



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

Full Based

**User Manual
IV Dispensing**

Version	: 1.5
Document ID	: FB_U. MANUAL_IV DISPENSING



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1.4	Michelle Foo/Juraidah Ayob (QA)	Change to latest screenshot and function for version 1.4.1
1.5	Michelle Foo/Juraidah Ayob (QA)	Change to latest screenshot and function for version 1.5.1



PhIS & CPS Project
User Manual – IV Dispensing



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Reference ID : FB_U. MANUAL_IV DISPENSING-v1.5

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1.0 Introduction

1.1 Overview of PhIS

Pharmacy Information System or better known as PhIS, is a complete and comprehensive system that integrates pharmacy related services geared towards pharmacy excellence. PhIS implementation would transform most of current manual process to electronic system 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

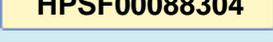
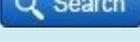
1.3 Organised Sections

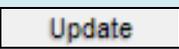
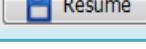
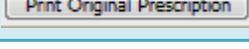
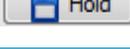
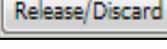
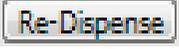
These are the sections within this document:

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

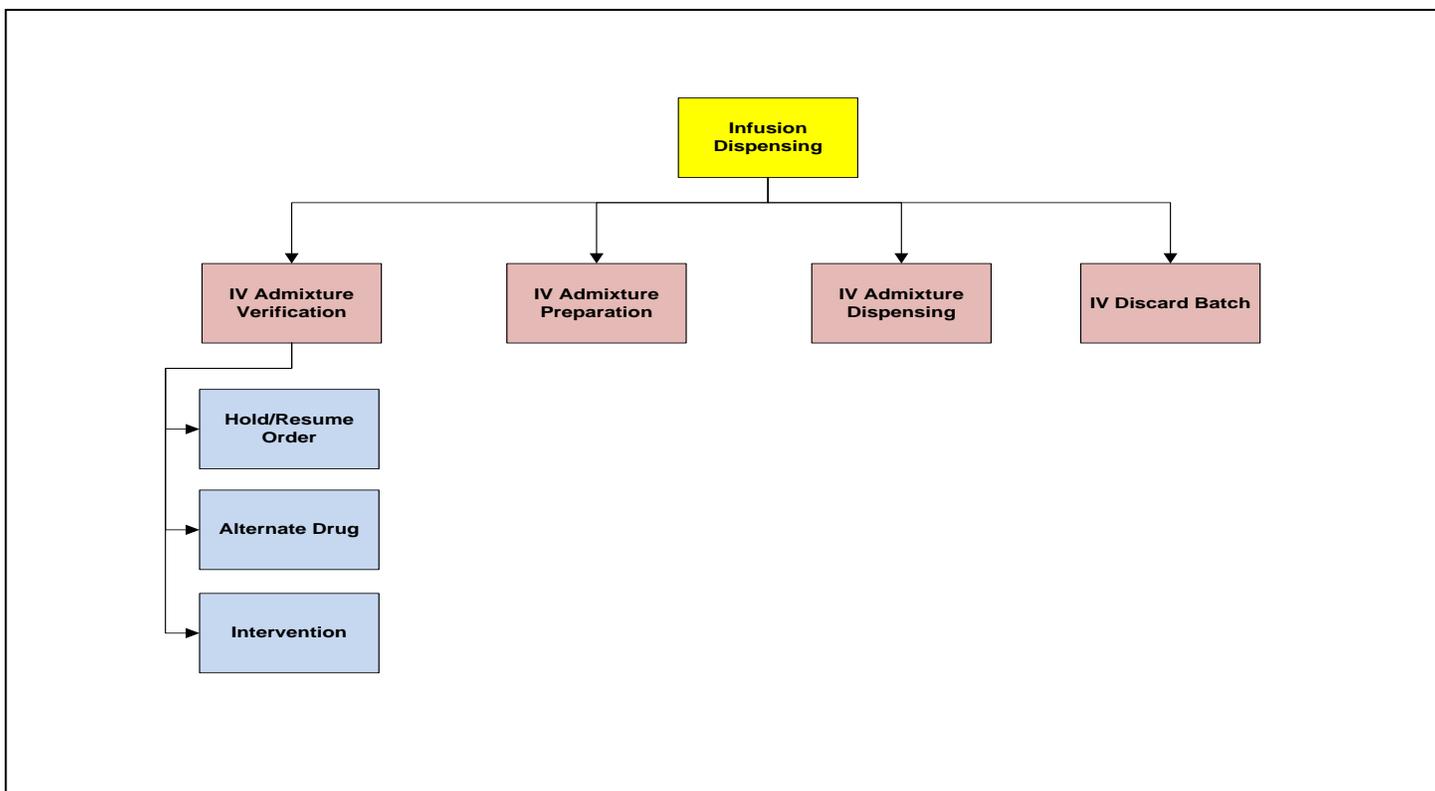


Figure 3.0-1



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**

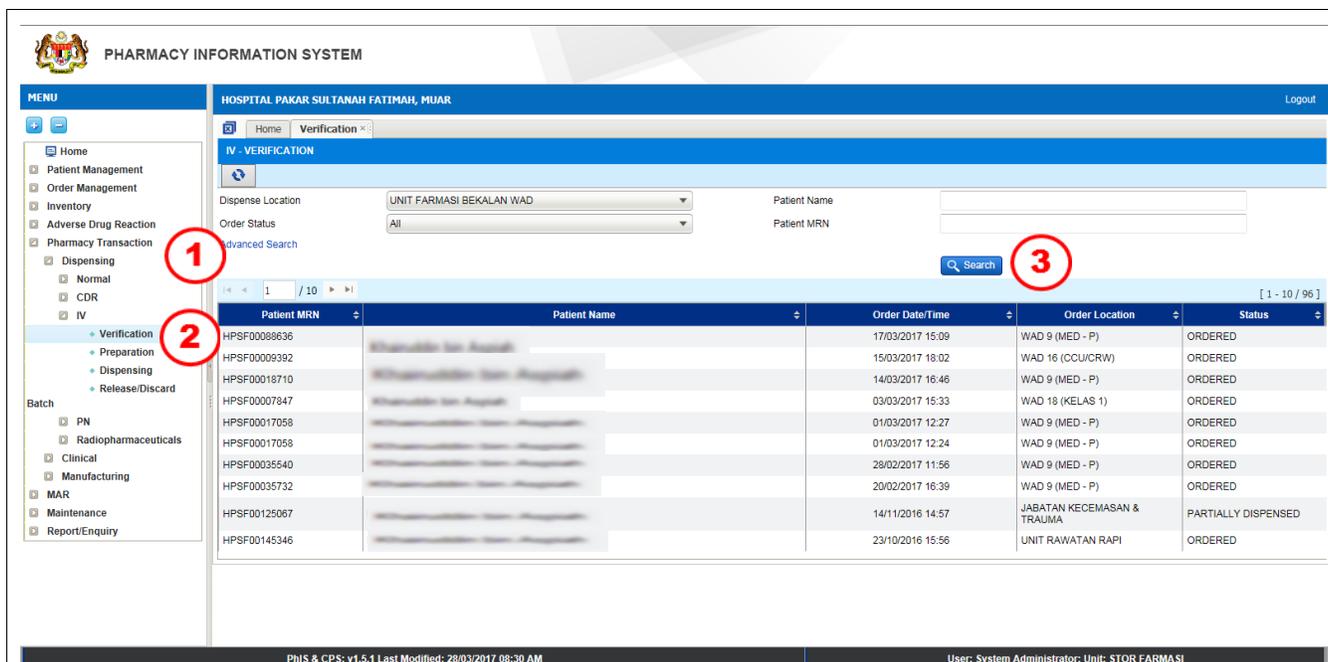
The prescription and the dispensing report are made in the system which is integrate with the inventory system.

- **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.



PHARMACY INFORMATION SYSTEM

HOSPITAL PAKAR SULTANAH FATIMAH, MUAR

Home | Verification

IV - VERIFICATION

Dispense Location: UNIT FARMASI BEKALAN WAD | Patient Name:

Order Status: All | Patient MRN:

Advanced Search

Patient MRN	Patient Name	Order Date/Time	Order Location	Status
HPSF00088636	[REDACTED]	17/03/2017 15:09	WAD 9 (MED - P)	ORDERED
HPSF0009392	[REDACTED]	15/03/2017 18:02	WAD 16 (CCU/CRW)	ORDERED
HPSF00018710	[REDACTED]	14/03/2017 16:46	WAD 9 (MED - P)	ORDERED
HPSF0007847	[REDACTED]	03/03/2017 15:33	WAD 18 (KELAS 1)	ORDERED
HPSF00017058	[REDACTED]	01/03/2017 12:27	WAD 9 (MED - P)	ORDERED
HPSF00017058	[REDACTED]	01/03/2017 12:24	WAD 9 (MED - P)	ORDERED
HPSF00035540	[REDACTED]	28/02/2017 11:56	WAD 9 (MED - P)	ORDERED
HPSF00035732	[REDACTED]	20/02/2017 16:39	WAD 9 (MED - P)	ORDERED
HPSF00125067	[REDACTED]	14/11/2016 14:57	JABATAN KECEMASAN & TRAUMA	PARTIALLY DISPENSED
HPSF00145346	[REDACTED]	23/10/2016 15:56	UNIT RAWATAN RAPI	ORDERED

PhIS & CPS: v1.5.1 Last Modified: 28/03/2017 08:30 AM | User: System Administrator; Unit: STOR FARMASI

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

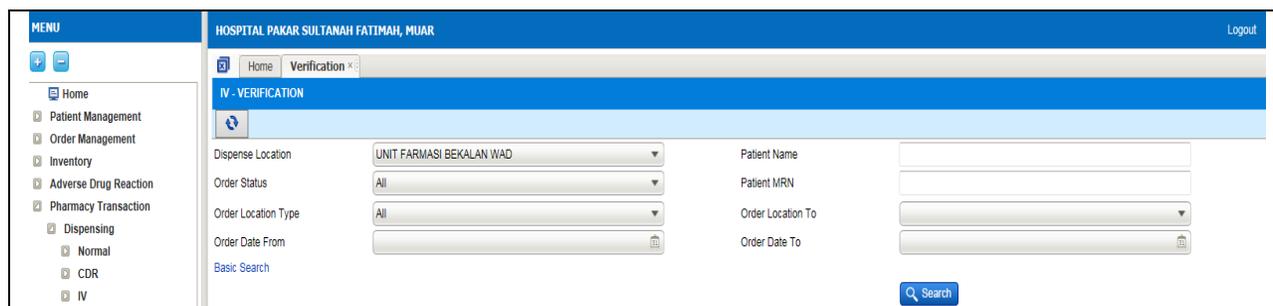


Figure 3.1-2 Advance Search

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
HPSF00088636	[Redacted]	17/03/2017 15:09	WAD 9 (MED - P)	ORDERED
HPSF00009392	[Redacted]	15/03/2017 18:02	WAD 16 (CCU/CRW)	ORDERED
HPSF00018710	[Redacted]	14/03/2017 16:46	WAD 9 (MED - P)	ORDERED
HPSF00007847	[Redacted]	03/03/2017 15:33	WAD 18 (KELAS 1)	ORDERED
HPSF00017058	[Redacted]	01/03/2017 12:27	WAD 9 (MED - P)	ORDERED
HPSF00017058	[Redacted]	01/03/2017 12:24	WAD 9 (MED - P)	ORDERED
HPSF00035540	[Redacted]	28/02/2017 11:56	WAD 9 (MED - P)	ORDERED
HPSF00035732	[Redacted]	20/02/2017 16:39	WAD 9 (MED - P)	ORDERED
HPSF00125067	[Redacted]	14/11/2016 14:57	JABATAN KECEMASAN & TRAUMA	PARTIALLY DISPENSED
HPSF00145346	[Redacted]	23/10/2016 15:56	UNIT RAWATAN RAPI	ORDERED

Figure 3.1-3 Verification Listing Screen

STEP 4

Double click on the selected patient

Passport [Redacted] Age 43 Years 02 Months 28 Days Gender Male M/RN HPSF00018710

Address [Redacted] Phone And Email [Redacted] Diagnosis [Redacted] No known Allergies

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

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

Encounter No: 0014 Admission Date: 14/03/2017 Attending Practitioner: Visit Location: WAD 9 (MED - P) Order By: Dr Priya Naraynen

PRESCRIPTION Verify

Alert	Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	Remarks	Status	Drug Info
Drug Interaction	Acyclovir 250mg/10ml Injection Sodium Chloride 0.9% 500mL IV soln	250 mg	10 ml 500 ml	0.5 mg/ml, Q8H , 1 Days	3 vial 3 bott	Remarks	ORDERED (PA)	Drug Info

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?

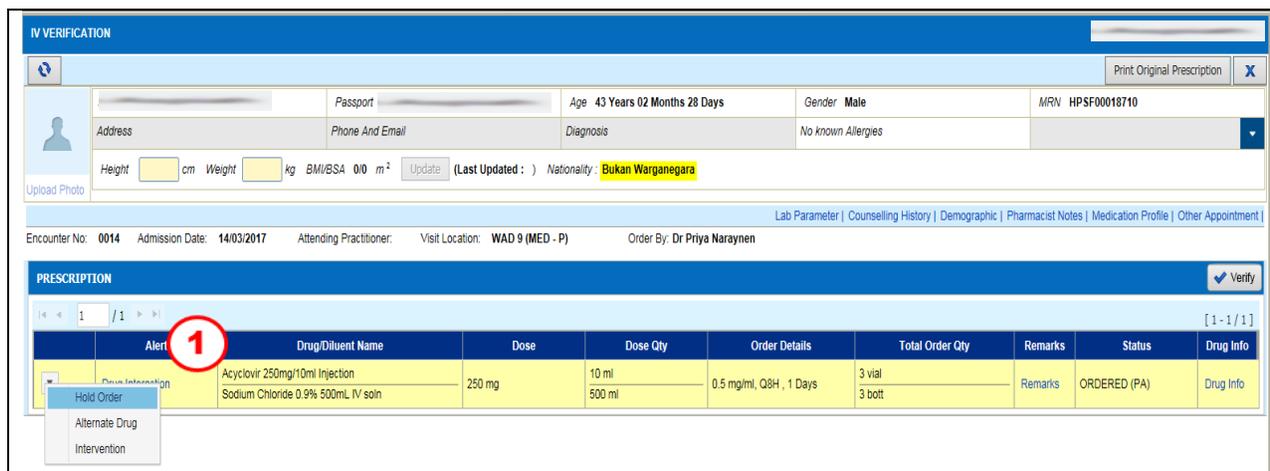
Figure 3.1-5 Verification Alert Message

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.



IV VERIFICATION

Print Original Prescription X

Passport: [Redacted] Age: 43 Years 02 Months 28 Days Gender: Male MRN: HPSF00018710

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

Height: [Redacted] cm Weight: [Redacted] kg BMI/BSA: 0.0 m² Update (Last Updated:) Nationality: **Bukan Warganegara**

Encounter No: 0014 Admission Date: 14/03/2017 Attending Practitioner: [Redacted] Visit Location: WAD 9 (MED - P) Order By: Dr Priya Naraynen

PRESCRIPTION Verify

Alert	Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	Remarks	Status	Drug Info
Alert	Acyclovir 250mg/10ml Injection	250 mg	10 ml	0.5 mg/ml, Q8H, 1 Days	3 vial	Remarks	ORDERED (PA)	Drug Info
	Sodium Chloride 0.9% 500mL IV soln		500 ml		3 bott			

Context Menu: Hold Order, Alternate Drug, Intervention

Figure 3.1.1-1 Prescription Listing Screen

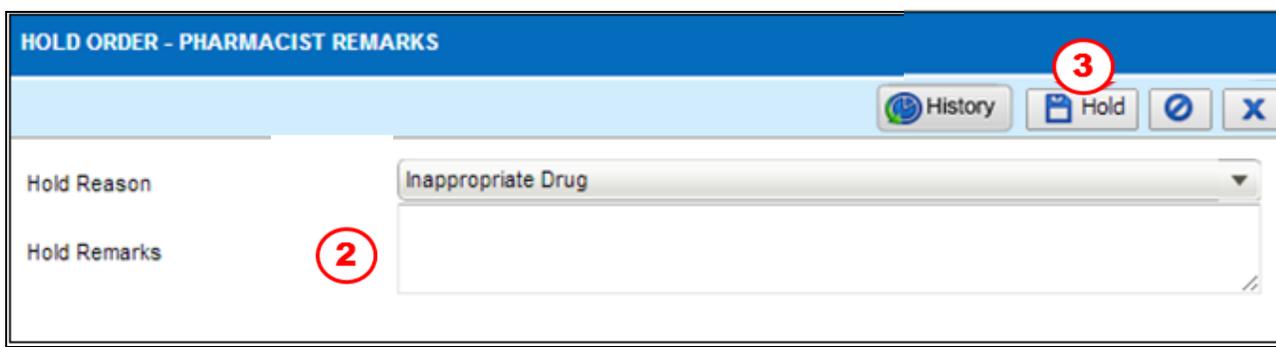
Note

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**



HOLD ORDER - PHARMACIST REMARKS

History Hold X

Hold Reason: Inappropriate Drug

Hold Remarks: [Text Area]

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

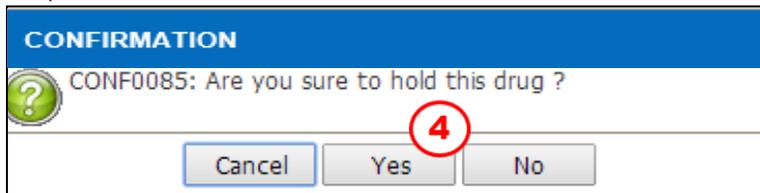
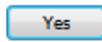
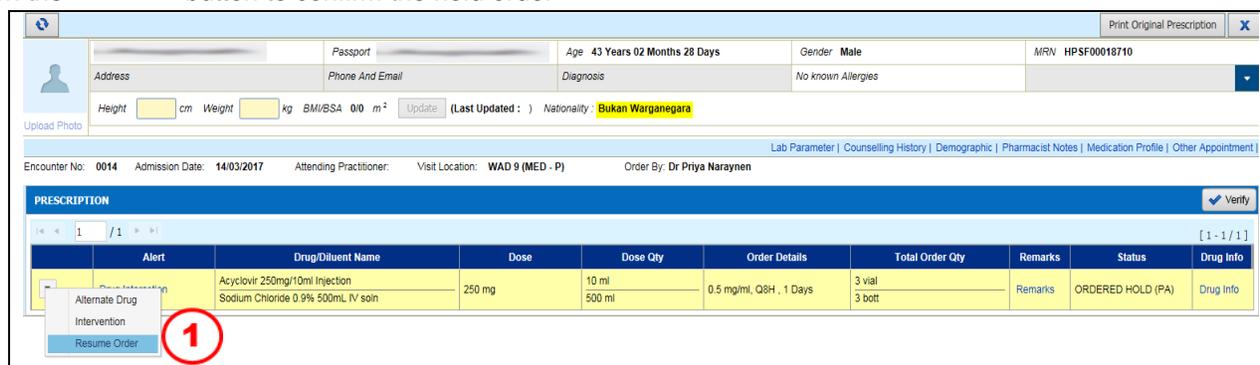


Figure 3.1.1-3 Hold Order Screen

STEP 4

Click on the  button to confirm the hold order



Encounter No: 0014 Admission Date: 14/03/2017 Attending Practitioner: Visit Location: WAD 9 (MED - P) Order By: Dr Priya Naraynen

Alert	Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	Remarks	Status	Drug Info
	Acyclovir 250mg/10ml Injection	250 mg	10 ml	0.5 mg/ml, Q8H , 1 Days	3 vial	Remarks	ORDERED HOLD (PA)	Drug Info
	Sodium Chloride 0.9% 500mL IV soln		500 ml		3 bott			

Figure 3.1.1-4 Prescription Listing Screen

Resume Order

STEP 1

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

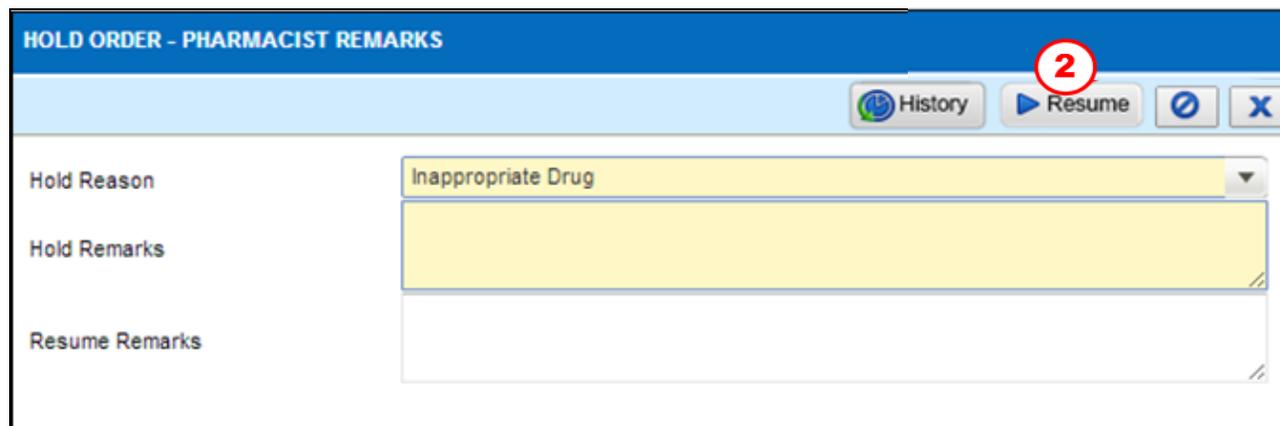


Figure 3.1.1-5 Hold Order Screen

STEP 2

Click on the  button to resume hold order

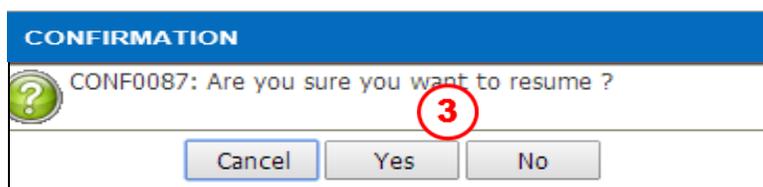


Figure 3.1.1-6 Hold Order Screen

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
Drug	Meropenem 1000mg Injection (1g)	1000 mg	20 ml	10 mg/ml, Q8H, 7 Days	21 vial	21	0 vial	21 vial	<input type="checkbox"/> Details	0 vial	Remarks	VERIFIED	Drug Info
Alternate Drug	Chloramphenicol 1000mg 100mL IV soIn	1000 mg	100 ml		21 bott		0 bott	21 bott		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	UNIT FARMASI PENGELUARAN FARMASEUTIKAL	Ordered Drug Code	J01GB06183P3002XX
Dosage Form	Parenteral Solution	Ordered Drug Description	Amikacin 500mg/2ml Injection
Route	IV	Alternate Drug Name	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	Remark
--------	--------

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	Ordered Drug Code: J01GB06183P3002XX
Dosage Form: Parenteral Solution	Ordered Drug Description: Amikacin 500mg/2ml Injection
Route: IV	Alternate Drug Name: Amikacin 250mg/2ml Injection
Order Details: 500 mg, Single Dose, 1 Days	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 soln	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 soln	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: <input type="text"/>	Remark: <input type="text"/>
------------------------------	------------------------------

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

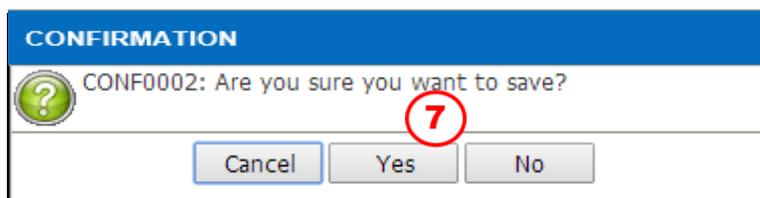


Figure 3.1.2-4 Prescription Listing Screen After Done Alternate

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 Interactik	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.

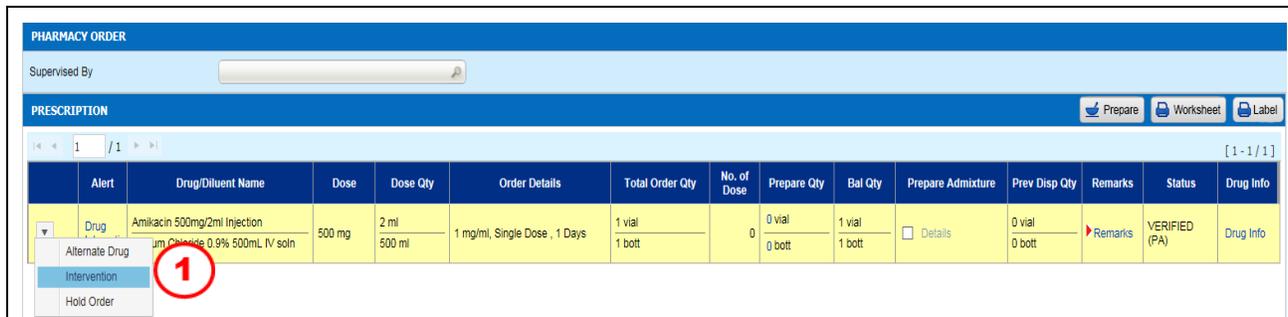


Figure 3.1.3-1 Prescription Listing Screen

Note

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

STEP 1

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

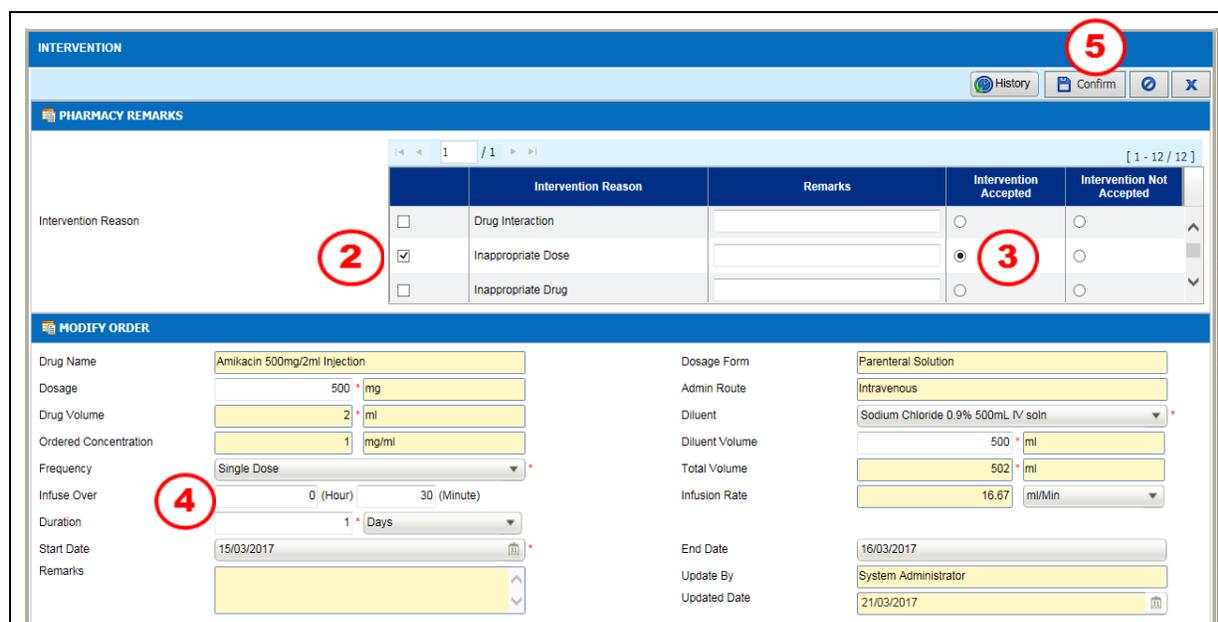


Figure 3.1.3-2 Intervention Screen

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

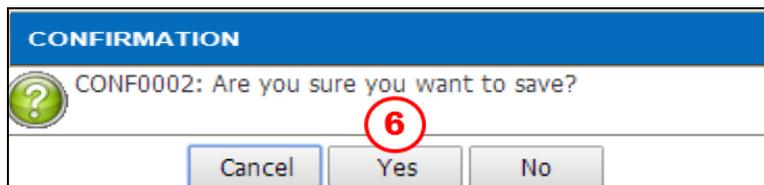
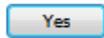


Figure 3.1.3-3 Alert Message

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	Gentamicin 80mg/2ml Injection Sodium Chloride 0.9% 100mL IV soln	100 mg	2.5 ml 100 ml	1 mg/ml, OD (once daily) , 1 Days	2 amp 1 bott	1	0 amp 0 bott	2 amp 1 bott	<input type="checkbox"/> Details	0 amp 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 be changed to blue hyperlink. User may click to view the original order details.
- Order details will be displayed as shown in Figure 3.1.3-5

ORIGINAL RX
X

Drug Code:
Default SKU:

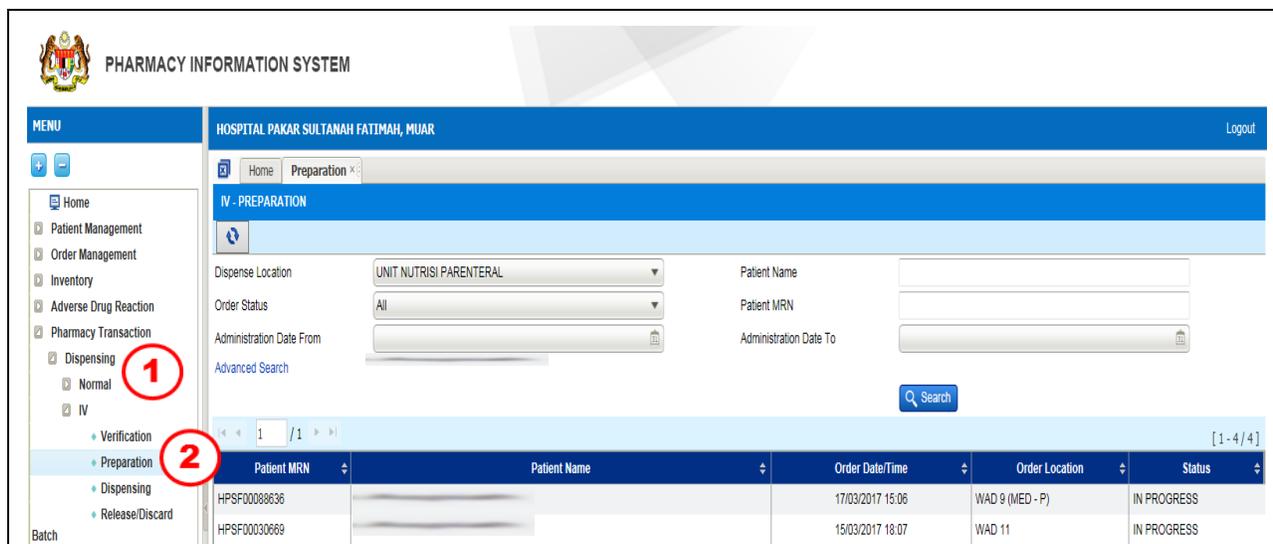
Drug Name:

Dose	Frequency	Duration	Start Date	End Date	Intervention Reason	Other Reason	Infuse Over	Diluent	Diluent Volume	Infusion Rate
80 mg	OD	1 Days	17/03/2017	18/03/2017	Contraindication		30 Minutes	Sodium Chloride 0.9% 100mL IV soln	100 ml	3.33 ml/Min
Dose	Frequency	Duration	Start Date	End Date	Infuse Over	Diluent	Diluent Volume	Infusion Rate		
100 mg	OD	1 Days	17/03/2017	18/03/2017	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.



Patient MRN	Patient Name	Order Date/Time	Order Location	Status
HPSF0008636		17/03/2017 15:06	WAD 9 (MED - P)	IN PROGRESS
HPSF00030689		15/03/2017 18:07	WAD 11	IN PROGRESS

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:

- Basic search
- Advance search

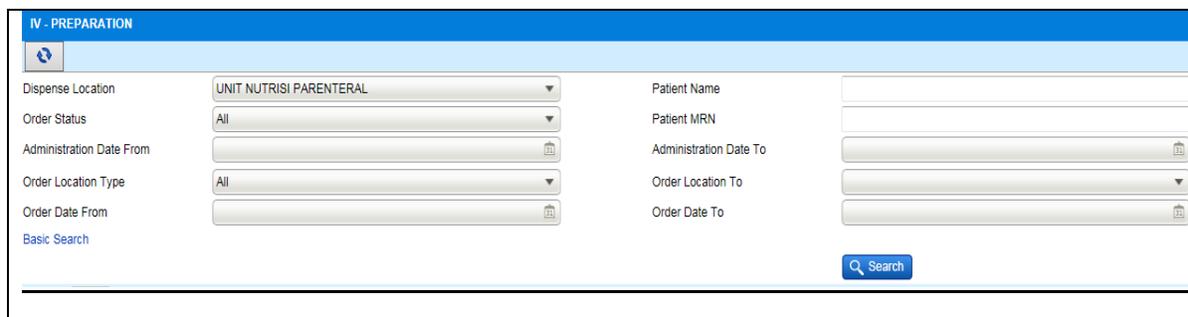


Figure 3.2-2 Advance search

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: • 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 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
HPSF00088636	[Redacted]	17/03/2017 15:06	WAD 9 (MED - P)	IN PROGRESS
HPSF00030669	[Redacted]	15/03/2017 18:07	WAD 11	IN PROGRESS
HPSF00018710	[Redacted]	14/03/2017 16:46	WAD 9 (MED - P)	IN PROGRESS
HPSF00035540	[Redacted]	28/02/2017 11:59	WAD 9 (MED - P)	PARTIALLY DISPENSED

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 Injection	500 mg	2 ml	1 mg/ml, Single Dose, 1 Days	1 vial 1 bott	0	0 vial 0 bott	1 vial 1 bott	<input type="checkbox"/> Details	0 vial 0 bott	Remarks	VERIFIED (PA)	Drug Info

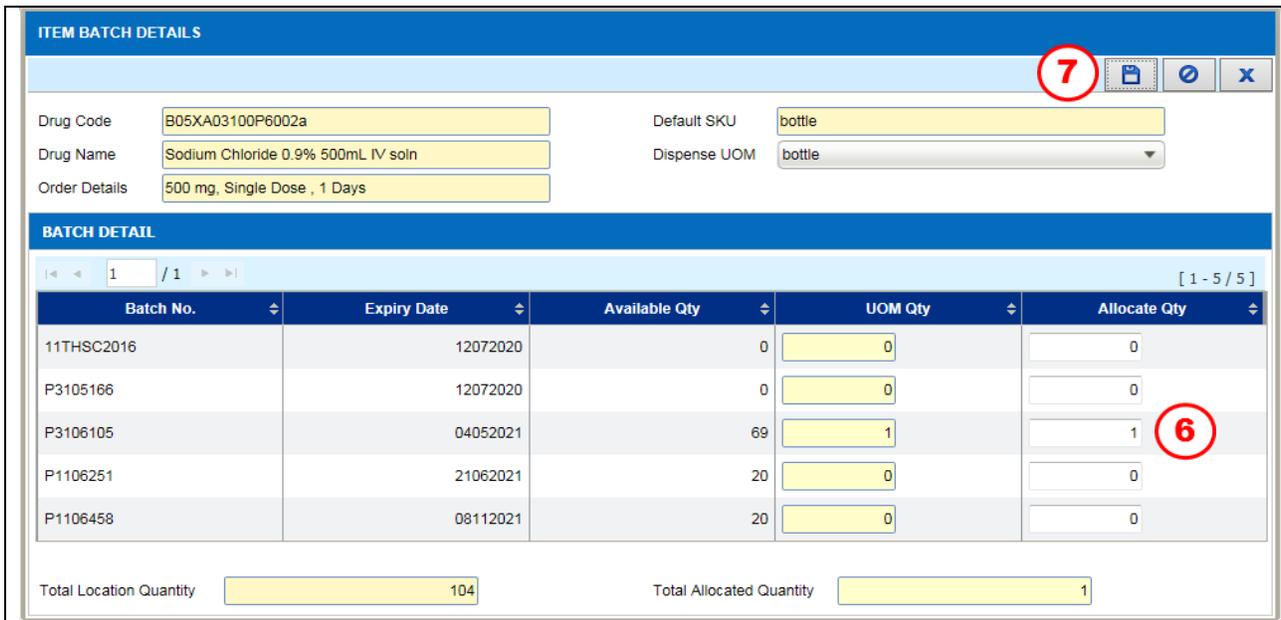
Figure 3.2-4 Prescription Listing Screen

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



ITEM BATCH DETAILS

Drug Code: B05XA03100P6002a Default SKU: bottle

Drug Name: Sodium Chloride 0.9% 500mL IV soln Dispense UOM: bottle

Order Details: 500 mg, Single Dose , 1 Days

BATCH DETAIL

Batch No.	Expiry Date	Available Qty	UOM Qty	Allocate Qty
11THSC2016	12072020	0	0	0
P3105166	12072020	0	0	0
P3106105	04052021	69	1	1
P1106251	21062021	20	0	0
P1106458	08112021	20	0	0

Total Location Quantity: 104 Total Allocated Quantity: 1

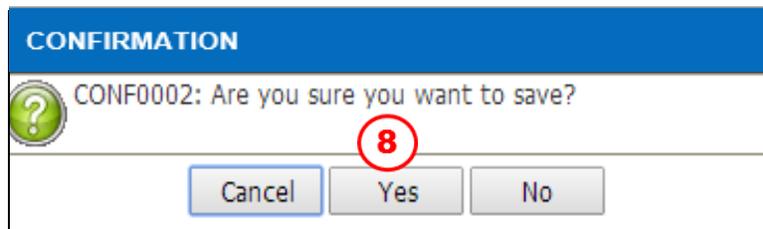
Figure 3.2-5 Allocation Screen

STEP 6

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

STEP 7

Click on the  button to proceed with allocation



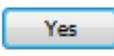
CONFIRMATION

CONF0002: Are you sure you want to save?

Buttons: Cancel, Yes, No

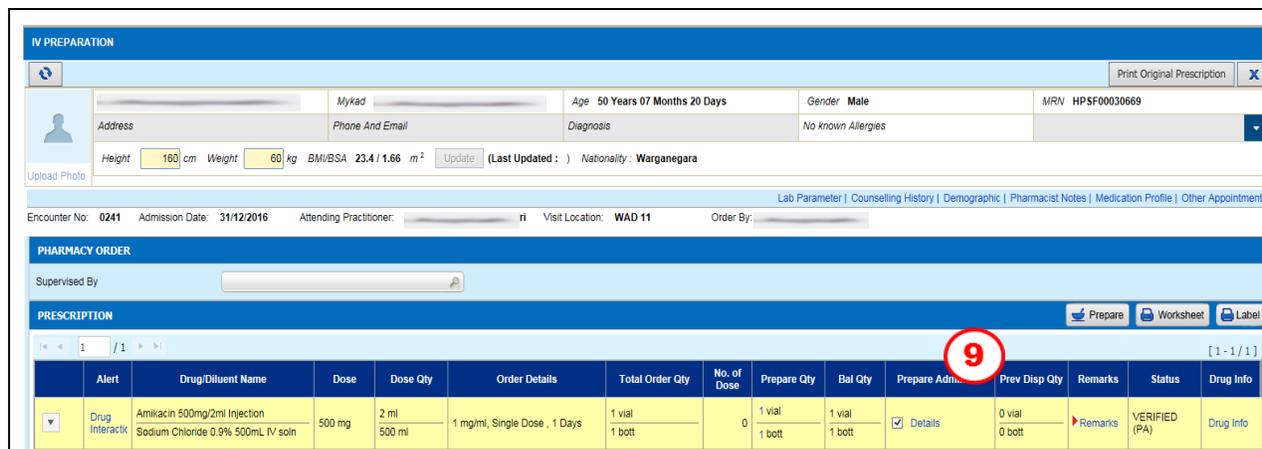
Figure 3.2-6 Preparation Screen

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

Mykad: _____ Age: 50 Years 07 Months 20 Days Gender: Male M/RN: HPSF00030669

Address: _____ Phone And Email: _____ Diagnosis: No known Allergies

Height: 160 cm Weight: 60 kg BMI/BSA: 23.4 / 1.66 m² Update (Last Updated:) Nationality: Warganegara

Upload Photo

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

Encounter No: 0241 Admission Date: 31/12/2016 Attending Practitioner: ri Visit Location: WAD 11 Order By: _____

PHARMACY ORDER

Supervised By: _____

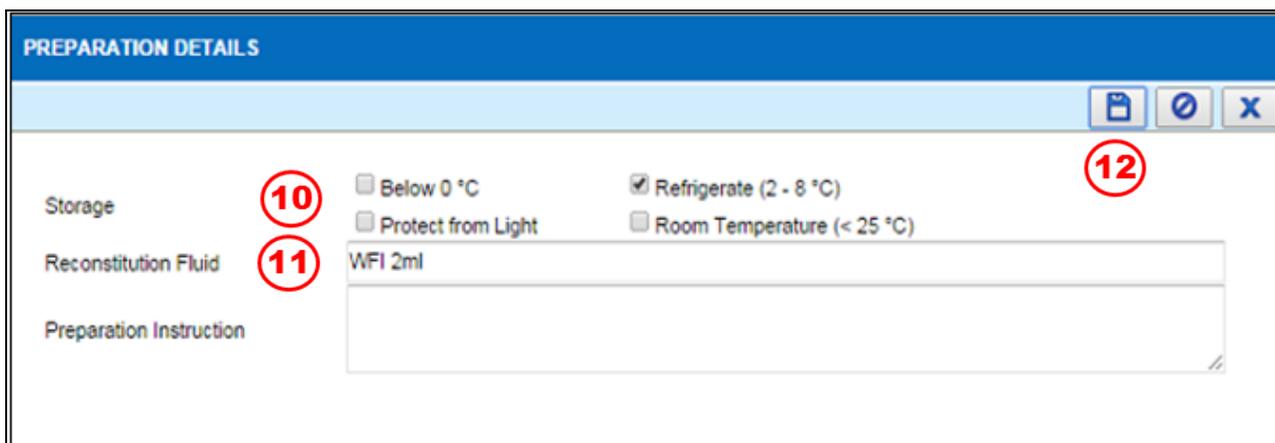
PRESCRIPTION Prepare Worksheet Label

Alert	Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Adm.	Prev Disp Qty	Remarks	Status	Drug Info
<input type="checkbox"/>	Amikacin 500mg/2ml Injection Sodium Chloride 0.9% 500mL IV soIn	500 mg	2 ml 500 ml	1 mg/ml, Single Dose, 1 Days	1 vial 1 bott	0	1 vial 1 bott	1 vial 1 bott	<input checked="" type="checkbox"/> Details	0 vial 0 bott	Remarks	VERIFIED (PA)	Drug Info

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

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

Reconstitution Fluid WFI 2ml

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

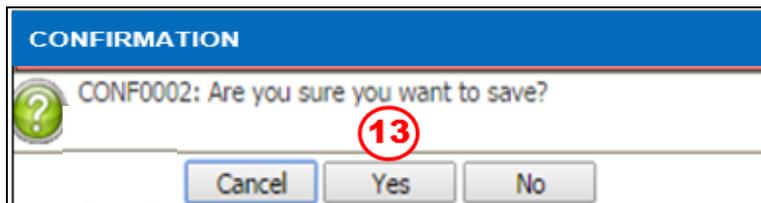
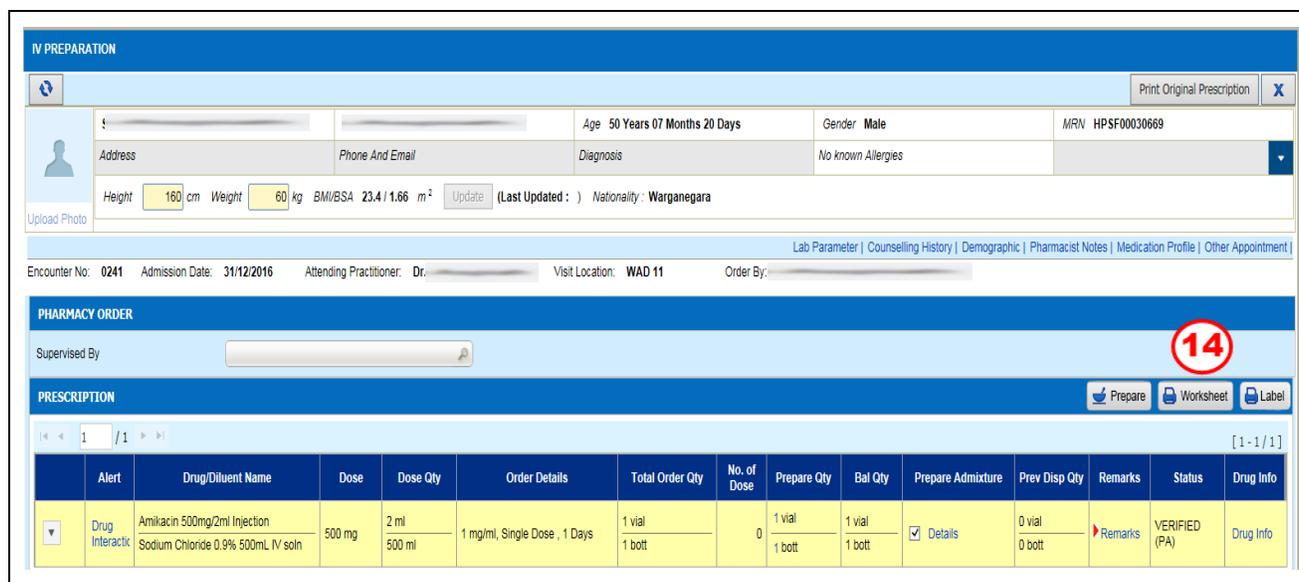


Figure 3.2-9 Preparation Details Screen

STEP 13

Click on  button to confirm saving of preparation details



IV PREPARATION

Print Original Prescription X

Age: 50 Years 07 Months 20 Days | Gender: Male | MRN: HPSF00030669

Address | Phone And Email | Diagnosis | No known Allergies

Height: 160 cm | Weight: 60 kg | BMI/BSA: 23.4 / 1.66 m² | Update (Last Updated:) | Nationality: Warganegara

Encounter No: 0241 | Admission Date: 31/12/2016 | Attending Practitioner: Dr. | Visit Location: WAD 11 | Order By:

PHARMACY ORDER

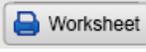
Supervised By

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 Interactk	Amikacin 500mg/2ml Injection Sodium Chloride 0.9% 500mL IV soln	500 mg	2 ml 500 ml	1 mg/ml, Single Dose, 1 Days	1 vial 1 bott	0	1 vial 1 bott	1 vial 1 bott	<input checked="" type="checkbox"/> Details	0 vial 0 bott	Remarks	VERIFIED (PA)	Drug Info

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		Worksheet & label checked		Prepared by		Final Product Checked by		Supervised by			
Noraini bt Saari											
Date: 24/09/2014		Date:		Date:		Date:		Date: 24/09/2014			

Figure 3.2-11 Worksheet

IV PREPARATION

[Print Original Prescription](#) X

	Mykad <input type="text"/>	Age 50 Years 07 Months 20 Days	Gender Male	MRN HPSF00030669
Address <input type="text"/>	Phone And Email <input type="text"/>	Diagnosis <input type="text"/>	No known Allergies	
Height <input type="text" value="160"/> cm	Weight <input type="text" value="60"/> kg	BMI/BSA <input type="text" value="23.4 / 1.66"/> m ²	Update (Last Updated :) Nationality : Warganegara	

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

Encounter No: 0241 Admission Date: 31/12/2016 Attending Practitioner: Dr. Visit Location: WAD 11 Order By:

PHARMACY ORDER

Supervised By
15

PRESCRIPTION

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

1 / 1
[1-1/1]

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
▼	Amikacin 500mg/2ml Injection	500 mg	2 ml	1 mg/ml, Single Dose , 1 Days	1 vial	0	1 vial	1 vial	<input checked="" type="checkbox"/> Details	0 vial	Remarks	VERIFIED (PA)	Drug Info
	Sodium Chloride 0.9% 500mL IV soln	500 ml	500 ml		1 bott		1 bott	1 bott		0 bott			

Figure 3.2-12 Preparation Listing Screen

STEP 15

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

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	Q8H	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.

PHARMACY ORDER

Supervised By:

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 Interactio	Amikacin 500mg/2ml Injection	500 mg	2 ml	1 mg/ml, Single Dose, 1 Days	1 vial	0	1 vial	1 vial	<input checked="" type="checkbox"/> Details	0 vial	Remarks	VERIFIED (PA)	Drug Info
	Sodium Chloride 0.9% 500mL IV soln	500 ml	500 ml		1 bott		1 bott	1 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.

CONFIRMATION

CONF0060: Do you want to proceed with the preparation?

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

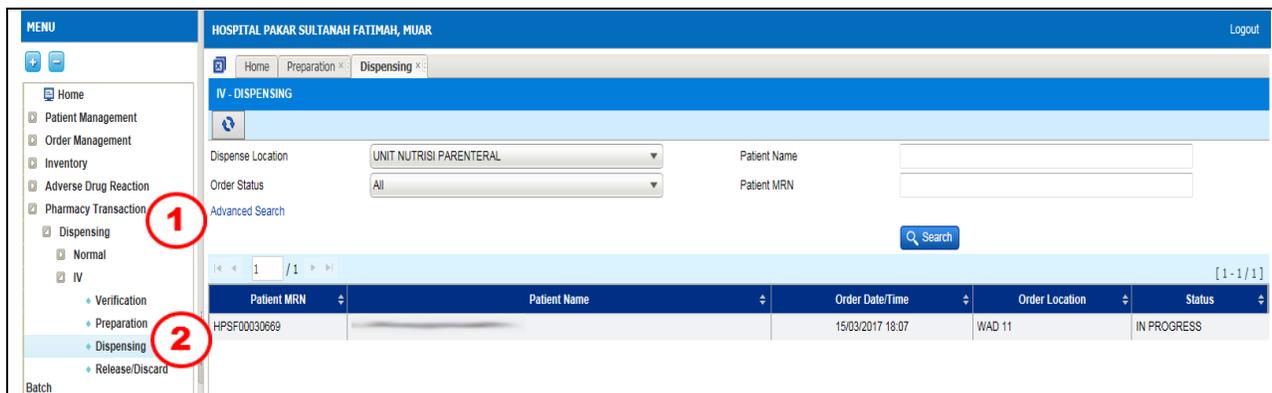


Figure 3.3-1 Dispensing Listing Screen

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

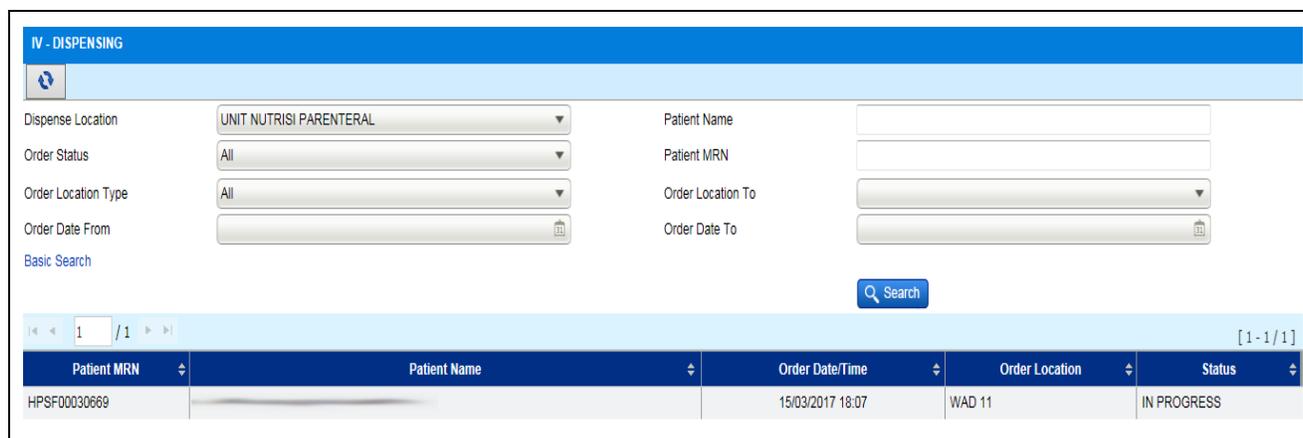


Figure 3.3-2 Dispensing Listing Screen

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>
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 3.3-1

Note

Search results of patient record list will display:

- Patient MRN
- Patient Name
- Order Date
- Order Location
- Status

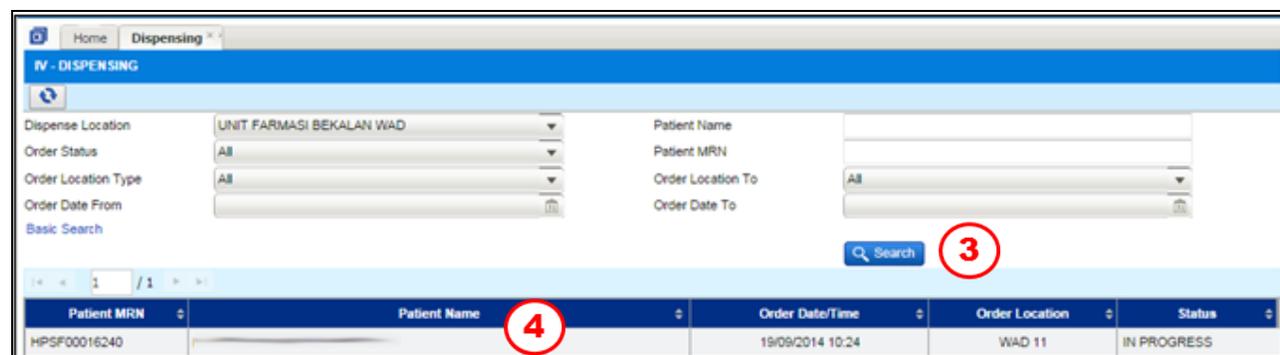


Figure 3.3-3 Dispensing Listing Screen

STEP 3

Click on the  button to search for patient

STEP 4

Double click on the selected patient

IV DISPENSING

Mykad:

Age: 50 Years 07 Months 20 Days

Gender: Male

M/RN: HPSF00030669

Address:

Phone And Email:

Diagnosis:

No known Allergies

Height: 160 cm

Weight: 60 kg

BMI/BSA: 23.4 / 1.66 m²

(Last Updated:)

Nationality: Warganegara

Encounter No: 0241

Admission Date: 31/12/2016

Attending Practitioner: Dr.

Visit Location: WAD 11

Order By:

PHARMACY ORDER

Dispensed To: SAPIYE BIN MD AMIN

Dispensed Date/Time: 28/03/2017 04:18

Remarks:

Dispensed At: Pharmacy Counter

Collected By:

Supervised By:

/

[1 - 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
<input type="button" value="v"/>	Amikacin 500mg/2ml Injection Sodium Chloride 0.9% 500mL IV soln	500 mg	2 ml 500 ml	1 mg/ml, Single Dose , 1 Days	1 vial 1 bott	0	1 vial 1 bott	1 vial 1 bott	<input checked="" type="checkbox"/> Details	0 vial 0 bott	Remarks	PREPARED (PA)	Drug Info

Figure 3.3-4 Dispensing Screen

STEP 5

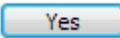
Click on the  button and system will open a new window as show in Figure 3.3-5

CONFIRMATION


CONF0064: Do you want to dispense now?

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.

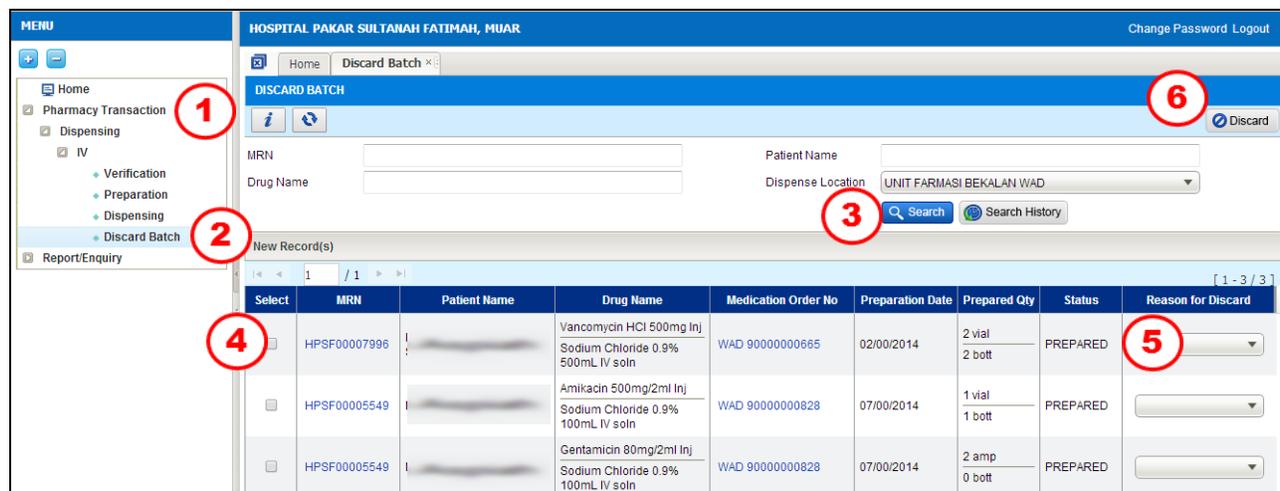


Figure 3.4-1 Discard Batch screen

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>	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		