Intervention.

**Verify Med Order**

Drug: citalopram    Dose: 40 mg / 1 tab(s)    Ordered As: citalopram

\*Route: Oral    \*Frequency: Daily    PRN doses: (None)    \*Physician: Test, CPOE Physician, MD

Duration: (None)    Start date: Original 2012-Dec-12 09:00    Stop date: 2013-Dec-12 08:59    \*Stop type: Soft Stop

Previous scheduled administration: 2013-Mar-01 09:00    Next administration: 2012-Dec-13 09:00    Remaining doses: 365

Order comments:    Product notes:

Dispense form: Tab    \*Communication type: Written    Order priority: (None)

\*Dispense category: TAB/CAP    \*Dispense from location: Pharmacy PCH1    Initial doses: 0    Initial quantity: 0

\*Billing formula: Pharmacy    Price: \$0.00    Cost: \$0.00

Patient's own med     Auto calculate initial dose

**Rx Intervention**

Using the intervene or Rx Intervention to document will display a mortar and pestle next to the medication indicating that there is a clinical documentation linked to that medication.

Status	Order Sentence
Active 	domperidone 20 mg/ 2 tab(s) Oral QID

**IMPORTANT NOTE:** Never save an intervention. If saved, the RN will not be able to document on the medication task for that order.

### 5.2.7 Label:

- Generate labels as required and perform extra dose/refill function
- A label reprint request generates a label without charging or creating a dispense event. The label reprint request is valid for Active, Suspended and Discontinued.
- Extra dose or refill request creates a dispense event and generates a label. Extra dose/refill requests are valid for Active and Discontinued Orders.
- When dispensing an extra dose check the history of the order to determine what was dispensed previously. This will help to determine whether the base unit is “mL”, “each”, or “g”

Order sentence:  
hydrocortisone 0.5% Cream 1 application Topical  
BID

Type of label request

Extra dose/refill  
 Reprint

Reason for label request:

Alternating IV bag:

Include daily ingredients

\*Number of doses: 1      \*Label copies: 1

Charge patient

\*Dispense from location:  
Pharmacy PCH1

\*Printer:  
pcpharmlb3

OK      Cancel

Remember that in this window you are entering the number of doses. If you click on the eyeglasses next to the dispense from location you will be able to see the product description (including pack size where appropriate), the base unit of measure (mL, each, g) and the QOH at your site.

Check	Location	Label Description	QOH	Unit
<input checked="" type="checkbox"/>	Pharmacy PCH1	hydrocortisone 0.5% Cream (15 g)	7	each
<input type="checkbox"/>	Pharmacy GEH1	hydrocortisone 0.5% Cream (15 g)	27	each
<input type="checkbox"/>	MED PCH	hydrocortisone 0.5% Cream (15 g)		

OK      Cancel

### 5.2.8 Modify

- Modify an order
- With eMAR, to keep continuity of electronic charting, orders are modified if there is a change in Dose, Frequency, order comments, physician etc.
- Changes in route require the order to be discontinued and a new order entered. This is to maintain the relationship between route and form.
- In the event that changing the route or form on the order DOES NOT change the product, Modify may be used with caution. Other users will be trained to NOT modify the route or form.
- When changing the dose you may need to select a new product.

- For medications that have a frequency of >1 day (e.g q2d, q3d), if the order is modified a task will drop at the next scheduled admin based on the frequency schedule, NOT based on when the patient last received a dose. Check the eMAR and discontinue/re enter if required being aware of the correct start date/time. Nurse may need to chart not done/not given on tasks that are not needed.

### Discontinue & New Order vs. Modify

When an order is discontinued and a new one is entered, the new order begins without reference to the first. Start time of the new order must take into account the last dose given of the old order. When an order is modified, the information on the order is replaced with any changes. The new frequency takes into account the previous administration in determining when to administer the first dose at the new frequency. The eMAR only reflects one order, previous order information can be found in order history.

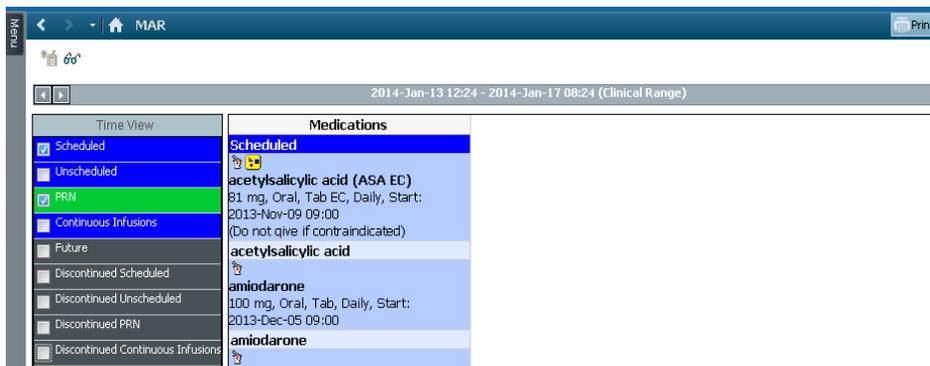
### 5.2.9 Pass

- The Pass Profile Action is used to create a new order with an associated dispense event intended to be given to a patient going on a pass or temporary leave of absence.
- The new order is created from the order details of the originating order.
- The Pass Profile Action is only valid for Active Orders. The resulting one time order that is created has an order status of Discontinued once submitted; therefore, if changes are required the Pass profile action will need to be completed again.

#### 5.2.9.1 Filling Pass Meds

\*\*At sites where the person entering the pass meds differs from the person checking the pass refer to the pass order on the Orders page and print if needed. Printing of the order and eMAR will assist with quantities of narcs/controlled/PRNs, duration, and for narcotic record keeping.

1. Look up patient profile in Med Manager
2. Enter/Verify any new orders for the patient.
3. Access and print a copy of the eMAR from Powerchart. Select the MAR tab, select only Scheduled and PRN active medications by deselecting all other categories under the time view panel then click the printer icon on the top right side of the eMAR.



- The eMAR contains information pertaining to the order such as order comments and special instructions that will need to be included on the Pass Med. The printed eMAR can then be maintained as the written record on which dispense record labels may be attached.

**Clinical Tip:**

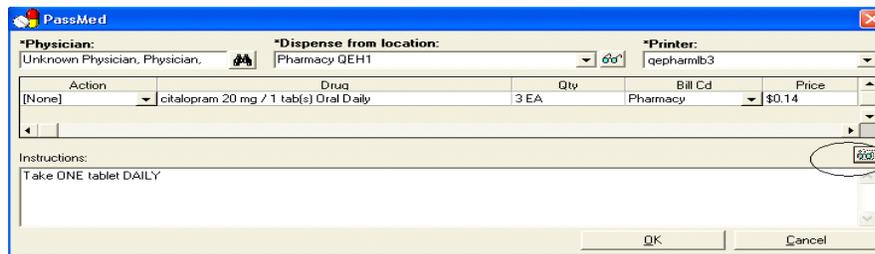
Please be sure to check the start/stop date on any taper orders or on orders with a specified duration (ex antibiotics) to ensure the course of therapy will continue as appropriate when the patient returns to the facility.

- For each medication required on the Pass, choose the profile action of <PASS> to the left of the medication and click <APPLY>. Please Note: if the order is in an unverified status, then the order must be verified before the <PASS> action may be taken.

Profile		Results	Interventions	Unverified Orders	Monitor
Drug:					
	A	Status			Order Sentence
	Pass	Active			acetaminophen 650 mg / 2 tab(s) Oral q4h interval PRN
	Pass	Active			citalopram 20 mg / 1 tab(s) Oral Daily
	Pass	Active			dimenhyDRINATE 50 mg / 1 tab(s) Oral q4h interval PRN
	Pass	Active			hydrochlorothiazide 25 mg / 1 tab(s) Oral Daily
	Pass	Active			metoprolol 25 mg / 1 tab(s) Oral BID
	Pass	Active			naproxen EC 375 mg / 1 tab(s) Oral TID
	Pass	Active			pantoprazole 40 mg / 1 tab(s) Oral Daily
	Pass	Active			ramipril 5 mg / 1 cap(s) Oral Daily

- The Pass Med conversation window opens. The user is prompted to fill out the Action, Qty and Instructions. The Physician may need to be modified depending on the process at each site.

**Action:** Choose NONE



**Instructions:** This field gives pharmacists the opportunity to provide the patient with instructions in language that is easy to understand. Shortcuts have been built for commonly used Instructions. They may be found by clicking on the eyeglasses on the right side of the conversation window. If the shortcut you need is not built, you may type the instructions in long form. Order comments and/or special instructions that are pertinent to the order as identified from the eMAR should be entered.

**Quantity:** The number entered here should represent the total number of units (tabs, caps, mLs) to be dispensed. It is NOT the number of doses as would be entered in a new med order for an inpatient.

Click <OK> then <SUBMIT> and a label will print. Inventory will be decremented from Supply Chain if appropriate.

**Please refer to document titled “Pass Meds for Multi-Product single ingredient orders” in the CIS Training Document Folder for information regarding processing pass meds for multi-product orders**

### 5.2.10 Reject: Refuse verification without review

- The Reject Profile Action is valid for only unverified orders. The order's status will remain Unverified after the Reject Profile Action is applied. Because the status does not change from the original unverified status, the change in state is denoted by  in the column to the right of the status column.

Action	Status				Order Sentence
	Active				amLODIPine 10 mg Oral Daily
	Active				pneumococcal 23-valent vaccine 0.5 mL IM Unscheduled

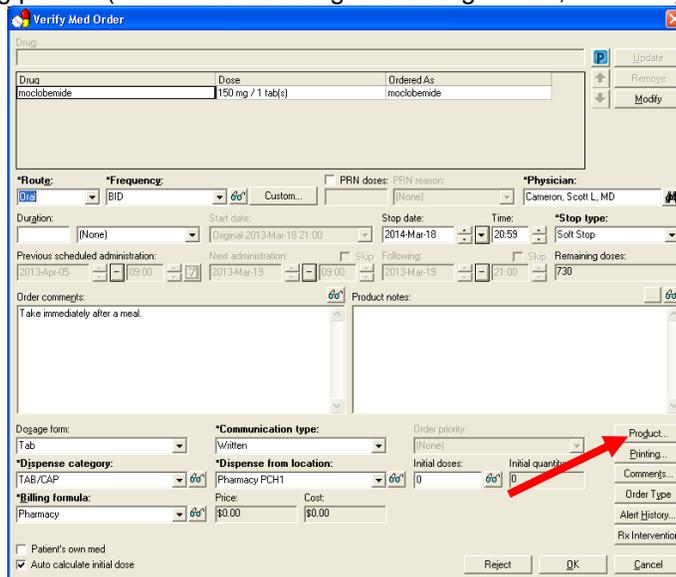
Since the order remains in an unverified state further action is required.

- This is a way to communicate to nursing that pharmacy has reviewed the order but has chosen not to verify at this time due to a clinical issue. An example would be if you are awaiting a physician call back on an issue with the order. This should be a temporary status. Direct communication with the nurse will often be appropriate and necessary.
- Verify the rejected order if clarification from the Physician indicates that the order is appropriate or needs a modification which can be made during the verification process.
- Discontinue or Void, as appropriate to the situation, the rejected order if clarification from the Physician indicates that the order is inappropriate

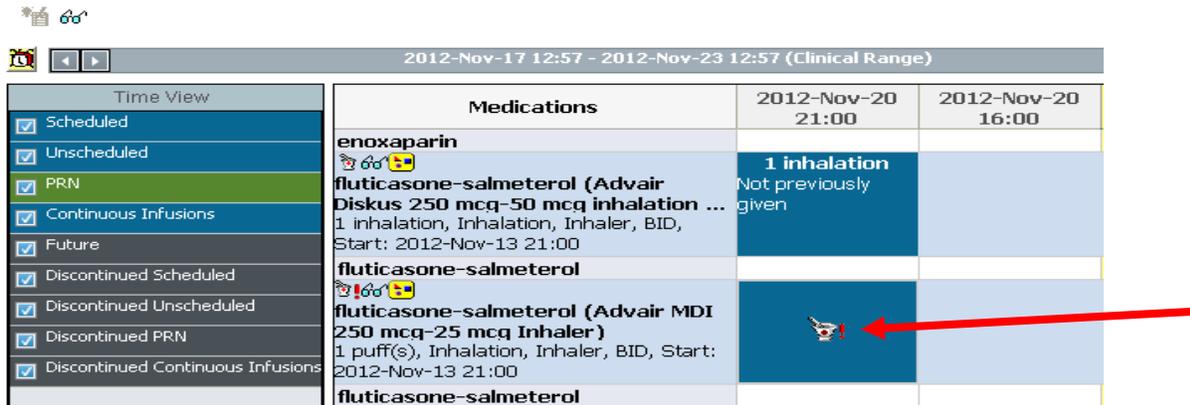
#### 5.2.10.1 Rejected Orders Process

Administration tasks become available as soon as a medication is ordered (exception: medical student orders). Pharmacists verify the order and may reject in situations where their clinical judgment deems this action to be appropriate. This may include, but not be limited to, the following scenarios:

- Inappropriate dose
- wrong drug (eg. pt ordered amitriptyline but on nortriptyline at home)
- contraindicated drug interaction (physician didn't give an override reason or we don't clinically agree with override)
- allergy (true or needs clarification before dose administered)
- wrong patient (this could be a tough one to figure out, but it may happen)

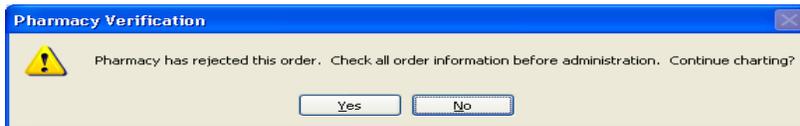


The task will have the  icon:



Time View	Medications	2012-Nov-20 21:00	2012-Nov-20 16:00
<input checked="" type="checkbox"/> Scheduled	enoxaparin		
<input checked="" type="checkbox"/> Unscheduled	fluticasone-salmeterol (Advair Diskus 250 mcq-50 mcq inhalation ...)	1 inhalation Not previously given	
<input checked="" type="checkbox"/> PRN	fluticasone-salmeterol		
<input checked="" type="checkbox"/> Continuous Infusions	fluticasone-salmeterol (Advair MDI 250 mcq-25 mcq Inhaler)		
<input checked="" type="checkbox"/> Future	fluticasone-salmeterol		
<input checked="" type="checkbox"/> Discontinued Scheduled			
<input checked="" type="checkbox"/> Discontinued Unscheduled			
<input checked="" type="checkbox"/> Discontinued PRN			
<input checked="" type="checkbox"/> Discontinued Continuous Infusions			

If the medication was administered before the order was rejected, that administration can still be documented. However, the following warning message will be displayed:



Clicking on the Yes button will open the charting window where the administration can be documented. When an order is rejected, the pharmacist will advise the nursing unit and/or physician.

**Clinical Tip:**

An order that has been rejected by pharmacy should not be administered and further investigation is required (call pharmacy or physician to clarify). A medication awaiting pharmacy verification SHOULD be given.

**5.2.11 Renew**

- Renew an order that has an existing stop date for a new period. Please use caution when renewing non-daily frequencies (for example q2d, q3d).

**Renew vs. Modify**

Renew is the best option to use if you need to add doses or days to an order with a stop date. Modify is the best option if the physician's orders state a day such as "stop vancomycin after 'x' dose on 01/06/13."

**5.2.12 Resume**

- Restart an order with a suspended status
- Resuming a suspended order will schedule the task to the nurse at the "next" scheduled dose. In this window, the user does not have options to adjust times. If the next dose time needs to be changed, you may need to discontinue and copy this order to adjust parameters as needed.

- Review all fields for accuracy and modify the defaults if necessary. A resume reason is optional and not a required field.

Order sentence:  
carbidopa-levodopa 25-100 mg 1 tab(s) Oral \*5x/Day

Resume date/time:  
2013-Mar-04 08:42

Start date/time:  
2013-Mar-04 12:00

Stop date/time:  
2014-Mar-04 11:59 (s)

Remaining doses: 1825

Frequency:  
5x/Day

Reset Administrations

Previous dose date/time:  
[Date/Time Picker]

First resumed dose date/time:  
2013-Mar-04 12:00

Second resumed dose date/time:  
2013-Mar-04 15:00 [Skip]

Following dose date/time:  
2013-Mar-04 18:00

Resume reason:  
Treatment Resumed

\*Physician:  
Unknown Physician, Physician

\*Communication type:  
Written

\*Dispense from location:  
Pharmacy PCH1

Printer:  
pcpharmib4

Initial doses:  
0

Label copies:  
1

Auto calculate initial dose

OK Cancel

### 5.2.13 Suspend

- Hold an order
- Suspend is used to change an active order to one where dispensing and administration is placed on hold
- “Suspended” appears in the order status field of the medication profile.

Active		salbutamol 2.5 mg/ 0.5 mL Inhalation QID
Suspended		carbidopa-levodopa 25-100 mg 1 tab(s) Oral *5x/Day

- The eMAR displays the suspended order in purple and will not have tasks after the suspended date and time.

carbidopa-levodopa (Sinemet 100/25 oral tablet) 1 tab(s), Oral, Tab, 5x/Day, Start: 2013-Mar-04 12:00			
carbidopa-levodopa			

## 5.2.14 Verify

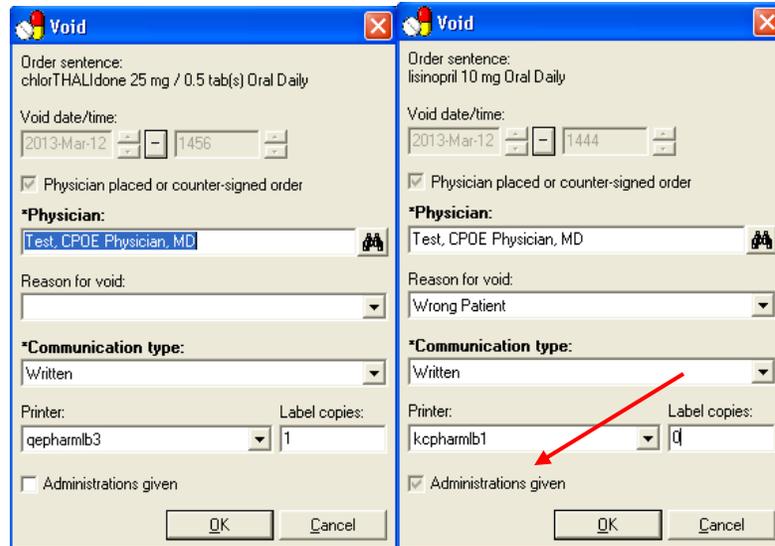
- The Verify action is used to launch an order into the Verify Order screen for review.
- The following profile actions from PowerChart will prompt a verify row in the UVOM: cancel/reorder, modify, order, renew, and resume. For a limited number of medications we will also be verifying the discontinue or complete action (ex gentamicin and vancomycin)
- When an order is launched into the Verify Order screen, the order details can be reviewed and modified. Then the order can be Verified or Rejected.

The screenshot shows the 'Verify Med Order' window with the following details:

- Drug:** levothyroxine (highlighted in blue)
- Dose:** 0.088 mg / 1 tab(s) (highlighted in cyan)
- Ordered As:** Synthroid
- \*Route:** Oral
- \*Frequency:** Daily
- \*Physician:** Unknown Physician, Physician
- Start date:** 2013-Mar-05 09:00
- Stop date:** 2014-Mar-05 08:59
- \*Stop type:** Soft Stop
- Remaining doses:** 362
- \*Communication type:** Telephone
- \*Dispense from location:** Pharmacy PCH1
- Price:** \$0.10
- Cost:** \$0.10
- Initial doses:** 0
- Initial quantity:** 0
- Buttons:** Reject, OK, Cancel

### 5.2.15 Void

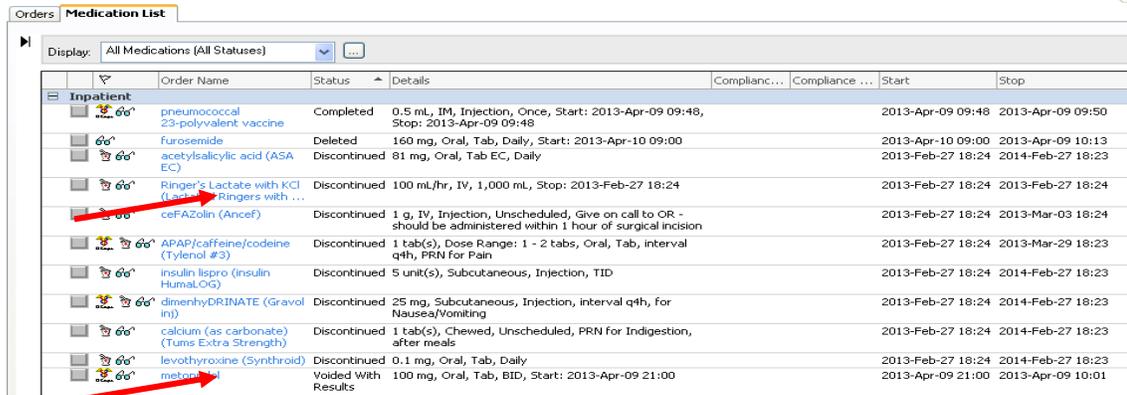
- Indicates an order was entered in error.
- An order should only be voided if a medication is ordered:
  - ✓ for wrong patient
  - ✓ on the wrong encounter for the correct patient or
  - ✓ in error (ie. Patient is on escitalopram, but citalopram was selected)
- Medications can be voided if administrations have or have not been occurred. If administrations have been given the Administrations given box will be default checked. If administrations have not been given the Administrations given box will be unchecked.



Pharmnet displays orders Voided With and Without Administrations when you change your view to filter those orders to the profile.

A	Status	Order Sentence
▼	Voided Without Administrations	chlorTHALIdone 25 mg / 0.5 tab(s) Oral Daily
▼	Voided With Administrations	lisinopril 10 mg Oral Daily

A Medication Voided with or without administrations drops off the eMAR, but can be on Powerchart in the Medication List by sorting display to All Medications (All Statuses). The metoprolol was voided with administrations and appears with a status of Voiced with Results. The furosemide was voided without administrations and appears with a status of Deleted.

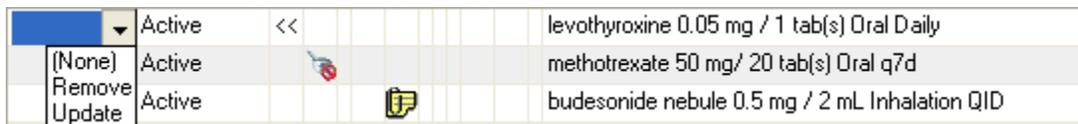


Order Name	Status	Details	Complianc...	Compliance ...	Start	Stop
pneumococcal 23-polyvalent vaccine	Completed	0.5 mL, IM, Injection, Once, Start: 2013-Apr-09 09:48, Stop: 2013-Apr-09 09:48			2013-Apr-09 09:48	2013-Apr-09 09:50
furosemide	Deleted	160 mg, Oral, Tab, Daily, Start: 2013-Apr-10 09:00			2013-Apr-10 09:00	2013-Apr-09 10:13
acetylsalicylic acid (ASA EC)	Discontinued	81 mg, Oral, Tab EC, Daily			2013-Feb-27 18:24	2014-Feb-27 18:23
Ringer's Lactate with KCl (Lact-Ringers with ...)	Discontinued	100 mL/hr, IV, 1,000 mL, Stop: 2013-Feb-27 18:24			2013-Feb-27 18:24	2013-Feb-27 18:24
cefazolin (Ancef)	Discontinued	1 g, IV, Injection, Unscheduled, Give on call to OR - should be administered within 1 hour of surgical incision			2013-Feb-27 18:24	2013-Mar-03 18:24
APAP/caffeine/codeine (Tylenol #3)	Discontinued	1 tab(s), Dose Range: 1 - 2 tabs, Oral, Tab, interval q4h, PRN for Pain			2013-Feb-27 18:24	2013-Mar-29 18:23
insulin lispro (insulin Humalog)	Discontinued	5 unit(s), Subcutaneous, Injection, TID			2013-Feb-27 18:24	2014-Feb-27 18:23
dimenhydrinate (Gravol in)	Discontinued	25 mg, Subcutaneous, Injection, interval q4h, for Nausea/Vomiting			2013-Feb-27 18:24	2014-Feb-27 18:23
calcium (as carbonate) (Tums Extra Strength)	Discontinued	1 tab(s), Chewed, Unscheduled, PRN for Indigestion, after meals			2013-Feb-27 18:24	2014-Feb-27 18:23
levothyroxine (Synthroid)	Discontinued	0.1 mg, Oral, Tab, Daily			2013-Feb-27 18:24	2014-Feb-27 18:23
metoprolol	Voiced With Results	100 mg, Oral, Tab, BID, Start: 2013-Apr-09 21:00			2013-Apr-09 21:00	2013-Apr-09 10:01

**NOTE:** Void will eliminate ALL uncharted tasks (past and future) on the eMAR for the medication

### 5.3 Pending or Un-Submitted State Order Actions

Orders in a pending or un-submitted state can be reviewed one last time in the profile view before the user clicks on  to submit the order



Active	<<		levothyroxine 0.05 mg / 1 tab(s) Oral Daily
(None)			methotrexate 50 mg/ 20 tab(s) Oral q7d
Remove			budesonide nebule 0.5 mg / 2 mL Inhalation QID
Update			

- **Remove**
  - Removes the order as if it was never inputted. There is no audit trail because this order was never submitted.
- **Update**
  - Allows the user to go back into the order and modify any details before the data is saved. This action does not leave a “modify” trail.

Three important buttons    are located in the bottom right-hand corner of the patient profile screen.

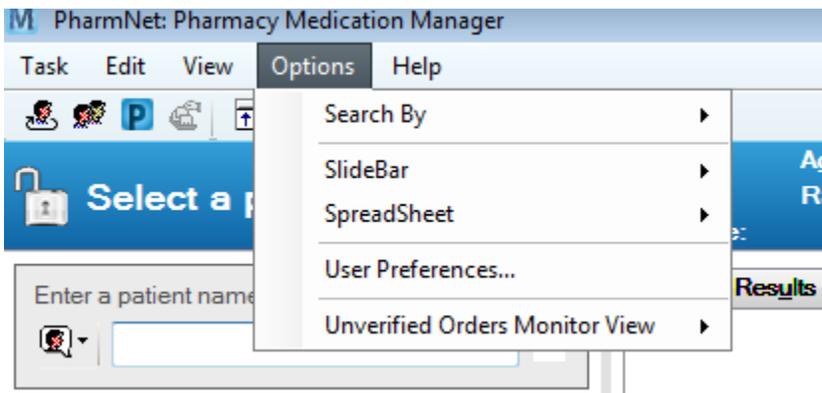
- If <Apply> is selected by clicking or <Ctrl> + <A> it will execute the currently selected order actions
- If <Cancel> is selected by clicking or <Ctrl> + <C> it will cancel any pending or un-submitted work
- If <Submit> is selected by clicking or <Ctrl> + <S> it will submit any pending or un-submitted work

## 6. Unverified Orders Monitor (UVOM)

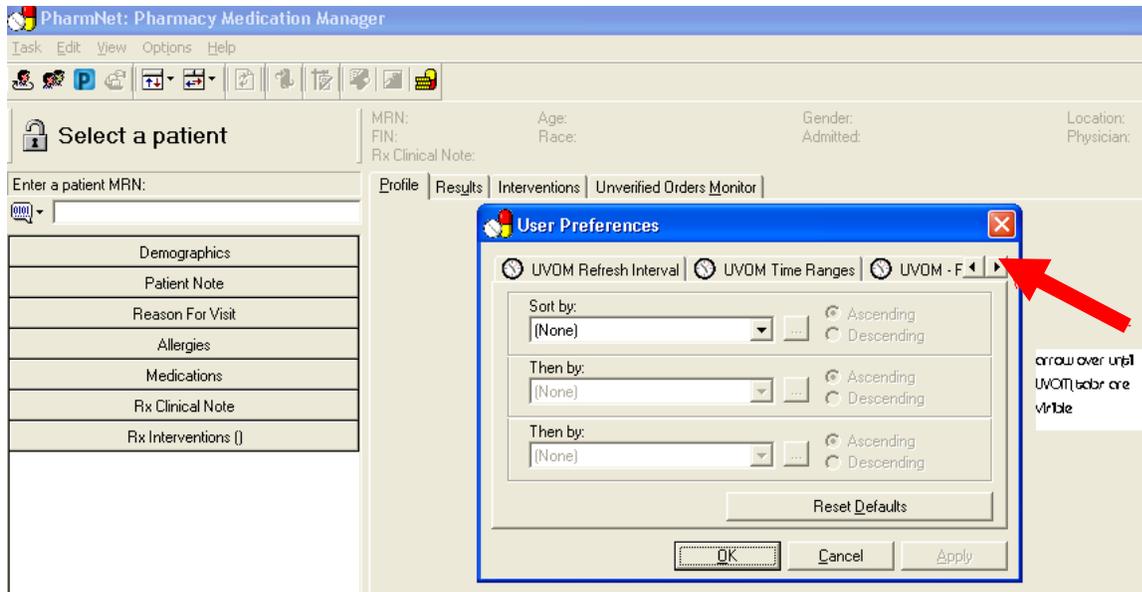
The Unverified Orders Monitor, known as the UVOM, is a component of *PharmNet*. The UVOM is used to notify you that an order has been entered or an action has been taken on an order that requires verification by a pharmacist. Unlike the other tabs in *PharmNet*, such as the Profile tab, or the Interventions tab, the information displayed on the UVOM is not patient specific. The UVOM shows information about all pharmacy orders that are in an Unverified status. All orders entered, modified, renewed, or resumed in *PowerChart* by a clinician or in *PharmNet* by a non-pharmacist are considered unverified until a pharmacist reviews them.

### 6.1 Customizing the UVOM

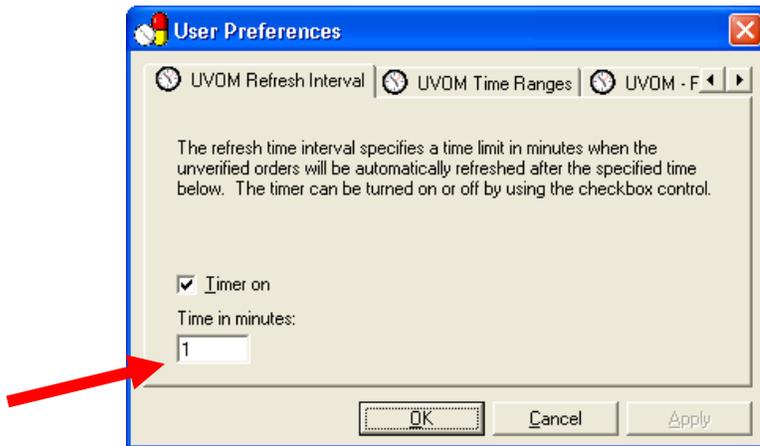
Select Options (ALT + i) then select User Preferences... (ALT + U)



Use the arrow button to move the tabs until the UVOM tabs are visible

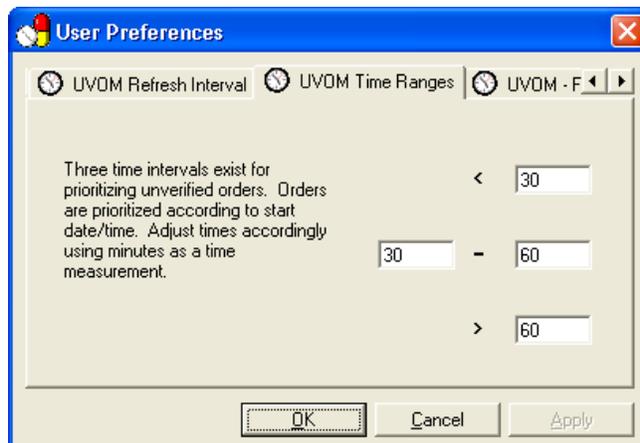


Select the UVOM Refresh Interval tab and check the Timer on box. In the "Time in Minutes" box put 1.



Click Apply (ALT + a). This will auto refresh your UVOM if you are in the UVOM and not while you are in a patient profile. If you want to refresh while in a patient's profile you will need to click the refresh button to see new orders.

Next select the UVOM Time Ranges. Leave the default selections of:



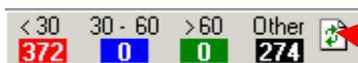
This information will show up in the Unverified Orders Monitor mini monitor at the top right hand corner of med manager. The boxes are populated with the total number of unverified orders based on the number of minutes between Start Time/Date and Current Date/Time.

**Red:** Orders with a Start Date/Time within 30 minutes

**Blue:** Orders with a Start Date/Time greater then 30 and less then 60 minutes

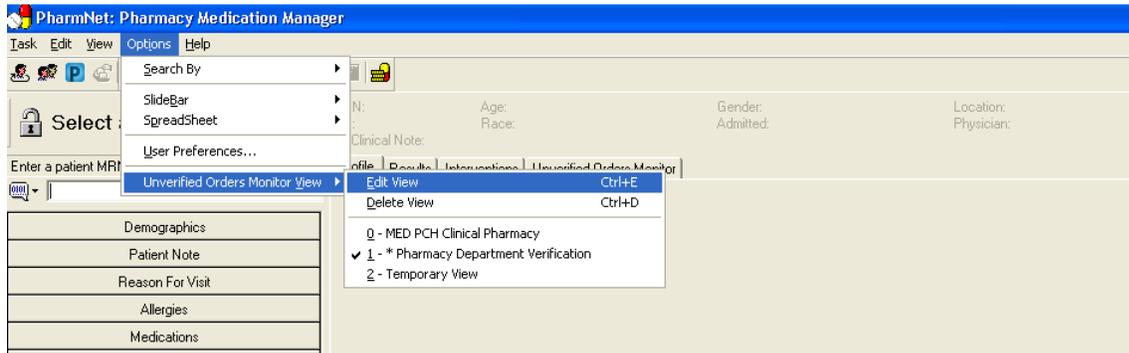
**Green:** Orders with a Start Date/Time greater then 60 minutes

**Black:** Orders with no scheduled Start/Date/Time – usually "cancelled, voided, & discontinued order. Also will include orders that were already verified and then modified.



The refresh button does not need to be used as you have set up the system to auto refresh every 1 minute.

Now you can edit your UVOM view by selecting Options (ALT + I) then by selecting Unverified Orders Monitor View (ALT + V) then by selecting Edit View (Ctrl + E).



On the Sort tab (ALT + T) you will set up the order in which unverified orders will be displayed in your UVOM. The recommended sort options are seen in the picture below.



On the Columns tab (ALT + M) have the following sequence of columns. Uncheck remaining by double clicking on the item.



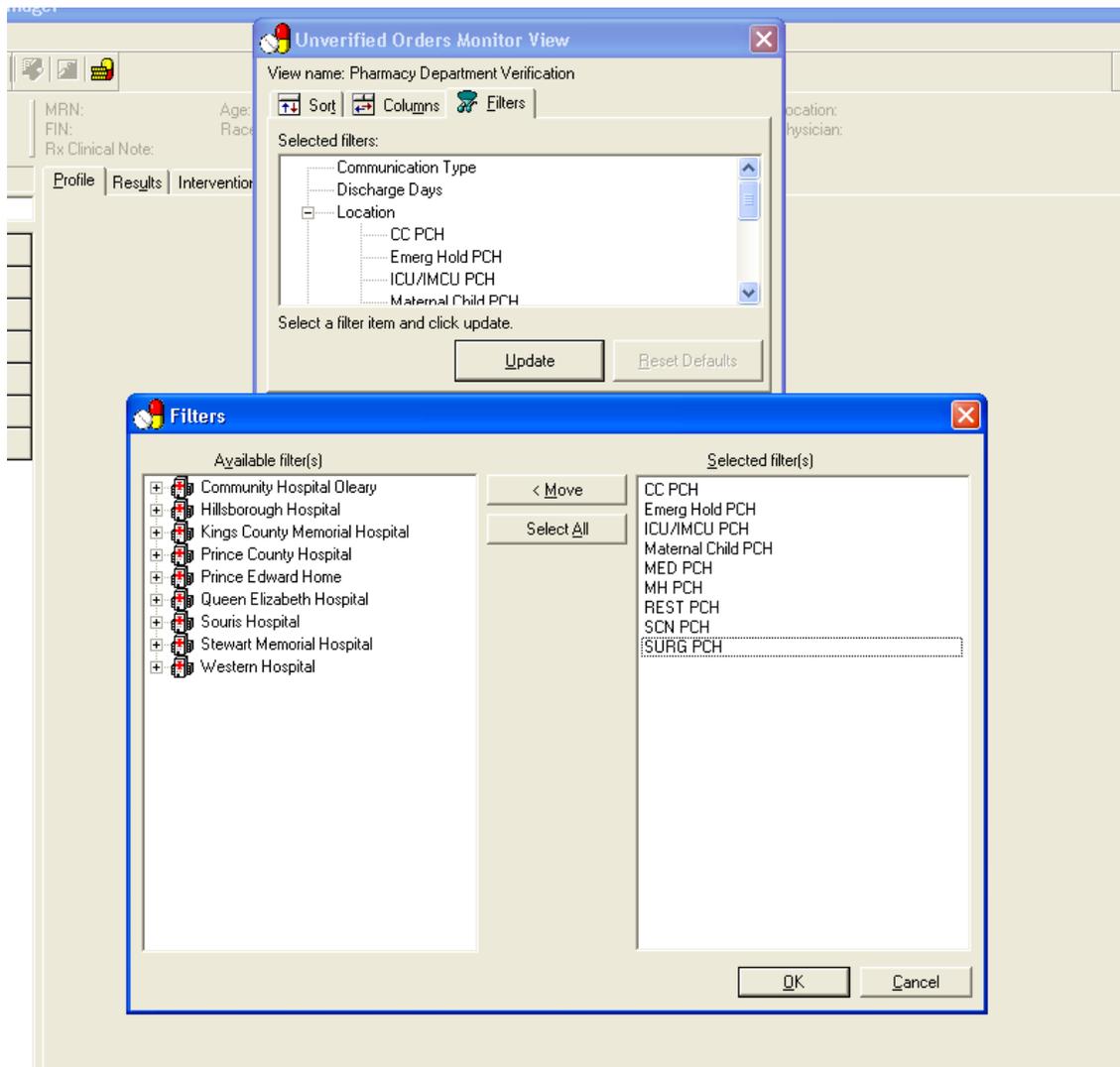
You will need to set the filter in the following sequence by utilizing the up and down arrows:

- Rx Priority
- Update Date/Time
- Last Unverified Action
- Alerts
- Plan
- Name
- Nurse Unit
- Order Sentence
- Communication Type
- Start Date/Time
- Ordering Physician
- Room
- Bed
- MRN
- Facility
- Route
- User Placing Order
- Role of User Placing Order
- Patient's Own Med
- Discern
- FIN
- Building
- Medical Service
- Link
- Future Order
- Unassigned Product
- Formulary Status

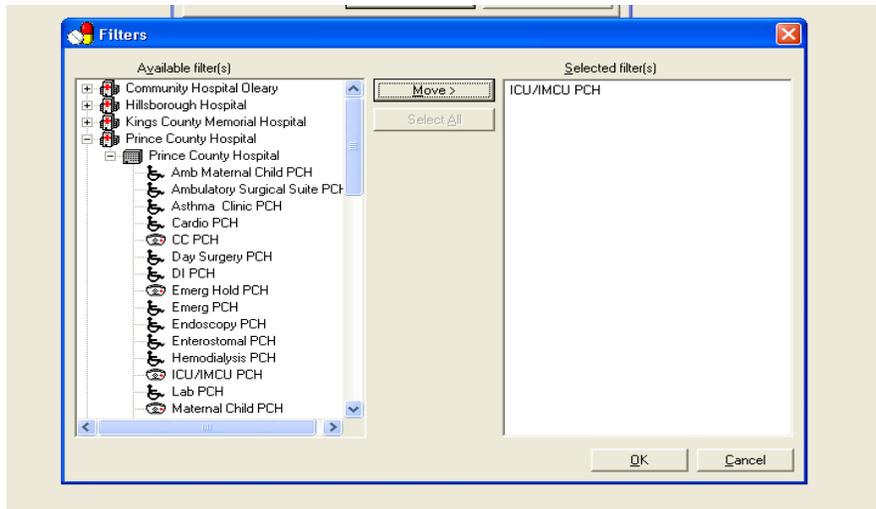
**TIP:**

You can sort a column in the UVOM by clicking on the column header. To revert back to the original sorting, either close the application and reopen or select a different default from <OPTIONS> then choose the desired default.

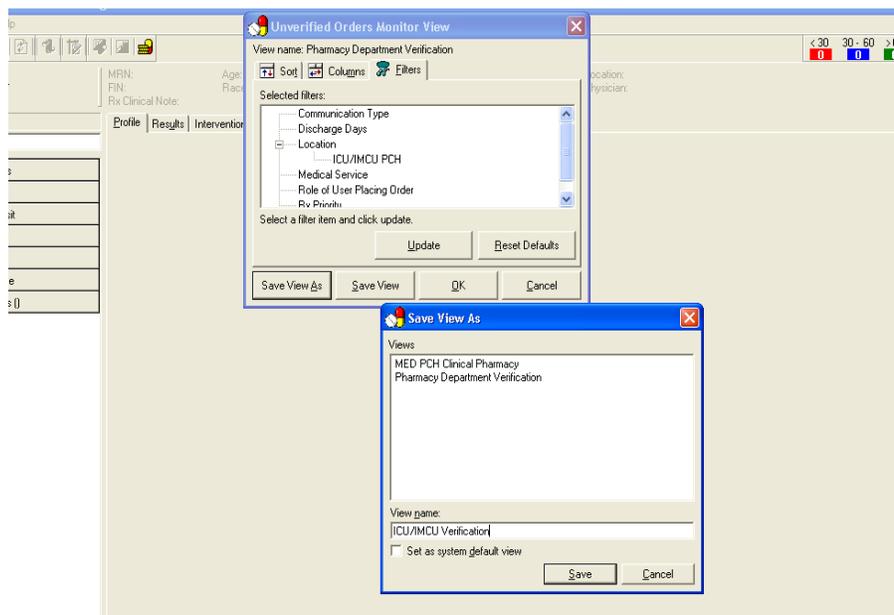
On the Filters tab (ALT + F) you can create new UVOM views for your various work areas.



To create a new UVOM view, click on a location and select Update (ALT + U). In the new Filters window you can move all the Selected filter(s) back over to the Available filter(s). Then select your location by clicking on the + sign next to your location. Highlight the location you want to have a UVOM view for and move it to the Selected Filters side.



Then click OK (ALT + O).



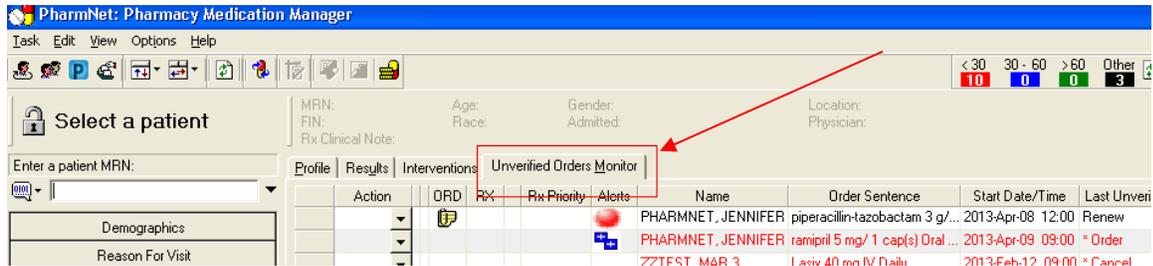
Then click on Save View As (ALT + A). Type in a title for the UVOM location you have just created. The other UVOM you have will be displayed in the Views box. You can then click Save (ALT + S) to save your view. You can also check the Set as system default view (ALT + D) to have your selected view be your default.

You can also delete a UVOM view by selecting Options (ALT + I) then by selecting Unverified Orders Monitor View (ALT + V) then by selecting Delete View (Ctrl + D). Highlight the view that you want to delete the click Delete (ALT + D).

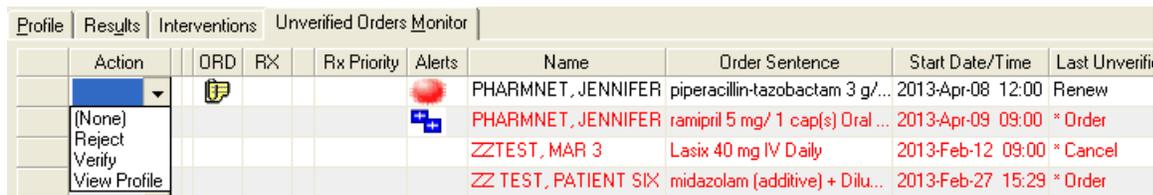
Tip: Multiple UVOM views can be created by “copying” pre-existing views. Select a pre-existing UVOM view with desired Sort, Column or Filter options. Make required changes and <Save As> a new UVOM View Name.

## 6.2 Verifying Orders from the UVOM

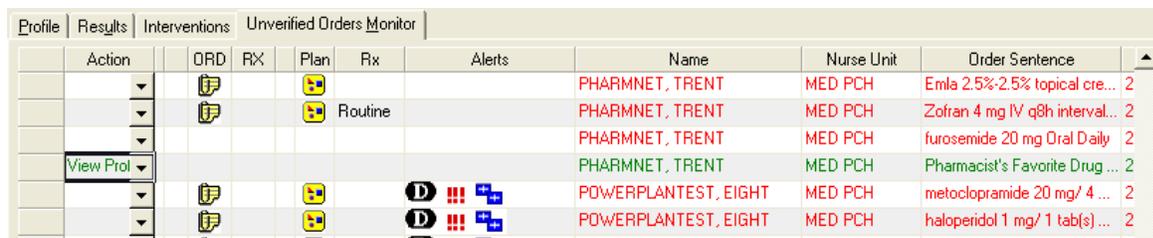
To access the UVOM select the Unverified Orders Monitor tab (ALT + M).



The UVOM will display according to view selected. There are 4 profile actions available in the UVOM – (None), Reject, Verify, View Profile.



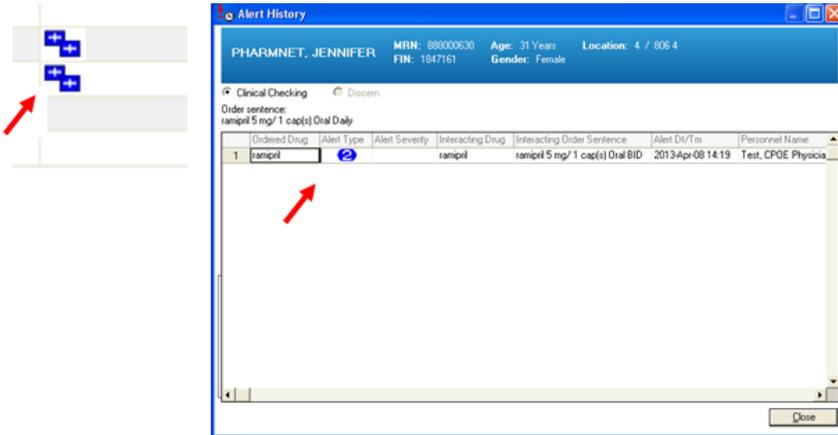
Apply an Action of <View Profile> to enter the patient's Medication Profile. From the patient's profile you will be able to verify all orders that exist for that patient. Take note of which orders for that patient have a greater order priority (Red) while in the UVOM. In some cases you may wish to verify these orders first and leave less urgent orders for later.



Do NOT verify orders from the UVOM. Always select "view profile" and verify orders from the patient's complete profile. This will give you a current view of the patients demographics, allergies, reason for visit, current medications etc.

## Alert Information

By clicking on the alert icon in the UVOM you can see details of the alert.



The screenshot shows a software interface with a patient information header and an alert history table. A red arrow points to an alert icon in the UVOM, and another red arrow points to the same icon in the table.

**Alert History**

PHARMNET, JENNIFER    MRN: 88900630    Age: 31 Years    Location: 4 / 805 4  
FIN: 1847161    Gender: Female

Clinical Checking     Discern

Order sentence:  
rampil 5 mg/ 1 cap(s) Oral Daily

Ordered Drug	Alert Type	Alert Severity	Interacting Drug	Interacting Order Sentence	Alert DU/Tm	Personnel Name
1 rampil			rampil	rampil 5 mg/ 1 cap(s) Oral BID	2013Apr08 14:19	Test, CPOE Physicia

Close

## 7. Order Entry/Order Verification: Dispensing Processes

In addition to adding and updating patient demographics, PharmNet's Medication Manager is used to enter/verify/action pharmacy orders.

### 7.1 Pharmacist Verification Overview

1. CPOE does not replace good communication between pharmacists, physicians and other allied health professionals.
2. Verification is a process to check the clarity and appropriateness of the electronically entered physician orders
3. Do NOT verify orders from the UVOM. Always select "view profile" and verify orders from the patient's complete profile. This will give you a current view of the patients demographics, allergies, reason for visit, current medications etc.
4. Things to check
  - a. Verify/validate the order details to make sure they make sense for the patient and are clinically appropriate.
  - b. Review alerts for allergies, duplicates and interactions and handle as deemed appropriate. Remember that physicians and nurses DO NOT see duplicate alerts.
  - c. Make sure the correct product is assigned. You can click the product button to review. You may also want to click the eyeglasses next to the dispense from location to ensure your facility stocks the selected product.
  - d. It is REQUIRED that pharmacists review user defined fields and order comments and update or manage as necessary.
  - e. When verifying orders that need to be voided or discontinued and reentered it is important to determine if a dose has been already administered on the previous order. This will help you to determine if you need to alter the start date/time of your newly entered order.
  - f. When verifying renew, resume, or modify actions that have a frequency of greater than 1 day, be cautious. You will need to review the last administration time to determine if the system assigns the correct next administration time. If not, you may need to discontinue and re enter the order. You also may need to alert the nurse to chart not done/not given on tasks that are not needed.
  - g. The system will have the capacity to provide audits on how often telephone and verbal orders are given. For this reason, please try to use the most appropriate communication type whenever possible. Even if your facility DOES NOT require pharmacist transcribed telephone or verbal orders to be cosigned by the ordering physician, you should still use the communication type of "telephone" or "verbal" for the purpose of statistics within Cerner. Once you verify the order in medication manager, you may change the communication type to "clinician" so that the order does not route to the physician for co-signature.
  - h. It is up to each individual pharmacist to decide how many orders to have in your "queue" to verify at any given time. This decision may be impacted by how many Stat orders are in your UVOM and also any issues that you encounter during verification. It is recommended to verify all Stat orders in a timely manner.
  - i. The UVOM may seem overwhelming at first. It is important to realize that the orders will be appearing INSTANTLY after being ordered. The paper orders from the past may have taken several hours just to arrive in pharmacy. Remember that the UVOM is set up so that the Stat and Now orders will sort to the top to help you manage your workload throughout the day. Also, you will be seeing orders in the queue sorted based on order start date and time rather than the time the order was placed.
  - j. When verifying orders, review the communication type. If it is verbal, telephone, or physician co-sign and you make any modifications to the order, it will route back to the physician. To avoid this, change the communication type to written/clinician during the verification process.

## 7.2 Choose the Correct Encounter

It is very important that orders are placed on the CORRECT encounter in CIS. Medications DO NOT cross encounters on the eMAR or on the orders page. If an order is placed on the wrong encounter, the order will not appear on the eMAR and doses of a medication could be missed. Medication orders do cross encounters in Med Manager and in Med List. In Med Manager, you will know that an order was placed on a different encounter if it is underlined. If a pharmacist notices or is made aware that an order has been entered on the wrong encounter, he or she will correct it during Pharmacy business hours. In the example below, paroxetine has been entered on the wrong encounter. This is indicated by the underline under the order.

**Step 1** – VOID the order in question:

Profile	Results	Interventions	Unverified Orders	Monitor
Drug:				
				Order Sentence
	Void	Active		<u>PARoxetine 20 mg/ 1 tab(s) Oral Daily</u>
		Active		ranitidine 150 mg/ 1 tab(s) Oral BID
		Active		zopiclone 5 mg/ 1 tab(s) Oral Bedtime PRN Sleep

**Step 2** – Adjust the filters so discontinued and voided orders are visible. In the Menu Bar, choose <View>, then <Inactive Orders> and the following box will appear. Check off boxes along the left side:

**View Profile by Status**

View profile by the following filter(s):

- Discontinued
- Canceled
- Voided with administrations
- Voided without administrations

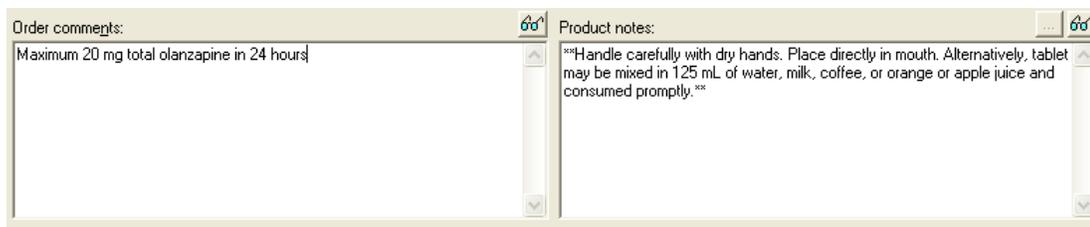
Beginning date: 2013-Mar-04 00:00  
Ending date: 2013-Apr-03 23:59

**Step 3** - Select the same order (indicated by the underline) and COPY it to create a new order on the correct encounter.

Drug:			
A	Status		Order Sentence
	Voided Without Administrations		nitroglycerin patch (Nitro-Dur) 0.6 mg Transdermal Daily
	Voided Without Administrations		nitroglycerin patch (Nitro-Dur) 0.8 mg Transdermal Daily
	Voided Without Administrations		<u>PARoxetine 20 mg/ 1 tab(s) Oral Daily</u>
Copy	Voided Without Administrations		<u>PARoxetine 20 mg/ 1 tab(s) Oral Daily</u>

When a patient transfers from another site, all of his/her orders will remain visible (underlined) on the profile in Med Manager. They remain active for several hours until the system automatically discontinues them. In the past, pharmacists have gotten into the habit of selecting all of the orders and discontinuing them prior to entering new orders. Post CPOE, pharmacists should NOT discontinue these orders. Underlined orders on a patient encounter provide an indication that an order may have been entered in error on the incorrect encounter. Discontinuing these orders may cause us to inadvertently discontinue an active order.

### 7.3 Order Comments vs. Product Notes vs. Special Instructions



**Order Comments** contain information that is specific to the order. They are visible “face-up” on the eMAR. They include such information as monitoring parameters, special instructions from the physician, instructions from Pharmacy such as ‘Request Refill’, etc. If the information takes up more than one line on the eMAR, the nurse can hover over the order which will display a box that contains the entire order comment.

Medications	2013-Jan-23 13:53
PRN OLANzapine (Zydis ZyPREXA) 5 mg, Oral, Tab RD, q6h interval, PRN for Agitation, Start: 2013-Jan-23 13:41 Maximum 20 mg total olanzapine in 24 hours	PRN 5 mg Not previously given
OLANzapine Discontinued Scheduled	OLANzapine (Zydis ZyPREXA) 5 mg, Oral, Tab RD, q6h interval, PRN for Agitation, Start: 2013-Jan-23 13:41
furosemide (Lasix)	Maximum 20 mg total olanzapine in 24 hours

During verification, the Pharmacist will ensure the Order Comments only contain pertinent information and that they are displayed in order of priority:

1. Conditional Order comment, if applicable.
2. Parameters/Instructions included in the order by the physician, (e.g. Hold if HR < 60, SBP < 90, May repeat X1).
3. Pharmacy communications such as Therapeutic Interchange for / Replacement for / Non-formulary Product, etc.
4. Information associating the order with a particular protocol (e.g. This medication is part of a chemo protocol: XXX).
5. \*\* Request Refill \*\* - This should always be the last order comment.

Shortcuts for common Order Comments have been built and can be found by clicking the eyeglasses icon on the top right-hand corner of the Order Comments field. Whenever possible, the shortcuts should be used rather than typing freely in order to standardize the appearance of Order Comments.

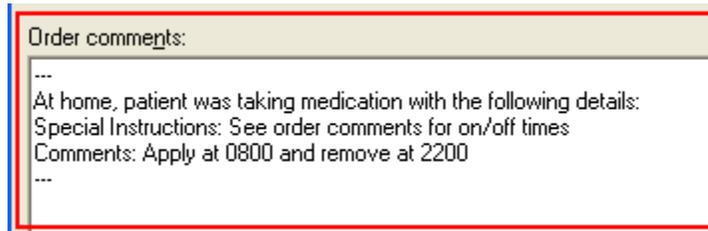
The quantity and length of Order Comments should be kept to a minimum. Only information that is pertinent to the order should be included in the Order Comments. Remember that Order Comments are visible to all users and a change in an order could necessitate a change in its associated Order Comments.

The following things should NOT be included in Order Comments:

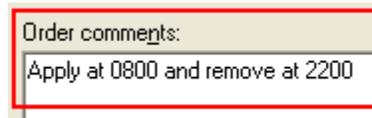
1. Dispensing notes to the technicians because Order Comments will be seen by all users.
2. Information that is found elsewhere in the order such as the physician's name or the date.
3. Range Doses. These should be documented in the User Defined Details.
4. References to other routes or associated orders, i.e. "may also be given by IV/SC routes". If one of the orders gets discontinued or changed, the comments on other orders may not be applicable or need to be updated. For this reason, it has been decided not to include these types of comments.
5. CAPS LOCK should not be used.

Items to REMOVE from order comments:

1. Target Dose comments, e.g. Target Dose: enoxaparin 1 mg/kg/dose 2013-Jan-23 14:38. These are cumbersome and clutter up the eMAR. Delete the whole comment.
2. Order comments from medications documented in Document Meds by History:



Remove the extraneous information and keep only what is pertinent to the order:



**Product Notes** contain information that is specific to the product. They are visible on the eMAR but it takes an extra step for nursing to see this information. If there is a product note associated with the product, a note icon will appear. Product Notes will also display on the 3<sup>rd</sup> label when a product is filled in Pharmacy.

Medications	2013-Jan-23 13:53
PRN	
 OLANzapine (Zydis zyPREXA) 5 mg, Oral, Tab RD, q6h interval, PRN for Agitation, Start: 2013-Jan-23 13:41 Maximum 20 mg total olanzapine in 24 hours	PRN 5 mg Not previously given
OLANzapine	

The nurse clicks on the icon and the order comments and product notes are displayed.

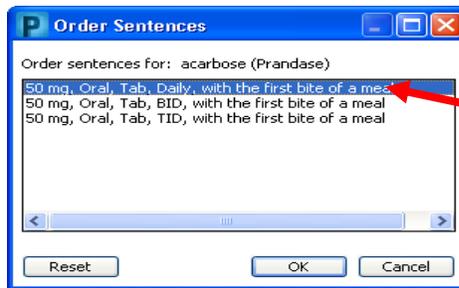
**Order Comment**

2013-Jan-23 13:53 Test, CPOE Pharmacist, Pharmacist  
Maximum 20 mg total olanzapine in 24 hours

**MAR Note**

2013-Jan-23 13:53 Test, CPOE Pharmacist, Pharmacist  
\*\*Handle carefully with dry hands. Place directly in mouth. Alternatively, tablet may be mixed in 125 mL of water, milk, coffee, or orange or apple juice and consumed promptly.\*\*

**Special Instructions** is a field available for modification by nurses and physicians on outpatient orders only (ie document meds by history and prescriptions). This field is dithered on inpatient orders, except to pharmacists. It may contain information pertinent to the order but it may not be changed by anyone other than pharmacists. Pharmacists can modify the Special Instructions if they receive a request from another user. When an outpatient order is converted to inpatient, the special instructions move to the order comment field. Special instructions on inpatient orders are NOT viewable in Med Manager It is specific info for the physician/nurse and may be seen on the eMAR and orders page. Special Instructions do not display in Med Manager.



acarbose (Prandase) Order 2013-Feb-28 09:00 50 mg, Oral, Tab, Daily, with the first bite of a meal, Start: 2013-Feb-28 09:00

**Details for acarbose (Prandase)**

Details Order Comments



Remaining Administrations: C

Special Instructions: with the first bite of a meal

Stop type: [dropdown]

\*Start Date/Time: 2013-Feb-28 09:00 [dropdown]

Stop Date/Time: [dropdown]

Order for future visit:  Yes  No

A red arrow points to the 'Special Instructions' field.

## 7.4 Adding Batch Fill Notes to an Order

When labels are printed off for batch filling, Order Comments do not print on the 3<sup>rd</sup> label as they do for initial doses. If you want to add comments so they'll appear on the labels, you need to add them to the Fill Notes. In the example below, the pharmacist wants to provide information on how to use vancomycin injectable for oral use.

The screenshot shows the 'New Med Order' window. The drug is 'vancomycin' with a dose of '500 mg / 1 vial(s)' and ordered as 'Vancocin'. The route is 'Oral' and frequency is 'q6h timed'. The start date is '2013-Jan-23' at '18:00'. The stop date is '2013-Feb-02' at '17:59'. The stop type is 'Soft Stop'. The previous administration was on '2013-Jan-24' at '00:00' with 40 remaining doses. The next administration is on '2013-Jan-24' at '00:00'. The communication type is 'Written'. The dispense category is 'INJ\_Single dose' and the dispense from location is 'Pharmacy PCH1'. The price is '\$3.61' and the cost is '\$3.61'. The 'Comments...' button is highlighted with a red circle.

Click on the Comments button. Type your comment in the Fill Notes field and click 'okay'.

The screenshot shows the 'Comments' dialog box. The 'Fill notes' field contains the following text: '\*\*\* VANCOMYCIN FOR ORAL ADMINISTRATION \*\*\*  
Use the injectable product and reconstitute as instructed on the vial. Store in the fridge for up to 96 hours. Immediately prior to oral administration, measure out the required amount and mix with an acidic juice to mask th'. The 'OK' button is highlighted.

The comments will now print on the 3<sup>rd</sup> label when the order is filled in the batch.

## 7.5 \*\*Request Refill\*\* for Unscheduled medications

For unscheduled orders, such as “on call to OR” please add \*\*Request Refill\* to the order comments so a sticker will be added to the bag. This will help to avoid technicians from removing the item from the cart.

## 7.6 Medication Reassessment Alerts (MRAs)

*Please refer to Provincial D&T approved policy Medication Reassessment Alerts approved November 2013.*

**\*\*If there is a hard stop on an order please adjust to a physician stop at verification\*\***

In PowerChart, MRAs behave differently than they do in PharmNet.

- It will not be possible to build separate MRAs for different routes of the same medication (e.g. PO/IV antibiotics).
- MRAs will not be visible to clinicians face-up on the order sentence.
- If the duration is specified in an order sentence, it will automatically be a physician stop and it will not be possible for a physician to change the order to a soft stop.

Reassess orders that are based on clinical response (‘reassess in 2 days’ or ‘reassess when cultures available’) will be indicated electronically by the physician in the order comments.

The screenshot shows a table of orders for signature. The first row is highlighted in blue and contains the following information: Order Name: MED PCH; 135; 1 FIN/ENC:01847096; Status: Order; Start: 2013-Apr-04 09:00; Details: 40 mg, Oral, Tab, Daily, Start: 2013-Apr-04 09:00 for 3 days and reassess. Below the table, there is a section titled 'Details for furosemide' with a sub-section for 'Order Comments'. The comment text 'for 3 days and reassess' is highlighted with a red box.

When reassess duration is indicated, pharmacy (upon verification of the order) will add the reassess duration on the order with a soft stop that will allow the order to print on the MRA report and route to the physician Message Centre. Leave the order comment on the order so they will appear on the eMAR and the Orders tab.

The screenshot shows the medication order details form. The 'Duration' field is set to '3 day(s)' and the 'Stop type' is set to 'Soft Stop', both highlighted with red boxes. The 'Order comments' field contains the text 'for 3 days and reassess', also highlighted with a red box. Other fields include 'Route: Oral', 'Frequency: Daily', 'Start date: 2013-Apr-04 09:00', and 'Stop date: 2013-Apr-07 08:59'.

## 7.7 Non Medication Orders (Handi Halers and Insulin Pens)

Handi-halers and Insulin Pens are not medications but do require patient-specific labels when dispensed from Pharmacy for infection control purposes. They should not be added to patients' medication profiles though since they are not medications.

### Pharmacist:

- Print an extra label from another medication, (e.g. tiotropium for handi-haler, insulin for insulin pen).
- Communicate what you are doing to the technician.
- Charge the handi-haler or insulin pen out through distribution manager.

### Technician:

- Cut the patient identification (name, MRN, room number) off the top of the extra label provided and affix it directly to the product, i.e. not the box, but the actual product.
- No dispensing record is required.

## 7.8 Assigning Par Doses

Default Par Doses have been assigned on Nicotine Inhalers and Gum (6each) and Barriere cream (100 g) so you don't have to think about how many to send. Note- you will still need to consult the history of the order to see when the refill was last sent. This only applies to PRN orders.

In Med Manager, the number of doses to be sent can be specified by entering a number in the 'Par Doses' field. In the example below, the pharmacist wants to send 5 doses.

When a refill is requested, the number of par doses defaults into the 'Number of doses' field:

The screenshot shows the 'New Med Order' window with the following details:

- Drug: Lorazepam, Dose: 1 mg / 1 tab(s), Ordered As: Ativan
- Route: Oral, Frequency: q4h interval, Custom: [X], PRN doses: 5, PRN reason: (None), Physician: [Unknown Physician, Physician, (A)]
- Duration: 365 day(s), Start date: 2012-Dec-12, Time: 14:27, Stop date: 2013-Dec-12, Time: 14:26, Stop type: Soft Stop
- Order comments: "Request Refill"
- Dispense category: NARC, Dispense from location: Pharmacy PCH1, Par Doses: 5, Initial quantity: 5
- Billing formula: Pharmacy, Price: \$0.02, Cost: \$0.02
- Order priority: (None)
- Order type: Soft Stop
- Dispense from location: Pharmacy PCH1
- Par Doses: 5
- Initial quantity: 5
- Patient's own med: [ ]
- Auto calculate initial dose: [X]

The screenshot shows the 'Label Request' window with the following details:

- Order sentence: LORazepam 1 mg / 1 tab(s) Oral q4h timed PRN
- Type of label request: Extra dose/refill
- Reason for label request: [ ]
- Alternating IV bag: [ ]
- Include daily ingredients: [ ]
- Number of doses: 5, Label copies: 1
- Charge patient: [X]
- Dispense from location: Pharmacy PCH1
- Printer: pcpharmib4

## 7.9 Process for Continuous Infusion Labels:

Pharmacist: Make sure the dispense category on the order is MED\_CONTINUOUS. Print two copies of the label.

Technician: Discard Diluent Label and Dispensing Record. Affix one copy of Product Label to the product and use the second copy of Product Label as a dispensing record. The Third Label (order comments, etc) can either be affixed to the product (\*\* comments \*\*) or included with the dispensing record.

The Continuous infusion will appear on the eMAR with a floating task:

Medications	2013-Jan-23 15:32
<b>Continuous Infusions</b>	
60^ <b>norepinephrine 4 mg + Dextrose 5% in Water</b> <b>250 mL</b> titrate to MAP > 60, IV, 250 mL, Start: 2013-Jan-23 15:29 **Request Refill**	<b>Pending</b> Not previously given
<b>Administration Information</b>	
<b>norepinephrine</b>	
<b>Dextrose 5% in Water</b>	

The nurse can view the order details by right-clicking on the order on the eMAR. The Pharmacy tab contains information about the products used, including volumes.

This process may also be used for Neonatal/Pediatric fluids that are mixed by nursing.

QEH Pharmacy 894-2024  
**ZZTEST, PATIENT NINE** 2013/JAN/23  
MRN 002172443 - Rx# 161748997 Endo QEH-

norepinephrine 1 mg/mL Inj (4 mL)  
For: norepinephrine DIN 02241981

1 x 1 Each RPh: RLC Exp: \_\_\_\_\_  
12031420  
**Product Label**

dextrose 5% in water Inj (250 mL)  
For: Dextrose 5% in Water DIN 00060348

1 x 1 Each RPh: RLC Exp: \_\_\_\_\_  
12031420  
**Diluent Label**

\*\*Request Refill\*\*

**Third Label (includes  
order comments).**

QEH Pharmacy 894-2024 Dispensing Record  
**ZZTEST, PATIENT NINE** 2013/JAN/23  
MRN 002172443 - Rx# 161748997 Endo QEH-

norepinephrine 1 mg/mL Inj (4 mL)  
dextrose 5% in water Inj (250 mL)  
For: Dextrose 5% in Water DIN 00060348

1 x 1 Each  
**Dispensing Record**

12031420 RPh: RLC\_\_\_\_\_ Label Request

## 8. Order Entry/Order Verification: Clinical Considerations

### Important Things to Consider

- **ALWAYS verify from the PROFILE.** This allows you to do a thorough review the patient's information (allergies, current medications etc.) before taking action on an unverified medication.
- Orders with a communication type of Verbal or Telephone have been entered by a non-Physician and needs a co signature. You can use the Order History Action to see the user who placed the order. This information can be useful if clarification on the order is required.
- When verifying orders, review the communication type. If it is verbal, telephone, or physician co-sign and you make any modification to the order, it will route back to the physician. To avoid this, change the communication type to written/clinician during the verification process.

### 8.1 Order Comments

TIP: "Request Refill" has been added to inpatient order sentences that are PRN. Please do not remove this as it will create a nurse review even though at most sites these products would be wardstock.

**As a general rule, please watch for order comments. If you see a comment that would be more appropriately captured in a different manner/field, please fix. For example:**

- a. Multiple Routes
  - Add separate orders to reflect the routes.
- b. Order comment that should be a separate order.
  - For example: Lorazepam order for regular BID schedule with an order comment "May give 1 mg HS PRN".
  - Verify the BID order. Remove the comment.
  - Add a separate order for 1 mg Bedtime PRN.
- c. Target dose
  - If you see a target dose in the order comment field, please remove.
- d. "No Substitution"
  - Leave as an order comment but be aware not to change the order.
- e. Range Dose
  - Range Dose information should be recorded in User Defined Fields. Please remove the order comment and transfer to the User Defined Fields as per process in section 9.19.
  - If physician enters range dose expressed in "tabs" please switch to strength ex "mg" if appropriate.
- f. Reassess in 3 days
  - This will need to be reflected in the duration and stop type. Please change duration to 3 days with a stop type of "soft".
  - Leave information in order comments

- g. Special Instructions/Order Comments converted from Document Meds by History
  - Please review for appropriateness
  - If these comments require a change in order, please make the change and REMOVE the comment.
- h. Hold Orders  
See section 9.23
- i. Custom administration times
  - The physician may specify a customized time in the Order Comments at the time of order entry.
  - The pharmacist will reschedule the administration time as instructed
  - The order comment can be removed unless the pharmacist believes it may be required for nursing

### 8.1.2 Rx Comments

For many medication orders, e.g. pediatric doses, medications requiring renal dose adjustments, the pharmacist reviews the dose to see if it's appropriate. If the dose is deemed to be appropriate, in the paper world, the pharmacist would document this on the paper Physician Order Form (e.g. "CrCl 80.33 mL/min, dose OK" or "dosed at 14 mg/kg/dose, dose OK"). In the electronic world, this information should be documented in the **Rx Comments**.

From the Verification screen, click on the <Comments> button and type the information in the Rx Comments field, e.g. CrCl 80.33 mL/min, dose OK, the date and your initials. Information added to this field will **not** go for Nurse Review.

If an intervention is required, this should be documented appropriately using the appropriate pharmacist progress note, or powerform so that this information is available to other powerchart users.

### 8.2 Conditional Orders

#### 1. Multiple Routes

If an order is ordered to be given via multiple routes, e.g. dimenhydrinate 25 - 50 mg PO/IM/IV q4h PRN, a different order must be placed for each route.

##### a. PRN orders:

When a dose is given, the nurse will choose which route to use based on the clinical condition of the patient and only document on the task for that route.

PRN 👤👤👤 dimenhyDRINATE (Gravol inj) 25 mg, Dose Range: 25 - 50 mg, IV, Injection, q4h timed, PRN for Nausea/Vomiting, Start: 2013-Jun-02 12:03	PRN		25 mg Last given: 25 mg @ 2013-Jun-02 12:03	<div style="border: 1px solid black; padding: 5px;"> <p>Whether PRN or scheduled, the dose/time/date of the last administration appears on the order for each route</p> </div>
dimenhyDRINATE 👤👤👤 dimenhyDRINATE (Gravol inj) 25 mg, Dose Range: 25 - 50 mg, IM, Injection, q4h timed, PRN for Nausea/Vomiting, Start: 2013-Jun-02 12:03	PRN		25 mg Last given: 25 mg @ 2013-Jun-02 12:03	
dimenhyDRINATE 👤👤 dimenhyDRINATE (Gravol) 25 mg, Dose Range: 25 - 50 mg, Oral, Tab, q4h timed, PRN for Nausea/Vomiting, Start: 2013-Jun-02 12:03	PRN		25 mg Last given: 25 mg @ 2013-Jun-02 12:03	
dimenhyDRINATE			* 25 Auth (Verified)	

**b. Scheduled orders:**

If a regularly scheduled order is placed for multiple routes, e.g. Lorazepam 1 mg PO/SL BID, there will be a regularly scheduled task for each order. There is a risk that both routes could inadvertently be given.

 <b>LORazepam</b> 1 mg, Oral, Tab, BID, Start: 2013-Jun-04 21:00 <b>LORazepam</b>	<b>1 mg</b> Previous admin could not be determined.
 <b>LORazepam (LORazepam sublingual)</b> 1 mg, SL, Tab SL, BID, Start: 2013-Jun-04 21:00 <b>LORazepam</b>	<b>1 mg</b> Previous admin could not be determined.

Pharmacy will contact Nursing (or vice versa) to determine which route is preferred. The preferred route will remain in the scheduled section of the eMAR. The order with the non-preferred route will be changed to a PRN with a PRN reason of 'Alternate Route' and will be in the PRN section of the eMAR. Order comments will be added to each order referring the user to the other.

 <b>LORazepam</b> 1 mg, Oral, Tab, BID, Start: 2013-Jun-04 21:00 Also ordered by alternate route (see PRN section)	<b>1 mg</b> Previous admin could not be determined.		
<b>LORazepam</b> <b>PRN</b>			
 <b>LORazepam (LORazepam sublingual)</b> 1 mg, SL, Tab SL, BID, PRN Alternate Route, Start: 2013-Jun-04 15:07 To be given in place of (not in addition to) scheduled order	<b>PRN</b>		<b>1 mg</b> Previous admin could not be determined.
<b>LORazepam</b>			

In the event that the nurse wishes to give the medication by the non-preferred route, s/he will chart the dose on the PRN order and chart 'not done/alternate route ordered' on the scheduled task. If the nurse wishes to change the preferred route for all future doses, s/he will contact Pharmacy who will modify the orders.

**2. Conditional Order (modify an existing order):**

If a physician wishes to leave instructions for a nurse to modify an existing order based on the patient's clinical condition, these instructions can be left in the order comments:

Examples:

PEG 3350 10 g po Daily, order comment: If very crampy, change to 5 g po BID

Sennosides 2 tab(s) po BID, order comment: decrease to 2 tabs Daily after good BM.

Metoprolol 25 mg po BID, order comment: If SBP remains > 110, increase to 50 mg po BID

Hydromorphone 1 mg/hr subcutaneous continuously with a bolus of 1 mg q30 min prn breakthrough pain, order comment: If patient requires more than 4 boluses within 12 hours, increase rate to 1.25 mg/hr + bolus of 1.25 mg q30 min prn breakthrough.

In the above examples, the same medication and route is being used, but the dose or frequency is being adjusted.

If the clinical condition is met, the nurse can modify the existing order, remove the order comment and change the required fields. The physicians' name will be used with a communication type of Written.

### **3. Conditional Order (change to a different order):**

If a physician wishes to leave instructions for a nurse to use a different order based on a patient's clinical condition, these instructions can also be left in the order comments.

#### Examples:

Ampicillin 1000 mg IV q6h, order comment: If IV falls out, change to Amoxicil 500 mg po TID

Metoprolol 50 mg po BID, order comment: If SBP remains above 110, change to labetalol 200 mg po BID

Cipro 400 mg IV q12h, order comment: if eating well, change to Cipro 500 mg po BID

In the above examples, a new drug or route is required so a new order will need to be entered. If the clinical condition is met, the nurse will enter the new order as indicated in the order comments of the original order. The physician's name will be used with a communication type of Written. The original order will be left active on the profile until the new order is entered. This will allow the nurse to refer back to it if needed. Once the new order is entered, the original order can be discontinued.

### **4. Conditional Order: Hold if...**

If a physician wishes to order a regularly scheduled medication, but leave instructions that it should be held if certain conditions occur, these conditions can be added to the order comments.

#### Examples:

Metoprolol 50 mg po BID, order comment: Hold if SBP <90 or HR <50

Docusate 100 mg po BID, order comment: Hold if diarrhea

The nurse will chart administrations on the eMAR as per the usual process. If the patient does not qualify for a dose based on the parameters of the order, the nurse will chart 'Not given' with an appropriate reason.

### **5. Conditional Order: Begin if...**

If a physician wishes to enter an order for a medication to begin if a certain condition is met, the order should be entered with an order comment.

#### Examples:

Cetazidime 1000 mg IV q8h, order comment: begin if temp >38.5

Pharmacy, upon verification, will modify the order comment to read "\*\*\*CONDITIONAL ORDER: Contact pharmacy if therapy initiated: begin if temp >38.5 \*\* Request Refill \*\*\*". Pharmacy will send a 24 hour supply of medication (if not ward stock) with the order comment and a request refill sticker attached. The pharmacist will also change the Dispense Category to BULK and change the duration of the order to 365 days with a soft stop.

A regularly scheduled task will appear for each dose on the eMAR. If the patient does not meet the condition for the order to be initiated, the nurse will chart 'Not given' on each task with an appropriate reason.

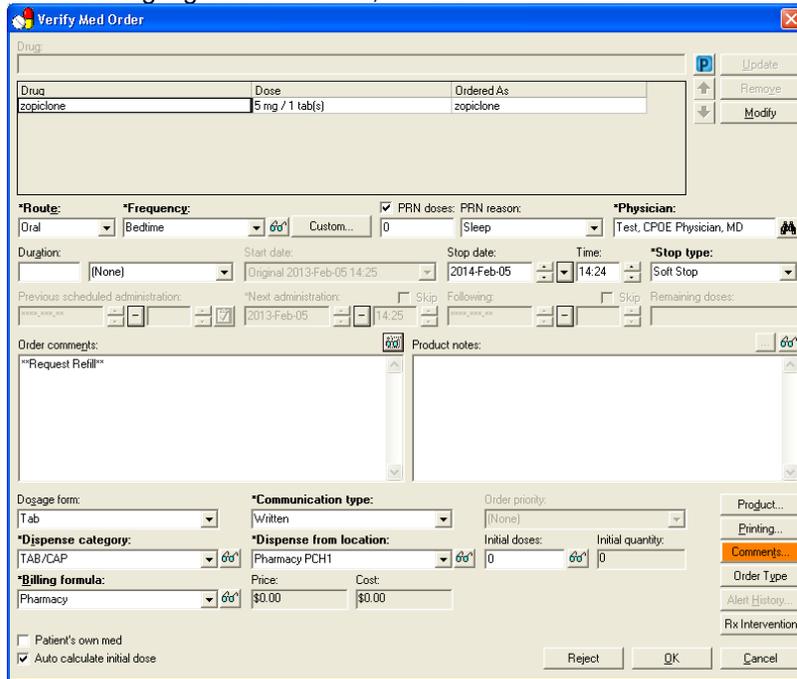
If the nurse begins the medication, s/he will contact Pharmacy who will change the order comment to read "Therapy initiated as condition met: begin if temp >38.5" and change the dispense category and duration back.

### 8.3 User Defined Details

These MUST be reviewed at the time an order is verified.

#### 8.3.1 New Orders

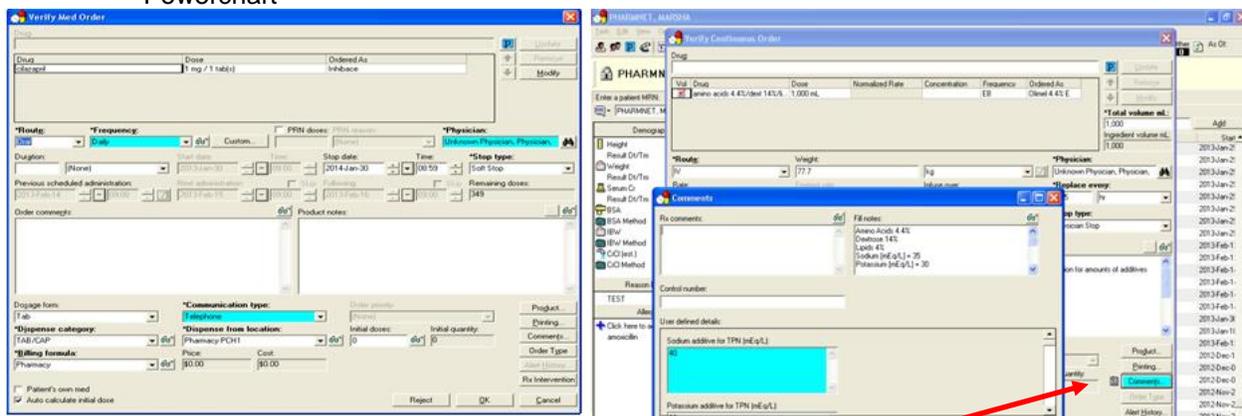
If new order has information contained in User Defined Details, the <Comments> box in the verification window will be ORANGE. If this box is highlighted ORANGE, it MUST be reviewed.



#### 8.3.2 Modified orders

Orders that have been modified in PowerChart will need to be verified in Med Manager.

- You will be alerted to the field that was modified as it will be highlighted blue.
- If modifications were made to User Defined Detail, the <comments> box will be blue. If highlighted, this box MUST be reviewed. When you click on <comments> the field that was modified will also be blue
- If you require information about what the modified field contained before modification, it is recommended that the information be accessed via the order info tab for the medication in Powerchart



## 8.4 Correction Insulin

Correction scales for short acting insulin are defined in PowerPlans. For example:

-  Insulin - Prandial No Correction
-  Insulin - Prandial with CUSTOM Dose Correction
-  Insulin - Prandial with HIGH Dose Correction (TDD insuli...
-  Insulin - Prandial with LOW Dose Correction (TDD insuli...
-  Insulin - Prandial with MEDIUM Dose Correction (TDD in...

**Verify Med Order**

Drug:

Drug	Dose	Ordered As
Insulin lispro (HumaLOG Kwipen)	6 unit(s)	HumaLOG insulin

**\*Route:** Subcutaneous **\*Frequency:** Morning   PRN doses: PRN reason: (None) **\*Physician:** Unknown Physician, Physician

Duration: (None) **\*Start date:** 2017-Oct-05 **\*Time:** 08:00 **Stop date:** 2018-Oct-05 **Time:** 07:59 **\*Stop type:** Soft Stop

Previous scheduled administration:     Skip **Next administration:** 2017-Oct-06 08:00  Skip **Following:** 2017-Oct-07 08:00  Skip **Remaining doses:** 365

**Order comments:** \*High Dose Correction\*  
 INCREASE SCHEDULED PRANDIAL INSULIN DOSE:  
 8 to 10.9 mmol/L +2 units ;  
 11 to 13.9 mmol/L +4 units ;  
 14 to 16.9 mmol/L +7 units ;  
 17 to 20 mmol/L +10 units ;  
 Above 20 mmol/L +12 units

**Product notes:**

**Dosage form:** Injection **\*Communication type:** Written **Order priority:** (None)

**\*Dispense category:** BULK **\*Dispense from location:** Pharmacy QEH Inventory **Initial doses:** 0 **Initial quantity:** 0

**\*Billing formula:** Pharmacy **Price:** \$0.00 **Cost:** \$0.00

Patient's own med  
 Auto calculate initial dose

The details of the correction scale will be visible on the eMAR when the nurse hovers over the order:

<p><b>insulin lispro (HumaLOG insulin)</b>          6 unit(s), Subcutaneous, Injection, Morning, + HIGH DOSE          correction, Start: 2017-Oct-05 08:00          *High Dose Correction* INCREASE SCHEDULED PRANDIAL</p>	<p>insulin lispro (HumaLOG insulin)          6 unit(s), Subcutaneous, Injection, Morning, + HIGH DOSE correction, Start: 2017-Oct-05 08:00          *High Dose Correction*          INCREASE SCHEDULED PRANDIAL INSULIN DOSE:          8 to 10.9 mmol/L +2 units ;          11 to 13.9 mmol/L +4 units ;          14 to 16.9 mmol/L +7 units ;          17 to 20 mmol/L +10 units ;          Above 20 mmol/L +12 units</p>
<p>insulin lispro          MAR Glucose Verify          insulin lispro prandial dose (units)          insulin lispro correction (units)          insulin lispro total given (units)</p>	<p>DECREASE SCHEDULED PRANDIAL INSULIN DOSE:          3 to 3.9 mmol/L -4 units ;          Less than 3 mmol/L -6 units</p>
<p><b>tamsulosin (Flomax CR 0.4 mg oral tablet, extended release)</b>          0.4 mg, Oral, Tab ER, Daily, Start: 2017-Sep-20 09:00</p>	<p>If blood glucose less than 4 mmol/L within 1 hour of meal:          treat as per Health PEI Adult Hypoglycemia Medical Directive.          When blood glucose has been corrected (i.e. greater than 4 mmol/L), patient should eat their meal.</p>
<p>tamsulosin</p>	<p>Insulin to be administered after the patient eats, with the prandial dose, adjusted based on the original blood glucose value on the correction scale.</p>
<p><b>PRN</b></p>	
<p><b>acetaminophen (Tylenol Regular Strength)</b>          975 mg, Oral, Tab, q4h timed, PRN for Pain, Start: 2017-10-19 16:16</p>	

**Reminder:** Insulin orders with correction scales should **NOT** have a PRN flag. The nurse needs to have a regular task on the eMAR to document against regardless of whether the insulin is being administered or not.

## 8.5 Replacing Incorrect Orders

Discontinue will only remove future tasks on the eMAR. Tasks that were due and not charted on prior to the discontinuation of the medication will remain. Therefore, in situations where an incorrect order is being discontinued and a new order is entered (Misc.Med, Combo Drugs, Multiple strengths), the Pharmacist must check the last administration time of the discontinued task. This will allow the Pharmacist to enter an appropriate start date and time. A phone call to the Nurse may be necessary to instruct them to “Chart not Done” on the discontinued task.

Example:

At 0905 the Pharmacist selects an order for Avalide 300mg -25 mg 1 tab(s) oral daily off the UVOM. The Pharmacist Rejects and Discontinues Availde and replaces it with 2 separate orders for Irbesartan and HCTZ and changes the start date and time of the order to Today (T) and Now (N). . Because discontinue only removes future tasks the 0900 task for Avalide will not be discontinued from the eMAR. Potentially, the nurse could not realize there are 2 orders for the same drug and administer the patient’s own Avalide, along with the Irbesartan and HCTZ.

Last Charted Administration can be viewed from Med Manager if the Verification Action is applied before the order is Rejected. This information can also be found on the eMAR.

The screenshot shows the 'Verify Med Order' window with the following details:

- Drug:** docosate-sennosides 50-8.6 mg
- Dose:** 2 tab(s)
- Ordered As:** Sencolot S
- Route:** Oral
- Frequency:** q2h timed
- Physician:** Test, CPDE Physician, MD
- Start date:** 2013-Apr-25 16:00
- Stop date:** 2014-Apr-25 15:59
- Time:** 15:59
- \*Stop type:** Soft Stop
- Last charted administration:** 2013-Apr-25 02:00 (highlighted with a red box)
- Next administration:** 2013-Apr-25 18:00
- Following:** 2013-Apr-25 18:00
- Remaining doses:** 4380
- Dispense from location:** Pharmacy PCH1
- Price:** \$0.00
- Cost:** \$0.00
- Initial doses:** 0
- Initial quantity:** 0
- Buttons:** Update, Remove, Modify, Reject, OK, Cancel

## 8.6 Patient's Own Med Functionality

When entering an order, a prescriber may indicate if a patient may use his or her own medication by choosing 'Yes' beside 'May use own medication'.

The screenshot shows the 'Orders' Medication List interface. The main heading is 'Orders for Signature'. Below it, the details for 'fluticasone-salmeterol (Advair MDI 125 mcg-25 mcg Inhaler)' are displayed. The 'Details' tab is active. The 'May use own medication' checkbox is checked and highlighted with a red box. Other fields include: \*Dose: 2 puff(s), \*Route of administration: Inhalation, \*Frequency: BID, Duration: (empty), Special Instructions: (empty), Stop type: (empty), Dose Range: (empty), Drug Form: (empty), PRN: (empty), Priority (e.g. STAT or NOW): (empty), May self administer: (empty), \*Start Date/Time: (empty), Stop Date/Time: (empty).

When the order is brought up for verification in PharmNet, the Patient's Own Med box will be checked off in the lower left corner of the verification screen. Alternatively, the pharmacist may check off this box if it is determined that the patient will supply his or her own medication after the order was entered.

The pharmacist will communicate with nursing, either via a phone call or a Medication Communication form, to determine if the patient is able to provide his or her own medication.

The screenshot shows the 'Verify Med Order' window. The 'Drug' table contains the following information:

Drug	Dose	Ordered As
fluticasone-salmeterol 125-25 mcg	2 puff(s)	Advair MDI 125 mcg-25 mcg Inhaler

Below the table, the following fields are visible:

- \*Route: Inhalation
- \*Frequency: BID
- PRN doses: (None)
- \*Physician: Test, CPOE Physician, MD
- Duration: (None)
- \*Start date: 2013-Apr-05
- \*Time: 09:00
- Stop date: 2014-Apr-05
- Time: 08:59
- \*Stop type: Soft Stop
- Previous scheduled administration: 2013-Apr-05
- Next administration: 2013-Apr-05
- Following: 2013-Apr-06
- Remaining doses: 730
- Order comments: (empty)
- Product notes: Shake well. Rinse mouth thoroughly after each use
- Dosage form: Inhaler
- \*Communication type: Written
- Order priority: (None)
- \*Dispense category: BULK
- \*Dispense from location: Pharmacy PCH1
- Initial doses: 0
- Initial quantity: 0
- \*Billing formula: Pharmacy
- Price: \$0.00
- Cost: \$0.00
- Patient's own med
- Auto calculate initial dose

The 'Patient's own med' checkbox is checked and highlighted with a red box. At the bottom right, there are buttons for 'Reject', 'OK', and 'Cancel'.

This will display in the Orders tab:

	Last Updated	Order Name	Status	Details
Inpatient				
	2013-Apr-04 09:02	hydrochlorothiazide	Ordered	25 mg, Oral, Tab, Daily, Start: 2013-Apr-05 09:00
	2013-Apr-05 08:44	fluticasone-salmeterol (Advair MDI 125 mcg-25 mcg Inhaler)	Ordered	2 puff(s), Inhalation, Inhaler, BID, <span style="border: 1px solid red; padding: 2px;">May use own medication</span> , Start: 2013-Apr-05 09:00

This will also display on the eMAR:

**Medications**

**Scheduled**

**fluticasone-salmeterol (Advair MDI 125 mcg-25 mcg Inhaler)**  
 2 puff(s), Inhalation, Inhaler, BID, May use own medication,  
 Start: 2013-Apr-05 09:00

**fluticasone-salmeterol**

If an order is marked as Patient's Own, it will not qualify for batches and a scroll icon will display on the patient profile:

Profile		Results	Interventions	Unverified Orders	Monitor
Drug:					
A	Status				Order Sentence
	Active				ranitidine 150 mg/ 1 tab(s) Oral BID
	Active				zopiclone 5 mg/ 1 tab(s) Oral Bedtime PRN Sleep
	Active				furosemide 40 mg/ 1 tab(s) Oral Daily
	Active				amino acids 5.7%/dext 11%/lipids/elect 1,000 mL IV 80 mL/hr
	Active			<span style="border: 1px solid red; padding: 2px;"></span>	fluticasone-salmeterol 125-25 mcg 2 puff(s) Inhalation BID
	Active				hydrochlorothiazide 25 mg / 1 tab(s) Oral Daily

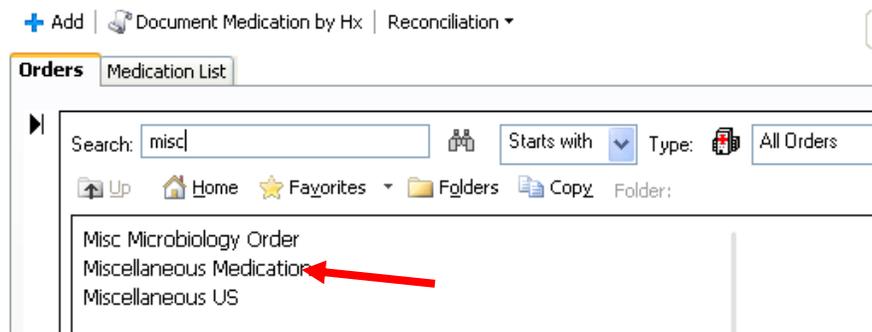
The following medications are most often patient's own med and may be indicated as such in medication manager at the time of verification. After communicating with nursing to confirm this, the Patient's Own Med checkbox may be removed if it is determined that the patient is unable to provide his or her own supply.

1. Didrocal Kit
2. Inhalers
3. Eye/Ear Drops
4. Topical
5. Herbals/Vitamins
6. Non formulary items (use the shortcut "NF" Non-Formulary Item: Not supplied by Pharmacy)

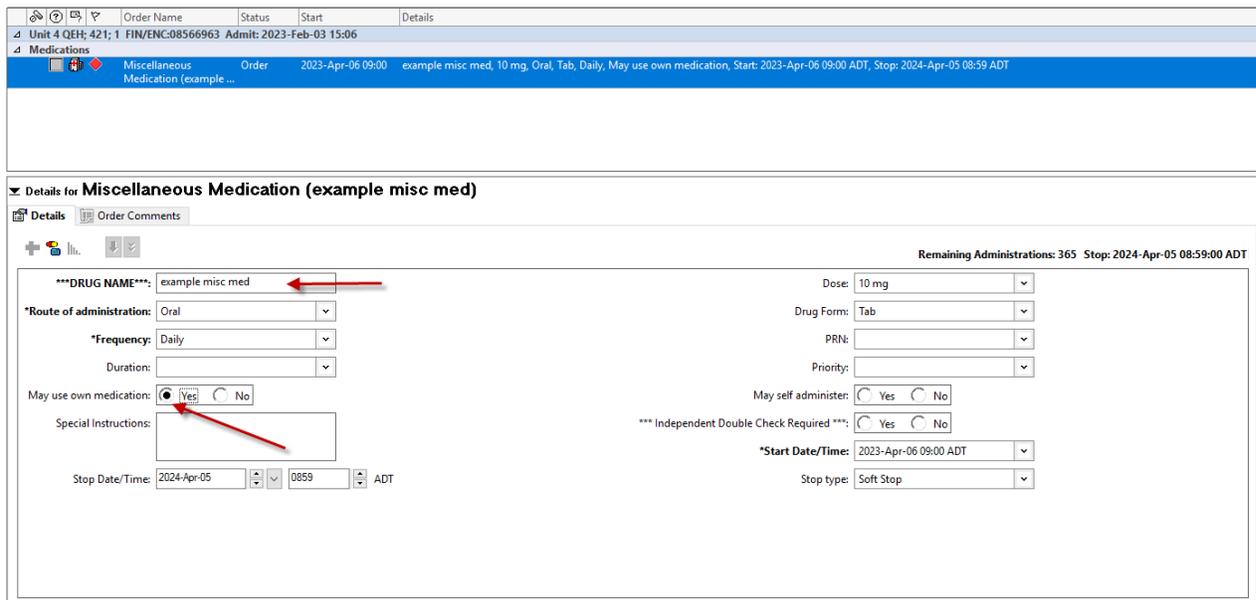
## 8.7 Non-Formulary Process

### Physician/Nurse/Pharmacist

1. Select <+ Add> to place a medication order in PowerChart. Enter a non-formulary medication by searching and selecting “Miscellaneous Medication” from the options provided.



2. Enter the details regarding the non-formulary medication. Once all of the details are entered, click <Sign> to place the order.



Order Name: Unit 4 QEH; 421; 1 FIN/ENC:08566963 Admit: 2023-Feb-03 15:06

Medications: Miscellaneous Medication (example ...)

Order: 2023-Apr-06 09:00 example misc med, 10 mg, Oral, Tab, Daily, May use own medication, Start: 2023-Apr-06 09:00 ADT, Stop: 2024-Apr-05 08:59 ADT

Remaining Administrations: 365 Stop: 2024-Apr-05 08:59:00 ADT

\*\*\*DRUG NAME\*\*\*: example misc med

Dose: 10 mg

\*Route of administration: Oral

Drug Form: Tab

\*Frequency: Daily

PRN:

Duration:

Priority:

May use own medication:  Yes  No

May self administer:  Yes  No

Special Instructions:

\*\*\* Independent Double Check Required \*\*\*:  Yes  No

\*Start Date/Time: 2023-Apr-06 09:00 ADT

Stop Date/Time: 2024-Apr-05 0859 ADT

Stop type: Soft Stop

- The “may use own medication” field can also be selected at this time if appropriate. It can also be selected in med manager upon order verification
- Once the order has been signed, the “drug name” field can no longer be modified

## Pharmacist (med manager)

1. In the Medication Profile, the order can be seen to have been entered in as the patient's own medication (if this option was selected). The pharmacist will be able to tell that the order is for a miscellaneous medication as the characters "nf-" will appear at the beginning of the drug name. Apply the <Verify> action to the medication.

Drug:

Action	Status	Order Sentence	Start
Verify	Active	nf - example misc med 10 mg Oral Daily	2023-Apr-06 09:00

2. Once the <Verify> action is applied, the Manual Product Select window will appear, indicating that a miscellaneous product was entered. If the product is identified as one that has been built inside the system, cancel out of this window, apply <discontinue> action to the order and re-enter the order with the built product (See Section 9.5 – Replacing an Incorrect Order). If, however, the product is truly a non-formulary product then proceed to Manual Product Select. Choose the non-formulary template by moving the "non-formulary 1 each med" over to the selected products. Enter in a quantity per dose =1 and select <OK>

Manual Product Select - Pharmacist's Favorite Drug ABC 10 mg 10 mg Oral Daily Cap

Order information

Ingredients:

Miscellaneous Medication 10 mg  
Pharmacist's Favorite Drug ABC 10 mg

Last updated by: Test, CPOE Physician, MD - CPOE Physician  
Order comments:

Communications: Written

Products

Products (2) | Compounds (0)

Description	Prod Info	Formular...
Continue Medications as in ED	- Misc	Formulary
non-formulary 1 each med	1 each Misc	TNF

Selected products:

Product	Prod Info	Dose	Unit
---------	-----------	------	------

3. Note that even if there is a DIN entered that is associated with the product, **Multum Alert will not detect any potential drug interactions.**

Template Non Formulary

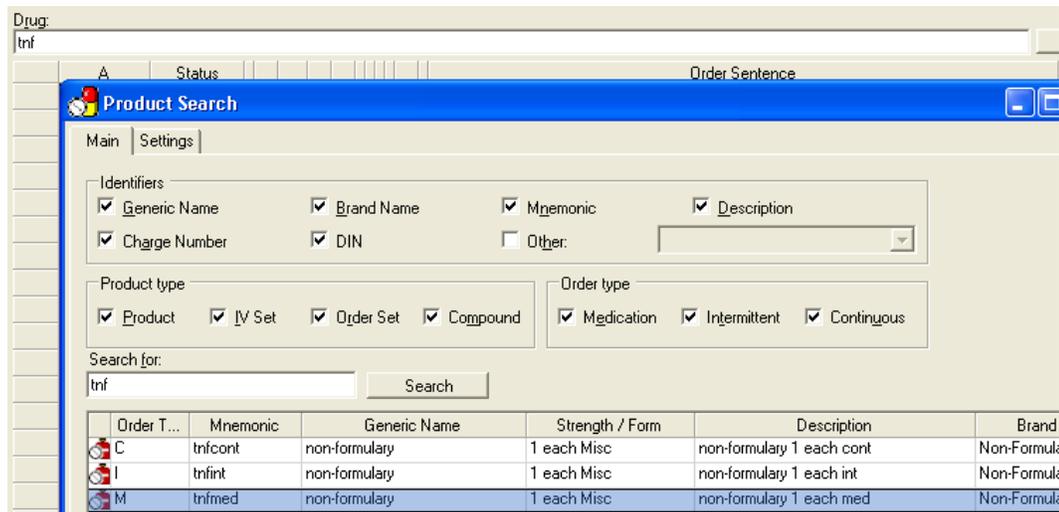
\*Description: Pharmacist's Favorite Drug ABC 10 mg

\*Cost per unit: 0

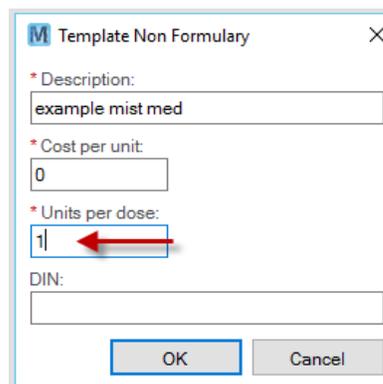
\*Units per dose: 1

DIN: 99999999

- Enter in the appropriate information into the Med Order screen, enter the short-cut “nf” in the order comments section and select the <Patient’s own med> option in the lower left-hand corner of the screen. Once this is completed, select <OK> and submit the order.
- If the pharmacist is required to enter in a non-formulary product in Medication Manager, search “tnf” or “nonform” in the drug field. Choose the applicable non-formulary item (either medication, intermittent, or continuous) in the product search window.



- Enter a description (medication name) of the product and units per dose = 1. Cost per unit should remain=0



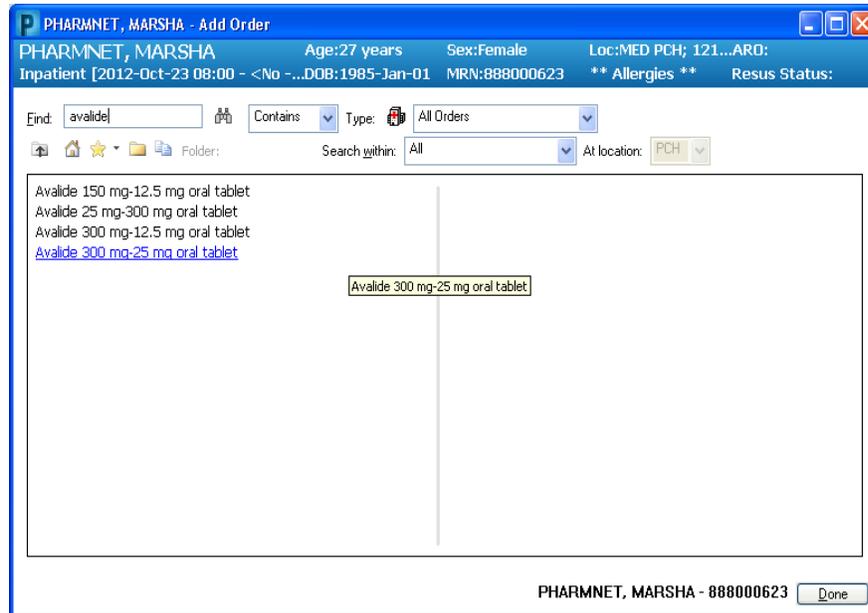
- Enter in the appropriate information into the Med Order screen, enter the short-cut “nf” in the order comments section and select the <Patient’s own med> option in the lower left-hand corner of the screen. Once this is completed, select <OK> and submit the order.

**NOTE:** It is preferable to enter Miscellaneous medications in Powerchart as they will convert properly upon discharge medication reconciliation. **Miscellaneous (or Freetext) medications ordered via MedManager do not convert upon discharge medication reconciliation.** Order details (dose, dosage form, frequency) will be lost

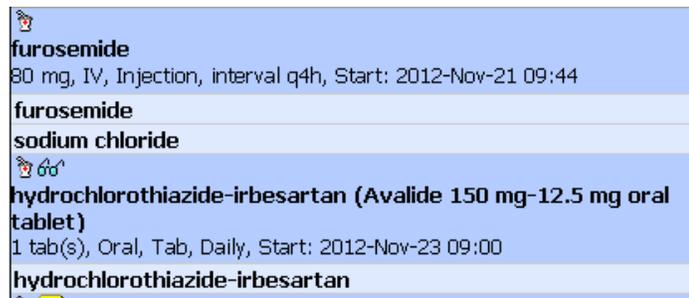
## 8.8 Process for Combination Drugs and Kits (without automatic therapeutic sub)

Orders for combination medications (ex Avalide, Micardis Plus) will be placed by the ordering clinician in Powerchart (or converted from the Home Meds using Enhanced Med Rec).

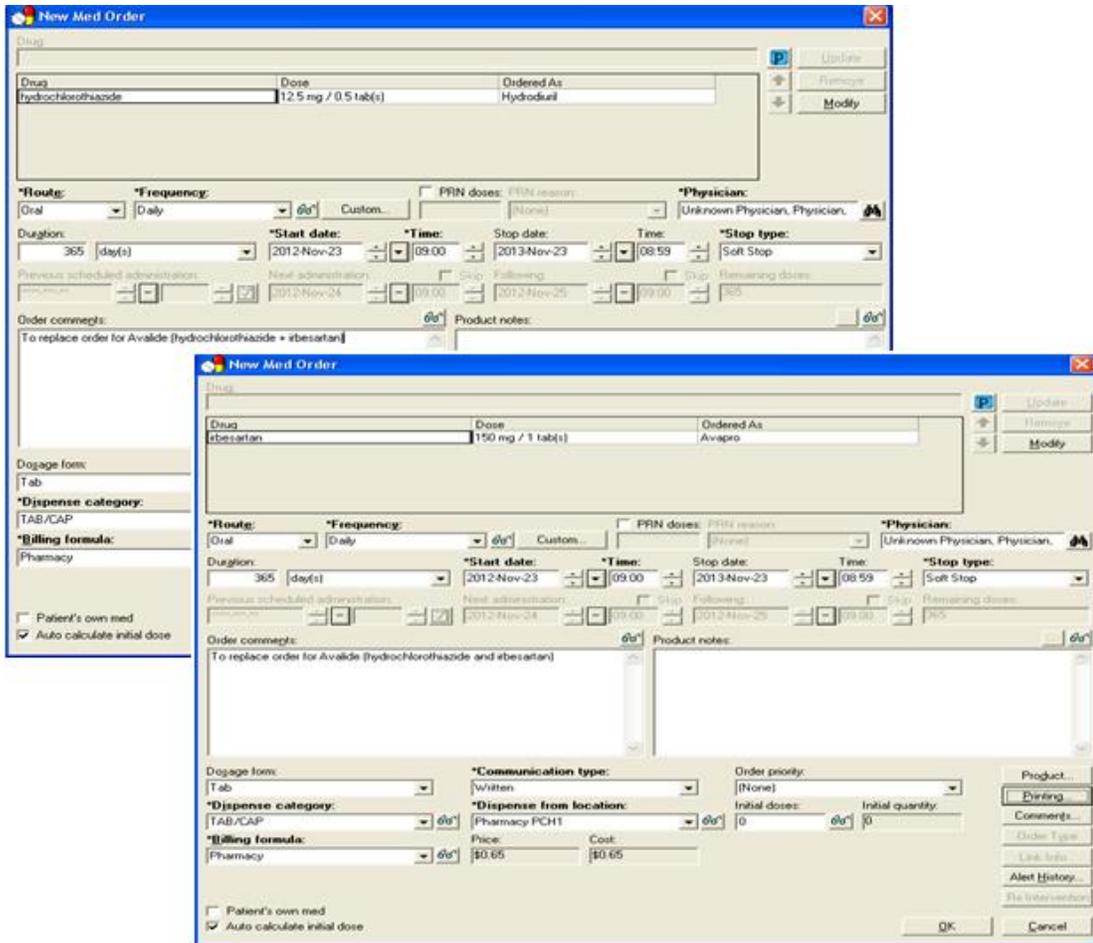
1. Order for combination medication is placed in PowerChart by the ordering provider



View on eMAR:



1. Pharmacist will then need to <Reject> and <Discontinue> the order in Med Manager. Note the start date and time of the order. \*\*May need to verify if an administration has been given on the eMAR – see Section 9.5 Replacing Incorrect Orders\*\*
2. Pharmacist to enter separate order for each medication component using a communication type of clinician, adjusting the start date and time of the order to reflect the next admin time for the nurse, and adding an order comment (shortcut TR: To replace order for:)



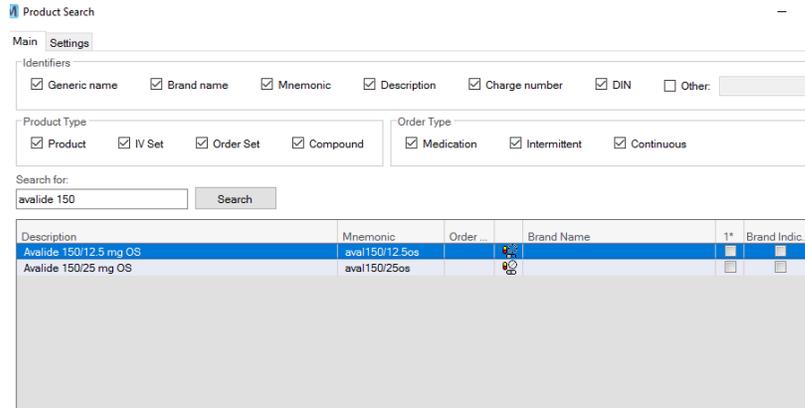
New view on the eMAR. The original order for Avalide now appears in the discontinued tab of the eMAR.

Medications	2012-Nov-22 10:24	Discontinued Scheduled
sodium chloride		
hydrochlorothiazide (Hydrodiuril) 12.5 mg, Oral, Tab, Daily, Start: 2012-Nov-23 09:00 To replace order for Avalide (hydrochloro...		hydrochlorothiazide-irbesartan (Avalide 150 mg-12.5 mg oral tablet) 1 tab(s), Oral, Tab, Daily, Start: 2012-Nov-23 09:00
hydrochlorothiazide		hydrochlorothiazide-irbesartan
hydrocortisone (hydrocortisone injection) 240 mg, IV, Injection, qph timed, Start: 2012-Nov-21 12:00 Target Dose: hydrocortisone injection 4...		
hydrocortisone irbesartan (Avapro) 150 mg, Oral, Tab, Daily, Start: 2012-Nov-23 09:00 To replace order for Avalide (hydrochloro...		
irbesartan		

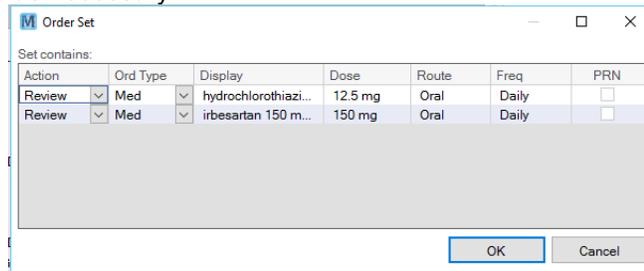
Order sets have been built in Med Manger for the more common combination drugs and kits.

For example:

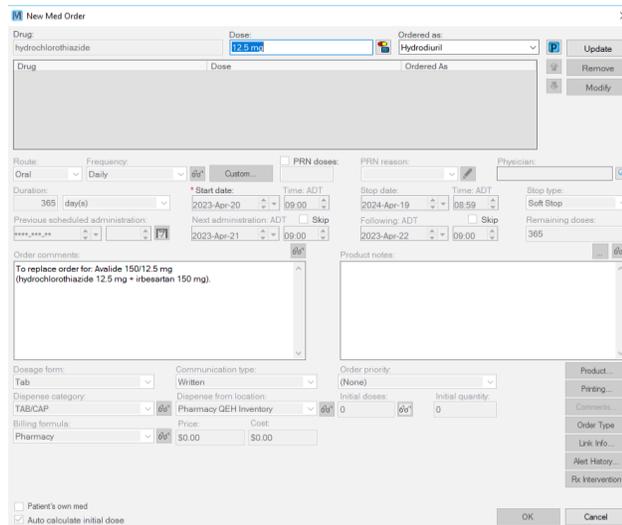
1. Order is placed in PowerChart for Avalide 150 mg – 12.5 mg oral tablet
2. Pharmacist chooses the Avalide 150/12.5 mg order set. This will allow us to have the order comments defaulted :



3. Pharmacist selects the “review” action. This allow the pharmacist to review each individual order and make any modifications as necessary



4. Pharmacist can now enter each ingredient in the combination as an individual order. Remember to discontinue the original order for the combination product with the discontinue reason “therapeutic interchange”



## 8.9 Dosage Calculator window

**Dosage Calculator vancomycin**

**Dose Values**

1) Target dose: 15 mg/kg/dose

2) Calculated dose: 1,140 mg

3) Reduced dose: 1,140 mg 100 %

4) Final dose: 1,140 mg 15 mg/kg/dose

5) Standard dose: 1,250 mg 16.4474 mg/kg/dose

6) Rounding rule: No rounding

7) Adjust Reason:

8) Route: IV

**Dose Forms: vancomycin**

- vancomycin 10 mg/mL intravitreal injection PEI
- vancomycin 1000 mg Inj
- vancomycin 125 mg Cap
- vancomycin 25 mg/mL in simple syr liq PEI
- vancomycin 250 mg Cap
- vancomycin 50 mg/mL drops PEI
- vancomycin 500 mg Inj

**Reference Data**

Date of birth: 1992-Jul-16 (21 Years)

Gender: Female

Height: 181 cm Source: 2014-Jan-20 14:13 181.00 cm

Actual weight: 76 kg Source: 2014-Jan-20 14:13 76.000 kg

Adjusted weight: 76 kg Adjustment: Actual (no adjustment)

Serum creatinine: umol/L Source: Manually entered

CrCl (est.): mL/min Algorithm: Cockcroft-Gault Missing data

Body surface area: 1.95 m2 Algorithm: Mosteller

► Last Dose Calculation

Formulae... Standard Dose Reference Apply Standard Dose Apply Dose Cancel

### **Definitions:**

**Target dose:** The Target dose can be pre-defined in the order or can be manually entered into the Dosage Calculator window. It is the formula used to calculate the dose. Clicking Cancel will cause the Target dose to be entered into the Dose field in the order sentence.

**Calculated dose:** Calculated based on the Target dose and the weight (actual or adjusted).

**Reduced dose:** The Final dose can be reduced by adjusting down from 100%

**Final dose:** The Final dose is the final dose applied to the order. It can be equal to the calculated dose or the user can override it by manually entering a dose or using the Rounding rule or Reduce dose fields. Clicking Apply Dose will apply the Final dose to the order. The system will display the Target dose in the field to the right of the Final dose field.

**Standard dose:** This dose can be defined using the Rounding rule or be customized using the Standard Dose Reference. Clicking the Apply Standard Dose button will cause the standard dose to be used as the Final dose. Clicking the Standard Dose Reference button will show what reference ranges were used to define the standard dose. The system will display the Target dose in the field to the right of the Final dose field.

Certain medications have a Standard dose pre-defined. This may represent a maximum recommended dose, a suggested rounded off dose, etc. For example, in most cases, the Apply Standard Dose button should always be used for adults in the 'Vancomycin Loading Dose Plus Regular Dosing' Careset and the Heparin bolus dose in the 'PROTOCOL Heparin IV' power plans. Users should use clinical judgment when determining whether or not to apply the standard dose.

**Rounding rule:** The Rounding rule can be pre-defined in the order or it can be manually selected at the time of order entry. If the Rounding rule is specified, the Calculated dose will be rounded off according to the Rounding Rule to make the Final dose.

**Adjust Reason:** An Adjust Reason can be specified if the Final dose is adjusted.

**Route:** The route pulls in from the order sentence.

**Dose forms:** Displays the dosage forms available in Pharmacy.

**Date of birth:** This data pulls in from the patient's chart.

**Gender:** This data pulls in from the patient's chart.

**Height:** If documented, will pull in from the patient's chart. The height can also be manually entered. In addition to Manually entered, the Source window lists historical heights that have been entered on the patient's chart.

**Actual weight:** If documented, will pull in from the patient's chart. The Actual weight can also be manually entered. In addition to Manually entered, the Source window lists historical weights that have been entered on the patient's chart.

**Adjusted weight:** The weight can be manually adjusted by the user. Alternatively, the Adjustment can be specified by the User, e.g. Ideal body weight, Lean body weight, Adjusted body weight. The formula used can be viewed by clicking the Formulae button.

**Serum creatinine:** If a Serum creatinine has been charted on the patient's chart, it will pull in. The SCr can also be manually entered. The source of the data is indicated in the Source window.

**CrCl (est.):** The estimated creatinine clearance will calculate based on data that was pulled in from the patient's chart or manually entered. The formula used to calculate the CrCl (est) can be specified in the Algorithm box. The formula used can be viewed by clicking the Formulae button.

**Body surface area:** The Body Surface Area will calculate based on data that was pulled in from the patient's chart or manually entered. The formula used to calculate the BSA can be specified in the Algorithm box. The formula used can be viewed by clicking the Formulae button.

## 8.10 Normalized or Weight Based Doses

It is the expectation that the physician will apply a dose at the time of order entry.

At the time of verification, we will know that they DID NOT apply a dose because we will be presented with the dose calculator.

Click <Cancel> to allow the weight based dose to appear in the dose field. **Pharmacy will not calculate and apply a finite dose.**

**Dosage Calculator enoxaparin**

Dose Values

1) Target dose: [ ] mg/kg/dose

2) Calculated dose: [ ] mg

3) Reduced dose: [ ] mg [ 100 ] %

4) Final dose: [ ] mg [ ] mg/kg/dose

5) Standard dose: [ ] mg [ ] mg/kg/dose

6) Rounding rule: Nearest whole number

7) Adjust Reason: [ ]

8) Route: Subcutaneous

Dose Forms: enoxaparin

enoxaparin 100 mg/mL Inj (3 mL)  
 enoxaparin 30 mg/0.3 mL Inj (PFS)  
 enoxaparin 40 mg/0.4 mL Inj (PFS)

Reference Data

Date of birth: 1985-Jan-05 (48 Years)

Gender: Female

Height: [ ] cm Source: (None)

Actual weight: [ ] kg Source: (None)

Adjusted weight: [ ] kg Adjustment: Actual (no adjustment)

Serum creatinine: 95 umol/L Source: 2013-Mar-26 11:11 95.00 umol/L

C<sub>Cr</sub> (est.): [ ] mL/min Algorithm: Cockcroft-Gault *Missing data*

Body surface area: [ ] m<sup>2</sup> Algorithm: Haycock *Missing data*

Last Dose Calculation

Formulae... Standard Dose Reference Apply Standard Dose Apply Dose Cancel

You will have to modify the dose and add a "." To the end of the dose to make it free text.

If this step is missed you will receive the following alert:



Weight base dose in eMAR:

<b>PRN</b>	
acetaminophen (Tylenol oral liquid (Ped))	<b>PRN 15 mg/kg/dose.</b>
15 mg/kg/dose., Oral, Drop, interval q6h,	Previous admin
PRN for Pain, Start: 2013-Feb-20 12:28	could not be
max 60 mg/kg in 24 hours	determined.
<b>acetaminophen</b>	

If the order is for vancomycin or aminoglycosides, a finite dose MUST be applied to the order. The order should be clarified with the physician/rounded by pharmacy depending on the facility process.

## 8.10.1 Continuous Infusion Considerations

### Continuous Infusion Details Window:

The left side of the continuous infusion order details window shows how the IV infusion is made:

▼ Details for **norepinephrine (additive) 4 mg [0.1 mcg/kg/min] + Dextrose 5% in Water 250 mL**

Details Continuous Details

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	30 mL/hr	8.3 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	4 mg	0.1 mcg/kg/min	8 mcg/min	EB
Total Bag Volume		250 mL		

Weight: 80 kg Weight Type: Clinical Weight Result dt/tm: 2013-May-08 13:20:01

The right side of the continuous infusion order details window is how the IV infusion is dosed, i.e. rate.

▼ Details for **norepinephrine (additive) 4 mg [0.1 mcg/kg/min] + Dextrose 5% in Water 250 mL**

Details Continuous Details

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	30 mL/hr	8.3 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	4 mg	0.1 mcg/kg/min	8 mcg/min	EB
Total Bag Volume		250 mL		

Weight: 80 kg Weight Type: Clinical Weight Result dt/tm: 2013-May-08 13:20:01

Continuous medication infusions have been built with the most common starting rate as a default. The rate may appear as a Normalized or dose/time unit (e.g. mcg/kg/min or mg/hr) rate or in a volume/time unit (e.g. mL/hr) rate depending on how the medication is normally dosed.

### Continuous infusion with a Weight-based Normalized Rate (weight available):

If a continuous infusion with a weight-based normalized rate is entered and a weight has been charted on a patient, the system will automatically calculate the rate using the charted weight.

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	18 mL/hr	13.9 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	4 mg	0.1 mcg/kg/min	4.8 mcg/min	EB
Total Bag Volume		250 mL		

Weight: 48 kg Weight Type: Clinical Weight Result dt/tm: 2013-May-10 15:54:00

When the nurse charts on the task, the dose and rate will default in based on the charted weight. Only the site will need to be selected.

\*Performed date / time : 2013-May-11 1419

\*Performed by : Test, CPOE RN, RN

Witnessed by :

\*Bag # : 1

\*Site :

\*Volume (mL) : 250

\*Rate (mL/hr) : 18

\*norepinephrine Dose : 0.1 mcg/kg/min

\*Weight : 48 kg 2013-May-10 15:54

**Order Entry of Continuous Infusions with a Weight-based Normalized Rate (no weight available):**

It is possible to enter an order for a continuous infusion with a weight-based normalized rate even if a weight has not been charted on the patient.

▼ Details for **norepinephrine (additive) 4 mg [0.1 mcg/kg/min] + Dextrose 5%**

Details Continuous Details

Base Solution	Bag Volume	Rate	Infuse Over
Dextrose 5% in Water	250 mL		
Additive	Additive Dose	Normalized Rate	Delivers Occurrence
norepinephrine (additive)	4 mg	0.1 mcg/kg/min	EB
Total Bag Volume	250 mL		

Weight:

Alternatively, if the physician wishes to remove a charted weight (e.g. old or inaccurate weight) and treat the Normalized rate as a free-text rate, the weight can be removed.

For Pharmacist Verification: Weight must be present on the order prior to verification. If weight not available please contact nursing and enter the order at the time of verification.

**Note:** If removing the weight, and entering a free-text rate, both the weight and the unit of measure fields must be empty or the weight will remain a required field.

The system will treat the Normalized rate as a 'free-text' rate. The rate will appear on the eMAR.

norepinephrine (additive) 4 mg [0.1 mcg/kg/min] + Dextrose 5% in Water 250 mL (V, 250 mL, Start: 2013-May-11 14:04)

**Administration Information**

Dextrose 5% in Water

norepinephrine

When the nurse charts on the task to begin a bag, a weight will be required. The system will use the charted weight to calculate a dose based on the normalized rate.

\*Performed date / time : 2013-May-11 1409

\*Performed by : Test, CPOE RN, RN

Witnessed by :

\*Bag # : 1

\*Site : Chest Anterior Right

\*Volume (mL) : 250

\*Rate (mL/hr) : 18

\*norepinephrine Dose : 0.1 mcg/kg/min

\*Weight : 48 kg 2013-May-10 15:54

If at the time of beginning the bag, the weight has still not been documented, the weight field will be yellow and the nurse will need to cancel charting, and chart a weight in Ad Hoc charting before a dose can be charted.

\*Performed date / time : 2013-May-13 1254

\*Performed by : Test, CPOE RN, RN

Witnessed by :

\*Bag # : 1

\*Site : Chest Anterior Right

\*Volume (mL) : 250

\*Rate (mL/hr) :

\*norepinephrine Dose : 0.1 mcg/kg/min

\*Weight :

**Order Entry of Continuous Infusions with a Weight-based Normalized Rate (charted weight modified by physician):**

If a weight has been charted on a patient, the charted weight will pull into the Continuous Details tab.

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	18 mL/hr	13.9 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	4 mg	0.1 mcg/kg/min	4.8 mcg/min	EB
Total Bag Volume		250 mL		

Weight: 48 kg Weight Type: Clinical Weight Result dt/tm: 2013-May-21 08:41:00

The physician may wish to modify this weight for various reasons, e.g. patient is retaining fluid, weight appears to be old or inaccurate.

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	15.75 mL/hr	15.9 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	4 mg	0.1 mcg/kg/min	4.2 mcg/min	EB
Total Bag Volume		250 mL		

Weight:   Weight Type:  Result dt/tm:

The Rate and Infuse Over fields will auto-calculate based on the manually entered weight. The manually entered weight is not documented anywhere in the patient's chart (e.g. Vitals); it is only attached to this order.

When the nurse begins a bag on the eMAR, the manually entered weight pulls into the charting window.

\*Performed date / time :

\*Performed by :

Witnessed by :

\*Bag # :

\*Site :

\*Volume (mL) :

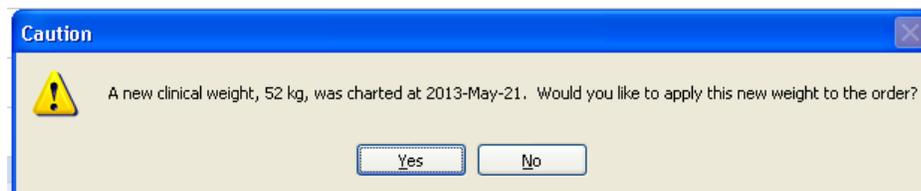
\*Rate (mL/hr) :

\*norepinephrine Dose :

\*Weight :

**New weight charted on the patient:**

If the physician or nurse modifies an order with a weight-based normalized rate and a new weight has been charted on the patient, an alert will fire. The clinician can choose whether or not to apply the new weight to the order.



To remove a Normalized rate and replace it with a mL/hr rate:

▼ Details for **norepinephrine (additive) 4 mg + Dextrose 5% in Water 250 mL**

Details Continuous Details

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	15 mL/hr	16.7 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	4 mg			EB
Total Bag Volume		250 mL		

Weight: 80 kg Weight Type: Clinical Weight Result dt/tm: 2013-May-08 13:20:01

1. Delete the normalized rate from the Normalized Rate field.
2. Enter the new mL/hr rate in the Rate field. When initially entering the mL/hr rate, you must enter the mL/hr (not mLs/hr); spacing and capitalization does not matter.

To chart the beginning of a bag on the eMAR:

The RN will need to document a dose on the eMAR.

norepinephrine 4 mg + dextrose 5% in water 250 mL: PHARMNET, REBECCA

norepinephrine (additive) 4 mg + Dextrose 5% in Water 250 mL  
30 mL/hr, IV, 250 mL, Start: 2013-May-08 15:02

2013-May-08 15:02

Begin Bag  
Site Change  
Infuse  
Bolus  
Rate Change  
norepinephrine

norepinephrine (additive) 4 mg + Dextrose 5% in Water 250 mL  
30 mL/hr, IV, 250 mL, Start: 2013-May-08 15:02

Yes  No Dextrose 5% in Water  
 Yes  No norepinephrine (additive)

\*Performed date / time: 2013-May-08 15:02  
\*Performed by: Test, CPOE RN  
Witnessed by:   
\*Bag #: 1  
\*Site: Chest Anterior  
\*Volume (mL): 254  
\*Rate (mL/hr): 30  
\*norepinephrine Dose:   
mg/hr  
g/kg/hour  
g/kg/min  
mcg/hr  
mcg/kg/hr  
mcg/kg/min  
mcg/m2/hr  
mcg/min  
mEq/day  
mEq/hr  
mEq/kg/day  
mEq/kg/hr  
mEq/kg/min  
mg/hr  
mg/kg/day  
mg/kg/hr  
mg/kg/min  
mg/m2/day  
mg/m2/hr  
mg/min  
million\_units/day  
million\_units/hr  
mmol/day  
mmol/hr  
mmol/kg/day  
mmol/kg/hr  
mmol/kg/min  
mmol/L  
mmol/min  
mmol/mL

Choose the appropriate units first based on the medication ordered and the dose will automatically calculate based on the rate entered. If the units chosen aren't appropriate for the drug ordered, an error box will appear.

\*Performed date / time: 2013-May-08 15:11  
\*Performed by: Test, CPOE RN, RN  
Witnessed by:   
\*Bag #: 1  
\*Site: Chest Anterior Left  
\*Volume (mL): 254  
\*Rate (mL/hr): 30  
\*norepinephrine Dose: 7.874 mcg/min

### Changing the mL/hr rate on a continuous infusion:

If you are changing the mL/hr rate, you can just delete the numerical value and leave the mL/hr that was already there.

1. Double click in front of the mL/hr:

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	30 mL/hr	8.3 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	4 mg			EB
Total Bag Volume		250 mL		

2. Backspace out the numerical value, leaving the mL/hr:

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	mL/hr	8.3 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	4 mg			EB
Total Bag Volume		250 mL		

3. Enter in the new numerical value (spacing doesn't matter):

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	20 mL/hr	12.5 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	4 mg			EB
Total Bag Volume		250 mL		

When the nurse charts on the task, the dose will need to be documented.

norepinephrine (additive) 4 mg + Dextrose 5% in Water 250 mL, IV, 250 mL, Start: 2013-May-11 14:00

2013-May-11 12:03:00

Begin Bag  
Infuse  
Bolus  
Rate Change  
norepinephrine

norepinephrine (additive) 4 mg + Dextrose 5% in Water 250 mL, IV, 250 mL, Start: 2013-May-11 14:00

Yes  No Dextrose 5% in Water  
 Yes  No norepinephrine (additive)

\*Performed date / time: 2013-May-11 12:03:00

\*Performed by: Test, CPDE

Witnessed by:

\*Bag #: 1

\*Site: Antecubital F

\*Volume (mL): 250

\*Rate (mL/hr): 20

\*norepinephrine Dose:

Choose the appropriate units first based on the medication ordered and the dose will automatically calculate based on the rate entered. If the units chosen aren't appropriate for the drug ordered, an error box will appear.

## Changing the Concentration of a Continuous Infusion

In certain clinical situations, it may be necessary to change the concentration of a continuous infusion, e.g. patient is overloaded with fluid. A physician may wish to do so when placing an order or a nurse may wish to modify an existing order to accomplish this. The additive dose can be changed in the Additive Dose box in the Continuous Details window from the Orders page.

**To concentrate a continuous infusion with a Weight-based Normalized rate:**

▼ Details for **norepinephrine (additive) 4 mg [0.1 mcg/kg/min] + Dextrose 5% in Water 250 mL**

Details Continuous Details

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	18 mL/hr	13.9 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	4 mg	0.1 mcg/kg/min	4.8 mcg/min	EB
Total Bag Volume		250 mL		

Change the Additive Dose. If there's a Normalized rate and a weight, the Rate and Infuse Over fields will automatically calculate.

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	4.5 mL/hr	55.6 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	16 mg	0.1 mcg/kg/min	4.8 mcg/min	EB
Total Bag Volume		250 mL		

Weight:  kg      Weight Type: Clinical Weight      Result dt/tm: 2013-May-10 15:54:00

**NOTE:** The Rate and Infuse over fields will automatically update if there is a Normalized rate and a weight available. If the weight or normalized rate is missing, the Rate and Infuse Over fields will not automatically update. They will need to be updated manually.

**To concentrate a continuous infusion with a Non-weight-based Normalized rate:**

▼ Details for **morphine (additive) 250 mg [1 mg/hr] + Sodium Chloride 0.9% IV Solution 50 mL**

Details Continuous Details

Base Solution	Bag Volume	Rate	Infuse Over	
Sodium Chloride 0.9% IV Solution	50 mL	0.2 mL/hr	250 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
morphine (additive)	250 mg	1 mg/hr	1 mg/hr	EB
Total Bag Volume		50 mL		

Change the additive amount. If there is a Normalized rate, the Rate and Infuse Over fields will automatically calculate

Base Solution	Bag Volume	Rate	Infuse Over	
Sodium Chloride 0.9% IV Solution	50 mL	0.1 mL/hr	500 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
morphine (additive)	500 mg	1 mg/hr	1 mg/hr	EB
Total Bag Volume		50 mL		

**NOTE:** The Rate and Infuse over fields will automatically update if there is a Normalized rate available. If there is no normalized rate, the Rate and Infuse Over fields will not automatically update. They will need to be updated manually.

To concentrate a continuous infusion without a Normalized Rate (e.g. mL/hr):

▼ Details for **norepinephrine (additive) 4 mg + Dextrose 5% in Water 250 mL**

Details Continuous Details

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	18 mL/hr	13.9 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	4 mg			EB
Total Bag Volume		250 mL		

Weight: 48 kg Weight Type: Clinical Weight Result dt/tm: 2013-May-10 15:54:00

Change the Additive Dose. As there is no Normalized rate, the system doesn't know what the desired rate is and the Rate and Infuse Over fields will NOT automatically update.

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	18 mL/hr	13.9 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	16 mg			EB
Total Bag Volume		250 mL		

Weight: 48 kg Weight Type: Clinical Weight Result dt/tm: 2013-May-10 15:54:00

The desired Rate will need to be manually updated by the clinician. Once the Rate field is updated, the Infuse Over field will automatically update.

Base Solution	Bag Volume	Rate	Infuse Over	
Dextrose 5% in Water	250 mL	4.5 mL/hr	55.6 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	16 mg			EB
Total Bag Volume		250 mL		

Weight: 48 kg Weight Type: Clinical Weight Result dt/tm: 2013-May-10 15:54:00

**NOTE:** The Rate and Infuse over fields will NOT automatically update in this case because there is no Normalized rate. The rate will need to be updated manually.

### 8.10.2 Continuous infusions that aren't built in PowerChart:

In rare situations, physicians may wish to order an IV solution that isn't built in the system. For example, a physician wishes to order Half Normal Saline with 40 mEq/L KCl (no substitution):

1. Physician enters an order for "plain" Sodium chloride 0.45% IV solution with the required rate.
2. The additive button cannot be used. This functionality has been turned off in the system for various reasons.
3. The additive must be added to the Infusion Instructions field.

Details for **Sodium Chloride 0.45% IV Solution 1000 mL**

Details Continuous Details

Base Solution	Bag Volume	Rate	Infuse Over	
Sodium Chloride 0.45% IV Solution	1000 mL	50 mL/hr	20 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
Total Bag Volume		1000 mL		

Weight: 48 kg Weight Type: Clinical Weight Result dt/tm: 2013-May-10 15:54:00

Infusion instructions  
with 40 mEq KCl per litre (no substitution)

Prior to modification by the pharmacist, the additive will appear on the eMAR in the Order Comments.

Sodium Chloride 0.45% IV Solution 1000 mL  
50 mL/hr, IV, 1,000 mL, Start: 2013-May-14 08:58  
with 40 mEq KCl per litre (no substitution)

Administration Information  
Sodium Chloride 0.45% IV Solution

In this example, the order for the solution will not come up with for verification by Pharmacy because Pharmacy is only verifying solutions that contain potassium. The system doesn't know this solution contains potassium because it's only added to the Order Comments.

Upon receiving a call from Nursing, Pharmacy will modify the order in Med Manager, remove the Order Comment and add the potassium additive.

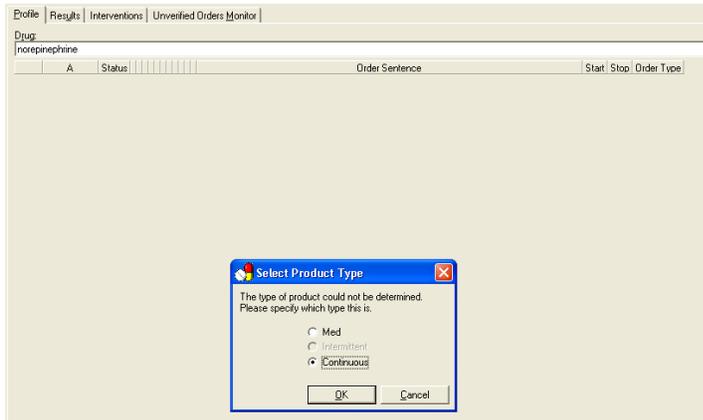
Sodium Chloride 0.45% IV Solution 1,000 mL +  
potassium chloride 40 mEq  
50 mL/hr, IV, 1,000 mL, Start: 2013-May-14 08:58

Administration Information  
Sodium Chloride 0.45% IV Solution  
potassium chloride

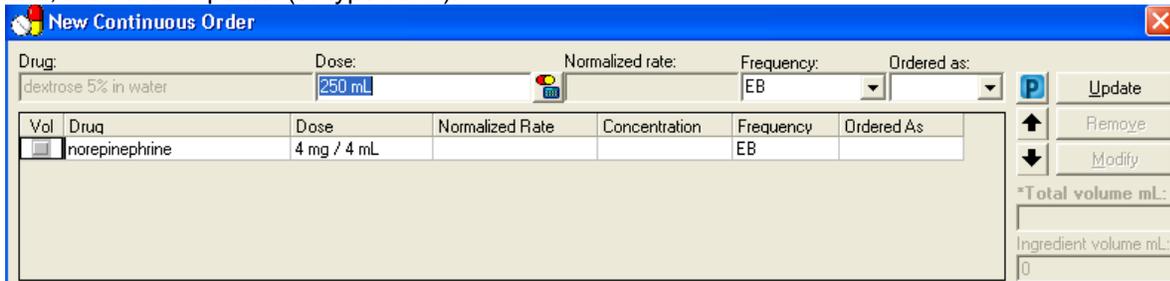
### 8.10.3 How to enter a Continuous order in PharmNet “on the fly”

In situations where a Pharmacist receives a verbal order for a continuous infusion that is not built in PowerChart, the Pharmacist may enter the order in PharmNet.

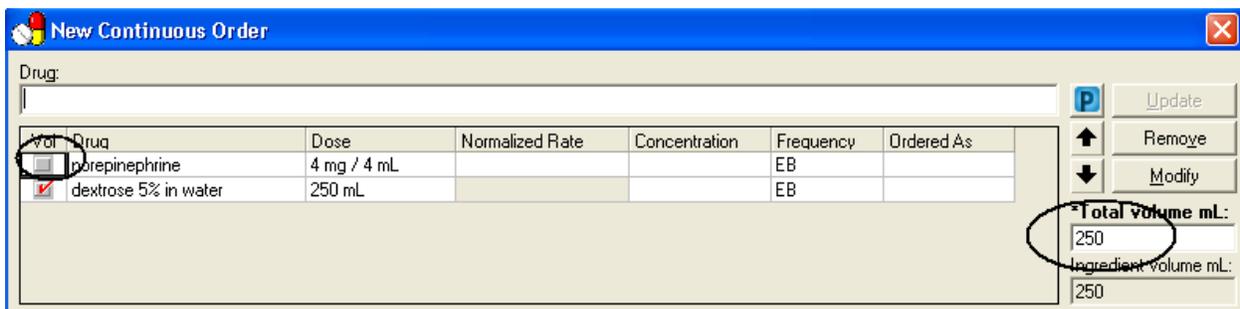
Select the product and choose “Continuous” from the pop-up:



In the New Continuous Order screen, click ‘Update’ (or type Alt-U) and enter the name of the diluent in the Drug field and hit enter to search. When the appropriate diluent has been found, enter the quantity in the Dose field, then click ‘Update’ (or type Alt-U).



If the ‘Vol’ box beside the drug is not checked off, it will not be included in the Total Volume. If the ‘Vol’ box is checked off, the volume of drug will be included in the Total Volume.



Enter the remaining order details:

The screenshot shows the 'New Continuous Order' window with the following details:

Vol	Drug	Dose	Normalized Rate	Concentration	Frequency	Ordered As
	norepinephrine	4 mg / 4 mL			EB	
	dextrose 5% in water	250 mL			EB	

**\*Route:** IV | Weight: [2012-Dec-19 12:55] | **\*Physician:** Unknown Physician, Physician, [AA]

**Rate:** 0 mL/hr | Freetext rate: titrate to MAP > 60 | Infuse over: 0 | **\*Replace every:** 24 hr

**Duration:** 365 day(s) | **\*Start date:** 2013-Jan-23 | **\*Time:** 15:29 | **Stop date:** 2014-Jan-23 | **Time:** 15:28 | **\*Stop type:** Soft Stop

**Order comments:** \*\*Request Refill\*\* | **Product notes:**

**Dispensing Information:**

- Dispense category:** MED\_CONTINUOUS
- Dispense from location:** Pharmacy PCH1
- Initial doses:** 0
- Initial quantity:**
- Billing formula:** Pharmacy | Price: \$1.93 | Cost: \$1.93

Patient's own med  
 Auto calculate initial dose

The rate can be entered in mL/hr or a free-text rate can be entered if applicable.  
 Choose "MED CONTINUOUS" Dispense Category if the vial is to be mixed on the floor by Nursing  
 The number of "Initial Doses" is the number of bags – so in the above example, if you wanted to send enough vials to mix 3 bags, "Initial Doses" should be 3.  
 Add the \*\* Request Refill \*\* comment to the Order Comments.  
 The Dispense Category of "MED CONTINUOUS" generates a "Medication" label which will print separate labels for the additive and diluents, but the Dispensing Record label will display both. The "IV" label displays the additive + diluent together.

OEH Pharmacy 894-2024  
**ZZTEST, PATIENT NINE** 2013/JAN/23  
 MRN 002172443 - Rx# 161748997 Endo OEH-

norepinephrine 1 mg/mL Inj (4 mL)  
 For: norepinephrine DIN 02241981

1 x 1 Each RPh: RLC Exp: \_\_\_\_\_  
 12031420

Product Label

---

dextrose 5% in water Inj (250 mL)  
 For: Dextrose 5% in Water DIN 00060348

1 x 1 Each RPh: RLC Exp: \_\_\_\_\_  
 12031420

Diluent Label

---

\*\*Request Refill\*\*

Third Label (includes order comments).

---

OEH Pharmacy 894-2024 Dispensing Record  
**ZZTEST, PATIENT NINE** 2013/JAN/23  
 MRN 002172443 - Rx# 161748997 Endo OEH-

norepinephrine 1 mg/mL Inj (4 mL)  
 ose 5% in water Inj (250 mL)  
 For: Dextrose 5% in Water DIN 00060348

1 x 1 Each

Dispensing Record

12031420 RPh: RLC\_\_\_\_\_ Label Request

**See Section 7.9 for Process for Continuous Infusion Labels**

### 8.10.4 Continuous Infusions – Changing the Concentration or Bag Size

The left side of the Continuous Details screen shows how the continuous infusion is mixed. It shows the Base Solution volume, Additive Dose and Total Bag Volume.

▼ Details for **norepinephrine (additive) 8 mg/8 mL [4 mcg/min] + D5W 250 mL**

Details Continuous Details

Base Solution	Bag Volume	Rate	Infuse Over	
D5W	250 mL			
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	8 mg/8 mL	4 mcg/min		EB
Total Bag Volume		250 mL		

#### To change the Bag Volume but keep the same concentration:

In this example, the rate has been increased considerably so the nurse wants to mix a bigger bag but keep the same concentration.

Change the Bag Volume by removing the old volume and entering a new volume.

▼ Details for **norepinephrine (additive) 8 mg/8 mL [30 mcg/min] + D5W 500 mL**

Details Continuous Details

Base Solution	Bag Volume	Rate	Infuse Over	
D5W	500 mL			
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	8 mg/8 mL	30 mcg/min		
Total Bag Volume		500 mL		

**Note: This changes the Total Bag Volume but not the Additive Dose so the concentration of the bag has changed.**

The Additive Dose needs to be adjusted accordingly. In this example, we've doubled the size of the bag so we need to double the amount of additive to keep the same concentration. Remove the old Additive Dose and replace it with the new Additive Dose.

▼ Details for **norepinephrine (additive) 16 mg [30 mcg/min] + D5W 500 mL**

Details Continuous Details

Base Solution	Bag Volume	Rate	Infuse Over	
D5W	500 mL			
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	16 mg	30 mcg/min		EB
Total Bag Volume		500 mL		

**To change the concentration of the bag but keep the same Bag Volume:**

In this example, the patient is fluid-restricted so the nurse wants to make the bag more concentrated but keep the same bag size.

The nurse removes the old Additive Dose and replaces it with the new Additive Dose. The Base Solution volume and Total Bag Volume remain the same. The concentration of the bag is changed.

▼ Details for **norepinephrine (additive) 16 mg [4 mcg/min] + D5W 250 mL**

Details Continuous Details

Base Solution	Bag Volume	Rate	Infuse Over	
D5W	250 mL			
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	16 mg	4 mcg/min		EB
Total Bag Volume	250 mL			

**To change the concentration of the bag by keeping the same Additive Dose and changing the Base Solution volume:**

In this example, the nurse wants to concentrate the bag by making a smaller bag but keep the same Additive Dose.

The nurse removes the old Base Solution volume and replaces it with the new Base Solution volume. The Additive Dose remains the same. The concentration of the bag changes.

▼ Details for **norepinephrine (additive) 8 mg [4 mcg/min] + D5W 125 mL**

Details Continuous Details

Base Solution	Bag Volume	Rate	Infuse Over	
D5W	125 mL			
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
norepinephrine (additive)	8 mg	4 mcg/min		EB
Total Bag Volume	125 mL			

## Epidurals – changing the Bag Volume

\*\* For informational purposes only. Commercially made epidural bags are currently stocked/in use. Epidural bags would only be compounded by pharmacy if they were a non-standard concentration. (Bupivacaine 0.1%, fentanyl 2 mcg/mL in NS)\*\*

When an epidural is ordered in the OR/PACU, the anesthetist can order either a 100 mL or 250 mL bag. Often the 100 mL size is chosen. Pharmacy always makes a 250 mL bag. When the pharmacist verifies the order, the bag size will be changed to 250 mL. There may be a rare occasion where an anesthetist will enter an order for a 100 mL bag and then need to make a second bag (e.g. if Pharmacy is closed). This second bag may be a 250 mL size. In this case, the nurse may have to change the bag size when the second bag is hung. Initial order:

▼ Details for **fentaNYL (additive) 200 mcg + bupivacaine 0.1% in NS 100 mL**

Details Continuous Details Offset Details

Base Solution	Bag Volume	Rate	Infuse Over	
bupivacaine 0.1% in NS	100 mL	6 mL/hr	16.7 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
fentaNYL (additive)	200 mcg			EB
Total Bag Volume		100 mL		

In this example, the Base Solution is bupivacaine 0.1% in NS. The concentration of the base solution (bupivacaine 0.1%) cannot be changed but the volume can. The Additive dose (amount of fentanyl per bag) can be changed.

To change the bag size from 100 mL to 250 mL, remove the old Base Solution volume (100 mL) and replace with the new volume (250 mL). Remove the old Additive Dose (200 mcg) and replace with the new Additive Dose (500 mcg) to keep the same fentanyl concentration (2 mcg/mL).

**IMPORTANT:** Remember to change the Additive Dose in addition to the Base Solution volume or the concentration of the bag will change.

▼ Details for **fentaNYL (additive) 500 mcg + bupivacaine 0.1% in NS 250 mL**

Details Continuous Details Offset Details

Base Solution	Bag Volume	Rate	Infuse Over	
bupivacaine 0.1% in NS	250 mL	6 mL/hr	41.7 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
fentaNYL (additive)	500 mcg			EB
Total Bag Volume		250 mL		

## 8.11 Pharmacy Process for TPN Orders

Order is placed by the physician in PowerChart using the TPN Total Parenteral Nutrition (contains lipids) PowerPlan. For non standard formulations, the physician will call Pharmacy and the Pharmacist will enter the order via Med Manager.

Pharmacist verifies in Med Manager:

The screenshot shows the 'Verify Continuous Order' window in Med Manager. The 'Drug' section contains a table with the following data:

Vol	Drug	Dose	Normalized Rate	Concentration	Frequency	Ordered As
1	amino acids 5.7%/dext 11%...	1,000 mL			EB	Olimel 5.7...

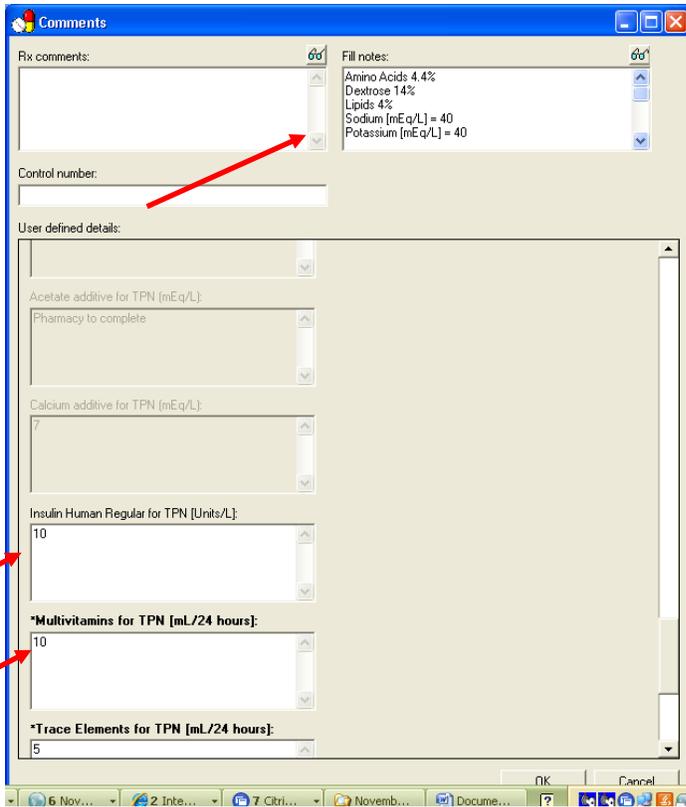
Below the table, various order parameters are set:

- Route: IV
- Weight: (None)
- BSA(m2):
- Physician: Unknown Physician, Physician
- Rate: 80 mL/hr
- Infuse over: 12.5 hr
- Replace every: 12.5 hr
- Duration: 365 day(s)
- Start date: 2023-May-10, Time: 15:14
- Stop date: 2024-May-09, Time: 15:13
- Stop type: Soft Stop

At the bottom, the 'Product...' button is highlighted with a red box and a red arrow. Other buttons include 'Printing...', 'Comments...', 'Order Type', 'Alert History...', and 'Rx Intervention'.

Depending on the rate, the pharmacist may need to update the dose, and the product to reflect a larger bag size. Ex) If the standard Olimel 5.7% E order is selected, and the rate is greater than 40 mL/min, the dose will need to be updated to 2,000 mL and the product updated to the 2,000 mL bag.

Comments are highlighted to alert pharmacist that there are User Defined Details to review. Click on the <Comments> box to display these.



- You are able to make changes in the Fill Notes section based on the user defined details.
- If insulin/heparin is not being ordered, remove the row(s) from the fill notes.
- Remember to add the day that vitamin K is being added to.
- Copy the fill notes, Save the changes and paste them into the order comments. **If any subsequent changes need to be made, follow the same process. All changes MUST be made in the fill notes and copied and pasted to the order comments. DO NOT just make changes in the order comments.**
- Change the total volume to reflect the volume of bag being dispensed

The label generated from Med Manager:

PCH Pharmacy 438-4295  
**PHARMNET, MARSHA** 2012/NOV/20  
MRN 888000623 - Rx# 121744411 MED PCH-121-2  
amino acids 4.4%/dext 14%/lipids/elect1000 mL  
IU Tot. Vol: 1000 mL

Rate: 80 mL/hr  
Expires: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_ RPh: MDC\_\_\_\_\_/\_\_\_\_\_

Amino Acids 4.4%  
Dextrose 14%  
Lipids 4%  
Sodium [mEq/L] = 40  
Potassium [mEq/L] = 40  
Magnesium [mEq/L] = 8  
Chloride [mEq/L] = 45  
Phosphate [mEq/L] = 30 (15 mmol)  
Acetate [mEq/L] = 45

Calcium [mEq/L] = 7  
Regular Human Insulin [units/L] = 10  
Multivitamin 10 mL/day  
Trace Elements 5 mL/day  
Vitamin K 10 mg/week added to TPN by  
Pharmacy on Thursdays

PCH Pharmacy 438-4295 Dispensing Record  
**PHARMNET, MARSHA** 2012/NOV/20  
MRN 888000623 - Rx# 121744411 MED PCH-121-2  
amino acids 4.4%/dext 14%/lipids/elect1000 mL  
IU Tot. Vol: 1000 mL

RPh: MDC\_\_\_\_\_/\_\_\_\_\_

Print an extra label to maintain in the pharmacy if required by your facility

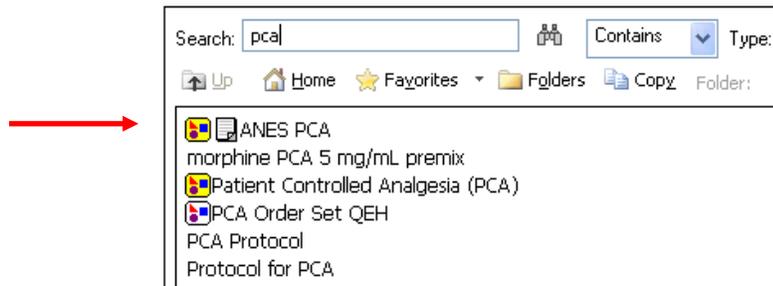
## 8.12 Patient-Controlled Analgesia (PCA)

The physician will order a PCA using one of the PCA PowerPlans that have been built in PowerChart. There are several options available.

**Reminder:** When entering an order for PCA ensure that the concentration is appropriate. The min/max volumes based on the route must be considered.

### 8.12.1 Anesthesia Orders:

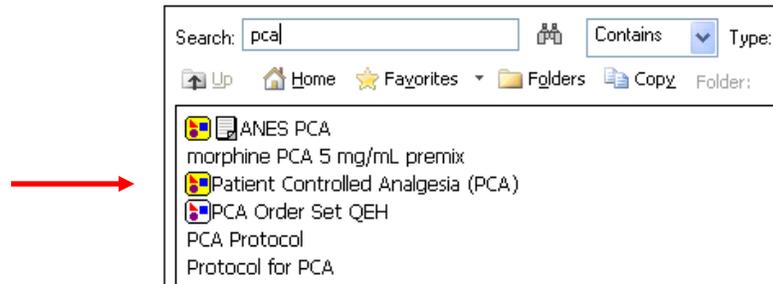
ANES PCA Power Plan



Within the Power Plan, there is a PCH and a QEH section. The QEH section is only visible to QEH and the PCH section is only visible to PCH.

### 8.12.2 Non-Anesthesia Orders:

#### Patient Controlled Analgesia (PCA) Power Plan



The physician can select Bolus/Demand Doses Only or Continuous Infusion with or without Bolus/Demand Doses:

<input checked="" type="checkbox"/>		Bolus/Demand Doses Only:	
<input type="checkbox"/>		HYDRomorphine PCA 1 mg/mL	Bolus/Demand only, Subcutaneous
<input type="checkbox"/>		Morphine PCA 5 mg/mL	Bolus/Demand only, Subcutaneous
<input checked="" type="checkbox"/>		Continuous Infusion with or without Bolus/Demand Doses:	
<input type="checkbox"/>		HYDRomorphine PCA 1 mg/mL	Subcutaneous
<input type="checkbox"/>		Morphine PCA 5 mg/mL	Subcutaneous

Under the Continuous Details tab, default rates have been built. The physician can change the rate as required.

Details
  **Continuous Details**
 Offset Details

Base Solution	Bag Volume	Rate	Infuse Over	
Sodium Chloride 0.9% PCA	50 mL	2 mL/hr	25 hr	
Additive	Additive Dose	Normalized Rate	Delivers	Occurrence
HYDRomorphone (additive)	50 mg	2 mg/hr	2 mg/hr	EB
Total Bag Volume		50 mL		

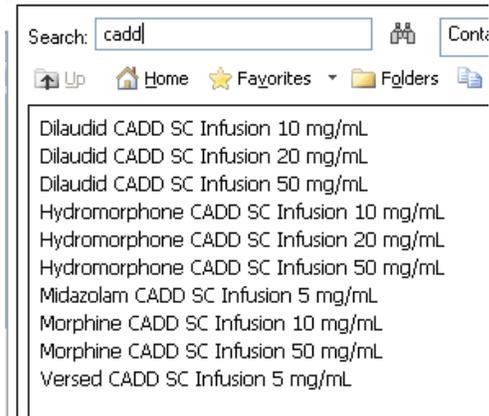
Weight:                      Weight Type:

Under the Details tab, the physician is required to specify the Bolus Dose, Lockout interval and Number of boluses/hour.

**Details**
 Continuous Details
  Offset Details

*Bolus Dose: 2 mg	*Lockout interval [min]: 30
*Number of boluses/hour: 2	Drug form: <input type="text" value="Injection"/>
*Route of administration: <input type="text" value="Subcutaneous"/>	Priority (e.g. STAT or NOW): <input type="text"/>
Duration: <input type="text"/>	Duration unit: <input type="text"/>
May use own medication: <input type="radio"/> Yes <input checked="" type="radio"/> No	Special Instructions: <input type="text"/>
*Start Date/Time: 2013-Apr-12 1034	Total volume unit: <input type="text"/>
Stop Date/Time: <input type="text"/>	

## CADD cassettes



The Demand Dose, Lockout interval and Max doses/hr are required fields. The Rate is changed in the Continuous Details tab.

Details for **HYDROMorphone (additive) 500 mg [1 mg/hr] + Diluent - CADD 50 mL**

Details Continuous Details

\*Demand Dose [mg]:

\*Lockout interval [min]:

\*Max Doses/hr:

Route of administration: Subcutaneous

Duration:

May use own medication:  Yes  No

Drug form:

Priority (e.g. STAT or NOW):

Duration unit:

Special Instructions:

## Verification (all sites):

Ensure the correct product is assigned. The Comments box will be orange which indicates that there are User Defined Details to review. This is where the Bolus Dose, Lockout Interval and Number of boluses/hour can be found.

Verify Continuous Order

Vol	Drug	Dose	Normalized Rate	Concentration	Frequency	Ordered As
	Sodium Chloride 0.9% IV Solu...	50 mL			EB	Sodium Chlorid...
	HYDRMorphine HP	50 mg / 5 mL	2 mg/hr	1 mg/mL	EB	HYDRMorph...

\*Total volume mL: 50  
Ingredient volume mL: 50

Physician, MD:

Priority:

Frequency:

Product...  
Printing...  
Comments...  
Order Type  
Alert History  
Fix Intervention

Comments

Rx comments:

Fill notes:

Control number:

User defined details:

\*Bolus Dose:

\*Lockout interval [min]:

\*Number of boluses/hour:

Total volume unit:

OK Cancel

Reject OK Cancel

### 8.12.3 Documenting a PCA Bolus/Demand Only Order

When beginning a bag for a PCA Bolus only order, enter 0 for the Rate and enter 0 for the Dose and mg/hr.

The screenshot displays a medical software interface for a patient named ZZ TEST, PATIENT TWO. The patient's information includes Age: 8 weeks, Sex: Female, MRN: 888000586, and Location: MED PCH; 135; 1. The interface shows a list of orders on the left, with 'HYDRomorphone HP 50 mg + Sodium Chloride 0.9% IV Solution PCA 50 mL: ZZ TES...' selected. The main window displays the order details, including the medication name, dose (50 mg), and rate (0 mg/hr). The 'Begin Bag' button is visible at the bottom of the order entry form.

**Order Details:**

- Medication: HYDRomorphone (additive) 50 mg + Sodium Chloride 0.9% PCA 50 mL
- Bolus Dose [mg]: 0.5, Lockout interval [min]: 10, Number of boluses/hour: 6, Bolus/Demand only, IV, Start: 2013-Jun-12 19:03
- \*\*\*ANESTHESIA ORDER\*\*\*
- Performed date / time: 2013-Jun-17
- Performed by: Test, CPOE
- Witnessed by: [Blank]
- \*Bag #: 1
- \*Site: [Blank]
- \*Volume (mL): 50
- \*Rate (mL/hr): 0
- \*HYDRomorphone HP Dose: 0 mg/hr

**Buttons:** Begin Bag, In Progress, Comment..., Clear, Apply

### 8.12.4 Verification of Epidurals (or Peripheral Nerve Blocks)

**\*\* Commercially made bags are currently stocked/in use. Epidural bags would only be compounded by pharmacy if they were a non-standard concentration. (Bupivacaine 0.1%, fentanyl 2 mcg/mL in NS)\*\***

If an inpatient goes to the OR and an epidural is ordered, the epidural order will come up for verification on the UVOM. In this case, the pharmacist will use the Verify action to verify the order. If a patient is admitted through Day Surgery, goes to the OR and an epidural is ordered, the epidural order will not go to the UVOM. In either case, anesthesiologists have been instructed to phone Pharmacy as soon as the epidural order is placed so the pharmacist will know to go look for the order. In this case, the pharmacist will use the Modify action to 'verify' the order.

When the Verify/Modify screen first opens, the Manual Product Select screen will automatically open to the Products tab.

The bupivacaine may already be selected. If so, de-select the bupivacaine by clicking on it and clicking the <Move> button to move it back over to the left hand side.

The screenshot shows the 'Manual Product Select' window for the order: fentaNYL (additive) + bupivacaine 0.1% in NS Epidural 6 mL/hr. The window is divided into several sections:

- Order information:**
  - Ingredients:** A list with checkboxes. 'bupivacaine 100 mL' (sub-item: bupivacaine 0.1% in NS) is checked and highlighted with a red box. 'fentaNYL 200 mcg' (sub-item: fentaNYL (additive)) is unchecked.
  - Last updated by:** Campbell, Rebecca L, Pharmacist - CPOE PharmNet
  - Communication type:** Written
  - Order comments:** bupivacaine 0.1% in NS + fentaNYL 2 mcg/mL
  - User defined details:** (Empty)
- Products:**
  - Products (9) | IV Sets (6):** A list of products. The first row is highlighted with a red box:

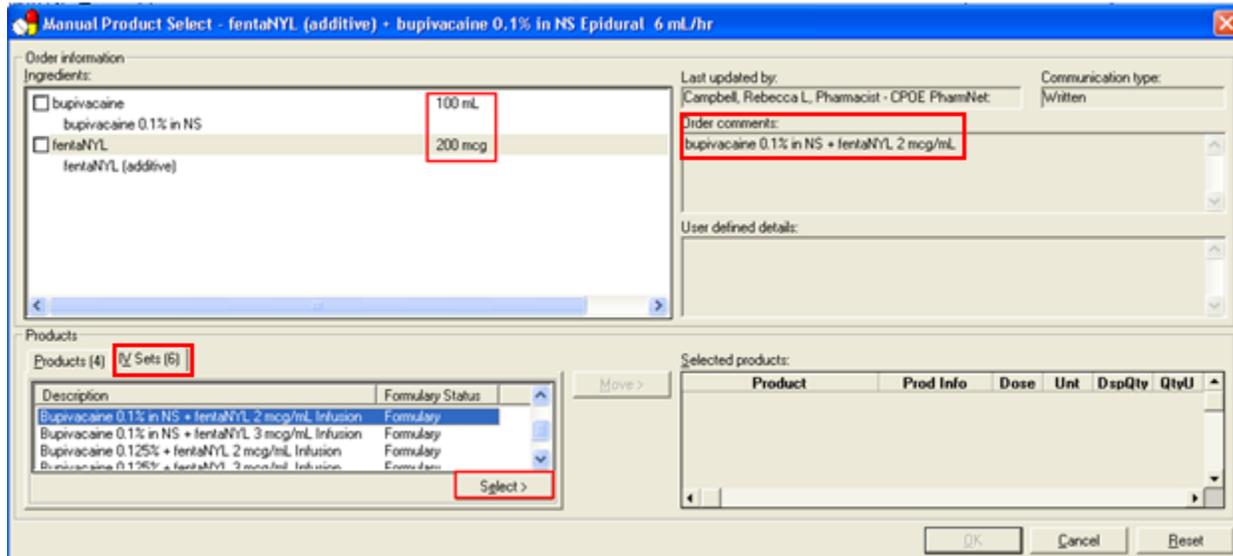
Description	Prod Info	Formulary ...
bupivacaine 0.0625% in NS	- Injection	Formulary
bupivacaine 0.1% in NS + epinephrine 2 mcg/mL	- Injection	Formulary
bupivacaine 0.125% in NS	- Injection	Formulary
bupivacaine 0.125% in NS + epinephrine 2 mcg/mL	- Injection	Formulary
bupivacaine 2.5 mg/mL (0.25%) Inj (10 mL)	0.25% Inj...	Formulary
  - < Move >** button: A button with a red box around it, used to move items between the lists.
  - Selected products:** A table showing the currently selected product:

Product	Prod Info	Dose	Unt	DspQty	QtyU
bupivacaine 1.0 mg/mL (0.10.1% Injection	100	mL	1		each

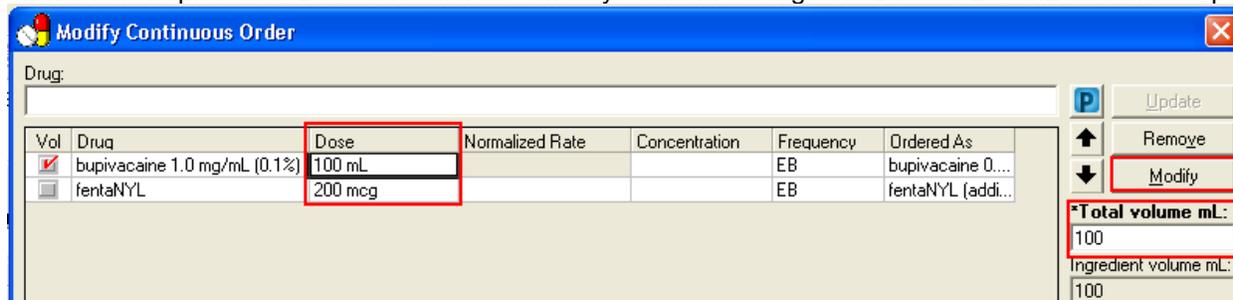
Buttons at the bottom: OK, Cancel, Reset.

The concentration of the fentanyl in the product can be determined by looking at the Order Comments or by looking at the Ingredients. In the example below, the ingredients include 200 mcg of fentanyl in a total volume of 100 mL (200 mcg/100 mL = 2 mcg/mL).

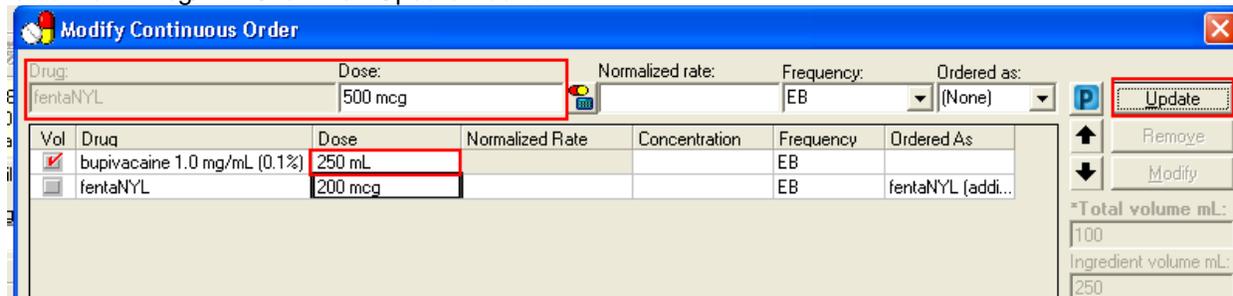
Go to the IV Sets tab and choose the correct IV set from the list. In the example below, the corresponding IV Set is “bupivacaine 0.1% in NS + fentanyl 2 mcg/mL infusion”. Double-click on the selection or click on it and click the <Select> button to move it over to the right-hand side. Click <OK>.



At the top of the Modify/Verify screen, the ingredients and quantities can be seen. When the anesthetist originally placed this order, a bag volume of 100 mL was selected. In most cases, the anesthetist will make a 100 mL bag but sometimes a 250 mL bag might be made. Pharmacy always makes 250 mL bags so if the 100 mL bag was ordered, the pharmacist will need to change the bag volume to 250 mL. Click on the bupivacaine Dose and click the <Modify> button. Change the Dose to 250 mL and click <Update>.



\*\*\*IMPORTANT: Because the bag volume has been changed, the Dose of fentanyl needs to be adjusted accordingly. In the example below, the Dose of fentanyl is changed to 500 mcg so the concentration will remain at 2 mcg/mL. Click the <Update> button.



The ingredients have now been changed to 500 mcg of fentanyl in 250 mL of bupivacaine 0.1%.

**Modify Continuous Order**

Drug:

Vol	Drug	Dose	Normalized Rate	Concentration	Frequency	Ordered As
<input checked="" type="checkbox"/>	bupivacaine 1.0 mg/mL (0.1%)	250 mL			EB	
<input type="checkbox"/>	fentaNYL	500 mcg			EB	

\*Total volume mL: 250  
Ingredient volume mL: 250

\*Route: Epidural Weight: 75 kg \*Physician: Unknown Physician, Physician,

Rate: 6 mL/hr Freetext rate: Infuse over: 41.7 hr \*Replace every: 24 hr

Duration: (None) Next dose date: 2013-Dec-11 13:44 Stop date: 2014-Dec-11 11:14 \*Stop type: Soft Stop

Order comments:  
Final Concentration:  
Bupivacaine 0.1%  
Fentanyl 2 mcg/mL  
in Normal Saline to a final volume of 250 mL

Update the Order Comments for the label. Use this format.

Dosage form: (None) \*Communication type: Written Order priority: (None)

\*Dispense category: CIVA\_CONTINUOUS \*Dispense from location: Pharmacy QEH Inventory Initial doses: 0 Initial quantity:

\*Billing formula: Pharmacy Price: Cost:

Patient's own med  
 Auto calculate initial dose

The Dispense category should be CIVA\_CONTINUOUS

Do not send any doses. Just print a label. The products must be charged out through Distribution Manager.

## Labels

If making two bags, print 8 labels.

1. Finished Bag #1
2. Narc sheet to accompany Bag #1
3. Finished Bag #2
4. Narc sheet to accompany Bag #2
5. For bag # 1 on the Epidural Infusion Work Sheet
6. For bag # 2 on the Epidural Infusion Work Sheet
7. Label for our Narcotic Record
8. Spare (just in case)

The label will come out looking like this:

GEH Pharmacy 894-2024  
**ZZTEST, PATIENT SIXTEEN** 2013/DEC/11  
MRN 888000586 - Rx# 200768833 PAND ENDO GEH-PAN-1  
bupivacaine 1.0 mg/mL (0.1%) 250 mL  
fentaNYL 500 mcg  
Epidural Tot. Vol: 250 mL

Rate: 6 mL/hr  
Expires: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_ RPh: RLC\_\_\_\_\_

Final Concentration:

Bupivacaine 0.1%  
Fentanyl 2 mcg/mL  
in Normal Saline to a final volume of  
250 mL

++ Not for IV Use ++

GEH Pharmacy 894-2024 Dispensing Record  
**ZZTEST, PATIENT SIXTEEN** 2013/DEC/11  
MRN 888000586 - Rx# 200768833 PAND ENDO GEH-PAN-1  
bupivacaine 1.0 mg/mL (0.1%) 250 mL  
fentaNYL 500 mcg  
Epidural Tot. Vol: 250 mL

RPh: RLC\_\_\_\_\_

Cut the label to make it look like this:

GEH Pharmacy 894-2024  
**ZZTEST, PATIENT SIXTEEN** 2013/DEC/11  
MRN 888000586 - Rx# 200768833 PAND ENDO GEH-PAN-1  
Final Concentration:  
Bupivacaine 0.1%  
Fentanyl 2 mcg/mL  
in Normal Saline to a final volume of  
250 mL

++ Not for IV Use ++

Expires: \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_ RPh: RLC\_\_\_\_\_

Bag# \_\_\_\_\_

Write the Bag # on the each bag.

Expires 72 hours after preparation

**Formulas / Calculations:**

- See Black Compounding Binders for Sample Calculations (most combinations are in there)
- Usually make 250 mL bags in NS (preservative free bags)
- Make 2 bags to begin, one to send to the floor right away and one to be sent when required by the floor. Reassess the next day for increasing dose, or preparations to taper before refilling.

**Gathering required materials:**

- Traditionally, a pharmacist will gather the required vials of drug, and it is helpful to have the drugs handy while preparing and billing out the products

**Paperwork:**Narcotic Sheets:

- 3 Sheets required: 1 for our narcotics staff, 1 sheet for each bag of product to be delivered
- The pharmacist fills out a narcotics sheet listing exactly what was used to make the epidural (i.e. 3 x 5 mL Fentanyl), signs it and files it in the narcotic records.
- Affix a label from each bag of the product to the sheet (the section showing how many ml of each ingredient was used)
- Affix a label identical to the one on the epidural bag itself

For each individual Bag of Product:

- Fill out a form to be used when the bag is delivered to the floor, including entering the floor information, patient name, add name of bag to an empty column across the top.
- On the back of the narcotics sheet, affix a label identical to the epidural bag label
- For the first bag being delivered right away, enter the date and time of delivery. For subsequent bags, leave this field blank

QEH Epidural Infusion Worksheet:

- Located on the P drive. Fill out patient information
- Affix a label for each bag prepared and information about each bag, especially date/time delivered

**Billing Out Narcotics:**

- Once the sheets have been prepared, bill out the narcotics to the appropriate floor using Distribution Manager.
- Be cautious to select the proper vial sizes and varieties of each ingredient (it is difficult to track narcotics and to detect problems if billed improperly)
- Do not need to bill out Normal Saline Bag.

## 8.13 Filling Prescriptions for Outpatients

1. If not already done, have a Pharmacy Meds encounter created by phoning Admitting.
2. Choose the patient's profile and enter the order as per usual. In the Order Comments section, type the Directions and Rx Expiry Date. Choose a Dispense Category of PASS. This will cause whatever information is typed in the Order Comments field to print on the label.

The screenshot shows the 'New Med Order' window with the following details:

- Drug:** darbepoetin alfa
- Dose:** 40 mcg / 1 syringe(s)
- Ordered As:** Aranesp
- \*Route\*:** Subcutaneous
- \*Frequency\*:** q2w
- \*Physician\*:** Unknown Physician, Physician
- \*Start date\*:** 2013-Jan-17 09:00
- \*Stop type\*:** Soft Stop
- \*Dispense category\*:** PASS (highlighted with a red arrow)
- \*Dispense from location\*:** Pharmacy QEH1
- \*Billing formula\*:** Pharmacy
- Order comments:** Inject 40 mcg subcutaneously every 2 weeks (Directions), RX EXPIRES: January 17, 2014 (Expiry Date)
- Product notes:** DO NOT shake DO NOT send in pneumatic tube \*\*Refrigerate\*\*
- Initial doses:** 0 (highlighted with a red arrow)

3. Do not fill any doses as they will not charge to a location. Click <OK> or type Alt-O to complete the entry. When you return to the Med Manager screen, click <Submit> or type Alt-S.
4. Print a label; do not charge out any doses. The directions and expiry date will print on the label.
5. Charge out the product under Distribution Manager.

## 8.14 Special Access Drugs

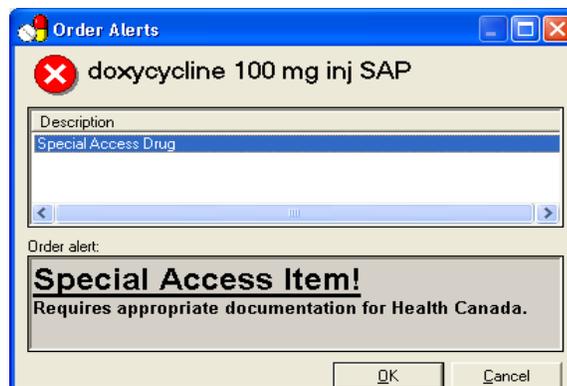
Special Access medications may be built in PowerChart with “Special Access” on the synonym.



On the eMAR you can see “Special Access” on the synonym display.



In PharmNet, when we verify the order we receive the following alert:



If there is a scheduled frequency attached to the order (i.e. not unscheduled or prn), the pharmacist at verification may alter the start date and time based on when they should be receiving the product. This will avoid the nurse having an overdue task sitting on the eMAR.

If special access documentation is required, this will need to be filled out as per facility process.

## 8.15 Tapering Dose Functionality

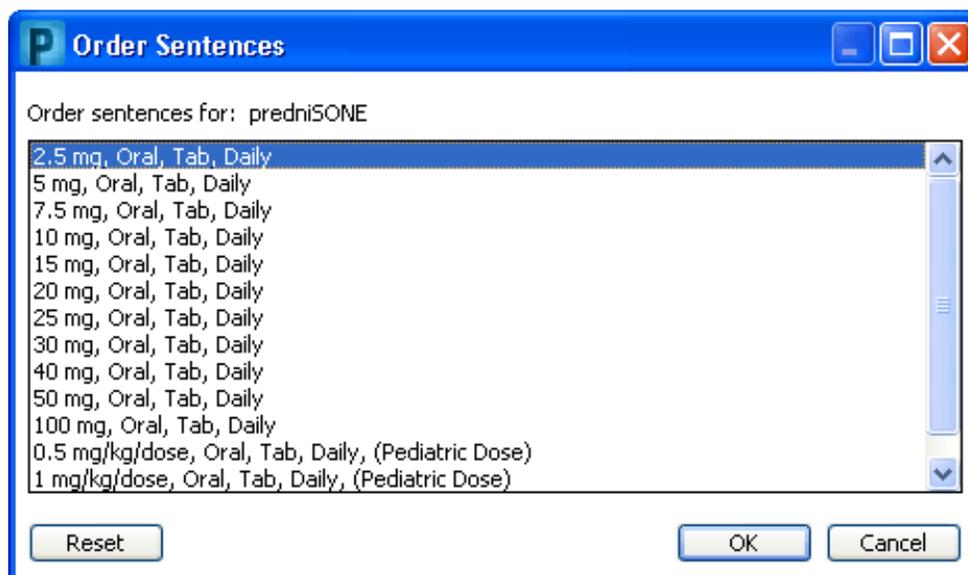
In the Orders screen in PowerChart, click <Add>



Choose the medication which you would like to taper:



Choose an order sentence (It doesn't matter which one):



In the Order Details screen, change the dose to the amount of the FIRST dose of the taper. **If the order is to start in the FUTURE, the start date and time will need to be changed accordingly.**

Orders for Signature

Order Name	Status	Start	Details
MED PCH; 135; 1 FIN/ENC:01847096			
<b>Medications</b>			
predniSONE	Order	2012-Dec-09 09:00	25 mg, Oral, Tab, Daily, Start: 2012-Dec-09 09:00

**Details for predniSONE**

Details | Order Comments

+ [Taper Icon] [Down Arrow] [Up Arrow]

Remaining Administrations: 0 Stop: (Unknown)

\*Dose: 25 mg

\*\*Range Dose\*\* - see comments:  Yes  No

\*Route of administration: Oral

Drug Form: Tab

\*Frequency: Daily

PRN: [Dropdown]

Duration: [Dropdown]

Priority (e.g. STAT or NOW): [Dropdown]

May use own medication:  Yes  No

May self administer:  Yes  No

Special Instructions: [Text Area]

\*Start Date/Time: 2012-Dec-09 09:00

Stop Date/Time: [Dropdown] [Dropdown] [Dropdown]

0 Missing Required Details

Sign

Click the taper icon (looks like cell phone bars) and the following screen will open:

predniSONE

Start

\*Dose: 25 \*Unit: mg \*Route: Oral \*Frequency: Daily \*Start: 2012-Dec-09 0900

Taper details

Reduce by 5 mg every 5 day(s)

\*Final dose: 5 mg

Stop final dose after 5 day(s)

Continue until instructed to stop

Calculate Steps

. The starting dose and Start Date/Time populate from the order details screen.

Enter the taper details and click <Calculate Steps>. This will build all of the orders:

If the taper is not linear, you can click on one of the orders and change any details necessary. Click <OK> and this will bring you back to the Orders screen:

You can click the Plus sign <+> next to the order to see all of the individual orders underneath the taper order:

Orders for Signature

Order Name	Status	Start	Details
<b>MED PCH; 135; 1 FIN/ENC:01847096</b>			
<b>Medications</b>			
predniSONE Taper	Order	2012-Dec-09 09:00	
predniSONE	Order	2012-Dec-09 09:00	25 mg, Oral, Tab, Daily, Start: 2012-Dec-09 09:00
predniSONE	Order	2012-Dec-14 09:00	20 mg, Oral, Tab, Daily, Start: 2012-Dec-14 09:00, Stop: 2012-Dec-19 08:59
predniSONE	Order	2012-Dec-19 09:00	15 mg, Oral, Tab, Daily, Start: 2012-Dec-19 09:00, Stop: 2012-Dec-24 08:59
predniSONE	Order	2012-Dec-24 09:00	10 mg, Oral, Tab, Daily, Start: 2012-Dec-24 09:00, Stop: 2012-Dec-29 08:59
predniSONE	Order	2012-Dec-29 09:00	5 mg, Oral, Tab, Daily, Start: 2012-Dec-29 09:00, Stop: 2013-Jan-03 08:59

Click <Sign> and go back to Med Manager to verify the order and assign products. If the dose can be made up from different strengths, (e.g. prednisone 25 mg can be made using 5 mg or 50 mg tablets), a product will need to be manually assigned.

**Note:** The start date and time will always default to NEXT dose time. The duration of each order within the taper cannot be changed. However, if the taper is written to decrease by 5 mg every 3 days but is already after today's dose time, choose a start date of T, N and express in number of DOSES rather than days.

## 8.16 Patch Orders

### 8.16.1 Transdermal Route of administration orders

If a pharmacy order is signed on an inpatient encounter (excluding ADDSC facility) AND the route of administration is transdermal then a Patch Remove order will be created with an order comment containing the name of the orderable and an indication that the order was placed via a system rule. Nursing staff will adjust the frequency of the "Patch Remove" order to align with the triggering transdermal order and document eMAR tasks on both the transdermal order and the corresponding "Patch Remove" order.

**If the incoming order is either the Nitro or Nictoine Patch Remove orderable or is accompanied by these orderables during the same ordering event, the rule will not fire.**

**Orders page:**

Status	Order Name	Details	Ordering Physician	Last Updated By	Start
Ordered	Patch Remove	1 each, See Order Comments for Route, Daily, Start: 2022-Jan-12 09:00, Stop: 2022-Jan-12 09:00, For rivastigmine **** Frequency and Start Date/Time to correspond to the med...	Unknown Physician, Physician	Test, Nurse, RN	2022-Jan-12 09:00
Ordered	rivastigmine (Exelon 5 patch)	1 patch(s), Transdermal, Patch, Daily, Start: 2022-Jan-11 09:00, Provides 4.6 mg/24 hr	Unknown Physician, Physician	Test, Nurse, RN	2022-Jan-11 09:00

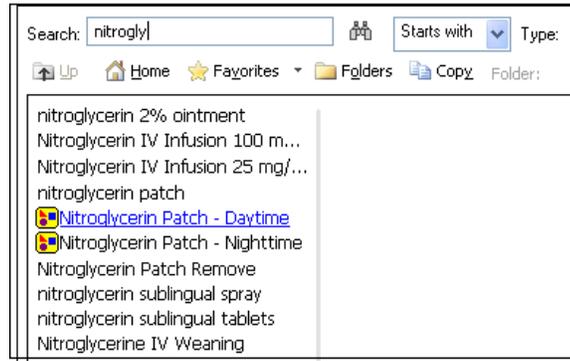
**MAR:**

Orderable	Quantity	Notes
rivastigmine (Exelon 5 patch)	1 patch(s)	Not given within 31 days.
1 patch(s), Transdermal, Patch, Daily, Start: 2022-Jan-11 09:00, Provides 4.6 mg/24 hr		
rivastigmine		
Previous Patch Removed		
Patch Remove		
1 each, See Order Comments for Route, Daily, Start: 2022-Jan-12 09:00, Stop: 2022-Jan-12 09:00, For rivastigmine **** Frequency and St...		

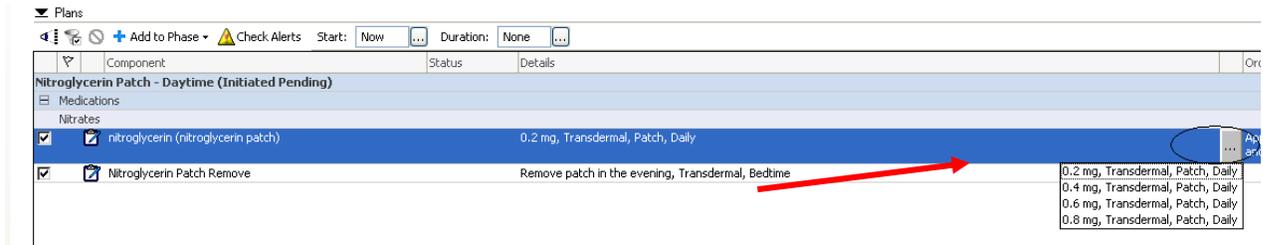
**If the order for the medication is cancelled, Nursing will have to cancel the Patch remove order separately. If the patch remove order requires a frequency time to be customized, pharmacy may assist nursing with setting this custom time.**

### 8.16.2 Nitroglycerin Patch:

The physician enters the order for the Nitroglycerin patch via Powerchart using the Nitroglycerin patch Power Plan. There are two Power Plans, one for Daytime and one for Nighttime administration.



The Power Plan contains orders for the Nitroglycerin patch and for Remove Patch. A Remove Patch order is required in order to create a task on the eMAR that will prompt the nurse to remove the patch at the prescribed time. IF the "remove patch order" is not chosen in the powerplan. One will be automatically generated by the system. Nursing will need to adjust the frequency/admin time for a system created patch rule. The Physician chooses the strength of the patch by clicking on the button to the right.



The Physician can change the application times by modifying them in the Order Comments.



The Pharmacist then verifies the order for the Nitroglycerin patch in Med Manager. The Remove Patch order does not require verification.

Profile		Results	Interventions	Unverified Orders	Monitor
Drug:					
	A	Status			Order Sentence
		Discontinued			LORazepam 0.5 mg/ 1 tab(s) Oral Bedtime PRN Sleep
		Active			nitroglycerin patch 0.2 mg/ 1 patch(s) Transdermal Daily
		Active			Nitroglycerin Patch Remove Remove patch in the evening Transdermal Bedtime

Two separate lines appear on the MAR, one for the Nitroglycerin patch and one for the Remove Patch order.

<b>nitroglycerin (nitroglycerin patch)</b> 0.2 mg, Transdermal, Patch, Daily, Start: 2013-Jan-19 08:00 Apply @ 0800 and Remove @ 2200 Hold if SBP less ...	
<b>nitroglycerin</b> <b>Nitroglycerin Patch Remove</b> Remove patch in the evening, Transdermal, Patch, Bedtime, Start: 2013-Jan-18 22:00 <b>Nitroglycerin Patch Remove</b>	nitroglycerin (nitroglycerin patch) 0.2 mg, Transdermal, Patch, Daily, Start: 2013-Jan-19 08:00 Apply @ 0800 and Remove @ 2200 Hold if SBP less than 90 mmHg

**TIP**

If you see that the nitroglycerin patch has been discontinued, please look at the profile and see if the Nitroglycerin Remove Patch order has been discontinued as well. If this has been missed, please discontinue.

Also, if the times in the Nitro patch comments differ from the standard 0800 and 2200 (or 2200 and 0800), please reschedule the Remove Patch order to reflect the difference. Nursing will send a request for this, however if we catch it prior to the request it would be convenient.

If the order is entered by the Pharmacist via Med Manager, use the shortcut 'NTG' in the order comments. The Order Comment 'Apply at \_ and Remove at \_' will appear. Remove the \_'s and type in the appropriate times, (e.g. Apply at 0800 and Remove at 2000).

### 8.16.3 Nicotine Replacement Therapy

To reduce the number of rows on the eMAR, physicians will be entering the first order of the appropriate step. The other orders (steps) will be noted in the order comments. **Upon verification, the pharmacist will change the stop type to a Soft Stop.** Pharmacy will be notified of the need to enter the subsequent orders if the patient is in the hospital for a longer stay.

The screenshot shows the 'Verify Med Order' interface. At the top, there is a search bar for the drug. Below it, a table lists the drug details:

Drug	Dose	Ordered As
nicotine patch (Habitrol)	42 mg	nicotine patch

Below the table are several configuration fields:

- Route:** Transdermal
- Frequency:** Daily
- Duration:** 42 day(s)
- Start date:** 2023-Apr-21
- Time:** 09:00
- Stop date:** 2023-Jun-02
- Time:** 08:59
- Stop type:** A dropdown menu is open, showing options: Physician Stop (selected), Hard Stop, No, Physician Stop, and Soft Stop.

The **Order comments** section contains the following text:

Remove patch at night if patient complains of insomnia.

Dose to be reassessed if withdrawal symptoms continue &/or if patient experiences symptoms of too much nicotine.

After 42 days (6 weeks), decrease to 35 mg daily for 4 weeks, then 28 mg daily for 2 weeks, then 21 mg daily for 2 weeks, then 14 mg daily for 2 weeks, then 7 mg daily for 2 weeks, then discontinue.

## 8.17 Enter an Order Set in PharmNet

Commonly used physician order sets have been built in med manager to expedite order entry for non-CPOE locations. Order sets descriptions are built in the system with the name of the hospital to which they apply in the description and distinguish them from a regular order. Be sure to pay attention to the order start date within the order set. You cannot build an order set with a deferred start date. If you find the need to do this, you will have to do this with order entry.

### The icon representing an Order set:

1. Open Med Manager.
  2. To view a list of all order sets available at your site from the product search window, unclick the "Product", "IV Set" and "Compound" checkboxes under product type so that only "order set" is selected. In the "search for" window type "\*" and click enter.
  3. In the product selection window, highlight the correct order set and press Alt + O or click OK.
  4. The order set will display with the choice to Review, Include, or Exclude for each item. These may be changed as the written order indicates.
- Review will allow you to change any fields within the order.
  - Include will accept the order as it is in the order set as long as all required fields are completed without any additional review.
  - Exclude will delete the order from the set.



Action	Ord Type	Display	Dose	Route	Freq	PRN
Exclude	Med	cholecalciferol (vitamin D) 100...	1,000 unit(s)	Oral	Daily	<input type="checkbox"/>
Exclude	Med	nitroglycerin 0.4 mg Spray	0.4 mg	SL	q5minutes	<input type="checkbox"/>
Exclude	Med	midazolam 5 mg/mL Inj (2 mL)	10 mg	Subcutaneo...	Unscheduled	<input type="checkbox"/>
Exclude	Med	hydroxypropylmethylcellulose ...	1 - 2 drop(s)	Eyes each	QID	<input type="checkbox"/>
Exclude	Med	mineral oil sterile (Light) Liqui...	1 - 2 drop(s)	Ears each	BID	<input type="checkbox"/>
Exclude	Med	sennosides A & B 8.6 mg Tab	8.6 mg	Oral	Daily	<input type="checkbox"/>
Exclude	Med	lactulose 667 mg/mL Liquid (1...	15 - 30 mL	Oral	Daily	<input type="checkbox"/>
Exclude	Med	bisacodyl 10 mg Supp (fat sol...	10 mg	Rectal	q3days	<input type="checkbox"/>
Exclude	Med	polystyrene glycol 3350/17 g	17 g	Oral	Daily	<input type="checkbox"/>

5. The New Order screen will display for the first order for review.
6. Review all order details and update as appropriate. Press Alt + O or click OK to move the order information to the Profile Tab.
7. After the last order in the set is reviewed, Press Alt + S or click submit to save and submit the order(s).

**You cannot exit an order set if you have not completed all the orders. You may, however, open a second session of Med Manager if you need immediate access to another patient.**

## 8.18 Orders With/Requiring a Therapeutic Substitution

Therapeutic Interchange will be handled by Pharmacy (when available). If a physician places an order for which an interchange is needed, the pharmacist will have to:

Verify the order placed by the physician

Discontinue that order. "Therapeutic Interchange" should be selected as reason for discontinue

Enter a new order for the appropriate interchange. The pharmacist will need to ensure accuracy of the next administration time (start time of the order) such that the nurse will have an appropriate task on the eMAR. An order comment should be added (shortcut TI) "Therapeutic Interchange for: <drug x>" using the pre built shortcut in Med Manager. Choose a communication type of "clinician" so the order will not route to the Message Centre

Many orders are built to automatically interchange/substitute in powerchart:

When inpatient orders are placed (either new orders or home medications/prescriptions converted to inpatient orders) for the following medications, the order will automatically switch to the approved inpatient substitution (this list is not all-inclusive)

- 1) acetaminophen/Tylenol Extra Strength → acetaminophen/Tylenol Regular Strength
- 2) tamsulosin/Flomax capsules → tamsulosin/Flomax tablets
- 3) esomeprazole/Nexium → pantoprazole/Tecta
- 4) rabeprazole/Pariet → pantoprazole/Tecta
- 5) Dexlansoprazole/Dexilant → pantoprazole/Tecta

### Key Points:

If a home medication was converted to an inpatient order, the additional medication information (AMI) field of the BPMH, must be reviewed in Powerchart

From the Order Entry window in Med Manager, you must click the icon to see the details of the substitution to ensure the order was substituted correctly

If the patient chooses to use their own supply, the order can be discontinued and re-entered via Med Manager for the original product.

1. Therapeutic Substitution is only approved for adult patients

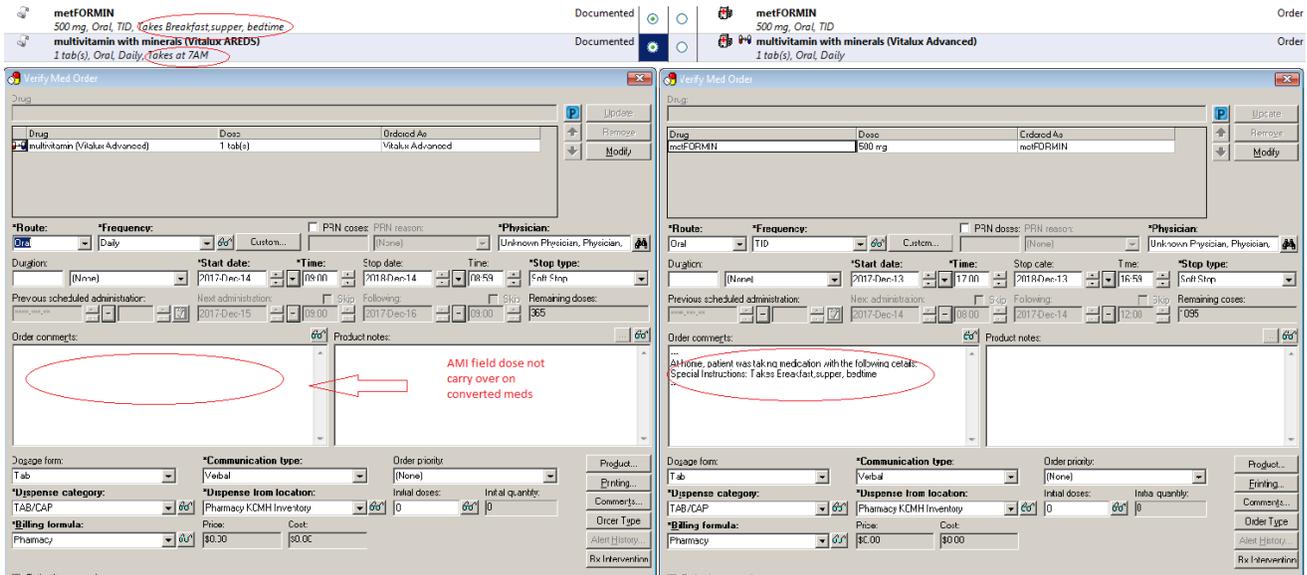
- This functionality allows for approved substitutions to automatically be applied to inpatient orders (generated from home medications or new orders) before the order comes to Pharmacy for verification.



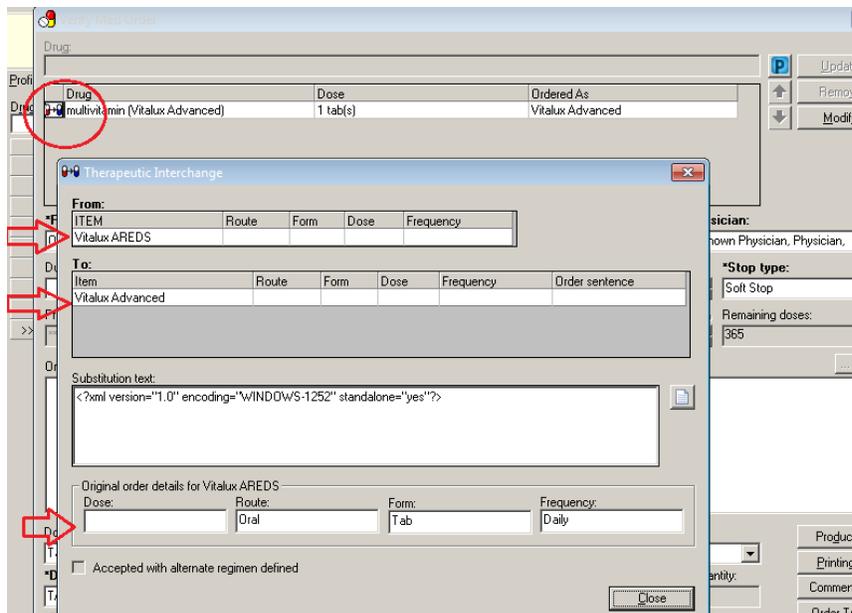
This icon displays beside the order if a substitution has taken place:



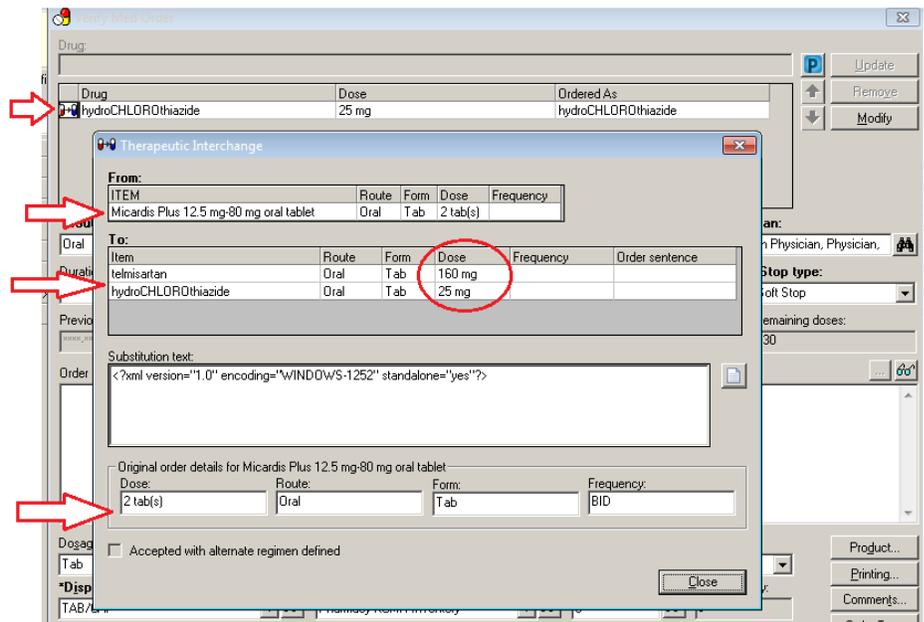
- Information documented in the Additional Medication Information (AMI) field will not carry over on converted medications. BPMH must be reviewed in Powerchart.



- From the Order Entry window in Med Manager, you must click the icon to see the details of the substitution to ensure the order was substituted correctly:
  - Basic substitution



o More complex substitution



- Since the substitution details are captured, there is no need to add an order comment
- If the patient chooses to use their own supply, the order can be discontinued and re-entered via Med Manager for the original product.

# “No Exact Match”

- Occurs when the drug is flagged to be substituted but an order detail does not match any of prebuilt substitution options.
- Since our substitutions are “Required”, the Clinician must select one that is built.
- After choosing a substitution, the order details may be modified (if appropriate) prior to signing.

## Scenario #1:

- Home Med/Prescription with a freetext dose converted to an Inpatient order:

Therapeutic Substitution - PHARMACY, DOCUMENTATION

PHARMACY, DOCUMENTATION Age:67 years Sex:Male Loc:Pharmacy WH... ARO:  
Outpatient [2011-May-30 09:00 - <No... DOB:1949-Dec-31 MRN:888000499 \*\* Allergies \*\* RESUS:  
Violent/Aggressive:

**Selected Order:**  
omeprazole (Losec): unknown, Oral, Cap, Daily

**Choose Therapeutic Substitution (No Exact Match):**

Tecta: 40 mg, Tab EC, Oral  
Equivalent to: Losec 20 mg, Cap, Oral

Pantoloc: 20 mg, Tab EC, Oral  
Equivalent to: Losec 10 mg, Cap, Oral

\* This substitution is required by your facility.

OK Cancel

## Scenario #2:

- The dose entered on the home med/prescription does not match any of the substituted options:

Therapeutic Substitution - PHARMACY, DOCUMENTATION

PHARMACY, DOCUMENTATION Age:67 years Sex:Male Loc:Pharmacy WH... ARO:  
Outpatient [2011-May-30 09:00 - <No... DOB:1949-Dec-31 MRN:888000499 \*\* Allergies \*\* RESUS:  
Violent/Aggressive:

**Selected Order:**  
omeprazole: 30 mg, Oral, Cap, Daily

**Choose Therapeutic Substitution (No Exact Match):**

Pantoloc: 20 mg, Tab EC, Oral  
Equivalent to: omeprazole 10 mg, Cap, Oral

Tecta: 40 mg, Tab EC, Oral  
Equivalent to: omeprazole 20 mg, Cap, Oral

\* This substitution is required by your facility.

OK Cancel

### Scenario #3:

- An extension of Scenario #2, when the dose of a combination products does not match any of the substituted options:

Therapeutic Substitution - PHARMACY DOCUMENTATION

PHARMACY DOCUMENTATION Age: 67 years Sex: Male Loc: Pharmacy KCM... ARO: Outpatient (2011-May-30 08:56 - <No - ... DOB: 1949-Dec-31 MRN: 888000499 \*\* Allergies \*\* RESUS: Violent/Aggressive:

**Selected Order:**  
amLODIPine-atorvastatin (Caduet 5 mg-10 mg oral tablet): 3 tab(s), Oral, Tab, Daily

**Choose Therapeutic Substitution (No Exact Match):**

amLODIPine: 5 mg, Tab, Oral  
-and-  
atorvastatin: 10 mg, Tab, Oral  
Equivalent to: Caduet 5 mg-10 mg oral tablet 1 tab(s), Tab, Oral

**\* This substitution is required by your facility.**

OK Cancel

In this example, the intended dose is amlodipine 15 mg and atorvastatin 30 mg (3 tablets of the combination med).

The substitution is required, so it must be selected and click “OK”.

The dose on the inpatient orders will appear as “3 tab(s)” but this is misleading since it is the strength dose that will appear on the inpatient order once it is signed (5 mg and 10 mg).

amLODIPine-atorvastatin (Caduet 5 mg-10 mg oral tablet) 3 tab(s), Oral, Daily	Documented	amLODIPine 5 mg, 3 tab(s), Oral, Daily	Order
		atorvastatin 10 mg, 3 tab(s), Oral, Daily	Order

Before signing the converted inpatient orders, the dose can be updated to the correct strength (once this is done the dose of “3 tab(s)” disappears):

Now the inpatient orders will have the correct dose for the conversion.

**If the converted orders have not been updated to the correct strength, Pharmacist action will be required.**

The dose in Med Manager will appear as “3 tab(s)” but this is misleading since it is the strength dose that will appear when the verification window is opened (5 mg and 10 mg).

▼ Active			amLODIPine 5 mg/ 3 tab(s) Oral Daily
▼ Active			atorvastatin 10 mg/ 3 tab(s) Oral Daily

From the Order Entry window in Med Manager, you **must** click the icon to see the details of the substitution to ensure the order was substituted correctly

Drug

Drug	Dose	Ordered As
amLODIPine	5 mg	amLODIPine

Therapeutic Interchange

From:

ITEM	Route	Form	Dose	Frequency
Caduet 5 mg-10 mg oral tablet	Oral	Tab	1 tab(s)	

To:

Item	Route	Form	Dose	Frequency	Order sentence
atorvastatin	Oral	Tab	10 mg		
amLODIPine	Oral	Tab	5 mg		

Substitution text:

```
<?xml version="1.0" encoding="WINDOWS-1252" standalone="yes"?>
```

Original order details for Caduet 5 mg-10 mg oral tablet:

Dose: 3 tab(s) \* \* Route: Oral Form: Tab Frequency: Daily

Accepted with alternate regimen defined

Close

Pharmacist must reconcile order as they see fit prior to verification.

## Discharge Medication Reconciliation

- Medications that had an automatic substitution applied at the time of admission medication reconciliation will appear grouped together on discharge medication reconciliation

Order Name/Details	Status			
<b>Continued Home Medications</b>				
acetylsalicylic acid (ECASA) 81 mg, Oral, Daily	Documented	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
acetylsalicylic acid (ECASA) 81 mg, Oral, Daily	Ordered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
amLODIPine-atorvastatin (Caduet 5 mg-10 mg oral tablet) 3 tab(s), Oral, Daily	Documented	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
amLODIPine 15 mg, Oral, Daily	Ordered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
atorvastatin 30 mg, Oral, Daily	Ordered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
esomeprazole (NexIUM) 40 mg, Oral, Daily	Documented	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
pantoprazole (Tecta) 40 mg, Oral, BID	Ordered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
gabapentin 300 mg, Oral, TID	Documented	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
gabapentin 300 mg, Oral, TID	Ordered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
hydroCHLORothiazide-telmisartan (Micardis Plus 12.5 mg-80 mg oral tablet) 1 tab(s), Oral, Daily	Documented	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
hydroCHLORothiazide 12.5 mg, 1 tab(s), Oral, Daily	Ordered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
telmisartan 80 mg, 1 tab(s), Oral, Daily	Ordered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
metFORMIN 500 mg, Oral, TID	Documented	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
metFORMIN 500 mg, Oral, TID	Ordered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
multivitamin with minerals (Vitalux AREDS) 1 tab(s), Oral, Daily	Documented	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
multivitamin with minerals (Vitalux Advanced) 1 tab(s), Oral, Daily	Ordered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 8.19 Medications with multiple dosage forms

- Please use caution when verifying medications with various dosage forms (ex diltiazem, morphine) to ensure the correct product is linked to the order. Sentences have been built to reflect the correct doses and forms, however, at the time of order entry these details can be modified.
- For example, here are the selections that may be chosen for diltiazem:

Search:  Contains  Type:  All Orders

At location:

**diltiazem**

diltiazem CD

diltiazem ER (T)

Diltiazem IV Infusion 100 mg/100 mL

diltiazem XC

## 8.20 Medications that DO NOT REQUIRE VERIFICATION

- Certain orders have been set up to NOT require pharmacist verification
- These include large volume bags (except those containing potassium), Remove patch orders, and Gastrografin
- When large volume bags are MODIFIED or VOIDED, if applicable, these are verified by pharmacy.

## 8.21 Furosemide between units of blood

As part of the RBC Administration Order set the Physician may order furosemide in 2 ways

1. After last unit of red blood cells – This order is unscheduled and therefore will not go overdue. Once the order has been administered it will automatically drop off the eMAR
2. There is a CareSet called “Furosemide Post Tranfusion” that contains multiple orders for multiple transfusions.

## 8.22 Suspend Orders

### 1. Suspend an order for a specific period of time :

Use this process **when you know when to restart.**

An order action of cancel/reorder should be performed.



The appropriate start date/time should be entered for when the medication is to be restarted.

\*Start Date/Time: 2013-May-16 09:00

Stop Date/Time: Start Date/Time (First Administration):

2013-May-18 0900

Next administration:

2013-May-17 0900

Following administration:

2013-May-18 0900

The order will be on the orders page with the future start date/time and will be on the eMAR with no associated task until the start date/time is reached.

Inpatient	
<input checked="" type="checkbox"/> furosemide	Ordered    40 mg, Oral, Tab, Daily, Start: 2013-May-18 09:00      2013-May-18 09:00

If an order comment is used to communicate the suspend order, it is very **important to specify the date the medication is to be restarted.**

Inpatient

furosemide Modify 40 mg, Oral, Tab, Daily, Start: 2013-May-16 09:00 2013-May-16 09:00

▼ Details for **furosemide**

Details Order Comments

Order comments

hold x 2 days and restart May 18th

**When you don't know when to restart**, right click and suspend the medication. It will display in purple on the MAR and as suspended on the orders page to be resumed when the physician decides.

## 2. Resuming a suspended medication considerations:

If an order is suspended and the medication is to be restarted with the next schedule dose administration: Right click on the suspended medication and choose resume.

Medications	Last Updated	Order Name	Status	Details
Inpatient				
2013-May-14 15:47	warfarin	Ordered	3 mg, Oral, Tab, Today, 2013-May-06 18:00	
2013-May-15 14:22	furosemide	Ordered	40 mg, Oral, Tab, Daily, 2013-May-16 09:00	
2013-May-15 14:28	ramipril	Ordered	5 mg, Oral, Cap, Daily, 2013-May-15 14:27	
2013-May-16 15:53	clopidogrel	Suspended	75 mg, Oral, Tab, Daily, 2013-May-16 09:00	
2013-May-16 16:18	warfarin	Ordered	5 mg, Oral, Tab, Daily, NOW, Start: 2013-May-16 09:00	

**Note:** The medication will be resumed on the system, but the medication will not be given until the next scheduled administration dose time for that frequency.

- i. eg. Ramipril 5 mg po daily is resumed at 0915 on May 15<sup>th</sup>, but the dose will not be scheduled to be given until 0900 on May 16<sup>th</sup>

**When the medication is resumed pay close attention to the frequency of the medication. The medication will automatically be scheduled into the next administration time. If that time is not suitable it may require to be cancel/reordered to reflect the appropriate start date and time.**

**3. Suspend an order before a procedure with a date not currently known.**

Modify the current order and enter the specific details for the suspend order in the order comments. (eg. Hold Plavix 5 days prior to.....)

<input checked="" type="checkbox"/>		clopidogrel	Ordered	75 mg, Oral, Tab, Daily	Status: 2013-May-16 09:00	2013-May-16 09:00
<input checked="" type="checkbox"/>		furosemide	Ordered	40 mg, Oral, Tab, Daily, hold x 2 days and rest	Renew	2013-May-16 09:00
<input checked="" type="checkbox"/>		ramipril	Ordered	5 mg, Oral, Cap, Daily	Modify	
<input checked="" type="checkbox"/>		warfarin	Ordered	3 mg, Oral, Tab, Today reassess on May 20th	Copy	2013-May-15 14:27
					Cancel/Reorder	2013-May-06 18:00
					Suspend	
					Activate	

**▼ Details for clopidogrel**

Order comments

Hold for 5 days prior to .....

**If the medication is to be suspended prior to an OR:**

Once the date of the OR is known the RN can modify the order comment and specify the date that the medication is to be suspended. Once that date is reached **the RN can suspend the medication and the physician will resume post-op when appropriate.**

**If the medication is to be suspended prior to a procedure (colonoscopy, bronchoscopy etc.):**

Once the date of the procedure is known the RN can modify the order comment and specify the date that the medication is to be suspended for and chart "not given" on the eMAR task .

Last Updated	Order Name	Status	Details	Order Comment	Last Upc
2013-May-15 14:15	Furosemide	Modify	40 mg, Oral, Tab, Daily, Start: 2013-May-18 09:00	Test, CF MD	

**▼ Details for furosemide**

Order comments

Hold in the am of May 16th for bronchoscopy.

2013-May-14 07:52 - 2013-May-20 07:52 (Clinical Range)

Time View	Medications	2013-May-17 07:52	2013-May-16 18:00	2013-May 16:29
<input checked="" type="checkbox"/> Scheduled	clopidogrel			
<input checked="" type="checkbox"/> Unscheduled				
<input checked="" type="checkbox"/> PRN	furosemide			
<input checked="" type="checkbox"/> Continuous Infusions	40 mg, Oral, Tab, Daily, Start: 2013-May-18 09:00			
<input checked="" type="checkbox"/> Future	Hold in the am of May 16th for broncos...			
<input checked="" type="checkbox"/> Discontinued Scheduled	furosemide			

#### 4. Suspend an order with the date known

If a medication requires **suspending on a particular date (in the future)**. The system is unable to suspend a medication into the future. The provider must right click on the medication and modify. In the orders comments communicate the Date and Time the med should be suspended.

Medication List

View: All Active Orders

Last Updated	Order Name	Status	Det
2013-May-16 16:18	warfarin	Modify	5 m 201

**Details for warfarin**

Order comments  
Suspend on May 22nd

2013-May-15 14:27	ramipril	
2013-May-16 16:18	warfarin	
	5 mg, Oral, Tab, Daily, NOW, Start:	
	Suspend on May 22nd	
	warfarin	
	MAR INR Verifv	

**It will display on the Emar for nursing to review and suspend the Medication on the appropriate date**

## 5. Suspend an order with a reassessment date

Modify the current order that is going to be suspended and enter the specific date for the reassessment in the order comments.

**Inpatient**

clopidogrel      Modify      75 mg, Oral, Tab, Daily, Start: 2013-May-16 09:00      2013-May-16 09:00

**▼ Details for clopidogrel**

Order comments  
hold and reassess on May 20th

Once the modified order is signed, refresh the orders page, then suspend the order.

<input checked="" type="checkbox"/>	clopidogrel	Ordered	75 mg, Oral, Tab, Daily, Start: 2013-May-16 09:00 hold and reassess on May 20th	2013-May-16 09:00	
<input checked="" type="checkbox"/>	ramipril	Ordered	5 mg, Oral, Cap, Daily, NOW, Sta		15 14:27
<input checked="" type="checkbox"/>	warfarin	Ordered	3 mg, Oral, Tab, Today, Start: 20 reassess on May 20th		06 18:00

- Renew
- Modify
- Copy
- Cancel/Reorder
- Suspend**
- Activate
- Complete

The order will display on the orders page with a status of suspended and the reassessment date will be visible in the order comments for the physician.

<input type="checkbox"/>	clopidogrel	Suspended	75 mg, Oral, Tab, Daily, Start: 2013-May-16 09:00 hold and reassess on May 20th	2013-May-16 09:00	
--------------------------	-------------	-----------	--	-------------------	--

The medication will appear purple on the eMAR for the RN and the reassessment date will be visible in the order details.

clopidogrel  
75 mg, Oral, Tab, Daily, Start:  
2013-May-16 09:00  
hold and reassess on May 20th

The physician will review the orders page but may require a reminder that this is due to be reassessed.

## 8.23 Oncology Patient Returning to Inpatient Unit

For a patient that is being treated in Oncology or the Cancer Treatment Center and returning to an inpatient unit it is important that any medications required post chemotherapy be entered on correct patient encounter. Since the patient is an Oncology patient and an inpatient there will be an active Recurring Initial encounter and an active Inpatient encounter. In this example any post chemotherapy orders should be placed on the active Inpatient encounter (highlighted in blue below).

Facility	Nurse Unit	Room	Bed	Enc Status	Enc Type	Med Service(s)	Reg Date	Disch Date
PCH	Oncology PCH			Active	Recurring Initial		2013-Jan-30 10:20	
PCH	MED PCH	140	1	Active	Inpatient		2013-Jan-06 12:43	
PCH	Endo PCH			Discharged	Preadmit			2013-Feb-15 13:05
PCH				Discharged	AMB/OP		2013-Feb-19	2013-Feb-19
PCH				Discharged	AMB/OP		2013-Jan-30	2013-Jan-30
PCH				Discharged	AMB/OP		2013-Jan-14	2013-Jan-14

The pharmacist will enter any post chemotherapy medications that will be required. The chemotherapy protocol has an order for dexamethasone 4 mg po bid on days 2 and 3 of cycle. The order is entered with the appropriate duration and start date and time. It is important to review the patient's medication profile when entering the orders and handle any of the duplicate orders appropriately.

As well, the shortcut "cp" can be selected in the Order Comments section which will populate "This medication is part of chemo protocol:" and the chemotherapy protocol name can be entered.

Drug dexamethasone	Dose 4 mg / 1 tab(s)	Ordered As Decadron	Remove
			Modify
<b>*Route:</b> Oral			
<b>*Frequency:</b> BID			
<input type="checkbox"/> PRN doses: PRN reason: (None)			
<b>*Physician:</b> Unknown Physician, Physician,			
Duration: 2 day(s)	<b>*Start date:</b> 2013-Mar-01	<b>*Time:</b> 09:00	Stop date: 2013-Mar-03
			Time: 08:59
			<b>*Stop type:</b> Physician Stop
Previous scheduled administration:	<b>*Next administration:</b>	<input type="checkbox"/> Skip	Following:
	2013-Mar-01 18:00	<input type="checkbox"/> Skip	2013-Mar-02 09:00
			Remaining doses: 4
<b>Order comments:</b>		<b>Product notes:</b>	
This medication is part of chemo protocol: GOOVCATX			

This information will be viewable on the eMAR.

The screenshot shows two medication orders in a table. The first order is for dexamethasone (Decadron) 4 mg, Oral, Tab, BID, for 2 day(s), starting on 2013-Mar-01 09:00 and stopping on 2013-Mar-03 08:59. The second order is for fentaNYL (fentaNYL MAT patch) 37 mcg, Transdermal, Patch, q72h timed, starting on 2013-Feb-27 10:00 and stopping on 2013-Mar-03 08:59. Both orders are part of chemo protocol: GOOVCATX. A tooltip is visible over the second order, showing the medication name and details.

If an RN or another provider enters the post chemotherapy orders via powerchart, during the verification process the pharmacist will have to ensure the:

1. medications were entered on the correct encounter since medications don't cross encounters on the eMAR
2. duplicate orders are handled appropriately

Examples:

- a. the above patient is on dexamethasone 4 mg po daily regularly. This order can be discontinued and re-entered with a new start date/time after the post chemotherapy dexamethasone order is completed
  - b. If the patient is on a higher dose of the same medication regularly, then the physician should be contacted to have the post chemotherapy order discontinued.
3. the shortcut "cp" is entered in order comments with the protocol name
  4. the correct duration and start date/time has been entered

## 8.24 Changing the Defaulted Route on a Medication Order Sentence in PowerChart

If you would like to order a particular route for a medication, but a sentence does not exist for the route you are needing, please remember that you must **remove the drug form** in order to see all of the route of administration choices (ie break the route-form compatibility). This can't be done on a Modify action but can be done on a Cancel/Reorder.

Example: Sentence is for Oral but IV is desired.

1. Choose the Oral sentence

The screenshot shows the PowerChart interface for a medication order. The order is for furosemide. The route of administration is set to Oral, and the drug form is set to Tab. A red arrow points to the Drug Form field, indicating that it should be removed to see all route options. The interface includes a search bar, filters, and a table of orders for signature. The details section shows the medication name, route, frequency, and drug form.

2. Remove the drug form (in this case Tab). You may backspace, hit <delete> then hit <enter> OR choose <none> and hit <enter>. Once this is done, the route of administration field drop down will expand to provide all the choices available in the system.

**Details for furosemide**

Details | Order Comments

Remaining Administrations: 0 St

\*Route of administration: Oral

\*Frequency:

Duration:

May use own medication:

Special Instructions:

Stop type:

Drug Form: [ ]

PRN: [ ]

Priority (e.g. STAT or NOW): [ ]

May self administer:  Yes  No

\*Start Date/Time: 2013-Jul-05 09:00

Stop Date/Time: [ ] [ ] [ ]

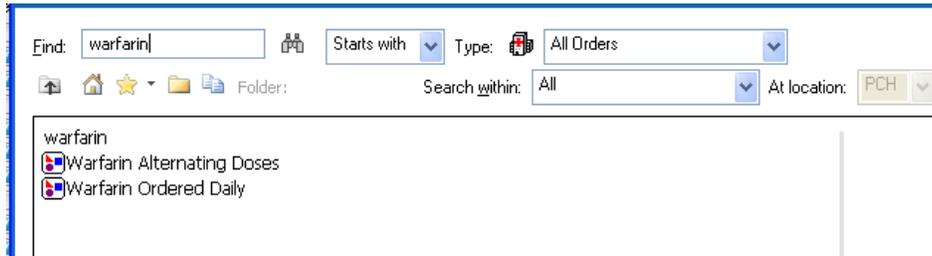
0 Missing Required Details

3. Choose the desired route of administration (in this example IV) modify any other details as needed and sign the order.

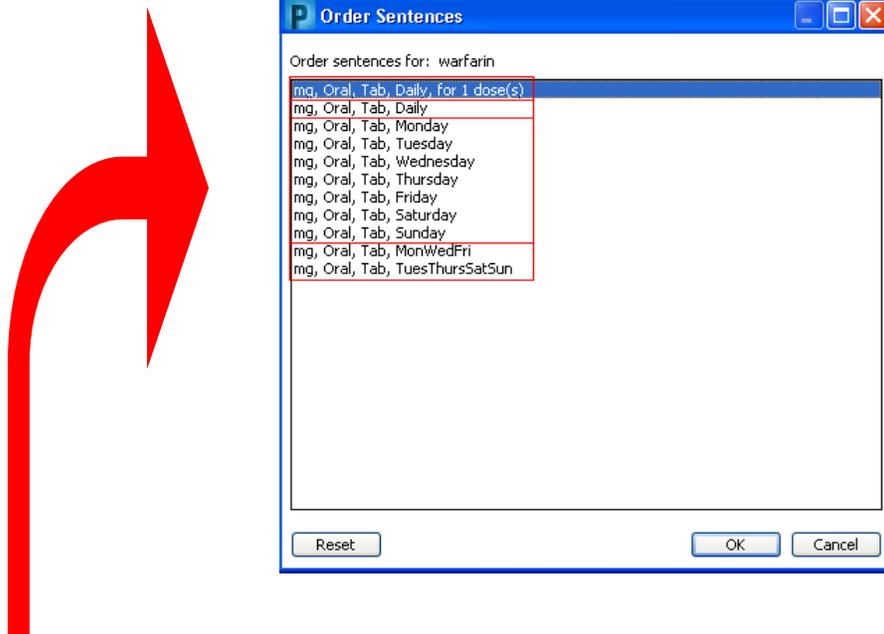
## 8.25 Warfarin Considerations

### Entering Orders:

There are many different ways to order warfarin. **Three different options** have been built to guide the clinician in the entry of warfarin orders. Typing “warfarin” into the Find box in the Add Order screen will bring up these three options.



Choosing the Warfarin orderable brings up the following Order Sentences window:



### Option 1: Regularly dosed Warfarin:

If the patient is established on the same dose of warfarin every day, choose the order sentence for “\_\_ mg, Oral, Tab, Daily” and customize the dose in the Details tab.

If the patient takes different doses of warfarin on different days of the week, various combinations of order sentences can be chosen to achieve the required schedule.

## Option 2: Alternating Doses:

Choosing the Warfarin Alternating Doses careset will bring up the following window. Order sentences can be chosen based on a q2d or q3d alternating schedule.

Component	Order Details
warfarin	mg, Oral, Tab, q2d, alternating dose - Day 1, Start: 2013-May-17 18:00
warfarin	mg, Oral, Tab, q2d, alternating dose - Day 2, Start: 2013-May-18 18:00
warfarin	mg, Oral, Tab, q3d, alternating dose - Day 1
warfarin	mg, Oral, Tab, q3d, alternating dose - Day 2, Start: T+1;1800
warfarin	mg, Oral, Tab, q3d, alternating dose - Day 3, Start: T+2;1800

Choose the appropriate combination of order sentences:

Component	Order Details
<input checked="" type="checkbox"/> warfarin	mg, Oral, Tab, q2d, alternating dose - Day 1, Start: 2013-May-17 18:00
<input checked="" type="checkbox"/> warfarin	mg, Oral, Tab, q2d, alternating dose - Day 2, Start: 2013-May-18 18:00

The Details box will appear for the hi-lighted order sentence. Enter the dose for each day in the schedule:

**Details for warfarin**

Details | Order Comments

+ [Icons]

\*Dose: 3 mg |

\*Route of administration: Oral |

\*Frequency: q2d |

Duration: |

May use own medication:  Yes  No

Special Instructions: alternating dose - Day 1

Stop type: |

On the Orders page and the eMAR, both orders are visible with the start dates and times offset to accommodate the alternating schedule:

Inpatient						
<input checked="" type="checkbox"/>		warfarin	Ordered	2 mg, Oral, Tab, q2d, alternating dose - Day 2	Start: 2013-May-18 18:00	2013-May-18 18:00
<input checked="" type="checkbox"/>		warfarin	Ordered	3 mg, Oral, Tab, q2d, alternating dose - Day 1	Start: 2013-May-17 18:00	2013-May-17 18:00

**warfarin**  
 3 mg, Oral, Tab, q2d, alternating dose - Day 1, Start: 2013-May-17 18:00

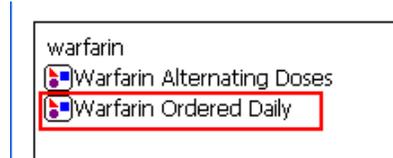
**warfarin**  
**MAR INR Verify**

**warfarin**  
 2 mg, Oral, Tab, q2d, alternating dose - Day 2, Start: 2013-May-18 18:00

**warfarin**  
**MAR INR Verify**

On the eMAR, tasks will fire each day on alternating lines based on the alternating schedule.

### Option 3: Warfarin Daily Orders:



When initially entering an order for daily warfarin orders, choose the Warfarin Ordered Daily CareSet. This CareSet allows the the physician to order warfarin that may be fluctuating **daily depending on daily INR results**.

A screenshot of the 'Careset - Warfarin Ordered Daily' interface. It shows a table with two columns: 'Component' and 'Order Details'. The table contains three rows, each with a checked checkbox in the 'Component' column.

Component	Order Details
<input checked="" type="checkbox"/> warfarin	Check For Order, Oral, Tab, Daily, Call Physician for Daily Orders, Start: 2013-Jun-04 18:00
<input checked="" type="checkbox"/> warfarin	mg, Oral, Tab, Daily, for 1 dose(s)
<input checked="" type="checkbox"/> Prothrombin Time Panel (INR)	Blood, Timed Study collect, Start: T,M, Daily

The Warfarin Ordered Daily CareSet is made up of three pre-selected components:

1. The Warfarin Check for Order “place holder” order.
2. The \_\_\_ mg, Oral, Tab, Daily, for 1 dose(s) order for today’s dose of warfarin.
3. PT/INR Daily order.

The Warfarin Check for Order placeholder order is meant to stay on the patient’s profile as a reminder that the patient is on warfarin and requires a daily order based on INR result. **Each day the nurse will have the task as a reminder to check on INR and call physician for the Daily Orders, if it has not already been ordered. No doses should be charted on this placeholder. The nurse should chart “Not Given” with a reason of “Placeholder Order.** Once the actual daily warfarin order is charted on the order will fall to the discontinued section of the orders tab, eMAR and MAR Summary. If there is no placeholder order on the patient’s profile it then becomes difficult to determine that the patient is on ongoing warfarin therapy.

At the time of verification, the pharmacist will change the duration of the warfarin placeholder to 365 days with a soft stop.

Any of the sentences can be de-selected depending on the intent of the clinician placing the orders.

Do not modify the Warfarin Check for Order placeholder order. Doing so may change the intent of the order and possibly lead to errors.

Hi-light the Order sentence \_\_\_ mg, Oral, Tab, Daily, for 1 dose(s) sentence and enter today’s dose in the Details tab. Sign the orders.

Both warfarin orders will appear together on the Orders page, the eMAR and the MAR Summary.

Ordered	warfarin	3 mg, Oral, Tab, Daily, for 1 dose(s), Start: 2013-Jun-04 18:00, Stop: 2013-Jun-05 17:59
Ordered	warfarin	Check for Order, Oral, Tab, Daily, Call Physician for Daily Orders... *** CHART NOT GIVEN (Placeholder order). Admin of med shoul...

 <b>warfarin</b> Check for Order, Oral, Tab, Daily, Call Physician for Daily Order, Start: 2013-Jun-04 18:00 ***CHART NOT GIVEN (Placeholder or or...	<b>Check for Order</b> Previous admin could not be determined.	Placeholder
<b>warfarin</b> MAR INR Verify		
 <b>warfarin</b> 3 mg, Oral, Tab, Daily, for 1 dose(s), Start: 2013-Jun-04 18:00, Stop: 2013-Jun-05 17:59	<b>3 mg</b> Previous admin could not be determined.	Today's order
<b>warfarin</b> MAR INR Verify		

 <b>warfarin</b> Check for Order, Oral, Tab, Daily, Call Physician for Daily Order, Start: 2013-Jun-04 18:00		@1800	Placeholder
 <b>warfarin</b> 3 mg, Oral, Tab, Daily, for 1 dose(s), Start: 2013-Jun-04 18:00, Stop: 2013-Jun-05 17:59		@1800	Today's order

Subsequent daily orders can be entered by using the Warfarin \_\_ mg, Oral, Tab, Daily, for 1 dose(s) order sentence. The placeholder order will remain on the patient's profile.

**Clinical Point:** It is very **IMPORTANT** to select the sentence that is for 1 dose or the order will continue daily.

## Documentation of Warfarin Administration and INR

When the nurse clicks on the task to document the administration of a dose, if there has been an INR result within the past 18 hours (today), it will pull into the documentation window.

Acknowledge INR : 1.00 , May 17, 2013 10:09:00 [Trend](#)

---

MAR INR Verify :  [Trend](#)

---

\*warfarin : 3 mg

Diluent : <none> ml

\*Route : Oral Site :

If there hasn't been a result posted within the past 18 hours (today), the nurse can click the Trend button to see recent INR results.

This encounter prior to May 17, 2013 11:00:00

Event Date	Event	Result	Ref. Range	Status
2013-May-17 10:09	INR	1.00	(0.90 - 1.20)	

[Close](#)

The nurse will take the most recent INR result and copy it into the MAR INR Verify box. This will allow the INR result to flow to the MAR and MAR Summary without flowing to the Lab Results.

Acknowledge INR : 1.00 , May 17, 2013 10:09:00 [Trend](#)

---

MAR INR Verify :  [Trend](#)

Do not chart medication administration on the place holder order. A task will fire at 1800h daily to serve as a reminder to the nurse that the patient requires a warfarin order based on INR. Chart the administration on the order for today's dose; **on the place holder task, chart Not Given with a reason of Placeholder Order.**

Not Given

\*Reason : Placeholder Order

[Comment...](#)

On the MAR Summary, the dose given and the INR result will display. The MAR Summary is set to display the last three days of results. If the clinician wishes to see more days on the MAR Summary, the Clinical Range can be changed accordingly.

	3 mg @1240
<b>warfarin</b>	MAR INR Verify: 1.0
3 mg, Oral, Tab, Daily, for 1 dose(s), Start: 2013-Jun-04 18:00, Stop: 2013-Jun-05 17:59	

## No Warfarin Today

If a physician wants to order 'no warfarin today' for a patient with warfarin daily orders, s/he will enter an order for **0 mg** of warfarin daily x 1 dose (or 2 doses if it's to be held for 2 days, etc.). This is a free-text dose so a dialogue box will pop up asking if s/he wishes to proceed with a free-text dose; the physician selects <Yes>. Add an order comment 'no warfarin today'.

The screenshot shows a software interface for entering a medication order. At the top, a blue dialog box titled "Order Services" asks: "You have entered a value smaller than the acceptable minimum value. Would you like 0 mg to be entered as a free text value?" with "Yes" and "No" buttons. Below this, the order entry form is visible. The "\*Dose:" field is set to "0 mg" and is highlighted with a red box. Other fields include "\*Route of administration:" (Oral), "\*Frequency:" (Daily), and "Duration:" (1 dose(s)). To the right, there are fields for "Dose Range:", "Drug Form:" (Tab), "PRN:", and "Priority (e.g. STAT or NOW):". Below the form, a section titled "Details for warfarin" has tabs for "Details" and "Order Comments". The "Order Comments" tab is active, and the text "no warfarin today" is entered in the comment field, also highlighted with a red box.

There will be a task on the eMAR for the dose of 0 mg.

 <b>warfarin</b> 0 mg, Oral, Tab, Daily, for 1 dose(s), Start: 2013-Jun-03 18:00, Stop: 2013-Jun-04 17:59 no warfarin today	<b>0 mg</b> Not previously given
---	-------------------------------------

It is not possible to document administration of 0 mg so the nurse will chart 'Not Given' with a reason of 'due to clinical condition'. Alternatively, a free-text reason can be added, e.g. "no warfarin today"

### Pharmacist Tip:

The Daily Order for warfarin drops off the eMAR 1 minute before the next day's schedule admin is due. If a physician modifies that order, there is a risk that the new dose will not be given to the patient as it will drop off the eMAR. For example, warfarin order for today is 5 mg at 1800. That order is displayed on the eMAR until 1759 tomorrow. Tomorrow morning physician modifies the order to 4 mg. That order will still drop off at 1759 and patient may not receive dose. Instead physician should place order via CareSet or cancel/reorder. ALWAYS during verification of warfarin daily orders check to make sure that the stop date/time makes sense. If you see a modified order in your unverified monitor for warfarin, always take the time to review and determine if the intent is correct.

## 8.26 Medication Alerts CareSet

It is very useful to use the Medication Alerts CareSet as the order will go to the eMar and gives the administering RN some flexibility and it will stay on the Orders Profile. Can add additional details to order comments (eg. give p.o. meds via enteral tube). Specific tubes should be specified in order comments (eg. via g-tube).

The screenshot shows the 'Orders Medication List' interface. The 'Medication Alerts' link is circled in red. Below it, the text 'Medications - Continue as in ED' and 'Medication Alerts' are visible.

Component	Order Details
<input type="checkbox"/> **Medication Alert (Crush Medications)	1 each, Oral, Misc, Daily
<input type="checkbox"/> **Medication Alert (Give medications with sip of water)	1 each, Oral, Misc, Daily
<input type="checkbox"/> **Medication Alert (Give PO meds whole in)	1 each, Oral, Misc, Daily, see comments
<input type="checkbox"/> **Medication Alert (Give PO meds via enteral tube)	1 each, Oral, Misc, Daily
<input type="checkbox"/> **Medication Alert (Hold all medications prior to procedure)	1 each, Oral, Misc, Daily
<input type="checkbox"/> **Medication Alert (If unable to swallow do not give PO meds)	1 each, Oral, Misc, Daily
<input type="checkbox"/> **Medication Alert (No ACE Inhibitors)	1 each, Oral, Misc, Daily
<input type="checkbox"/> **Medication Alert (No anticoagulants)	1 each, Oral, Misc, Daily, Warfarin, Heparin, Enoxaparin, Dalteparin, Rivaroxaban, Dabigatran, Apixaban, Fon
<input type="checkbox"/> **Medication Alert (No antiplatelets)	1 each, Oral, Misc, Daily, ASA, Clopidogrel, Ticagrelor, ASA/Dipyridamole, Ticlodipine
<input type="checkbox"/> **Medication Alert (No Aspirin)	1 each, Oral, Misc, Daily
<input type="checkbox"/> **Medication Alert (No Benzodiazepines/Sedation)	1 each, Oral, Misc, Daily
<input type="checkbox"/> **Medication Alert (No Bowel Care Protocol)	1 each, Oral, Misc, Daily
<input type="checkbox"/> **Medication Alert (No GOPs)	1 each, Oral, Misc, Daily
<input type="checkbox"/> **Medication Alert (No Heparin/LMWH)	1 each, Oral, Misc, Daily, Dalteparin, Enoxaparin, Heparin
<input type="checkbox"/> **Medication Alert (No IM injections)	1 each, Oral, Misc, Daily
<input type="checkbox"/> **Medication Alert (No NSAIDs)	1 each, Oral, Misc, Daily

**Details**

Order details:

Detail values:

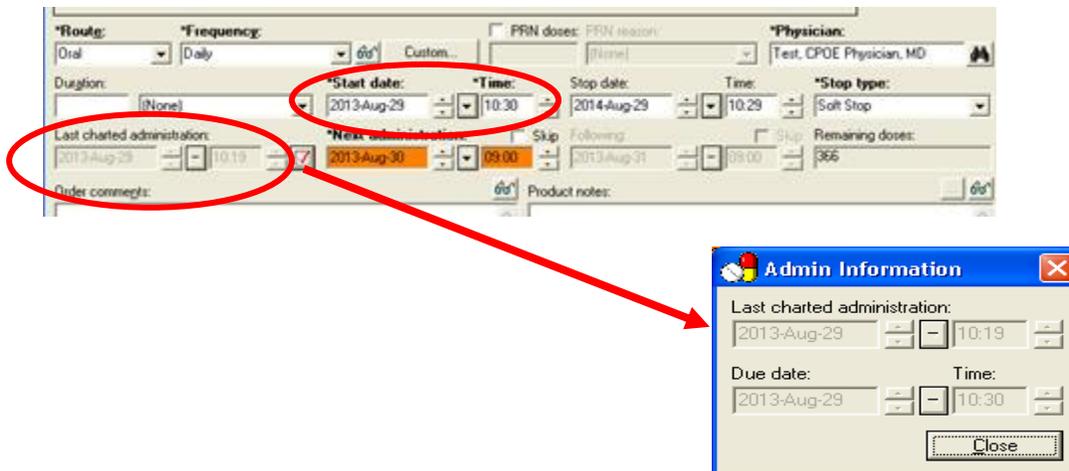
OK Cancel

## 8.27 New Tasks Firing After Task Documentation

When an administration is documented **before** the actual time that it is due there is potential for the system to create another task in that time slot. This occurs when a modification is made to the order **between the time the task was charted and the dosing time**. For example, task is due at 0930, nurse documents at 0915. Modification to order is performed at 0920, a new task will fire for 0930.

### How will I know that I may create a new task?

If the last charted administration displays a time that is PRIOR to the start date and time/due date (new order) or next standard frequency time/due date (existing order)



### How Do I Know the Next Standard Frequency Time/Due Date?

It is based on the standard time that you are likely familiar with or the custom time set for the order. You may access this information by clicking on the red checkmark, if available (see picture above) or by clicking the eyeglasses to the right of the frequency field.

### What Do I Need to Know About “Last Charted Administration”?

This field will be populated any time the nurse has charted the task. That could mean the med was given, or that the nurse charted “Not Done” or “Not Given”. The ONLY way to know the med was given is to look at the eMAR/MAR Summary.

### What Modifications in Med Manager create a new task?

In general, any changes made to the top half of the Med Manager screen have the potential to create an additional task, so please watch for the timing of the order and check the eMAR if needed.

### Some Specific examples of items that may create a new task:

1. Add an Order Comment
2. Skip the Next Administration



3. Change the Start Date and Time



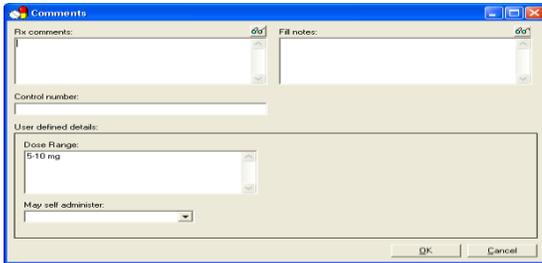
Start date: 2013-Aug-21 Time: 09:11

4. Check the Patient's Own Med Box



Patient's own med

5. Add User Defined Details



Comments dialog box with fields: Rx comments, Fill notes, Control number, User defined details (Dose Range: 5-10 mg), May self administer.

- 6. Change the physician
- 7. Change the frequency
- 8. Change the dose
- 9. Change the stop type
- 10. Change the duration

**What Modifications in Med Manager DO NOT create a new task?**

In general, any changes made to the bottom half of the Med Manager screen should not create a new task.

**Some Specific examples of items that should not create a new task:**

1. Change the initial doses



Initial doses: 2 Initial quantity: 2

2. Change Dispense from location



\*Dispense from location: Maternal Child PCH

3. Change Communication type



\*Communication type: Clinician

- 4. Add a product note
- 5. Change the Dispense Category
- 6. Change the Dosage Form
- 7. Change the product

**Verify Med Order**

Drug: 😊

Drug	Dose	Ordered As
hydrochlorothiazide	12.5 mg / 0.5 tab(s)	HCTZ

↑ Update  
↓ Remove  
Modify

**\*Route:** Oral **\*Frequency:** Daily  PRN doses: PRN reason: (None) **\*Physician:** Test, CPOE Physician, MD

**Duration:** (None) **\*Start date:** 2013-Aug-31 **\*Time:** 09:00 **Stop date:** 2014-Aug-31 **Time:** 07:00 **\*Stop type:** Soft Stop

**Last charted administration:** 2013-Aug-29 09:23 **\*Next administration:** 2013-Aug-30 09:00  Skip Following:  Skip **Remaining doses:** 366

**Order comments:** + **Product notes:** +

⊘ Adding or Removing Comments may create additional task.

😊

**Dosage form:** Tab **\*Communication type:** Written **Order priority:** (None)

**\*Dispense category:** TAB/CAP **\*Dispense from location:** Pharmacy PCH1 **Initial doses:** 0 **Initial quantity:** 0

**\*Billing formula:** Pharmacy **Price:** \$0.00 **Cost:** \$0.00

Patient's own med  
 Auto calculate initial dose

Product...  
Printing...  
Comments  
Order Type  
Alert History...  
Rx Intervention  
Reject OK Cancel

## 8.28 Advanced Order Rescheduling

The advanced order rescheduling functionality allows pharmacists in the Med Manager application to alter the “Start Date and Time” and/or “Next Administration” fields when appropriate for the clinical situation at the time of verification. This will help in numerous situations, for example, when a greater than one day (q2d, q3d) frequency is modified, two doses are scheduled too close together, staggering doses, etc.

If an order is placed that has a start date and time that differs from the system generated time, the pharmacist will see orange boxes at verification in the “Start Date and Time” and/or “Next Administration” fields. This can occur if a priority of STAT is chosen OR if the physician alters the start date and time of the order at the time of placing it.

If the physician did not alter the start date and time of the order, the pharmacist may still have the ability to edit the start date and time if the priority of the order is routine and the start date and time of the order is in the future.

Several factors will impact how the verification screen will appear in relation to the “Start Date and Time” and/or “Next Administration” fields:

1. Has the dose been charted?
2. Is the current time prior to the scheduled administration time?
3. Has the scheduled administration time already passed?
4. Does the order have a priority of STAT?

If the order has not yet been administered, the “previous scheduled administration” field will be presented. Or, it may indicate that previous doses were administered but the last scheduled dose has not yet been given. If the last scheduled dose has been charted then the “Last Charted Administration” will be displayed. If the last administration was an additional dose, “Additional Dose” will be displayed.

### Scenarios:

- A. Order is placed in PowerChart, no priority is assigned, start date and time is not altered.
  1. Pharmacy verifies the order BEFORE the start date and time.
    - 1.1 Nurse has NOT charted an administration.
    - 1.2 Nurse has charted an administration.
  2. Pharmacy verifies the order AFTER the start date and time.
    - 2.1 Nurse has NOT charted an administration
    - 2.2 Nurse has charted an administration.
- B. Order is placed in PowerChart with a priority of STAT.
  1. Pharmacy verifies the order (always AFTER the start date and time).
    - 1.1 Nurse has NOT charted an administration.
    - 1.2 Nurse has charted an administration.
- C. Order is placed in PowerChart and the start date and time of the order is changed (T;N or a future date and time).
  1. Pharmacy verifies the order BEFORE the start date and time.
    - 1.1 Nurse has NOT charted an administration.
    - 1.2 Nurse has charted an administration.
  2. Pharmacy verifies the order AFTER the start date and time.
    - 2.1 Nurse has NOT charted an administration
    - 2.2 Nurse has charted an administration.

## Description of Scenarios

**A.1.1.1 Order is placed in PowerChart, no priority is assigned, start date and time is not altered. Nurse has not charted administration.**

Previous Scheduled Administration is blank indicating that the dose was not charted.

Admin Information checkbox is dithered indicating that dose was not charted.

Start Date and Time field is editable.

**A.1.1.2 Order is placed in PowerChart, no priority is assigned, start date and time is not altered. Nurse has charted administration.**

Last Charted Administration date and time is displayed indicating that the dose was charted. (may have been given to patient, charted Not Done or Not Given)

Admin Information checkbox is available. Clicking on it shows the Due Date and Last Charted Admin.

Start Date and Time field is editable.

**A.2.2.1 Order is placed in PowerChart, no priority is assigned, start date and time is not altered. Pharmacy verifies the order AFTER the start date and time. Nurse has not charted administration.**

Previous Scheduled Administration is displayed (as we are past the start date and time of the order). \*\*\* see end of section for more info

Admin Information checkbox is dithered indicating that the dose was not charted.

Start Date and Time field is dithered because the start date and time is in the past.

**A.2.2.2 Order is placed in PowerChart, no priority is assigned, start date and time is not altered. Pharmacy verifies the order AFTER the start date and time. Nurse has charted administration.**

Start Date and Time field is dithered because the start date and time is in the past.

Last Charted Administration date and time is displayed indicating that the dose was charted. (may have been given to patient, charted Not Done or Not Given)

Admin Information checkbox is available. Clicking on it shows the Due Date and Last Charted Admin.

**B.1.1.1 Order is placed in PowerChart with a priority of STAT. Pharmacy verifies the order (always AFTER the start date and time). Nurse has NOT charted an administration.**

Previous Scheduled Administration is displayed (priority is STAT so the start date and time is original time of the order).

Admin Information checkbox is dithered indicating that the dose was not charted.

Next administration field is orange to alert the pharmacist that the start date and time was altered (STAT) so the next admin time should be reviewed in case it is too close. You can either skip the dose or change the dose date and time, but not beyond the following dose date and time.

**B.1.1.2 Order is placed in PowerChart with a priority of STAT. Pharmacy verifies the order (always AFTER the start date and time). Nurse has charted an administration.**

Start Date and Time field is dithered because the start date and time is in the past.

Admin Information checkbox is available. Clicking on it shows the Due Date and Last Charted Admin.

Last Charted Administration date and time is displayed indicating that the dose was charted. (may have been given to patient, charted Not Done or Not Given)

Next administration field is orange to alert the pharmacist that the start date and time was altered (STAT) so the next admin time should be reviewed in case it is too close. You can either skip the dose or change the dose date and time, but not beyond the following dose date and time.

**C.1.1.1 Order is placed in PowerChart and the start date and time of the order is changed (future date and time). Pharmacy verifies the order BEFORE the start date and time. Nurse has NOT charted an administration.**

**\*Route:** Oral **\*Frequency:** QID  PRN doses: PRN reason: **\*Phys**

Duration: (None) **\*Start date:** 2013-Aug-29 **\*Time:** 13:30

Previous scheduled administration: **\*Next administration:** 2013-Aug-29 16:00  Skip Following: 2013-Aug-29 21:00  Skip

Start Date and Time field is editable.

Previous Scheduled Administration is blank indicating that the dose was not charted.

Admin Information checkbox is dithered indicating that the dose was not charted.

Next administration field is orange to alert the pharmacist that the start date and time was altered so the next admin time should be reviewed in case it is too close. You can either skip the dose or change the dose date and time, but not beyond the following dose date and time.

**C.1.1.2 Order is placed in PowerChart and the start date and time of the order is changed (future date and time). Pharmacy verifies the order BEFORE the start date and time. Nurse has charted an administration.**

**\*Route:** Oral **\*Frequency:** QID  PRN doses: PRN reason: **\*Phys**

Duration: (None) **\*Start date:** 2013-Aug-29 **\*Time:** 13:30 Stop date: 2014-Aug-29

Last charted administration: 2013-Aug-29 13:27  **\*Next administration:** 2013-Aug-29 16:00  Skip Following: 2013-Aug-29 21:00  Skip

Order comments:

Admin Information

Last charted administration: 2013-Aug-29 13:27

Due date: 2013-Aug-29 Time: 13:30

Close

Start Date and Time field is editable.

Admin Information checkbox is available. Clicking on it shows the Due Date and Last Charted Admin.

Last Charted Administration date and time is displayed indicating that the dose was charted. (may have been given to patient, charted Not Done or Not Given)

Next administration field is orange to alert the pharmacist that the start date and time was altered so the next admin time should be reviewed in case it is too close. You can either skip the dose or change the dose date and time, but not beyond the following dose date and time.

**C.2.2.1 Order is placed in PowerChart and the start date and time of the order is changed (T;N or a future date and time). Pharmacy verifies the order AFTER the start date and time. Nurse has NOT charted an administration.**

Admin Information checkbox is dithered indicating that the dose was not charted.

Start Date and Time field is editable. Dropdown is available. It is not recommended to change from original date and time.

Previous Scheduled Administration is displayed (as we are past the start date and time of the order). \*\*\* see end of section for more info

Next administration field is orange to alert the pharmacist that the start date and time was altered so the next admin time should be reviewed in case it is too close. You can either skip the dose or change the dose date and time, but not beyond the following dose date and time.

**C.2.2.2 Order is placed in PowerChart and the start date and time of the order is changed (T;N or a future date and time). Pharmacy verifies the order AFTER the start date and time. Nurse has charted an administration.**

Start Date and Time field is dithered because the start date and time is in the past.

Admin Information checkbox is available. Clicking on it shows the Due Date and Last Charted Admin.

Last Charted Administration date and time is displayed indicating that the dose was charted. (may have been given to patient, charted Not Done or Not Given)

Next administration field is orange to alert the pharmacist that the start date and time was altered so the next admin time should be reviewed in case it is too close. You can either skip the dose or change the dose date and time, but not beyond the following dose date and time.

\*\*\* Previous Scheduled Administration being displayed may indicate one of two scenarios.

- The first is that the order has not been started yet.
- The second is that earlier doses have been charted but the most recent dose is past due and has not been charted yet.

<b>*Route:</b>		<b>*Frequency: Custom</b>		<input type="checkbox"/> PRN doses:	PRN reason:	<b>*Phys</b>
Oral	TID	601	Custom...		(None)	Test, I
Duration:		Start date:		Stop date:		Time:
	(None)	Original 2013-Aug-29 14:03		2014-Aug-29		14:02
Previous scheduled administration:		Next administration:		<input type="checkbox"/> Skip	Following: <input type="checkbox"/> Skip	
2013-Aug-29	14:05	2013-Aug-29	14:05		2013-Aug-30	07:00

In the example above, a dose was charted at 1403. Next dose is due at 1405 and has not yet been charted, so the previous scheduled administration is the same as the next administration. The admin info is also dithered as the most recent dose is not charted.

## 9. Rx Bypass

### 9.1 Rx Bypass General Info

- Rx Bypass allows medication orders in bypassed locations to be exempted from the normal pharmacy verification flow.
- The orders will not be on the unverified orders monitor.
- No product will be assigned to the orders.
- The orders will not go to a batch.
- There will be no requirement for pharmacy verification.
- **Currently, there are no locations set up for Rx Bypass**

### 9.2 Providing a Medication for a Patient in a Bypassed Location

**Currently, there are no locations set up for Rx Bypass.** The following provides an overview of the historical bypass process. If a medication is required for a patient in a Bypassed Location you may MODIFY the order. Once the Modify action is applied, the system will try to auto assign a product. If unable you will need to manually select a product to be sent.

### 9.3 Patient Admitted from a Bypassed Location

**Currently, there are no locations set up for Rx Bypass.** The following provides an overview of the historical bypass process

A registration admission sheet will print in pharmacy indicating that a patient has been admitted. The location the patient is admitted from will need to be reviewed to determine if it was a bypassed location. If the patient was admitted from a bypassed location, **each order on the patients profile should have the profile action of modify applied so that the system will auto assign a product.** If the system is unable to auto assign a product, as soon as the modify profile action is applied the Manual Product Select window will display. Once a product is assigned, check over the fields in the medication order window and complete any other modifications that are required. Once complete click OK or ALT + O to finish that order.

**IMPORTANT:** No drug interactions or duplications will fire for the pharmacist if the patient has been admitted from a bypassed location. It is important to always have Powerchart open.

Powerchart you can go to the Med list and click on the Check Interactions button.



This will populate the alerts that are current from the time you click the Check Interactions button for both inpatient and home medications.

Display:	All Active Medications	Order Name	Status	Details	Order Comment
		citalopram	Ordered	30 mg, Oral, Tab, Daily, Start: 2013-Mar-19 09:00	
		FentaNYL (fentaNYL MAT patch)	Ordered	100 mcg, Transdermal, Patch, q72h timed, Start: 2013-Mar-19 10:00	
		heparin flush	Ordered	1 mL, IV, Injection, Once, Start: 2013-Mar-28 08:27, Stop: 2013-Mar-28 08:27	
		hydrochlorothiazide	Ordered	12.5 mg, Oral, Tab, Daily, Start: 2013-Mar-19 09:00	
		ibuprofen	Ordered	400 mg, Oral, Tab, QID, PRN For Fever, Start: 2013-Mar-18 11:02	
		linezolid	Ordered	600 mg, Oral, Tab, q12h timed, Start: 2013-Mar-18 22:00	
		LORazepam (Ativan)	Ordered	1 mg, Oral, Tab, Once, Start: 2013-Jan-29 13:48, Stop: 2013-Jan-29 13:48	
		metoclopramide	Ordered	10 mg, Oral, Tab, QID, Start: 2013-Mar-18 16:00	--- At home, patient was taking medication with the following details: Special Instructions: Take before meals and at bedtime... Take immediately after a meal.
		moclobemide	Ordered	150 mg, Oral, Tab, BID, Start: 2013-Mar-18 21:00	
		naproxen	Ordered	500 mg, Oral, Tab, BID, NOW, Start: 2013-Mar-18 09:36	
		norepinephrine (additive) 4 mg [0.1 mcg/kg/min] + Dextrose...	Ordered	74.25 mL/hr, IV, 250 mL, Start: 2013-Mar-18 15:24	
		ramipril	Ordered	5 mg, Oral, Cap, Daily, Start: 2013-Mar-19 09:00	
		spironolactone	Ordered	25 mg, Oral, Tab, Daily, Start: 2013-Mar-19 09:00	
		tranylcypromine (Parnate)	Ordered	10 mg, Oral, Tab, BID, Start: 2013-Mar-18 21:00	
<b>Documented Medications by Hx</b>					
		citalopram	Documented	30 mg, Oral, Tab, Daily	
		clarithromycin (Biaxin)	Documented	500 mg, Oral, BID	
		hydrochlorothiazide	Documented	12.5 mg, Oral, Daily	
		ibuprofen	Documented	400 mg, Oral, QID, PRN For Fever	

When you hover over the icons in the Interactions column a dialogue box appears.

linezolid

Interactions:

**!!! A major drug-drug interaction exists for this order.**

[Click here to view all interactions for this order](#)

Click on "Click here to view all interactions for this order". This will display all the alerts for the medication chosen. If the alert required the physician/RN to enter an override reason it will be viewable.

linezolid

Severity	Substance	Details	Status	Interaction Information	Reference Information	Override Reason
!!!	citalopram	30 mg, Oral, Daily, 30 tab(s)	Ordered	linezolid-citalopram		Treatment plan requirement
!!!	citalopram	30 mg, 3 tab(s), Oral, Daily	Ordered	linezolid-citalopram		Treatment plan requirement
!!!	meperidine	100 mg, Oral, q4h interval, 20 tab(s), ...	Ordered	linezolid-meperidine		Treatment plan requirement
!!!	moclobemide	150 mg, 1 tab(s), Oral, BID	Ordered	linezolid-moclobemide		
!!!	tranylcypromine (Parnate)	10 mg, 1 tab(s), Oral, BID	Ordered	linezolid-tranylcypromine		Treatment plan requirement
!!!	fentaNYL (fentaNYL MAT patch)	100 mcg, Transdermal, q72h timed	Ordered	linezolid-fentaNYL		
!!!	metoclopramide	10 mg, Oral, QID, Take before meals a...	Ordered	linezolid-metoclopramide		Treatment plan requirement
!!!	metoclopramide	10 mg, 1 tab(s), Oral, QID	Ordered	linezolid-metoclopramide		Treatment plan requirement
!!!	norepinephrine (additive) 4 mg [0.1 mc...	74.25 mL/hr, IV, Stop: 2014-Mar-18 1...	Ordered	linezolid-norepinephrine		

Within this view the physician/RN who overrode the alert is not viewable. If you double click on the medication name in the Substance column it will take you into the order details screen.

Task View Help

Original order entered and electronically signed by Test, CPOE Physician, MD on 2013-Mar-18 at 13:36 .  
Pharmacy Department

**linezolid**

Details Additional Info History Comments Validation Results Ingredients Pharmacy Compliance History

Click on the View alert history icon .

Clinical Checking     Discern

Order sentence:  
linezolid 600 mg/ 1 tab(s) Oral q12h timed

	Ordered Drug	Alert Type	Alert Severity	Interacting Drug	Interacting Order Sentence	Alert Dt/Tm	Personnel Name	Override Reason
1	linezolid	Drug	!!!	citalopram		2013-Mar-18 13:36	Test, CPDE Physician, MD	Treatment plan requirement
2	linezolid	Drug	!!!	metoclopramide	metoclopramide 10 mg/ 1 tab(s) Oral QID	2013-Mar-18 13:36	Test, CPDE Physician, MD	Treatment plan requirement
3	linezolid	Drug	!!!	meperidine		2013-Mar-18 13:36	Test, CPDE Physician, MD	Treatment plan requirement
4	linezolid	Drug	!!!	metoclopramide		2013-Mar-18 13:36	Test, CPDE Physician, MD	Treatment plan requirement
5	linezolid	Drug	!!!	PARoxetine	PARoxetine 60 mg/ 3 tab(s) Oral Daily	2013-Mar-18 13:36	Test, CPDE Physician, MD	Treatment plan requirement
6	linezolid	Drug	!!!	tranylcypromine	tranylcypromine 10 mg/ 1 tab(s) Oral BID	2013-Mar-18 13:36	Test, CPDE Physician, MD	Treatment plan requirement
7	linezolid	Drug	!!!	citalopram	citalopram 30 mg/ 3 tab(s) Oral Daily	2013-Mar-18 13:36	Test, CPDE Physician, MD	Treatment plan requirement

This view will display the alerts and it will display the name of the physician/RN who overrode the alert.

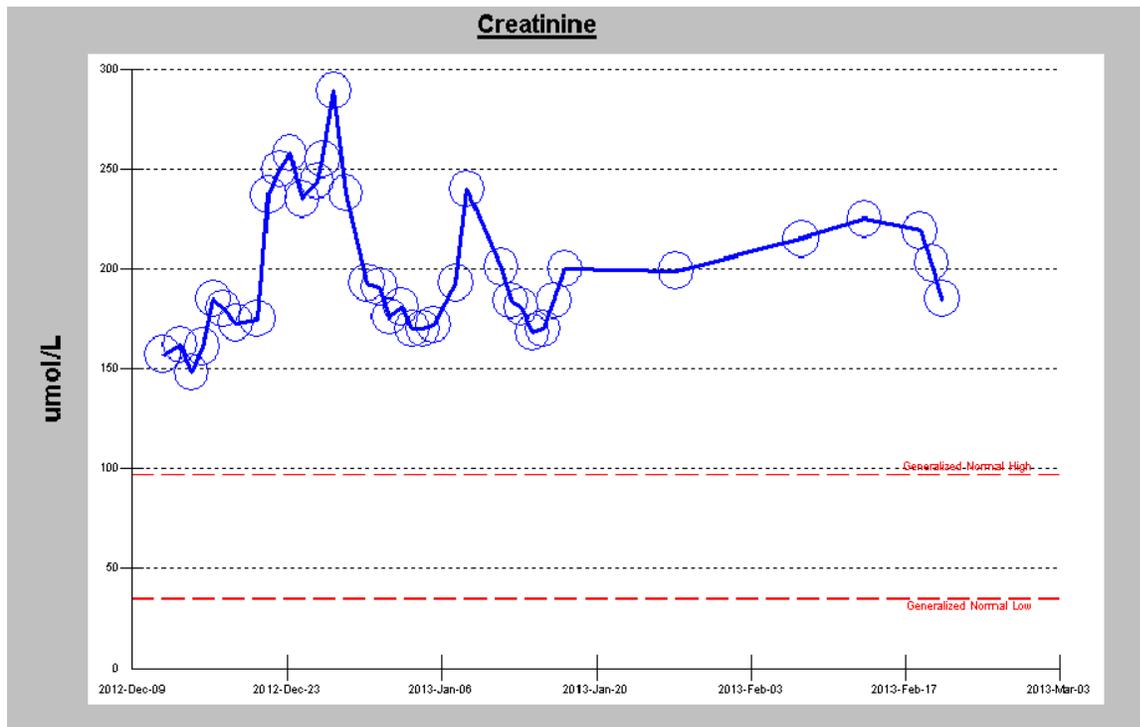
## 10. Trending/Graphing Patient Results

You can use PowerChart's graph in the Results Review section to trend patient results (e.g. Creatinine over time).

Click the grey box to the left of the lab parameter you want to trend. This puts a checkmark in the box to let PowerChart know this is the result you are interested in.

<input type="checkbox"/>	Anion Gap	7 mmol/L	11 mmol/L	12 mmol/L
<input type="checkbox"/>	Urea	H 14.3 mmol/L	H 16.3 mmol/L	H 17.2 mmol/L
<input checked="" type="checkbox"/>	Creatinine	H 185 umol/L	H 203 umol/L	H 219 umol/L
<input type="checkbox"/>	Total Protein			
<input type="checkbox"/>	Albumin Level			

Click the **Graph** icon  on the Toolbar to see the results.



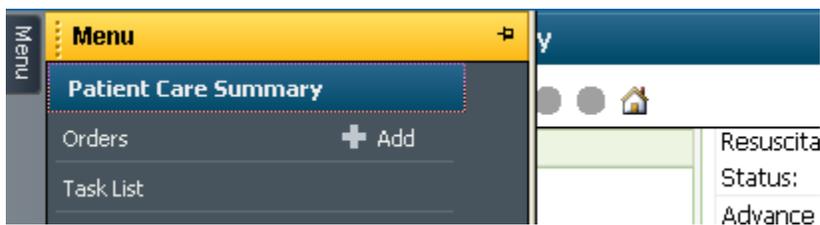
In the Results Review Section you can also sort your results view by Table, Group or List. The default selection will be Table, but if you select Group it also provides visual trending by grouping all the results by parameter.



Lab View		
<b>Routine Chem</b>	<input type="checkbox"/> Creatinine	<input type="checkbox"/> Total Prote
2013-Feb-20 07:45	H 185 umol/L	
2013-Feb-19 08:17	H 203 umol/L	
2013-Feb-18 07:30	H 219 umol/L	
2013-Feb-13 08:00	H 225 umol/L	L 55 g/L
2013-Feb-12 09:40		63 g/L
2013-Feb-07 13:20	H 215 umol/L	L 57 g/L
2013-Jan-27 05:22	H 199 umol/L	
2013-Jan-17 05:00	H 200 umol/L	
2013-Jan-16 05:00	H 184 umol/L	
2013-Jan-15 05:00	H 170 umol/L	
2013-Jan-14 05:40	H 168 umol/L	
2013-Jan-13 05:00	H 181 umol/L	
2013-Jan-12 05:45	H 184 umol/L	
2013-Jan-11 08:50	H 201 umol/L	
2013-Jan-08 07:45	H 240 umol/L	

The box can then be clicked next to the parameter and graph the results from this view as well.

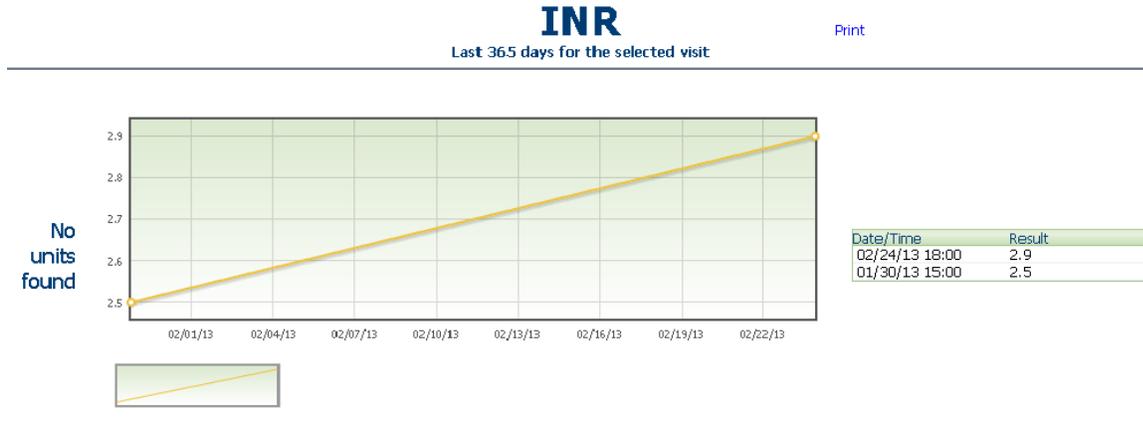
You can also trend results in the Patient Care Summary tab. Select the Patient Care Summary from the Menu.



Find the Lab section of the Patient Care Summary

Labs			
Selected visit ▾			
	Latest within	Previous within	
▾ Lab results (1)			
INR	↑ 2.9 18 hrs	↑ 2.5 4 wks	--

Any result that is blue in color can be double clicked and the results will be trended



## 11. Med Manager Related Results

Related Results can be viewed for applicable orders in the order entry/order verification window (icon beside “Drug” in the top left corner)

Drug: clozapine (Clozani) Dose: 100 mg Ordered As: Clozani

Route: Oral Frequency: Daily Duration: (None) Previous scheduled administration: \*\*\*\*\_\*\*\_\*\_\*

Order comments:

Physician: Unknown Physician, Physician

Time: 12:25 Stop type: Soft Stop Remaining doses:

Product... Printing... Comments... OrderType

**Related Results**

CBC		
WBC	3.80	2022-Dec-19 12:28
	3.80	2022-Nov-07 15:13
Hgb	140	2022-Dec-19 12:28
	140	2022-Nov-07 15:13
Platelet	150	2022-Dec-19 12:28
	150	2022-Nov-07 15:13
RBC	4.50	2022-Dec-19 12:28
	4.50	2022-Nov-07 15:13
Hct	0.500	2022-Dec-19 12:28
	0.500	2022-Nov-07 15:13

Close

## 12. Drug Reference Information accessed within Med Manager

Right click on the order that you require drug reference, an education leaflet, or other reference material for

▼	Active								furosemide 20 mg Oral Daily		
▼	Active								heparin + diluent premix IV Rat	<ul style="list-style-type: none"> <li>Actions ▶</li> <li>Sort By ▶</li> <li>Find...</li> <li>Launch Powerchart</li> <li style="background-color: #e0e0e0;">Reference Information...</li> <li>Properties...</li> </ul>	
▼	Active							heparin + diluent premix IV Rat			
▼	Active							lansoprazole 15 mg Oral BID			
▼	Active							metoclopramide 5 mg Oral TID			
▼	Active							metoprolol 25 mg Oral BID			
▼	Active							metoprolol 25 mg Oral BID			
▼	Active							Neonatal IV Fluid 500 mL IV 6			
▼	Active							nf - test misc drug 1 tab(s) Oral			
▼	Active							nf - test misc drug 1 tab(s) Oral			
▼	Active							norepinephrine + dextrose 5% in water IV 4.69 mL/hr [0.05 mcg/kg/min]			
▼	Active							olanzapine 5 mg Oral Daily			
▼	Active							pantoprazole magnesium 40 mg Oral Daily			
▼	Active							sodium chloride 0.45% with KCl 20 mEq/L 1,000 mL IV 40 mL/hr			

Identified Order:  
furosemide

Drug Reference | Education Leaflet | Reference

[furosemide](#)

**furosemide**

[Pharmacology](#), [Warnings](#), [Pregnancy](#), [Lactation](#), [Side Effects](#), [IV Compatibility](#), [Dosage](#), [Additional Dosage](#)

**Pharmacology (Top)**

**Pharmacology**

Pharmacology Category: Loop diuretic; antihypertensive

Mechanism of Action: Inhibits sodium and chloride reabsorption at the proximal and distal tubules as well as the ascending loop of Henle.

General Uses: Oedema, Hypertension; Oliguria

Local product information should be consulted for approved uses. More information may be available at:  
 AU: [www.ebs.tga.gov.au/](http://www.ebs.tga.gov.au/)  
 ES/CL: [aemps.gob.es/cima](http://aemps.gob.es/cima)  
 UK: [medicines.org.uk](http://medicines.org.uk)  
 US: [daily.med.nlm.nih.gov](http://daily.med.nlm.nih.gov)

**Pharmacokinetics**

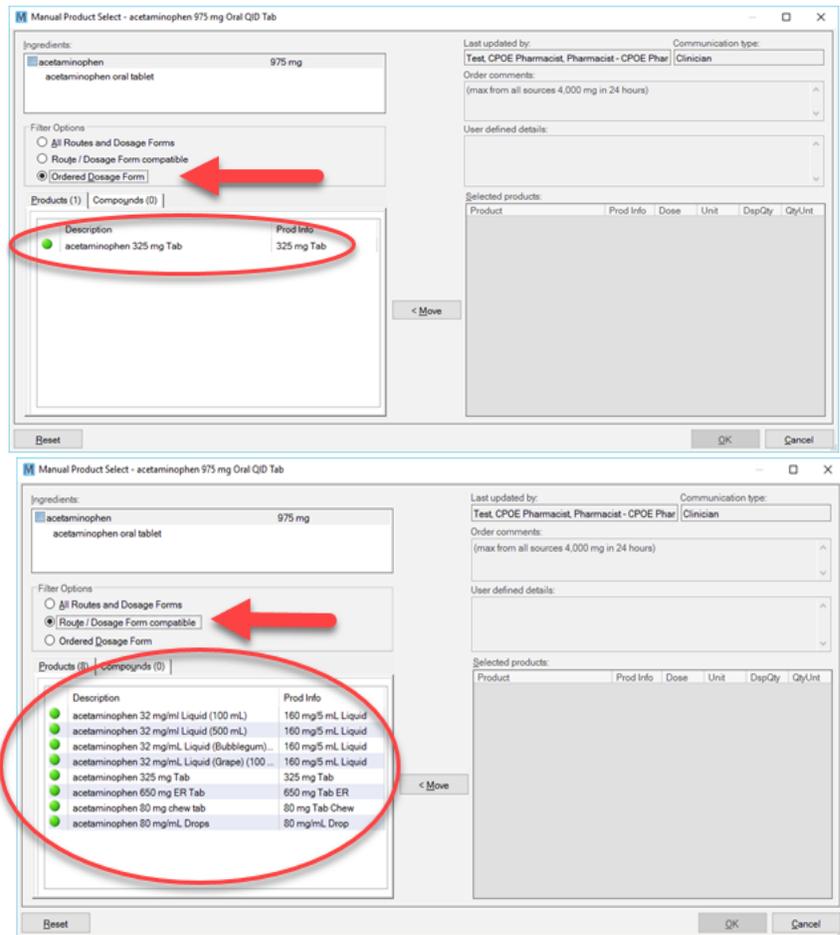
### 13. Med Manager Product Selection Window

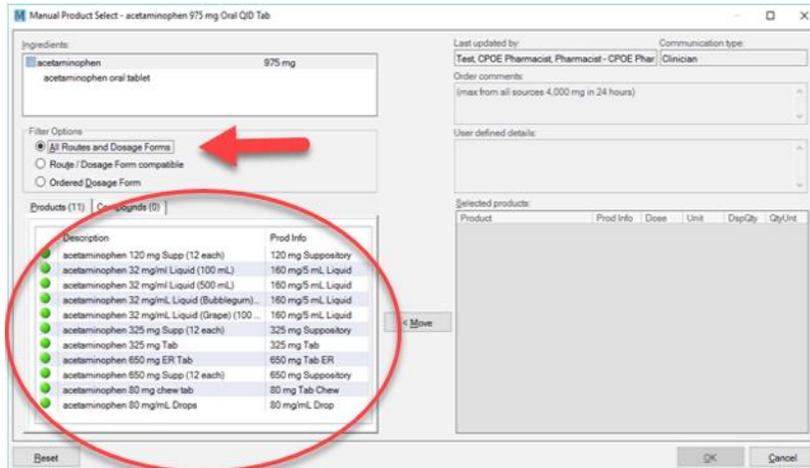
In med manager, automatic product selection will try to match a product (drug) to the order based on

- 1) Dosage form, then
- 2) Ordered Dose/Product strength

If no exact match can be made, the manual product selection window will appear when verifying an order

Users may filter products by ordered dosage form, route/dosage form compatible, or all routes and dosage forms

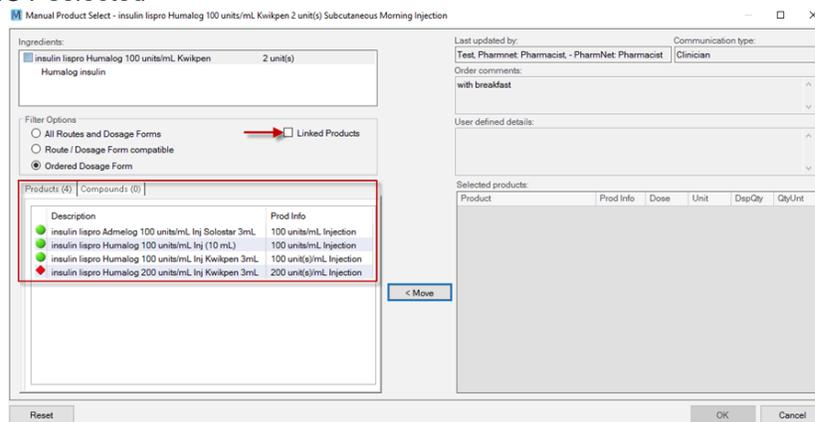




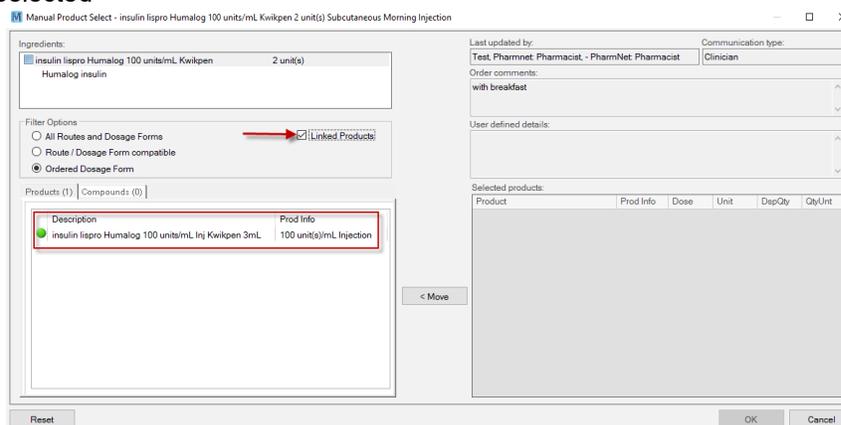
### Filter by Assigned Products in Manual Product Selection

Manual Product Selection (MPS) can also filter products based on the product-synonym configuration. (Synonym-product linking completed by CIS-pharmacy)

### “Linked Products” NOT selected

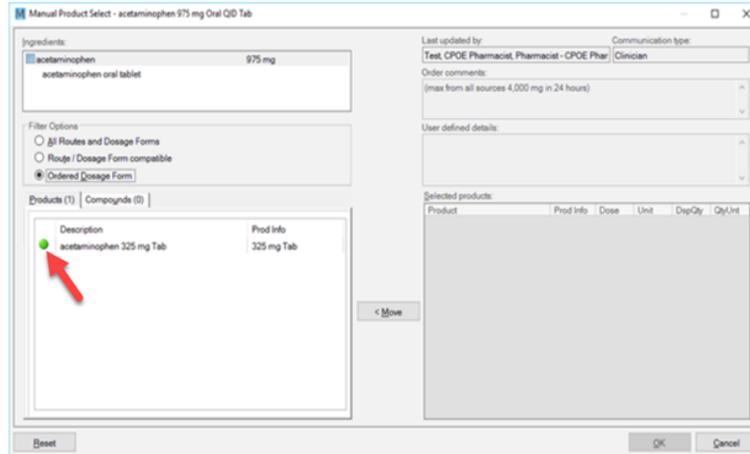


### “Linked products” selected

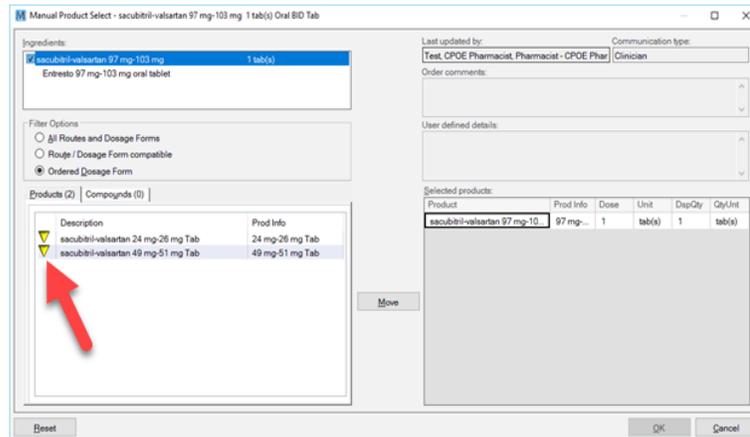


Users are made aware of the formulary status of products based on the color of the icon to the left of the product description.

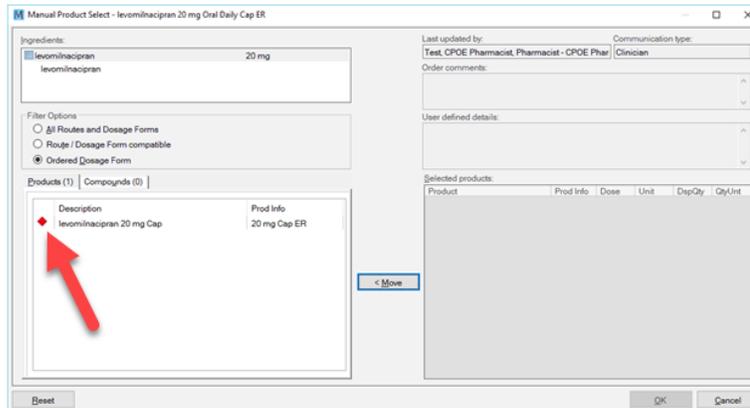
### Formulary



### Restricted



### Non-Formulary



## Product selection

Select the product (highlighted in blue when selected) you would like to assign to the order and then click “Move”

The screenshot shows the 'Manual Product Select' window for 'morphine 5-10 mg IV q4h timed PRN Pain Injection'. The 'Ingredients' section lists 'morphine 5-10 mg' and 'morphine inj'. The 'Filter Options' section has 'Ordered Dosage Form' selected. The 'Products (1)' list shows 'morphine 10 mg/mL Inj (1 mL)' selected. A red arrow points to the 'Move >' button. The 'Selected products' table is empty. The 'Last updated by' field is 'Test, Nurse, RN - Nurse' and the 'Communication type' is 'Written'. The 'Order comments' and 'User defined details' fields are empty. The 'Reset', 'OK', and 'Cancel' buttons are at the bottom.

If the dose entered by the clinician was a free-text dose ie) range dosing, then you will be asked to enter a quantity per dose. **Users should always enter this field as “1”** and click “ok”

The screenshot shows the 'Manual Product Select' window with a dialog box open. The dialog box title is 'morphine 10 mg/mL Inj (1 mL)'. The message says: 'The dose entered did not match the dispensing strength and/or volume. Please enter a quantity per dose.' There is a field for '\* Quantity per dose:' with the value '1' and the unit 'each'. The 'OK' and 'Cancel' buttons are at the bottom of the dialog. The background window shows the 'Products (1)' list with 'morphine 10 mg/mL Inj (1 mL)' selected and the 'Move >' button. The 'Reset', 'OK', and 'Cancel' buttons are at the bottom of the main window.

The product has been moved to the “selected products” field. This field will display the product, product info, dose, dispense quantify, and qty unit (ie “each”, “mL”, “g”)

Click on to complete product assignment.

Manual Product Select - morphine 5-10 mg IV q4h timed PRN Pain Injection

Ingredients:

- morphine 5-10 mg
- morphine inj

Filter Options:

- All Routes and Dosage Forms
- Route / Dosage Form compatible
- Ordered Dosage Form
- Linked Products

Products (0) | Compounds (0)

Description | Prod Info

Move >

Selected products:

Product	Prod Info	Dose	DspQty	QtyUnit
morphine 10 mg/mL Inj (1 mL)	10 mg/mL	5-10 mg	1	each

Reset OK Cancel

... Patient's own med  
 Auto calculate initial dose Reject OK Cancel

### IV Sets During Manual Product Selection

The “IV Sets” tab can be selected rather than the “Products” tab in the Manual Product Selection window when at least one IV set is available for selection for an order.

Manual Product Select - oxytocin - lactated ringers IV 100 mL/hr [30 units/min] Injection

Ingredients:

- oxytocin 30 unit(s) / 3 mL
- oxytocin (additive)
- lactated ringers 1,000 mL
- Ringer's Lactate

Products (1) | IV Sets (7) ←

Description

- Oxytocin IV Infusion 10 units/1000 mL
- Oxytocin IV Infusion 20 units/500 mL
- Oxytocin IV Infusion 30 units/1000 mL
- Oxytocin IV Infusion 30 units/500 mL
- Oxytocin IV Infusion 40 units/1000 mL
- Oxytocin IV Infusion Protocol A 30 units/500 mL Ringer's Lactate
- Oxytocin IV Infusion Protocol B 30 units/500 mL Ringer's Lactate

Select >

Move >

Selected products:

Product	Prod Info	Dose	Unit	DspQty	QtyUnit
oxytocin 10 IU/mL Inj (1mL)	10 unit...	30	unit(s)	3	each

Reset OK Cancel

## 14. Multi-Ingredient Orders and Labels

The clinician enters an order for a medication dose in powerchart that requires a combination of products to achieve the total dose. Example: pregabalin 125 mg po BID.

**Details for pregabalin**

Details | Order Comments

Remaining Administrations: 73

\*Dose: 125 mg

Route of administration: Oral

Drug Form: Cap

\*Frequency: BID

PRN:

Duration from start to end point:

Priority:

May use own medication:  Yes  No

May self administer:  Yes  No

Special Instructions:

\*\*\* Independent Double Check Required \*\*\*:  Yes  No

\*Start Date/Time: 2019-Aug-14 21:00

Stop Date/Time: <No Items>

Stop type: Soft Stop

The pharmacist verifies the order in Med Manager. If applicable, the system will default to provide ONE single product that will divide evenly into the dose.

**Verify Med Order**

Drug: pregabalin

Dose: 125 mg

Ordered As: pregabalin

Route: Oral

Frequency: BID

Duration: 365 day(s)

\*Start date: 2019-Aug-14 21:00

\*Time: 21:00

Stop date: 2020-Aug-13 20:59

\*Stop type: Soft Stop

Previous scheduled administration: 2019-Aug-14 09:00

Next administration: 2019-Aug-15 09:00

Following: 2019-Aug-15 21:00

Remaining doses: 730

Order comments:

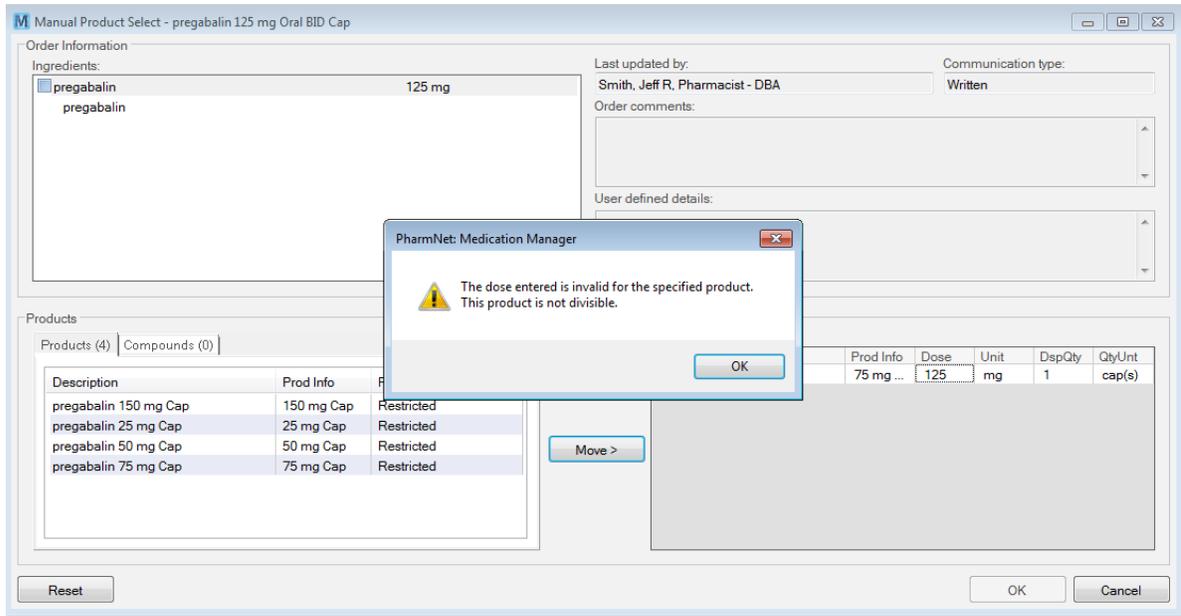
Order Products

Product	QtyPerDose	QtyUnit	24HrPar	Manufacturer
pregabalin 25 mg Cap	5	cap(s)	0	Pharmascience Inc

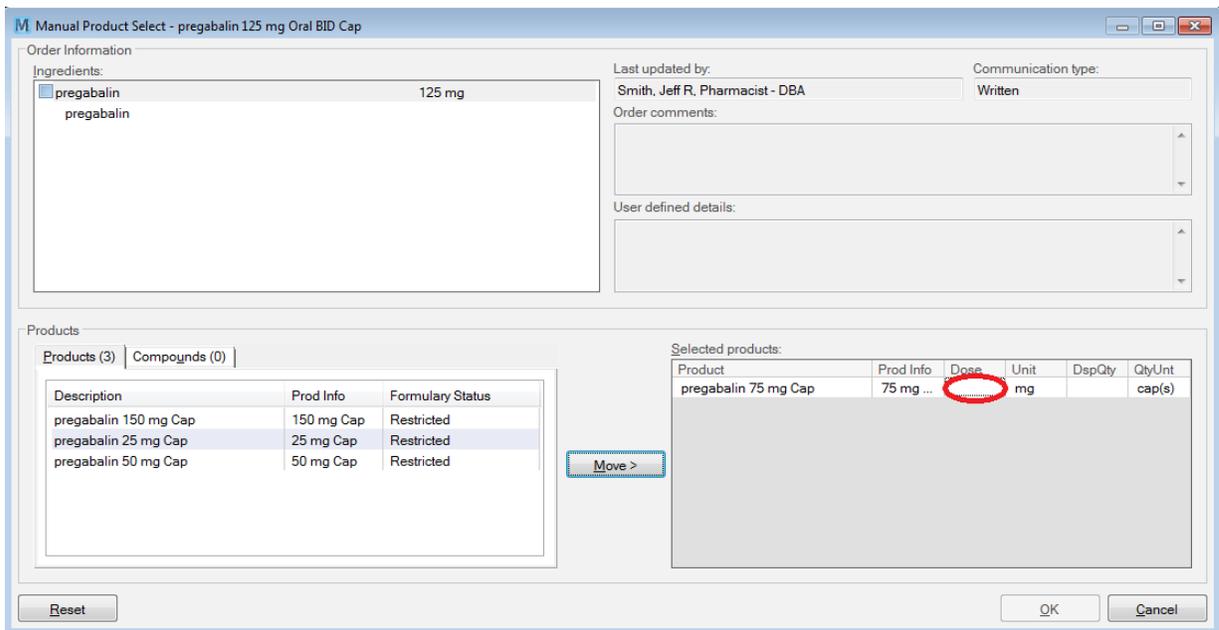
Product...  
Printing...  
Comments...  
Order Type  
Rx History...  
Rx Intervention

Reject OK Cancel

The user will have the option to click on Prod Select and enter multiple products to achieve the total dose. Upon selecting the first product the user wishes to use, the following message may be received. *The dose entered is invalid for the specified product. The product is not divisible.* Click OK to proceed



The user will manually enter the amount of the first product (in mg) that they wish to use in order to achieve the total dose in the “Dose” field. In this example, we wish to achieve a cumulative dose of 75 mg with the pregabalin 75 mg cap. Insure that the “DispQty” field is correct based on the quantity entered in the “Dose” field. In this case, the system has calculated that 1 cap is required to achieve 75 mg using 75 mg capsules.



Add the second product that will be used to make up the total dose. Insure that the “Dose” and “Disp Qty” fields are correct for the second product. Verify that the “Dose” and “Disp Qty” fields accurately represent the required total dose.

Manual Product Select - pregabalin 125 mg Oral BID Cap

Order Information

Ingredients:

- pregabalin 125 mg
- pregabalin

Last updated by: Smith, Jeff R, Pharmacist - DBA

Communication type: Written

Order comments:

User defined details:

Products

Products (2) | Compounds (0)

Description	Prod Info	Formulary Status
pregabalin 150 mg Cap	150 mg Cap	Restricted
pregabalin 25 mg Cap	25 mg Cap	Restricted

< Move

Selected products:

Product	Prod Info	Dose	Unit	DspQty	Qty/Unt
pregabalin 75 mg Cap	75 mg ...	75	mg	1	cap(s)
pregabalin 50 mg Cap	50 mg ...	50	mg	1	cap(s)

Reset OK Cancel

In this second example below, the user requires a total dose of **175 mg**. They wish to use, two, 75 mg capsules and one, 25 mg capsule. Select the 75 mg cap and enter 150 mg in the “Dose” field. The “DispQty” field populates as 2 cap(s). The user then selected the 25 mg cap, the “Dose field” populates to 25 mg and the “DisQty” field populates to 1 cap

Manual Product Select - pregabalin 175 mg Oral BID Cap

Order Information

Ingredients:

- pregabalin 175 mg
- pregabalin

Last updated by: Smith, Jeff R, Pharmacist - DBA

Communication type: Written

Order comments:

User defined details:

Products

Products (2) | Compounds (0)

Description	Prod Info	Formulary Status
pregabalin 150 mg Cap	150 mg Cap	Restricted
pregabalin 50 mg Cap	50 mg Cap	Restricted

Move >

Selected products:

Product	Prod Info	Dose	Unit	DspQty	Qty/Unt
pregabalin 75 mg Cap	75 mg ...	150	mg	2	cap(s)
pregabalin 25 mg Cap	25 mg ...	25	mg	1	cap(s)

Reset OK Cancel

If the user accidentally enters an incorrect amount that does not properly yield the total dose, the “Ok” button will remain grayed out. The pharmacist should verify that the combination of products selected will yield the correct total dose before clicking OK.

**M Manual Product Select - pregabalin 25 mg Oral Cap**

Order Information

Ingredients:

<input checked="" type="checkbox"/> pregabalin	175 mg
Lyrica	

Last updated by: \_\_\_\_\_ Communication type: Written

Order comments:

User defined details:

Products

Products (2) | Compounds (0)

Description	Prod Info	Formulary Status
pregabalin 150 mg Cap	150 mg Cap	Restricted
pregabalin 50 mg Cap	50 mg Cap	Restricted

< Move

Selected products:

Product	Prod Info	Dose	Unit	DspQty	QtyUnt
pregabalin 75 mg Cap	75 mg ...	150	mg	2	cap(s)
pregabalin 25 mg Cap	25 mg ...	50	mg	2	cap(s)

Reset OK Cancel

Initial quantity field will remain grayed out due to multiple products being selected.

**M Verify Med Order**

Drug: \_\_\_\_\_

Drug	Dose	Ordered As
pregabalin	125 mg	pregabalin

Update Remove Modify

\*Route: Oral \*Frequency: BID  PRN doses: \_\_\_\_\_ PRN reason: (None) \*Physician: Unknown Physician, Physician

Duration: 365 day(s) \*Start date: 2019-Aug-14 \*Time: 21:00 Stop date: 2020-Aug-13 Time: 20:59 \*Stop type: Soft Stop

Previous scheduled administration: \*\*\*\*.\*\*\*.\*\*\* Next administration: 2019-Aug-15 09:00  Skip Following: 2019-Aug-15 21:00  Skip Remaining doses: 730

Order comments: \_\_\_\_\_ Product notes: \_\_\_\_\_

Dosage form: Cap \*Communication type: Written Order priority: (None) Sequence: (None)

\*Dispense category: TAB/CAP \*Dispense from location: Pharmacy QEH Inventory Initial doses: 1

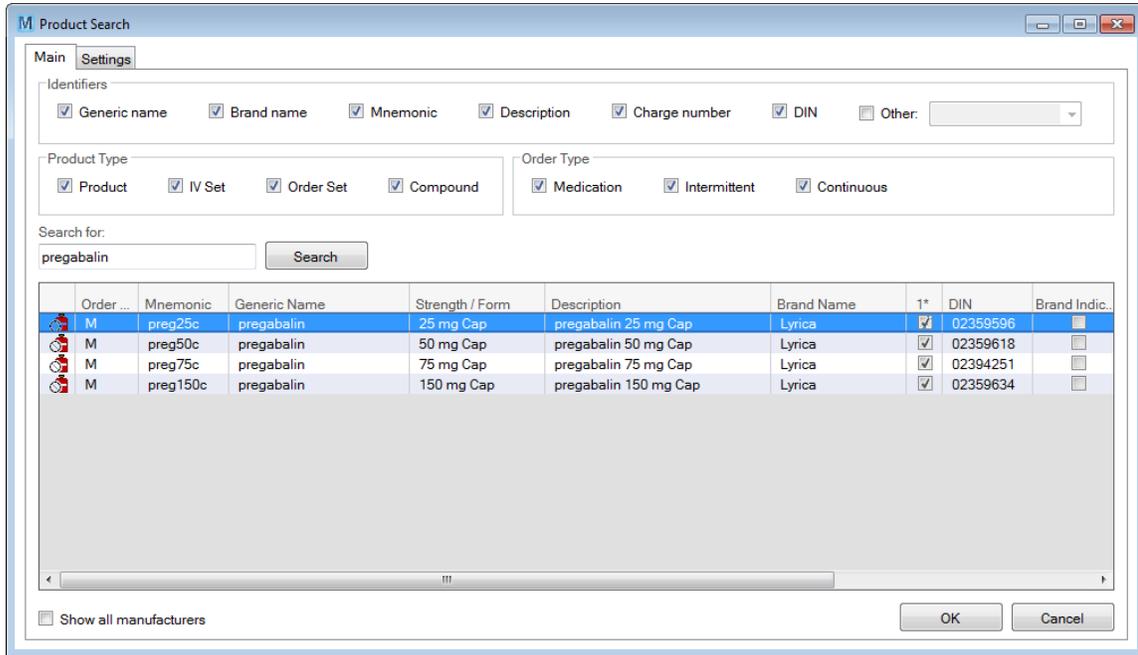
\*Billing formula: Pharmacy Price: \$0.37 Cost: \$0.37

Patient's own med  Auto calculate initial dose

Product... Printing... Comments... Order Type Alert History... Rx Intervention

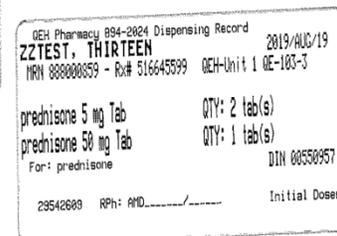
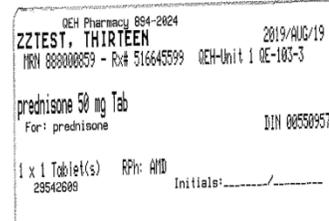
Reject OK Cancel

If the user wishes to enter a drug order directly from Med Manager (as opposed to PowerChart), initially pick a product that you know is divisible into the total dose. *Ex My total dose of Pregabalin is 175 mg. I will initially pick the 25 mg capsule.* Modify the dose on the New Med Order screen to reflect the total dose, then select the products you wish to use to achieve the total dose as in steps 4-5.



**Only products with the same dosage form should be assigned to a single order. (For example, do not assign a 100 mg ER cap and a 50 mg chewable tablet to the same order.) The clinical display line will only display one dosage form.**

Separate labels will be printed out for each product selected, as well as a dispensing record label which includes the name(s)/strength(s) of the products selected in the order and the quantity of each



Nursing staff will be supplied with multiple products but will have one task (the total dose) to chart on.

**ZZTEST, PATIENT BEDTWENTY** Age: 19 years  
DOB: 1999-Nov-23

**ZZTEST, PATIENT BEDTWENTY**  
Inpatient [2019-Jun-06 14:38:00 - <No - Discharge date>]  
Violent/Aggressive: Yes

**Menu**

- Handoff
- Discharge Summary
- Patient Summary
- Orders + Add
- Transfusion Summary Report
- Overview
- Results Review
- Problems and Diagnoses
- Assessments
- Documents
- Form Browser
- MAR
- MAR Summary**
- Med List + Add
- Allergies + Add
- Task List
- Reference Text Browser

**MAR Summary**

Time View	2019-Aug-15 0700 - 0659	2019-Aug-14 0700 - 0659	2019-Aug-13 0700 - 0659	2019-Aug-12 0700 - 0659
<b>Scheduled</b>				
<b>pregabalin</b> 125 mg, Oral, Cap, BID, Start: 2019-Aug-14 21:00	@0900	@2100		
	@2100			

**Charting for: ZZ TEST, PHARMACY INTERACTION TESTING**

**pregabalin (Lyrica)**  
125 mg, Oral, Cap, Daily, Start: 2021-Apr-23 09:00

\*Performed date / time: 2021-Apr-22 1032

\*Performed by: Smith, Jeff R, Pharmacist

Witnessed by:

Primary Pain Intensity:  [Trend](#)

\*pregabalin: 125 mg Volume: 0 ml

Diluent: <none> ml

\*Route: Oral Site:

Total Volume: 0 Infused Over: 0

2021-Apr-22 0900 1000 1100 1200 1300 1400

Not Given

Reason:

Comment

If nursing staff would like to verify which products they are intended to use to make up the total dose, they can right click on the drug order in question and select “order information”. Under the “Pharmacy” tab and “Dispense Info” they may view the products that were dispensed to provide the total dose.

**P** ZZTEST, PATIENT BEDTWENTY - Order Information for: pregabalin

Task View Options Help

Original order entered and electronically signed by Smith, Jeff R, Pharmacist on 2019-Aug-16 at 10:12 .  
Written order by Unknown Physician, Physician,  
Pharmacy Department

**pregabalin**

Details Additional Info History Comments Validation Results Ingredients **Pharmacy** Compliance History Plan History

Dispense Info

**Dispense Info**  
**pregabalin 75 mg Cap + pregabalin 50 mg Cap 125 mg**  
 pregabalin 50 mg Cap 1 cap(s)  
 pregabalin 75 mg Cap 1 cap(s)

**Note that these amounts are the amounts dispensed – not necessarily the amount to administer. In the example below, only HALF of the 50 mg prednisone tablet is to be administered.**

**prednisone**

Details Additional Info History Comments Validation Results Ingredients **Pharmacy** Compliance History Plan History

Dispense Info

**Dispense Info**  
**prednisone 50 mg Tab + prednisone 5 mg Tab 45 mg**  
 prednisone 5 mg Tab 4 tab(s)  
 prednisone 50 mg Tab 1 tab(s)

The cMAR will display the total dose only (ondansetron 4 + 8 mg ODT products assigned)

<b>ondansetron</b>	09:00
(Zofran ODT)	21:00
<b>12 mg Oral Tab RD, 2 times a day</b>	
Start: _____ Stop: _____	
**Do not open blister until ready to administer. Do not crush, chew or break tablets. The tablets disintegrate in the mouth within seconds and can be swallowed with or without water.**	
**Do not open blister until ready to administer. Do not crush, chew or break tablets. The tablets disintegrate in the mouth within seconds and can be swallowed with or without water.**	

In Charge/Credit, crediting a “dose” of the single order will credit back the quantity of each ingredient dispensed. In this example, Prednisone (2x5 mg) + (1 x 50 mg) = 60 mg is to be credited back

Status	Order Display	Qty	Avail. Dose	Avail. Qty	Total Dose	Total Qty	Dispense From Location	Price Schedule	Order#	Return to Inv.
Active	caffAZdine 2.750 mg IV intrnal q8h	0		0	0	0	Pharmacy	515842977		Yes
Active	caffAZdine 2.750 mg IV intrnal q8h	0		0	0	0	Pharmacy	515846545		Yes
Active	siTTAZem + NaCl 0.9% IV 5 mL/hr [5 mg/h]	1		1	1	1	Pharmacy	515825233		Yes
Active	insulin degludec Tresiba 200 units/mL 20 u	0		0	0	0	Pharmacy	516630819		Yes
Deleted	insulin degludec Tresiba 200 units/mL 40 u	0		0	0	0	Pharmacy	516638539		Yes
Active	insulin degludec Tresiba FlexTouch 20 unit	0		0	0	0	Pharmacy	516638579		Yes
Discontin...	prednisone 60 mg Oral Daily	1		1	1	1	Pharmacy	51582545		Yes
Deleted	prednisone 60 mg Oral Daily	1		1	1	1	Pharmacy	516645599		Yes
Active	prednisone 60 mg Oral Daily	1		1	1	1	Pharmacy GEH Inventory	516645675		Yes

prednisone 60 mg Oral Daily

Action history     Dispense history     Verification history

History Event	Date/Time	User	Doses
Order - 516645675	2019-Aug-19 11:51	Doucette, Angela M, Pharmacist	
Verified	2019-Aug-19 11:53	Doucette, Angela M, Pharmacist	
Modify	2019-Aug-19 11:53	Doucette, Angela M, Pharmacist	
Initial Doses	2019-Aug-19 11:53	Doucette, Angela M, Pharmacist	1
Manual Credit	2019-Aug-19 11:53	Doucette, Angela M, Pharmacist	1
Fill List	2019-Aug-19 12:03	Doucette, Angela M, Pharmacist	1

**Products**

Product	Qty	Price Schedule	Manufacturer	Drug ID
prednisone 50 mg Tab	1	Pharmacy	Apotex Inc.	00550957
prednisone 5 mg Tab	2	Pharmacy	Novopharm Ltd.	00021695

Close

**Non PacMed Batch Checklist Display**

Example: ondansetron (2 x 4 mg) + (2 x 8 mg) to make up TWO doses of 12 mg

```

SCH      ondansetron ODT 4 mg Tab                Dose: 12 mg
          ondansetron ODT 8 mg Tab                Dose: 12 mg
          Dispense:      2 x      1.00 tab(s)      Quantity:_____
          Route: Oral           Sig: 2 times a day      Stop date: * 18/Aug/2020 20:59
          **Do not open blister until ready to administer. Do not crush, chew
          or break tablets. The tablets disintegrate in the mouth within
          seconds and can be swallowed with or without water.**
  
```



## VERSION CHANGES

### Version #1 – June 2013

### Version #2 – August 2013 – CHANGES

Section 4.8.1 – Add an Allergy (Select the Category)  
Section 4.8.7 – Updating No Known Allergy (NEW SECTION)  
Section 5.1.1 – Field Order Priority/Entry  
Section 5.4 - Pharmacy Order Priority  
Section 6.22 - Reminder  
Section 6.2.8 - Modify  
Section 8.1.4 – Pharmacist Verification Overview  
Section 8.7 - Non Medication Orders (Handi Halers and Insulin Pens)  
Section 9 – Order Entry/Order Verification: Clinical Considerations (NEW SECTION)  
Section 9.1 – Order Comments  
Section 9.1.1 – Admin Notes (NEW SECTION)  
Section 9.2 – Conditional Orders  
Section 9.10.1 – Continuous Infusion Considerations  
Section 9.10.2 – Continuous Infusions that are not built in PowerChart  
Section 9.12.3 – Documenting a PCA Bolus/Demand Only Order  
Section 9.23 – Suspend Orders  
Section 9.25 – Changing the Defaulted Route on a Medication Order Sentence in PowerChart (NEW SECTION)  
Section 9.26 – Warfarin Considerations (NEW SECTION)  
Section 9.27 – Medication Alerts CareSet (NEW SECTION)  
Section 9.28 – New Tasks Firing After Task Documentation (NEW SECTION)  
Section 9.29 – Advanced Order Rescheduling (NEW SECTION)  
Section 10.4 – Technician Receiving Medication Request for a Patient In/From an Rx Bypassed Location (NEW SECTION)  
Section 12 – CIS Documentation of Home Medications in Document Medication by Hx

### Version #3 – February 2014 – CHANGES

Section 5.1.1 – Medication Lists – Change to “List”  
Section 5.2.1 – Types of Frequencies – Change to “One Time (Once)”  
Section 6.2.3 – Discontinue – Change to “ NOTE:”  
Section 8.3 – Order Comments vs Product Notes vs Special Instructions – Change to “The following things should NOT be included in Order Comments #4”  
Section 8.3 – Change to Special Instructions  
Section 8.8 – Assigning Par Doses  
Section 9.1 – Order Comments  
Section 9.10 – Dose Calculator – NEW section  
Section 9.10.4 – Changing the Concentration or Bag Size – NEW section  
Section 9.11 – Pharmacy Process for TPN orders  
Section 9.12. 4 - Verification of Epidurals  
Section 9.21 – Medications that DO NOT REQUIRE VERIFICATION – bullet added  
Section 9.22 - Furosemide between units of blood – Section removed  
Section 9.25 - Changing the Defaulted Route on a Medication Order Sentence in PowerChart  
Section 12 – CIS Documentation of Home Medications in Med List – Section REMOVED

## **Version #4 – October 2017 – CHANGES**

Section 1 (1.1-1.4) - removed

Section 2.2 - removed line “they will be brought live in a staged manner”, updated CareNet - Clinical Documentation – powerforms

Section 4.7.2 - Calculating Estimated Creatinine Clearance (CrCl)

Section 4.5 - Added “problems” to the clinical summary SlideBar

Section 6.3 - tranylcypromine, sumatriptan, dihydroergotamine added to list of medications

Section 9.1.1 - Admin notes: removed

Section 9.1.2 - Rx Comments: reference to paper world removed

Section 9.3.2 - Modified orders

Section 9.4 - Correction Insulin – new process

Section 9.12.4 - Verification of Epidurals (or Peripheral Nerve Blocks)

Section 9.18 - Orders with a Therapeutic Substitution – new process

Section 9.19 - Entering Orders with a Dose Range – removed

Section 10.4 - Technician Receiving Medication Request for a Patient In/From an Rx Bypassed Location – removed

**\*Note\*\*** due to sections being removed, above section #'s may not line up with new table of contents