

Pharmacy Patient Monitor (PPM)

Overview

The Pharmacy Patient Monitor (PPM) is a workflow MPage view in PowerChart that displays patients who have work items that need pharmacy interaction, such as reviewing inpatient orders needing verification or medication requests needing processing. The list of patients and orders can be searched, sorted, and filtered to meet workflow needs.

For pharmacy staff, beneficial features include:

- Displays work items to be processed in a patient-centric view.
- Displays how long a work item has been queued.
- Prioritises urgent work items – i.e. STAT/NOW orders and High/Medium priority medication requests.
- Multiple views can be set up and sorted in various ways.
- Search functionality using different criteria is available.

1. View Selection

2. Search Field

Allow the ability to search for patient by list of parameters. (All, Dispense Location, FIN, MRN, Name etc.)

3. Priority Indicator

Inpatient Orders	Med Requests
STAT	High
NOW	Medium
No priority	Low

Priority Coloured bar indicators prioritise work items on the PPM as follows:

- **Red** – inpatient orders with a First Dose Priority of STAT and medication requests with a priority of High.

- **Orange** – inpatient orders with a First Dose Priority of NOW and medication requests with a priority of Medium.
- **No colour** – inpatient orders with either no First Dose Priority or a First Dose Priority of Routine and medication requests with a priority of Low.

4. Sorting view: Patient centric vs Order centric

Patient Centric View

The screenshot shows the Pharmacy Patient Monitor interface. On the left, a list of patients is displayed with their MRN, name, age, and queue time. The patient MCTEST, Sanity (MRN: 2660026) is highlighted. On the right, the detailed view for this patient shows an inpatient order for paracetamol 300 mg, Oral, 6 hourly, PRN pain, analgesia. The order status is 'Ordered' and the queue time is 66 days. The interface also shows the patient's room (01) and the ward (Surgical Ward).

Order Centric View

The screenshot shows the Pharmacy Patient Monitor interface in Order Centric View. The top right corner shows 'Inpatient Orders 220' and 'Medication Request 38'. The main area displays a table of inpatient orders for patient MCTEST, Sanity (MRN: 2660026). The table columns include Room, Name, Status, N., Last Unverified Action, R., Order Description, Start Date/Time, and Order Sentence.

Room	Name	Status	N.	Last Unverified Action	R.	Order Description	Start Date/Time	Order Sentence
02	TEST, Dannione	Ordered		Activate		cefaZOLin 1 g, IV Bolus, ONCE, STAT, Stop Date: 21-Sep-23 14:17:00 AEST, Other (specify in indication...	21/09/2023 14:17 AEST	cefaZOLin 1 g IV Bolus ONCE
-	UCTEST, Bbone	Ordered		Resume		amoxicillin 30 mg, Oral, 8 hourly, PRN diabetes insipidus, Sinusitis - Acute, Severe infection	09/08/2023 15:51 AEST	amoxicillin 30 mg Oral 8 hourly PRN diabetes insipidus
-	UCTEST, Bbone	Ordered		Activate		methotrexate (methotrexate intrathecal) 12 mg, Intrathecal, chemo-once, Stop Date: 13-Aug-23 8:...	13/08/2023 8:00 AEST	Day 38 methotrexate intrathecal 12 mg Intrathecal chemo-once
-	UCTEST, Bbone	Ordered		Order		morphine (morphine PCA/NCA/infusion) Paper Chart, IV Continuous Infusion, As Indicated, PRN pa...	09/08/2023 16:52 AEST	morphine PCA/NCA/infusion Paper Chart IV Continuous Infusion As Indicated PRN pain
-	UCTEST, Bbone	Ordered		Order		aspirin 5 mg, Oral, daily, test	10/08/2023 8:00 AEST	aspirin Cap-EC 5 mg Oral daily
-	UCTEST, Bbone	Ordered		Order		olanzapine (olanzapine 210 mg intramuscular modified release injection) 10 mg, Ear-Right, 36...	09/08/2023 17:00 AEST	olanzapine 210 mg intramuscular modified release injection 10 mg Ear-Right 36 hourly
-	UCTEST, Bbone	Ordered		Order		sevelamer 800 mg, Oral, TDS, PRN with meals (phosphate binder), Phosphate binder, Tablet must be sw...	09/08/2023 17:16 AEST	sevelamer Tab 800 mg Oral TDS PRN with meals (phosphate binder)
-	UCTEST, Bbone	Ordered		Order		aspirin 7.5 mg, Oral, 6 hourly, PRN constipation, Kawasaki's disease	09/08/2023 17:33 AEST	aspirin 7.5 mg Oral 6 hourly PRN constipation
-	UCTEST, Bbone	Ordered		Order		aspirin 3 mg, Oral, daily, Kawasaki's disease	10/08/2023 8:00 AEST	aspirin 3 mg Oral daily
-	UCTEST, Bbone	Ordered		Order		aspirin 12.5 mg, Oral, 6 hourly, Rheumatic fever/anti-inflammatory	09/08/2023 18:00 AEST	aspirin 12.5 mg Oral 6 hourly
-	UCTEST, Bbone	Ordered		Order		naloxone 5 microg, IV Bolus, every 2 minutes, PRN diabetes insipidus, Opioid depression with therapeut...	09/08/2023 18:02 AEST	naloxone Injection 5 microg IV Bolus every 2 minutes PRN diabetes insipidus
02	THREEPIO, See	Ordered		Order		vancomycin (vancomycin intravenous) 120 mg, IV Intermittent Infusion, 6 hourly, Meningitis - Empir...	10/08/2023 8:00 AEST	vancomycin intravenous Infusion 120 mg IV Intermittent Infusion 6 hourly
01	MCTEST, Sanity	Ordered		Order		paracetamol 300 mg, Oral, 6 hourly, PRN pain, analgesia	10/08/2023 13:58 AEST	paracetamol 300 mg Oral 6 hourly PRN pain
02	EMHUPGRADE, Passivitytwo	Ordered		Order		salbutamol (salbutamol 2.5 mg/2.5 mL inhalation solution) Nebulised Inhalation, 4 hourly, Asthma	11/08/2023 10:00 AEST	salbutamol 2.5 mg/2.5 mL inhalation solution Nebule 2 puff(s) Nebulised Inhalation 4 hour
02	EMHUPGRADE, Passivitytwo	Ordered		Order		QUETIAPINE (quetiapine MR) 150 mg, Oral, night, Modified Release, Psychosis and delusional thought...	11/08/2023 11:00 AEST	quetiapine MR 150 mg Oral night
02	EMHUPGRADE, Passivitytwo	Ordered		Order		itraconazole (itraconazole 10 mg/mL oral solution) 125 mg, Oral, 12 hourly, Tinea, Prophylaxis of...	11/08/2023 10:00 AEST	itraconazole 10 mg/mL oral solution Solution 125 mg Oral 12 hourly
02	EMHUPGRADE, Passivitytwo	Ordered		Order		cytarabine (cytarabine IV) 146 mg, IV Intermittent Infusion, chemo-q24h	15/08/2023 13:54 AEST	cytarabine IV 146 mg IV Intermittent Infusion chemo-q24h
02	EMHUPGRADE, Passivitytwo	Ordered		Order		unlisted medication (Standard order routed for cosign) Standard order routed for cosign, 1 tab(s),...	16/08/2023 20:00 AEST	TNF - Standard order routed for cosign 1 tab(s) Oral BD
02	EMHUPGRADE, Passivitytwo	Ordered		Order		apixaban 5 mg, Oral, 12 hourly, Maintenance: Heparin-induced thrombotic thrombocytopenia syndrome...	16/08/2023 13:00 AEST	apixaban 5 mg Oral 12 hourly

5. Order Priority view

The screenshot shows the Order Priority View dialog box. It displays a table of medication requests with columns for Order Description, Patient, MRN, Queue Time, and Location. The requests are sorted by priority, with 'cefaZOLin 1 g, IV Bolus, ONCE, STAT' at the top (22 days queue time) and 'apixaban 5 mg, Oral, 12 hourly' at the bottom (103 days queue time).

Order Description	Patient	MRN	Queue Time	Location
cefaZOLin 1 g, IV Bolus, ONCE, STAT	TEST, Dannione - 7 years	2660088	22 days	CHW / Clancy
Medication Request				
cefTRIAxONE 580 mg, IV...	YOU, Celina Kai yi - 6 years	1376442	103 days	CHW / Hunter Baillie Ward
monobasic sodium phos...	AIULU, Peter Tua - 15 years	1042762	103 days	CHW / Commercial Travell...
CLONazepam 2 mg, Oral,...	TEST, Dannitwo - 7 years	2660062	37 days	CHW / Hall Ward
parecoxib 22.5 mg, IV Bol...	EMMUPGRADE, Passivity KJ...	2660024	36 days	CHW / Hall Ward
parecoxib 22.5 mg, IV Bol...	TEST, Karen - 10 years	2660017	36 days	CHW / Clancy
magnesium/manganese...	JAMES, Riley William - 17 y...	990435	103 days	CHW / Camperdown Ward
olanzapine (olanzapine...	XU, Patrick - 7 years	1344418	103 days	CHW / Camperdown Ward

6. Settings

Adjust User Preferences, Create/Edit or Delete View

7. Inpatient Orders

The screenshot shows the 'Inpatient Orders' window with a dropdown menu expanded for 'magnesium (as aspartate) (magnesium (as aspartate) 37.4mg oral tablet) 1 tab(s), Oral, daily, test'. The details are as follows:

Status: Ordered	Queue time: 1 hr 21 min
Rx priority: Routine	Start date/time: 13/10/2023 15:00:00 AEDT
Ordering physician: None, Specified	MRN: 1660000
Route: Oral	FIN: 7420984
Formulary status:	Facility: CHW
Update date/time: 13/10/2023 14:55:36 AEDT	Nurse unit: Hall Ward
Start dispense date/time:	Room: 04
Last unverified action: Order	Medical service: Infectious Diseases

Buttons: Remove, View, Process

The following actions may be performed on inpatient orders within the PPM:

- Remove – removes orders from the queue without any further action. Orders will still display in PharmNet.
- View – opens the patient’s Acute Profile in Medication Manager (PharmNet). Orders will not have an Action defaulted.
- Process – opens the patient’s Acute Profile in Medication Manager (PharmNet), with orders defaulted to a “Verify” action

8. Medication Request

The screenshot shows the 'Medication Request' window with a dropdown menu expanded for 'acetazolamide 160 mg, Oral, BD, Raised intracranial pressure'. The details are as follows:

Requested date/time: 12/09/2023 9:29 AEST	Queue time: 33 days
Reason: Expired stock	History
Requested by: Chong, Annie	Priority: When possible
Status: Discontinued	Start date/time: 08/09/2023 20:00:00 AEST
Ordering physician: None, Specified	MRN: 2660108
Formulary status:	FIN: 7420905
Update date/time: 13/09/2023 09:49:41 AEST	Facility: CHW
Medical service: Endocrinology	Nurse unit: Hall Ward
Last dispense: Initial Doses (14) - 32 days ago	Room: 06
	Bed: 08

Buttons: View, Process

The following actions may be performed on inpatient orders within the PPM:

- View – opens the patient’s Acute Profile in Medication Manager (PharmNet). Orders will not have an Action defaulted.
- Process – opens the patient’s Acute Profile in Medication Manager (PharmNet), with orders defaulted to a “Verify” action

The screenshot shows the 'Acute Profile' tab in the Medication Manager. A 'Drug:' search bar is at the top with an 'Add' button. Below is a table of active orders:

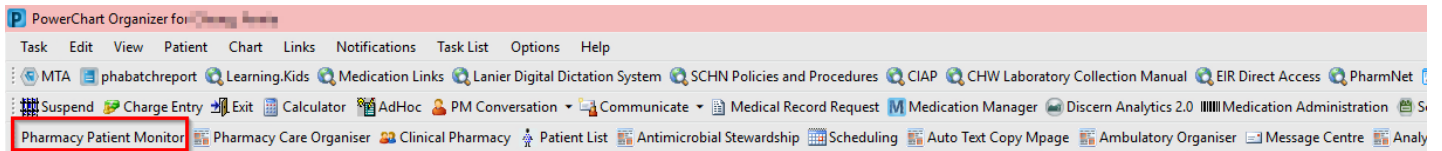
Action	Status	Order Sentence
Verify	Active	amlodipine Tablet 5 mg/ 1 tab(s) Oral morning
Verify	Active	atorvastatin Tablet 10 mg/ 1 tab(s) Oral night
Verify	Active	roxithromycin Tablet 150 mg/ 1 tab(s) Oral BD (before fo...

Note: the UVOM tab is not available when Medication Manager (PharmNet) is opened via the PPM

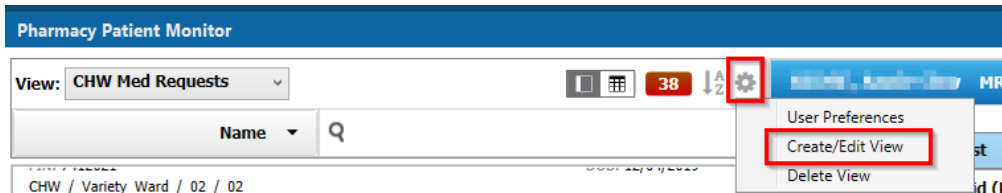
How to access PPM and Set Up Pharmacy Work Item Types

The PPM can be accessed in PowerChart via the View dropdown menu or via a button on the toolbar. The Temporary view displays all patients that the user has organisational security to access. Custom user views should be configured to limit the number of patients and work items displayed, which will also improve PPM performance.

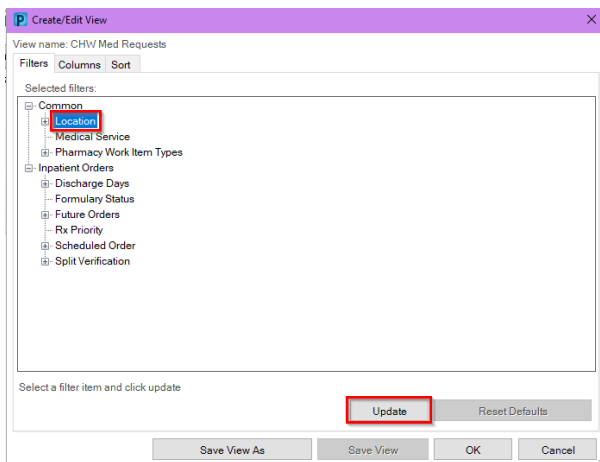
1. In PowerChart, access the PPM by clicking on **Pharmacy Patient Monitor** in the toolbar.



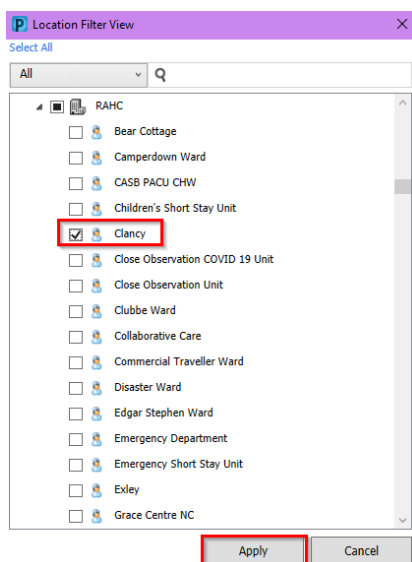
2. To set up a new view, click on the settings cog wheel icon and select **Create/Edit View**.



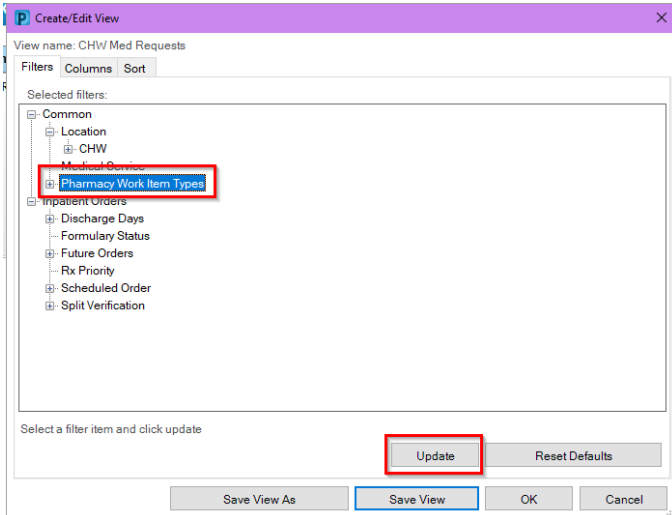
3. To filter your view to a particular ward, select **Location** and click **Update**.



4. Select the desired ward of the hospital and click **Apply**.

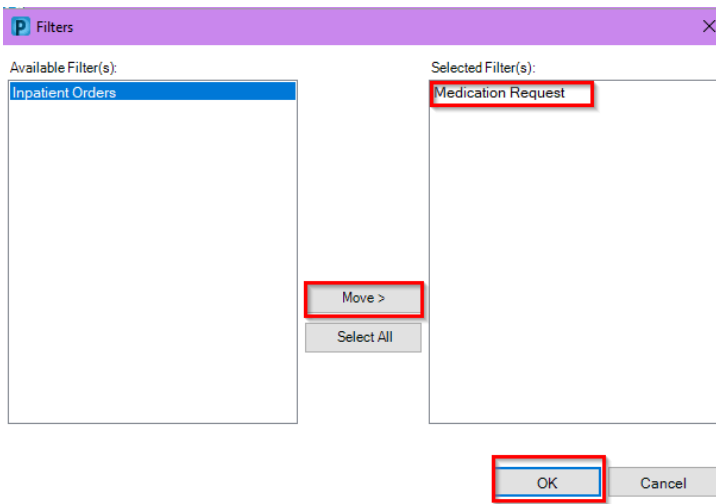


5. To filter your view to a particular work item, select **Pharmacy Work Item Types** and click **Update**.

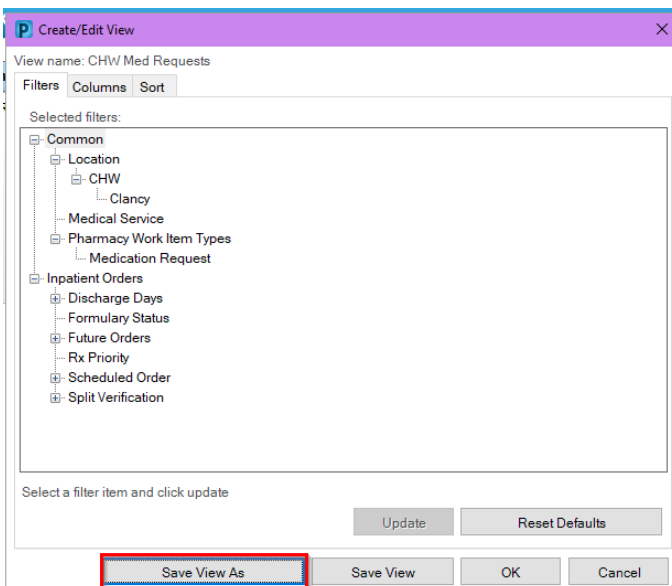


Note: The Pharmacy Work Items allows users to set the Pharmacy Work Item Types to display the Unverified Orders Monitors (UVOMs) Inpatient Orders and/or the Medication Requests.

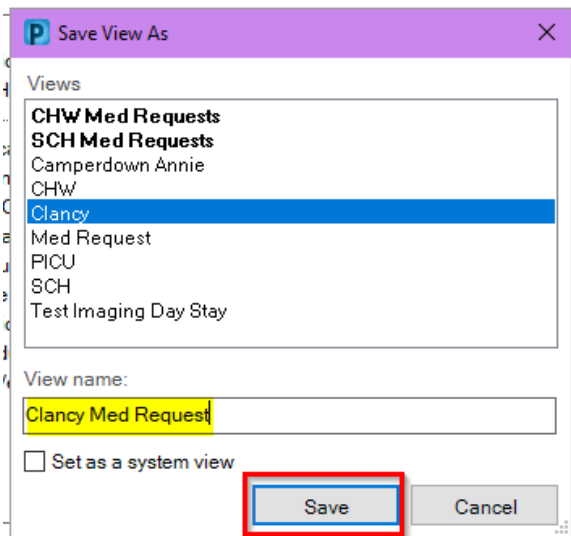
6. Move the desired work item types in the **Selected Filter(s)** section and click **OK**.



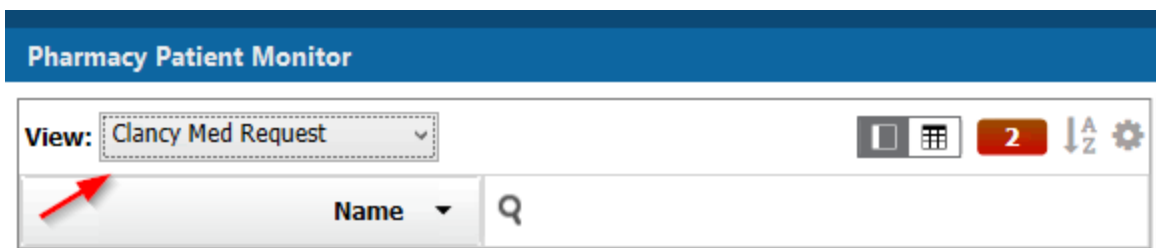
7. Click **Save View As** to create the view and save it for future use.



8. Enter **View name** and click **Save**.

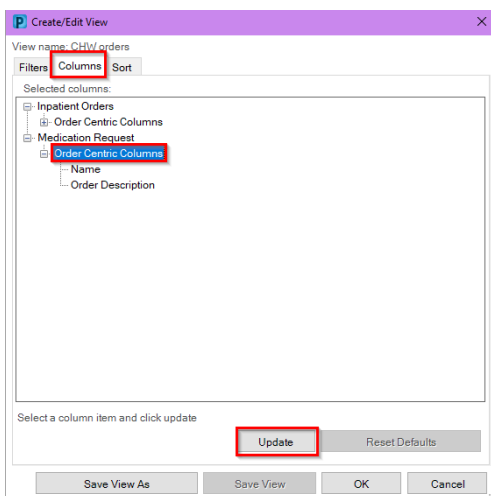


9. The new view will be available for selection in the PPM.

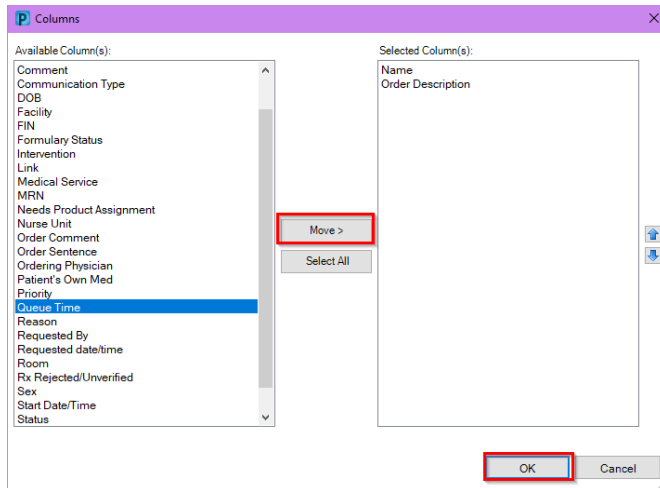


To customize Columns for the Order Centric Views on PPM:

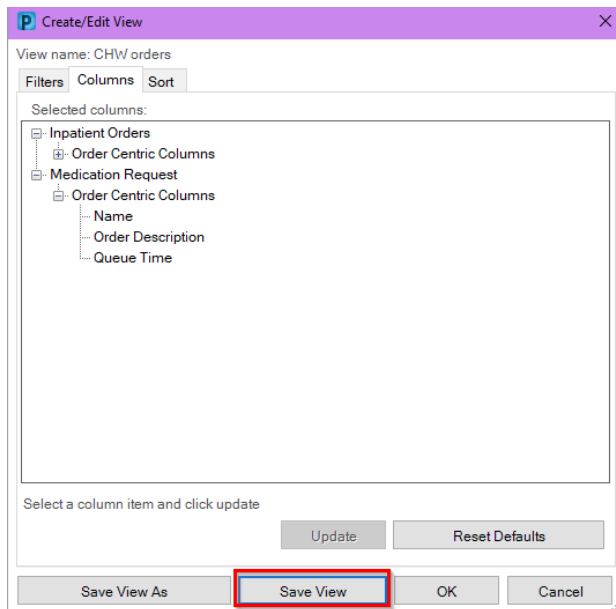
10. Navigate to Create/Edit View and select the Columns tab followed by Inpatient Orders/Medication Request and then Update



11. Move items from the Available Column(s) to the Selected Columns and select OK

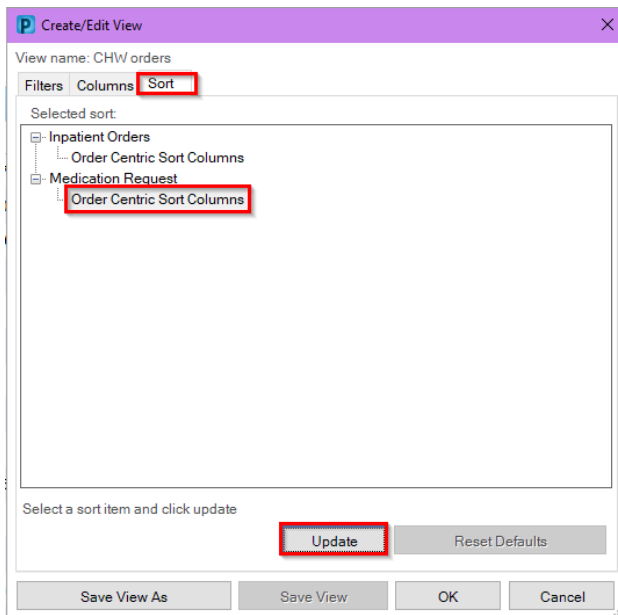


12. Select Save View

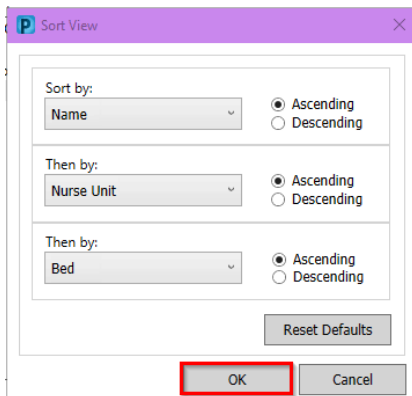


To customize Sorting for the Order Centric Views on PPM:

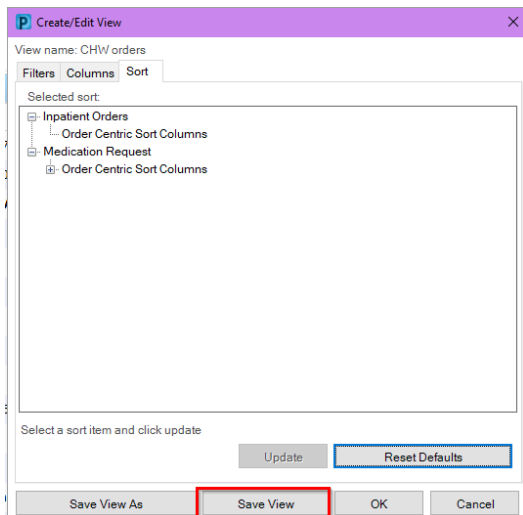
13. Navigate to Create/Edit View and select the Sort tab. Select Inpatient/Medication Request followed by Medication Request and then Update.



14. Sort view can be defined up to three levels. E.g., by Name followed by Nurse Unit then by Bed number then click OK.



15. Select Save View



View: CHW orders MRN 258

MRN

Inpatient Orders **230** Medication Request **38**

Name	Nurse Unit	Bed	Order Description	Queue Time	MRN
TUCKWELL, Antonia Marie	Clancy	22	melatonin 3 mg, Oral, daily (at bedtime), delayed sleep cycle, chronic insomnia	106 days	1189244
ZREIKA, Falemah	Close Observation Unit	26	melatonin 4 mg, PEG, daily (at bedtime), delayed sleep cycle, chronic insomnia	106 days	1480325
RIFAI, Nasrine	Clubbe Ward	02	TACrolimus 3 mg, Oral, BD, post transplant	106 days	1262678
HO, Kayla Isabella	Clubbe Ward	16	clindamycin 450 mg, Oral, 8 hourly, Other (specify in indication), Bacterial infections - MRSA	106 days	1614136
TEST, Alload	Clubbe Ward	12	amoxicillin 60 mg, IV Intermittent Infusion, 12 hourly, Sinusitis - Acute, Bacterial infections	39 days	2660097
TEST, Alload	Clubbe Ward	12	prednisolone 3 mg, Oral, daily (with or after food), wheeze	39 days	2660097
TEST, Alload	Clubbe Ward	12	vancomycin (vancomycin intravenous) 45 mg, IV Intermittent Infusion, 12 hourly, Endocarditis - MR...	39 days	2660097
TEST, Alload	Clubbe Ward	12	warfarin (warfarin (Coumadin)) Variable dose, Oral, daily, maintenance - anticoagulation	39 days	2660097
AIULU, Peter Tua	Commercial Traveller Ward	08	monobasic sodium phosphate (Phosphate (Sandoz)) 16.1 mmol, Oral / PEG, BD, Order Duration: 2...	106 days	1042762
GUTHRIE, Daisy	Edgar Stephen Ward	04	bifidobacterium bifidum-lactobacillus acidophilus (Infloran oral capsule) 1 cap(s), Oral / Nasog...	106 days	1621160
ARGUIJO, Mason	Edgar Stephen Ward	08	melatonin 2 mg, Oral, daily (at bedtime), delayed sleep cycle, chronic insomnia	106 days	1593363
KIDSE, Annie Chw	Edgar Stephen Ward	08	paraffin liquid (Parachoc 50% oral emulsion) 31 mL, Oral, daily, Constipation	47 days	1660000
KIDSE, Annie Chw	Edgar Stephen Ward	08	flucloxacillin 1.530 mg, IV Intermittent Infusion, 6 hourly, Cellulitis/Erysipelas	40 days	1660000
TEST, Dannitwo	Hall Ward	04	CLONazepam 2 mg, Oral, BD, Epilepsy - maintenance dose	40 days	2660062
EHMUPGRADE, Passivity Kjp	Hall Ward	01	parecoxib 22.5 mg, IV Bolus, 24 hourly, Order Duration: 2 dose(s), Stop Date: 07-Sep-23 11:59:00 AES...	39 days	2660024
TEST, Diana	Hall Ward	08	acetazolamide 160 mg, Oral, BD, Raised intracranial pressure	34 days	2660108
TEST, Ailtwo	Hall Ward	L1	ARIPiprazole 2.5 mg, Oral, daily, Behaviour disturbance in autism	33 days	2660031
KIDSE, Annie Chw	Hall Ward	L1	ARIPiprazole 5 mg, Oral, midday, Behaviour disturbance in autism	19 days	1660000
KIDSE, Annie Chw	Hall Ward	06	ARIPiprazole 10 mg, Oral, daily, Behaviour disturbance in autism	19 days	1660000
PARKES, Leo Joanas douglas m...	Helen Macmillan PICU	05	valproate 480 mg, Oral, BD, Epilepsy	106 days	1476144

View Process