



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

Full Based User Manual Cytotoxic Drug Reconstitution (CDR) Dispensing

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Peer Review

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1.0	Jenny Heng/Maxine Wong (QA)	First submission to MOH
1.1	Jenny Heng/Maxine Wong (QA)	Application interface changes (screen)
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1.4	Michelle Foo / Juraidah Ayob (QA)	Change to latest update and screenshot version 1.4.1
1.5	Michelle Foo / Juraidah Ayob (QA)	Change to latest update and screenshot version 1.5.1



PhIS & CPS Project
User Manual – Cytotoxic Drug Reconstitution (CDR) 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 would benefit facility end user in the health care sector.

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

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

1.2 Purpose and Objectives

This user manual outlines the Cytotoxic Drug Reconstitution (CDR) Dispensing sub-module and its key features and functionalities. The primary objective is to help guide user through the process of completing PhIS application process.

User will understand the following activities in details:

- Cytotoxic Drug Reconstitution (CDR) Verification Visit Management
- Verify CDR Order
- Intervention CDR Order
- Hold/Resume CDR Order

1.3 Organised Sections













These are the sections within this document:

- Section 1 : Introduction
- Section 2 : Application Standard Features
- Section 3 : Cytotoxic Drug Reconstitution (CDR) Dispensing
- Section 4 : Acronyms
- Section 5 : Link 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		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		

Module Legend			
 Update	Update Record	 Verify	Verify Prescription
 History	View History	 Hold	Hold Order
 Resume	Resume Order	 Worksheet	Print Worksheet
 Label	Print Label	 Prepare	Prepare Drug
 Dispense	Dispense Drug	 Search History	View History
 Release	Release Batch	 Discard	Discard Batch

Note

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

2.2 Latest Enhancement and Updates

Latest Functions	Page
Label updated	27

3.0 Cytotoxic Drug Reconstitution (CDR) Dispensing

Overview

The Cytotoxic Drug Reconstitution (CDR) Dispensing module aims to implement safe, organised, and efficient drug-dispensing systems essential for controlling costs and assuring that the medical prescription is safely followed as requested within the relevant deadline. An appropriate dispensing system is important 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 Specialist, Doctor, Medical Officer, Medical Assistant and Authorised Pharmacist (subject to user assign by the facility)

Functional Diagram

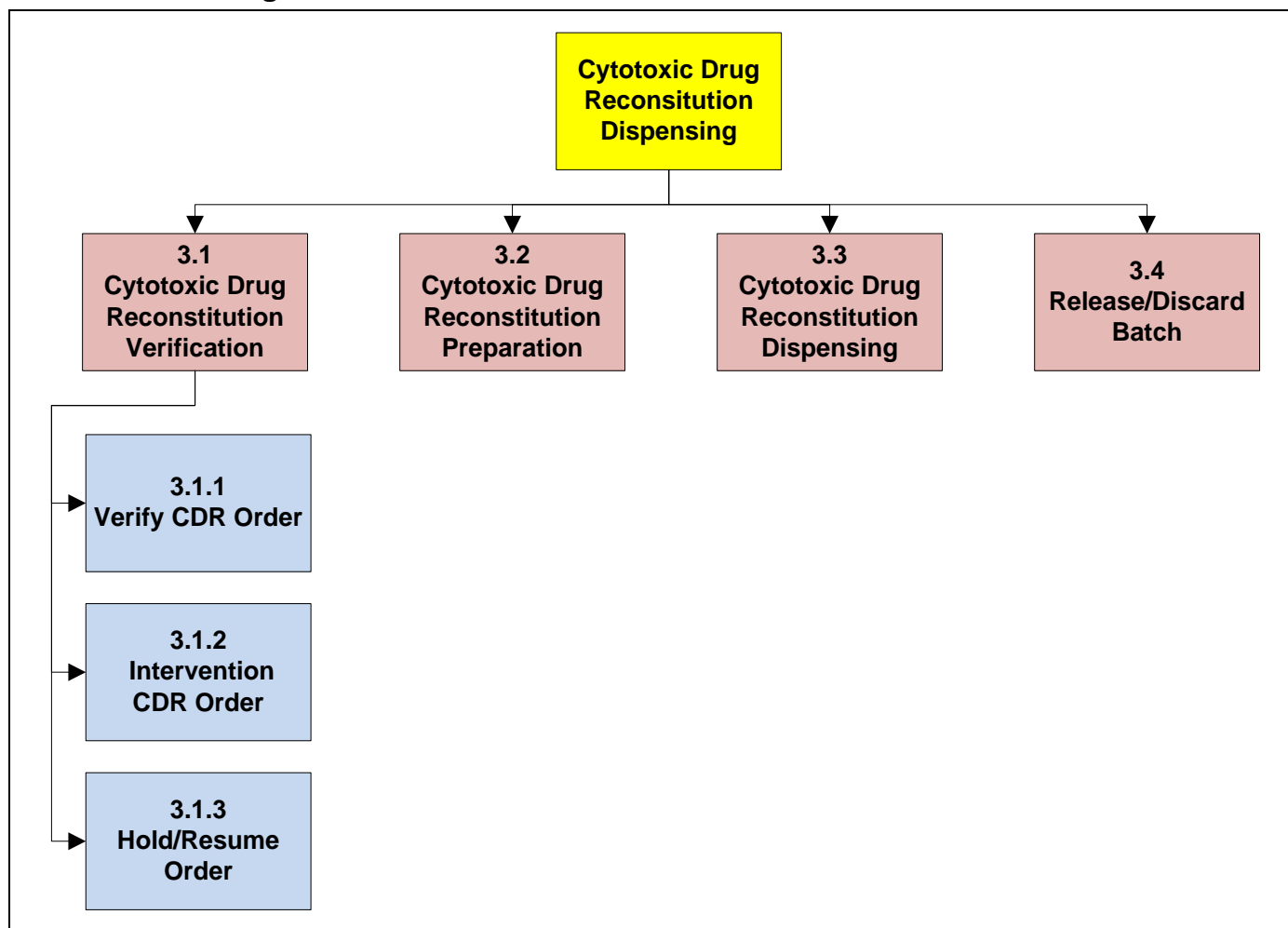


Table 3.0-1

Functional Description

Cytotoxic Drug Reconstitution (CDR) dispensing comprises of four (4) main functions:

- **Verification**

Verification is for pharmacist to verify the prescriptions received from order management. This process is mandatory for all prescriptions receive before the user can proceed with dispensing preparation.

- **Preparation**

The prescription and the drug preparation are made in the system that is integrated with the inventory system. Users access 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 that is integrated with the inventory system.

- **Release/Discard Batch**

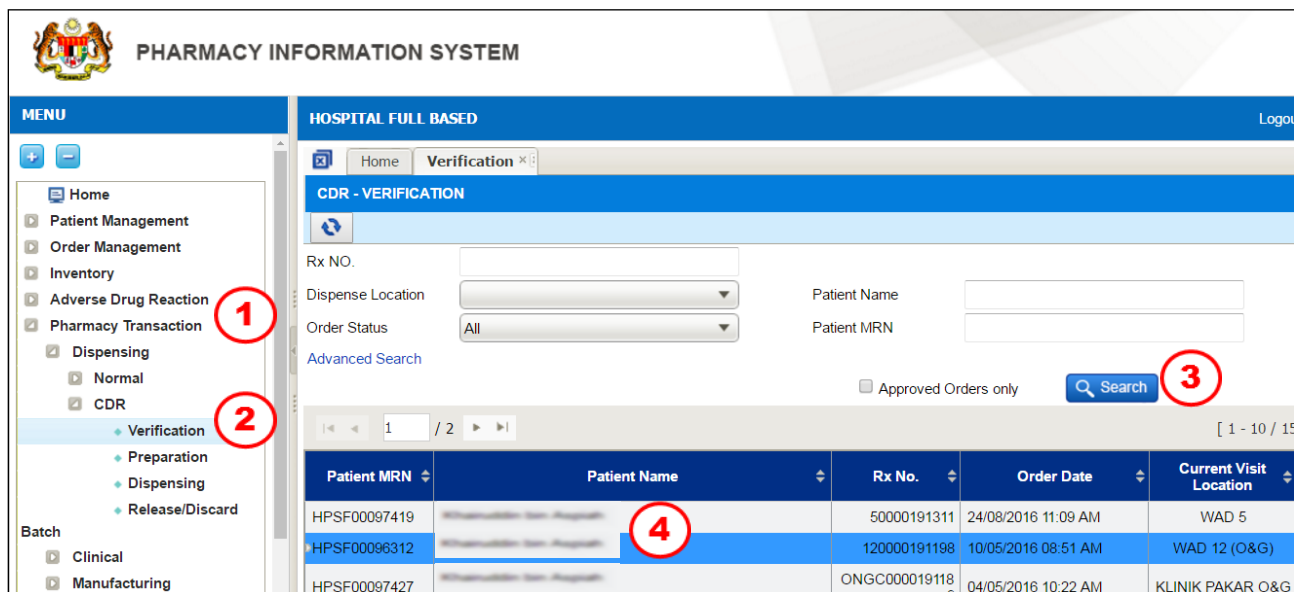
The Release function: allows user to return the allocated quantity of the CDR preparation back into the drug inventory list.

The Discard function: allows user to dispose the CDR product that has been prepared.

3.1 Cytotoxic Drug Reconstitution (CDR) Verification

Verification is for pharmacist to verify the prescriptions received from order management. At this stage, user has the option to do intervention and to hold/resume order.

3.1.1 Verify CDR Order



Patient MRN	Patient Name	Rx No.	Order Date	Current Visit Location
HPSF00097419	[Redacted]	50000191311	24/08/2016 11:09 AM	WAD 5
HPSF00096312	[Redacted]	120000191198	10/05/2016 08:51 AM	WAD 12 (O&G)
HPSF00097427	[Redacted]	ONGC000019118	04/05/2016 10:22 AM	KLINIK PAKAR O&G

Figure 3.1.1-1 CDR Verification Listing Page

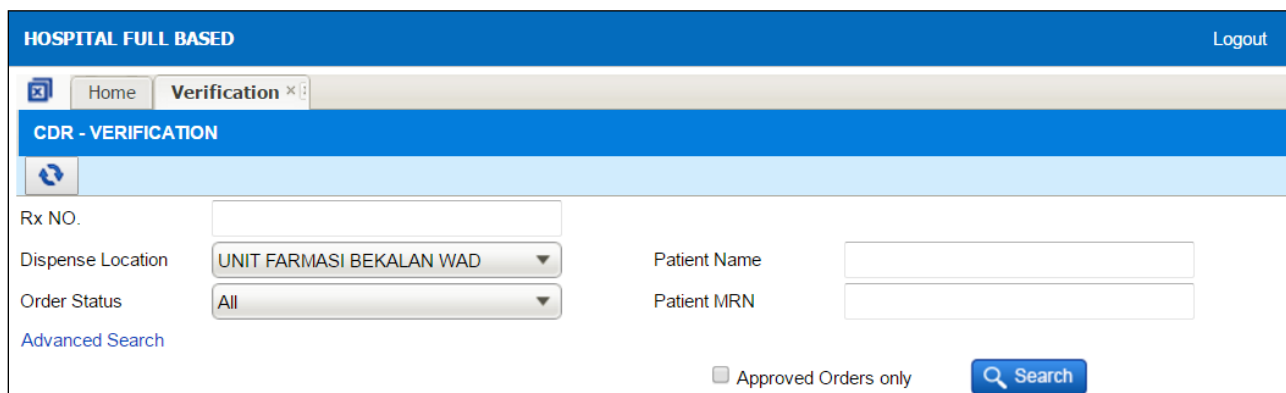


Figure 3.1.1-2 Advance Search

STEP 1

Click on 'Pharmacy Transaction' menu followed by "Dispensing" sub menu and select 'CDR'

STEP 2

Click on the 'Verification' function

Note

Search patient records by below criteria:-

Basic Search			
No	Field	Description	Remark
a	Rx NO	Prescription number	Able to filter and search patient name by prescription number
b	Dispense Location	Dispensing location. (It will list down all active location)	Able to filter and search patient name by dispensing location
c	Order Status	Search by: <ul style="list-style-type: none"> - All - Discharge Medications - New Orders - Outsourced Orders 	Able to filter and search patient name by order status
d	Patient Name	Patient Name	Allow to search by fully or partially entered patient name
e	Patient MRN	Patient Medical Record Number	Search option: <ul style="list-style-type: none"> • Type the MRN either in full or partially: Example: HPSF00001234 or "1234"
Advance Search			
a	Current Visit Location Type	Search by: <ul style="list-style-type: none"> - All - Clinic - Day Care - ER - Nursing Unit - Pharmacy 	Able to filter and search patient name by order location type
b	Current Visit Location	Current visit Location	Able to filter and search patient name by visit location
c	Order Date From	Order confirmed date	Allow to search by start date of order created
d	Order Date To	Order confirmed date	Allow to search by selected duration of order created

Table 3.1.1-1

STEP 3

Click on Search button  to search for patient

Note

Search result of patient record list will display:

- Patient MRN
- Patient Name
- Rx No
- Order Date
- Current Visit Location

STEP 4

Double click on the selected patient and the CDR Verification screen will be displayed as shown in Figure 3.1.1-3

CDR VERIFICATION

Mykad: [Mykad] Age: 38 Years 01 Months 01 Days Gender: Female MRN: HPSF00084282

Address: [Address] Phone And Email: [Phone And Email] Diagnosis: [Diagnosis] Known Allergies: [Known Allergies]

Height: 158 cm Weight: 56 kg BMI/BSA: 22.4 / 1.59 m² (Last Updated: 10/06/2015)

Upload Photo

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

Encounter No: 0009 Admission Date: 20/05/2015 Attending Practitioner: [Attending Practitioner] Current Visit Location: WAD 11 Rx No: 110000142250 Order By: [Order By] Start Date: 10/06/2015

PRESCRIPTION CDR Cycle History Verify

1 / 1 [1 - 1 / 1]

Regimen Code	Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	Remarks	Status
CDRON00003	Cisplatin 50mg Inj Sodium Chloride 0.9% 500mL IV soln	159 mg	159 ml 1000 ml	100 mg/m2, OD (once daily), Day: 1 Schedule	4 vial 2 bott	Remarks	ORDERED

Figure 3.1.1-3 CDR Verification

Note

- Click on the **Regimen Code** hyperlink to view Regimen Details.

REGIMEN DETAILS

Category: Oncology - Head & Neck Regimen Code: CDRON00003 Regimen Description: Cisplatin

Cycle Duration: 21 Remarks: [Remarks]

Active Ingredient	Admin Route	Dosage	Frequency	Chemo day	Infuse Over	Diluent	Diluent Volume	Drug Remark	Status
Cisplatin	Intravenous Infusion	100 mg/m2	OD (once daily)	1	2 Hours 0 Minutes	Sodium Chloride 0.9% 500mL IV soln	1000 ml		Active

Figure 3.1.1-4 Regimen Details

- Click on the **Schedule** hyperlink to view Dose Schedule.

DOSE SCHEDULE

1 / 1 [1 - 1 / 1]

Chemo Day	Date	Total Dose	UOM	Time	Supplied
1	10/06/2015	159	mg	08:00	<input type="checkbox"/>

Figure 3.1.1-5 Dose Schedule

- Click on the **Remarks** hyperlink to enter Pharmacist Remark.

PHARMACIST REMARK

Prescriber Remark

Order Stage

Pharmacist Remark

Verification Stage

release by pharmacist

Preparation Stage

Dispensing Stage

Figure 3.1.1-6 Pharmacist Remark

- Pharmacist Remark will be mandatory if the drug under the regimen code need to be authorized.
- Enter remark on the **Verification Stage** field and click on the button to save the record.
- Click on the CDR Cycle History button to view CDR Cycle History.

CDR CYCLE HISTORY													
	Regimen Code	Regimen Name	Cycle Start Date	Cycle End Date	Cycle Duration	Total Cycle	Cycle No	Height/Weight/B SA	Remarks	Prescription Status	Selection	Ordered By	Approved By(Future Order)
	CDRON0000i	Weekly Cisplatin	04/05/2016	10/05/2016	7 Days	6	6	174cm/66kg/1.79r		ORDERED	<input type="checkbox"/>	Available for Input	
	CDRON0000i	MTX	19/05/2016	25/05/2016	7 Days	6	6	174cm/66kg/1.79r		ORDERED	<input type="checkbox"/>	Available for Input	

Figure 3.1.1-7 CDR Cycle History

- Click on the button to print CDR Cycle History Report.

REPORT
Export to Excel

Ministry of Health, Malaysia
Hospital Full Based
Cytotoxic Drug Reconstitution : Cycle History

Patient Name : NUR AFIOAH Patient ID : 910413025074
Age / Gender : 25 Y 4 M 11 / Female MRN : HPSF00097427

Regimen Code	Regimen Name	Drug Name	Dose	Freq	Route	Chemo day	Drug Remarks	Drug status	Cycle Date	Total Cycle	Cycle No	Remarks	Height/Weight /BSA	Order By	Approved By
CDRON00008	Weekly Cisplatin	Cisplatin	71.6 mg	OD (once daily)	INF	1	40-50 mg/m2	ORDERED	04/05/2016 - 10/05/2016 (7 Days)	6	6		174cm/66kg/1.79m2	System	
CDRON00005	MTX	Methotrexate	71.6 mg	OD (once daily)	IVSB	1		ORDERED	19/05/2016 - 25/05/2016 (7 Days)	6	6		174cm/66kg/1.79m2	System	

Printed Date : 24/08/2016
Printed By : Lye Pow Sim
Source : PHIS

Figure 3.1.1-8 CDR Cycle History Report

CDR VERIFICATION

Mykad 770509145802 Age 38 Years 01 Months 01 Days Gender Female MRN HPSF00084282

Address Phone And Email Diagnosis Known Allergies

Height 158 cm Weight 56 kg BMI/BSA 22.4 / 1.59 m² (Last Updated : 10/06/2015)


Encounter No: 0009 Admission Date: 20/05/2015 Attending Practitioner: Current Visit Location WAD 11 Rx No: 110000142250 Order By: Cycle Start Date: 10/06/2015

PRESCRIPTION
CDR Cycle History Verify

Regimen Code	Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	Remarks	Status
CDRON00003	Cisplatin 50mg Inj Sodium Chloride 0.9% 500mL IV soln	159 mg	159 ml 1000 ml	100 mg/m2, OD (once daily), Day: 1 Schedule	4 vial 2 bott	Remarks	ORDERED

Figure 3.1.1-9 CDR Verification

STEP 5

Click on the  button to verify the order and alert message will be display as shown in 3.1.1-10

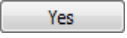
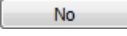
CONFIRMATION

CONF0061: Do you want to proceed with the verification?

Cancel Yes No

Figure 3.1.1-10 Alert Message

Note

- Click on the  button to confirm the verification.
- Click on the  button to cancel the verification.
- Verified order will flow to the preparation stage.

3.1.2 Intervention CDR Order

CDR VERIFICATION

Mykad: Age: 38 Years 01 Months 01 Days Gender: Female MRN: HPSF00084282

Address: Phone And Email: Diagnosis: **Known Allergies**

Height: 158 cm Weight: 56 kg BMI/BSA: 22.4 / 1.59 m² (Last Updated: 10/06/2015)

Encounter No: 0009 Admission Date: 20/05/2015 Attending Practitioner: Current Visit Location: WAD 11 Rx No: 110000142250 Order By: Start Date: 10/06/2015

PRESCRIPTION

CDR Cycle History ☒ Verify

Regimen Code	Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	Remarks	Status
CDRON00003	Cisplatin 50mg Inj	159 mg	159 ml	100 mg/m2, OD (once daily), Day: 1 Schedule	4 vial	Remarks	ORDERED
	Sodium Chloride 0.9% 500mL IV soln		1000 ml		2 bott		

Figure 3.1.2-1 CDR Verification

Note

- To proceed with Intervention CDR Order, repeat **Step 1 to 4** from section [3.1.1 Verify CDR Order](#).

REGIMEN DETAILS

Category: Oncology - Head & Neck Regimen Code: CDRON00003 Regimen Description: Cisplatin

Cycle Duration: 21 Remarks:

Active Ingredient	Admin Route	Dosage	Frequency	Chemo day	Infuse Over	Diluent	Diluent Volume	Drug Remark	Status
Cisplatin	Intravenous Infusion	100 mg/m2	OD (once daily)	1	2 Hours 0 Minutes	Sodium Chloride 0.9% 500mL IV soln	1000 ml		Active

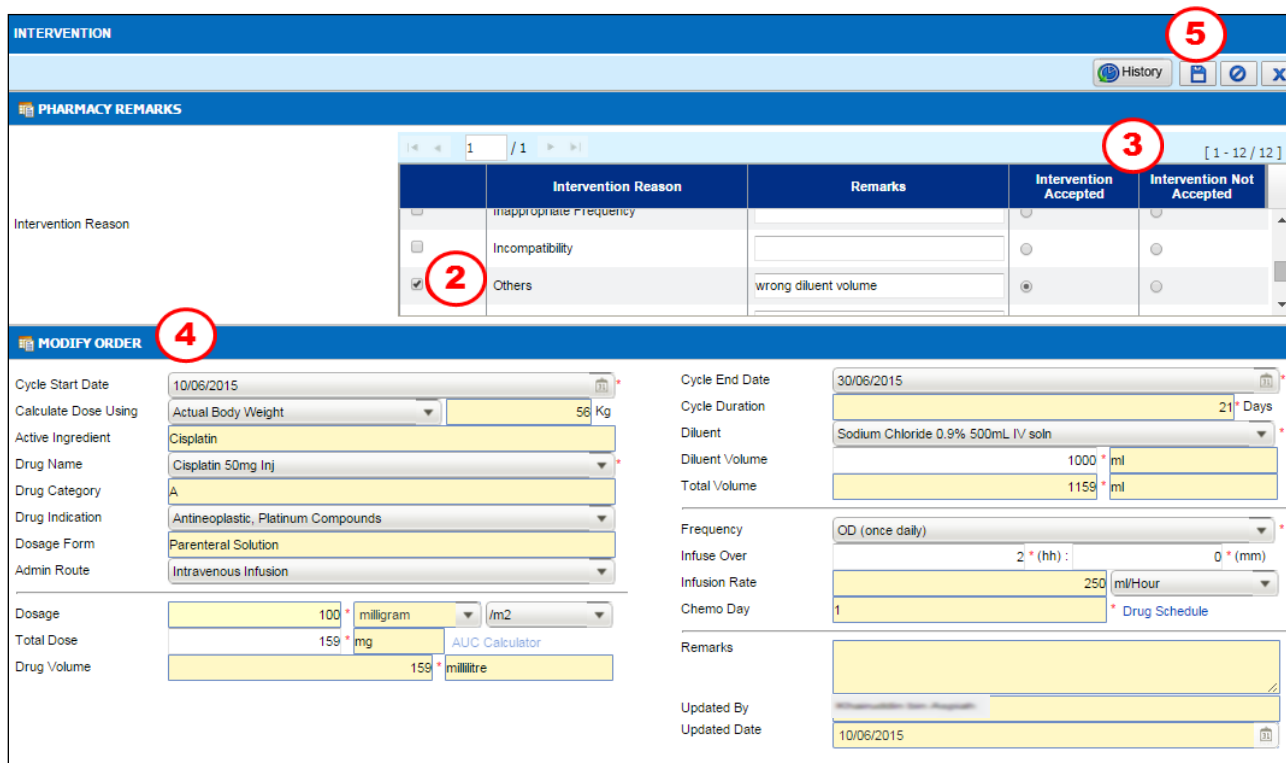
Figure 3.1.2-2 Regimen Details

- Click on the **Schedule** hyperlink to view Dose Schedule.

DOSE SCHEDULE

Chemo Day	Date	Total Dose	UOM	Time	Supplied
1	10/06/2015	159	mg	08:00	<input type="checkbox"/>

Figure 3.1.2-3 Dose Schedule



INTERVENTION

History

PHARMACY REMARKS

1 / 1 [1 - 12 / 12]

Intervention Reason	Remarks	Intervention Accepted	Intervention Not Accepted
<input type="checkbox"/> Inappropriate Frequency		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Incompatibility		<input type="radio"/>	<input type="radio"/>
<input checked="" type="checkbox"/> Others	wrong diluent volume	<input type="radio"/>	<input type="radio"/>

MODIFY ORDER

Cycle Start Date: 10/06/2015

Calculate Dose Using: Actual Body Weight 56 Kg

Active Ingredient: Cisplatin

Drug Name: Cisplatin 50mg Inj

Drug Category: A

Drug Indication: Antineoplastic, Platinum Compounds

Dosage Form: Parenteral Solution

Admin Route: Intravenous Infusion

Dosage: 100 milligram /m2

Total Dose: 159 mg

Drug Volume: 159 millilitre

Cycle End Date: 30/06/2015

Cycle Duration: 21 Days

Diluent: Sodium Chloride 0.9% 500mL IV soln

Diluent Volume: 1000 ml

Total Volume: 1159 ml

Frequency: OD (once daily)

Infuse Over: 2 (hh) : 0 (mm)

Infusion Rate: 250 ml/Hour

Chemo Day: 1


Remarks:

Updated By:

Updated Date: 10/06/2015

Figure 3.1.2-4 Intervention

STEP 1

Right click on the  button and select **Intervention** function and the Intervention screen will be displayed as shown in Figure 3.1.2-4

STEP 2

Select **Intervention Reason** from *Intervention Reason* column:

- 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 **Intervention Status** radio button

Note

Pharmacist will select ☒ **Accepted** after confirming status with prescriber.

STEP 4

Change order details


Note

Field that can be edited are as below:

- Cycle Start Date

- Cycle End Date
- Calculate Dose Using
- Drug Name
- Drug Indication
- Admin Route
- Diluent
- Diluent Volume
- Frequency
- Infuse Over

STEP 5

Click on the  button to save the record and alert message will be displayed as shown in Figure 3.1.2-5

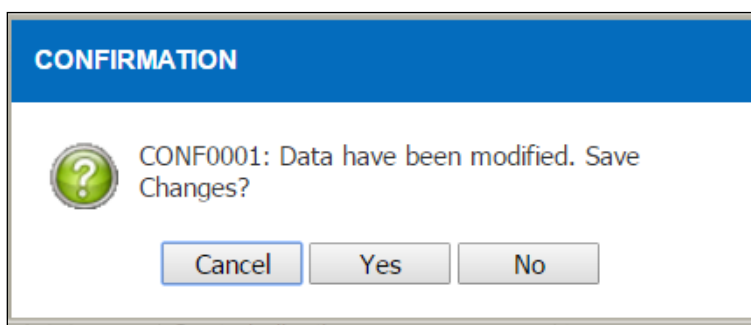




Figure 3.1.2-5 Alert Message

Note

- Click on the  button to confirm saving.
- To view the intervention history, user is allowed to click on the  button.

INTERVENTION REASON HISTORY LISTING			
<div> <div> <div>1</div> <div>/ 1</div> </div> <div> <div>[1 - 3 / 3]</div> </div> </div>			
Date/Time	Intervention Reason	Remarks	Updated By
24/08/2016 12:28:35 PM	Authenticity		Whisperedlin Sim Angeli
24/08/2016 12:28:35 PM	Polypharmacy		Whisperedlin Sim Angeli
24/08/2016 12:30:50 PM	Inappropriate Frequency	change from single	Whisperedlin Sim Angeli

Figure 3.1.2-6 Pharmacist Remark

- After intervention is made, Order Details column will change to a hyperlink as shown in Figure 3.1.2-7, and user is allowed to click to view the original order details.
- Order details will be displayed as shown in Figure 3.1.2-8.

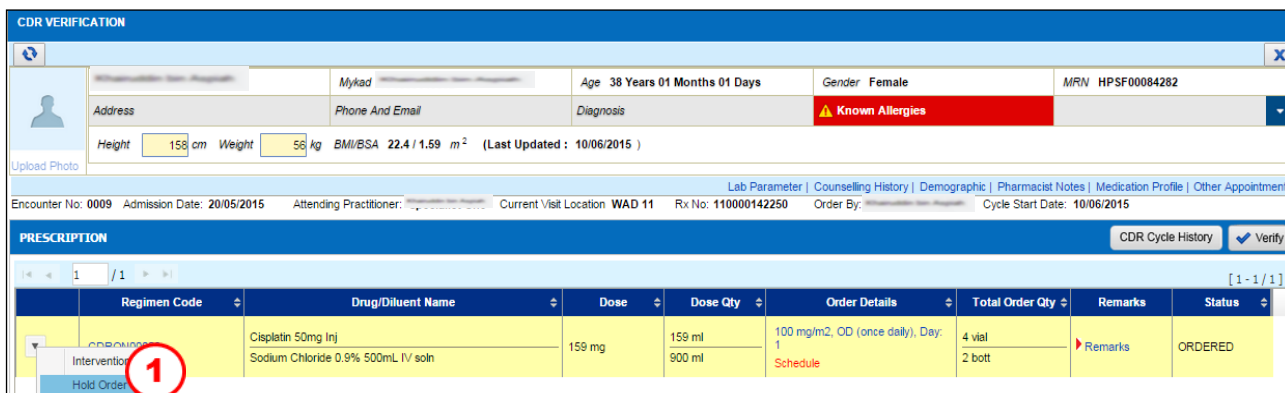
CDR VERIFICATION																									
Mykad		Age: 38 Years 01 Months 01 Days		Gender: Female		MRN: HPSF00084282																			
Address		Phone And Email		Diagnosis		Known Allergies																			
Height	158 cm	Weight	56 kg	BMI/BSA: 22.4 / 1.59 m ² (Last Updated: 10/06/2015)																					
Lab Parameter Counselling History Demographic Pharmacist Notes Medication Profile Other Appointment																									
Encounter No: 0009 Admission Date: 20/05/2015 Attending Practitioner: Upendran Srinivasan Current Visit Location: WAD 11 Rx No: 110000142250 Order By: Upendran Srinivasan Cycle Start Date: 10/06/2015																									
PRESCRIPTION																									
CDR Cycle History Verify																									
<div>1 / 1</div> <table border="1"> <thead> <tr> <th>Regimen Code</th> <th>Drug/Diluent Name</th> <th>Dose</th> <th>Dose Qty</th> <th>Order Details</th> <th>Total Order Qty</th> <th>Remarks</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>CDRON00003</td> <td>Cisplatin 50mg Inj Sodium Chloride 0.9% 500mL IV soln</td> <td>159 mg</td> <td>159 ml 900 ml</td> <td>100 mg/m2, OD (once daily), Day: 1 Schedule</td> <td>4 vial 2 bott</td> <td>Remarks</td> <td>ORDERED</td> </tr> </tbody> </table>										Regimen Code	Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	Remarks	Status	CDRON00003	Cisplatin 50mg Inj Sodium Chloride 0.9% 500mL IV soln	159 mg	159 ml 900 ml	100 mg/m2, OD (once daily), Day: 1 Schedule	4 vial 2 bott	Remarks	ORDERED
Regimen Code	Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	Remarks	Status																		
CDRON00003	Cisplatin 50mg Inj Sodium Chloride 0.9% 500mL IV soln	159 mg	159 ml 900 ml	100 mg/m2, OD (once daily), Day: 1 Schedule	4 vial 2 bott	Remarks	ORDERED																		

Figure 3.1.2-7 Prescription After Intervention

ORIGINAL RX												
Category	Oncology - Head & Neck	Regimen Code	CDRON00003	Regimen Description	Cisplatin							
Cycle Duration	21	Cycle No	8	Cycle Start Date	10/06/2015	Cycle End Date	30/06/2015					
Remarks												
Default Drug Name	Admin Route	Dosage	Total Dose	Infuse Over	Frequency	Chemo days	Diluent	Diluent Volume	Infusion Rate	Drug Remark	Intervention Reason	Intervention Remarks
Cisplatin 50mg Inj	Intravenous Infusion	100 mg/m2	159 mg	2 Hours 0 Minutes	OD (once daily)	Day: 1	Sodium Chloride 0.9% 500mL IV soln	1000 ml	250 ml/Hour		Others	wrong diluent volume

Figure 3.1.2-8 Original Rx

3.1.3 Hold/Resume CDR Order



CDR VERIFICATION

Mykad: [Redacted] Age: 38 Years 01 Months 01 Days Gender: Female MRN: HPSF00084282

Address: [Redacted] Phone And Email: [Redacted] Diagnosis: [Redacted] Known Allergies: [Redacted]

Height: 158 cm Weight: 56 kg BMI/BSA: 22.4 / 1.59 m² (Last Updated: 10/06/2015)

Encounter No: 0009 Admission Date: 20/05/2015 Attending Practitioner: [Redacted] Current Visit Location: WAD 11 Rx No: 110000142250 Order By: [Redacted] Cycle Start Date: 10/06/2015

PRESCRIPTION

Regimen Code	Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	Remarks	Status
Intervention	Cisplatin 50mg Inj	159 mg	159 ml	100 mg/m2, OD (once daily), Day: 1	4 vial		
Hold Order	Sodium Chloride 0.9% 500mL IV soln		900 ml	Schedule	2 bott		ORDERED


Figure 3.1.3-1 CDR Verification Screen

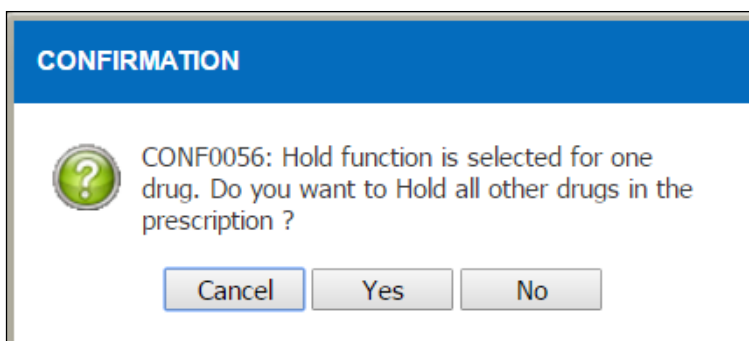
Note

To proceed with Hold/Resume CDR Order, repeat **Step 1** to **4** from section [3.1.1 Verify CDR Order](#).

Hold Order

STEP 1

Right click on the  button and select **Hold Order** function and an alert message will be displayed as shown in Figure 3.1.3-2



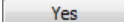
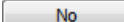
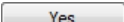
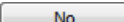
CONFIRMATION

CONF0056: Hold function is selected for one drug. Do you want to Hold all other drugs in the prescription ?

Cancel Yes No

Figure 3.1.3-2 Alert Message

Note

- Click on the  button and system will hold all the drugs in the prescription.
- Click on the  button and system will only hold the selected drug.
- Hold Order – Pharmacist Remarks window will be displayed after  or  button is clicked as shown in Figure 3.1.3-3.

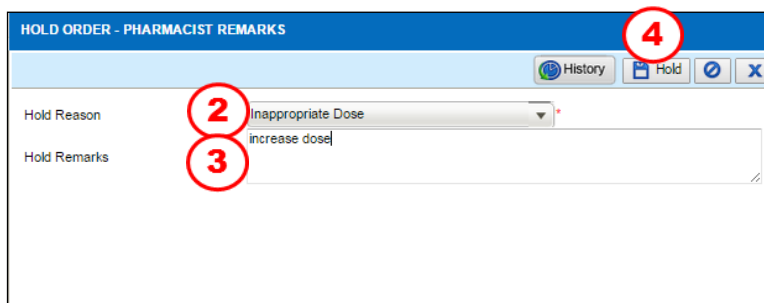


Figure 3.1.3-3 Hold Order – Pharmacist Remarks

STEP 2

Select **Hold Reason** from dropdown 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

Enter **Hold Remarks** (if required)

STEP 4

Click on the  button to hold the order and an alert message will be displayed as shown in Figure 3.1.3-4

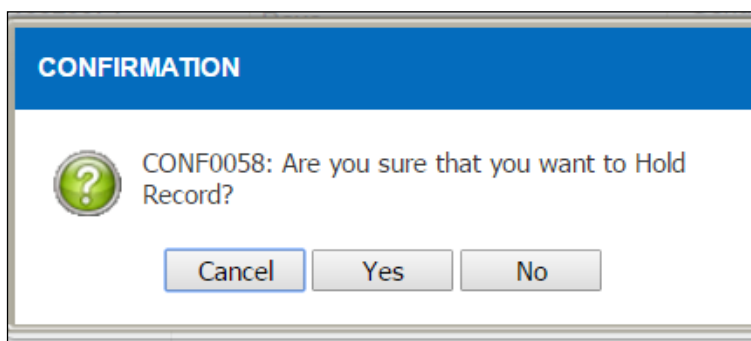
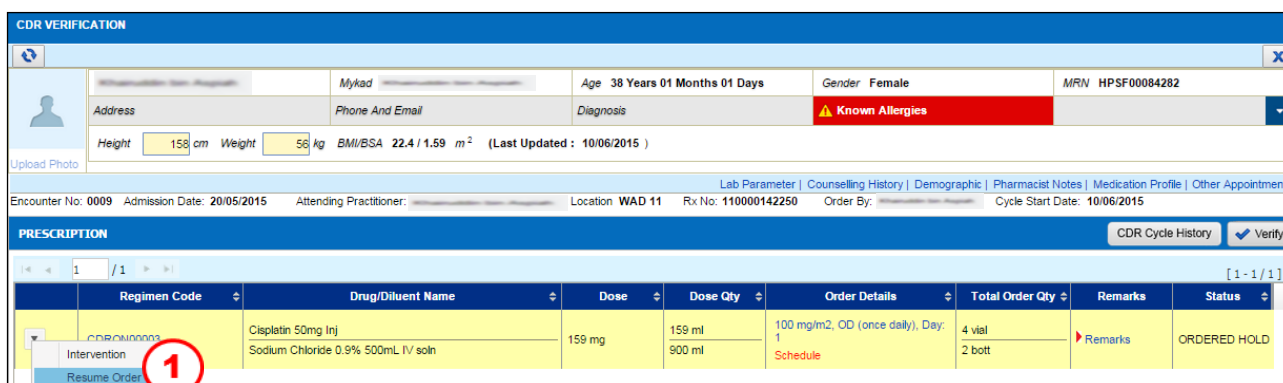


Figure 3.1.3-4 Alert Message

Note

- Click on the  button to confirm the hold record.
- **Status** will change to “Ordered Hold”.



The CDR Verification screen displays patient information, prescription details, and a table of drugs. A red circle with the number 1 highlights the 'Resume Order' button in the bottom left corner of the prescription table.

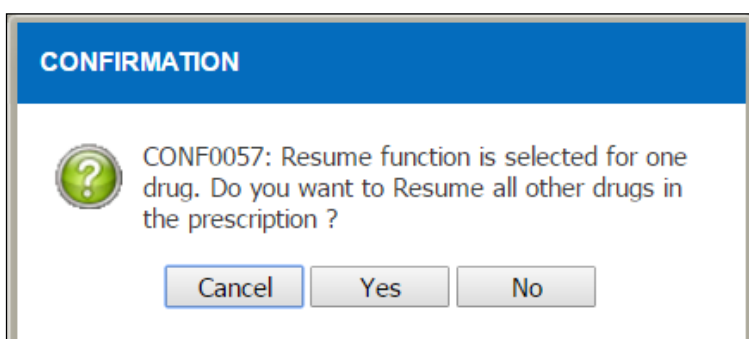
Regimen Code	Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	Remarks	Status
CONF000003	Cisplatin 50mg Inj	159 mg	159 ml	100 mg/m ² , OD (once daily), Day: 1	4 vial		
	Sodium Chloride 0.9% 500mL IV soln		900 ml	Schedule	2 bott		

Figure 3.1.3-5 CDR Verification Screen

Resume Order

STEP 1

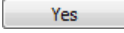
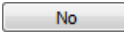
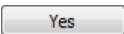
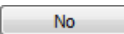
Right click on the  button and select **Resume Order** function and alert message will be displayed as shown in Figure 3.1.3-6

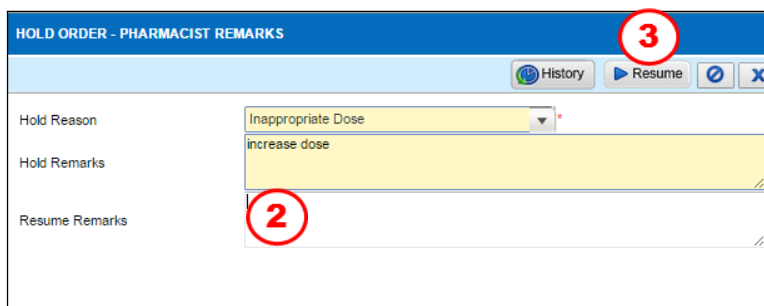


The CONFIRMATION dialog box asks: "CONF0057: Resume function is selected for one drug. Do you want to Resume all other drugs in the prescription?". It has three buttons: Cancel, Yes, and No.

Figure 3.1.3-6 Alert Message

Note

- Click on the  button and system will resume all the drugs in the prescription.
- Click on the  button and system will only resume the selected drug.
- Hold Order – Pharmacist Remarks window will be displayed after  or  button is clicked as Figure 3.1.3-7.



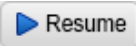
The HOLD ORDER - PHARMACIST REMARKS window shows a dropdown menu for 'Hold Reason' with 'Inappropriate Dose' selected. Below it is a text area for 'Hold Remarks' containing 'increase dose'. A red circle with the number 2 highlights the 'Resume Remarks' text area. A red circle with the number 3 highlights the 'Resume' button in the top right corner.

Figure 3.1.3-7 Resume Hold Order

STEP 2

Enter **Resume Remarks** (if required)

STEP 3

Click on the  button to resume the hold order and an alert message will be displayed as shown in Figure 3.1.3-8

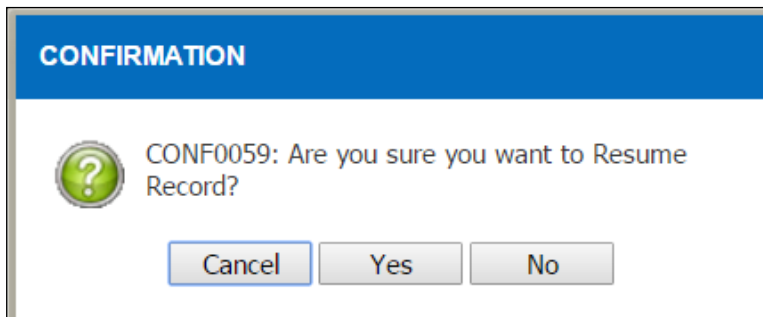
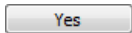



Figure 3.1.3-8 Alert Message

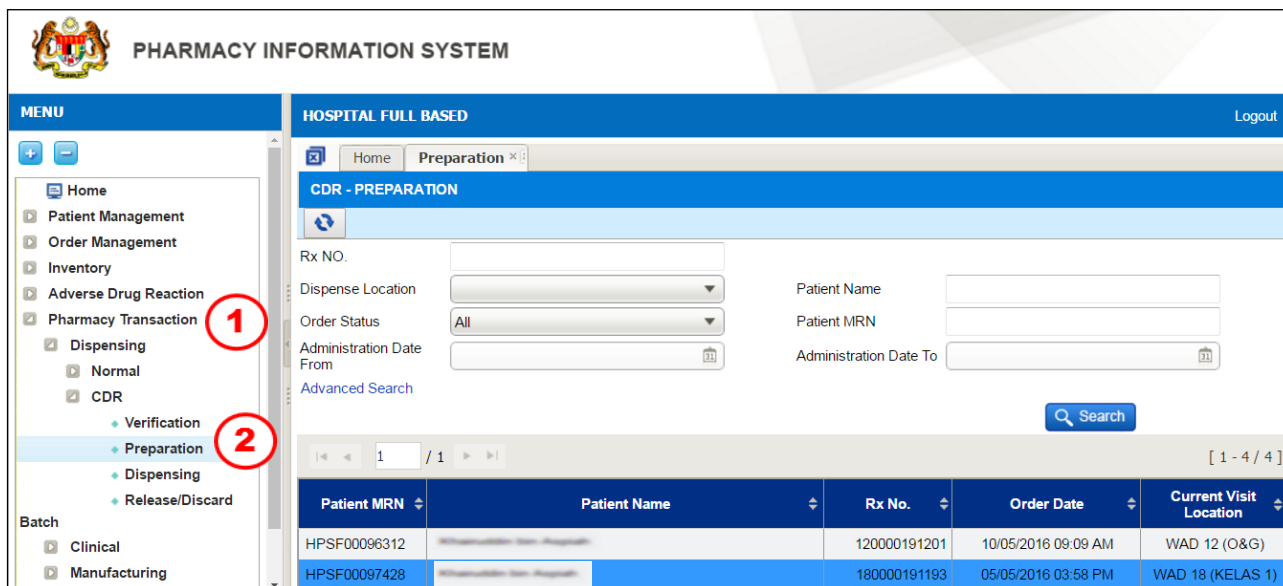
Note

- Click on the  button to confirm the Resume Record.
- Status** will change to "Ordered".
- To view the Hold Reason History Listing as shown in Figure 3.1.3-9, user is allowed to click on the  button.

HOLD REASON HISTORY LISTING					
<div> <div>1 / 1</div> <div>[1 - 1 / 1]</div> </div>					X
Date/Time	Screen	Hold Reason	Remarks	Resume Remarks	Updated By
10/06/2015 10:14:38 PM	Verification	Inappropriate Dose	increase dose		Khairuddin bin Asyraf

Figure 3.1.3-9 Alert Message

3.2 CDR Preparation



PHARMACY INFORMATION SYSTEM

HOSPITAL FULL BASED Logout

Home Preparation

CDR - PREPARATION

Rx NO.

Dispense Location

Order Status

Administration Date From

Administration Date To

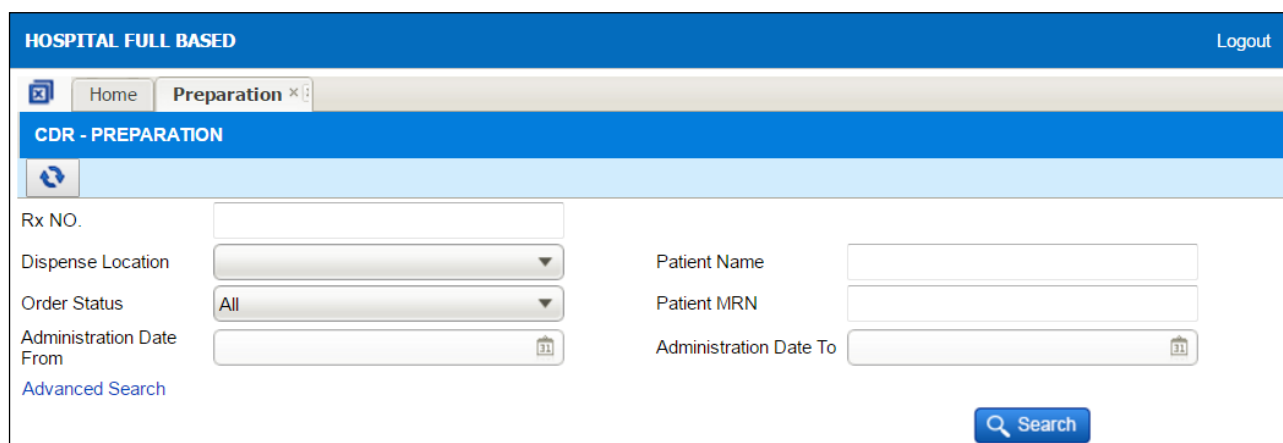
Advanced Search

Search

[1 - 4 / 4]

Patient MRN	Patient Name	Rx No.	Order Date	Current Visit Location
HPSF00096312	Chen, Sze, Sze	120000191201	10/05/2016 09:09 AM	WAD 12 (O&G)
HPSF00097428	Chen, Sze, Sze	180000191193	05/05/2016 03:58 PM	WAD 18 (KELAS 1)

Figure 3.2-1 CDR Preparation Listing Page



HOSPITAL FULL BASED Logout

Home Preparation

CDR - PREPARATION

Rx NO.

Dispense Location

Order Status

Administration Date From

Administration Date To

Advanced Search

Search

Figure 3.2-2 Advance Search

STEP 1

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

STEP 2

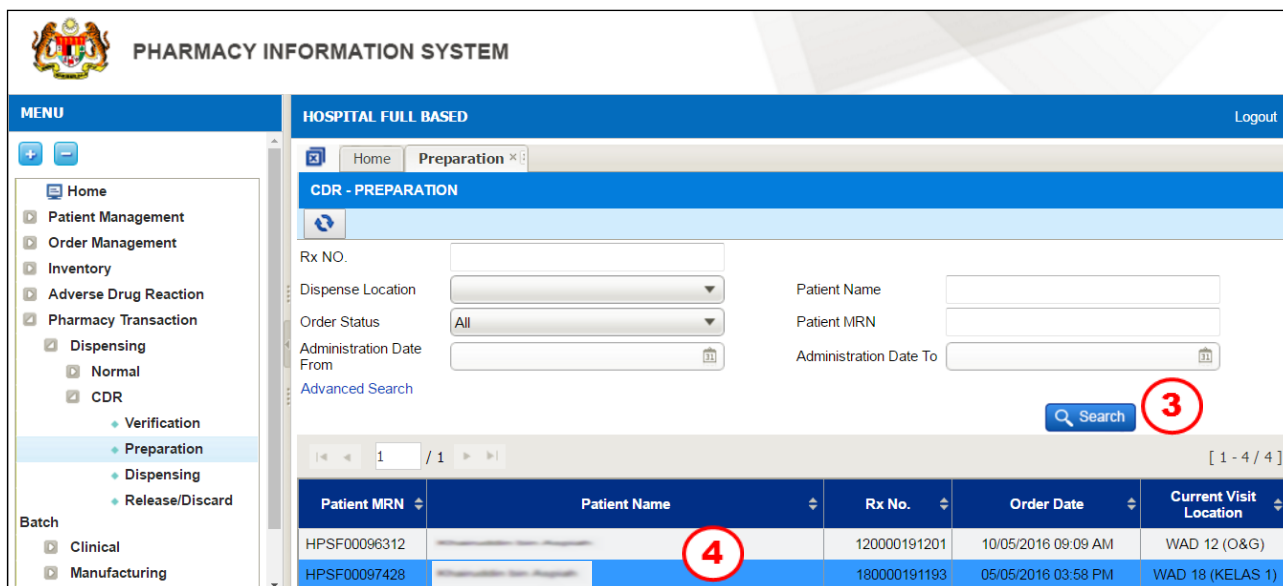
Click on 'Preparation' function

Note

Search patient record based :-

Basic Search			
No	Field	Description	Remark
a	Rx NO	Prescription number	Able to filter and search patient name by prescription number
b	Dispense Location	Dispensing location. (It will list down all active location)	Able to filter and search patient name by dispensing location
c	Order Status	Search by: <ul style="list-style-type: none"> - All - Verified - Verified Hold - Partial Supply Orders 	Able to filter and search patient name by order status
d	Patient Name	Patient Name	Allow to search by full name or partially entered patient name
e	Patient MRN	Patient Medical Record Number	Search option: <ul style="list-style-type: none"> • Type the MRN either in full or partially: <i>Example: HPSF00001234 or "1234"</i>
f	Administration Date From	Administration confirmed date	Allow to search by start date of verification order
g	Administration Date To	Administration confirmed date	Allow to search by selected duration of verification order
Advance Search			
a	Current Visit Location Type	Current Visit Location Type	Search by: <ul style="list-style-type: none"> - All - Clinic - Day Care - ER - Nursing Unit - Pharmacy
b	Current Visit Location	Current visit Location	Able to filter and search patient name by visit location
c	Order Date From	Order confirmed date from	Allow to search by start date of order created
d	Order Date To	Order confirmed date to	Allow to search by selected duration of order created

Table 3.2-1



PHARMACY INFORMATION SYSTEM

HOSPITAL FULL BASED Logout

Home Preparation

CDR - PREPARATION

Rx NO.

Dispense Location

Order Status

Administration Date From

Advanced Search

Patient Name

Patient MRN

Administration Date To

Search 3

1 / 1 [1 - 4 / 4]

Patient MRN	Patient Name	Rx No.	Order Date	Current Visit Location
HPSF00096312	4	120000191201	10/05/2016 09:09 AM	WAD 12 (O&G)
HPSF00097428		180000191193	05/05/2016 03:58 PM	WAD 18 (KELAS 1)

Figure 3.2-3 CDR Preparation Listing Page

STEP 3

Click on Search button  to search for patient

Note

Search results of patient record list will display:

- Patient MRN
- Patient Name
- Rx No
- Order Date/Time
- Current Visit Location

STEP 4

Double click on record and CDR Preparation screen will be displayed as shown in Figure 3.2-4

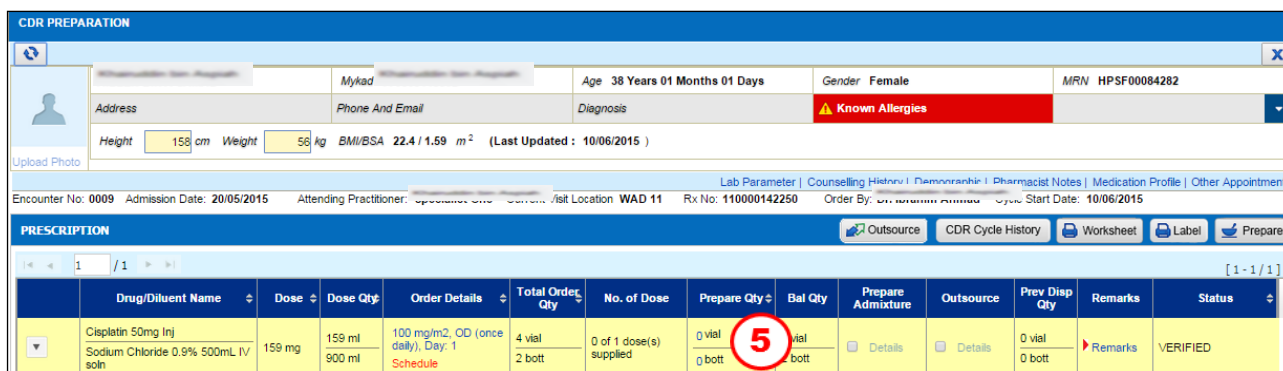
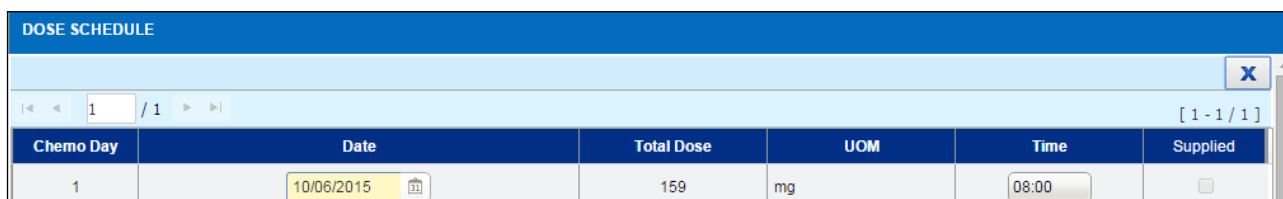


Figure 3.2-4 CDR Preparation

Note

Click on the **Schedule** hyperlink to view Dose Schedule screen.



Chemo Day	Date	Total Dose	UOM	Time	Supplied
1	10/06/2015	159	mg	08:00	<input type="checkbox"/>

Figure 3.2-5 Dose Schedule

STEP 5

Click on the **Prepare Qty** hyperlink and the Item Batch Details window will be displayed for user to allocate quantity

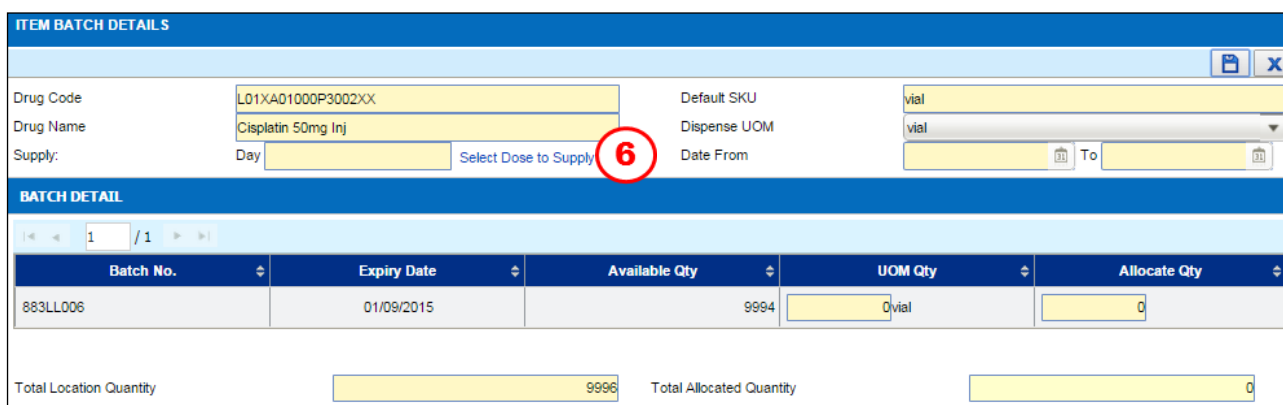
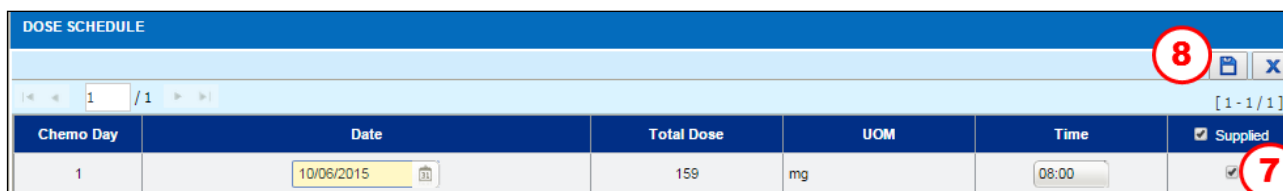


Figure 3.2-6 Item Batch Details

STEP 6

Click on the **Select Dose to Supply** hyperlink and the Dose Schedule window will be displayed as shown in Figure 3.2-7



Chemo Day	Date	Total Dose	UOM	Time	Supplied
1	10/06/2015	159	mg	08:00	<input checked="" type="checkbox"/>

Figure 3.2-7 Dose Schedule

STEP 7

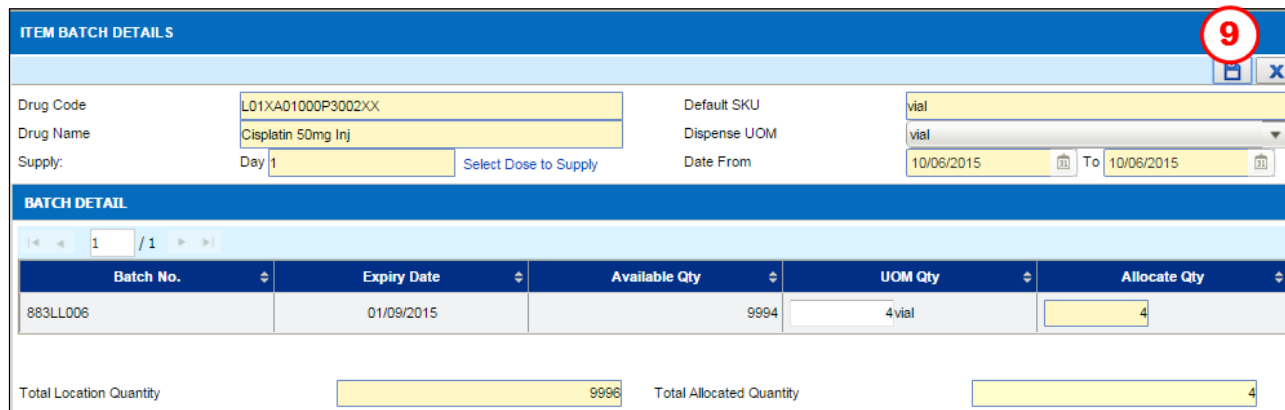
Click on the selected **Supplied** ☒ checkbox to select the dose to prepare

STEP 8

Click on the  button to save the record

Note


After saving, the Item Batch Screen will be displayed.

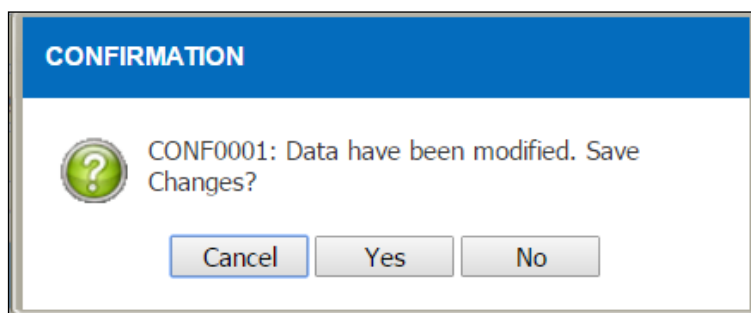


The screenshot shows the 'ITEM BATCH DETAILS' window. It contains fields for Drug Code (L01XA01000P3002XX), Drug Name (Cisplatin 50mg Inj), Default SKU (vial), Dispense UOM (vial), Supply (Day 1), and Date From (10/06/2015) to Date To (10/06/2015). A red circle with the number 9 highlights the save icon in the top right corner. Below these fields is a 'BATCH DETAIL' table with columns: Batch No., Expiry Date, Available Qty, UOM Qty, and Allocate Qty. The table shows one row with Batch No. 883LL006, Expiry Date 01/09/2015, Available Qty 9994, UOM Qty 4 vial, and Allocate Qty 4. At the bottom, there are fields for Total Location Quantity (9996) and Total Allocated Quantity (4).

Figure 3.2-8 Item Batch Details

STEP 9

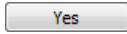
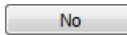
Click on the  button to save the allocation quantity and an alert message will be displayed as shown in Figure 3.2-9



The screenshot shows a 'CONFIRMATION' dialog box with a question mark icon. The text inside says 'CONF0001: Data have been modified. Save Changes?'. There are three buttons at the bottom: 'Cancel', 'Yes', and 'No'.

Figure 3.2-9 Alert Message

Note

- Click on the  button to confirm the saved record.
- Click on the  button to cancel the saved record.
- Quantity allocation will be updated in the CDR Preparation screen as shown in Figure 3.2-10.
- Allocated drugs are based on selected **Dispense Location** during logging in.

CDR PREPARATION

MyKad: Age: 38 Years 01 Months 01 Days Gender: Female MRN: HPSF00084282

Address: Phone And Email: Diagnosis: Known Allergies:

Height: 158 cm Weight: 56 kg BMI/BSA: 22.4 / 1.59 m² (Last Updated: 10/06/2015)

Encounter No: 0009 Admission Date: 20/05/2015 Attending Practitioner: Current Visit Location: WAD 11 Rx No: 110000142250 Order By: Cycle Start Date: 10/06/2015

PRESCRIPTION

Outsource CDR Cycle History Worksheet Label Prepare

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	Outsource	Prev Disp Qty	Remarks	Status
Cisplatin 50mg Inj	159 mg	159 ml	100 mg/m ² , OD (once daily), Day: 1	4 vial	0 of 1 dose(s) supplied	4 vial	4 vial	<input checked="" type="checkbox"/> Details	<input type="checkbox"/> Details	0 vial	Remarks	VERIFIED
Sodium Chloride 0.9% 500mL IV soln	900 ml	900 ml	Schedule	2 bott		2 bott	2 bott			0 bott		

Figure 3.2-10 CDR Preparation

STEP 10

Click on the selected **Prepared Admixture** ☒ checkbox to proceed with preparation

Note

- Prepare Admixture Screen will saved automatically upon clicking the checkbox.
- Users are not required to click save and no pop up screen.
- User still can edit or add information

PREPARATION DETAILS

Storage

☐ Below 0 °C ☒ Refrigerate (2 - 8 °C)

☐ Protect from Light ☐ Room Temperature (< 25 °C)

Reconstitution Fluid:

Preparation Instruction:

Figure 3.2-11 Preparation Details

CDR PREPARATION

MyKad: Age: 38 Years 01 Months 01 Days Gender: Female MRN: HPSF00084282

Address: Phone And Email: Diagnosis: Known Allergies:

Height: 158 cm Weight: 56 kg BMI/BSA: 22.4 / 1.59 m² (Last Updated: 10/06/2015)

Encounter No: 0009 Admission Date: 20/05/2015 Attending Practitioner: Specialist One Current Visit Location: WAD 11 Rx No: 110000142250 Order By: Cycle Start Date: 10/06/2015


PRESCRIPTION

Outsource CDR Cycle History Worksheet Label Prepare

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	Outsource	Prev Disp Qty	Remarks	Status
Cisplatin 50mg Inj	159 mg	159 ml	100 mg/m ² , OD (once daily), Day: 1	4 vial	0 of 1 dose(s) supplied	4 vial	4 vial	<input checked="" type="checkbox"/> Details	<input type="checkbox"/> Details	0 vial	Remarks	VERIFIED
Sodium Chloride 0.9% 500mL IV soln	900 ml	900 ml	Schedule	2 bott		2 bott	2 bott			0 bott		

Figure 3.2-12 Generate Worksheet

STEP 11

Click on the  **Worksheet** button to view and print record as shown in Figure 3.2-14

CDR WORKSHEET											
MINISTRY OF HEALTH											
Hospital Full Based											
Date of preparation : 08/11/2014						Worksheet Id: 14-11-0002					
Name		NX XXXX XXX				Rx. No.		WAD 50000053941			
MRN		HPSF00052630				Order By		Dr.Nur Afikah binti Md Sa'ee			
ID NO		560726016155				Current Visit Location		WAD 5			
No	ROA	Preparation Name	Drug/Diluent Name	Material Used						Storage	Instruction
				Total Dose	Drug / Diluent Vol	No of Dose	Allocated Qty	Batch No	Expiry Date		
1	IVSB	Calcium Folate (Leucovorin calcium)	Leucovorin Calcium 50mg/5ml Inj	278 mg	27.8 ml	2 dose(s) to supply	12 vial	883YY022	30/04/2015	Protect from Light, Room Temperature (< 25 °C)	
			Sodium Chloride 0.9% 500mL IV soln		500 ml		2 vial	DMHPSF14	31/03/2015		
2	INF	Fluorouracil	Fluorouracil 1g/20ml Inj	556 mg	11.12 ml	2 dose(s) to supply	2 vial	A032695AA	01/07/2015	Refrigerate (2 - 8 °C), Protect from Light, Room Temperature (< 25 °C)	
			Sodium Chloride 0.9% 500mL IV soln		500 ml		2 vial	DMHPSF14	31/03/2015		
3	INF	Carboplatin	Carboplatin 450mg/45ml Inj	333.6 mg	33.36 ml	1 dose(s) to supply	1 vial	A091686AA	01/05/2015	Refrigerate (2 - 8 °C), Protect from Light	
			Sodium Chloride 0.9% 500mL IV soln		500 ml		1 vial	DMHPSF14	31/03/2015		
Worksheet generated by		Worksheet & label checked by		Prepared by		Final Product Checked by					
Lye Pow Sim											
Date: 24/08/2016		Date:		Date:		Date:					

Figure 3.2-13 CDR Worksheet

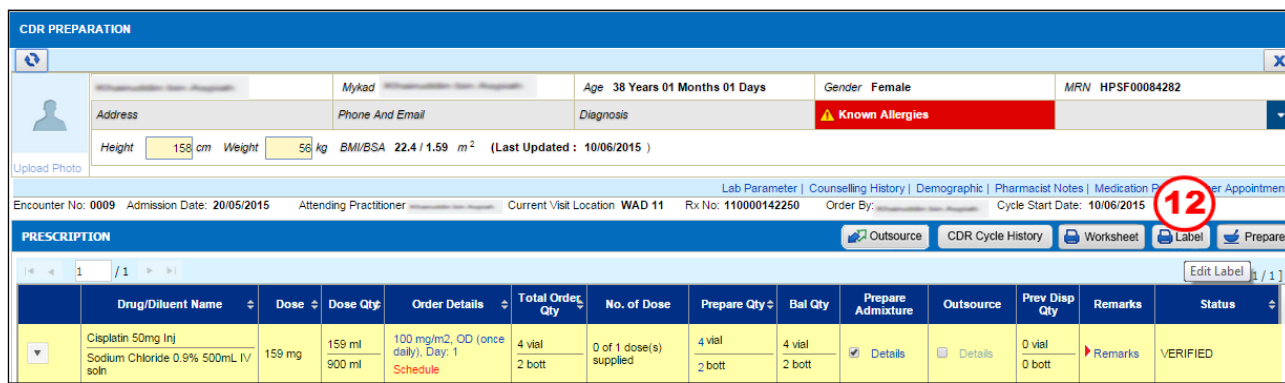
Note

- Click on the **Details** hyperlink and the Preparation Details window will display Prepare Admixture Details as shown in Figure 3.2-12.
- Click on the **Remarks** hyperlink and Pharmacist Remarks will be displayed as shown in Figure 3.2-13.

PHARMACIST REMARK	
Prescriber Remark	
Order Stage	
Pharmacist Remark	
Verification Stage	release by pharmacist.
Preparation Stage	done by preparation
Dispensing Stage	

Figure 3.2-14 Pharmacist Remark

- Enter remarks on the **Preparation Stage** field.



CDR PREPARATION

Mykad: [Name], Age: 38 Years 01 Months 01 Days, Gender: Female, MRN: HPSF00084282

Height: 158 cm, Weight: 56 kg, BMI/BSA: 22.4 / 1.59 m² (Last Updated: 10/06/2015)

Encounter No: 0009, Admission Date: 20/05/2015, Attending Practitioner: [Name], Current Visit Location: WAD 11, Rx No: 110000142250, Order By: [Name], Cycle Start Date: 10/06/2015

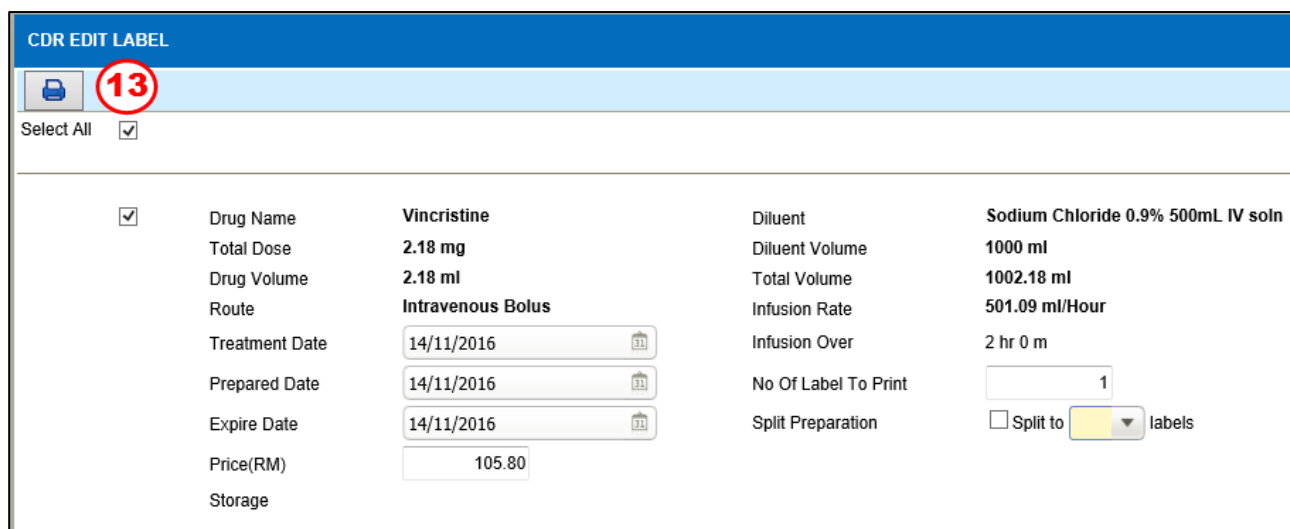
PRESCRIPTION

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	Outsource	Prev Disp Qty	Remarks	Status
Cisplatin 50mg Inj	159 mg	159 ml	100 mg/m ² , OD (once daily), Day: 1	4 vial	0 of 1 dose(s) supplied	4 vial	4 vial	<input checked="" type="checkbox"/> Details	<input type="checkbox"/> Details	0 vial	Remarks	VERIFIED
Sodium Chloride 0.9% 500mL IV soln	900 ml	900 ml	Schedule	2 bott		2 bott	2 bott			0 bott		

Figure 3.2-15 Edit Label

STEP 12

Click on the  button and CDR Edit Label screen will be displayed as shown in Figure 3.2-16




CDR EDIT LABEL

Select All ☒

<input checked="" type="checkbox"/>	Drug Name	Vincristine	Diluent	Sodium Chloride 0.9% 500mL IV soln
	Total Dose	2.18 mg	Diluent Volume	1000 ml
	Drug Volume	2.18 ml	Total Volume	1002.18 ml
	Route	Intravenous Bolus	Infusion Rate	501.09 ml/Hour
	Treatment Date	14/11/2016	Infusion Over	2 hr 0 m
	Prepared Date	14/11/2016	No Of Label To Print	1
	Expire Date	14/11/2016	Split Preparation	<input type="checkbox"/> Split to <input type="text"/> labels
	Price(RM)	105.80		
	Storage			

Figure 3.2-16 CDR Edit Label

STEP 13

Click on the  button to print drug label as shown in Figure 3.2-17




	HOSPITAL KULIM	
	CYTOTOXIC DRUG - Handle with care	
██████████		
HKLM000 ██████████	Ward 7 - Surgical	530602 ██████████
Drug name	Vincristine	ROA : IVB
Dose :	2.18 mg	Vol :2.18 ml
IV Fluid :	Sodium Chloride 0.9% 500mL IV soln	
Inf. Rate :	501.09	Inf. Over : 2 hr 0 m Vol : 1000 ml
Treatment Date	14/11/2016	Total Vol 1002.18 ml
Prepared Date :	14/11/2016	Exp Date 14/11/2016
Price :	RM105.80	Exp Time :
Storage :		

Figure 3.2-17 CDR Drug Label

Note

- Select all ☒ checkbox to print all drug labels in the selected prescription.
- Select Split Preparation: Split to 2, 3, 4 or 5 labels as shown in Figure 3.2-18.
- Click on the  button to print drug label as shown in Figure 3.2-19.

CDR EDIT LABEL




Select All ☒

<input checked="" type="checkbox"/>	Drug Name	Vincristine	Diluent	Sodium Chloride 0.9% 500mL IV soln
	Total Dose	1.09 mg	Diluent Volume	500 ml
	Drug Volume	1.09 ml	Total Volume	501.09 ml
	Route	Intravenous Bolus	Infusion Rate	501.09 ml/Hour
	Treatment Date	<input type="text" value="14/11/2016"/>	Infusion Over	1 hr 0 m
	Prepared Date	<input type="text" value="14/11/2016"/>	No Of Label To Print	<input type="text" value="1"/>
	Expire Date	<input type="text" value="14/11/2016"/>	Split Preparation	<input checked="" type="checkbox"/> Split to <input type="text" value="2"/> labels
	Price(RM)	<input type="text" value="52.90"/>		
	Storage			

<input checked="" type="checkbox"/>	Drug Name	Vincristine	Diluent	Sodium Chloride 0.9% 500mL IV soln
	Total Dose	1.09 mg	Diluent Volume	500 ml
	Drug Volume	1.09 ml	Total Volume	501.09 ml
	Route	Intravenous Bolus	Infusion Rate	501.09 ml/Hour
	Treatment Date	<input type="text" value="14/11/2016"/>	Infusion Over	1 hr 0 m
	Prepared Date	<input type="text" value="14/11/2016"/>		
	Expire Date	<input type="text" value="14/11/2016"/>		
	Price(RM)	<input type="text" value="52.90"/>		
	Storage			

Figure 3.2-18 CDR Edit Label

		HOSPITAL KULIM	
		CYTOTOXIC DRUG - Handle with care	
<div style="background-color: #cccccc; height: 15px; width: 100%;"></div>			
HKLM000	Ward 7 - Surgical	530602	
Drug name	Vincristine	ROA : IVB	
Dose :	1.09 mg	Vol :1.09 ml	
IV Fluid :	Sodium Chloride 0.9% 500mL IV soln		
Inf. Rate : 250.54	Inf. Over : 1 hr 0 m	Vol : 500 ml	
Treatment Date	14/11/2016	Total Vol	501.09 ml
Prepared Date :	14/11/2016	Exp Date	14/11/2016
Price :	RM52.90	Exp Time :	
Storage :			


		HOSPITAL KULIM	
		CYTOTOXIC DRUG - Handle with care	
<div style="background-color: #cccccc; height: 15px; width: 100%;"></div>			
HKLM000	Ward 7 - Surgical	5306020	
Drug name	Vincristine	ROA : IVB	
Dose :	1.09 mg	Vol :1.09 ml	
IV Fluid :	Sodium Chloride 0.9% 500mL IV soln		
Inf. Rate : 250.54	Inf. Over : 1 hr 0 m	Vol : 500 ml	
Treatment Date	14/11/2016	Total Vol	501.09 ml
Prepared Date :	14/11/2016	Exp Date	14/11/2016
Price :	RM52.90	Exp Time :	
Storage :			

Figure 3.2-19 CDR Drug Label

HOSPITAL KULIM	
TESTING	
HKLM00067194	Ward 3 -Medical (Male) 650213355698
39 mg	Oral
Daily	
Take after meal	
Take medicine as directed by pharmacist	
Do not stop this medicine abruptly.	
Prednisolone 5mg Tab	
Corticosteroid (Systemic) Plain	
Cycle Start Date: 11/11/2016	39 tablet RM5.85
Chemo Day: 1,2,3,4,5	
Controlled Medicine	11/11/2016

Figure 3.2-20 CDR Normal Drug Label Sample


	HOSPITAL KULIM	
	CYTOTOXIC DRUG - Handle with care	
TESTING		
HKLM00067194	Ward 3 -Medical	650213355698
Drug name	Vincristine	ROA : IVB
Dose :	1.09 mg	Vol :1.09 ml
IV Fluid :	Sodium Chloride 0.9% 100mL IV soln	
Inf. Rate :	400 ml/Hour	Inf. Over : 0 hr 15 m Vol : 100 ml
Treatment Date	11/11/2016	Total Vol 101.09 ml
Prepared Date :	11/11/2016	Exp Date 12/11/2016
Price :	RM69.50	Exp Time :
Storage : Refrigerate (2 - 8 C)		

Figure 3.2-21 CDR Infusion Drug Label Sample


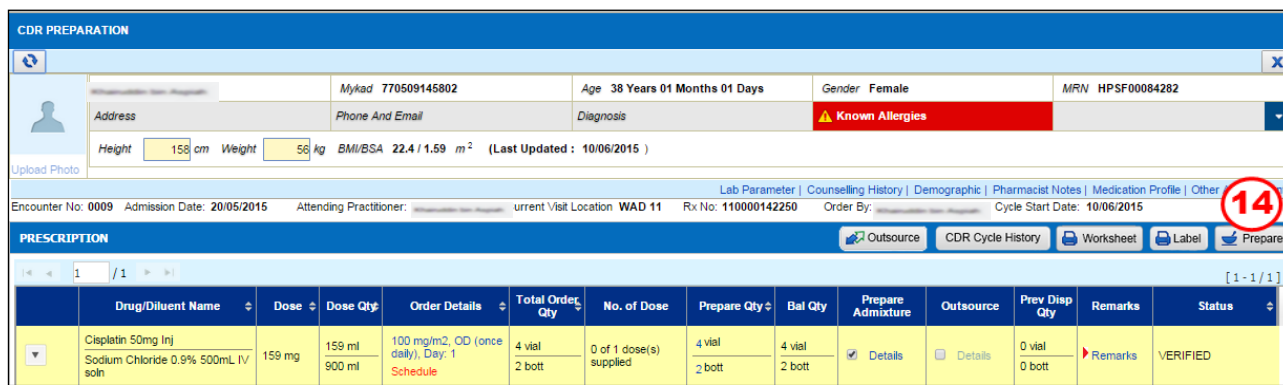
	HOSPITAL KULIM	
	CYTOTOXIC DRUG - Handle with care	
TESTING		
HKLM00067194	Ward 3 -Medical	650213355698
Drug Name	Cyclophosphamide	
Dose :	585 mg	Vol : 29.25 ml
ROA :	INF	
Treatment Date :		
Prepared Date	11/11/2016	Exp Date : 12/11/2016
Price :	RM42.50	Exp Time :
Storage :	Refrigerate (2 - 8 C)	

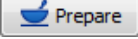
Figure 3.2-22 CDR Bolus Drug Label Sample

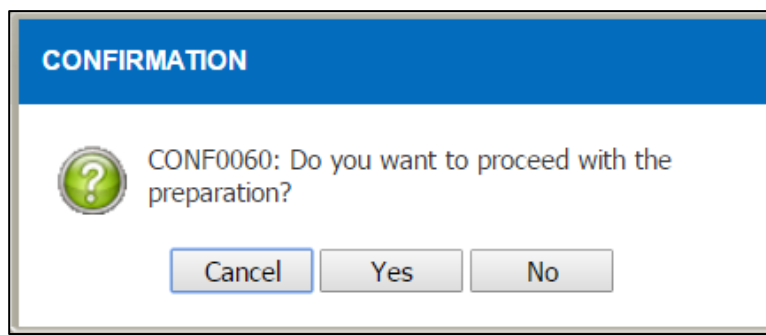


Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	Outsource	Prev Disp Qty	Remarks	Status
Cisplatin 50mg Inj	150 mg	150 ml	100 mg/m ² , OD (once daily), Day: 1	4 vial	0 of 1 dose(s) supplied	4 vial	4 vial	<input checked="" type="checkbox"/> Details	<input type="checkbox"/> Details	0 vial	Remarks	VERIFIED

Figure 3.2-23 CDR Preparation

STEP 14

Click on the  button to proceed with preparation and an alert message will be displayed as shown in Figure 3.2-21



CONFIRMATION

CONF0060: Do you want to proceed with the preparation?

Figure 3.2-24 Alert Message

Note

- Click on the button to proceed with the preparation.
- Click on the button to cancel preparation.

3.3 CDR Dispensing

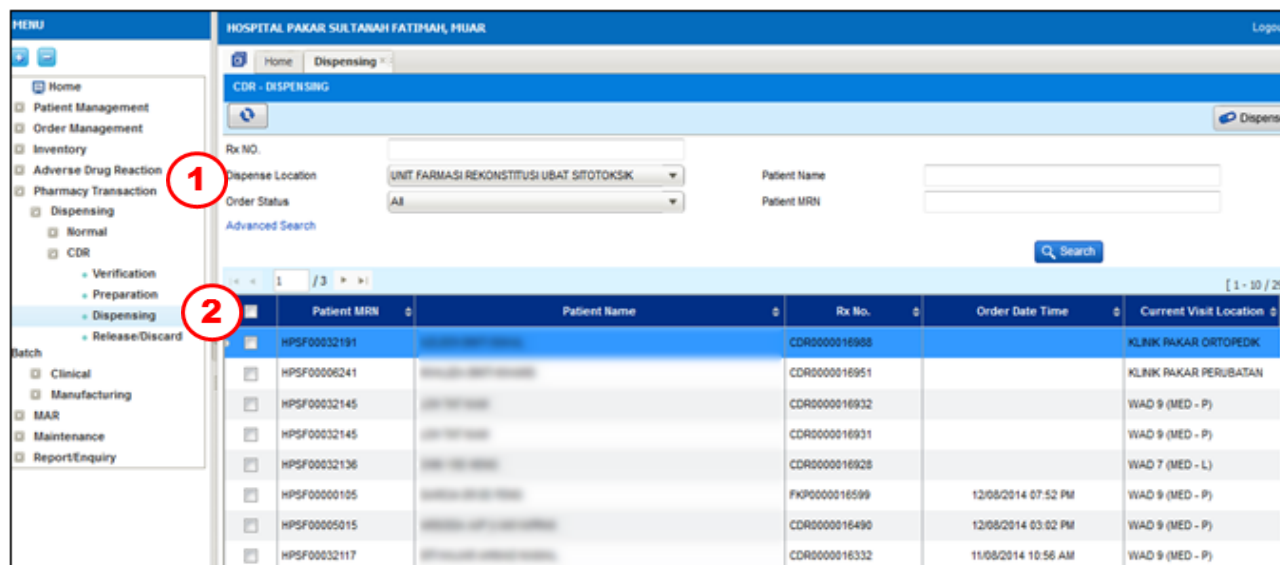


Figure 3.3-1 CDR Dispensing Listing Page

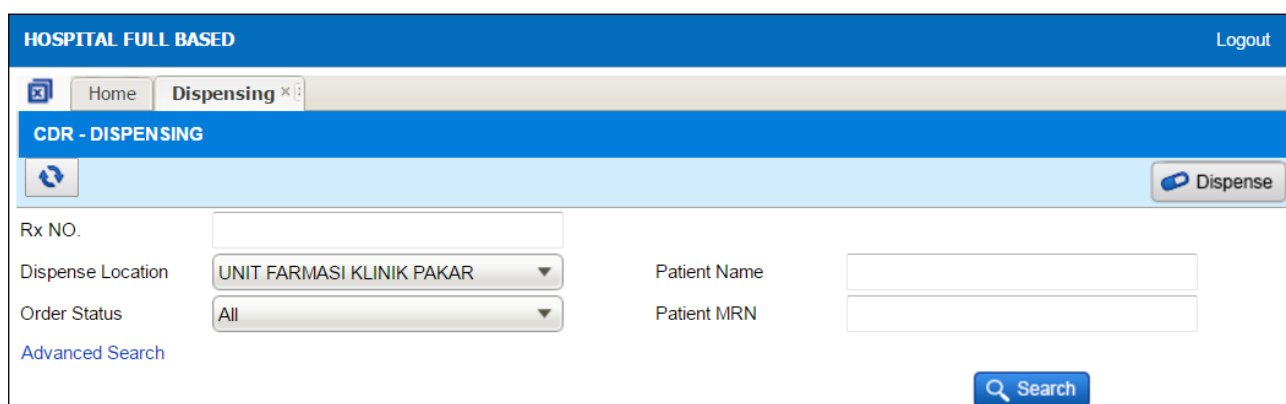


Figure 3.3-2 Advance Search

STEP 1

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

STEP 2

Click on 'Dispensing' function

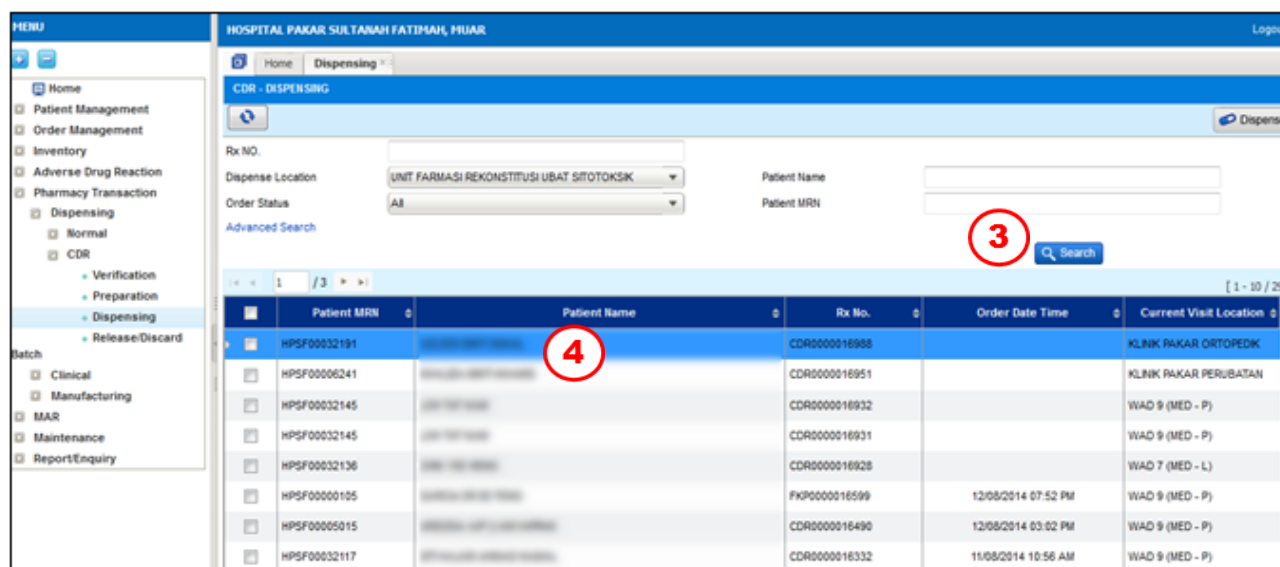
Note

Search patient records by below criteria:-

Basic Search			
No	Field	Description	Remark
a	Rx NO	Prescription number	Able to filter and search patient name by prescription number
b	Dispense Location	Dispensing location. (It will list down all active location)	Able to filter and search patient name by dispensing location
c	Order Status	Search by: <ul style="list-style-type: none"> - All - Prepared - Prepared hold 	Able to filter and search patient name by order status

d	Patient Name	Patient Name	Allow to search by full or partially entered patient name
e	Patient MRN	Patient Medical Record Number	Search option: <ul style="list-style-type: none"> Type the MRN either in full or partially: <i>Example: HPSF00001234 or "1234"</i>
Advance Search			
a	Current Visit Location Type	Search by: <ul style="list-style-type: none"> All Clinic Day Care ER Nursing Unit Pharmacy 	Able to filter and search patient name by order location type
b	Current Visit Location	Current visit Location	Able to filter and search patient name by visit location
c	Order Date From	Order confirmed date	Allow to search by start date of order created
d	Order Date To	Order confirmed date	Allow to search by selected duration of order created

Table 3.3-1



Patient MRN	Patient Name	Rx No.	Order Date Time	Current Visit Location
HPSF00032191	[Redacted]	CDR000016985		KLINIK PAKAR ORTOPEDIK
HPSF00006241	[Redacted]	CDR000016951		KLINIK PAKAR PERUBATAN
HPSF00032145	[Redacted]	CDR000016932		WAD 9 (MED - P)
HPSF00032145	[Redacted]	CDR000016931		WAD 9 (MED - P)
HPSF00032136	[Redacted]	CDR000016928		WAD 7 (MED - L)
HPSF00000105	[Redacted]	FKP0000016599	12/08/2014 07:52 PM	WAD 9 (MED - P)
HPSF000005015	[Redacted]	CDR0000016490	12/08/2014 03:02 PM	WAD 9 (MED - P)
HPSF00032117	[Redacted]	CDR0000016332	11/08/2014 10:56 AM	WAD 9 (MED - P)

Figure 3.3-3 CDR Dispensing Listing Page

STEP 3

Click on Search button  to search for patient

Note

- Search result of patient record list will display:
 - Patient MRN
 - Patient Name
 - Rx No
 - Order Date
 - Current Visit Location

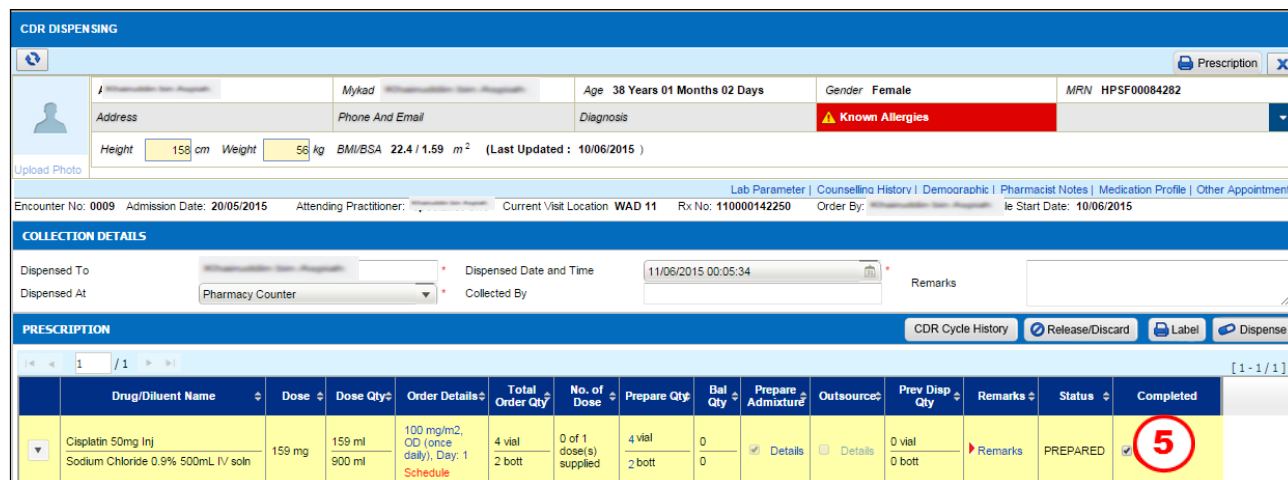
- User have the option to dispense the medication by:
 - Dispense individual order
 - Dispense multiple patient order

Dispense Individual Order:

To dispense an individual order, perform the steps below:

STEP 4

Double click on the selected patient and CDR Dispensing screen will be displayed as shown in Figure 3.3-4



CDR DISPENSING

Prescription X

Mykid: [Name], Age: 38 Years 01 Months 02 Days, Gender: Female, MRN: HPSF00084282

Address: [Address], Phone And Email: [Phone And Email], Diagnosis: [Diagnosis], Known Allergies: [Allergies]

Height: 158 cm, Weight: 56 kg, BMI/BSA: 22.4 / 1.59 m² (Last Updated: 10/06/2015)

Encounter No: 0009, Admission Date: 20/05/2015, Attending Practitioner: [Practitioner], Current Visit Location: WAD 11, Rx No: 110000142250, Order By: [Practitioner], Start Date: 10/06/2015

COLLECTION DETAILS

Dispensed To: [Name], Dispensed Date and Time: 11/06/2015 00:05:34, Remarks: [Remarks]

Dispensed At: Pharmacy Counter, Collected By: [Name]

PRESCRIPTION

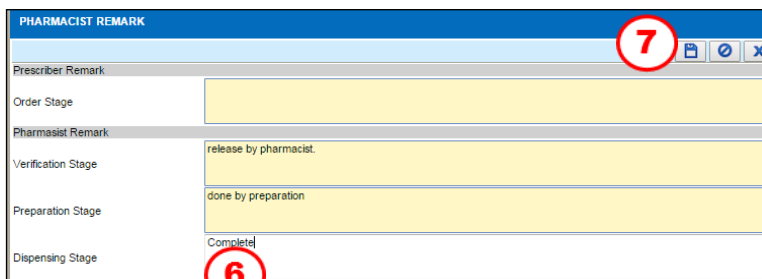
CDR Cycle History, Release/Discard, Label, Dispense

Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Bal Qty	Prepare Admixture	Outsource	Prev Disp Qty	Remarks	Status	Completed
Cisplatin 50mg Inj	159 mg	159 ml	100 mg/m ² , OD (once daily), Day: 1	4 vial	0 of 1 dose(s) supplied	4 vial	0	Details	Details	0 vial	Remarks	PREPARED	<input checked="" type="checkbox"/>
Sodium Chloride 0.9% 500mL IV soln	900 ml	900 ml	Schedule	2 bott		2 bott	0			0 bott			

Figure 3.3-4 CDR Dispensing

STEP 5

Click on the selected ☐ **Complete** checkbox



PHARMACIST REMARK

Prescriber Remark: [Text]

Order Stage: [Text]

Pharmacist Remark: [Text]

Verification Stage: release by pharmacist.

Preparation Stage: done by preparation

Dispensing Stage: Complete ☒

Figure 3.3-5 Pharmacist Remark

Note

Remark is mandatory to be filled by pharmacist.

STEP 6

Enter **Dispensing Stage** remark

STEP 7

Click on the  button to save the record and alert message will be displayed as shown in Figure 3.3-7

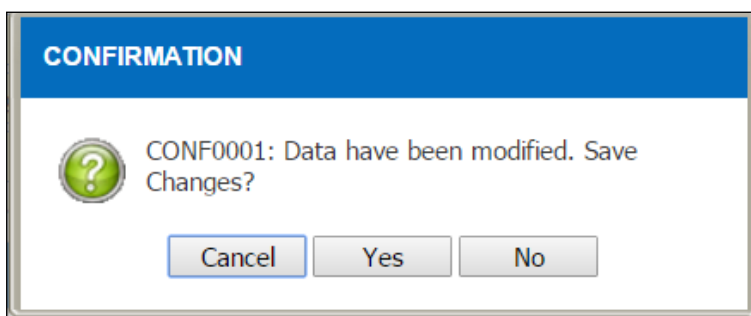
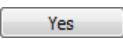
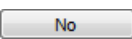
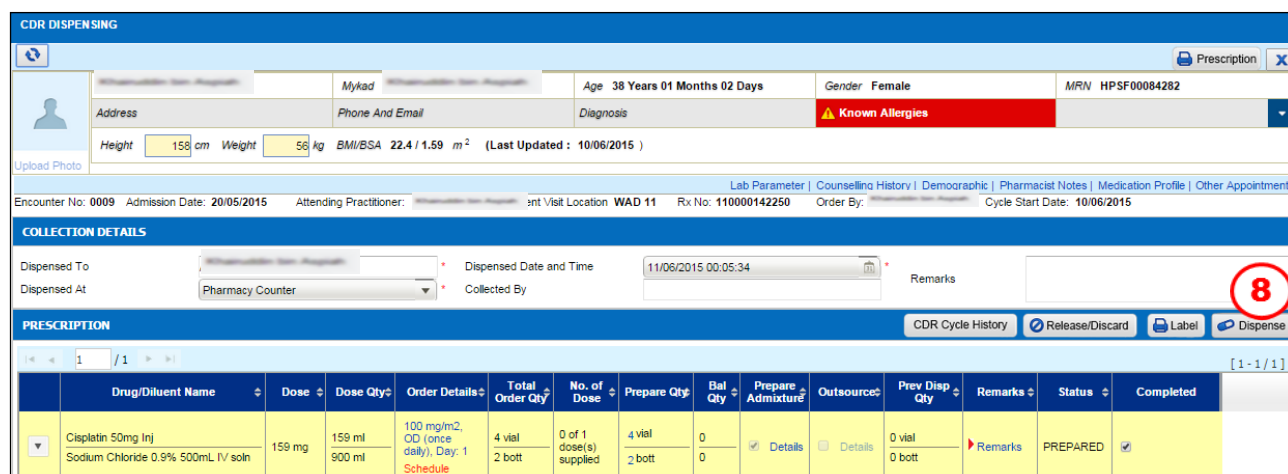


Figure 3.3-6 Alert Message

Note

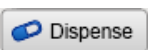
- Click on the  button to confirm the saving of record.
- Click on the  button to cancel saving of record.

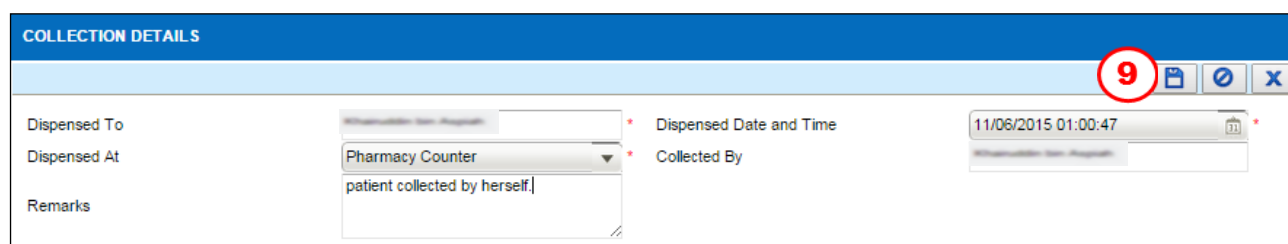


Drug/Diluent Name	Dose	Dose Qty	Order Details	Total Order Qty	No. of Dose	Prepare Qty	Balance Qty	Prepare Admixture	Outsource	Prev Disp Qty	Remarks	Status	Completed
Cisplatin 50mg Inj	159 mg	159 ml	100 mg/m2, OD (once daily), Day: 1	4 vial	0 of 1 dose(s) supplied	4 vial	0	<input checked="" type="checkbox"/> Details	<input type="checkbox"/> Details	0 vial	Remarks	PREPARED	<input checked="" type="checkbox"/>
Sodium Chloride 0.9% 500mL IV soln		900 ml		2 bott		2 bott	0			0 bott			

Figure 3.3-7 CDR Dispensing

STEP 8

Click on the  button to dispense the medication and **Collection Details** window will be displayed as shown in Figure 3.3-9



Dispensed To:

Dispensed At: Pharmacy Counter

Remarks: patient collected by herself.

Dispensed Date and Time: 11/06/2015 01:00:47

Collected By:

Figure 3.3-8 Collection Details

Note

User is allowed to change the details at the Collection Details screen.

STEP 9

Click on the  button to save the record and an alert message will be displayed as shown in Figure 3.3-10

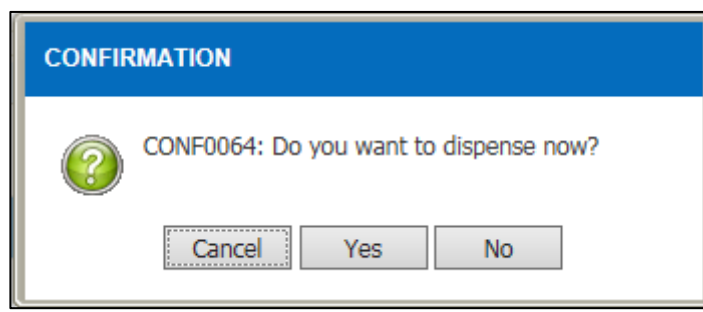


Figure 3.3-9 Alert Message

Note

- Click on the button to confirm the dispensing.
- Click on the button to cancel the dispensing.

Dispense Multiple Patient Order:

To dispense a multiple patient order, perform the steps below:

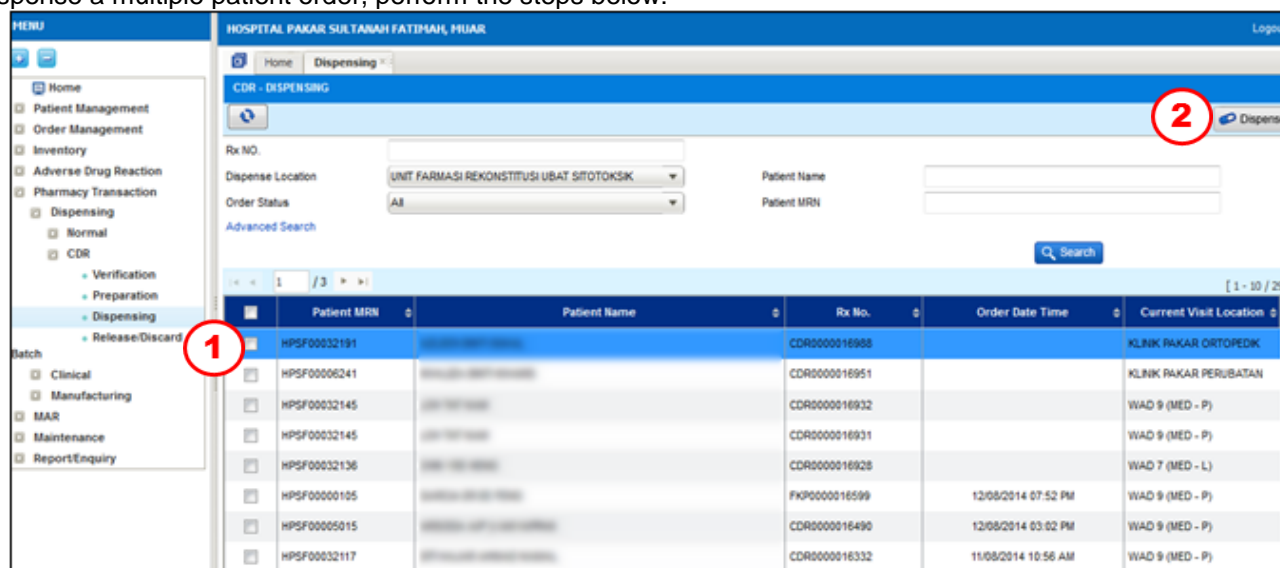


Figure 3.3-10 CDR Dispensing Listing Page

STEP 1

Click on the selected ☒ Patient MRN checkbox from the patient list

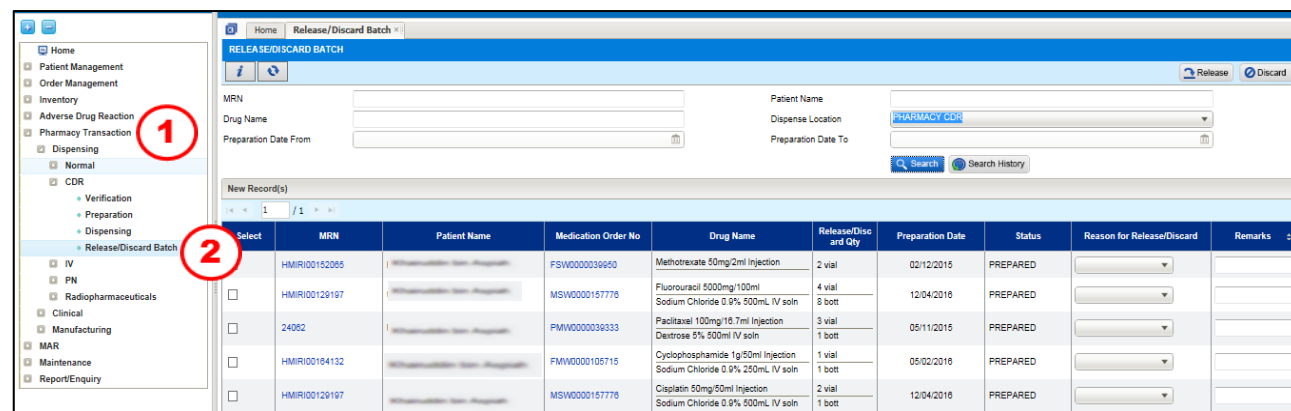
STEP 2

Click on the button to dispense the medication

Note

Allocated stocks are based on dispensing location instead of login location selected by user.

3.4 Release/Discard Batch



Select	MRN	Patient Name	Medication Order No	Drug Name	Release/Discard Qty	Preparation Date	Status	Reason for Release/Discard	Remarks
<input type="checkbox"/>	HMR/00152055	[Patient Name]	FSW0000039950	Methotrexate 50mg/2ml Injection	2 vial	02/12/2015	PREPARED		
<input type="checkbox"/>	HMR/00129197	[Patient Name]	MSW0000157776	Fluorouracil 500mg/100ml Sodium Chloride 0.9% 500mL IV soln	4 vial 8 bott	12/04/2016	PREPARED		
<input type="checkbox"/>	24082	[Patient Name]	PMW0000039333	Paclitaxel 100mg/16.7ml Injection Dextrose 5% 500ml IV soln	3 vial 1 bott	05/11/2015	PREPARED		
<input type="checkbox"/>	HMR/00194132	[Patient Name]	FMW0000105715	Cyclophosphamide 1g/50ml Injection Sodium Chloride 0.9% 250mL IV soln	1 vial 1 bott	05/02/2016	PREPARED		
<input type="checkbox"/>	HMR/00129197	[Patient Name]	MSW0000157776	Cisplatin 50mg/50ml Injection Sodium Chloride 0.9% 500mL IV soln	2 vial 1 bott	12/04/2016	PREPARED		

Figure 3.4-1 Release/Discard Batch Listing Page

STEP 1

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

STEP 2

Click on 'Release/Discard Batch' function

Note

Search patient records by below criteria:-

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	Allow to search by full or partial drug 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

STEP 3

Click on the  button to search for patient

Note

- Search results of patient record list will display:
 - MRN
 - Patient Name
 - Drug Name
 - Medication Order No
 - Preparation Date
 - Prepared Qty
 - Status
 - Reason for Discard
- Click on the **MRN** hyperlink to view Medication Profile for the selected patient.

MEDICATION PROFILE

Administration Dispensing X

Drug Name Visit Type

Prescription Date From Prescription Date To

Prescription Status Location

Order Type

Current Medication

Encounter No

Previous Medication

Encounter No

Rx No.	Drug Name	Dose	Route	Frequency	Status	Visit Type	Visit Date	Duration	Prescribed Qty	Start Date	End Date	En
WAD 90000000509	Warfarin Sodium 1 mg Tablet	1 mg	Oral	OD	ORDERED	Inpatient	26/03/2014	1 Days	1	28/03/2014	29/03/2014	
WAD 90000000395	nIFEDipine 10 mg Tablet	10 mg	Oral	TDS	ORDERED	Inpatient	26/03/2014	1 Days	3	27/03/2014	28/03/2014	28
WAD 90000000392	Allopurinol 300 mg Tablet	300 mg	Oral	OD	ORDERED	Inpatient	26/03/2014	2 Days	2	27/03/2014	29/03/2014	28
WAD 90000000108	Insulin regular (Actrapid) 100 IU/mL Penfill	1 IU	Subcutaneous	OD	ORDERED	Inpatient	26/03/2014	2 Days	1	27/03/2014	29/03/2014	

Figure 3.4-2 Medication Profile

- Click on the **Medication Order No.** hyperlink to view Order Details for the selected patient.

ORDER DETAILS

Mykad Age 17 Years 8 Months 2 Days Gender Female MRN HPSF00007996

Address Phone And Email Diagnosis No known Allergies

Height cm Weight kg BMI/BSA 28.1 / 2.09 m² (Last Updated : 01/04/2014)

Rx No Order Type Order By

Order Date Order Location

Category Regimen Code Regimen Description

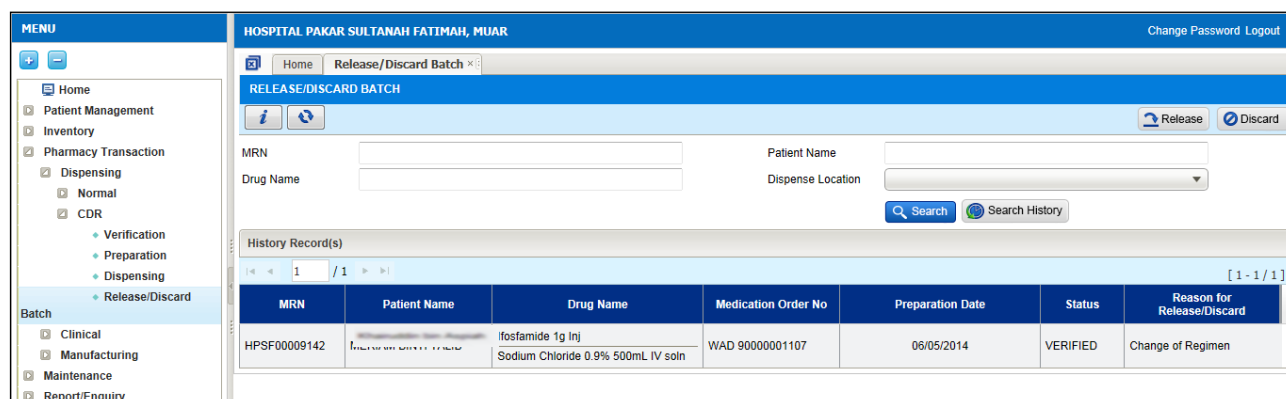
Cycle Duration No. of Cycles Cycle Start Date Cycle End Date

Remarks

Active Ingredient	Default Drug Name	Admin Route	Dosage	Total Dose	Infuse Over	Frequency	Chemo day	Diluent	Diluent Volume	Total Volume	Infusion Rate	Drug Remark
Vinblastine	vinBLASStine Sulphate 10mg Inj	Intravenous Infusion	6 mg/m2	12.54 mg	0 Hours 0 Minutes	OD	Day: 1,15	Sodium Chloride 0.9% 500mL IV soln	500 ml	506 ml	0 ml/Hour	

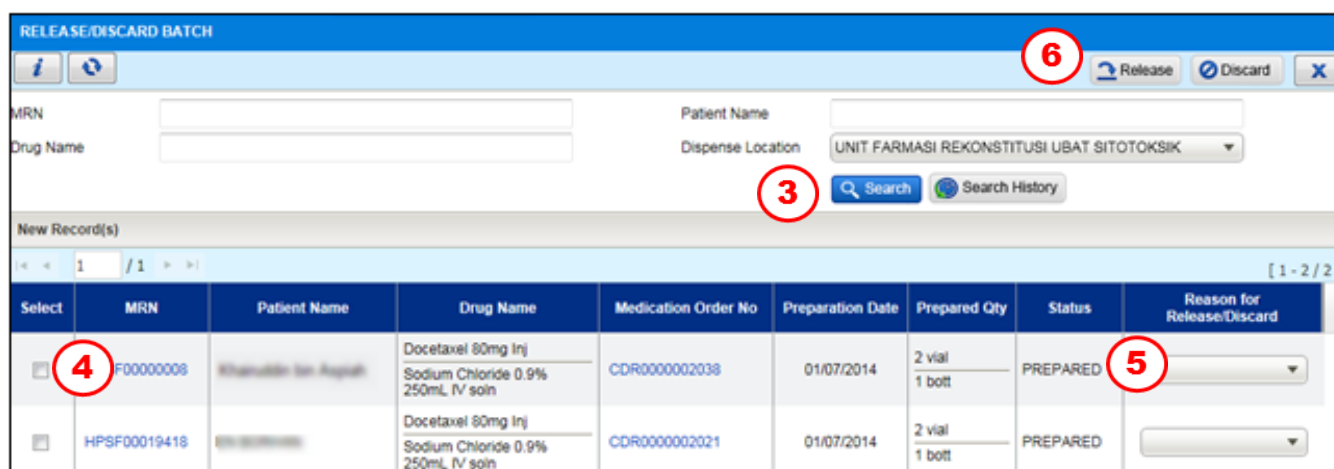
Figure 3.4-3 Order Details

- Click on the  button to view release/discard history.



MRN	Patient Name	Drug Name	Medication Order No	Preparation Date	Status	Reason for Release/Discard
HPSF00009142	[REDACTED]	Ifosfamide 1g Inj Sodium Chloride 0.9% 500mL IV soln	WAD 90000001107	06/05/2014	VERIFIED	Change of Regimen

Figure 3.4-4 Release/Discard Batch History



Select	MRN	Patient Name	Drug Name	Medication Order No	Preparation Date	Prepared Qty	Status	Reason for Release/Discard
<input checked="" type="checkbox"/>	F00000008	[REDACTED]	Docetaxel 80mg Inj Sodium Chloride 0.9% 250mL IV soln	CDR0000002038	01/07/2014	2 vial 1 bott	PREPARED	[REDACTED]
<input type="checkbox"/>	HPSF00019418	[REDACTED]	Docetaxel 80mg Inj Sodium Chloride 0.9% 250mL IV soln	CDR0000002021	01/07/2014	2 vial 1 bott	PREPARED	[REDACTED]

Figure 3.4-5 Release/Discard Batch Listing Page

STEP 4

Click on the selected drug ☒ checkbox

STEP 5

Select **Reason for Discard** from dropdown box

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

STEP 6

Click on the  button to proceed release

Click on the  button to proceed discard

4.0 Acronyms

Abbreviation	Definition
PhIS	Pharmacy Information System
CPS	Clinical Pharmacy System
MOH	Ministry Of Health
HQ	Headquarters
CDR	Cytotoxic Drug Reconstitution

5.0 Links to Clinical Modules

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