



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

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## User Manual IV Dispensing

<b>Version</b>	<b>: 4<sup>th</sup> Edition</b>
<b>Document ID</b>	<b>: U. MANUAL_IV DISPENSING</b>





PhIS & CPS Project  
User Manual – IV Dispensing



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Reference ID : U. MANUAL\_IV DISPENSING-4<sup>th</sup> E

Application reference: PhIS & CPS v1.4.1



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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:

- Patient Registration
- Visit Management
- Manage Duplicate Record
- Cancel Discharge Patient
- Clinical Summary

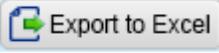
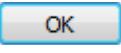
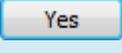
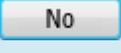
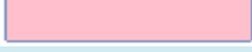
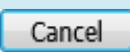
### 1.3 Organised Sections

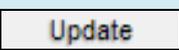
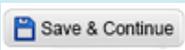
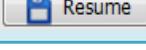
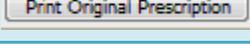
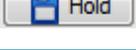
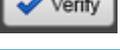
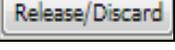
These are the sections within this document:

- Section 1 : Introduction
- Section 2 : Application Standard Features
- Section 3 : Order Management-IV Admixture
- Section 4 : Acronyms

## 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 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 authorised 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 pharmacist and assistant pharmacist (subject to user assign by the facility)

#### Functional Diagram

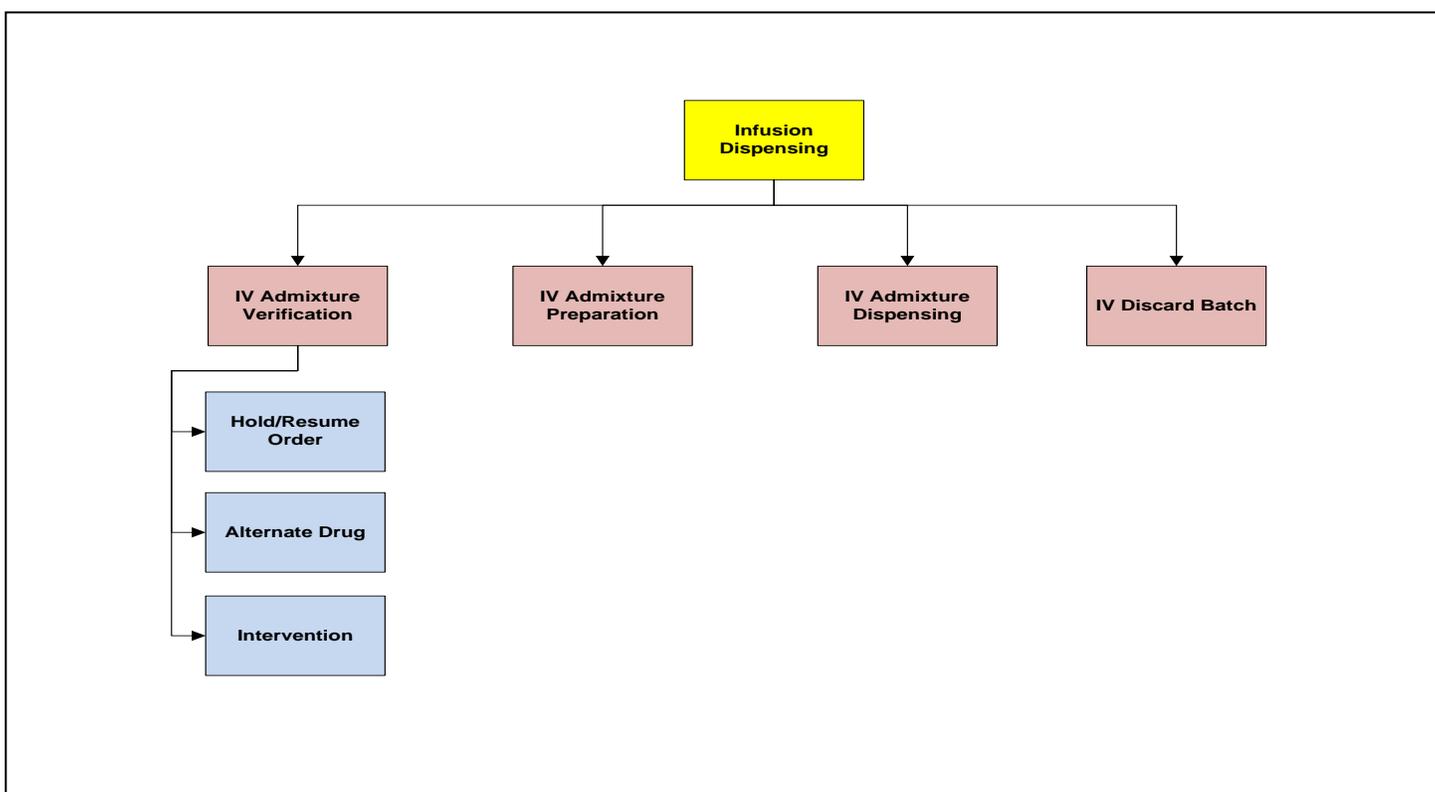


Figure 3.0-1



## 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. Professionals 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 Discard Batch**  
The function allows the user to discard the drug reserved for the patient from inventory.  
User needs to discard this drug when the preparation is not applicable for dispensing and pharmacist needs to perform the preparation again.

### 3.1 IV Admixture Verification

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

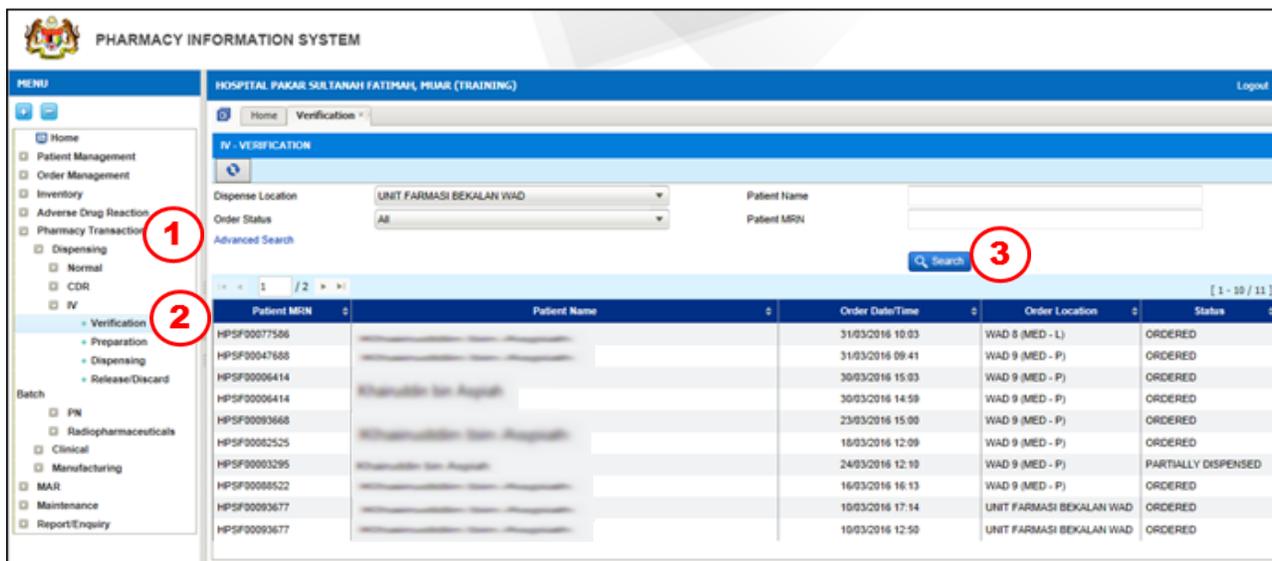


Figure 3.1-1 Verification Listing Screen

#### 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:

- Basic search
- Advance search



The screenshot shows the 'IV - VERIFICATION' interface. On the left is a 'MENU' sidebar with options like Home, Patient Management, Order Management, Inventory, Adverse Drug Reaction, Pharmacy Transaction, and Dispensing (Normal, CDR, IV). The main area has a header 'HOSPITAL PAKAR SULTANAH FATIMAH, MUAR' and a 'Logout' button. Below the header are search filters: Dispense Location (UNIT FARMASI BEKALAN IWAD), Order Status (All), Order Location Type (All), Order Date From, Order Date To, Patient Name, and Patient MRN. A 'Basic Search' link and a 'Search' button are at the bottom.

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 - Discharge Medications - New Orders - Outsourced Orders	
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>
Advance Search			
e)	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
f)	Order Date from	Order confirmed date	Allow to search by start date of order created
g)	Order Location To	It will list down all active locations	Able to filter and search patient name by order location
h)	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
- Order Date
- Status

Patient MRN	Patient Name	Order Date/Time	Order Location	Status
HPSF00093736	[Redacted]	31/03/2016 10:38	WAD 8 (MED - L)	ORDERED
HPSF00077586	[Redacted]	31/03/2016 10:03	WAD 8 (MED - L)	ORDERED
HPSF00047688	[Redacted]	31/03/2016 09:41	WAD 9 (MED - P)	ORDERED
HPSF00006414	[Redacted]	30/03/2016 15:03	WAD 9 (MED - P)	ORDERED
HPSF00006414	[Redacted]	30/03/2016 14:59	WAD 9 (MED - P)	ORDERED
HPSF00093668	[Redacted]	23/03/2016 15:00	WAD 9 (MED - P)	ORDERED
HPSF00082525	[Redacted]	18/03/2016 12:09	WAD 9 (MED - P)	ORDERED
HPSF00003295	[Redacted]	24/03/2016 12:10	WAD 9 (MED - P)	PARTIALLY DISPENSED
HPSF00088522	[Redacted]	16/03/2016 16:13	WAD 9 (MED - P)	ORDERED
HPSF00093677	[Redacted]	10/03/2016 12:50	UNIT FARMASI BEKALAN WAD	ORDERED

Figure 3.1-3 Verification Listing Screen

**STEP 4**

Double click on the selected patient

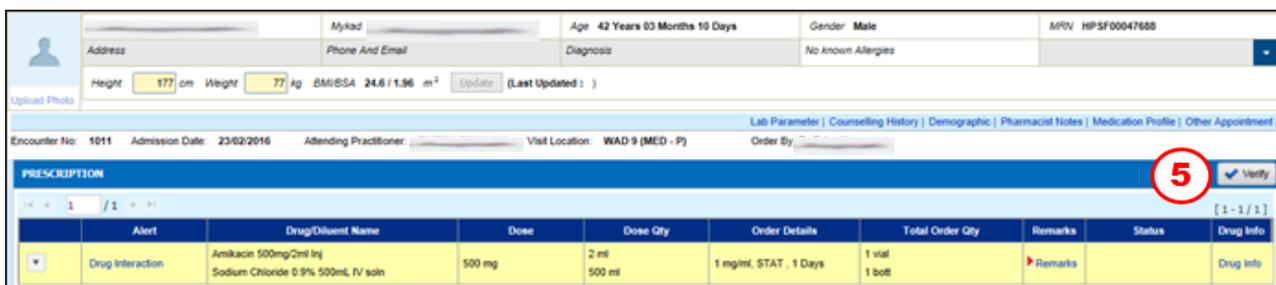
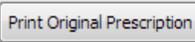


Figure 3.1-4 Verification Listing Screen

**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.

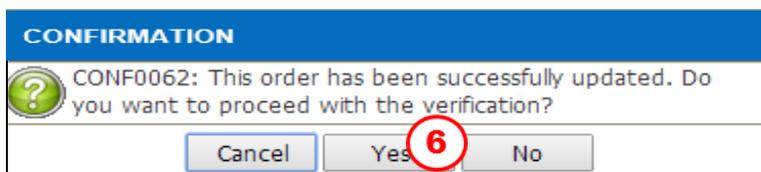
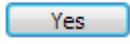


Figure 3.1-5 Verification Alert Message

**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.

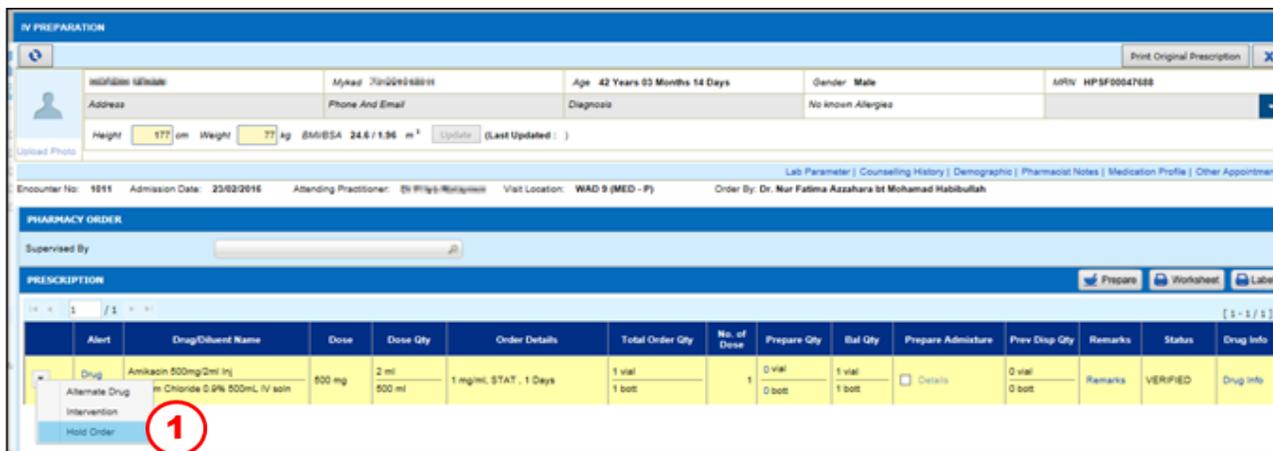


Figure 3.1.1-1 Prescription Listing Screen

**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**

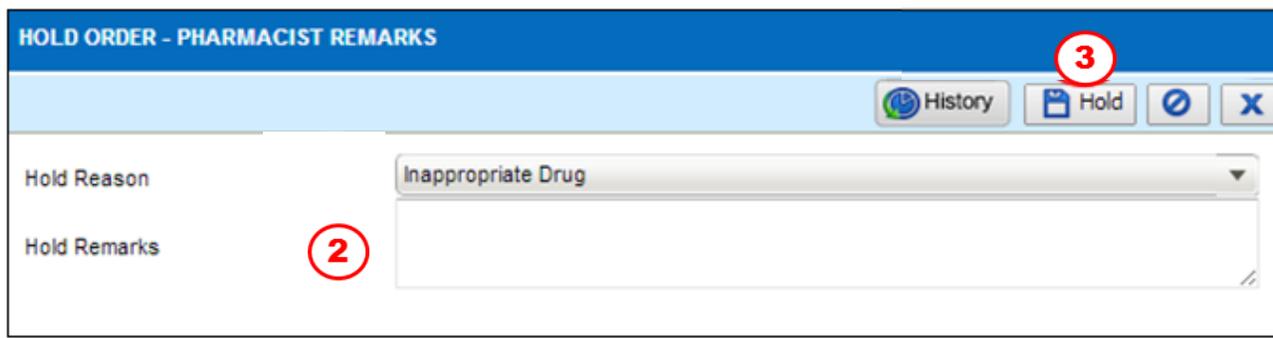


Figure 3.1.1-2 Hold Order Screen

**STEP 2**

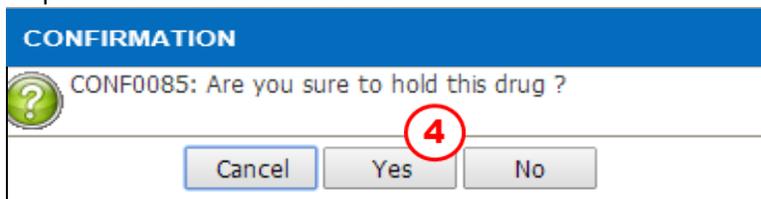
Select **Hold Reason** from drop down box:

- 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**

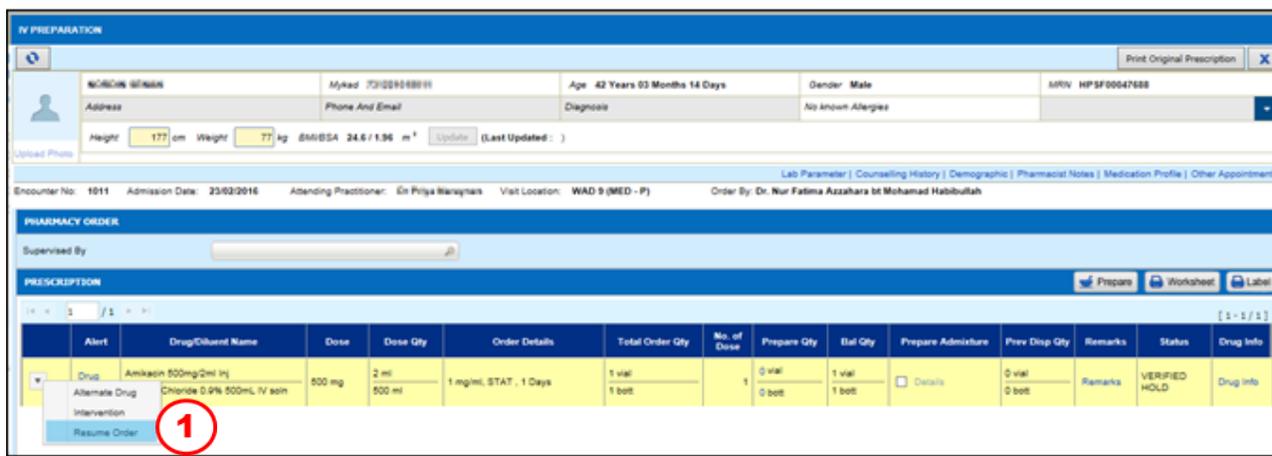
Click on the  button to proceed with hold transaction



**Figure 3.1.1-3 Hold Order Screen**

**STEP 4**

Click on the  button to confirm the hold order



**Figure 3.1.1-4 Prescription Listing Screen**

**Resume Order**

**STEP 1**

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

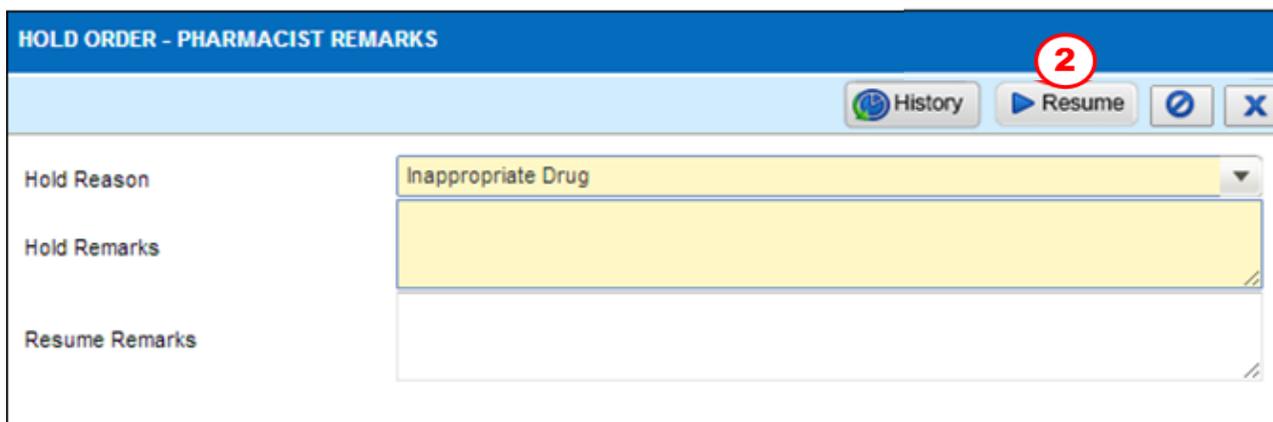


Figure 3.1.1-5 Hold Order Screen

**STEP 2**

Click on the  button to resume hold order

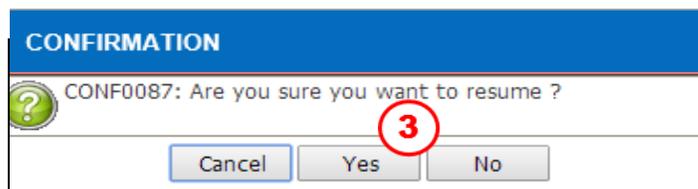


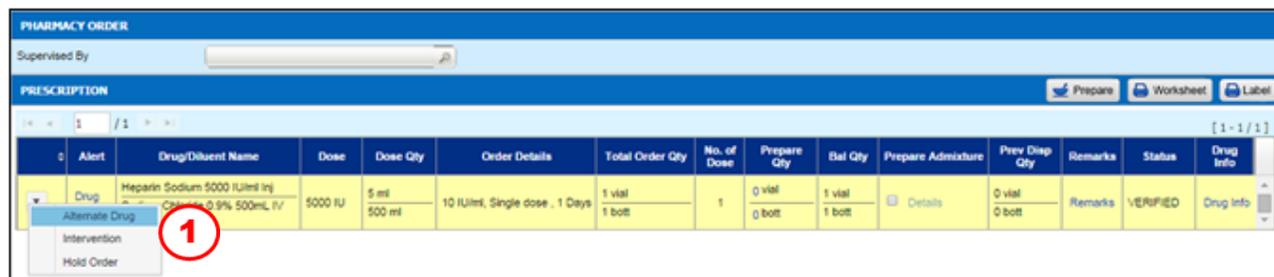
Figure 3.1.1-6 Hold Order Screen

**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.



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
	Heparin Sodium 5000 IU/ml Inj	5000 IU	5 ml	10 IU/ml, Single dose, 1 Days	1 vial	1	0 vial	1 vial		0 vial	Remarks	VERIFIED	Drug Info
	Calcium 0.9% 500mL IV		500 ml		1 bott		0 bott	1 bott	Details	0 bott			

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		Ordered Drug Code	B01AB01520P3002XX
Dosage Form	Parenteral Solution	Ordered Drug Description	Heparin Sodium 5000 IU/ml Inj
Route	SC	Alternate Drug Name	Heparin Sodium 50 IU/5ml Inj
Order Details	5000 IU, Single dose, 1 Days	Alternate Drug Order Qty (Total Order Qty: 100 amp)	0 ampoule

**BATCH DETAIL**

No	Drug Name	Dosage Form	Route	Batch	Expiry Date	Available Qty	Units	Qty to Dispense
1	Heparin Sodium 50 IU/5ml Inj	Parenteral Solution	SC	DMHPSF14	31/03/2015	0	ampoule	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	SC	DMHPSF14	31/03/2015	0	bottle	0

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*

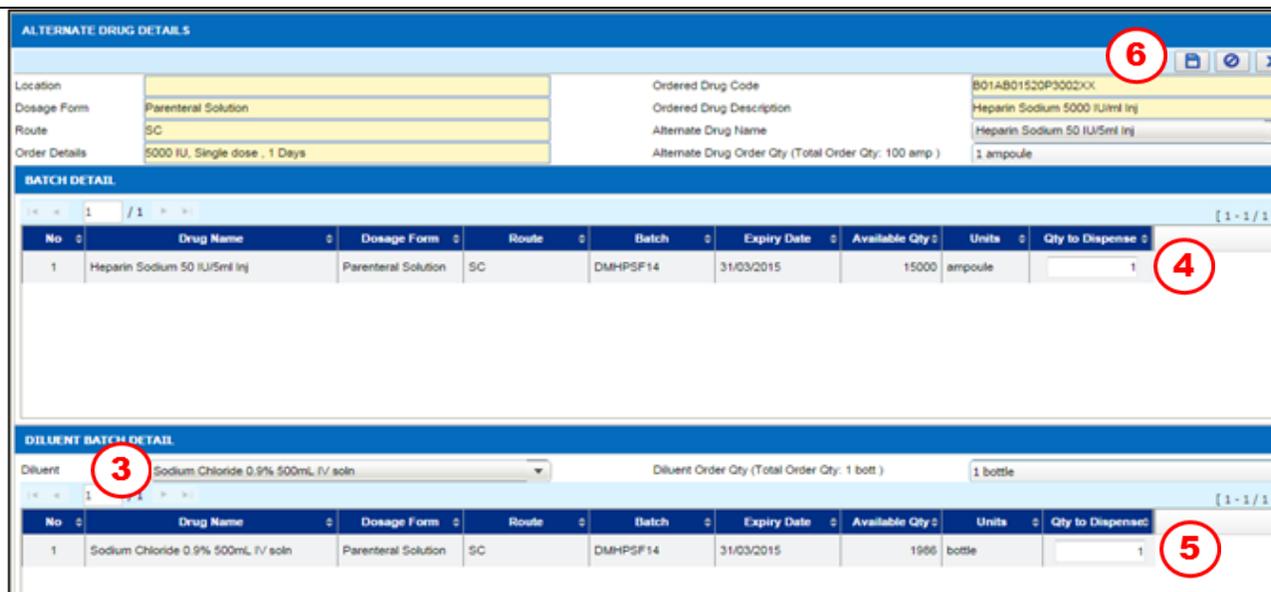
- **Location, Dosage Form, Route, Ordered Drug Code, Ordered Drug Description, Alternate Drug Name** will be retrieved from medication order and drug master setup.

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.



The screenshot shows the 'ALTERNATE DRUG DETAILS' window. It contains several sections: 'Location', 'Dosage Form', 'Route', and 'Order Details' on the left; 'Ordered Drug Code', 'Ordered Drug Description', 'Alternate Drug Name', and 'Alternate Drug Order Qty' on the right. Below these are two tables: 'BATCH DETAIL' and 'DILUENT BATCH DETAIL'. The 'BATCH DETAIL' table has columns for No., Drug Name, Dosage Form, Route, Batch, Expiry Date, Available Qty, Units, and Qty to Dispense. The 'DILUENT BATCH DETAIL' table has similar columns. Annotations 3, 4, 5, and 6 are placed on the screen: 3 points to the Diluent dropdown, 4 points to the Qty to Dispense field in the Batch Detail table, 5 points to the Qty to Dispense field in the Diluent Batch Detail table, and 6 points to the save button in the top right corner.

No.	Drug Name	Dosage Form	Route	Batch	Expiry Date	Available Qty	Units	Qty to Dispense
1	Heparin Sodium 50 IU/5ml inj	Parenteral Solution	SC	DMHPSF14	31/03/2015	15000	ampoule	1

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	SC	DMHPSF14	31/03/2015	1986	bottle	1

Figure 3.1.2-3 Alternate screen

**STEP 3**

Select **Diluent** from dropdown box

**STEP 4**

Select the item list  checkbox under **Batch Detail** section

**STEP 5**

Select the item list  checkbox under **Diluent Batch Detail** section

**STEP 6**

Click on the  button to confirm alternate drug

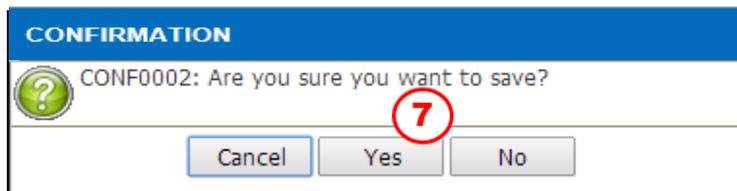


Figure 3.1.2-4 Prescription Listing Screen After Done Alternate

**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														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	Heparin Sodium 5000 IU/ml Inj Sodium Chloride 0.9% 500mL IV soln	5000 IU		10 IU/ml, Single dose, 1 Days	0 vial 0 bott	1	0 vial 0 bott	1 vial 1 bott		0 vial 0 bott	Remarks	VERIFIED	Drug Info			
	Heparin Sodium 50 IU/5ml Inj Sodium Chloride 0.9% 500mL IV soln	500 ml 500 ml			100 amp 1 bott		1 amp 1 bott		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.



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**

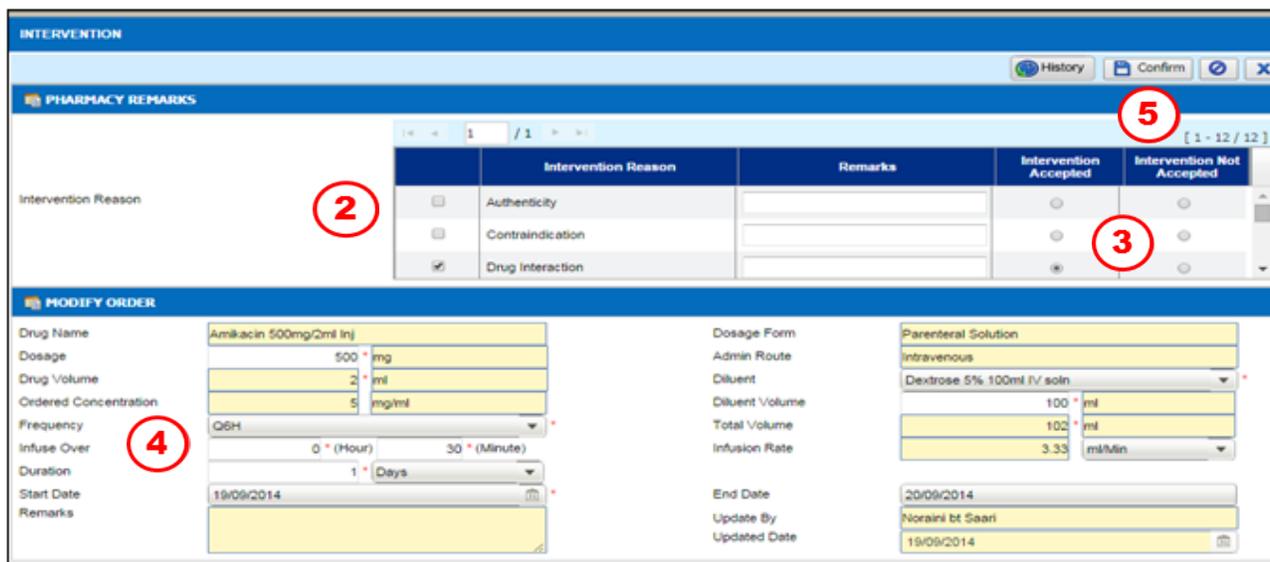


Figure 3.1.3-2 Intervention Screen

**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

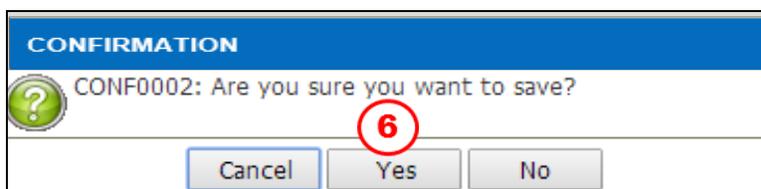
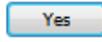


Figure 3.1.3-3 Alert Message

**Step 6**

Click on the  button to confirm the intervention

PRESCRIPTION														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	Amikacin 500mg/2ml inj Dextrose 5% 100ml IV soln	500 mg	2 ml 100 ml	5 mg/ml, Q6H, 1 Days	4 vial 4 bott	4	0 vial 0 bott	4 vial 4 bott	Details	0 vial 0 bott	Remarks	VERIFIED	Drug Info			

Figure 3.1.3-4 Prescription Listing Screen After Done Intervention

**Note**

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

**ORIGINAL RX** X

---

Drug Code: J01GB06183P3002XX      Default SKU: vial

Drug Name: Amikacin 500mg/2ml Inj

Dose	Frequency	Duration	Start Date	End Date	Intervention Reason	Other Reason	Infuse Over	Diluent	Diluent Volume	Infusion Rate
500 mg	STAT	1 Days	21/08/2014	22/08/2014	Drug Interaction		30 Minutes	Dextrose 5% 100ml IV soln	100 ml	3.33 ml/Min

Dose	Frequency	Duration	Start Date	End Date	Infuse Over	Diluent	Diluent Volume	Infusion Rate
400 mg	STAT	1 Days	21/08/2014	22/08/2014	30 Minutes	Dextrose 5% 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.

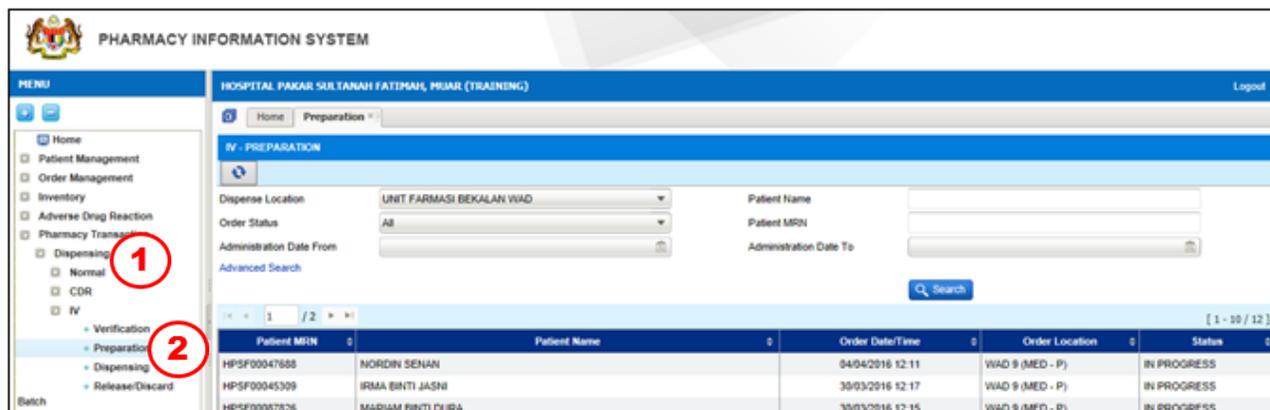


Figure 3.2-1 Preparation Listing Screen

#### STEP 1

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

#### STEP 2

Click on 'Preparation' sub-menu

#### Note

Various search criteria are provided as below:

- a) Basic search
- b) Advance search

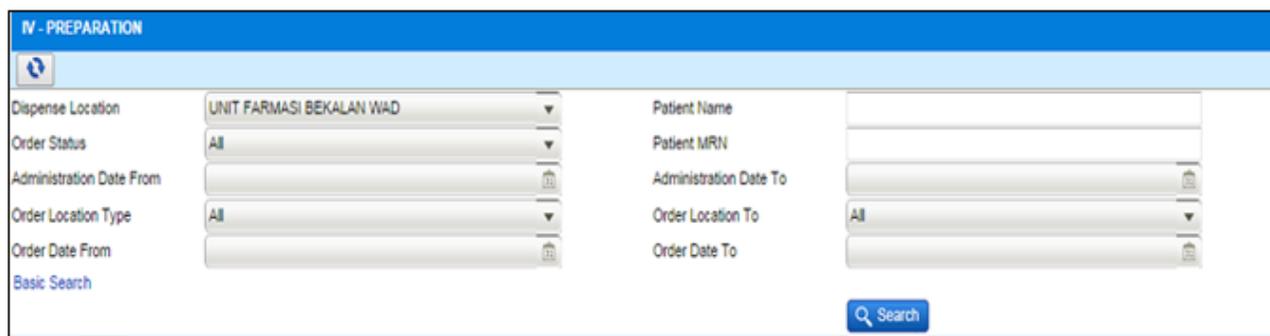


Figure 3.2-2 Advance search

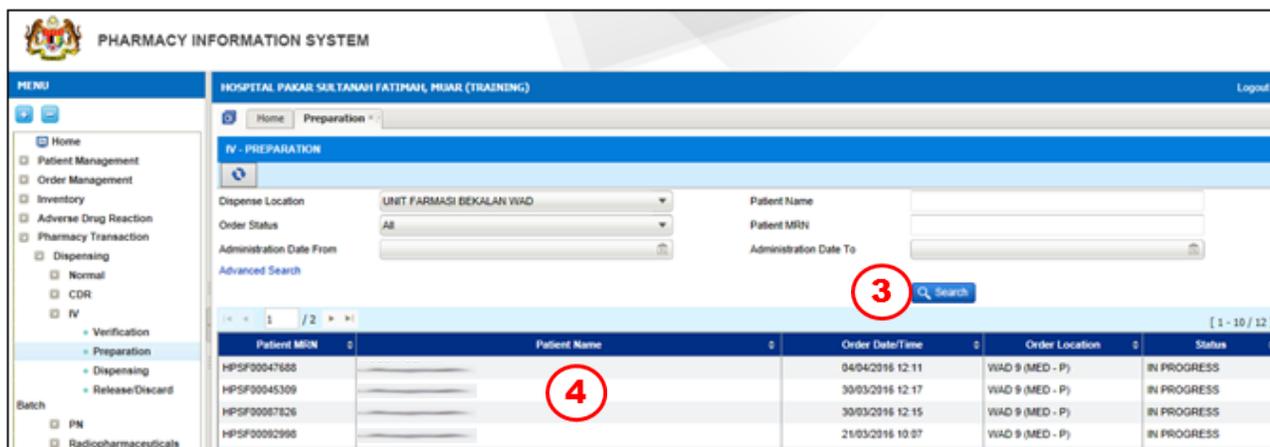
Advance Search			
No	Field	Description	Remark
a)	Dispense Location	Dispensing location. (It will list down all active locations)	Able to filter and search patient name by dispensing location
b)	Order Status	All Discharge Medications New Orders Outsourced Orders	Able to filter status prescription by order status
c)	Patient Name	Patient Name	Allow to search by full or partial patient name
d)	Patient MRN	Patient Medical Record Number	Search option: <ul style="list-style-type: none"> <li>Type the MRN either in full or partially: Example : HPSF00001234 or "1234"</li> </ul>
Advance Search			
e)	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
f)	Order Date from	Order confirmed date	Allow to search by start date of order created
g)	Order Location To	It will list down all active location	Able to filter and search patient name by order location
h)	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
- Order Date
- Order Location
- Status



Patient MRN	Patient Name	Order Date/Time	Order Location	Status
HPSF00047688		04/04/2016 12:11	WAD 9 (MED - P)	IN PROGRESS
HPSF00045309		30/03/2016 12:17	WAD 9 (MED - P)	IN PROGRESS
HPSF00067826		30/03/2016 12:15	WAD 9 (MED - P)	IN PROGRESS
HPSF00092990		21/03/2016 10:07	WAD 9 (MED - P)	IN PROGRESS

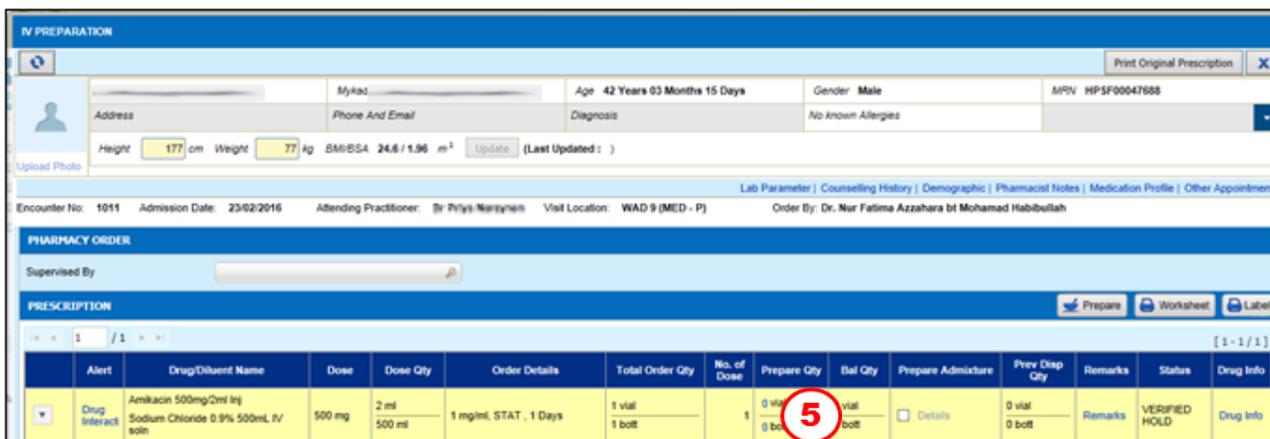
Figure 3.2-3 Preparation Listing Screen

### STEP 3

Click on the  button to search for patient

### STEP 4

Double click on the selected patient



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 Inj Sodium Chloride 0.9% 500ml IV soln	500 mg	2 ml 500 ml	1 mg/ml, STAT, 1 Days	1 vial 1 bott	1	0 vial 0 bott	1 vial 1 bott	<input type="checkbox"/> Details	0 vial 0 bott	Remarks	VERIFIED HOLD	Drug Info

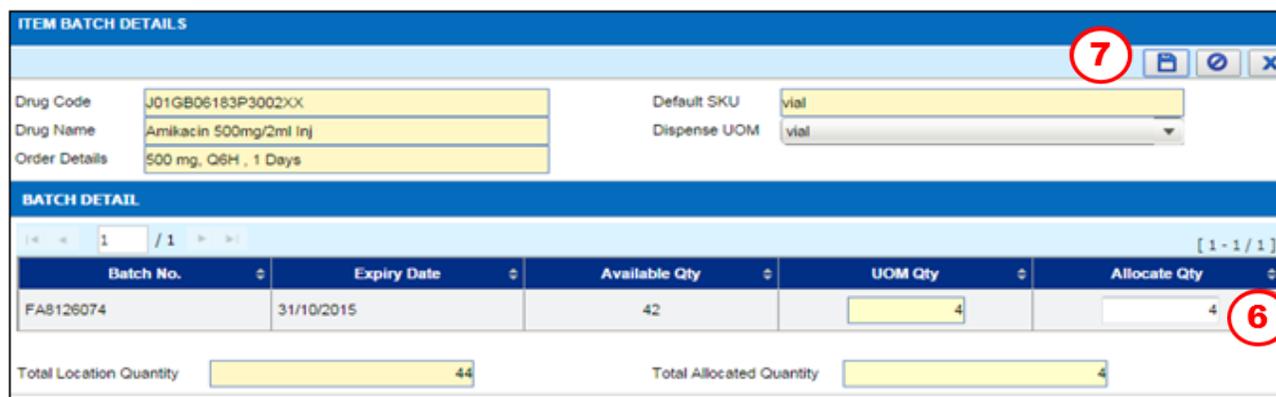
Figure 3.2-4 Prescription Listing Screen

### 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



Batch No.	Expiry Date	Available Qty	UOM Qty	Allocate Qty
FA8126074	31/10/2015	42	4	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

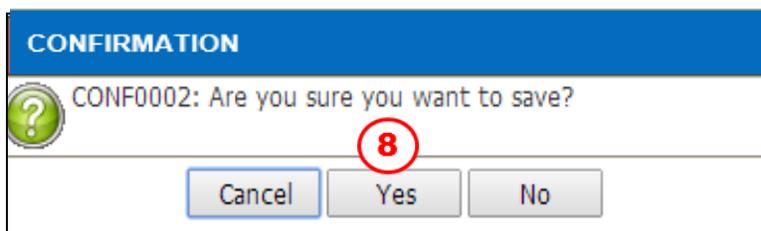
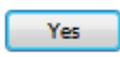


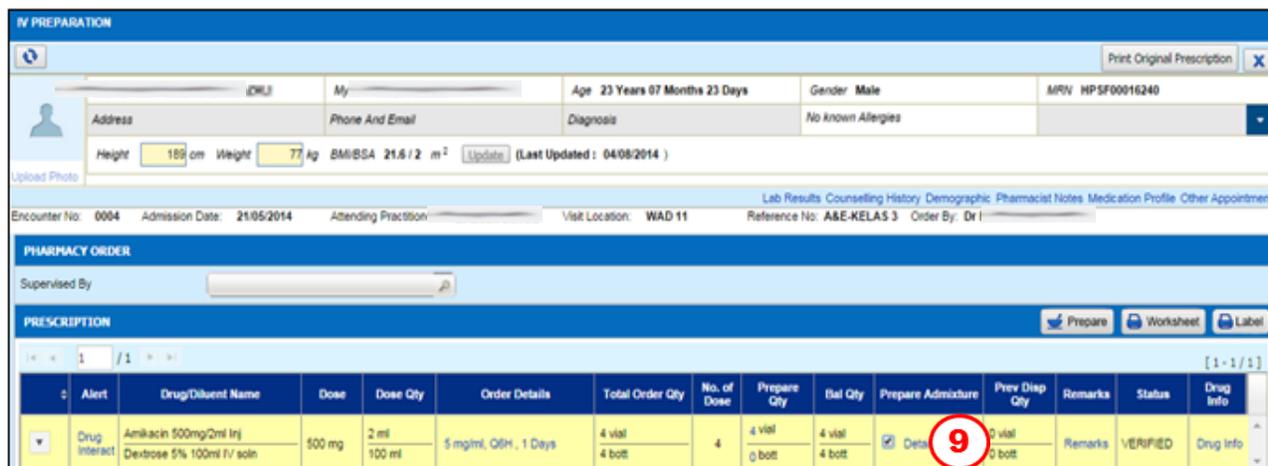
Figure 3.2-6 Preparation Screen

**STEP 8**

Click on the  button to save and close the window

**STEP 9**

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

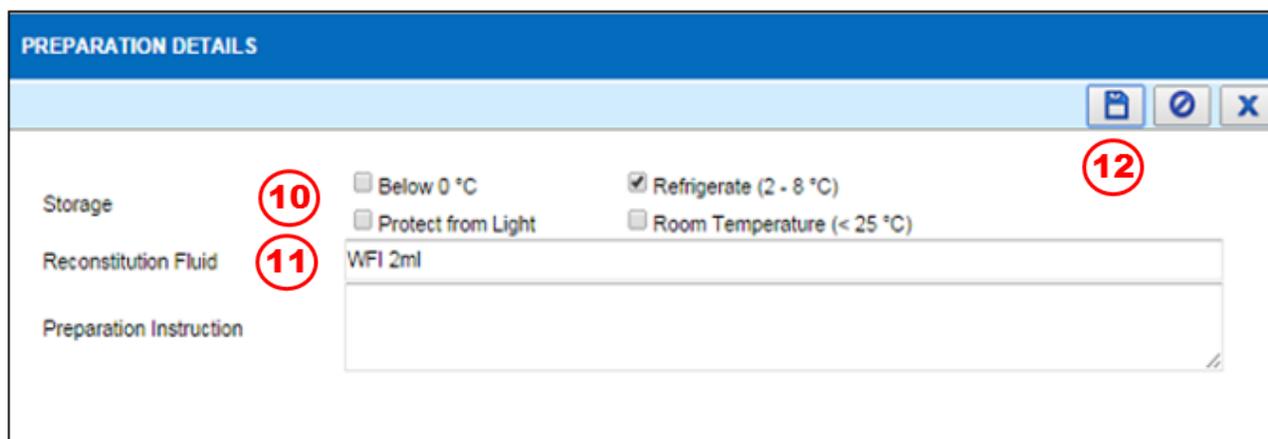


The screenshot shows the 'IV PREPARATION' interface. At the top, there are fields for patient information: DRUJ, My, Age (23 Years 07 Months 23 Days), Gender (Male), and MRN (HP5F00016240). Below this is a section for 'PHARMACY ORDER' with a 'Supervised By' dropdown. The main part of the screen is a 'PRESCRIPTION' table. The table has columns: 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, and Drug Info. The 'Prepare Admixture' column for the first row has a checkbox labeled 'Details' circled in red with the number 9. The table contains two rows of medication: Amikacin 500mg/2ml Inj and Dextrose 5% 100ml IV soln.

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.



The screenshot shows the 'PREPARATION DETAILS' pop-up window. It has a title bar with a save icon, a refresh icon, and a close icon. The main content area has three sections: 'Storage' with checkboxes for 'Below 0 °C', 'Refrigerate (2 - 8 °C)', 'Protect from Light', and 'Room Temperature (< 25 °C)'. The 'Refrigerate (2 - 8 °C)' checkbox is checked and circled in red with the number 12. 'Reconstitution Fluid' is a text input field containing 'WFI 2ml' and is circled in red with the number 11. 'Preparation Instruction' is a larger text area. A red circle with the number 10 is placed over the 'Storage' label.

Figure 3.2-8 Preparation Details Screen

**STEP 10**

Select the applicable  **Storage** checkboxes  
BELOW/REFRIGERATE/PROTECTED FROM LIGHT OR ROOM TEMPERATURE

**STEP 11**

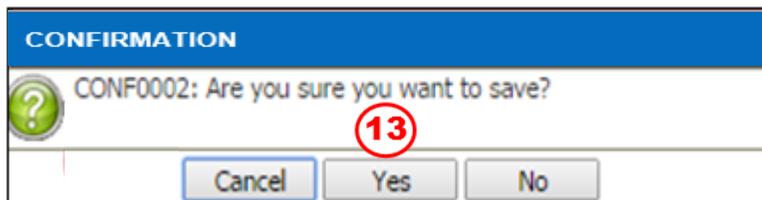
Enter **Reconstitution Fluid** & **Preparation Instruction** if applicable

**STEP 12**

Click on the  button to save record

**Note**

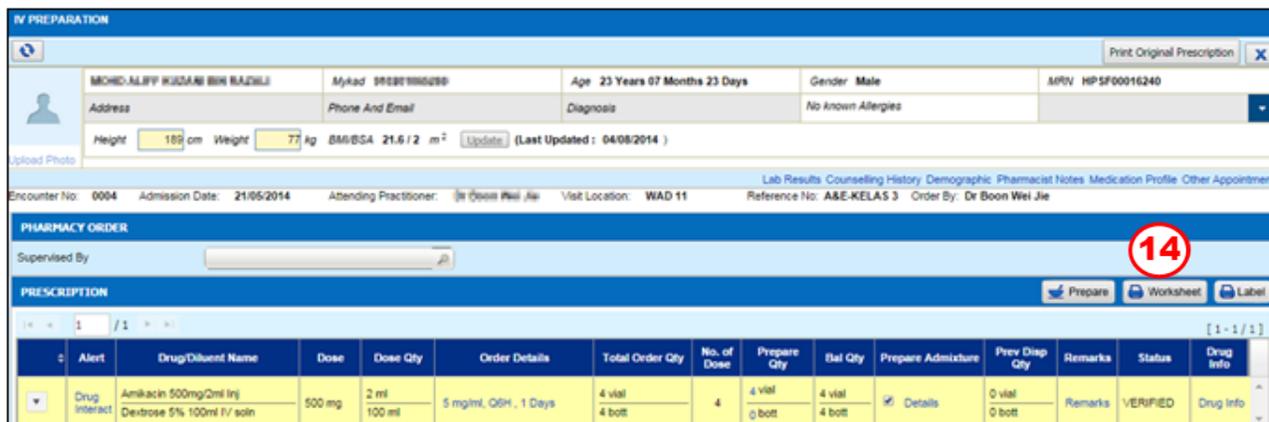
- Storage condition and reconstitution fluid value will be defaulted as setup in Drug Master (if any).
- Preparation Instruction also can default in Drug Master



**Figure 3.2-9 Preparation Details Screen**

**STEP 13**

Click on  button to confirm saving of preparation details



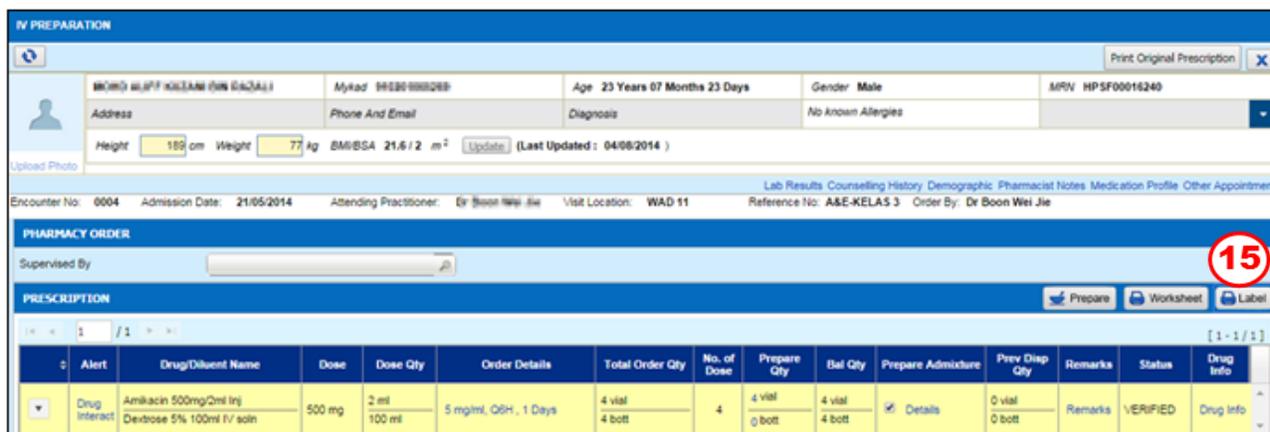
**Figure 3.2-10 Preparation Listing Screen**

**STEP 14**

Click on the  button to view and print

IV WORKSHEET														
MINISTRY OF HEALTH														
Hospital Pakar Sultanah Fatimah, Muar														
Date of preparation : 24/09/2014						Worksheet Id: 14-09-0003								
MRN HPSF00016240			Name MOHD ALIFF KUZANI BIN RAZALI			ID No 910201065269			Rx. No. WAD 30000015985					
Order Location WAD 11			Ordered By Dr Boon Wei Jie			Order Date 19/09/2014								
No	ROA	Preparation Name	Material Used								Storage			
			Ingredient Name	Dose	Dose Volume	No of Dose	Total Qty	Preparation Qty	Batch No	Expiry Date				
1	IV	Amikacin 5 mg/ml	Amikacin 500mg/2ml Inj	500 mg	2 ml	4	8 ml	4 vial	FA812607 4	31/10/2015	Refrigerate (2 - 8 °C)			
			WFI 2ml											
			Dextrose 5% 100ml IV soln											
Instruction: Please Refer to SOP														
Reference:														
Worksheet generated by Noraini bt Saari			Worksheet & label checked			Prepared by			Final Product Checked by			Supervised by		
Date: 24/09/2014			Date:			Date:			Date:			Date: 24/09/2014		

Figure 3.2-11 Worksheet



The screenshot shows the 'IV PREPARATION' interface. At the top, there is a patient summary for MOHD ALIFF KUZANI BIN RAZALI, Mykad: 9480080288, Age: 23 Years 07 Months 23 Days, Gender: Male, MRN: HPSF00016240. Below this is a 'PHARMACY ORDER' section with a 'Supervised By' dropdown. The main part of the screen is a 'PRESCRIPTION' table with columns: 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, and Drug Info. The table contains one entry for Amikacin 500mg/2ml Inj and Dextrose 5% 100ml IV soln. A red circle with the number '15' is overlaid on the 'Label' button in the top right corner of the prescription table.

Figure 3.2-12 Preparation Listing Screen

**STEP 15**

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

<input checked="" type="checkbox"/>	Drug Name	Amikacin 500mg/2ml Inj	Concentration	5 mg/ml
	Dose	500 mg	Diluent	Dextrose 5% 100ml IV soln
	Drug Volume	2 ml	Diluent Volume	100 ml
	Route	IV	Total Volume	102 ml
	Frequency	Q6H	Infusion Rate	3.33 ml/Min
	Prepared Date	24/09/2014	Indication	Antibiotics, Aminoglycosides
	Expiry Date	24/09/2014		
	Price	RM 1.00		
	Storage	Refrigerate (2 - 8 °C)		

Figure 3.2-13 Drug label

**STEP 16**

Click on the button to print drug label

**Note**

**Select All**  checkbox allow users to print all drug labels in the selected 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 Interact	Amikacin 500mg/2ml Inj	500 mg	2 ml	5 mg/ml, Q6H, 1 Days	4 vial	4	4 vial	4 vial	<input checked="" type="checkbox"/> Details	0 vial	Remarks	VERIFIED	Drug Info
	Dextrose 5% 100ml IV soln		100 ml		4 bott		0 bott	4 bott		0 bott			

Figure 3.2-14 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.

Figure 3.2-15 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



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

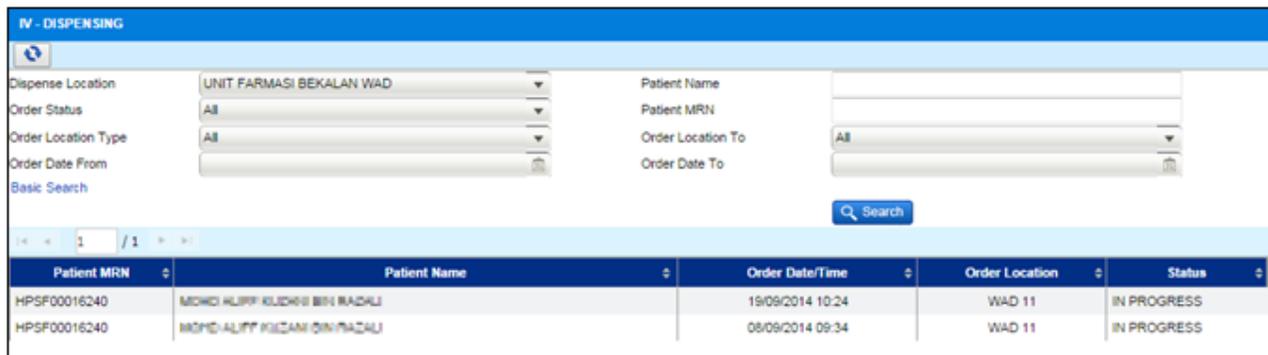


Figure 3.3-2 Dispensing Listing Screen

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 Discharge Medications New Orders	

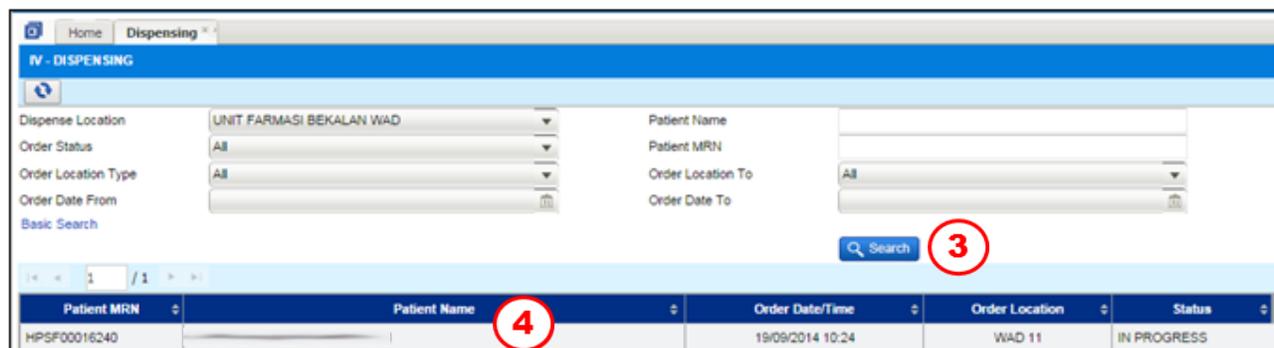
		Outsourced Orders	
c)	Patient Name	Patient Name	Allow to search by full or partial patient name
d)	Patient MRN	Patient Medical Record Number	Search option: • Type the MRN either in full or partially: <i>Example : HPSF00001234 or "1234"</i>
<b>Advance Search</b>			
e)	Order Location Type	- Order location type (It will list down all active location types)	Able to filter and search patient name by order location type
f)	Order Date from	Order confirmed date	Allow to search by start date of order created
g)	Order Location To	It will list down all active location	Able to filter and search patient name by order location
h)	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
- Order Date
- Order Location
- Status



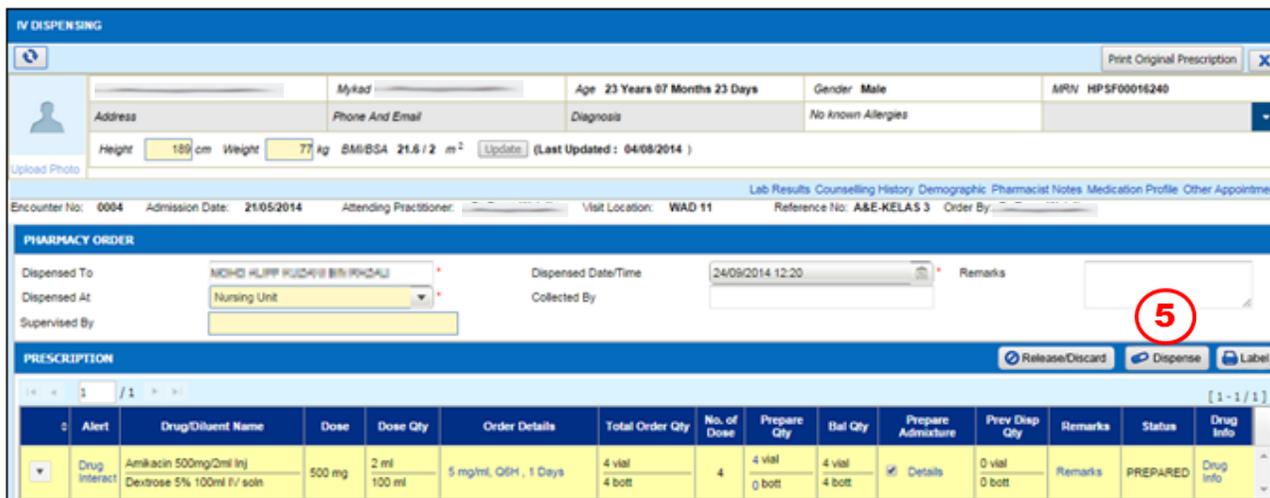
**Figure 3.3-3 Dispensing Listing Screen**

**STEP 3**

Click on the  button to search for patient

**STEP 4**

Double click on the selected patient



**IV DISPENSING**

Print Original Prescription

Mykad: [redacted] Age: 23 Years 07 Months 23 Days Gender: Male MRN: HPSF00016240

Address: [redacted] Phone And Email: [redacted] Diagnosis: [redacted] No known Allergies

Height: 159 cm Weight: 77 kg BMI/BSA: 21.6 / 2 m<sup>2</sup> Update (Last Updated: 04/08/2014)

Encounter No: 0004 Admission Date: 21/05/2014 Attending Practitioner: [redacted] Visit Location: WAD 11 Reference No: A&E-KELAS 3 Order By: [redacted]

**PHARMACY ORDER**

Dispensed To: MOHD HULIFF KUDRIB BIN PONDALI Dispensed Date/Time: 24/09/2014 12:20 Remarks: [redacted]

Dispensed At: Nursing Unit Collected By: [redacted]

Supervised By: [redacted]

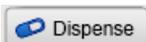
**PRESCRIPTION**

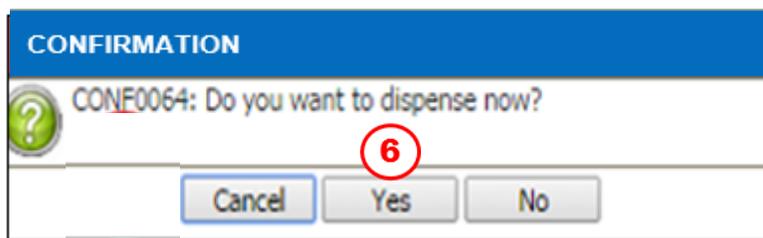
Release/Discard Dispense Label

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	Amikacin 500mg/2ml Inj Dextrose 5% 100ml IV soln	500 mg	2 ml 100 ml	5 mg/ml, Q8H, 1 Days	4 vial 4 bott	4	4 vial 0 bott	4 vial 4 bott	<input checked="" type="checkbox"/> Details	0 vial 0 bott	Remarks	PREPARED	Drug info

Figure 3.3-4 Dispensing Screen

**STEP 5**

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



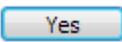
**CONFIRMATION**

CONF0064: Do you want to dispense now?

Cancel Yes No

Figure 3.3-5 CONFIRMATION 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.

### 3.4 IV Discard Batch

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

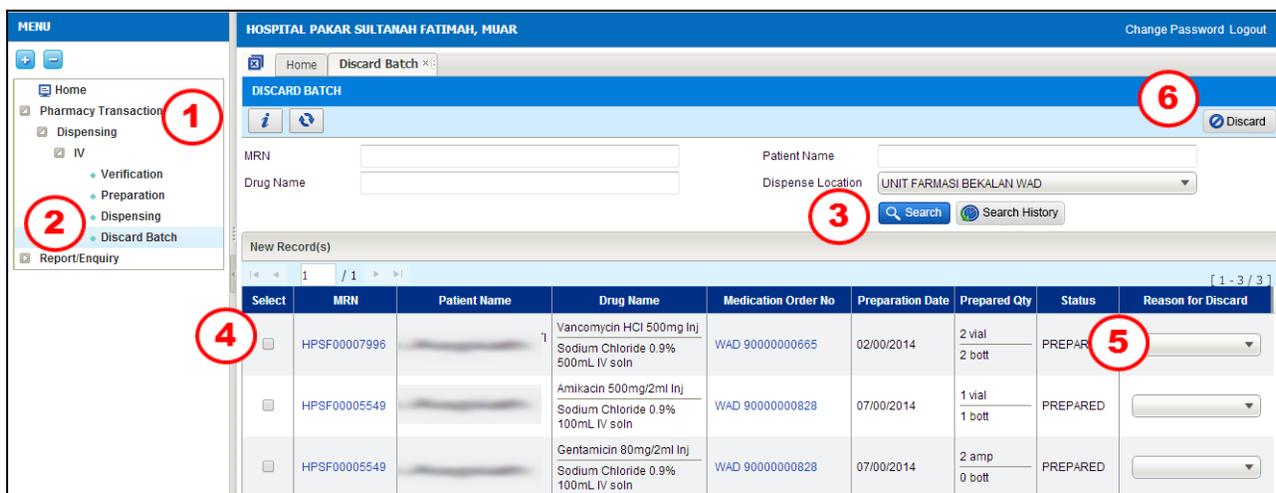


Figure 3.4-1 Discard Batch screen

**STEP 1**

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

**STEP 2**

Click on 'Discard Batch' sub-menu

**Note**

Various search criteria are 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 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

Table 3.4-1

**Note**

Search results of patient record list will display:

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

**STEP 3**

Click on the  button

**STEP 4**

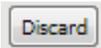
Select  checkbox to discard from the listed drug

**STEP 5**

Select Reason for Discard from the dropdown box options :- Uncollected

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

**STEP 6**

Click on the  button to proceed with 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>	<a href="#">Click Here</a>	12	<i>CDR Dispensing</i>	<a href="#">Click Here</a>
2	<i>CDR Order</i>	<a href="#">Click Here</a>	13	<i>Methadone Dispensing</i>	<a href="#">Click Here</a>
3	<i>TDM Order</i>	<a href="#">Click Here</a>	14	<i>PN Dispensing</i>	<a href="#">Click Here</a>
4	<i>PN Order</i>	<a href="#">Click Here</a>	15	<i>Order Management</i>	<a href="#">Click Here</a>
5	<i>IV Order</i>	<a href="#">Click Here</a>	16	<i>Patient Management</i>	<a href="#">Click Here</a>
6	<i>Prepacking</i>	<a href="#">Click Here</a>	17	<i>Radiopharma</i>	<a href="#">Click Here</a>
7	<i>Galenical</i>	<a href="#">Click Here</a>	18	<i>Outpatient</i>	<a href="#">Click Here</a>
8	<i>MTAC</i>	<a href="#">Click Here</a>	19	<i>Special Drug Request</i>	<a href="#">Click Here</a>
9	<i>ADR &amp; DAC</i>	<a href="#">Click Here</a>	20	<i>MAR</i>	<a href="#">Click Here</a>
10	<i>Medication Counselling</i>	<a href="#">Click Here</a>	21	<i>DICE</i>	<a href="#">Click Here</a>
11	<i>Ward Pharmacy</i>	<a href="#">Click Here</a>	22		