Pharmacy Information System (PhIS)
and
Clinic Pharmacy System (CPS)

Full Based

User Manual
Order Management - Infusion Order

Version	**: 1.5**
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1.0 Introduction

1.1 Overview of PhIS

Pharmacy Information System or better known as PhIS, is a complete and comprehensive system that integrates pharmacy related services geared towards pharmacy excellence. PhIS implementation would transform most of current manual process to electronic system would benefit facility end user in the health care sector.

There are 12 modules to assist services delivery by the health care sector which comprises of:

1. Order Management
2. Inpatient Pharmacy
3. Outpatient Pharmacy
4. Medication Counselling
5. Ward Pharmacy
6. Pharmacy Inventory
7. Manufacturing of Cytotoxic Drug Reconstitution, Parenteral Nutrition, IV Admixture & Eye Drop, Radiopharmaceuticals and Extemporaneous
8. Adverse Drug Reaction & Drug Allergic (ADR & DAC)
9. Clinical Pharmacokinetics Services (TDM)
10. Drug Information & Consumer Education (DICE)
11. Medication Therapy Adherence Clinic (MTAC)
12. Data Mining (PhARM)

1.2 Purpose and Objectives

This user manual outlines the Infusion Order sub-module and its key features and functionalities. The primary objective is to guide user through the process of completing PhIS application process.

User will understand the following activities in details:

- Medication Order – Infusion
- Manage Order
- Order Endorsement
- Authorisation

1.3 Organised Sections

These are the sections within this document:

- Section 1 : Introduction
- Section 2 : Application Standard Features
- Section 3 : Medication Order-Infusion Order
- Section 4 : Acronyms
- Section 5 : Links to Clinical Modules

2.0 Application Standard Features

2.1 PhIS Legend

Standard Legend			
LOGIN	Login to PhIS	Logout	Logout from PhIS
	Close All Open Tabs		Refresh Screen
	Expand Menu		Collapse Menu
	Expand Module		Collapse Module
	Add/Create New Record		Save
	Close Window		Calendar Icon
	Save Transaction		Delete Record
Export to Excel	Export Report From PDF file to Excel file	OK	OK Button
Yes	Yes Button	No	No Button
	Radio Button		Checkbox
SPUB5656569	System Automatic Generate Record No.	HPSF00088304	Automatically Display/Retrieve Box
	Reset Login Screen		Show Help
Home	Display Home Tab	Search	Search Record
	Cancel		Dropdown Box
	Search Icon	*	Mandatory Field
	Edit Record		Empty Text Box
Cancel	Cancel Button		

Module Legend			
Update	Update Records	Save	Save Prescription
Search	Search Patient	Confirm	Confirm Order
	Print Prescription	Delete	Delete Record
Add	Add Drug	Clear	Clear Field
Cancel Order	Cancel Order		

Note

To learn more about Login Information, kindly click Login Information module for descriptive steps.

3.0 Order Management- Infusion Order

Overview

The Order Management-Infusion Order module handles all the information to specify the ordered items as per local drug formulary, MOH and non-MOH including registered and non-registered drugs. This function is to enable data mining. All medication orders must be prescribed by authorized personnel only and be in compliance with guidelines on prescribing in the drug formulary (drug category, discipline / specialty) as defined by MOH.

User Group

This module is intended for specialist, Medical Officer (MO), Medical Assistance (MA) and Housemen. (subject to the user assigned by the facility)

Functional Diagram

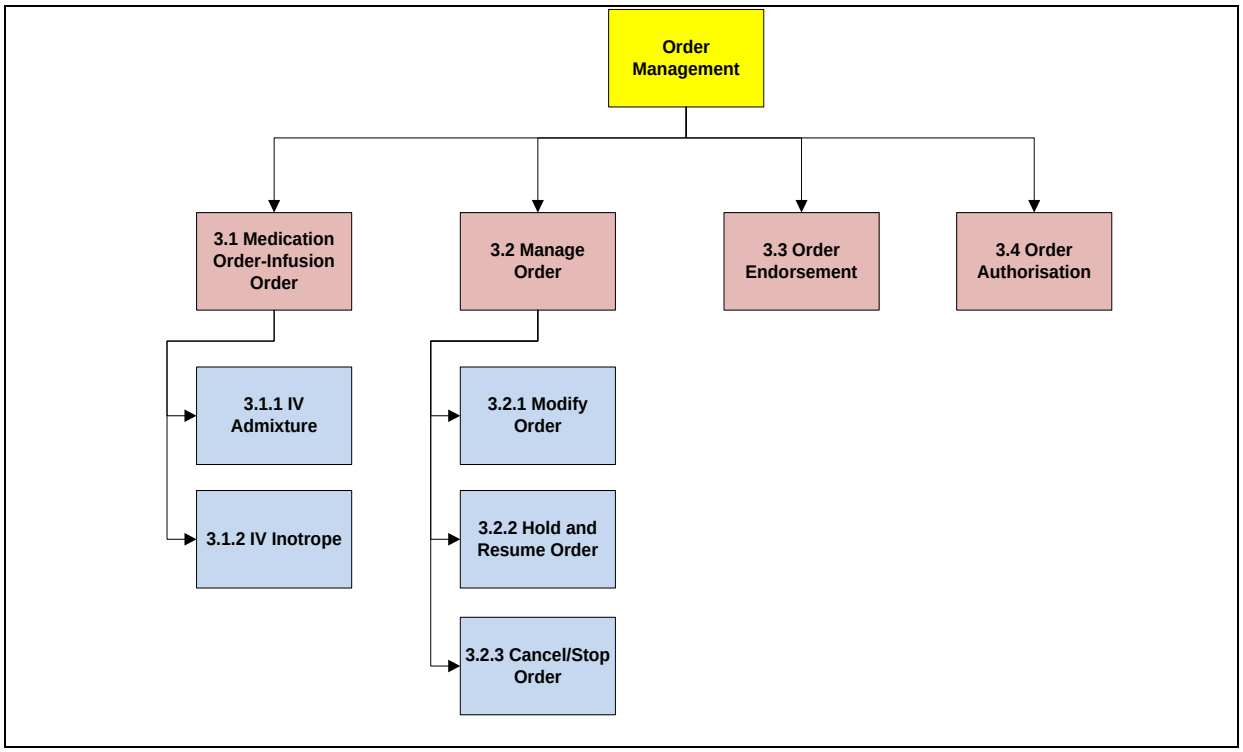


Figure 3.1

Functional Description

Medication Order comprises of four (4) main functions:

- **Medication Order- Infusion Order**

  To prescribe:

  - IV Admixture
  - Inotrope order

- **Manage Order**

  To monitor patient's prescription including modify order, hold/resume order and cancel/stop order

- **Order Endorsement**

  Order endorsement is to notify prescriber of prescription changes made by pharmacist. Prescriber can endorse the intervention made by a Pharmacist

- **Order Authorization**

  To approve list A/ A*/ A/KK drugs that require authorization

3.1 Medication Order-Infusion

Infusion order is used to prescribe medicine for Inpatient, Emergency and Day Care departments based on the facility setup.

3.1.1 IV Admixture

This function is for a prescriber to order injectable medication that requires further dilution before administration. However, it is only applicable for medication that is diluted by pharmacy department. If the dilution is prepared by nursing personnel, the normal order function is to be used.

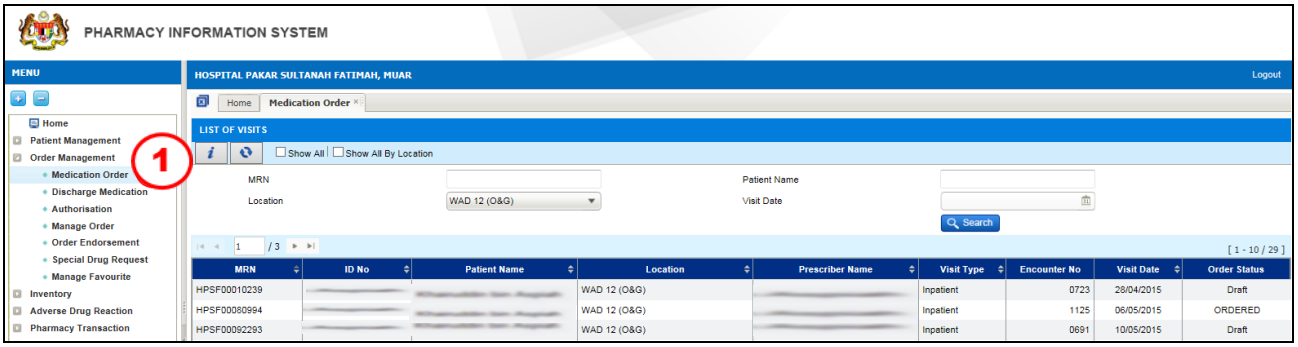


Figure 3.1.1-1 Medication Order Page

STEP 1
Click on the 'Order Management' menu and follow by 'Medication Order' sub-menu

Note

- *Prescriber can select either of these options: Click on the checkbox to view all patients assigned to the login prescriber or click on the checkbox to view patients assigned to prescriber login location and not assigned to other prescriber.*
- *Assigning of patients will be based on access rights.*
- *By default, a list of patients will be displayed according to patient assigned to login prescriber and prescriber's login location.*

- *Various search criteria as provided as below:*

No	Field	Description	Remark
a)	MRN	Patient Medical Record Number	Search option: • Type the MRN either full or partial: *Example : HPSF00001234 or "1234"*
b)	Patient Name	Patient Name	Allow to search by full or partial patience name
c)	Location	Patient visit location	Able to filter and search patient by visit location and prescriber's location.
d)	Visit Date	Patient visit date	Able to filter and search patient visit date

Table 3.1.1-1

Note

Search results of patient record list will display:

- *MRN*
- *Patient Name*
- *Location*
- *Prescriber Name*
- *Visit Date*
- *Order Status*

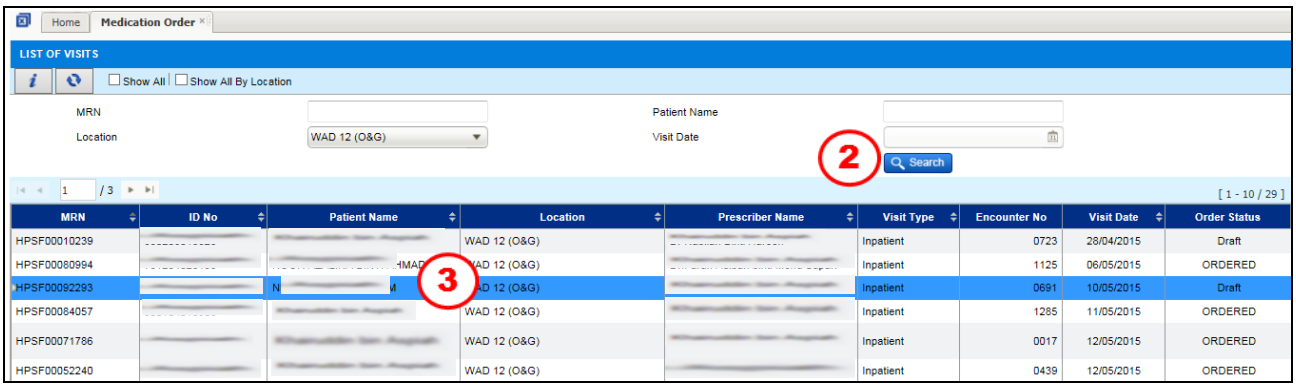


Figure 3.1.1-2 List of visit at Medication Order Page

STEP 2

Click on the

button to search patient

STEP 3

Double click on the selected patient

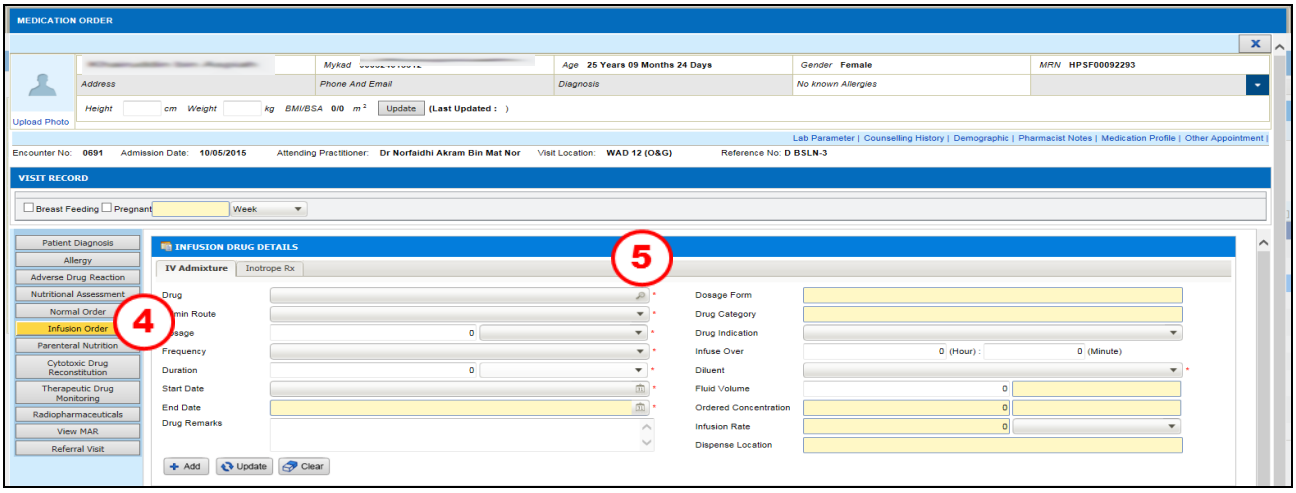
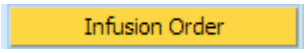


Figure 3.1.1-3 Infusion Order Screen

STEP 4

Click on the 

button to place order for iv admixture or inotrope rx

STEP 5

Click on the button to search drugs

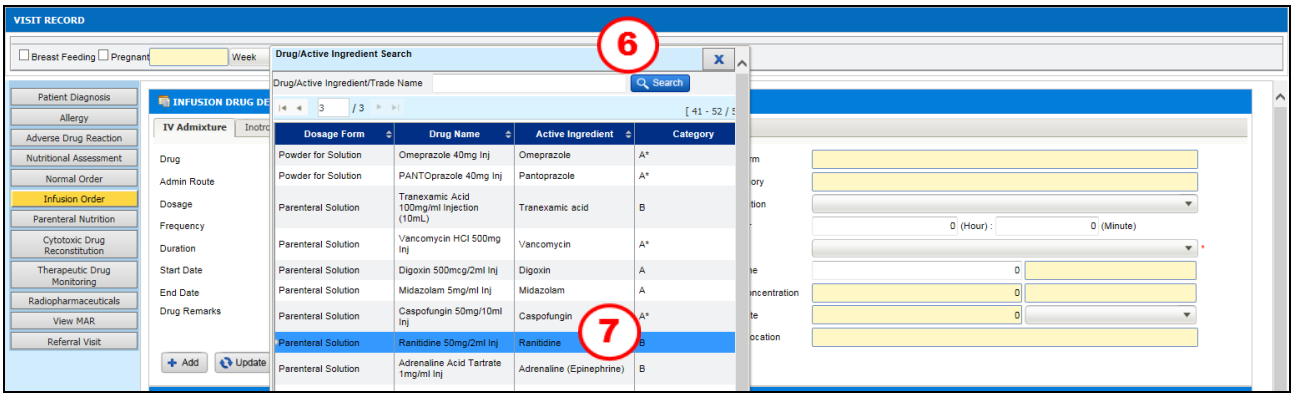


Figure 3.1.1-4 Infusion Order Screen with Search Drug List

STEP 6

Enter the keyword of ***Drug/Active Ingredient/Trade Name*** and click on

the button

Note

After click on the

button, list of drug will be appeared as per Figure 3.1.1-4.

STEP 7

Double click on the selected drug name

Note

- ***End Date/Time*** *will be defaulted by system according to duration.*
- ***Information in*** *Infusion Drug Details* ***under*** *IV Admixture screen will be automatically calculated based on master setup.*
- *Infusion Rate = Fluid Volume/ Infuse Over.*
- *Ordered Concentration = Dosage/ Fluid Volume.*

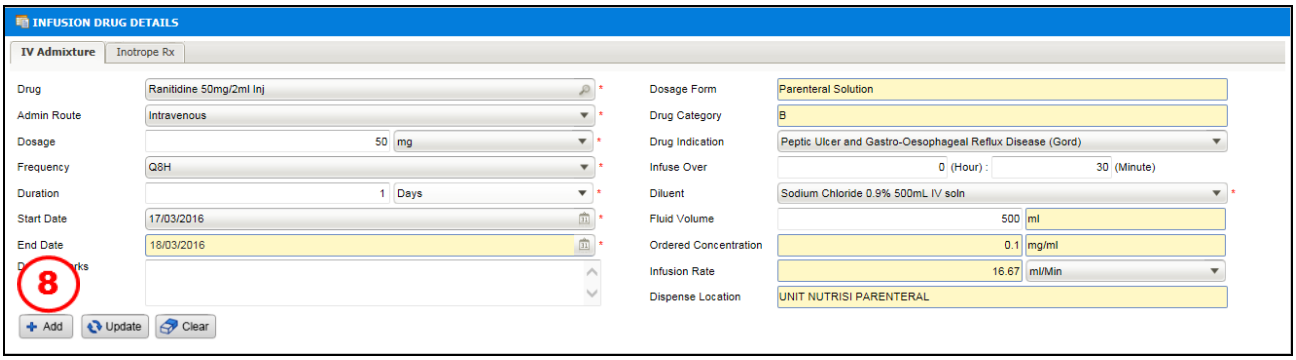


Figure 3.1.1-5 Infusion Order Screen

STEP 8

Click on the button to add on prescription list

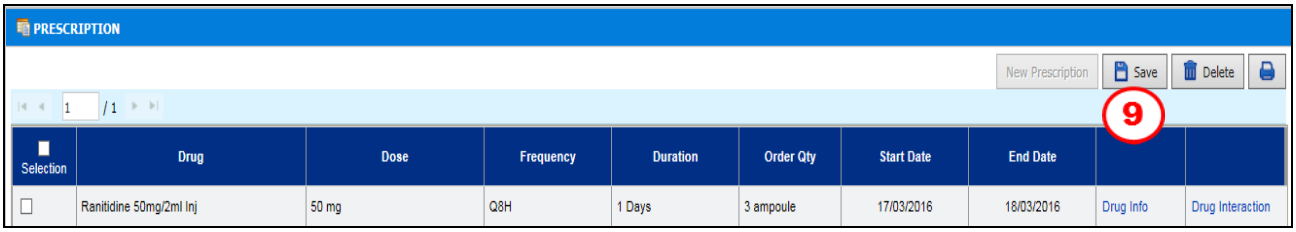


Figure 3.1.1-6 Infusion Prescription List

STEP 9

Click on the button to save the prescription

Note

*To add and save another drug on prescription list repeat **step 5** to **9.***

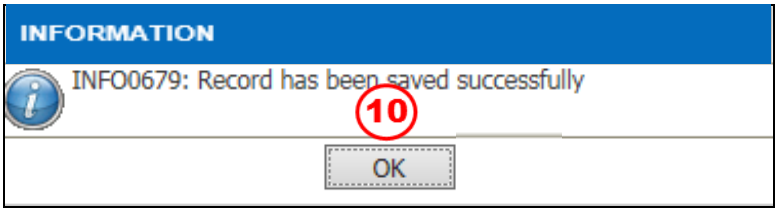


Figure 3.1.1-7 Infusion Prescription Message Information

STEP 10

Click on the button

STEP 11

Click on the Confirm Order button to proceed with the order confirmation

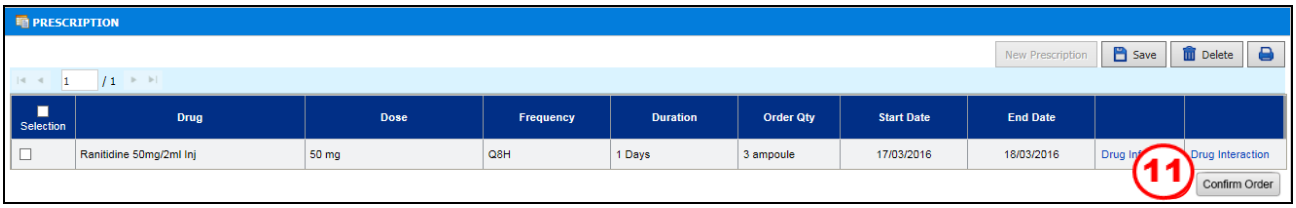


Figure 3.1.1-8 Infusion Prescription List

Note

- *Medication Information Management System (MIMS) will alert if there is any drug interaction.*
- *Click on the Drug Info hyperlink to view the drug details.*
- *Click on the button to print prescription.*

3.1.2 Inotrope Rx

Drugs which are defined as Inotrope Order Application in Drug Master (IV Characteristics) will display in the Inotrope Rx order.

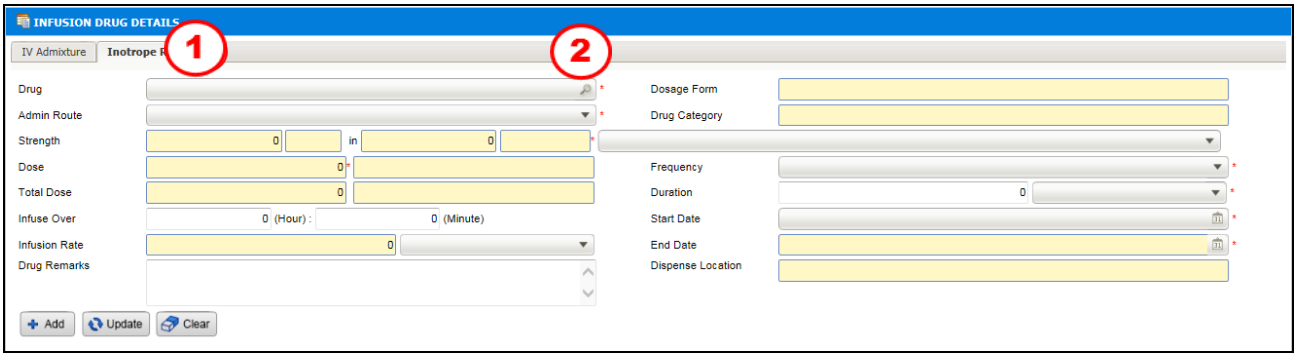


Figure 3.1.2-1 Inotrope Rx Order Screen

Note

Repeat IV Admixture order, follow Step 1 to 4.

STEP 1

Click on the ***Inotrope Rx*** tab

STEP 2

Select drug by clicking the search button

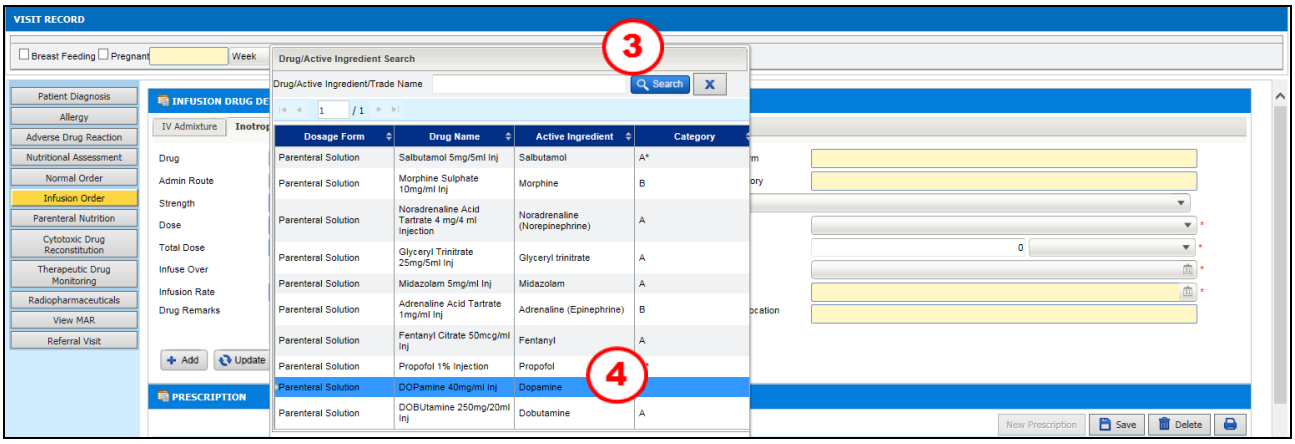


Figure 3.1.2-2 Inotrope Rx Order Screen with Search Drug List

STEP 3

Enter the keyword of ***Drug/Active Ingredient/Trade Name*** and click on the Search button

Note

After click on the Search *button, list of drug will be appeared as per Figure 3.1.2-2.*

STEP 4

Double click on the selected drug name

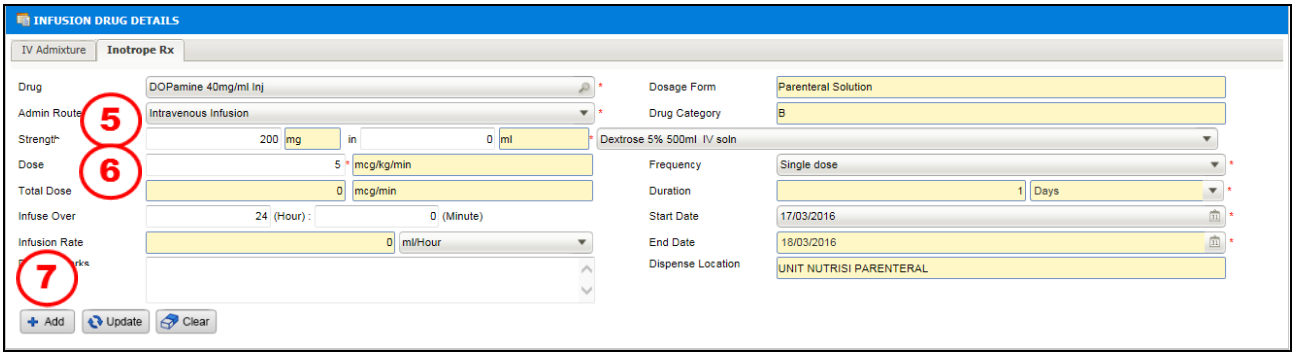


Figure 3.1.2-3 Inotrope Rx Order Screen

STEP 5

Enter the strength of preparation e.g.400mg in 50ml

STEP 6

Enter the dose required in mcg/kg/min

STEP 7

Click on the button to add on prescription list

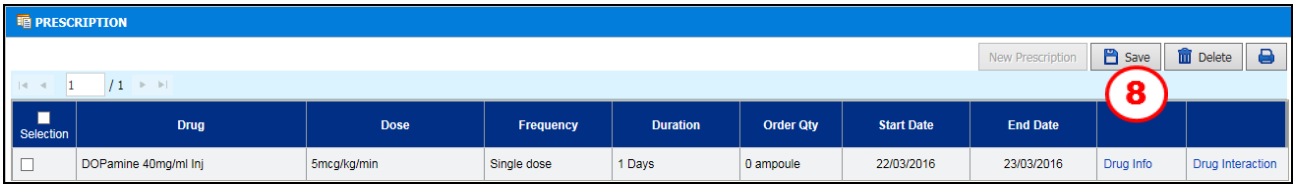


Figure 3.1.2-4 Inotrope Prescription List

STEP 8

Click on the button to save the prescription

Note

*To add and save another drug on prescription list repeat **step 2** to **8.***

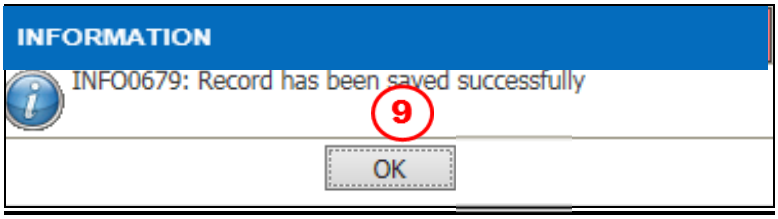


Figure 3.1.2-5 Inotrope Prescription Message Information

STEP 9

Click on the OK button

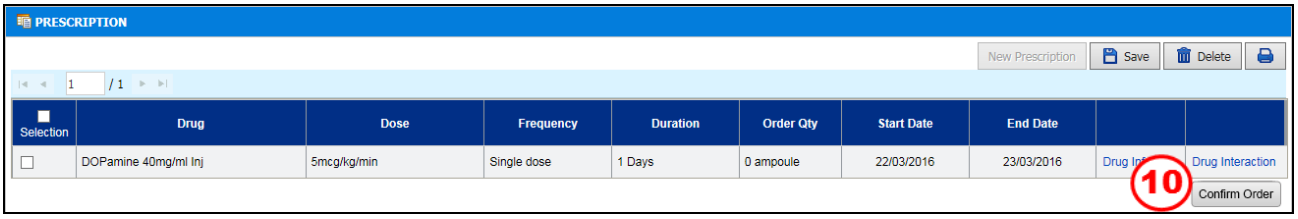


Figure 3.1.2-6 Inotrope Prescription List

STEP 10

Click on the Confirm Order button to proceed with the order confirmation

Note

- *Monthly Index for Medical Speciality (MIMS) will alert if there is any drug interaction.*
- *Click on the Drug Info hyperlink to view the drug details.*
- *Click on the button to print prescription.*

3.2 Manage Order

Prescriber is allowed to manage order after it is confirmed.

3.2.1 Modify Order

Prescriber is allowed to modify Dosage, Frequency Duration and Counseling Indication if the ***Order Status*** is ordered.

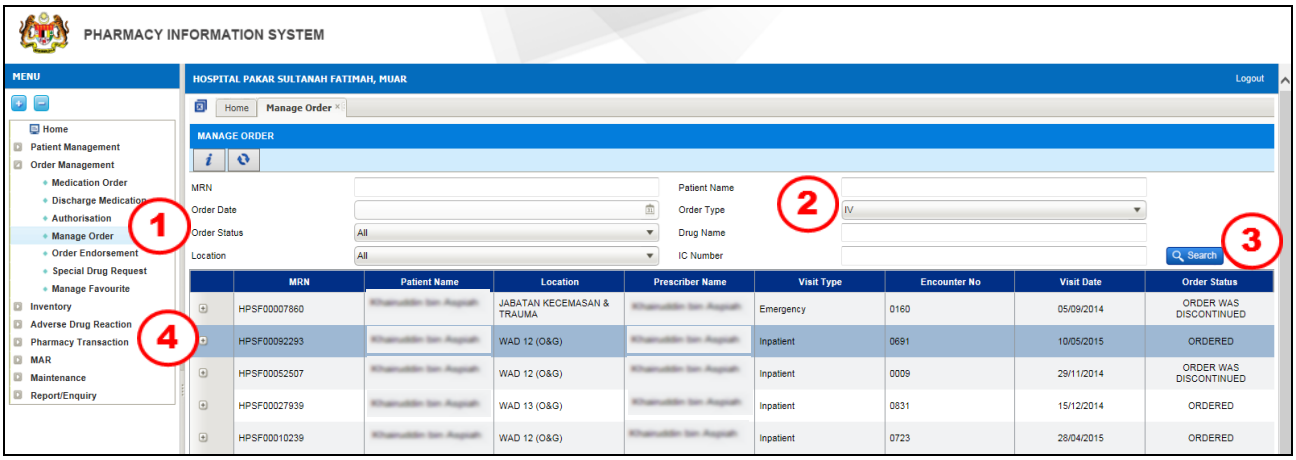


Figure 3.2.1-1 Manage Order Screen

STEP 1

Click on the 'Order Management' menu and follow by 'Manage Order' sub-menu

Note

- *On this listing page, various search criteria is provided as below:*

No	Field	Description	Remark
A	MRN	Patient Medical Record Number	Search option: • Scan the MRN using barcode scanner. • Type the MRN either in full or partially:. *Example : HPSF00001234 or "1234"*
B	Order Date	Order date	Allow to search by ordered date
C	Order Status	According to Order in which stage	Able to filter by order status
D	Location	Patient visit location	Able to filter and search patient name by visit location
E	Patient Name	Patient Name	Allow to search by patient name
F	Order Type	- Normal - CDR - IV - PN - Radiopharmaceuticals	Allow to search by order type
G	Drug Name	Drug Name	Allow to search by full or partial drug name

Table 3.2.1-1

- *Search results of patient record list will display:*

  - *MRN*
  - *Patient Name*
  - *Location*
  - *Prescriber Name*
  - *Visit Type*
  - *Encounter No*
  - *Visit Date*
  - *Order Status*

STEP 2

Select ***Order Type*** as ***IV***

STEP 3

Click on the Search button to search patient

STEP 4

Click on button to view selected patient's prescription

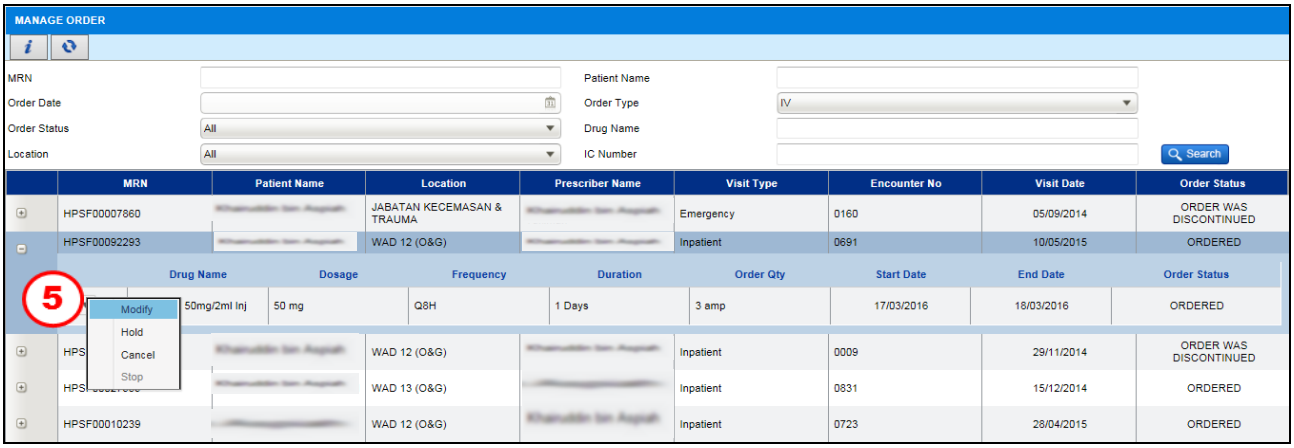


Figure 3.2.1-2 Manage Order Screen

STEP 5

Right click on the button and select ***Modify***

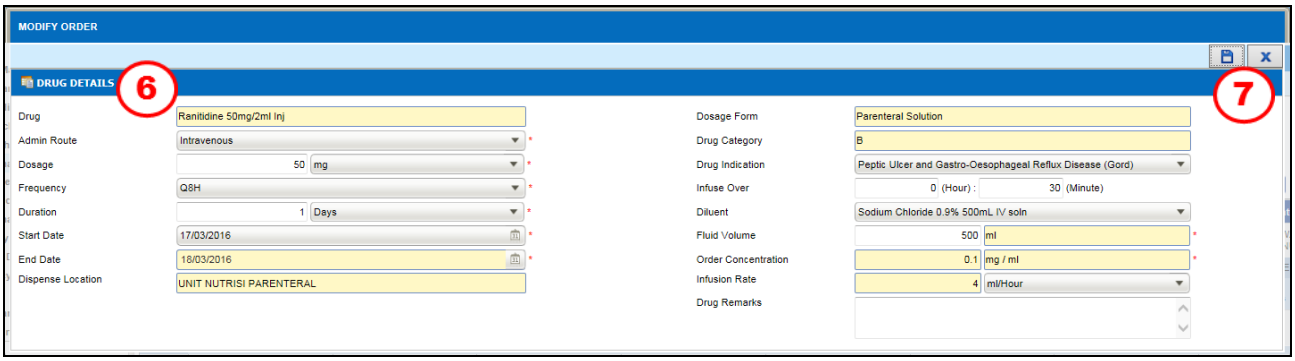


Figure 3.2.1-3 Manage Order

STEP 6

Change the drug details as required like shown in Figure 3.2.1-3

Note

Prescriber is allowed to change the drug details as below:

- *Admin Route*
- *Dosage*
- *Frequency*
- *Duration*
- *Start Date/Time*
- *Drug Indication*
- *Infuse Over*
- *Diluent*
- *Fluid Volume*
- *Infusion Rate UOM*

STEP 7

Click on the button to save and button to close

3.2.2 Resume/Hold Order

Prescriber is allowed to hold medication order from being administered or dispensed to the patient; and is able to resume the hold order to continue medication order.

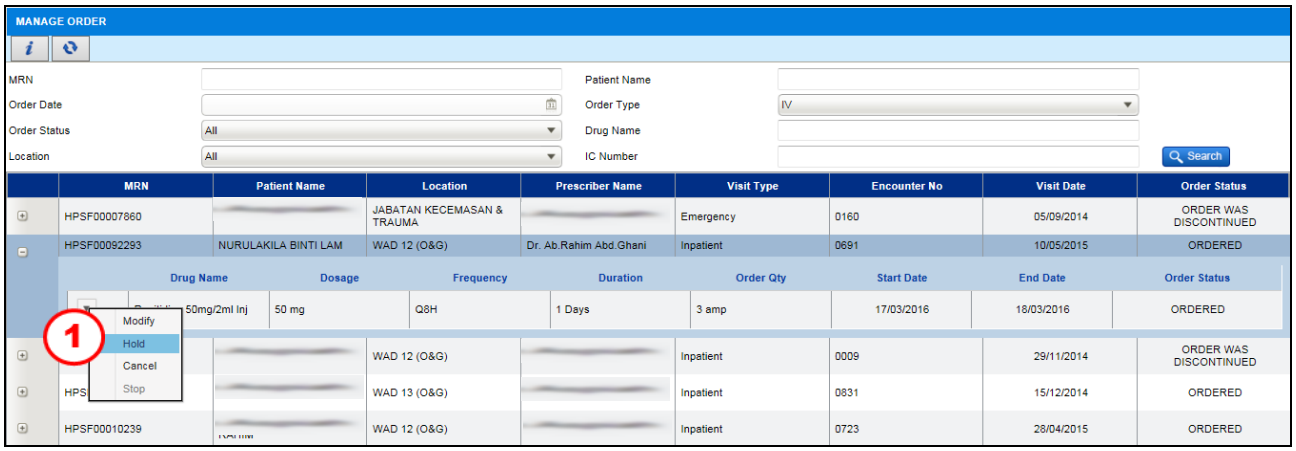


Figure 3.2.2-1 Manage Order Screen with Hold/Resume Menu

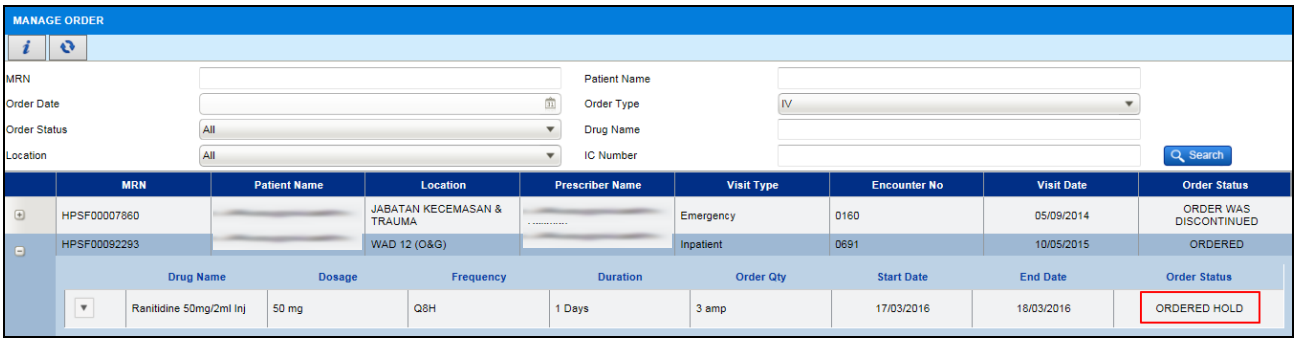


Figure 3.2.2-2 Manage Order Screen With Hold status

Note
*To proceed with Hold/Resume medication order repeat Modify Order steps from **Step 1** to **4***

STEP 1
Right click on the button and select ***Hold*** or ***Resume***

Hold Medication Order
- Right click on the button and select ***Hold***

Resume Medication Order
- Right click on the button and select ***Resume***

Note
*Order status will be changed according to the current Order Status followed by '**Hold**'.*
*Example : **ORDERED HOLD***

3.2.3 Cancel/Stop Order

Prescriber is allowed to cancel or stop the prescribed medication order from being administered or dispensed.

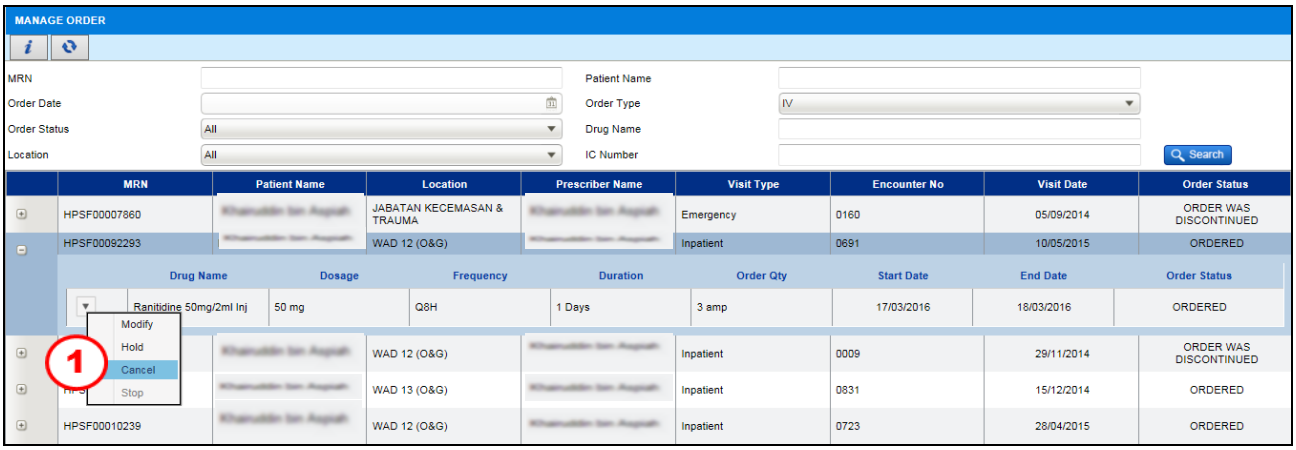


Figure 3.2.3-1 Manage Order Screen with Cancel/Stop Menu

Note

*To proceed with cancel or stop medication order, repeat Modify Order steps from **Step 1** to **4.***

STEP 1

Right click on the button and select ***Cancel*** or ***Stop***

Cancel Medication Order

- Right click on the button and select ***Cancel*** from context menu

Enter ***Cancel Reason*** as per Figure 3.2.3-2

Click on the save button to save the order cancellation

Note

If prescriber found that prescription needs to be cancelled due to patient allergies, prescriber may click on the Patient Allergies *button to record allergies.*

Stop Medication Order

- Right click on the button and select ***Stop***

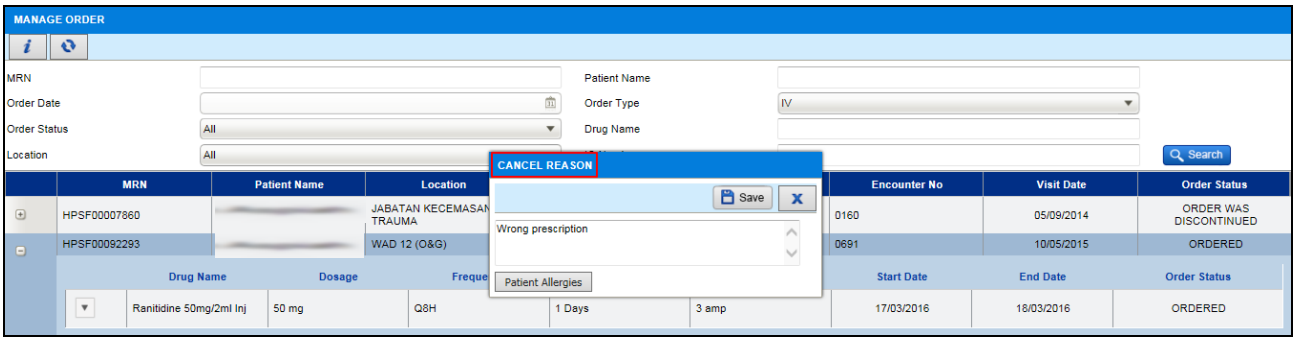


Figure 3.2.3-2 Manage Order Screen with Cancel/Stop Reason Box

3.3 Order Endorsement

Order endorsement is to notify the prescriber on prescription changes made by pharmacist.

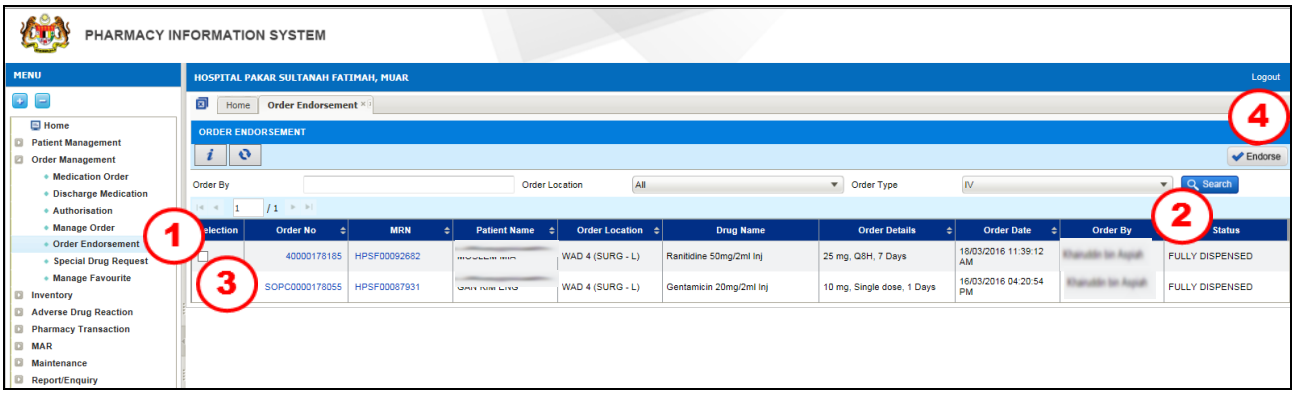


Figure 3.3-1 Order Endorsement Screen

STEP 1
Click on the 'Order Management' menu and follow by 'Order Endorsement' sub-menu

Note

- *On this listing page, various Search Criteria is provided as below:*

No	Field	Description	Remark
A	Order By	Prescriber Name	Allow to search by full or partial prescriber name
B	Order Location	Patient visit location	Able to filter and search patient name by visit location
C	Order Type	- Normal - CDR - IV - PN - Radiopharmaceuticals	Allow to search by order type

Table 3.3-1

- *Search results of patient record list will display:*
  - *Order No*
  - *MRN*
  - *Patient Name*
  - *Order Location*
  - *Drug Name*
  - *Order Status*
  - *Date and Time*
  - *Order By*
  - *Status*

STEP 2

Select ***Order Type*** as ***IV*** and click on the

button to search patient

STEP 3

Select/tick checkbox on selected patient

Note

Multiple selections are allowed.

STEP 4

Click on the

button to proceed with endorsement

3.4 Authorisation

This function is used by specialist or authorised person to approve list A/A*/A/KK drug that requires authorisation.

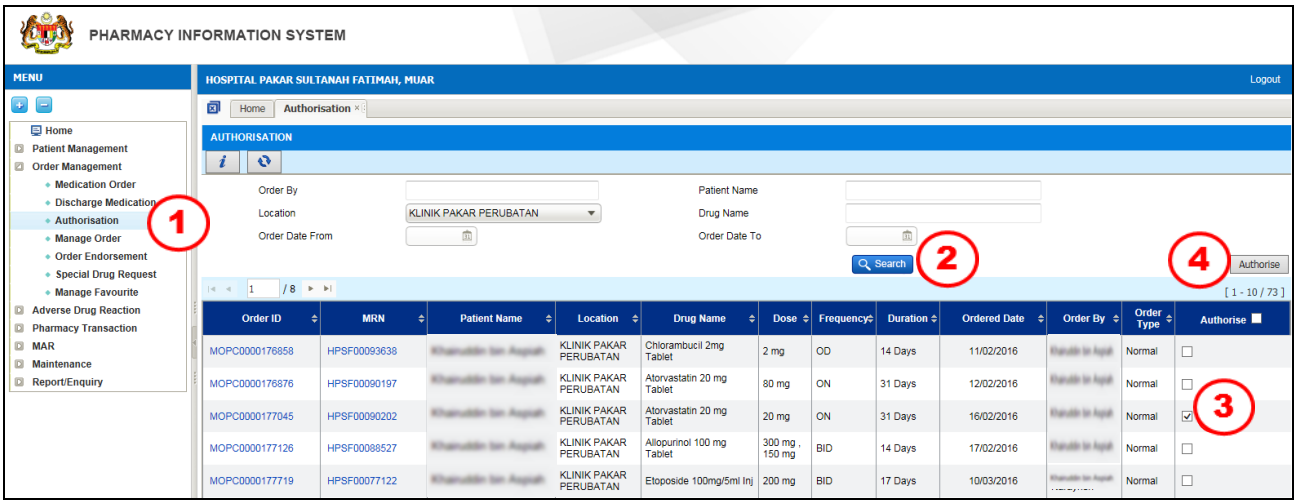


Figure 3.4-1 Order Autorisation Screen

STEP 1

Click on the 'Order Management' menu and follow by 'Authorisation' sub-menu

Note

- *On this listing page, various Search Criteria is provided as bellow:*

No	Field	Description	Remark
A	Order By	Prescriber Name	Allow to search by full or partial Prescriber Name
B	Location	Patient visit location	Able to filter and search patient name by visit location
C	Order Date From	Order date	Allow to search by date from selected month/date/year
D	Patient Name	Patient Name	Allow to search by full or partial patient name
E	Drug Name	Drug Name	Allow to search by full or partial drug name
F	Order Date To	Order date	Allow to search by date from selected month/date/year

Table 3.4-1

- *Search results of patient record list will display:*
  - *Order No*
  - *MRN*
  - *Patient Name*
  - *Location*
  - *Drug Name*
  - *Dose*
  - *Frequency*
  - *Duration*
  - *Ordered Date and Time*
  - *Order By*
  - *Order Type*

STEP 2

Click on the

button to search patient

STEP 3

Select/tick checkbox on selected patient

STEP 4

Click on the

button to proceed with authorisation

Note

User may click/tick on the

checkbox to authorise all drugs on the list.

4.0 Acronyms

Abbreviation	Definition
MOH	Ministry Of Health
PhIS	Pharmacy Information System
CPS	Clinical Pharmacy System
OM	Order Management
MRN	Medical Record Number
IV	Intravernous

5.0 Links to Clinical Modules

No	*Module*	*PDF Links*	*No*	*Module*	*PDF Links*
1	*Inpatient*	*Click Here*	*12*	*CDR Dispensing*	*Click Here*
2	*CDR Order*	*Click Here*	*13*	*Methadone Dispensing*	*Click Here*
3	*TDM Order*	*Click Here*	*14*	*PN Dispensing*	*Click Here*
4	*PN Order*	*Click Here*	*15*	*Order Management*	*Click Here*
5	*IV Order*	*Click Here*	*16*	*Patient Management*	*Click Here*
6	*Prepacking*	*Click Here*	*17*	*Radiopharmaceuticals*	*Click Here*
7	*Galenical*	*Click Here*	*18*	*Outpatient*	*Click Here*
8	*MTAC*	*Click Here*	*19*	*Special Drug Request*	*Click Here*
9	*ADR & DAC*	*Click Here*	*20*	*MAR*	*Click Here*
10	*Medication Counselling*	*Click Here*	*21*	*DICE*	*Click Here*
11	*Ward Pharmacy*	*Click Here*	*22*		