



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

User Manual IV Dispensing

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|--------------------|----------------------------------|
| Version | : 12th Edition |
| Document ID | : U. MANUAL_IV DISPENSING |



PhIS & CPS Project
User Manual – IV Dispensing



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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 to 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 IV Dispensing 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:

- Acknowledgement
- Screening & Verification
- Preparation
- Dispensing
- Release/Discard Medication

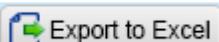
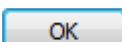
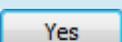
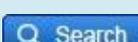
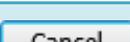
1.3 Organised Sections

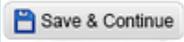
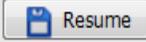
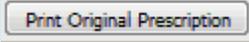
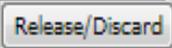
These are the sections within this document:

- Section 1 : Introduction
- Section 2 : Application Standard Features
- Section 3 : Order Management-IV Admixture
- Section 4 : Acronyms
- Section 5 : Links to Clinical Modules

2.0 Application Standard Features

2.1 PhIS Legend

| Standard Legend | | | |
|---|---|--|------------------------------------|
|  | Login to PhIS |  | 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 Report From PDF file to Excel file |  | OK Button |
|  | Yes Button |  | No Button |
|  | Radio Button | <input type="checkbox"/> | Checkbox |
|  | System Automatic Generate Record No. |  | Automatically Display/Retrieve Box |
|  | Reset Login Screen |  | Show Help |
|  | Display Home Tab |  | Search Record |
|  | Cancel |  | Dropdown Box |
|  | Search Icon | * | Mandatory Field |
|  | Edit Record |  | Empty Text Box |
|  | Cancel Button | | |
| | | | |

| IV Dispensing Module Legend | | | |
|---|------------------------------------|--|-----------------------------|
|  | Update Patient's Height and Weight |  | Print |
|  | Acknowledge Prescription |  | Calendar |
|  | Preparation |  | Save and Continue |
|  | Edit Label |  | Dispense |
|  | Resume |  | Print Original Prescription |
|  | Hold |  | Verification |
|  | Confirm |  | Release/Discard |
|  | Re-Dispense |  | Delete |

Note

To learn more about Login Information, kindly click [Login Information](#) module for descriptive steps.

3.0 Order Management-IV Admixture

Overview

The IV dispensing module includes implementing safe, organized, and efficient drug-dispensing systems is essential for controlling costs and assuring that the medical prescription is safely followed as requested within the appropriate deadline. An appropriate dispensing system is an important all for the prevention or reduction of medication errors by helping to minimize dispensing error opportunities in a pharmacy. At present there are various types of dispensing systems for medical prescriptions within a hospital

User Group

This module is intended for pharmacist and assistant pharmacist (subject to user assign by the facility)

Functional Diagram

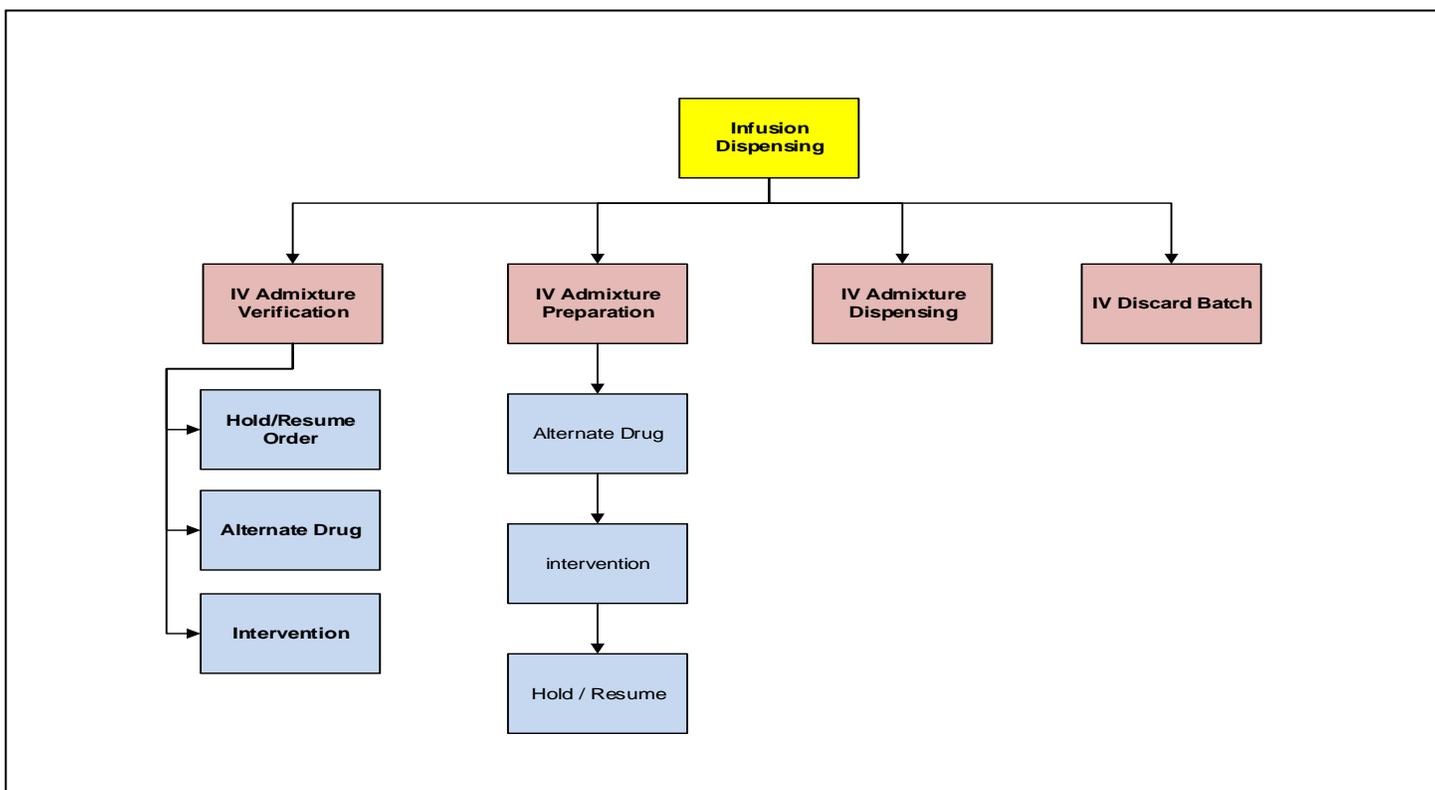


Figure 3.0-1

Functional Description

Admixture comprises of four (4) main functions:

- **Verification**

Verification is for the pharmacist to verify the prescriptions received from order management. This process is mandatory for all prescriptions receive before the user can proceed with dispensing and preparation. There are also safety systems that warn against toxic doses, allergic and cross-reactions, drug interactions, duplication of therapeutic classes, contraindications, and adverse effects.

- **Preparation**

The prescription and the drug preparation are made in the system which is integrated with the inventory system. Pharmacists access the system data directly with no need to send files or manual drug labeling.

- **Dispensing**

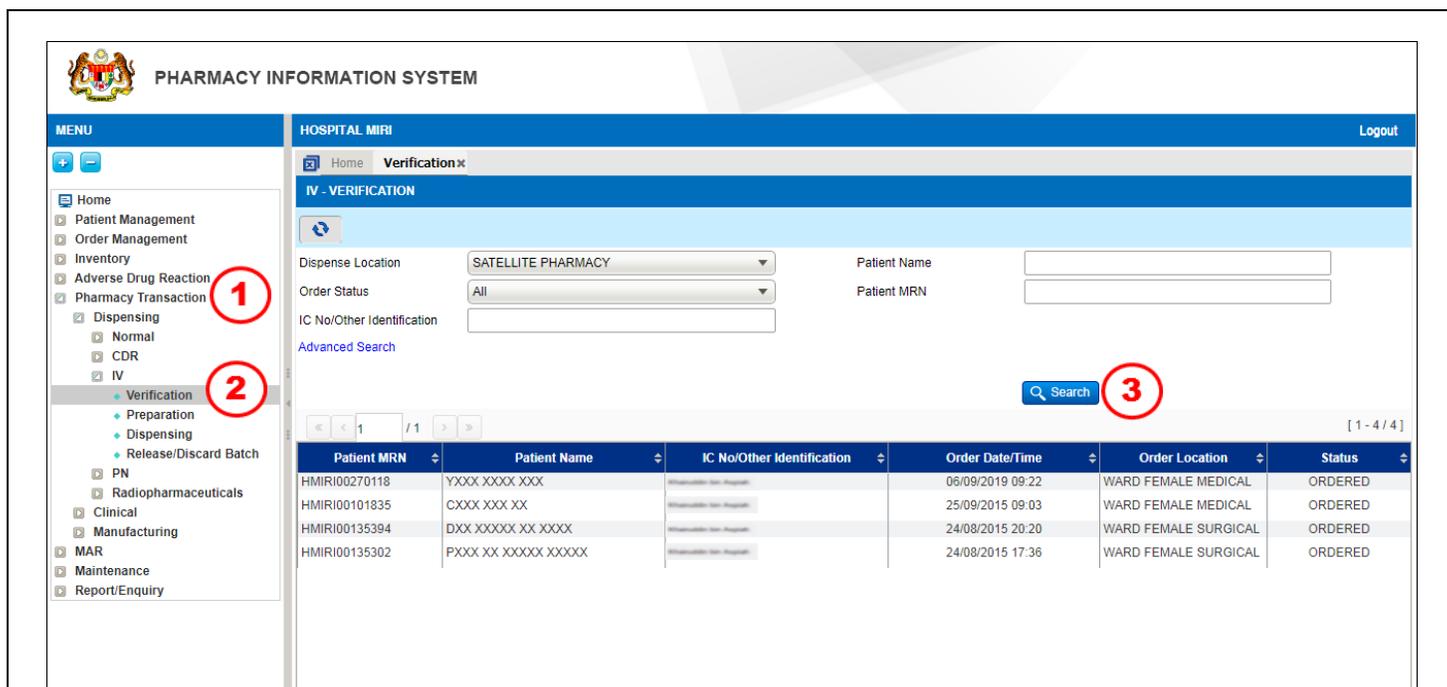
The prescription and the dispensing report are made in the system which is integrate with the inventory system.

- **IV Release / Discard Batch**

The function allows the user to release or discard the drug reserved for the patient from inventory. User able to release or discard the prepared drug when unable to dispense to patient due to several reasons and pharmacist to perform the preparation again after release or discard.

3.1 IV Admixture Verification

This function is used to verify the prescription before preparation and dispensing stage.



PHARMACY INFORMATION SYSTEM

MENU | **HOSPITAL MIRI** | **Logout**

Home | Verification x

IV - VERIFICATION

Dispense Location: SATELLITE PHARMACY | Patient Name:

Order Status: All | Patient MRN:

IC No/Other Identification:

Advanced Search

Search

| Patient MRN | Patient Name | IC No/Other Identification | Order Date/Time | Order Location | Status |
|---------------|--------------------|----------------------------|------------------|----------------------|---------|
| HMIRI00270118 | YXXX XXXX XXX | HMIRI00270118 | 06/09/2019 09:22 | WARD FEMALE MEDICAL | ORDERED |
| HMIRI00101835 | CXXX XXX XX | HMIRI00101835 | 25/09/2015 09:03 | WARD FEMALE MEDICAL | ORDERED |
| HMIRI00135394 | DXX XXXXX XX XXXX | HMIRI00135394 | 24/08/2015 20:20 | WARD FEMALE SURGICAL | ORDERED |
| HMIRI00135302 | PXXX XX XXXX XXXXX | HMIRI00135302 | 24/08/2015 17:36 | WARD FEMALE SURGICAL | ORDERED |

Figure 3.1-1 Verification Listing Screen

STEP 1

Click on the 'Pharmacy Transaction' menu followed by 'Dispensing' and select 'IV' sub-menu

STEP 2

Click on 'Verification' sub-menu

STEP 3

Click on the  button to search for patient

Note

Various search criteria are provided as below:

- a) Basic search
- b) Advance search

HOSPITAL MIRI Logout

Home Verification

IV - VERIFICATION

Refresh

Dispense Location: SATELLITE PHARMACY Patient Name:

Order Status: All Patient MRN:

IC No/Other Identification:

Order Location Type: All Order Location To:

Order Date From: Order Date To:

[Basic Search](#) Search

Figure 3.1-2 Advance Search

| Basic Search | | | |
|----------------|----------------------------|---|--|
| No | Field | Description | Remark |
| a) | Dispense Location | Dispensing location. (It will list down all active locations) | Able to filter and search patient name by dispensing location |
| b) | Order Status | - All - New Orders - Outsourced Orders | Search by order status |
| c) | IC No/Other Identification | IC No/Other Identification | Able to search patient based on MYKAD/MYKID and others identification. |
| d) | Patient Name | Patient Name | Allow to search by full or partial patient name |
| e) | Patient MRN | Patient Medical Record Number | Search option: • Type the MRN either in full or partially: <i>Example : HPSF00001234 or "1234"</i> |
| Advance Search | | | |
| f) | Order Location Type | - Order location type (It will list down all active location types) | Able to filter and search patient name by order location type |
| g) | Order Date from | Order confirmed date | Allow to search by start date of order created |
| h) | Order Location To | It will list down all active locations | Able to filter and search patient name by order location |
| i) | Order Date To | It will list down all active location | Able to filter and search patient name by order location. |

Table 3.1-1

Note

Search results of patient record list will display:

- Patient MRN
- Patient Name
- IC No/Other Identification
- Order Date
- Status

| Patient MRN | Patient Name | IC No/Other Identification | Order Date/Time | Order Location | Status |
|---------------|---------------------|----------------------------|------------------|----------------------|---------|
| HMIRI00270118 | YXXX XXXX XXX | | 06/09/2019 09:22 | WARD FEMALE MEDICAL | ORDERED |
| HMIRI00101835 | CXXX XXX XX | | 25/09/2015 09:03 | WARD FEMALE MEDICAL | ORDERED |
| HMIRI00135394 | DXX XXXXX XX XXXX | | 24/08/2015 20:20 | WARD FEMALE SURGICAL | ORDERED |
| HMIRI00135302 | PXXX XX XXXXX XXXXX | | 24/08/2015 17:36 | WARD FEMALE SURGICAL | ORDERED |

Figure 3.1-3 Verification Listing Screen

STEP 4

Double click on the selected patient

IV VERIFICATION

| | | | | | |
|---|--------------------------------|--------------------------------|----------------------------|---|---------------------------|
| | YXXX XXXX XXX | Mykad 760905136124 | Age 43 Years 01 Days | Gender Female | MRN HMIRI00270118 |
| | Address | Phone And Email | Diagnosis | No known Allergies | |
| <input type="button" value="Upload Photo"/> | Height <input type="text"/> cm | Weight <input type="text"/> kg | BMI/BSA 0/0 m ² | <input type="button" value="Update"/> (Last Updated :) | Nationality : Warganegara |

[Medication Profile](#) | [Counseling History](#) | [Pharmacist Notes](#) | [Demographic](#) | [Monitoring Parameter](#) | [Other Appointment](#)

Encounter No: 0185 Actual Admission Date: 07/10/2018 Attending Practitioner: Dr. Nur Faatihah Binti Mazwin Visit Location: WARD FEMALE MEDICAL Order By: System Administrator

PRESCRIPTION

| Alert | Drug/Diluent Name | Dose | Dose Qty | Order Details | Total Order Qty | Remarks | Status | Drug Info |
|------------------|--|---------|----------|------------------------------------|-----------------|---------|---------|-----------|
| Drug Interaction | Erythromycin Lactobionate 500 mg Injection | 500 mg | 20 ml | 1 mg/ml, Q6H , 1 Days | 4 vial | Remarks | ORDERED | Drug Info |
| | Sodium Chloride 0.9% 500mL IV soln | | 500 ml | | 4 bott | | | |
| Drug Interaction | Ertapenem 1g Injection | 1000 mg | 10 ml | 10 mg/ml, OD (once daily) , 1 Days | 1 vial | Remarks | ORDERED | Drug Info |
| | Sodium Chloride 0.9% 100mL IV soln | | 100 ml | | 1 bott | | | |

Figure 3.1-4 Verification Listing Screen

STEP 5

Click on the button and system will display alert message as show in per Figure 3.1-5

Note

- User have the option to .
- Double click on the selected drug to view order details.

CONFIRMATION

CONF0062: This order has been successfully updated. Do you want to proceed with the verification?

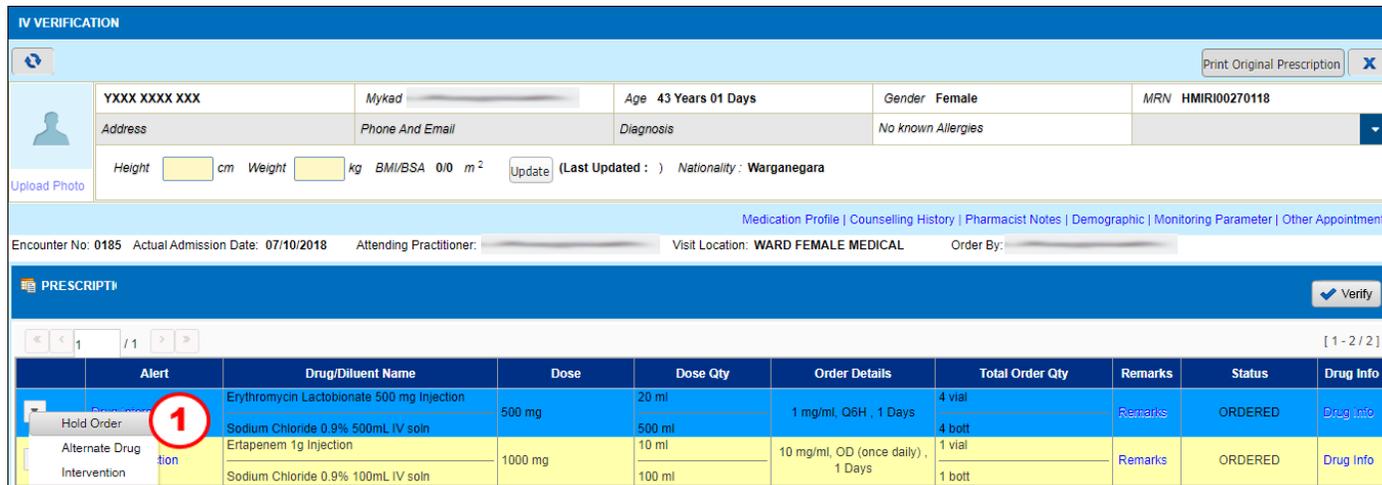
Figure 3.1-5 Verification Alert Message

STEP 6

Click on the button to proceed with verification

3.1.1 Hold/Resume Order

This function allows Pharmacist to hold medication from being prepared or dispense; the user may resume the medication order to continue dispensing.



| Alert | Drug/Diluent Name | Dose | Dose Qty | Order Details | Total Order Qty | Remarks | Status | Drug Info |
|---------------------|--|---------|----------|------------------------------------|-----------------|---------|---------|-----------|
| Hold Order 1 | Erythromycin Lactobionate 500 mg Injection | 500 mg | 20 ml | 1 mg/ml, Q8H , 1 Days | 4 vial | Remarks | ORDERED | Drug Info |
| Alternate Drug | Sodium Chloride 0.9% 500mL IV soln | 1000 mg | 500 ml | 10 mg/ml, OD (once daily) , 1 Days | 4 bott | Remarks | ORDERED | Drug Info |
| Intervention | Ertapenem 1g Injection | 1000 mg | 10 ml | 10 mg/ml, OD (once daily) , 1 Days | 1 vial | Remarks | ORDERED | Drug Info |
| | Sodium Chloride 0.9% 100mL IV soln | 1000 mg | 100 ml | | 1 bott | | | |

Figure 3.1.1-1 Prescription Listing Screen

Note

To Hold/Resume order, repeat as in Verification process from **Step 1 to 4**.

Hold Order

STEP 1

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

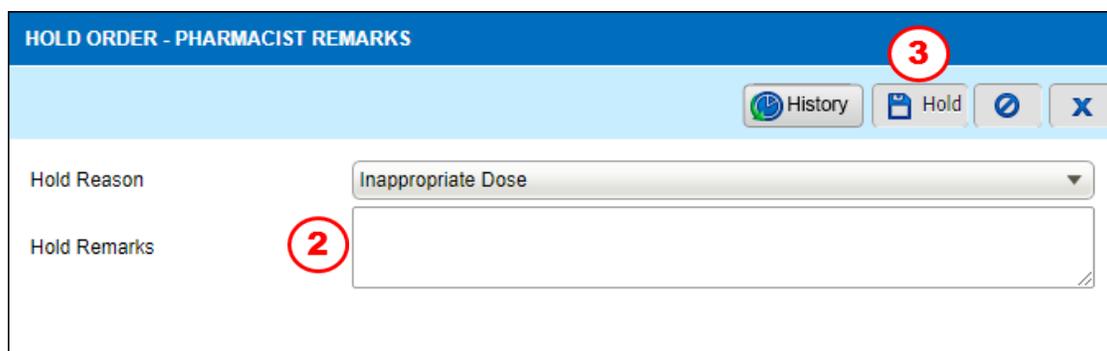


Figure 3.1.1-2 Hold Order Screen

STEP 2

Select **Hold Reason** from drop down box:

- Patient Refused
- Intervention
- Others
- Suggest to Monitor Vital Signs/Lab Result
- Incompatibility
- Authenticity
- Contraindication
- Drug Interaction
- Polypharmacy

- Wrong Patient
- Inappropriate Dose
- Inappropriate Drug
- Inappropriate Duration
- Inappropriate Frequency

STEP 3

Click on the  button to proceed with hold transaction

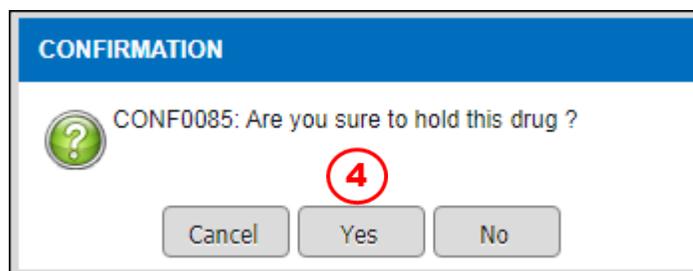
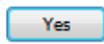


Figure 3.1.1-3 Hold Order Screen

STEP 4

Click on the  button to confirm the hold order

IV VERIFICATION Print Original Prescription X

| | | | | | |
|--------------|---------------------------------|---------------------------------|-----------------------------|-------------------------|--------------------------|
| | YXXX XXXX XXX | Mykad: 760905136124 | Age: 43 Years 01 Days | Gender: Female | MRN: HMIRI00270118 |
| | Address | Phone And Email | Diagnosis | No known Allergies | |
| Upload Photo | Height: <input type="text"/> cm | Weight: <input type="text"/> kg | BMI/BSA: 0/0 m ² | Update (Last Updated:) | Nationality: Warganegara |

Medication Profile | Counselling History | Pharmacist Notes | Demographic | Monitoring Parameter | Other Appointment |

Encounter No: 0185 Actual Admission Date: 07/10/2018 Attending Practitioner: Dr. Nur Faatihah Binti Mazwin Visit Location: WARD FEMALE MEDICAL Order By: System Administrator

PRESCRIPTION Verify

[1 - 2 / 2]

| Alert | Drug/Diluent Name | Dose | Dose Qty | Order Details | Total Order Qty | Remarks | Status | Drug Info |
|------------------|--|---------|----------|---------------------------------------|-----------------|---------|--------------|-----------|
| Drug Interaction | Ertapenem 1g Injection | 1000 mg | 10 ml | 10 mg/ml, OD (once daily) , 1 Days | 1 vial | Remarks | ORDERED | Drug Info |
| | Sodium Chloride 0.9% 100mL IV soln | | 100 ml | | 1 bott | | | |
| Drug Interaction | Erythromycin Lactobionate 500 mg Injection | 500 mg | 20 ml | 1 mg/ml, Q6H , 1 Days | 4 vial | Remarks | ORDERED HOLD | Drug Info |
| | Sodium Chloride 0.9% 500mL IV soln | | 500 ml | | 4 bott | | | |

Alternate Drug Intervention
Resume Order 1

Figure 3.1.1-4 Prescription Listing Screen

Resume Order

STEP 1

Click on the  button and select **Resume Order**

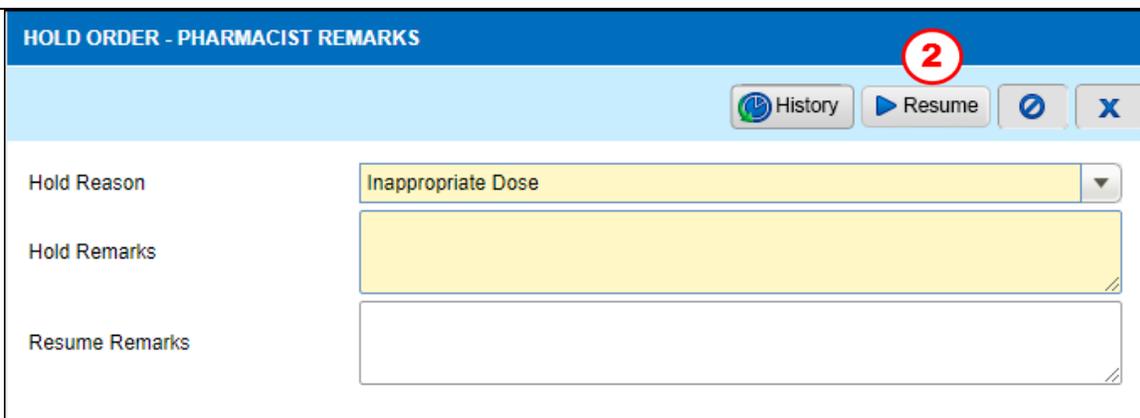


Figure 3.1.1-5 Hold Order Screen

STEP 2

Click on the  button to resume hold order

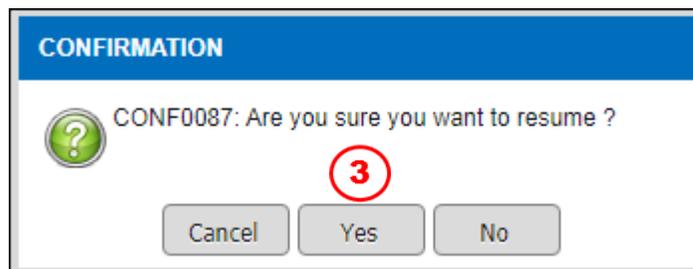


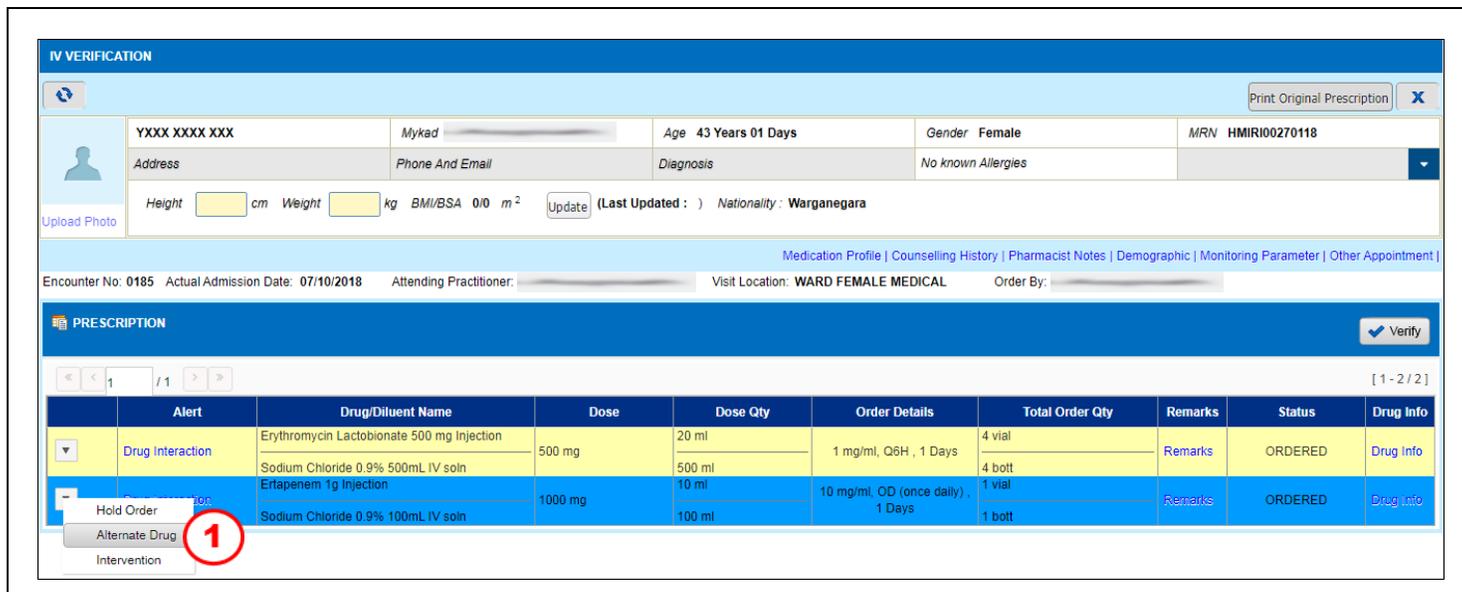
Figure 3.1.1-6 Hold Order Screen

STEP 3

Click on the  button to release drug from hold

3.1.2 Alternate Drug

This function allow user to select different drugs with the same active ingredient and same administration route.



IV VERIFICATION

Print Original Prescription X

YXXX XXXX XXX Mykad Age 43 Years 01 Days Gender Female MRN HMIRI00270118

Address Phone And Email Diagnosis No known Allergies

Height cm Weight kg BMI/BSA 0/0 m² Update (Last Updated :) Nationality : Warganegara

Medication Profile | Counseling History | Pharmacist Notes | Demographic | Monitoring Parameter | Other Appointment |

Encounter No: 0185 Actual Admission Date: 07/10/2018 Attending Practitioner: Visit Location: WARD FEMALE MEDICAL Order By:

PRESCRIPTION Verify

[1 - 2 / 2]

| Alert | Drug/Diluent Name | Dose | Dose Qty | Order Details | Total Order Qty | Remarks | Status | Drug Info |
|------------------|--|---------|----------|------------------------------------|-----------------|---------|---------|-----------|
| Drug Interaction | Erythromycin Lactobionate 500 mg Injection | 500 mg | 20 ml | 1 mg/ml, Q6H , 1 Days | 4 vial | Remarks | ORDERED | Drug Info |
| | Sodium Chloride 0.9% 500mL IV soln | | 500 ml | | 4 bott | | | |
| | Ertapenem 1g Injection | 1000 mg | 10 ml | 10 mg/ml, OD (once daily) , 1 Days | 1 vial | Remarks | ORDERED | Drug Info |
| | Sodium Chloride 0.9% 100mL IV soln | | 100 ml | | 1 bott | | | |

Context Menu: Hold Order, Alternate Drug (1), Intervention

Figure 3.1.2-1 Prescription Listing Screen

Note

To create Alternate drug record repeat as Verification process from **Step 1** to **4**.

STEP 1

Right click on the  button and select Alternate Drug

Note

Alternate drug screen consist of three (3) sections:

a) Alternate Drug Detail

- **Location, Dosage Form, Route, ordered drug Code, Ordered Drug Description, Alternate Drug Name** will be retrieved from medication order and drug master setup.

b) Batch Details

- Selected drug name will be listed based on drug master setup.

c) Diluent Batch Detail

- Selected drug name will be listed based on drug master setup.

ALTERNATE DRUG DETAILS

| | |
|--|---|
| Location: UNIT FARMASI PENGELUARAN FARMASEUTIKAL | Ordered Drug Code: J01GB06183P3002XX |
| Dosage Form: Parenteral Solution | Ordered Drug Description: Amikacin 500mg/2ml Injection |
| Route: IV | Alternate Drug Name: 2 Amikacin 250mg/2ml Injection |
| Order Details: 500 mg, Single Dose, 1 Days | Alternate Drug Order Qty (Total Order Qty: 2 vial): 0 vial |

BATCH DETAIL

| No | Drug Name | Dosage Form | Route | Batch | Expiry Date | Available Qty | Units | Qty to Dispense |
|----|------------------------------|---------------------|-------|-------|-------------|---------------|-------|-----------------|
| 1 | Amikacin 250mg/2ml Injection | Parenteral Solution | IV | 12 | 23/11/2017 | 11110 | vial | 0 |

DILUENT BATCH DETAIL

| | |
|---|---|
| Diluent: Sodium Chloride 0.9% 500mL IV soln | Diluent Order Qty (Total Order Qty: 1 bott): 0 bottle |
|---|---|

| No | Drug Name | Dosage Form | Route | Batch | Expiry Date | Available Qty | Units | Qty to Dispense |
|----|------------------------------------|---------------------|-------|------------|-------------|---------------|--------|-----------------|
| 1 | Sodium Chloride 0.9% 500mL IV soln | Parenteral Solution | IV | 11THSC2016 | 12/07/2020 | 0 | bottle | 0 |
| | | | | P3105166 | 12/07/2020 | 0 | bottle | 0 |
| | | | | P3106105 | 04/05/2021 | 70 | bottle | 0 |

| | |
|------------------------------|------------------------------|
| Reason: <input type="text"/> | Remark: <input type="text"/> |
|------------------------------|------------------------------|

Figure 3.1.2-2 Alternate screen

STEP 2

Select **Alternate Drug Name** from dropdown box

Note

Alternate drug screen consists of three (3) sections:

a) *Alternate Drug Detail*

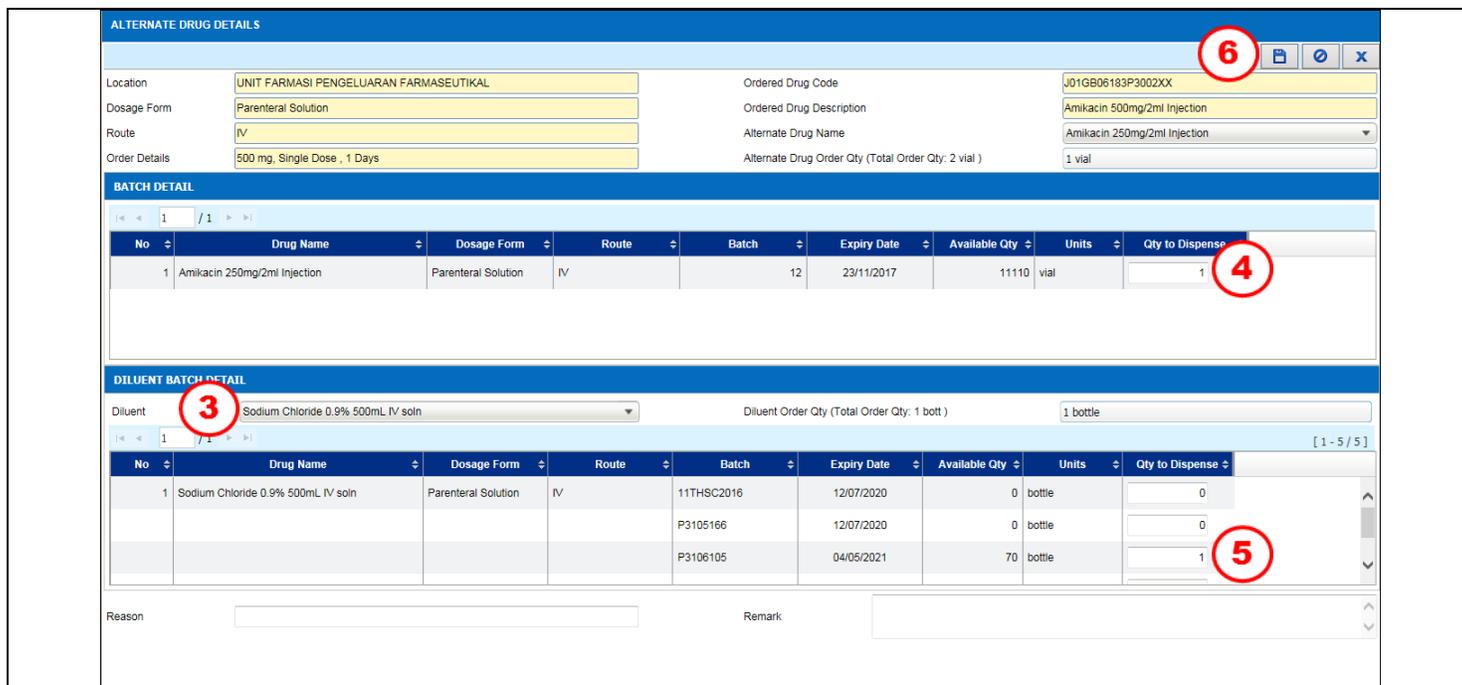
- **Location, Dosage Form, Route, Ordered Drug Code, Ordered Drug Description, Alternate Drug Name** will be retrieved from medication order and drug master setup.

b) *Batch Details*

- Selected drug name will be listed based on drug master setup.

c) *Diluent Batch Detail*

- Selected drug name will be listed based on drug master setup.



ALTERNATE DRUG DETAILS

Location: UNIT FARMASI PENGELUARAN FARMASEUTIKAL
 Doseage Form: Parenteral Solution
 Route: IV
 Order Details: 500 mg, Single Dose, 1 Days

Ordered Drug Code: J01GB06183P3002XX
 Ordered Drug Description: Amikacin 500mg/2ml Injection
 Alternate Drug Name: Amikacin 250mg/2ml Injection
 Alternate Drug Order Qty (Total Order Qty: 2 vial): 1 vial

BATCH DETAIL

| No | Drug Name | Dosage Form | Route | Batch | Expiry Date | Available Qty | Units | Qty to Dispense |
|----|------------------------------|---------------------|-------|-------|-------------|---------------|-------|-----------------|
| 1 | Amikacin 250mg/2ml Injection | Parenteral Solution | IV | 12 | 23/11/2017 | 11110 | vial | 1 |

DILUENT BATCH DETAIL

Diluent: Sodium Chloride 0.9% 500mL IV soin
 Diluent Order Qty (Total Order Qty: 1 bott): 1 bottle

| No | Drug Name | Dosage Form | Route | Batch | Expiry Date | Available Qty | Units | Qty to Dispense |
|----|------------------------------------|---------------------|-------|------------|-------------|---------------|--------|-----------------|
| 1 | Sodium Chloride 0.9% 500mL IV soin | Parenteral Solution | IV | 11THSC2016 | 12/07/2020 | 0 | bottle | 0 |
| | | | | P3105166 | 12/07/2020 | 0 | bottle | 0 |
| | | | | P3106105 | 04/05/2021 | 70 | bottle | 1 |

Reason: Remark:

Figure 3.1.2-3 Alternate screen

STEP 3

Select **Diluent** from dropdown box

STEP 4

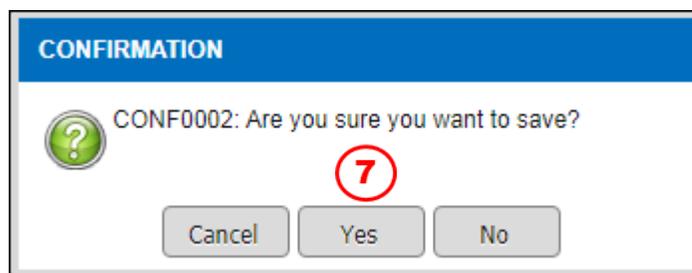
Enter quantity to dispense under **Batch Detail** section

STEP 5

Enter quantity to dispense under **Diluent Batch Detail** section

STEP 6

Click on the  button to confirm alternate drug



CONFIRMATION

CONF0002: Are you sure you want to save?

Cancel Yes No

Figure 3.1.2-4 Prescription Listing Screen After Done Alternate

STEP 7

Click on the button to save record

Note

- Value of **Alternate Drug Name** and **Diluent** from dropdown menu will be defined in drug master setup.
- **Batch Detail** will display the earliest expiration date.

- After completing the alternate drug selected, the drug will change to green colour as shown in figure 3.1.2-5.

| PRESCRIPTION Verify | | | | | | | | | | | | | |
|--|--|--------|----------------|-------------------------------|------------------|-------------|------------------|------------------|----------------------------------|------------------|---------|---------------|---------------|
| 1 / 1 | | | | | | | | | | | | | [1 - 2 / 2] |
| Alert | Drug/Diluent Name | Dose | Dose Qty | Order Details | Total Order Qty | No. of Dose | Prepare Qty | Bal Qty | Prepare Admixture | Prev Disp Qty | Remarks | Status | Drug Info |
| Drug Interact | Amikacin 500mg/2ml Injection Sodium Chloride 0.9% 500mL IV soln | 500 mg | | 1 mg/ml, Single Dose , 1 Days | 0 vial 0 bott | 0 | 0 vial 0 bott | 1 vial 1 bott | | 0 vial 0 bott | Remarks | VERIFIED (PA) | Drug Info |
| | Amikacin 250mg/2ml Injection Sodium Chloride 0.9% 500mL IV soln | | 4 ml 500 ml | | 2 vial 1 bott | | 1 vial 1 bott | | <input type="checkbox"/> Details | | | | |

Figure 3.1.2-5 Prescription Listing Screen After Done Alternate

3.1.3 Intervention

This function allow user to modify drugs details frequency, duration and form. This function is available in verification screen and preparation screen.

IV VERIFICATION

| | | | | | |
|---|----------------|---------------------|-------------------------------------|--|-------------------|
|  | AHMAD ALBOB | Mykad: 890428085277 | Age: 30 Years 05 Months 10 Days | Gender: Male | MRN: HPSF00268220 |
| | Address | Phone And Email | Diagnosis | No known Allergies | |
| Upload Photo | Height: 173 cm | Weight: 80 kg | BMI/BSA: 26.7 / 1.96 m ² | <input type="button" value="Update"/> (Last Updated : 08/10/2019) Nationality : Warganegara | |

[Medication Profile](#) | [Counselling History](#) | [Pharmacist Notes](#) | [Demographic](#) | [Monitoring Parameter](#) | [Other Appointment](#)

Encounter No: 0001 Actual Visit Date: 08/10/2019 Attending Practitioner: Visit Location: KLINIK PAKAR PEMBEDAHAN Order By: Dr Low Han Nee

PRESCRIPTION

/ 1 [1 - 1 / 1]

| Alert | Drug/Diluent Name | Dose | Dose Qty | Order Details | Total Order Qty | Remarks | Status | Drug Info |
|-------|------------------------------------|--------|----------|-------------------------|-----------------|---------|--------|---------------------------|
| ▼ | Cefuroxime 750mg Injection | 750 mg | 6 ml | 7.5 mg/ml, Q8H , 7 Days | 21 vial | Remarks | DRAFT | Drug Info |
| ▼ | Sodium Chloride 0.9% 100mL IV soln | | 100 ml | | 21 bott | | | |

Figure 3.1.3-1 Prescription Listing Screen

Note

To perform Intervention repeat as in Verification process from **Step 1 to 4**.

STEP 1

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

INTERVENTION

5

History Confirm Refresh Close

PHARMACY REMARKS

< < 1 / 1 > >
[1 - 12 / 12]

| | Intervention Reason | Remarks | Intervention Accepted | Intervention Not Accepted |
|--------------------------|---|---------|-----------------------|---------------------------|
| <input type="checkbox"/> | Authenticity | | <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> | Contraindication | | <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> | Drug Interaction | | <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> | Inappropriate Dose | | <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> | Inappropriate Drug | | <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> | Inappropriate Duration | | <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> | Inappropriate Frequency | | <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> | Incompatibility | | <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> | Others | | <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> | Polypharmacy | | <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> | Suggest to Monitor Vital Signs/Lab Result | | <input type="radio"/> | <input type="radio"/> |
| <input type="checkbox"/> | Wrong Patient | | <input type="radio"/> | <input type="radio"/> |

MODIFY ORDER

| | |
|---|---|
| <p>Drug Name: <input type="text" value="Erythromycin Lactobionate 500 mg Injection"/></p> <p>Dosage: <input type="text" value="500"/> * <input type="text" value="mg"/></p> <p>Drug Volume: <input type="text" value="20"/> * <input type="text" value="ml"/></p> <p>Ordered Concentration: <input type="text" value="1"/> <input type="text" value="mg/ml"/></p> <p>Frequency: <input type="text" value="Q6H"/> *</p> <p>Infuse Over: <input type="text" value="1"/> (Hour) <input type="text" value="0"/> (Minute) *</p> <p>Duration: <input type="text" value="1"/> * <input type="text" value="Days"/></p> <p>Start Date: <input type="text" value="05/09/2019"/> *</p> <p>Remarks: <input style="width: 100%; height: 20px;" type="text"/></p> | <p>Dosage Form: <input type="text" value="Parenteral Solution"/></p> <p>Admin Route: <input type="text" value="Intravenous Infusion"/></p> <p>Diluent: <input type="text" value="Sodium Chloride 0.9% 500mL IV soln"/> *</p> <p>Diluent Volume: <input type="text" value="500"/> * <input type="text" value="ml"/></p> <p>Total Volume: <input type="text" value="520"/> * <input type="text" value="ml"/></p> <p>Infusion Rate: <input type="text" value="500"/> <input type="text" value="ml/Hour"/></p> <p>End Date: <input type="text" value="06/09/2019"/></p> <p>Update By: <input type="text" value="Farmasi 1"/></p> <p>Updated Date: <input type="text" value="06/09/2019"/></p> |
|---|---|

Figure 3.1.3-2 Intervention Screen

STEP 2

Select **Intervention Reason** from drop down box

- Authenticity
- Contraindication
- Drug Interaction
- Inappropriate Dose
- Inappropriate Drug
- Inappropriate Duration
- Inappropriate Frequency
- Incompatibility
- Others
- Polypharmacy
- Suggest to Monitor Vital Signs/Lab Result
- Wrong Patient

STEP 3

Select on **Accepted** radio button under Intervention Status

Note

Pharmacist will select the **Intervention Status** radio button after confirming the intervention status with prescriber.

STEP 4

Change Modify Order details as required

STEP 5

Click on the  button to save the changes

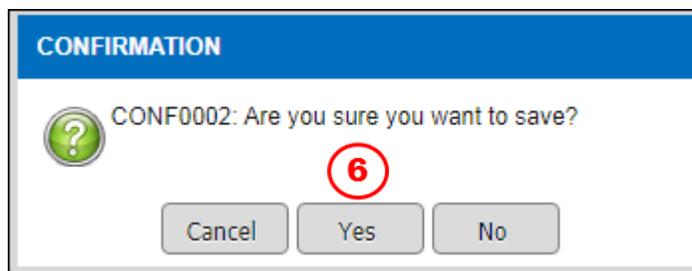
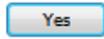


Figure 3.1.3-3 Alert Message

STEP 6

Click on the  button to confirm the intervention

| PRESCRIPTION | | | | | | | | | |
|------------------|------------------------------------|--------|----------|-----------------------|-----------------|---------|--------|-----------|--|
| Alert | Drug/Diluent Name | Dose | Dose Qty | Order Details | Total Order Qty | Remarks | Status | Drug Info | |
| Drug Interaction | Cefuroxime 750mg Injection | 800 mg | 6.4 ml | 8 mg/ml, Q8H , 6 Days | 36 vial | Remarks | DRAFT | Drug Info | |
| | Sodium Chloride 0.9% 100mL IV soln | | 100 ml | | 18 bott | | | | |

Figure 3.1.3-4 Prescription Listing Screen After Done Intervention

Note

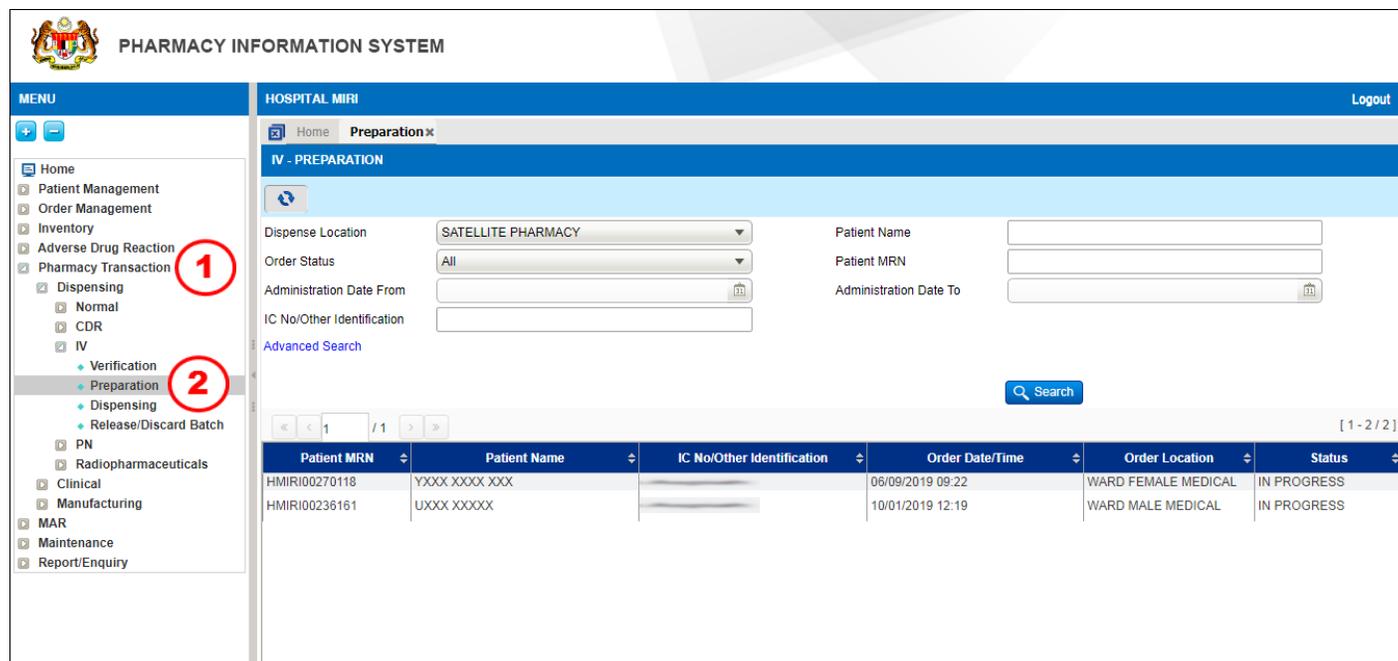
- After intervention is made, Order Details column will be changed to blue hyperlink. User may click to view the original order details.
- Order details will be displayed as shown in per Figure 3.1.3-5

| ORIGINAL RX | | | | | | | | | | |
|-------------|-----------|----------|------------|------------|---------------------|--------------|-------------|------------------------------------|----------------|---------------|
| Dose | Frequency | Duration | Start Date | End Date | Intervention Reason | Other Reason | Infuse Over | Diluent | Diluent Volume | Infusion Rate |
| 750 mg | Q8H | 7 Days | 08/10/2019 | 15/10/2019 | Others, Others | test | 30 Minutes | Sodium Chloride 0.9% 100mL IV soln | 100 ml | 3.33 ml/Min |
| 800 mg | Q8H | 6 Days | 08/10/2019 | 14/10/2019 | | | 30 Minutes | Sodium Chloride 0.9% 100mL IV soln | 100 ml | 3.33 ml/Min |

Figure 3.1.3-5 Original Rx Screen

3.2 IV Admixture Preparation

This function is used to record preparation of IV before the dispensing stage.



PHARMACY INFORMATION SYSTEM

HOSPITAL MIRI Logout

Home Preparation x

IV - PREPARATION

Dispense Location: SATELLITE PHARMACY
 Order Status: All
 Administration Date From:
 IC No/Other Identification:

Patient Name:
 Patient MRN:
 Administration Date To:

Advanced Search

< 1 / 1 >

| Patient MRN | Patient Name | IC No/Other Identification | Order Date/Time | Order Location | Status |
|---------------|---------------|----------------------------|------------------|---------------------|-------------|
| HMIRI00270118 | YXXX XXXX XXX | | 06/09/2019 09:22 | WARD FEMALE MEDICAL | IN PROGRESS |
| HMIRI00236161 | UXXX XXXXX | | 10/01/2019 12:19 | WARD MALE MEDICAL | IN PROGRESS |

[1 - 2 / 2]

Figure 3.2-1 Preparation Listing Screen

STEP 1

Click on 'Pharmacy Transaction' menu followed by 'Dispensing' and select sub-menu 'IV'

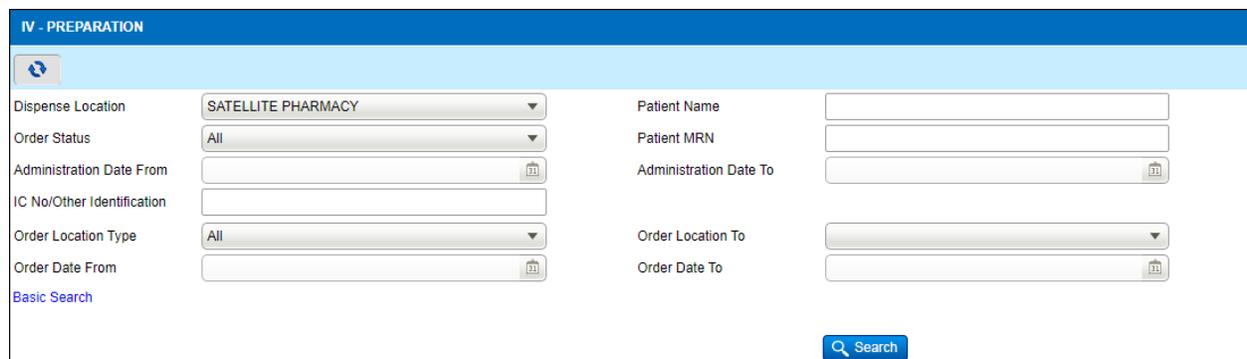
STEP 2

Click on 'Preparation' sub-menu

Note

Various search criteria are is provided as below:

- a) Basic search
- b) Advance search



IV - PREPARATION

Dispense Location: SATELLITE PHARMACY
 Order Status: All
 Administration Date From:
 IC No/Other Identification:

Order Location Type: All
 Order Date From:

Patient Name:
 Patient MRN:
 Administration Date To:

Order Location To:
 Order Date To:

Basic Search

Figure 3.2-2 Advance search

| Advance Search | | | |
|----------------|----------------------------|---|--|
| No | Field | Description | Remark |
| a) | Dispense Location | Dispensing location. (It will list down all active locations) | Able to filter and search patient name by dispensing location |
| b) | Order Status | All New Orders Outsourced Orders | Able to filter status prescription by order status |
| c) | Patient Name | Patient Name | Allow to search by full or partial patient name |
| d) | Patient MRN | Patient Medical Record Number | Search option: • Type the MRN either in full or partially: <i>Example : HPSF00001234 or "1234"</i> |
| e) | Administration Date From | Administration Date From | Able to search date before |
| f) | Administration Date To | Administration Date To | Able to search date current |
| g) | IC No/Other Identification | IC No/Other Identification | Able to search patient based on MYKAD/MYKID and others identification. |
| Advance Search | | | |
| h) | Order Location Type | - Order location type (It will list down all active location types) | Able to filter and search patient name by order location type |
| i) | Order Date from | Order confirmed date | Allow to search by start date of order created |
| j) | Order Location To | It will list down all active location | Able to filter and search patient name by order location |
| k) | Order Date To | Order confirmed date | Allow to search by selected duration of order created |

Table 3.2-1

Note

Search result of patients record list will display:

- Patient MRN
- Patient Name
- IC No/Other Identification
- Order Location
- Order Status
- Administration Date From
- Administration Date To

PHARMACY INFORMATION SYSTEM
Logout

MENU

- Home
- ▶ Patient Management
- ▶ Order Management
- ▶ Inventory
- ▶ Adverse Drug Reaction
- ▶ Pharmacy Transaction
 - ▶ Dispensing
 - ▶ Normal
 - ▶ CDR
 - ▶ IV
 - ▶ Verification
 - ▶ Preparation
 - ▶ Dispensing
 - ▶ Release/Discard Batch
 - ▶ PN
 - ▶ Radiopharmaceuticals
 - ▶ Clinical
 - ▶ Manufacturing
 - ▶ MAR
 - ▶ Maintenance
 - ▶ Report/Enquiry

HOSPITAL MIRI

Home Preparation x

IV - PREPARATION

Dispense Location:

Order Status:

Administration Date From:

IC No/Other Identification:

[Advanced Search](#)

Patient Name:

Patient MRN:

Administration Date To:

3

[1 - 2 / 2]

| Patient MRN | Patient Name | IC No/Other Identification | Order Date/Time | Order Location | Status |
|---------------|---------------|----------------------------|------------------|---------------------|-------------|
| HMIRI00270118 | YXXX XXXX XXX | | 06/09/2019 09:22 | WARD FEMALE MEDICAL | IN PROGRESS |
| HMIRI00236161 | UXXX XXXXX | | 10/01/2019 12:19 | WARD MALE MEDICAL | IN PROGRESS |

Figure 3.2-3 Preparation Listing Screen

STEP 3

Click on the button to search for patient

STEP 4

Double click on the selected patient

IV PREPARATION Print Original Prescription X

Upload Photo

| | | | | |
|---|---|----------------------------|--|-------------------|
| YXXX XXXX XXX | Mykad | Age 43 Years 01 Days | Gender Female | MRN HMIRI00270118 |
| Address | Phone And Email | Diagnosis | No known Allergies | |
| Height <input type="text" value=""/> cm | Weight <input type="text" value=""/> kg | BMI/BSA 0/0 m ² | Update (Last Updated :) Nationality : Warganegara | |

[Medication Profile](#) | [Counselling History](#) | [Pharmacist Notes](#) | [Demographic](#) | [Monitoring Parameter](#) | [Other Appointment](#)

Encounter No: 0185 Actual Admission Date: 07/10/2018 Attending Practitioner: Visit Location: WARD FEMALE MEDICAL Order By:

PHARMACY ORDER

Supervised By:

PRESCRIPTION Prepare Worksheet Label

| Alert | Drug/Diluent Name | Dose | Dose Qty | Order Details | Total Order Qty | No. of Dose | Prepare Qty | Bal Qty | Prepare Admixture | Prev Disp Qty | Remarks | Status | Drug In |
|---------------|--|---------|----------|------------------------------------|-----------------|-------------|-------------|---------|-------------------|---------------|---------|----------|----------|
| Drug Interact | Erythromycin Lactobionate 500 mg Injection | 500 mg | 20 ml | 1 mg/ml, Q6H , 1 Days | 4 vial | 0 vial | 0 vial | 4 vial | Details | 0 vial | Remarks | VERIFIED | Drug Int |
| | Sodium Chloride 0.9% 500mL IV soln | | 500 ml | | 4 bott | | 0 bott | 4 bott | | 0 bott | | | |
| Drug Interact | Ertapenem 1g Injection | 1000 mg | 10 ml | 10 mg/ml, OD (once daily) , 1 Days | 1 vial | 1 | 0 vial | 1 vial | Details | 0 vial | Remarks | VERIFIED | Drug Int |
| | Sodium Chloride 0.9% 100mL IV soln | | 100 ml | | 1 bott | | 0 bott | 1 bott | | 0 bott | | | |

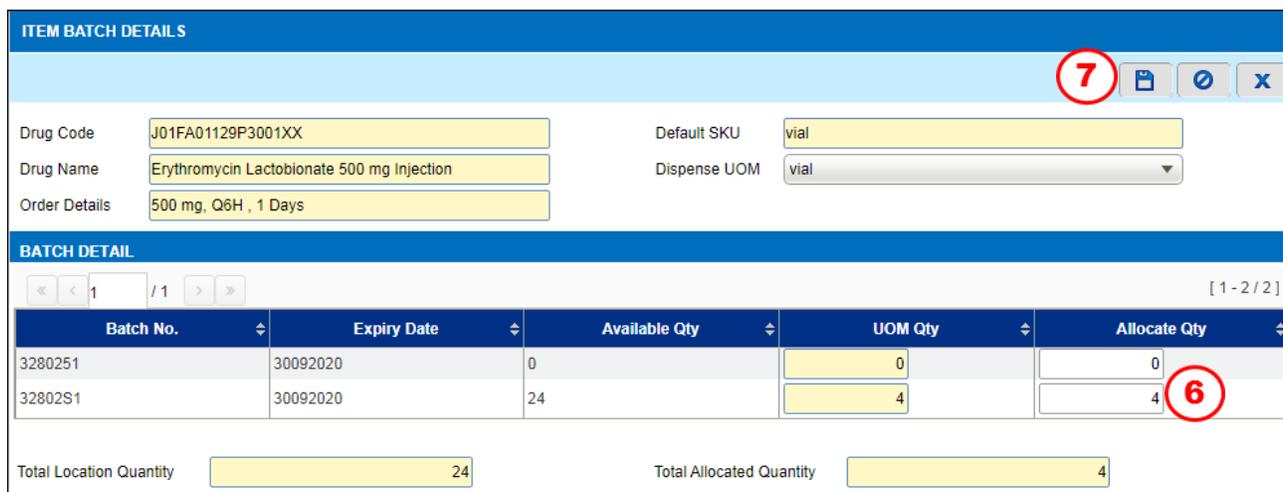
Figure 3.2-4 Prescription Listing Screen

Note

- **Dose Qty** column will be automatically calculated based on drug and diluent volume.
- **Total Order Qty** is the total no. of drugs needed for preparation.
- **No of Dose** is no of dose(s) to be prepared.

STEP 5

Click on **Prepare Qty** “0” hyperlink to perform the allocation from displayed window as show in Figure 3.2-5



ITEM BATCH DETAILS

Drug Code: J01FA01129P3001XX
 Drug Name: Erythromycin Lactobionate 500 mg Injection
 Order Details: 500 mg, Q6H , 1 Days

Default SKU: vial
 Dispense UOM: vial

BATCH DETAIL

| Batch No. | Expiry Date | Available Qty | UOM Qty | Allocate Qty |
|-----------|-------------|---------------|---------|--------------|
| 3280251 | 30092020 | 0 | 0 | 0 |
| 32802S1 | 30092020 | 24 | 4 | 4 |

Total Location Quantity: 24
 Total Allocated Quantity: 4

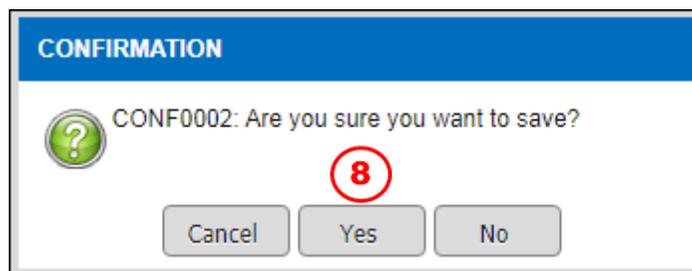
Figure 3.2-5 Allocation Screen

STEP 6

Click on selected Batch and enter **Allocate Qty**

STEP 7

Click on the  button to proceed with allocation



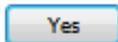
CONFIRMATION

CONF0002: Are you sure you want to save?

Buttons: Cancel, Yes, No

Figure 3.2-6 Preparation Screen

STEP 8

Click on the  button to save and close the window

STEP 9

Select on the **Details** checkbox on **Prepare Admixture** column

IV PREPARATION

[Print Original Prescription](#) X

| | | | | | |
|--------------------|---------------|-----------------------|----------------------|-----------------|-------------------|
| | YXXX XXXX XXX | Mykad _____ | Age 43 Years 01 Days | Gender Female | MRN HMIRI00270118 |
| Address _____ | | Phone And Email _____ | | Diagnosis _____ | |
| No known Allergies | | | | | |

Height cm Weight kg BMI/BSA 0/0 m² Update (Last Updated :) Nationality : Warganegara

[Medication Profile](#) | [Counselling History](#) | [Pharmacist Notes](#) | [Demographic](#) | [Monitoring Parameter](#) | [Other Appointment](#)

Encounter No: 0185 Actual Admission Date: 07/10/2018 Attending Practitioner: _____ Visit Location: WARD FEMALE MEDICAL Order By: _____

PHARMACY ORDER

Supervised By:

PRESCRIPTION

[Prepare](#) [Worksheet](#) [Label](#)

| Alert | Drug/Diluent Name | Dose | Dose Qty | Order Details | Total Order Qty | No. of Dose | Prepare Qty | Bal Qty | Prepare Admixture | Prev Disp Qty | Remarks | Status | Drug Info |
|-------|---|---------|----------|------------------------------------|-----------------|-------------|-------------|---------|---|---|---------|----------|-----------|
| ▼ | Drug Interact Erythromycin Lactobionate 500 mg Injection | 500 mg | 20 ml | 1 mg/ml, Q6H , 1 Days | 4 vial | 4 | 4 vial | 4 | <input checked="" type="checkbox"/> Details | 0 vial | Remarks | VERIFIED | Drug Info |
| | Sodium Chloride 0.9% 500mL IV soln | | 500 ml | | 4 bott | | 4 | 4 bott | 4 | <input checked="" type="checkbox"/> Details | | | |
| ▼ | Drug Interact Ertapenem 1g Injection | 1000 mg | 10 ml | 10 mg/ml, OD (once daily) , 1 Days | 1 vial | 1 | 1 vial | 1 vial | <input type="checkbox"/> Details | 0 vial | Remarks | VERIFIED | Drug Info |
| | Sodium Chloride 0.9% 100mL IV soln | | 100 ml | | 1 bott | | 0 bott | 1 bott | 0 bott | <input type="checkbox"/> Details | | | |

Figure 3.2-7 Preparation Listing Screen

Note

After selecting the **Details** checkbox a pop-up window will appear as show in Figure 3.2.8.

PREPARATION DETAILS

12

Storage 10
 "Refrigerate (2 - 8 °C)" Below 0 °C
 "Room Temperature (< 25 °C)" Protect from Light

Reconstitution Fluid 11

Preparation Instruction

Figure 3.2-8 Preparation Details Screen

STEP 10

Select the applicable **Storage** checkboxes
 Below/Refrigerate/Protected From Light Or Room Temperature

STEP 11

Enter **Reconstitution Fluid & Preparation Instruction** if applicable

STEP 12

Click on the button to save record

Note

- Storage condition, reconstitution fluid and preparation instruction will default value as setup in Drug Master (if any).

U. MANUAL_IV DISPENSING-12th E

Page 23

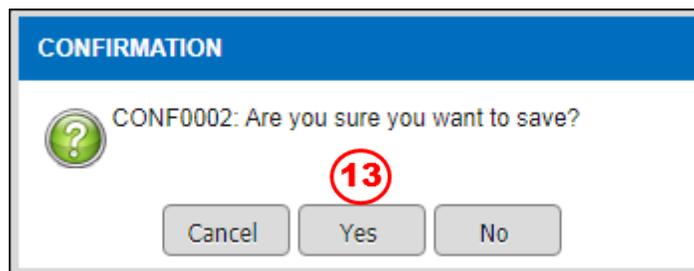


Figure 3.2-9 Preparation Details Screen

STEP 13

Click on  button to confirm saving of preparation details

IV PREPARATION Print Original Prescription X

| | | | | | |
|--------------|--------------------------------|--------------------------------|----------------------------|--|-------------------|
| | YXXX XXXX XXX | Mykad | Age 43 Years 01 Days | Gender Female | MRN HMIRI00270118 |
| Address | Phone And Email | Diagnosis | No known Allergies | | |
| Upload Photo | Height <input type="text"/> cm | Weight <input type="text"/> kg | BMI/BSA 0/0 m ² | Update (Last Updated :) Nationality : Warganegara | |

[Medication Profile](#) | [Counselling History](#) | [Pharmacist Notes](#) | [Demographic](#) | [Monitoring Parameter](#) | [Other Appointment](#)

Encounter No: 0185 Actual Admission Date: 07/10/2018 Attending Practitioner: Visit Location: WARD FEMALE MEDICAL Order By:

PHARMACY ORDER

Supervised By

PRESCRIPTION

14

| Alert | Drug/Diluent Name | Dose | Dose Qty | Order Details | Total Order Qty | No. of Dose | Prepare Qty | Bal Qty | Prepare Admixture | Prev Disp Qty | Remarks | Status | Drug Info |
|-----------------|--|---------|----------|------------------------------------|-----------------|-------------|-------------|---------|---|---------------|---------|----------|-----------|
| ▼ Drug Interact | Erythromycin Lactobionate 500 mg Injection | 500 mg | 20 ml | 1 mg/ml, Q6H , 1 Days | 4 vial | 4 | 4 vial | 4 vial | <input checked="" type="checkbox"/> Details | 0 vial | Remarks | VERIFIED | Drug Info |
| | Sodium Chloride 0.9% 500mL IV soln | | 500 ml | | 4 bott | | 4 bott | 0 bott | | | | | |
| ▼ Drug Interact | Ertapenem 1g Injection | 1000 mg | 10 ml | 10 mg/ml, OD (once daily) , 1 Days | 1 vial | 1 | 1 vial | 1 vial | <input type="checkbox"/> Details | 0 vial | Remarks | VERIFIED | Drug Info |
| | Sodium Chloride 0.9% 100mL IV soln | | 100 ml | | 1 bott | | 1 bott | 0 bott | | | | | |

Figure 3.2-10 Preparation Listing Screen

STEP 14

Click on the  button to view and print

IV WORKSHEET

MINISTRY OF HEALTH

Hospital Miri

Date of preparation : 06/09/2019

Worksheet Id: 19-09-0001

MRN HMIRI00270118

Name YXXX XXXX XXX

ID No 760905136124

Rx. No. FMW0000954203

Order Location WARD FEMALE MEDICAL

Ordered By

Order Date 06/09/2019

| No | ROA | Preparation Name | Material Used | | | | | | | Storage | |
|----|-----|----------------------|--|--------|-------------|------------|-----------|-----------------|----------|------------|---|
| | | | Ingredient Name | Dose | Dose Volume | No of Dose | Total Qty | Preparation Qty | Batch No | | Expiry Date |
| 1 | INF | Erythromycin 1 mg/ml | Erythromycin Lactobionate 500 mg Injection | 500 mg | 20 ml | 4 | 80 ml | 4 vial | 32802S1 | 30/09/2020 | "Refrigerate (2 - 8 °C)", Protect from Light |
| | | | 20ml WFI | | | | | | | | |
| | | | Sodium Chloride 0.9% 500mL IV soln | | | | | | | | |

Instruction: Please Refer to SOP

Reference:

Worksheet generated by Worksheet & label checked Prepared by Final Product Checked by Supervised by

Date: 06/09/2019

Date:

Date:

Date:

Date: 06/09/2019

Figure 3.2-11 Worksheet

IV PREPARATION Print Original Prescription X



Upload Photo

| | | | | |
|--------------------------------|--------------------------------|----------------------------|--|-------------------|
| YXXX XXXX XXX | Mykad | Age 43 Years 01 Days | Gender Female | MRN HMIRI00270118 |
| Address | Phone And Email | Diagnosis | No known Allergies | |
| Height <input type="text"/> cm | Weight <input type="text"/> kg | BMI/BSA 0/0 m ² | Update (Last Updated :) Nationality : Warganegara | |

PHARMACY ORDER

Supervised By

PRESCRIPTION Prepare Worksheet Label

| Alert | Drug/Diluent Name | Dose | Dose Qty | Order Details | Total Order Qty | No. of Dose | Prepare Qty | Bal Qty | Prepare Admixture | Prev Disp Qty | Remarks | Status | Drug Info |
|---------------|--|---------|----------|------------------------------------|-----------------|-------------|-------------|----------------------------------|---|---------------|---------|----------|-----------|
| Drug Interact | Erythromycin Lactobionate 500 mg Injection | 500 mg | 20 ml | 1 mg/ml, Q6H , 1 Days | 4 vial | 4 | 4 vial | 4 vial | <input checked="" type="checkbox"/> Details | 0 vial | Remarks | VERIFIED | Drug Info |
| | Sodium Chloride 0.9% 500mL IV soln | | 500 ml | | 4 bott | | 4 bott | <input type="checkbox"/> Details | 0 bott | | | | |
| Drug Interact | Ertapenem 1g Injection | 1000 mg | 10 ml | 10 mg/ml, OD (once daily) , 1 Days | 1 vial | 1 | 1 vial | 1 vial | <input type="checkbox"/> Details | 0 vial | Remarks | VERIFIED | Drug Info |
| | Sodium Chloride 0.9% 100mL IV soln | | 100 ml | | 1 bott | | 1 bott | <input type="checkbox"/> Details | 0 bott | | | | |

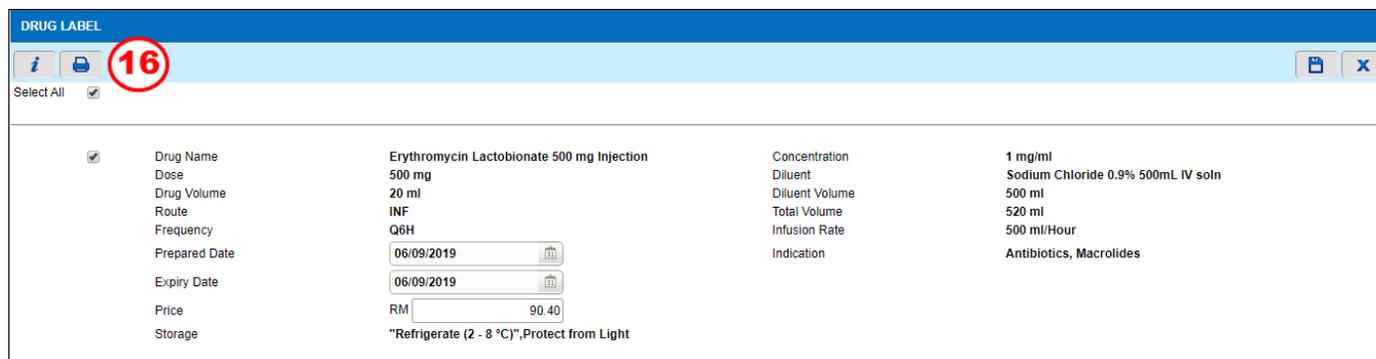
Figure 3.2-12 Preparation Listing Screen

U. MANUAL_IV DISPENSING-12th E

Page 25

STEP 15

Click on  button and a window will display as show in Figure 3.2-13



DRUG LABEL

Select All

| | | | | |
|-------------------------------------|---------------|--|----------------|------------------------------------|
| <input checked="" type="checkbox"/> | Drug Name | Erythromycin Lactobionate 500 mg Injection | Concentration | 1 mg/ml |
| | Dose | 500 mg | Diluent | Sodium Chloride 0.9% 500mL IV soln |
| | Drug Volume | 20 ml | Diluent Volume | 500 ml |
| | Route | INF | Total Volume | 520 ml |
| | Frequency | Q6H | Infusion Rate | 500 ml/Hour |
| | Prepared Date | 06/09/2019 | Indication | Antibiotics, Macrolides |
| | Expiry Date | 06/09/2019 | | |
| | Price | RM 90.40 | | |
| | Storage | "Refrigerate (2 - 8 °C)", Protect from Light | | |

Figure 3.2-13 Drug label

STEP 16

Click on the  button to print drug label will display as shown in Figure 3.2-14

| | |
|---|---|
| IV Admixture Pharmacy | |
| Hospital Pakar Sultanah Fatimah, Muar | |
| LXXX XXXX XXX | |
| HKL000009 | Farmasi Klinik Pakar |
| Drug Name: Adrenaline 1 mg/ml Injection | Bed No: |
| Dose: 3 mg / 3 ml (Conc: 0.01 mg/ml) | |
| in 500 ml Sodium Chloride 0.9% with Dextrose 5% | |
| Route: INF | Freq: Single Dose Infuse Rate: 0 ml/Min |
| Prepared Date: 09/10/2019 | Exp Date: 09/10/2019 |
| Indication: Cardiac Stimulants Excl. Cardiac | Price: RM 1.00 |
| Storage: | |

Figure 3.2-14 Label

Note

Select All checkbox allow users to print all drug labels in the selected prescription.

IV PREPARATION

| | | | | | |
|---|--------------------------------|--------------------------------|--|---|-------------------|
|  | YXXX XXXX XXX | Mykad | Age 43 Years 01 Days | Gender Female | MRN HMIRI00270118 |
| | Address | Phone And Email | Diagnosis | No known Allergies | |
| <input type="button" value="Upload Photo"/> | Height <input type="text"/> cm | Weight <input type="text"/> kg | BMI/BSA 0/0 m ² <input type="button" value="Update"/> | (Last Updated :) Nationality : Warganegara | |

[Medication Profile](#) | [Counselling History](#) | [Pharmacist Notes](#) | [Demographic](#) | [Monitoring Parameter](#) | [Other Appointment](#)

Encounter No: 0185 Actual Admission Date: 07/10/2018 Attending Practitioner: Visit Location: WARD FEMALE MEDICAL Order By:

PHARMACY ORDER

Supervised By

PRESCRIPTION

1 / 1

| | Alert | Drug/Diluent Name | Dose | Dose Qty | Order Details | Total Order Qty | No. of Dose | Prepare Qty | Bal Qty | Prepare Admixture | Prev Disp Qty | Remarks | Status | Drug Info |
|---|----------------|--|---------|----------|------------------------------------|-----------------|-------------|-------------|---------|-------------------------------------|---------------|---------|----------|-----------|
| ▼ | Drug Interactc | Erythromycin Lactobionate 500 mg Injection | 500 mg | 20 ml | 1 mg/ml, Q6H , 1 Days | 4 vial | 4 | 4 vial | 4 vial | <input checked="" type="checkbox"/> | 0 vial | Remarks | VERIFIED | Drug Info |
| | | Sodium Chloride 0.9% 500mL IV soln | | 500 ml | | 4 bott | | 4 bott | 4 bott | 4 bott | | | | |
| ▼ | Drug Interactc | Ertapenem 1g Injection | 1000 mg | 10 ml | 10 mg/ml, OD (once daily) , 1 Days | 1 vial | 1 | 1 vial | 1 vial | <input checked="" type="checkbox"/> | 0 vial | Remarks | VERIFIED | Drug Info |
| | | Sodium Chloride 0.9% 100mL IV soln | | 100 ml | | 1 bott | | 1 bott | 1 bott | 1 bott | | | | |

Figure 3.2-15 Preparation Screen

STEP 17

Click on the  button to proceed with preparation

Note

After allocating the quantity, **Prepare Qty** column will retrieve the reserved quantity from item batch.

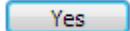
CONFIRMATION


CONF0060: Do you want to proceed with the preparation?

18

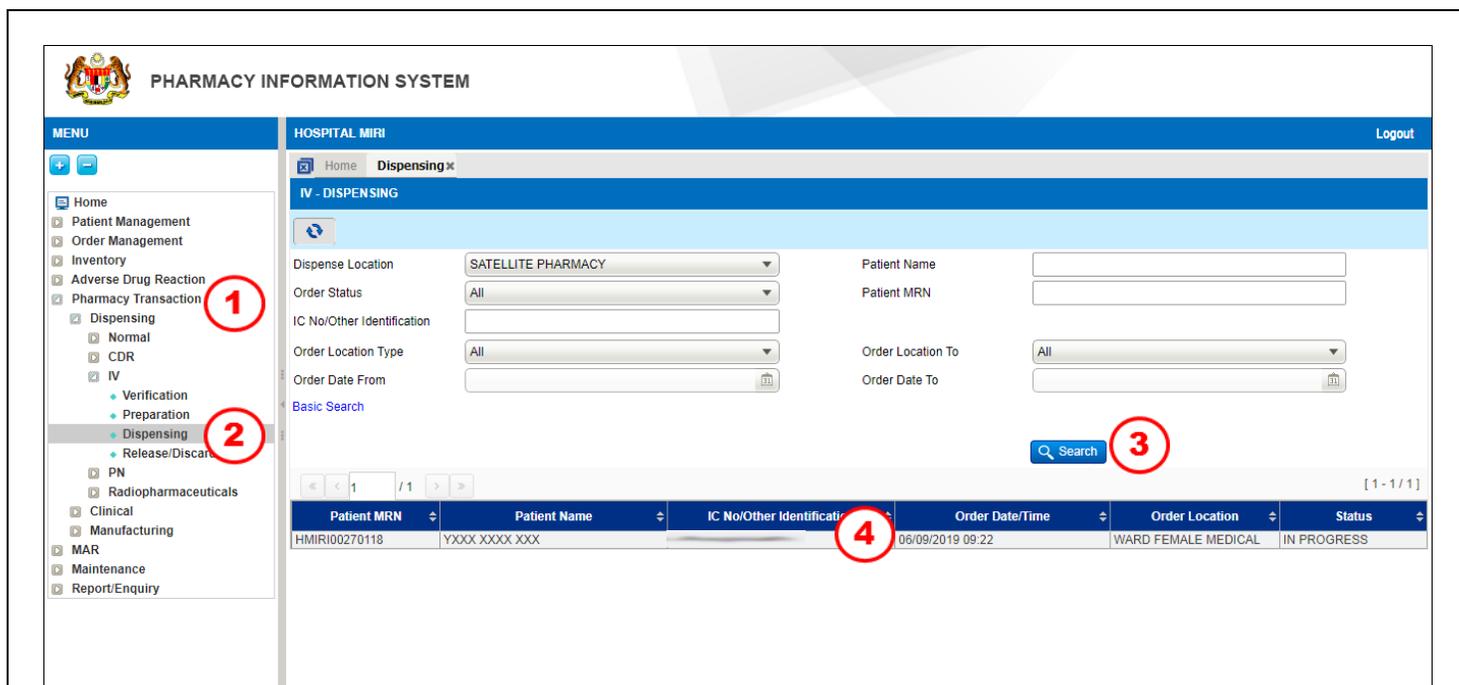
Figure 3.2-16 Preparation Screen

STEP 18

Click on the  button to proceed with dispensing

3.3 IV Admixture Dispensing

This function allows user to record dispensing, to hold, resume and reprint drug label



PHARMACY INFORMATION SYSTEM

HOSPITAL MIRI Logout

Home **Dispensing**

IV - DISPENSING

Dispense Location: SATELLITE PHARMACY
 Order Status: All
 IC No/Other Identification:
 Order Location Type: All
 Order Date From:
 Patient Name:
 Patient MRN:
 Order Location To: All
 Order Date To:

Basic Search Search

| Patient MRN | Patient Name | IC No/Other Identification | Order Date/Time | Order Location | Status |
|---------------|---------------|----------------------------|------------------|---------------------|-------------|
| HMIRI00270118 | YXXX XXXX XXX | | 06/09/2019 09:22 | WARD FEMALE MEDICAL | IN PROGRESS |

Figure 3.3-1 Dispensing Listing Screen

STEP 1

Click on 'Pharmacy Transaction' menu followed by 'Dispensing' and select 'IV' sub-menu

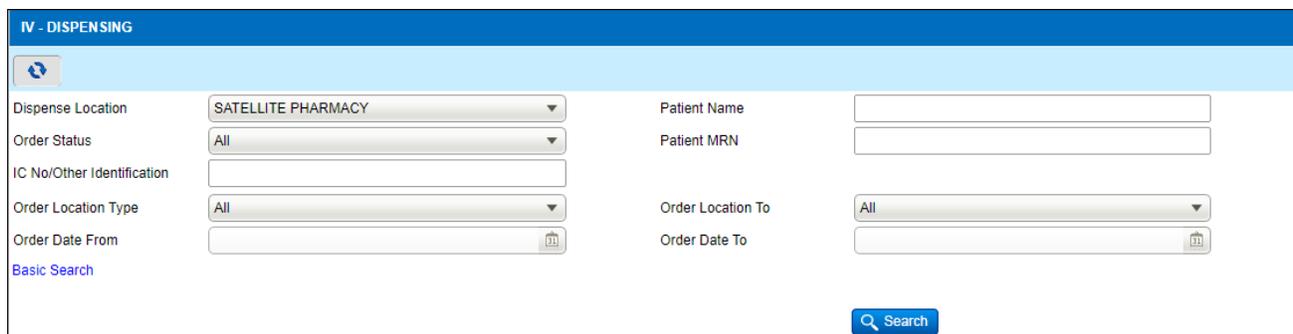
STEP 2

Click on 'Dispensing' sub-menu

Note

Various search criteria are provided as below :

- a) Basic search
- b) Advance search



IV - DISPENSING

Dispense Location: SATELLITE PHARMACY
 Order Status: All
 IC No/Other Identification:
 Order Location Type: All
 Order Date From:
 Patient Name:
 Patient MRN:
 Order Location To: All
 Order Date To:

Basic Search Search

Figure 3.3-2 Dispensing Listing Screen

| Basic Search | | | |
|----------------|----------------------------|---|--|
| No | Field | Description | Remark |
| a) | Dispense Location | Dispensing location. (It will list down all active locations) | Able to filter and search patient name by dispensing location |
| b) | Order Status | All New Orders Outsourced Orders | Able to filter status prescription by order status |
| c) | Patient Name | Patient Name | Allow to search by full or partial patient name |
| d) | Patient MRN | Patient Medical Record Number | Search option: • Type the MRN either in full or partially: <i>Example : HPSF00001234 or "1234"</i> |
| e) | IC No/Other Identification | IC No/Other Identification | Able to search patient based on MYKAD/MYKID and others identification. |
| Advance Search | | | |
| f) | Order Location Type | - Order location type (It will list down all active location types) | Able to filter and search patient name by order location type |
| g) | Order Date from | Order confirmed date | Allow to search by start date of order created |
| h) | Order Location To | It will list down all active location | Able to filter and search patient name by order location |
| i) | Order Date To | Order confirmed date | Allow to search by selected duration of order created |

Table 3.3-1

Note

Search results of patient record list will display:

- Patient MRN
- Patient Name
- IC No/Other Identification
- Order Date
- Order Location
- Status

STEP 3

Click on the  button to search for patient

STEP 4

Double click on the selected patient

IV DISPENSING

Upload Photo

| | | | | |
|---|-----------------|----------------------|--------------------|-------------------|
| YXXX XXXX XXX | Mykad | Age 43 Years 01 Days | Gender Female | MRN HMIRI00270118 |
| Address | Phone And Email | Diagnosis | No known Allergies | |
| Height <input type="text"/> cm Weight <input type="text"/> kg BMI/BSA 0/0 m ² <input type="button" value="Update"/> (Last Updated :) Nationality: Warganegara | | | | |

[Medication Profile](#) | [Counselling History](#) | [Pharmacist Notes](#) | [Demographic](#) | [Monitoring Parameter](#) | [Other Appointment](#)

Encounter No: 0185 Actual Admission Date: 07/10/2018 Attending Practitioner: Visit Location: WARD FEMALE MEDICAL Order By:

PHARMACY ORDER

| | | | | | |
|---------------|------------------|---------------------|------------------|---------|--|
| Dispensed To | YXXX XXXX XXX | Dispensed Date/Time | 06/09/2019 03:57 | Remarks | |
| Dispensed At | Pharmacy Counter | Collected By | | | |
| Supervised By | | | | | |

5

PRESCRIPTION

| Alert | Drug/Diluent Name | Dose | Dose Qty | Order Details | Total Order Qty | No. of Dose | Prepare Qty | Bal Qty | Prepare Admixture | Prev Disp Qty | Remarks | Status | Drug Info |
|-----------------|--|---------|----------|------------------------------------|-----------------|-------------|-------------|---------|---|---------------|---------|----------|-----------|
| Drug Interactic | Erythromycin Lactobionate 500 mg Injection | 500 mg | 20 ml | 1 mg/ml, Q6H , 1 Days | 4 vial | 4 | 4 vial | 4 vial | <input checked="" type="checkbox"/> Details | 0 vial | Remarks | PREPARED | Drug Info |
| | Sodium Chloride 0.9% 500mL IV soln | | 500 ml | | 4 bott | | 4 bott | 0 bott | | | | | |
| Drug Interactic | Ertapenem 1g Injection | 1000 mg | 10 ml | 10 mg/ml, OD (once daily) , 1 Days | 1 vial | 1 | 1 vial | 1 vial | <input checked="" type="checkbox"/> Details | 0 vial | Remarks | PREPARED | Drug Info |
| | Sodium Chloride 0.9% 100mL IV soln | | 100 ml | | 1 bott | | 1 bott | 0 bott | | | | | |

Figure 3.3-3 Dispensing Screen

STEP 5

Click on the button and system will open a new window as show in Figure 3.3-5

CONFIRMATION

CONF0064: Do you want to dispense now?

6

Figure 3.3-5 Conformation Screen

STEP 6

Click on the button to dispense as Figure 3.3-5

Note

User may record the collectors name. Example the nurse in charge on the day.

U. MANUAL_IV DISPENSING-12th E

Page 30

3.4 IV Discard Batch

This function is used by the pharmacist to discard the IV admixture that has been prepared at the preparation stages. The drug and diluents quantity will be deducted from the inventory.

Figure 3.4-1 Discard Batch screen

STEP 1

Click on 'Pharmacy Transaction' menu followed by 'Dispensing' and select 'IV' sub-menu

STEP 2

Click on 'Release and Discard Batch' sub-menu

Note

Various search criteria is provided as below

| No | Field | Description | Remark |
|----|----------------------------|--|--|
| a | MRN | Patient Medical Record Number | Search option: • Type the MRN either in full or partially: <i>Example : HPSF00001234 or "1234"</i> |
| b | Patient Name | Patient Name | Allow to search by t full or partial patient name |
| c | Drug Name | Drug Name | Generic name |
| d | Dispense Location | Dispensing location. (It will list down all active locations) | Able to filter and search patient name by dispensing location |
| e | Preparation Date From | Preparation Date From | Able to search date before |
| f | Preparation Date To | Preparation Date To | Able to search current date |
| g | IC No/Other Identification | IC No/Other Identification | Able to search patient based on MYKAD/MYKID and others identification. |

Table 3.4-1

Note

Search results of patient record list will display:

- Select
- MRN
- Patient Name
- IC No/Other Identification
- Drug Name
- Medication Order No
- Preparation Date
- Prepared Qty
- Status
- Reason For Discard

STEP 3

Click on the  button

STEP 4

Select checkbox to Release/discard from the listed drug

STEP 5

Select Reason for Release/Discard from the dropdown box options:

- Change of Regimen
- Faulty Product
- Intervention
- Patient Refused
- Uncollected
- Wrong Allocation

STEP 6

Click on the Release or Discard button to proceed with release/discard

Note

Once the drug is already discard, it will display back in the Preparation screen for re-allocation of a new batch quantity.

4.0 Acronyms

| Abbreviation | Definition |
|--------------|-----------------------------|
| MOH | Ministry Of Health |
| PhIS | Pharmacy Information System |
| CPS | Clinical Pharmacy System |
| MRN | Medical Record Number |
| IV | Intravenous |
| HQ | Headquarters |
| INJ | Injection |
| QTY | Quantity |
| LAB | Laboratory |

5.0 Links to Clinical Modules

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