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

Full Based

User Manual
Inpatient Pharmacy

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1.5	Michelle Foo / Juridah Ayob (QA	Change to latest screenshot and functions for version 1.5.1

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1.0 Introduction

1.1 Overview of PhIS

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

- Screening & Verification
- Preparation
- Dispensing
- Fill List
- Released / Discard Batch
- Medication Return
- Re-Dispensing

1.3 Organised Sections

These are the sections within this document:

- Section 1 : Introduction
- Section 2 : Application Standard Features
- Section 3 : Inpatient Pharmacy
- Section 4 : Acronyms
- Section 5 : Links to Clinical Modules

2.0 Application Standard Features

2.1 PhIS Legend

Standard Legend			
LOGIN	Login to PhIS	Logout	Logout from PhIS
	Close All Open Tabs		Refresh Screen
	Expand Menu		Collapse Menu
	Expand Module		Collapse Module
	Add/Create New Record		Save
	Close Window		Calendar Icon
	Save Transaction		Delete Record
Export to Excel	Export Report From PDF file to Excel file	OK	OK Button
Yes	Yes Button	No	No Button
	Radio Button		Checkbox
SPUB56565698	System Automatic Generate Record No.	HPSF00088304	Automatically Display/Retrieve Box
	Reset Login Screen		Show Help
Home	Display Home Tab	Search	Search Record
	Cancel		Dropdown Box
	Search Icon	*	Mandatory Field
	Edit Record		Empty Text Box
Cancel	Cancel Button		

Inpatient Module Legend					
Update	Update Patient's Height and Weight	Print Ingredient Label	Print Ingredient Label	Fill List	Fill List
Patient sticker	Patient Sticker	Dispense	Dispense	Label	Label
Prepare	Preparation	Print Original Prescription	Print Original Prescription	Worksheet	Worksheet
Edit Label	Edit Label	Verify	Verifiy	Manage Fill List	Manage Fill List
Generate Worksheet	Generate Worksheet	Confirm	Confirm	Balance Medication Sheet	Balance Medication Sheet
Invoice	Invoice	Release/Discard	Release/Discard	Collapse All	Collapse All Fill List
	Previous/Next record	Re-Dispense	Re-Dispense	Expand All	Expand All Fill List

Note

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

3.0 Inpatient Pharmacy

Overview

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

User Group

This module is intended for pharmacist (subject to the user assigned by the facility)

Functional Diagram

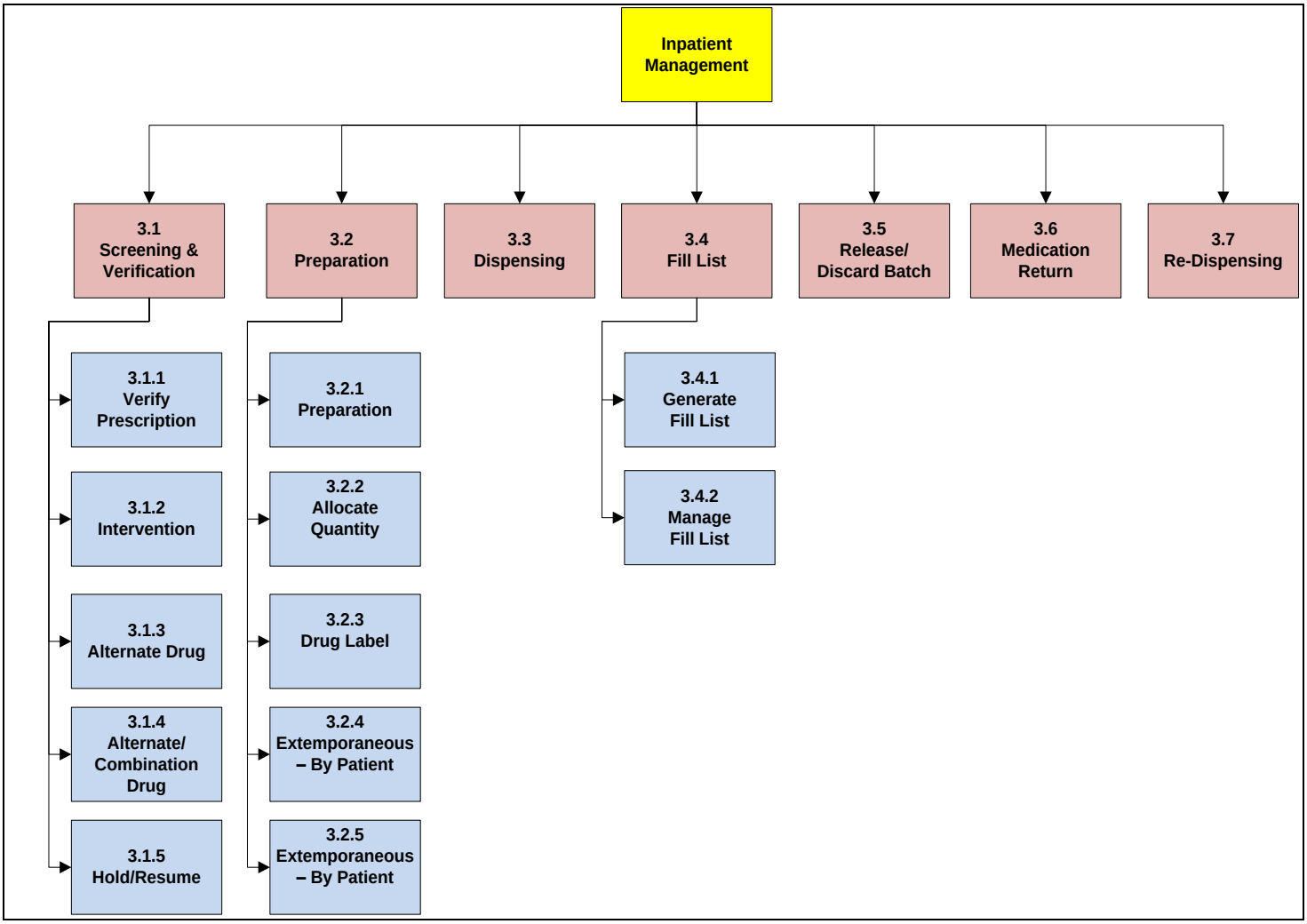


Figure 3.0-1

Functional Description

Inpatient Pharmacy comprises of seven (7) main functions:

- **Screening & Verification**

  Screening and 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 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 that may integrated with inventory system. Professionals 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 may integrated with inventory system

- **Fill List**

  User is allowed to make unit dose dispensing for a selected nursing unit's entire list of patients of medication orders as a batch process. The dispensing process like preparation and dispensing will be done from the same screen for an entire list of patient from a selected nursing unit.

- **Release / Discard Batch**

  Allow the user to release the drug reserved for the patient back into inventory. This list will a contain list of drugs with 'Uncollected', 'Prepared' or 'Hold' status. User need to release this drug in order for it to be available in the drug inventory list. The status of allocated (reserved quantity) will change to available quantity.

- **Medication Return**

  Allow the user to return any unused drugs back to inventory. This screen will allow the user to Create New Record and Confirm Online Request. 'Confirm Online Request' is used to manage medication return requests made by nurses for medication returned for all unused medication from inpatient upon the patient's discharge.

- **Re-Dispensing**

  Allow the user to re-issue medication to the patient due to spilled, broken or lost. Only Authorized users will be able to access this process.

3.1 Screening & Verification

This function is used to screen & verify prescription before preparation and dispensing stage

3.1.1 Verify Prescription

This function is used to verify patient's prescription

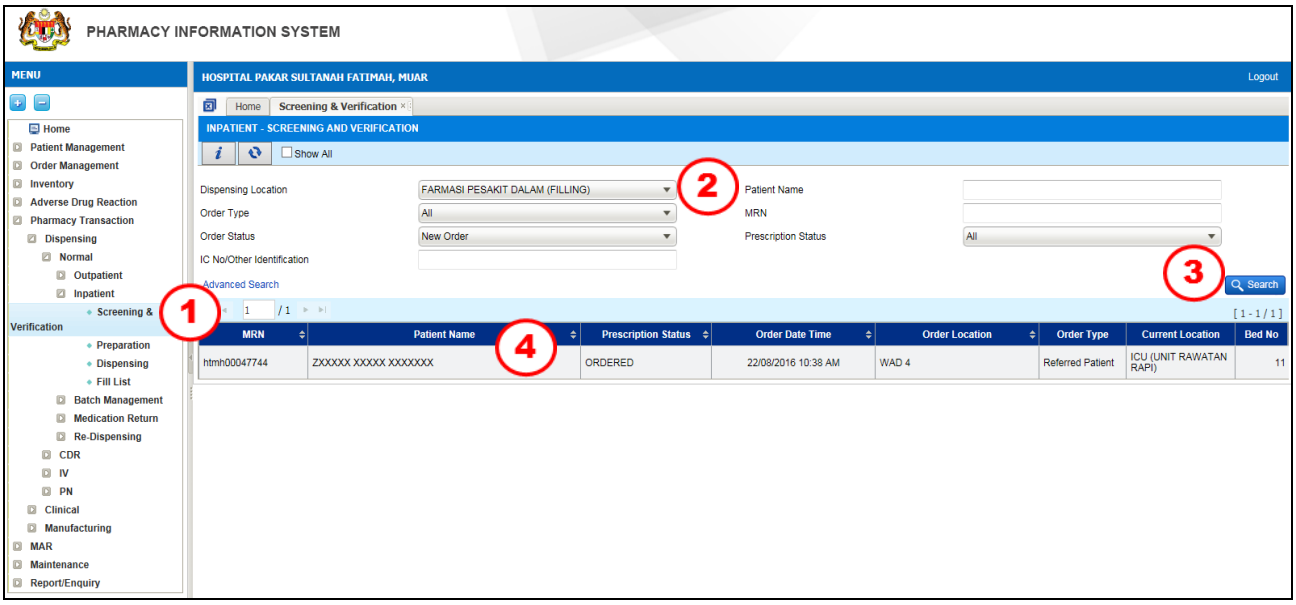


Figure 3.1.1-1 Screening & Verification Listing Page

Note

PhIS Screen menu/sub menu will be displayed according to user access right

STEP 1

Click on 'Screening & Verification 'menu

STEP 2

Select ***Dispensing Location***

STEP 3

Click on the button to search the patient:

Basic Search			
No	**Field**	**Description**	**Remark**
a	Show All		Able to view all patient record
b	Dispensing Location	Dispensing location. (It will list down all active location)	Able to filter and search patient name by dispensing location
c	Patient Name	Patient Name	Allow to search by full or partial patient's name
d	Order Type	-All -Normal -SPUB -Discharge -Referred Patient	All -Type of search from range Normal, SPUB, Discharge and Referred Patient Normal – Prescription from normal order SPUB - Prescription from SPUB order Discharge - Prescription from Discharge order Referred Patient – Prescription from referred patient

e	MRN	Patient MRN	Allow to search by patient full or partial MRN No
f	Order Status	-All -New Order -Partial Supply -Pending Authorisation	All – Type of search from range New order, Partial Supply and Pending Authorisation New Order – Prescription of new order Partial Supply – Prescription from partially dispense Pending Authorisation – Prescription contain of drug to authorise
Advance Search			
g	Order Location	Order location. (It will list down all active location)	
h	Order Location Type	-All -Clinic -Day Care -ER -Nursing Unit -Pharmacy	
i	Order Date From		Start point for range of order date
j	Order Date To		Order Date To can be NULL or must be greater than the value for Order Date From
k	Bed		Search patient by bed number

Table 3.1.1

Note

Advanced Search *can be used to narrow down the criteria. Consist of:*

a) Order Location
b) Order Location Type
c) Order Date From
d) Order Date To
e) Bed No

STEP 4

Click on existing patient record as follow.

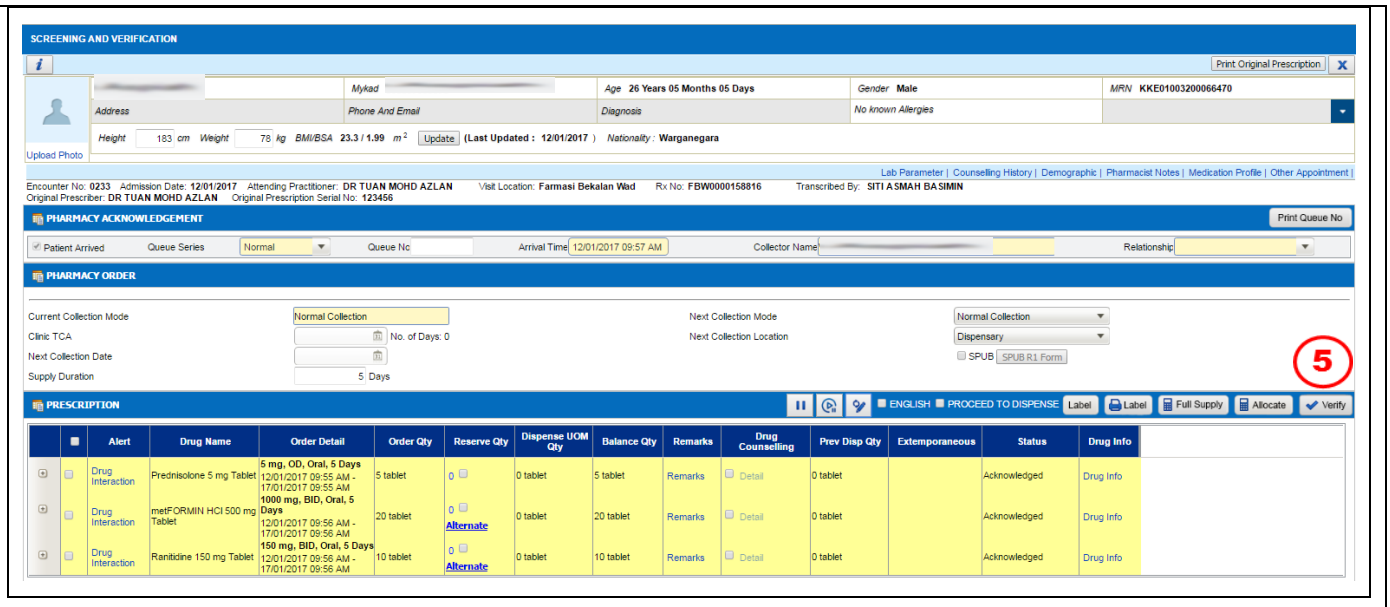


Figure 3.1.1-2 Screening & Verification

STEP 5

Click on the button to proceed verification process

Note

- *When selected patient name is clicked, the summary of patient information will be displayed in the patient banner. The patient banner will be displayed at the specific screen which is required patient information. Below is the list of patient information:*
  - *Patient Name*
  - *Patient Address*
  - *Patient IC Number*
  - *Patient Phone and Email*
  - *Patient Diagnosis*
  - *Patient Age*
  - *Patient Allergy*
  - *Patient Gender*
  - *Patient MRN*
- *Below options are provided for user to view the additional patient information. Click on the hyperlink as below:*

  a) Lab Parameter
  - *Patient's laboratory test results.*

  b) Counselling History
  - *Medication counselling history records.*

  c) Demographic
  - *Patient's demographic details.*

  d) Pharmacist Notes
  - *Pharmacy notes such as MTAC, Ward Pharmacy and etc.*

  e) Medication Profile
  - *This hyperlink will show the patient's current medication and previous medication history.*

  f) Other Appointments

- *This screen provides information if there are any other appointments recorded for the patient.*

- *<u>Current visit information</u> will be displayed as below:*
  - *a) Admission Date*
  - *b) Attending practitioner*
  - *c) Visit location*
  - *d) Room No / Bed No*
  - *e) Rx No*
- *<u>Prescription</u> from order management will be displayed as below:*
  - *a) Alert*
  - *b) Drug Name*
  - *c) Order Detail*
  - *d) Order Qty - Quantity of drug ordered by the prescriber.*
  - *e) Reserve Qty*
  - *f) Balance Qty*
  - *g) Remarks*
  - *h) Drug Counselling*
  - *i) Prev Disp Qty*
  - *j) Freshly Prepare*
  - *k) Status*
  - *l) Drug Info*
- *To skip preparation screen, tick on the Proceed to Dispense checkbox.*
- *Select ENGLISH check box to print in English language.*

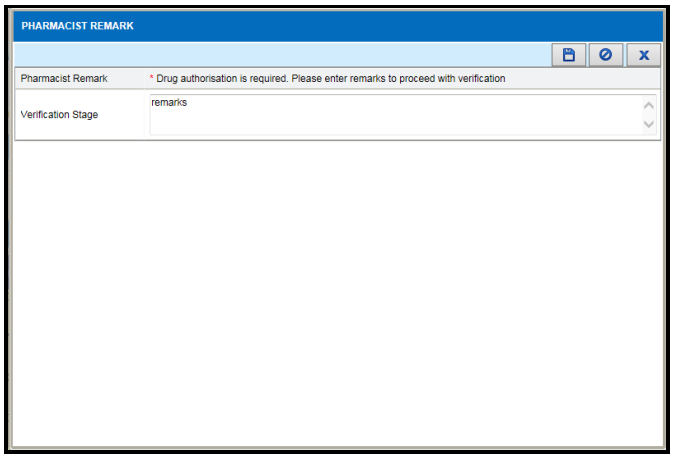


Figure 3.1.1-3 Screening & Verification

<u>Note</u>

Click on the button after insert the remarks to confirm verification and proceed to Preparation

Once the button Verify *is clicked, system will automatically calculated the quantity in* ***Reserve Qty*** *field base on quantity in Supply Duration field*

3.1.2 Intervention

This function allow user to modify drugs details frequency, duration and form. This function is available in screening verification screen and preparation screen however the suitable time to do intervention is during screening and verification screen

Figure 3.1.2-1 Screening & Verification - Intervention

Note

Repeat Step 1 to Step 5 as in verify prescription as per Figure 3.1.1-1 before perform Intervention steps.

STEP 1

Click on the ☐ checkbox as per Figure 3.1-2-1

STEP 2

Click on intervention button for Intervention as per Figure 3.1-2-1

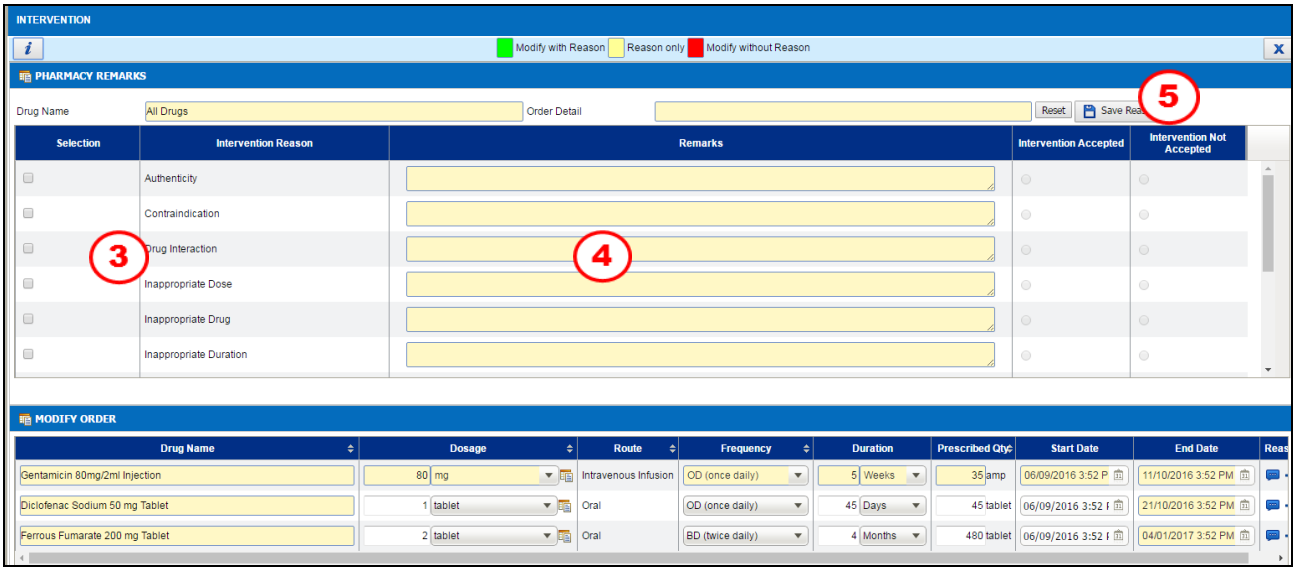


Figure 3.1.2-2 Intervention

STEP 3

Choose the ***Intervention Reason*** by tick at the checkbox of the column ***Selection***:

- Authenticity
- Contraindication
- Drug Interaction
- Inappropriate Dose
- Inappropriate Drug
- Inappropriate Duration

STEP 4

Enter remarks of intervention reason.

STEP 5

Click on the

to save the intervention reason. Once do that, the drugs information will be change from grey to yellow.

Note

- *Intervention reason will be updated to all drugs listed in the screen.*
- *Background color for the drugs change from grey to Yellow, means the records is being updated on the intervention reason but no modification been done.*

a) *There were also some color indicator highlighted for a drug row, when user do the intervention:*

i. *GREEN- Modify with Intervention Reason:- user able to save changes.*
ii. *YELLOW- Add Reason only:- user able to save changes.*
iii. *RED-Modify without Reason:- user are not able to save changes. User need to add in at least one reason to save changes.*

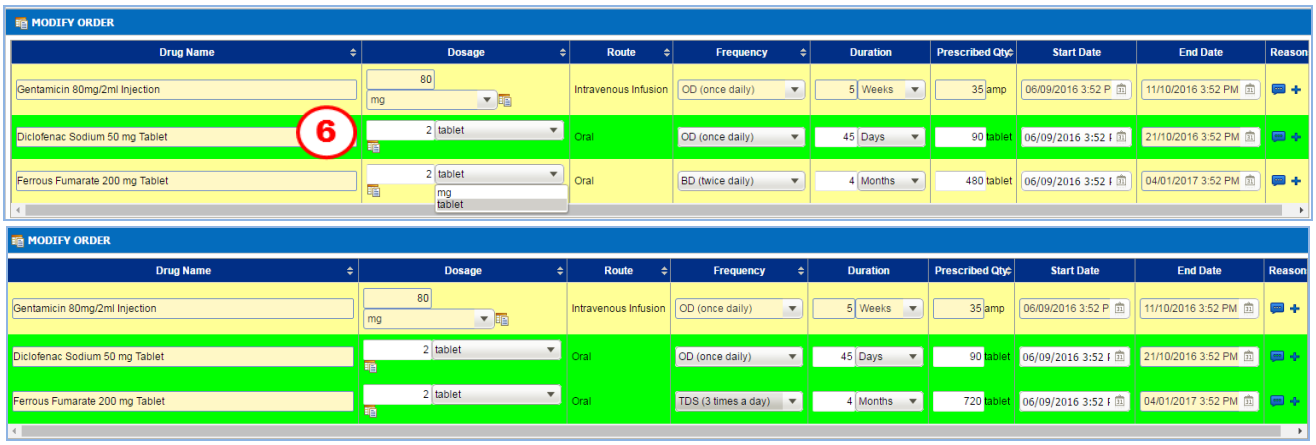


Figure 3.1.2-3 Intervention

STEP 6

Modify the order detail and background color will change to green.

Note

- *User is allowed to change only Frequency, Duration and Dose*
- *Modify Order will be displayed:*

b) Drug name.
c) Dose – dosage will be allowed to change.
d) Frequency - dosage will be a drop down and allowed to change - once changed the changed value of the dose will be stored and the order quantity will be recalculated.
e) Order Qty - dosage will be allowed to change - value of the Order Qty will be recalculated after change the frequency and duration.

f) Start Date Time.
g) Dosage form.
h) Admin Route.
i) Admin Route.
i) Duration - duration is allowed to change. The user will also have to select the UOM for duration, possible UOM will be days, month and hours.
j) Dispense Location.
k) End Date Time.
l) Remarks.

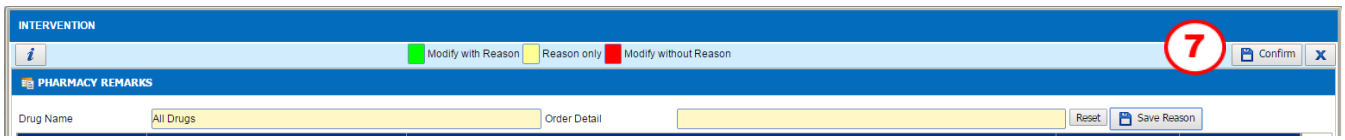


Figure 3.1.2-4 Intervention

STEP 7

Click on Confirm

button to save the modification as refer to Figure 3.1.2-4.

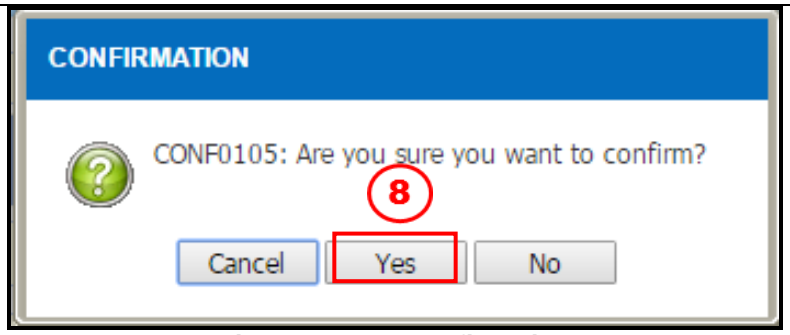


Figure 3.1.2-5 Confirmation

STEP 8

Click on Yes to confirm drug intervention.

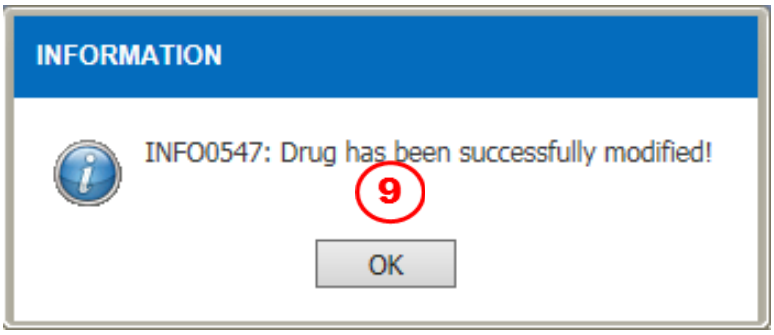


Figure 3.1.2-6 Information Alert Message

STEP 9

Click on the OK button to save record

Figure 3.1.2-7 Prescription

Note

It will then goes back to Screening & Verification screen with changes being highlighted in blue text.

3.1.3 Alternate Drug

This function allow user to select different drug with the same active ingredient and same administration route. This function is available in screening verification screen and preparation screen, however the suitable time to do intervention is during screening and verification screen

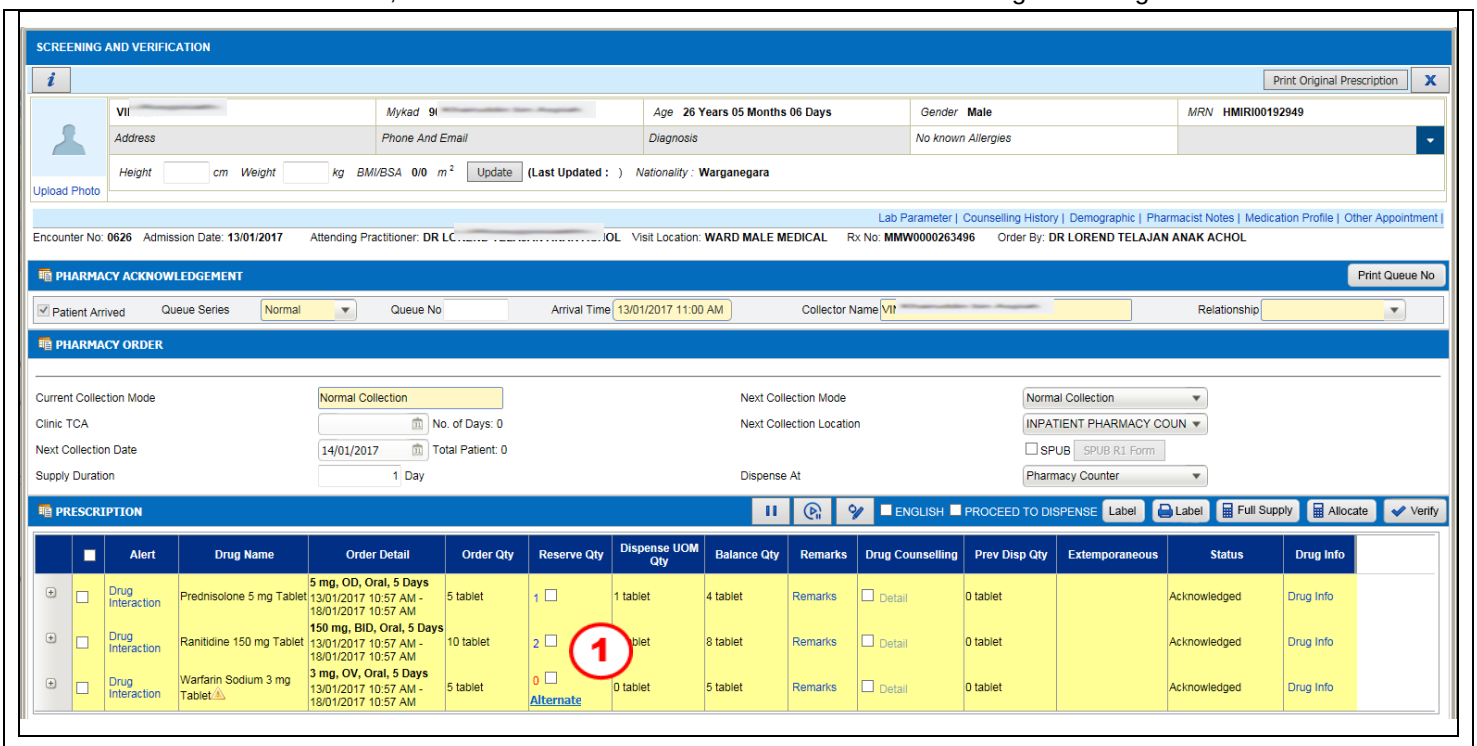


Figure 3.1.3-1 Screening & Verification – Alternate Drug

Note

*Repeat **Step 1 to Step 4** as in verify prescription as per Figure 3.1-1-1 before perform Alternate Drug steps.*

STEP 1

Click on the Alternative(C) link to do alternate as per Figure 3.1.3-1

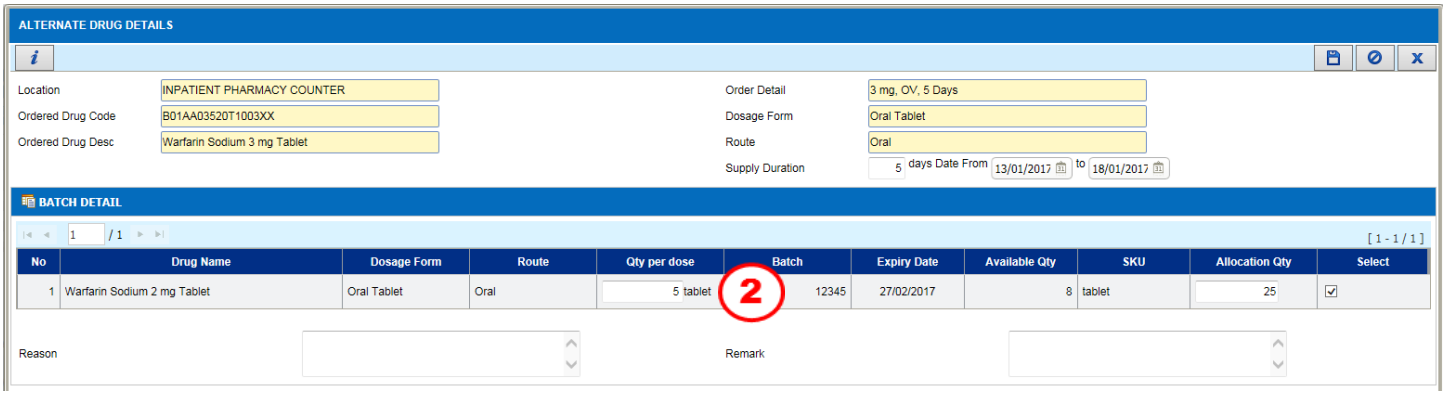


Figure 3.1.3-2 Alternate Drug Details

STEP 2

Enter the ***Qty per dose*** and save record

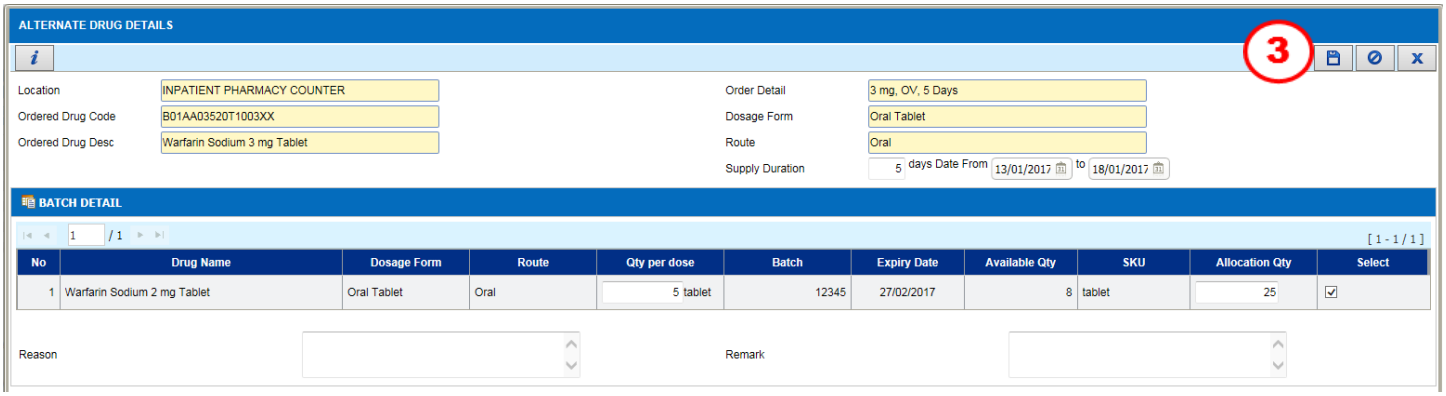


Figure 3.1.3-3 Alternate Drug Details

STEP 3

Click on the button to save record

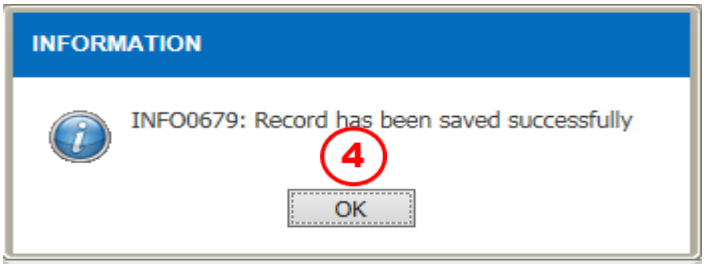


Figure 3.1.3-4 Information Alert Massage

STEP 4

Click on the OK button to save record and screen will automatically closed and back to prescription screen as Figure 3.1.3-5

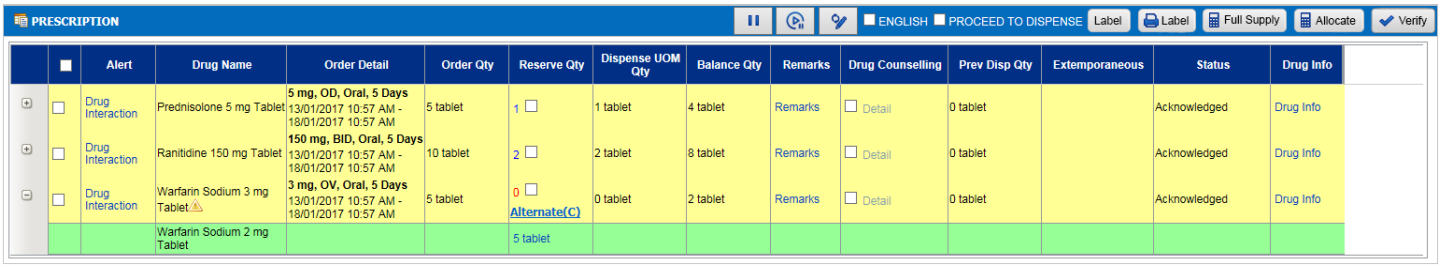


Figure 3.1.3-5 Updated Prescription

3.1.4 Alternate / Combination Drug

This function allow user to replace existing ordered drug with the combination of drug within the same active ingredient and same administration route as ordered drug. This function is available in screening verification screen and preparation screen, however the suitable time to do intervention is during screening and verification screen .

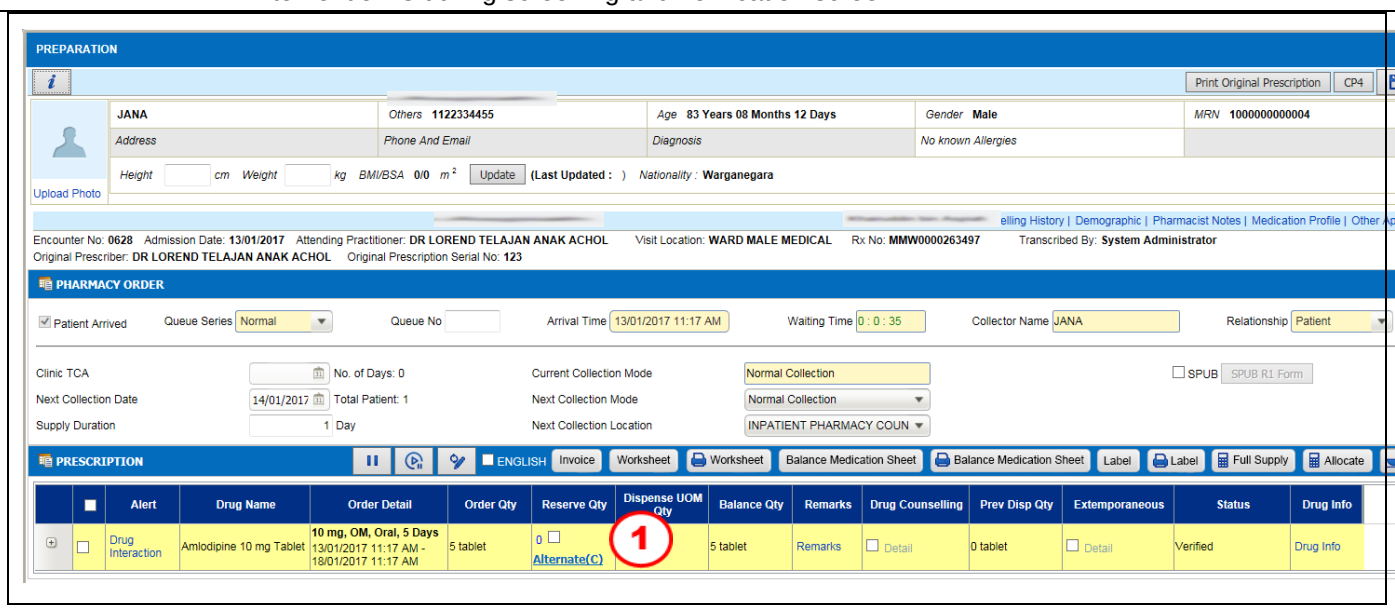


Figure 3.1.4-1 Screening & Verification

Note

Repeat Step 1 to Step 4 as in verify prescription as per Figure 3.1.1-1 before perform ***Alternate / Combination Drug*** *steps.*

STEP 1

Click on the Alternative(C) hyperlink to perform alternate / combination drug as per Figure 3.1.4-1

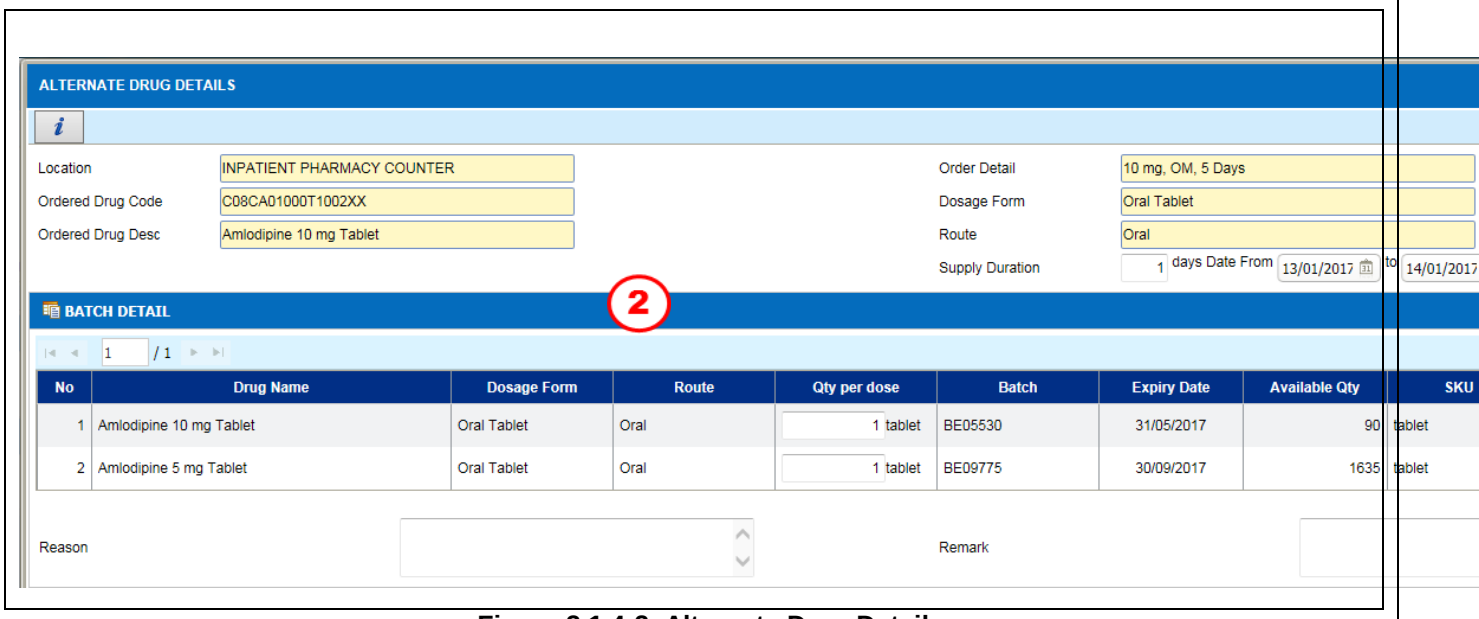


Figure 3.1.4-2 Alternate Drug Details

STEP 2

Enter the ***Qty per dose*** field for selected combination drug

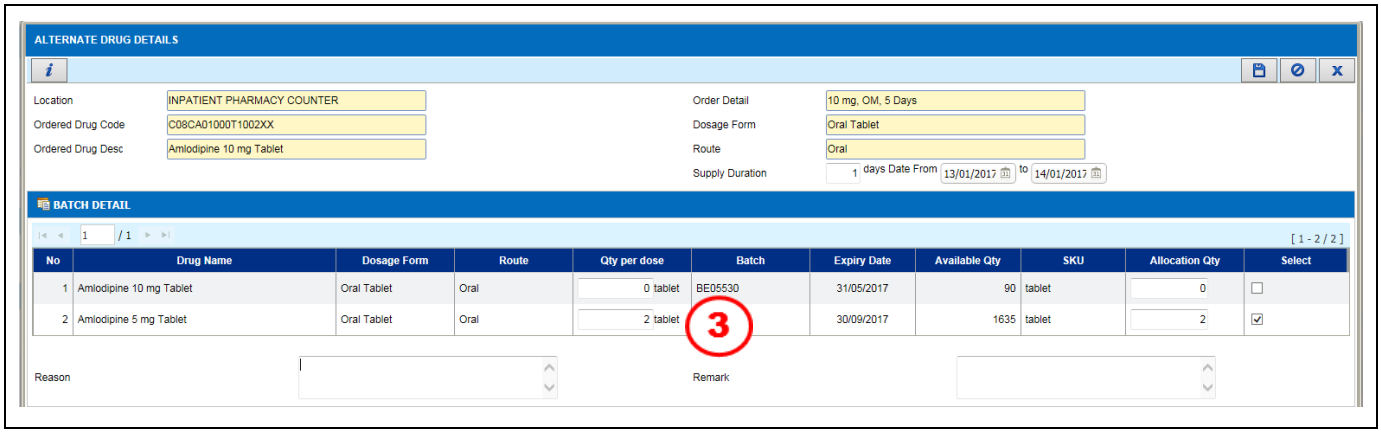


Figure 3.1.4-3 Alternate Drug Details

STEP 3

Click on the button to save record

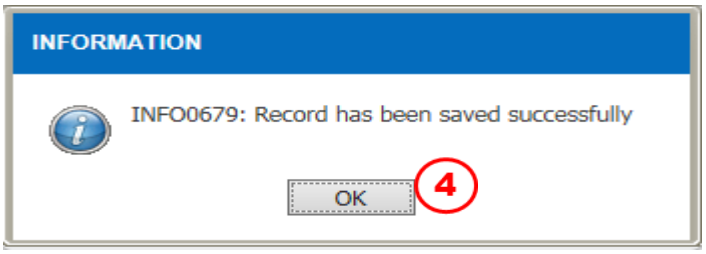


Figure 3.1.4-4 Information Alert Massage

STEP 4

Click on the OK button to save record and screen will be automatically closed and back to prescription screen as Figure 3.4-5

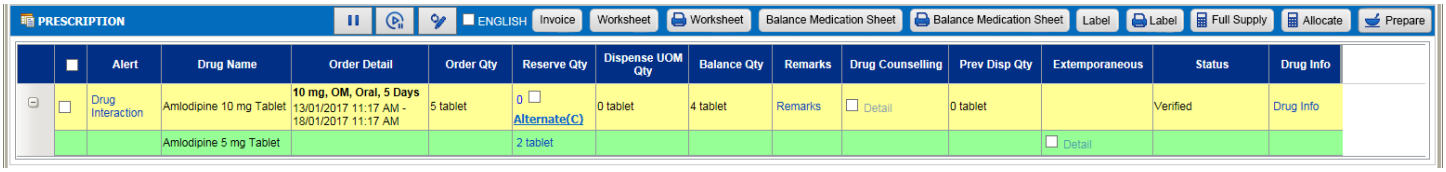


Figure 3.1.4-5 Updated Prescription

3.1.5 Hold / Resume

This function allows Pharmacist to hold medication from being prepare or dispense; may resume the medication order to continue dispensing .Hold/Resume process is available at Screening and Verification, Preparation and Dispensing

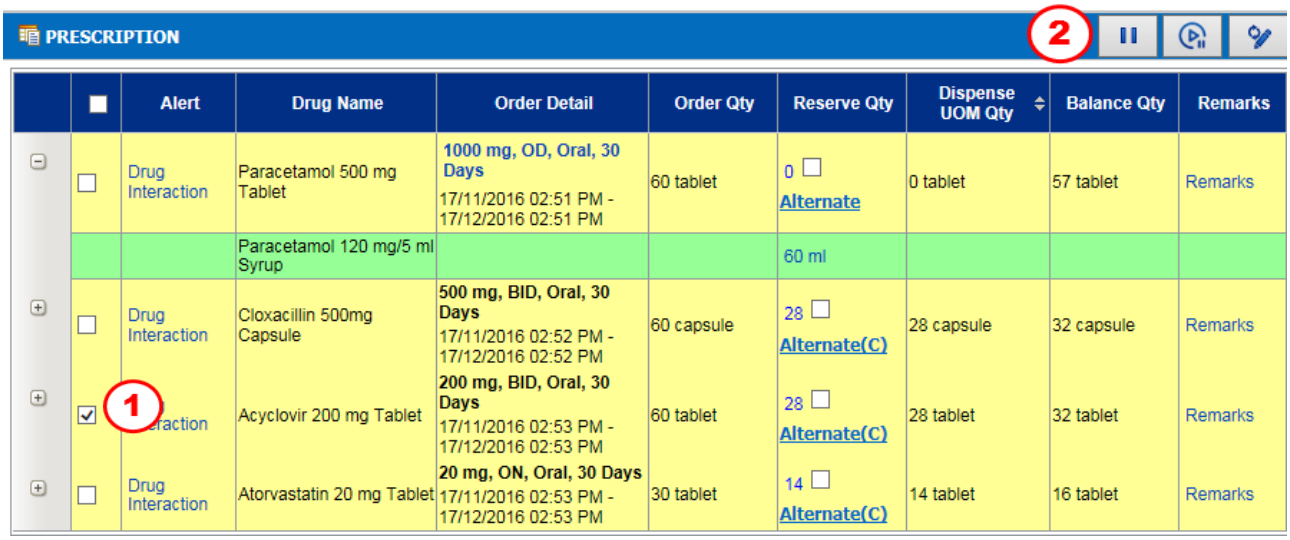


Figure 3.1.5-1 Screening & Verification – Hold

<u>Hold</u>

<u>Note</u>

*Repeat **Step 1 to Step 4** as verify prescription as per Figure 3.1.1-1 before perform Hold / Resume steps.*

STEP 1

Select one drug by clicking on the ☐ checkbox

STEP 2

Click on Hold button as per Figure 3.1.5-1

Figure 3.1.5-2 Hold Order – Pharmacist Remarks

Note

Select and enter from the ***Hold Reason*** 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

Enter the Remarks field with applicable information

STEP 4

Click on the Hold button

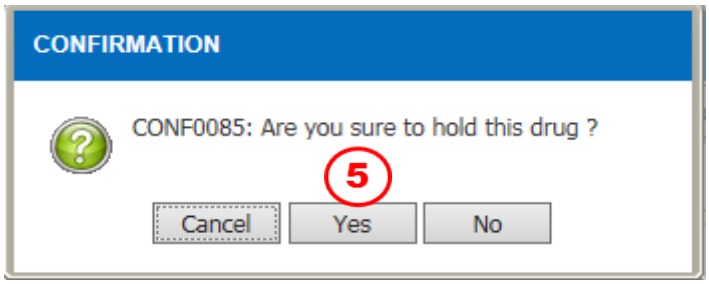


Figure 3.1.5-3 Hold Drug Alert Message

STEP 5

Click on the Yes button to Hold Drug and confirmation pop up message will automatically close

Resume

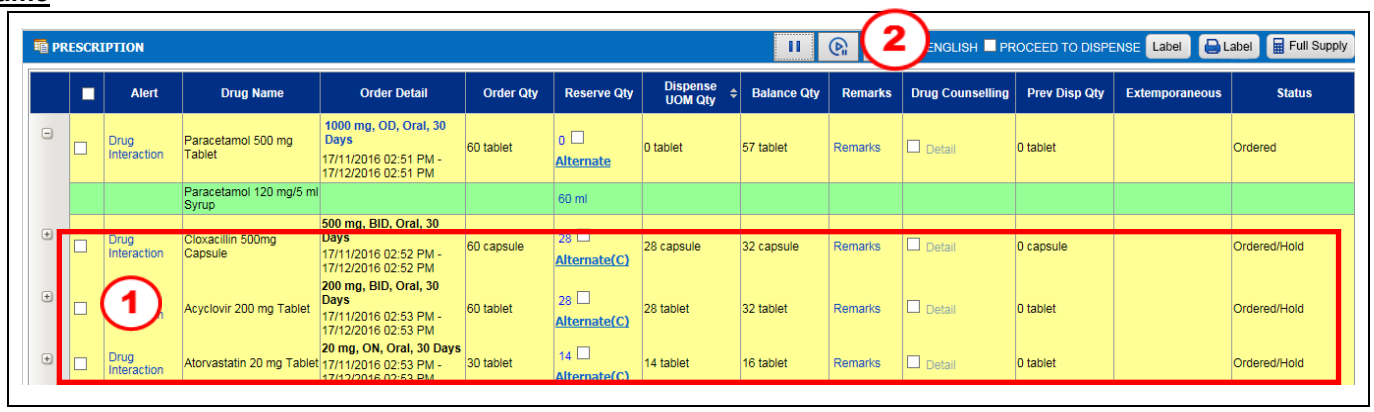


Figure 3.1.5-4 Screening & Verification – Resume

STEP 1

Click on the ☐ button as per Figure 3.1.5-4

STEP 2

Click on the Resume button and select Resume as per Figure 3.1.5-4

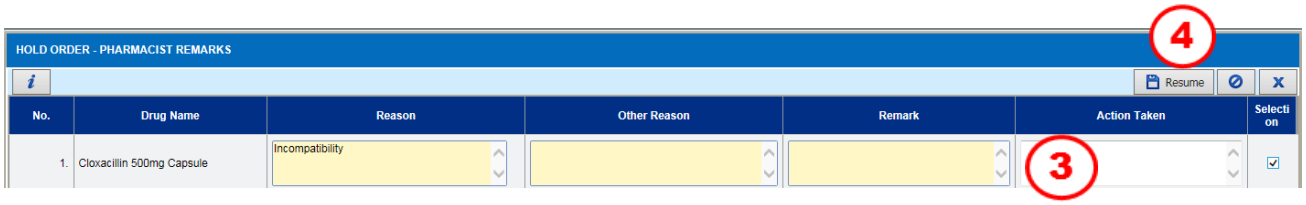


Figure 3.1.5-5 Hold Order – Pharmacist Remarks

STEP 3

Enter information in **Action Taken** field

STEP 4

Click on the Resume button

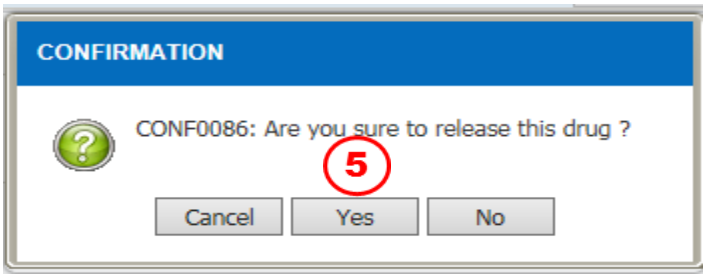


Figure 3.1.5-6 Confirmation Alert Message

STEP 5

Click on the Yes button to release drug from hold and the Hold Order screen will automatically close

3.2 Preparation

This function is used to manage patient visits for both Outpatient and Inpatient such as patient admission, discharge and transfer.

3.2.1 Prepare

This function is used to prepare drug before dispensing stage

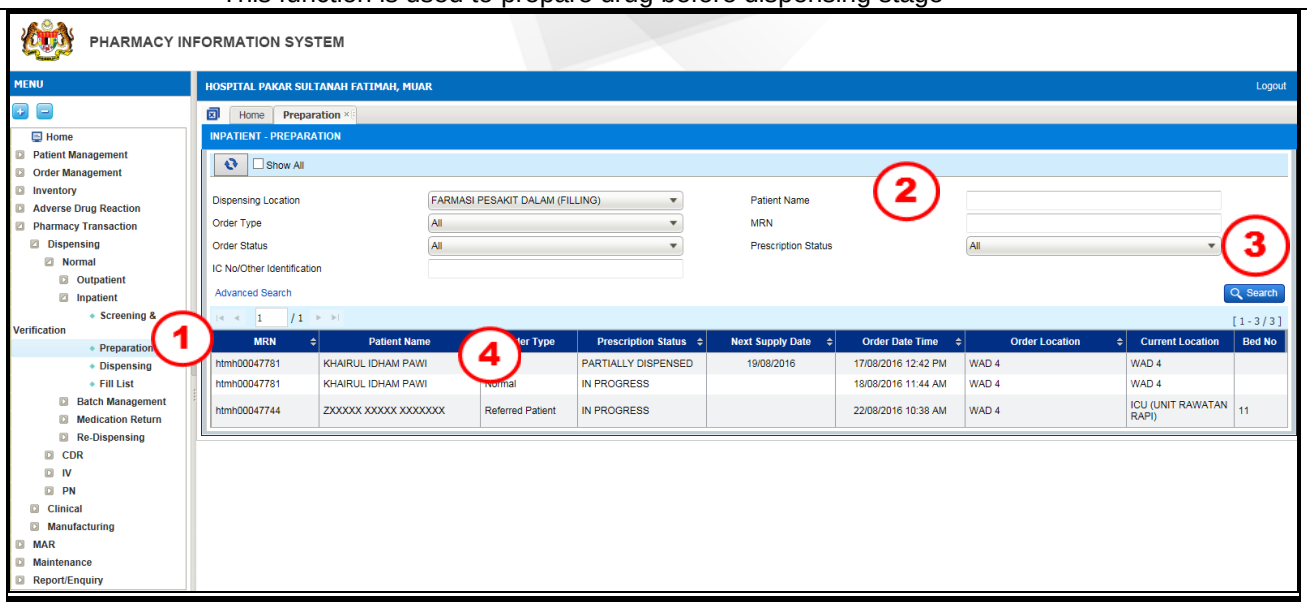


Figure 3.2.1-1 Preparation Listing Page

STEP 1

Click on 'Preparation' sub menu

STEP 2

Search existing patient record as follow:

a) Dispensing Location

b) Order Type

- All
- Normal
- SPUB
- Discharge

c) Mode of Services

- All
- Appointment Card
- Email and Take
- Fax and Take
- Normal Collection
- Others
- SMS and Take
- Telephone and Take
- UMP

d) Patient Name

e) MRN

f) Order Status

- All
- New Order

- Partial Supply

Note

Advanced Search *can be used to narrow down the criteria. It is consist of :*

a) Order Location
b) Order Location Type
c) Order Date From
d) Order Date To
e) Next Supply From
f) Next Supply To
g) Bed No

STEP 3

Click on the Search button to search the patient

STEP 4

Double click on the selected patient's name

Note

On this listing page, various Search criteria as below:

Basic Search			
No	**Field**	**Description**	**Remark**
a	Show All		Able to view all patient record
b	Dispensing Location	Dispensing location. (It will list down all active location)	Able to filter and search patient name by dispensing location
c	Patient Name	Patient Name	Allow to search by entering fully or partially search criteria of patient's name
d	Order Type	-All -Normal -SPUB -Discharge -Referred Patient	All -Type of search from range Normal, SPUB, Discharge and Referred Patient Normal – Prescription from normal order SPUB - Prescription from SPUB order Discharge - Prescription from Discharge order Referred Patient – Prescription from referred patient
e	MRN	Patient MRN	Allow to search by entering fully or partially search criteria of MRN No
f	Order Status	-All -New Order -Partial Supply -Pending Authorization	All – Type of search from range New order, Partial Supply and Pending Authorization New Order – Prescription of new order Partial Supply – Prescription from partially dispense Pending Authorization – Prescription contain of drug to authorize

Advance Search			
g	Order Location	Order location. (It will list down all active location)	
h	Order Location Type	- All - Clinic - Day Care - ER - Nursing Unit -Pharmacy	
i	Order Date From		Start point for range of order date
j	Order Date To		Order Date To can be NULL or must be greater than the value for Order Date From
k	Bed		Search patient by bed number

Table 3.2.1

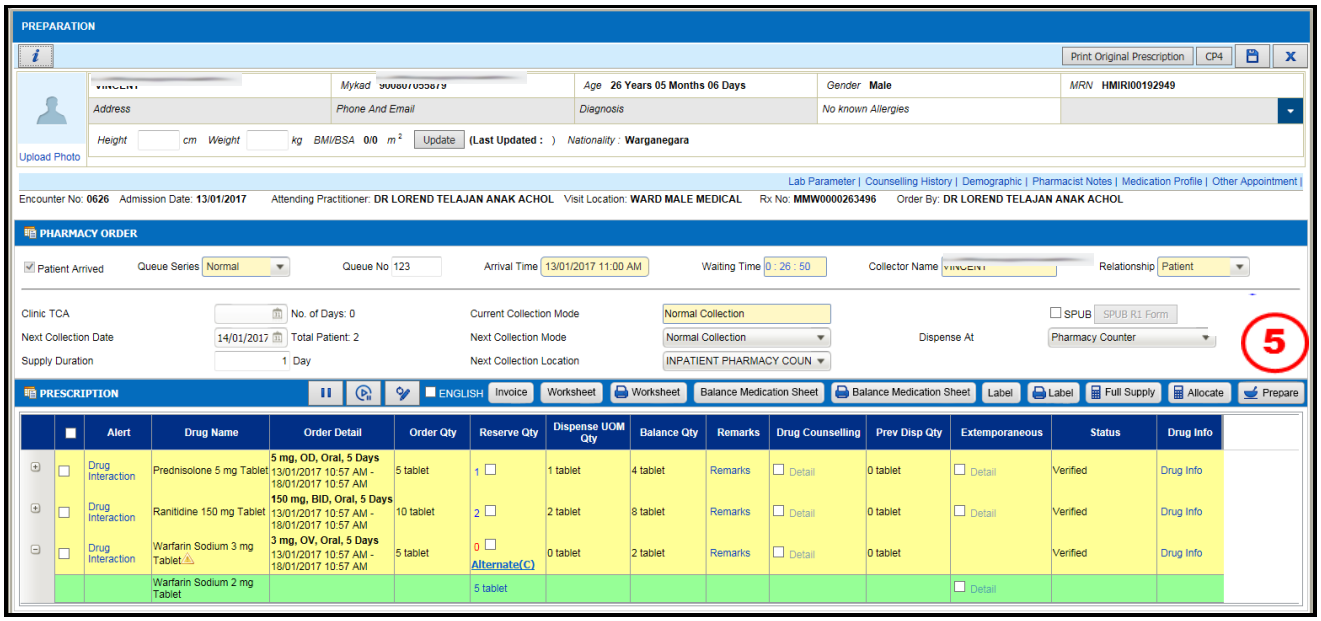


Figure 3.2.1-2 Preparation

Note

- *When selected patient name is clicked, the summary of patient information will be displayed in the patient banner. The patient banner will be displayed at the specific screen which is required patient information. Below is the list of patient information:*

  - *Patient Name*
  - *Patient Address*
  - *Patient IC Number*
  - *Patient Phone and Email*
  - *Patient Diagnosis*
  - *Patient Age*
  - *Patient Allergy*
  - *Patient Gender*
  - *Patient MRN*

- *Below options are provided to view the additional patient information. Click on the hyperlink as below:*

  a) Lab Parameter
  - *Patient's Laboratory Test Result*

  b) Counselling History
  - *Medication Counselling history records.*

  c) Demographic
  - *Patient's demographic details*

  d) Pharmacist Notes
  - *Pharmacy notes such as MTAC, Ward Pharmacy and etc.*

  g) Medication Profile
  - *This hyperlink will show the patient's current medication and previous medication history.*

  h) Other Appointments
  - *This screen provides information if there are any other appointments recorded for the patient.*

- *Current visit information will be displayed as below:*

  a) Admission Date
  b) Attending practitioner

c) *Visit location*
d) *Room No / Bed No*
e) *Rx No*

- *<u>Prescription</u> from order management will be displayed as below:*

a) *Alert*
b) *Drug Name*
c) *Order Detail*
d) *Order Qty - Quantity of drug ordered by the prescriber.*
e) *Reserve Qty*
f) *Balance Qty*
g) *Remarks*
h) *Drug Counseling*
i) *Prev Disp Qty*
j) *Freshly Prepare*
k) *Status*
l) *Drug Info*

STEP 5

Click on the

button to proceed prepare process

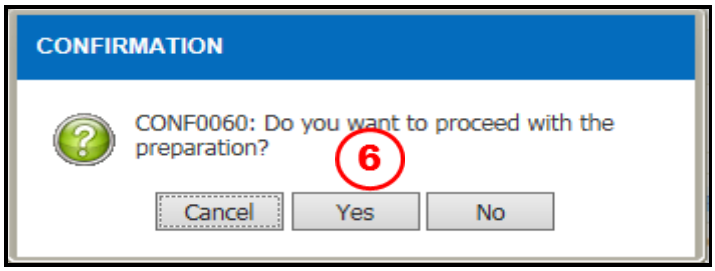
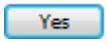


Figure 3.2.1-3 Confirmation Alert Message

STEP 6

Click on the 

button to confirm preparation

<u>Note</u>

These are the options to select and print reports as per Figure 4.1-4:

a) *Balance Medication Sheet – English*
b) *Balance Medication Sheet – Malay*
c) *Worksheet*
d) *Dispense Labels*

3.2.2 Allocate Quantity

This function is used to allocate quantity manually or change the quantity calculated by application

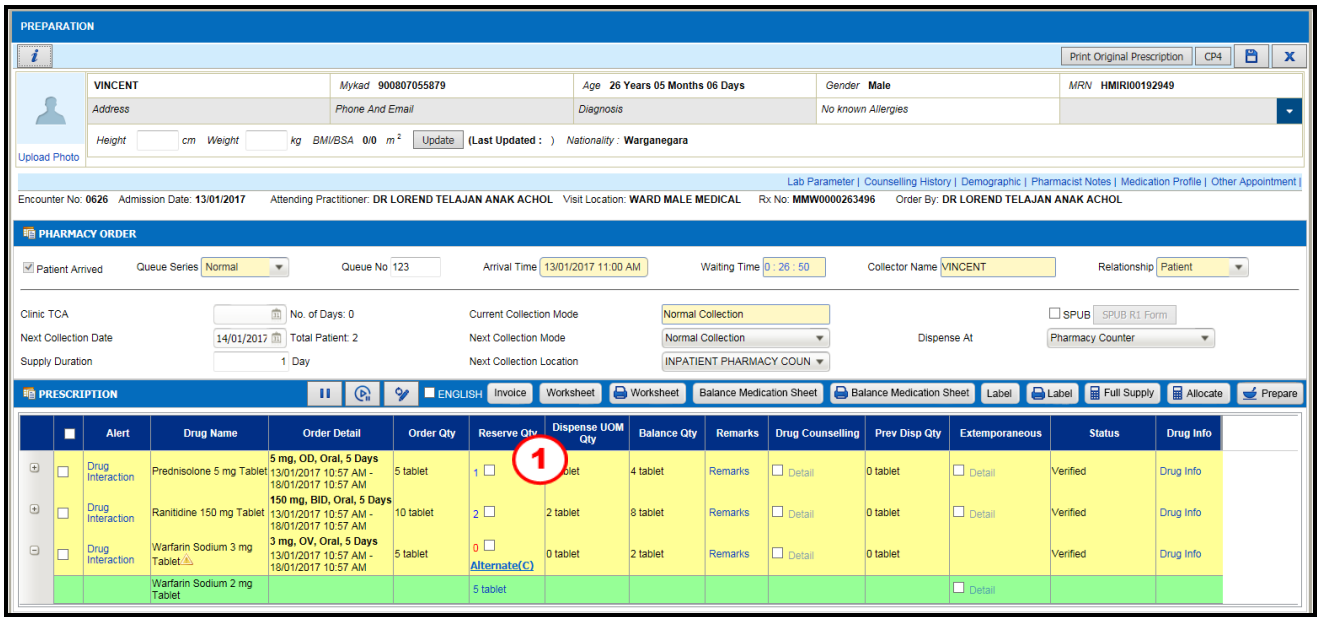


Figure 3.2.2-1 Preparation

Note

*Repeat **Step 1 – Step 4** as in prepare as per Figure 4.1.1-1 before performs Allocate Quantity steps.*

STEP 1

Click on ***Reserve Qty*** to allocate quantity

Note

User are allow to allocate 0 quantity in Reserve Qty field by clicking the ☐ checkbox.

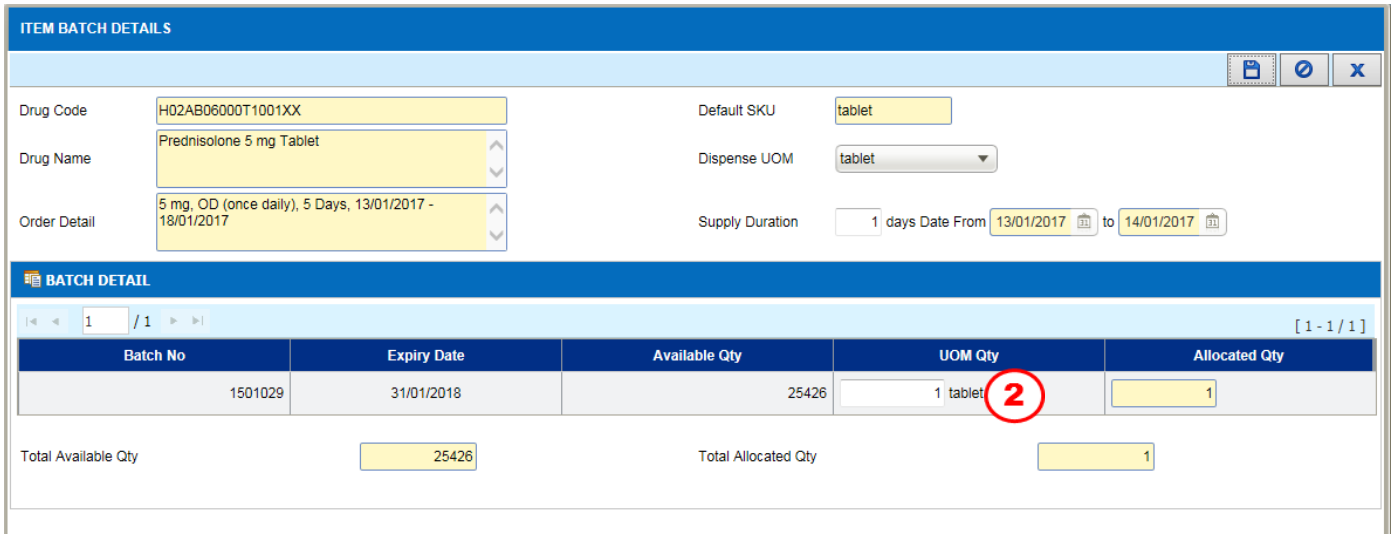


Figure 3.2.2-2 Item Batch Details

STEP 2

Enter the ***UOM Qty*** field

Note

- *User is allowed to choose and Allocate Qty from Batch Detail.*
- ***Dispense UOM*** Dispense UOM tab *will be automatically generated from the drug master.*

- *Item Batch Details will be displayed:*
  - *a)* ***Drug Code*** *- The value will be defaulted to the drug code selected from the prescription list, auto display.*
  - *b)* ***Drug Name*** *- The value will be defaulted to the drug name selected from the prescription list, auto display.*
  - *c)* ***Order Detail*** *- The value will be defaulted to the duration selected from the prescription list. Will include duration, date and time for medication, auto display.*
  - *d)* ***Default SKU*** *- The value will be defaulted to the SKU selected from the prescription list, auto display.*
  - *e)* ***Supply Duration*** *- The value will be defaulted to the duration selected from the prescription list, auto display.*
  - *f)* ***Date*** *- The value will be defaulted to the supply duration selected from the prescription list, auto display.*
- *Batch Detail - will list down all item batches which are related to the selected drug where expiry date is less than 30 days from the current date.*
  - *a)* ***Batch No*** *– Available batch no*
  - *b)* ***Expiry Date*** *– Batch expiry date*
  - *c)* ***Available Qty*** *– Quantity available for the selected batch*
  - *d)* ***UOM Qty*** *– Quantity available by UOM*
  - *e)* ***Allocate Qty*** *– Reserved quantity from the selected batch. Allocated quantity cannot be more than the available quantity and order quantity.*
  - *f)* ***Total Available Qty*** *- will show the quantity of the drug available for the selected dispensing location only, auto display.*
  - *g)* ***Total Allocated Qty*** *- will show total of allocated quantity for the selected drug, It will auto calculate the total quantity when user allocates the quantity for the selected batch no, auto display.*

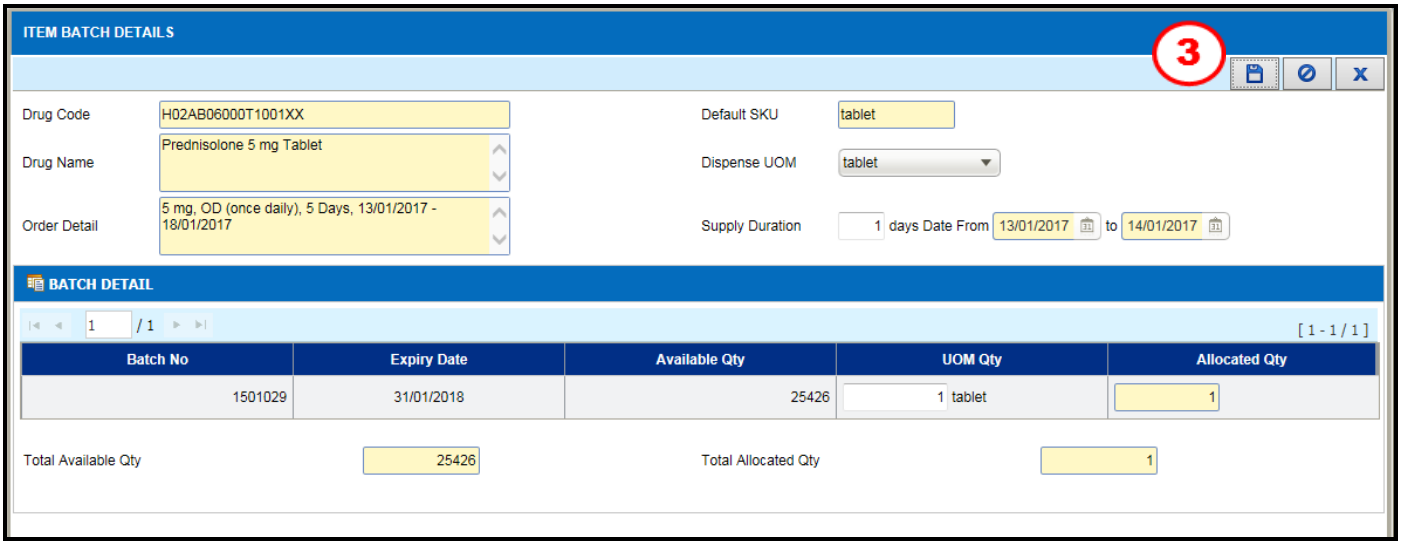


Figure 3.2.2-3 Item Batch Details

STEP 3

Click on the button to save record

STEP 4

Click on the OK button to save record and screen will automatically closed

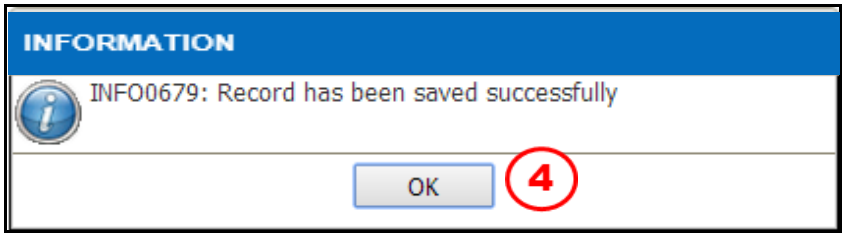


Figure 3.2.2-4 Information Alert Message

3.2.3 Drug Label

This function is used to edit and print drug label.

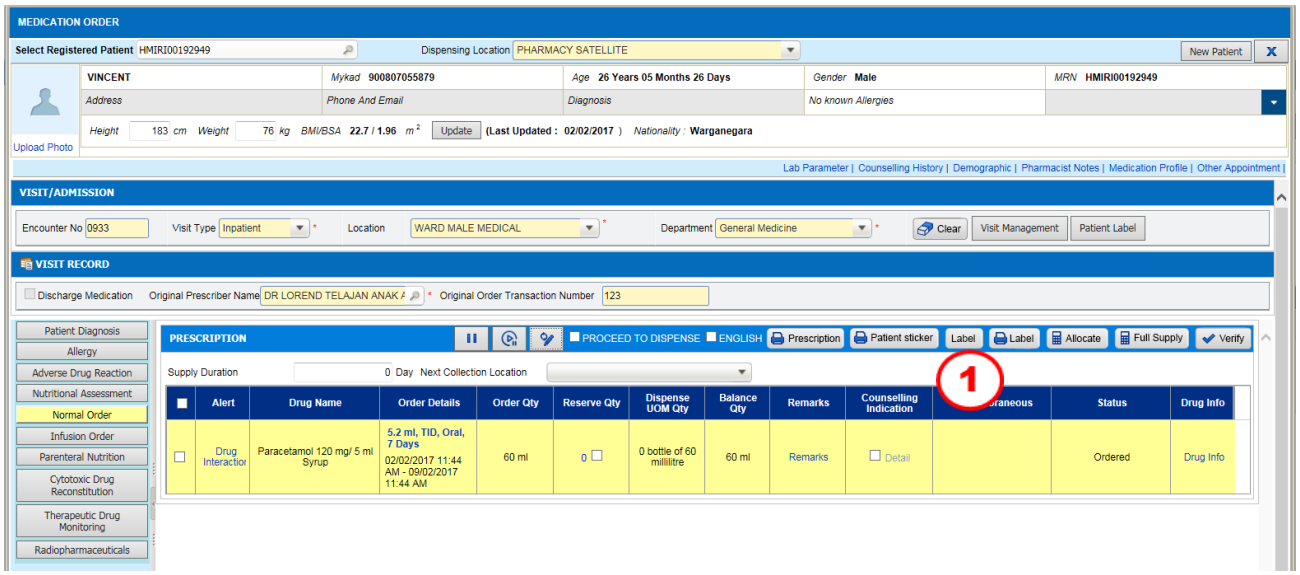


Figure 3.2.3-1 Preparation – Drug Label

Note

- *Repeat **Step 1 to Step 4** as in prepare as per Figure 4.1-1 before performs Drug Label steps. There are to option to print label*
  - a) Label *Preview then print*
  - b) Label *Print without preview (Direct printing)*
- *Pre-Requisite to print label is **Reserve Quantity** field must have value >0 (Drug Allocated)*

STEP 1

Click on the Label button to print drug label

Note

- *User able to Select All drug label, or click on the check box to select drug label to print.*
- *Click on Print in Local Language check box to print label in Malay.*
- *Enter No of Label to Print.*
- *Able to edit Administration Instruction, Indication, Cautionary, Special Instruction, Expiry Date and Price*

STEP 2

Click on the Preview button to preview ***Drug Label***

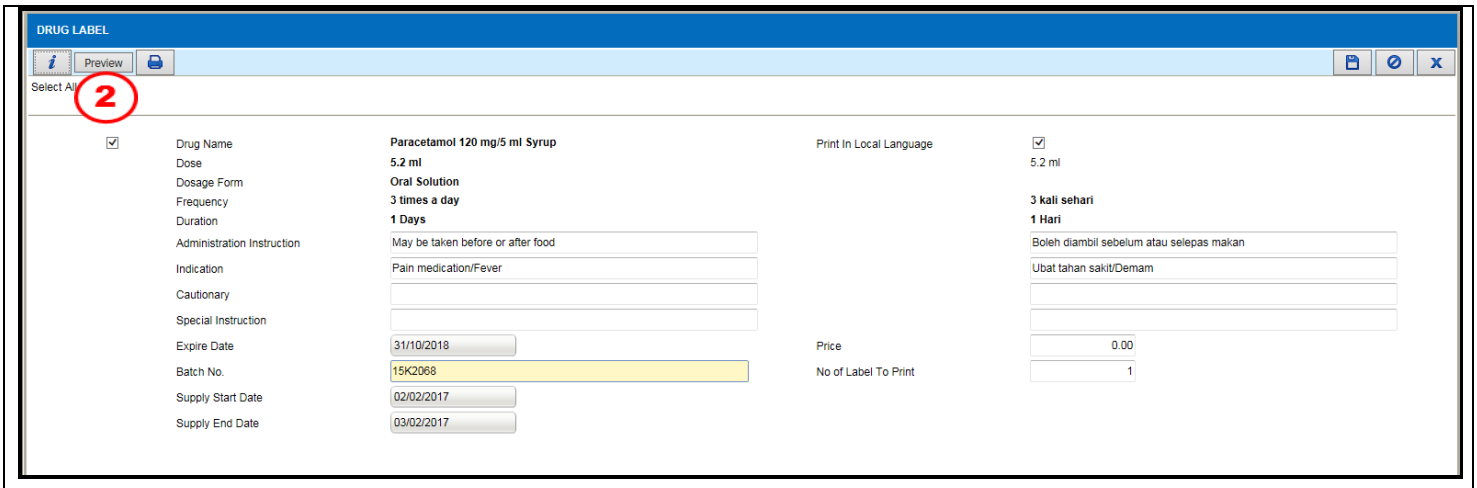


Figure 3.2.3-2 Preparation – Drug Label

STEP 3

Click on the button to print ***Drug Label***

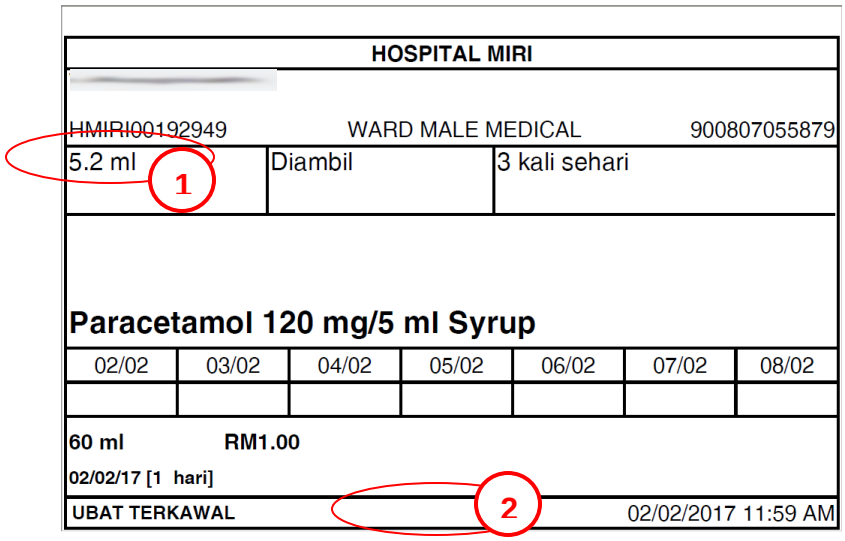


Figure 3.2.3-3 Preview Drug Label

Note

- *User able to Select All drug label, or click on the check box to select drug label to print.*
- *Click on Print in Local Language check box to print label in Malay.*
- *Enter No of Label to Print.*
- *Able to edit Administration Instruction, Indication, Cautionary, Special Instruction, Expiry Date and Price*
- *Drug dosage has been modified to 1 decimal point (1)*
- *Prescriber's name has been removed from the label (2)*

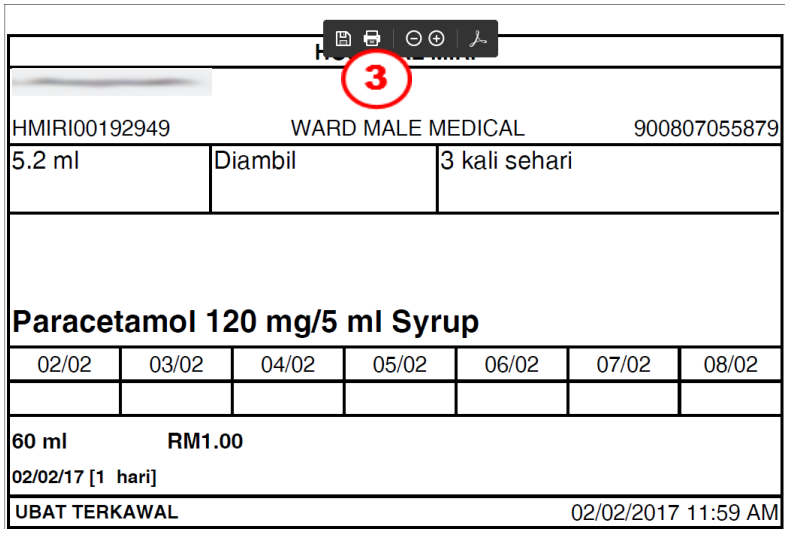


Figure 3.2.3-4 Preview Drug Label

3.2.4 Extemporaneous – By Patient

This function is used to generate and print the Ingredient label prepared for patient, based on drugs setup. Extemporaneous preparation prepared by patient at home.

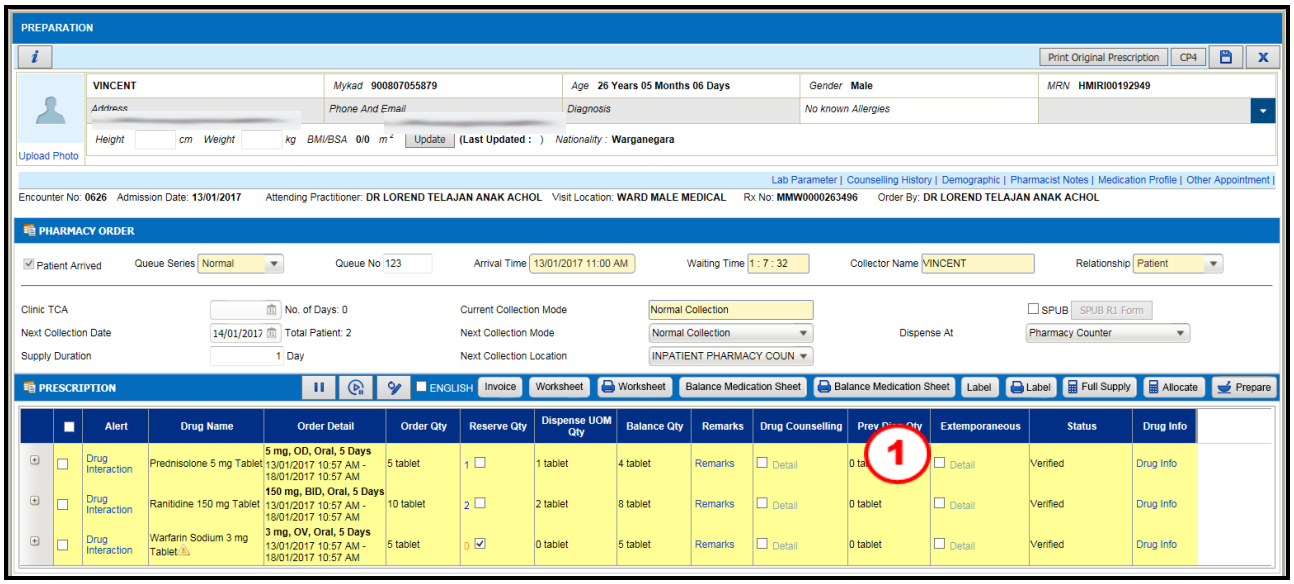


Figure 3.2.4-1 Preparation – Extemporaneous

Note

*Repeat **Step 1 to Step 2** as in prepare as per Figure 3.2.1-1 before performs Extemporaneous by Patient steps.* **STEP 1**

Click on the ***Extemporaneous*** ☑ checkbox and system will be displayed extemporaneous screen as Figure 4.4.-**2**

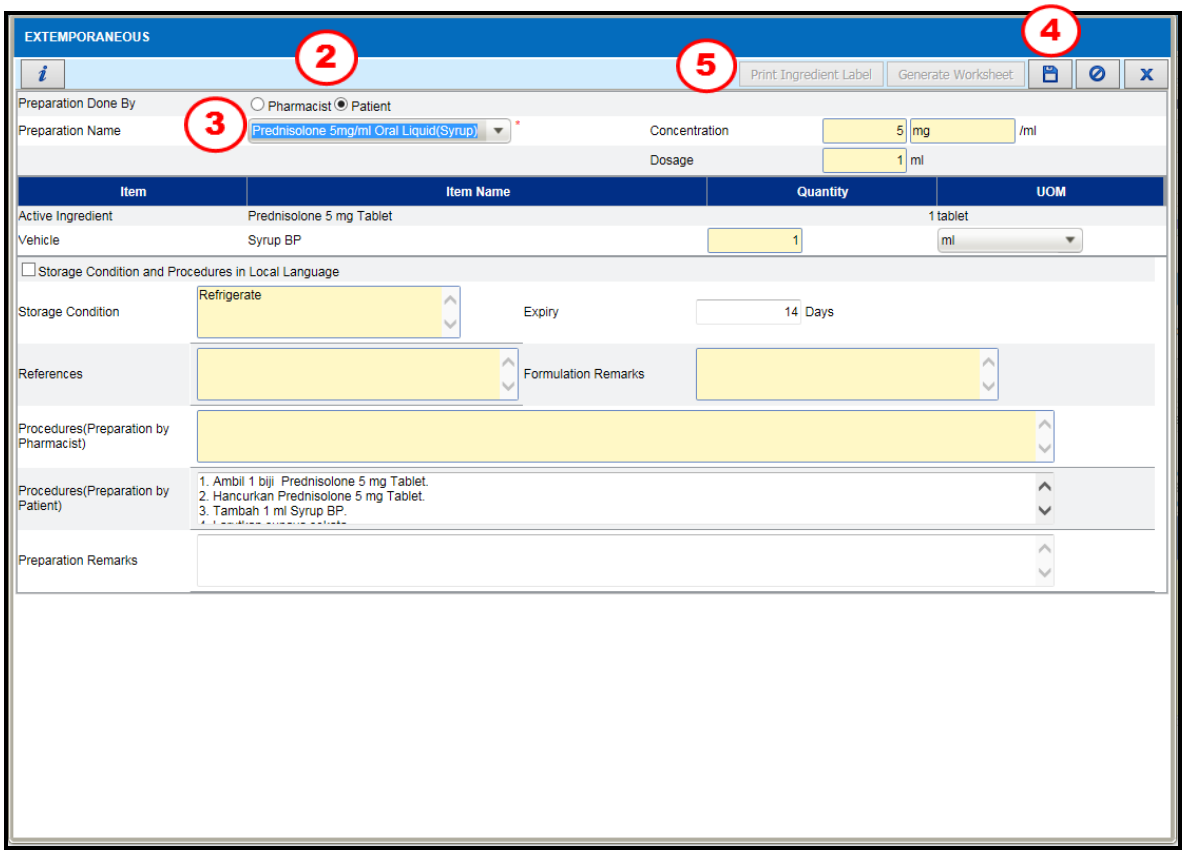


Figure 3.2.4-2 Preparation – Extemporaneous

STEP 2
Click on 'Patient' radio button

STEP 3
Select ***Preparation Name*** from the drop down box

Note

- *Concentration, dosage, Quantity, Storage Condition, Vehicle Expiry Date, Formulation Remarks and Procedures/Preparation by Patient and Reference will be retrieve from Master Setup.*
- *Allow to select Storage Condition and Procedures in Local Language.*
- *Allow to change **Vehicle** UOM if applicable.*
- *Allow to change **Expiry** duration.*
- ***Procedures/Preparation** by Pharmacist is editable.*

STEP 4
Click on the button to save record

STEP 5
Click on the Print Ingredient Label button to print ingredient label

STEP 6
Click on the button to print the label

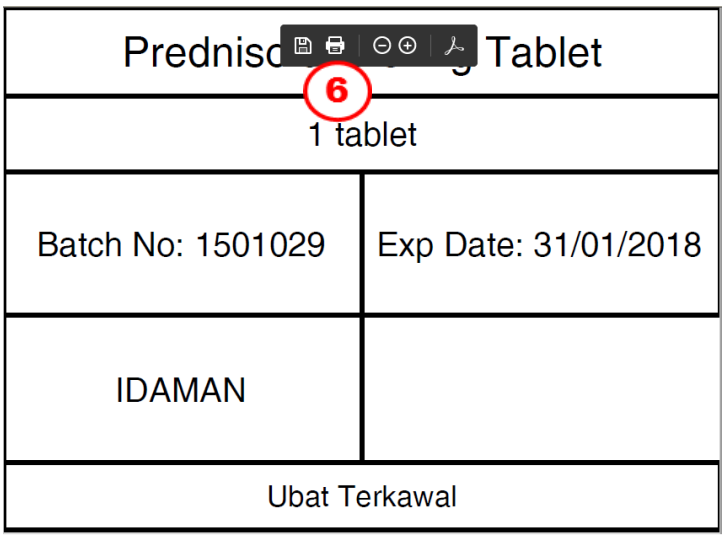


Figure 3.2.4-3 Sample Of Extemporaneous Ingredient Label

Note
Refer Figure 3.2.4-3 for the Ingredient Label Prepared by Patient sample.

3.2.5 Extemporaneous – By Pharmacist

This function is used to generate and print the Ingredient label prepared for patient, based on drugs setup. Extemporaneous preparation prepared by patient at home.

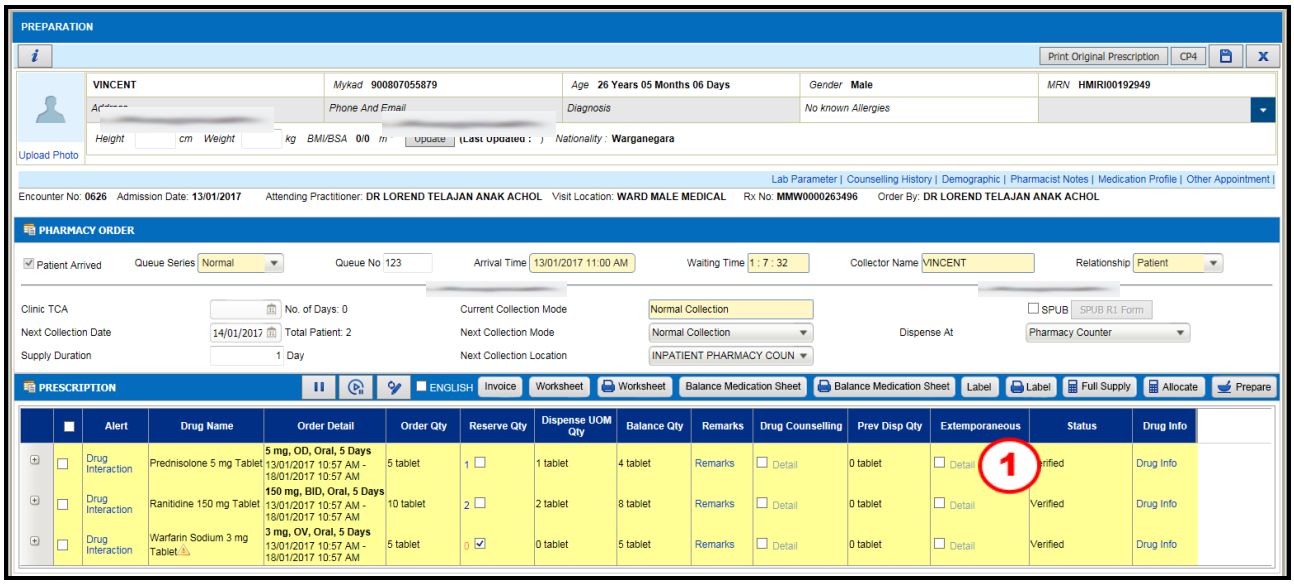


Figure 3.2.5-1 Preparation – Extemporaneous

Note

Repeat Step 1 to Step 2 as in prepare as per Figure 3.2.1-1 before performs Extemporaneous by Patient steps.

STEP 1

Click on the *Extemporaneous* checkbox and system will be displayed extemporaneous screen as Figure 4.5-2

STEP 2

Click on 'Pharmacist' radio button

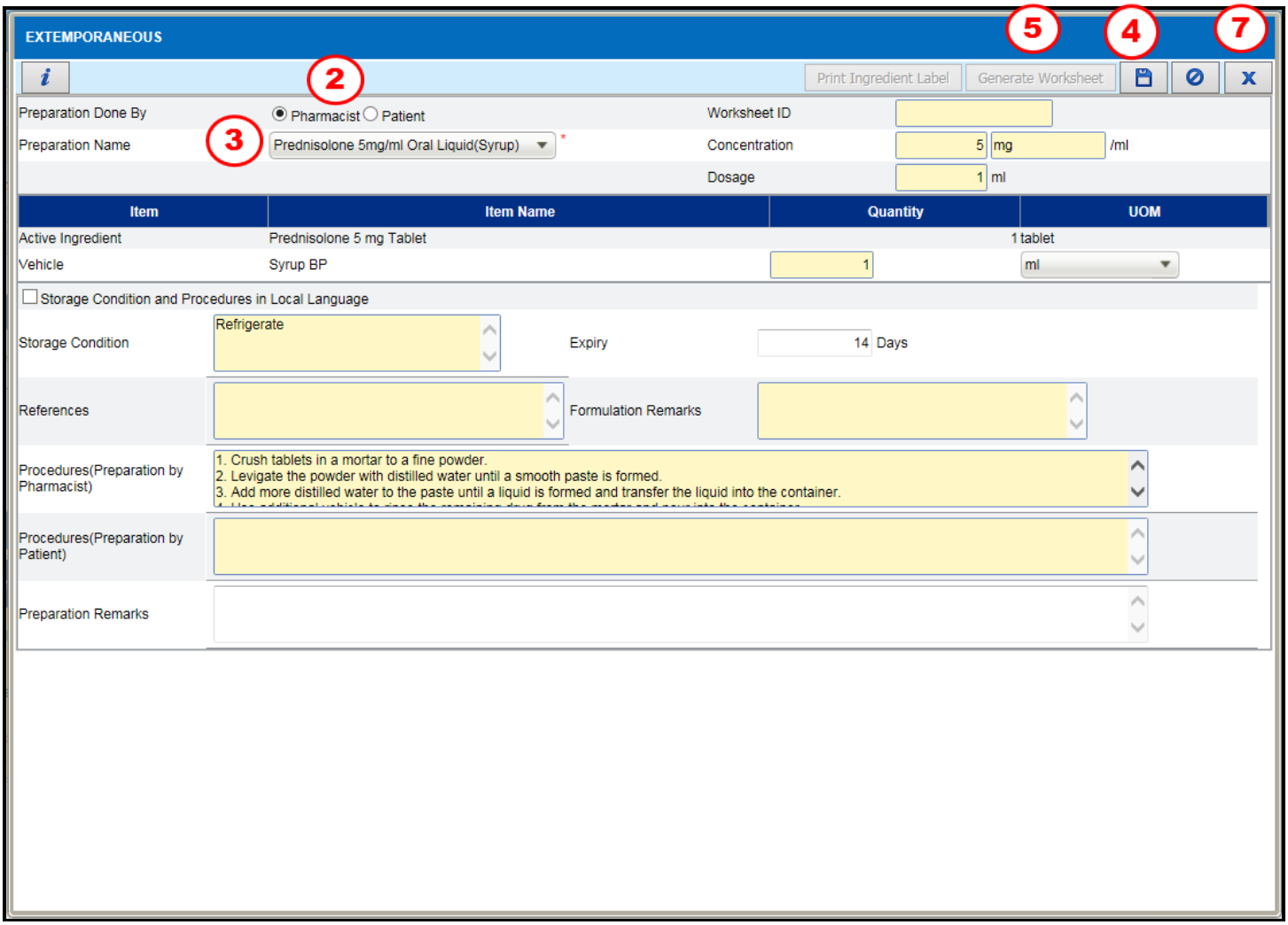


Figure 3.2.5-2 Preparation – Extemporaneous

STEP 3

Select *Preparation Name* from drop down box

Note

- *Concentration, dosage, Quantity, Storage Condition, Vehicle, Expiry Date, Formulation Remarks and Procedures/Preparation by Patient and Reference will be retrieve from Master Setup.*
- *Allow to select Storage Condition and Procedures in Local Language.*
- *Allow to change Vehicle UOM if applicable.*
- *Allow to change Expiry duration.*

STEP 4

Click on the button to save record

STEP 5

Click on the Generate Worksheet button to print Ingredient Worksheet

Note

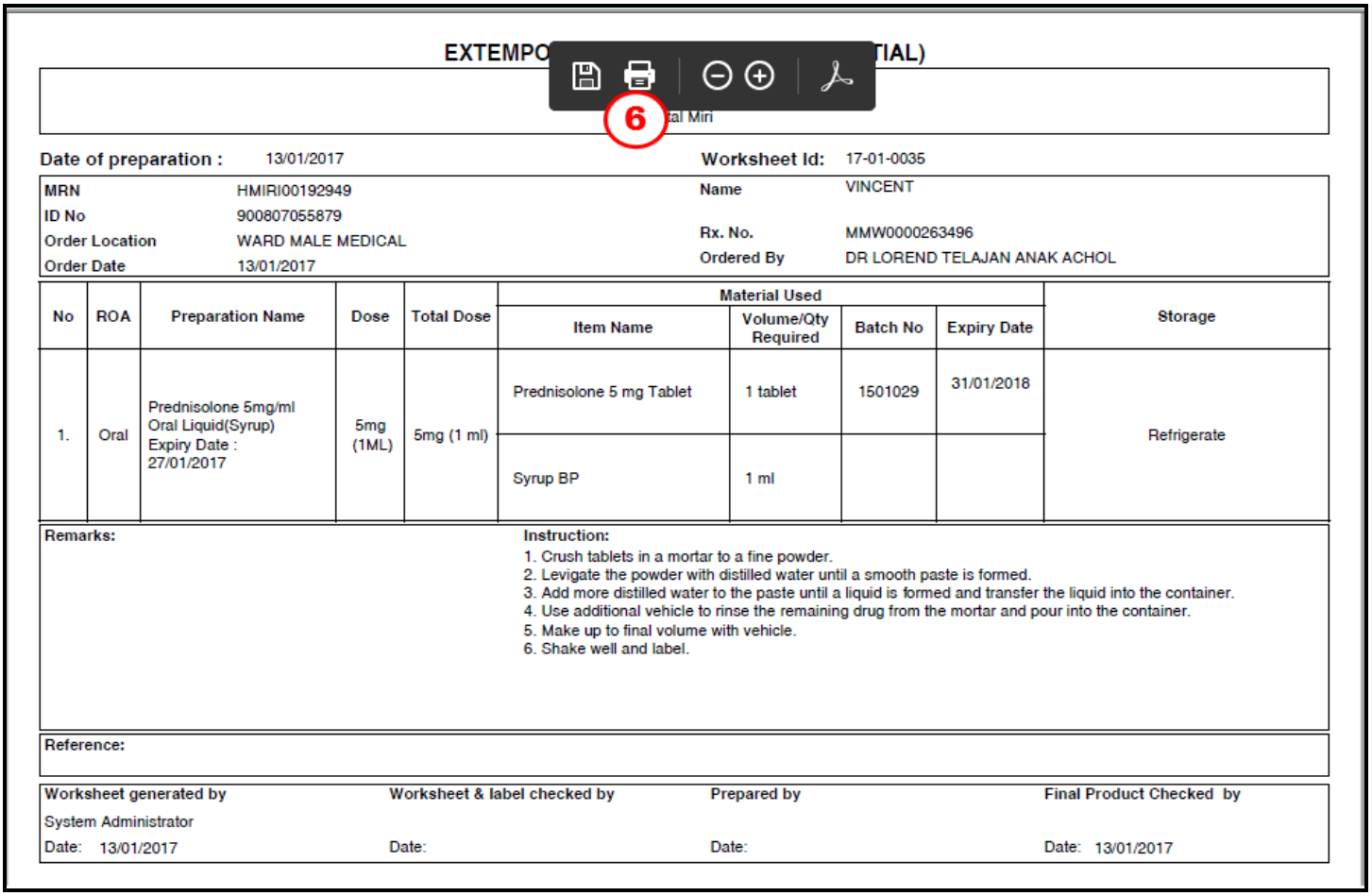
- *Refer Figure 4.5-3 for the Extemporaneous Worksheet by Pharmacist sample.*
- *Able to print Worksheet for prepare drug for patient.*

STEP 6

Click on the button to print the worksheet

STEP 7

Click on the button and close record



EXTEMPO TIAL)

6

tal Miri

Date of preparation : 13/01/2017 Worksheet Id: 17-01-0035

MRN	HMIRI00192949	Name	VINCENT
ID No	900807055879		
Order Location	WARD MALE MEDICAL	Rx. No.	MMW0000263496
Order Date	13/01/2017	Ordered By	DR LOREND TELAJAN ANAK ACHOL

No	ROA	Preparation Name	Dose	Total Dose	Material Used				Storage
					Item Name	Volume/Qty Required	Batch No	Expiry Date	
1.	Oral	Prednisolone 5mg/ml Oral Liquid(Syrup) Expiry Date : 27/01/2017	5mg (1ML)	5mg (1 ml)	Prednisolone 5 mg Tablet	1 tablet	1501029	31/01/2018	Refrigerate
					Syrup BP	1 ml			

Remarks:

Instruction:
1. Crush tablets in a mortar to a fine powder.
2. Levigate the powder with distilled water until a smooth paste is formed.
3. Add more distilled water to the paste until a liquid is formed and transfer the liquid into the container.
4. Use additional vehicle to rinse the remaining drug from the mortar and pour into the container.
5. Make up to final volume with vehicle.
6. Shake well and label.

Reference:

Worksheet generated by	Worksheet & label checked by	Prepared by	Final Product Checked by
System Administrator			
Date: 13/01/2017	Date:	Date:	Date: 13/01/2017

Figure 3.2.5-3 Preparation – Extemporaneous

3.3 Dispensing

This function allow user to record dispensing, to hold, resume and edit label.

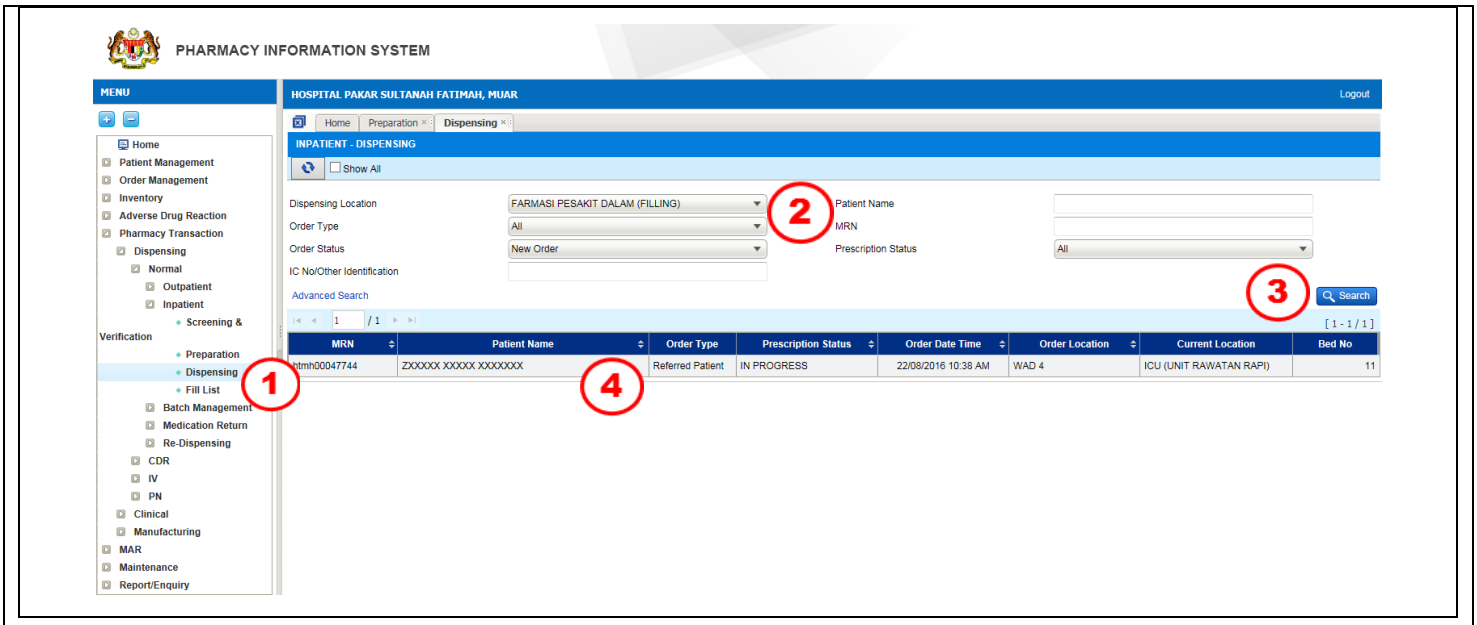


Figure 3.3-1 Dispensing Landing Screen *Note*

Various search criteria for Patient is provided as below:

Basic Search			
No	**Field**	**Description**	**Remark**
a	Show All		Able to view all patient record
b	Dispensing Location	Dispensing location. (It will list down all active location)	Able to filter and search patient name by dispensing location
c	Patient Name	Patient Name	Allow to search by entering fully or partially search criteria of patient's name
d	Order Type	-All -Normal -SPUB -Discharge -Referred Patient	All -Type of search from range Normal, SPUB, Discharge and Referred Patient Normal – Prescription from normal order SPUB - Prescription from SPUB order Discharge - Prescription from Discharge order Referred Patient – Prescription from referred patient
e	MRN	Patient MRN	Allow to search by entering fully or partially search criteria of MRN No
f	Order Status	-All -New Order -Partial Supply -Pending Authorisation	All – Type of search from range New order, Partial Supply and Pending Authorisation New Order – Prescription of new order Partial Supply – Prescription from partially dispense - Pending Authorisation – Prescription contain of drug to authorize

Advance Search			
g	Order Location	Order location. (It will list down all active location)	
h	Order Location Type	- All - Clinic - Day Care - ER - Nursing Unit -Pharmacy	
i	Order Date From		Start point for range of order date
j	Order Date To		Order Date To can be NULL or must be greater than the value for Order Date From
k	Bed		Search patient by bed number

Table 3.3

STEP 1
Click on 'Dispensing' sub menu

STEP 2
Search existing patient record as follow:

a) Dispensing Location
b) Order Location Type
c) Mode of Services
- All
- Appointment Card
- Email and Take
- Fax and Take
- Normal Collection
- Others
- SMS and Take
- Telephone and Take
- UMP

d) Patient Name
e) MRN
f) Order Status
- All
- New Order
- Partial Supply

g) Order Location
h) IC No/Other Identification
i) Order Type
- All
- Normal
- SPUB
- Discharge

j) Acknowledged without patient arrival

STEP 3

Click on the

button to search the patient

STEP 4

Click on the selected patient's name

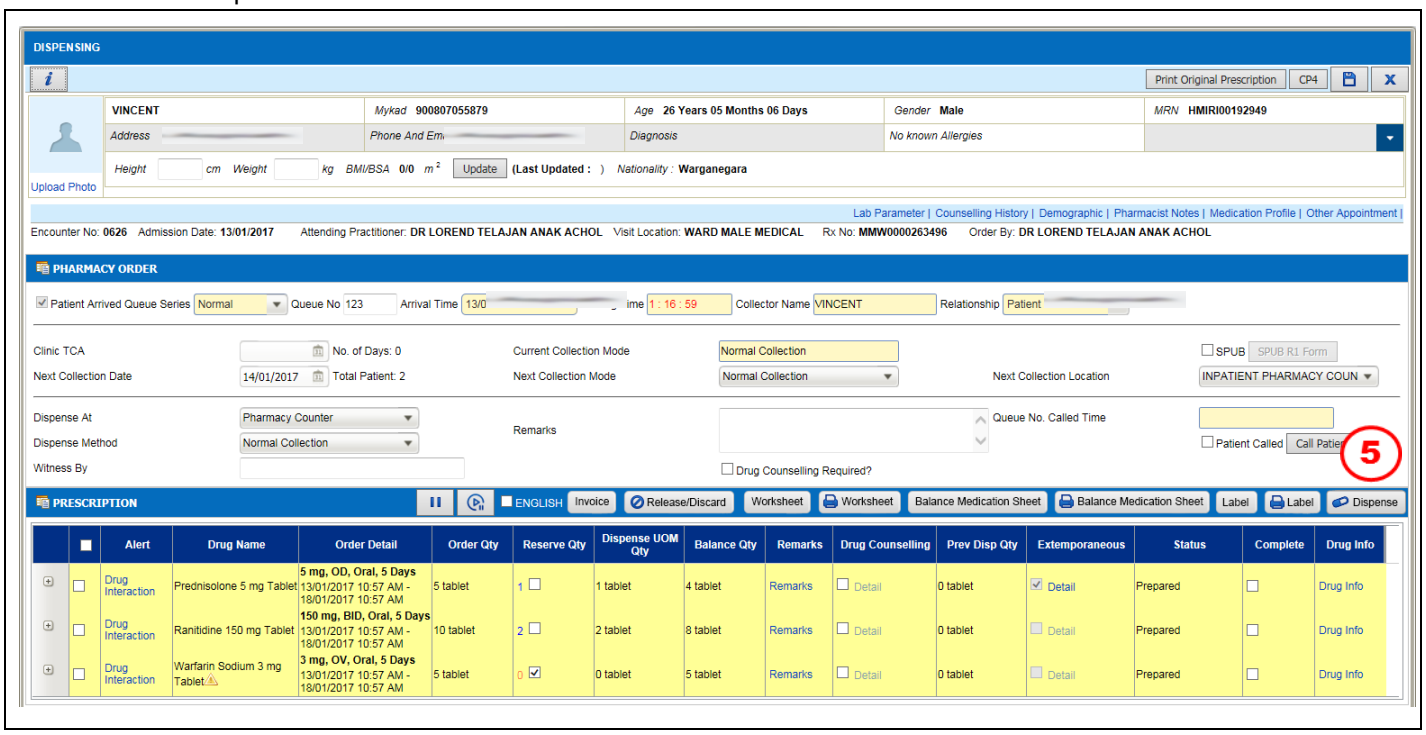


Figure 3.3-2 Dispensing

STEP 5

Click on the

button to proceed dispensing process to proceed

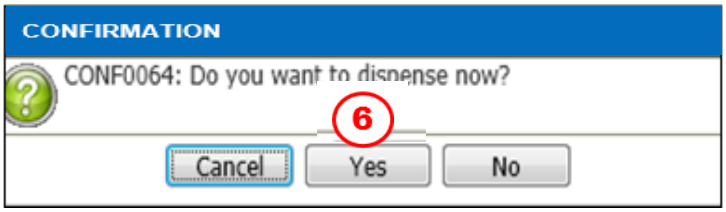
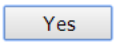


Figure 3.3-3 Confirmation Alert Message

STEP 6

Click on the 

button to confirm dispensing proceed and dispensing screen will automatically closed

Note

To close/complete medication, select the

checkbox then click on the

button. The selected drug will be treat as fully supply.

3.4 Fill List

This function is used for inpatient pharmacy to prepare and dispense medication by ward. The user has to generate and manage the fill list in order to complete the dispensing process.

3.4.1 Generate Fill List

Generate Fill List screen allow user to retrieve patient by ward, view prescription, allocate Qty, edit label, print original prescription and generate fill list.

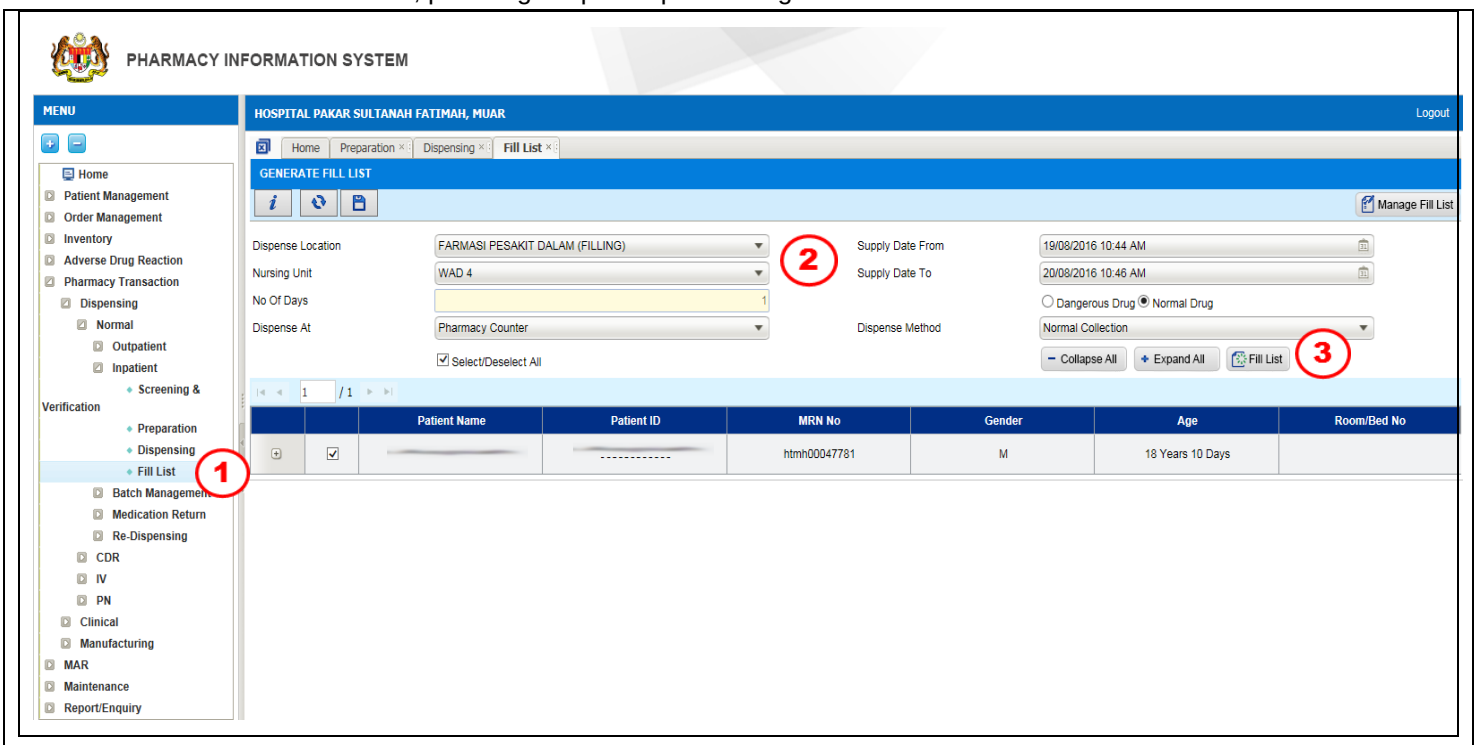


Figure 3.4.1-1 Fill List Listing Page

STEP 1

Click 'Fill List' in sub menu 'Inpatient'

STEP 2

Search existing patient record as follow:

a) ***Dispensing Location***
b) ***Nursing Unit***
c) ***Supply Date From***
d) ***Supply Date To***

Note

*User Able to select **Dangerous Drug or Normal Drug** and generate Fill List.*

STEP 3

Tick on the Fill List button to view patient by ward.

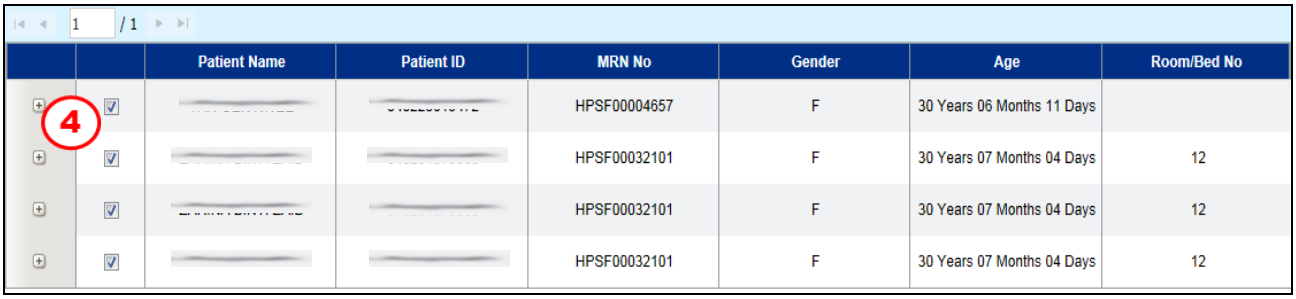


Figure 3.4.1-2 Select / Deselect Patient Prescription

STEP 4

Select the checkbox to include the patient prescription for generated fill list else deselect the checkbox to exclude the patient prescription patient from the fill list

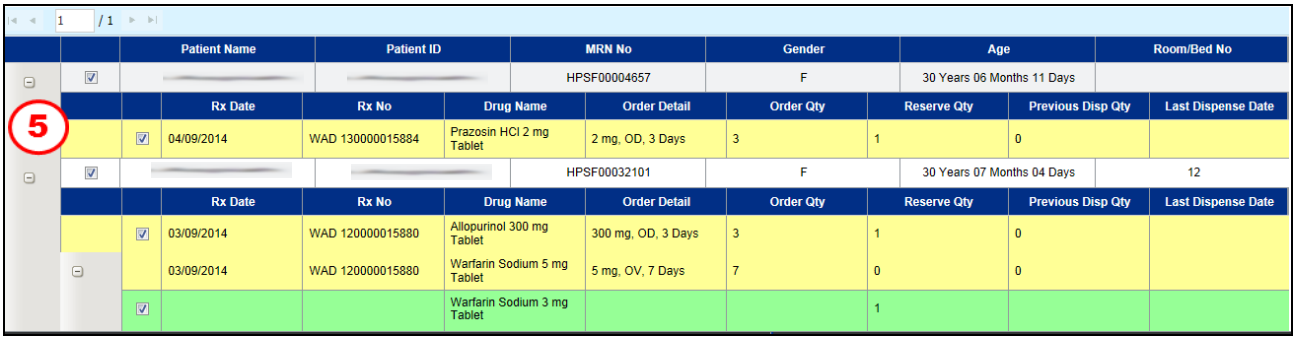


Figure 3.4.1-3 Select / Deselect Drug

STEP 5

Click on the button to expand the patient prescription, select the checkbox to exclude the drug from the fill list or else remain selected if the drug included in the fill list

Note

By default, all patient will selected.

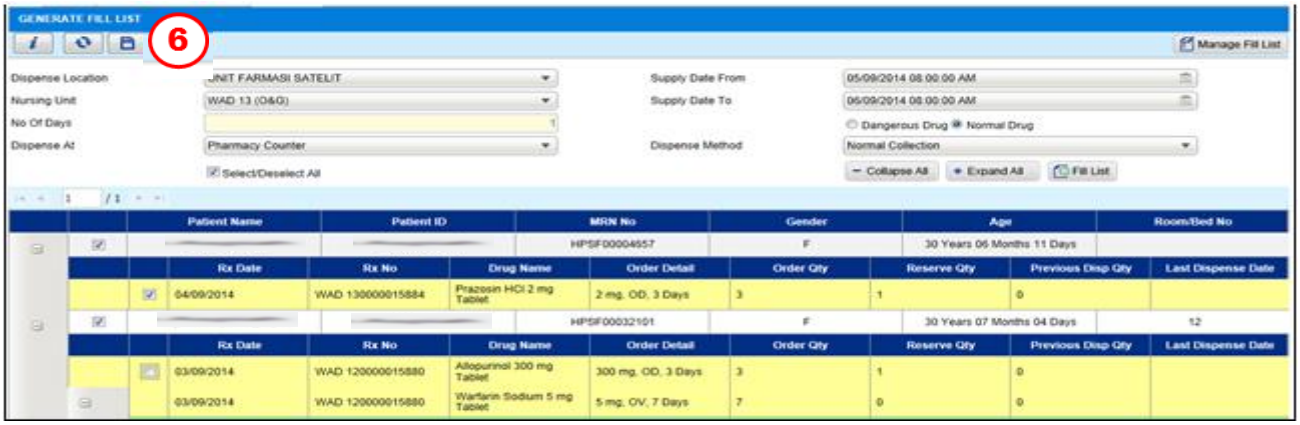


Figure 3.4.1-4 Generate Fill List

STEP 6

Click on the button to save record

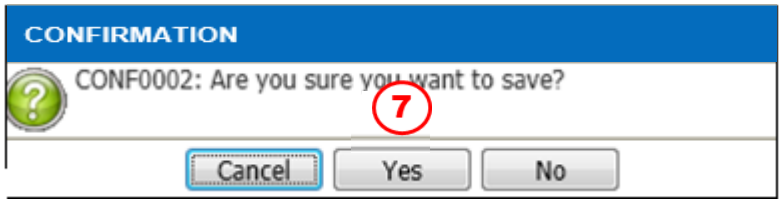


Figure 3.4.1-5 Confirmation Alert Message

STEP 7

Click Yes button to confirm save record and fill list screen will automatically closed

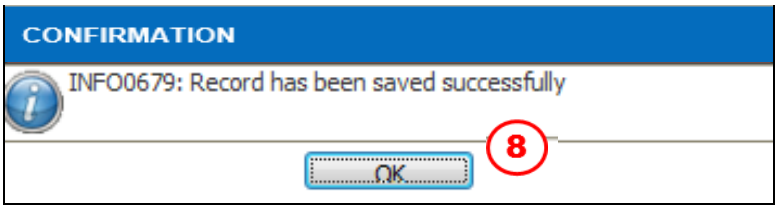


Figure 3.4.1-6 Information Alert Massage

STEP 8

Click on the OK button to save record

3.4.2 Manage Fill List

This function is used to dispense drugs base on the generated fill list by nursing unit, also able to print label and prescription fill list.

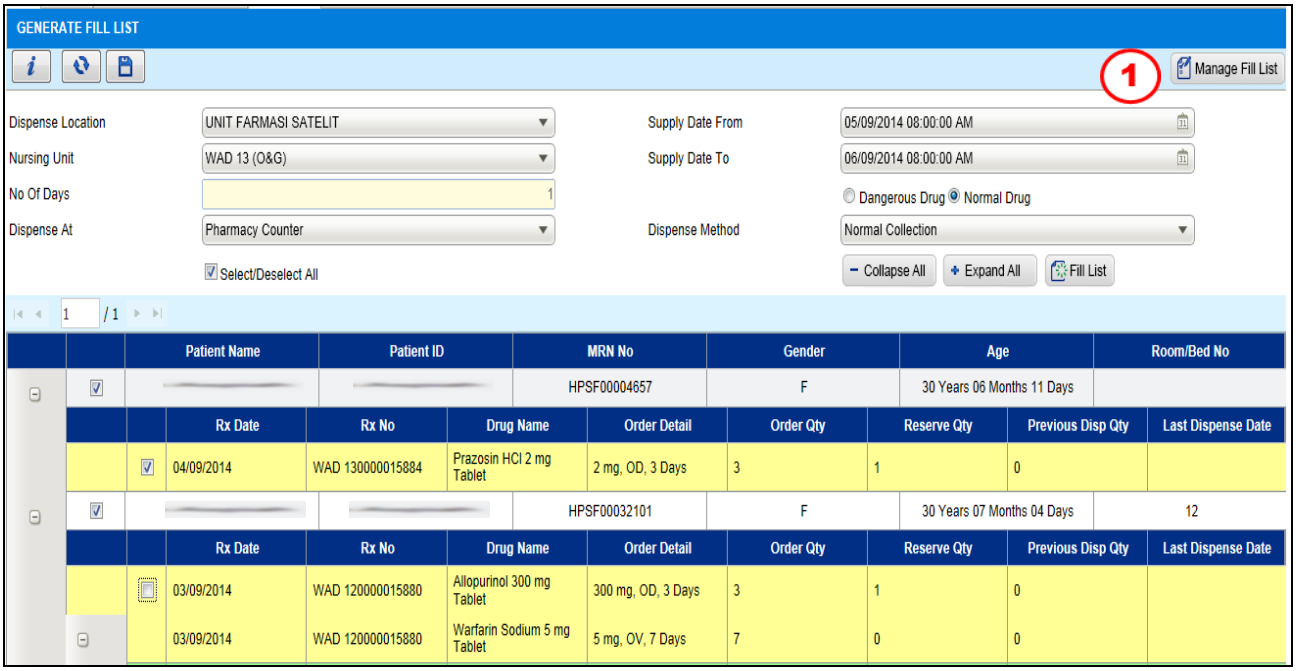


Figure 3.4.2-1 Manage Fill List

STEP 1

Click on the Manage Fill List button to proceed Manage Fill List process

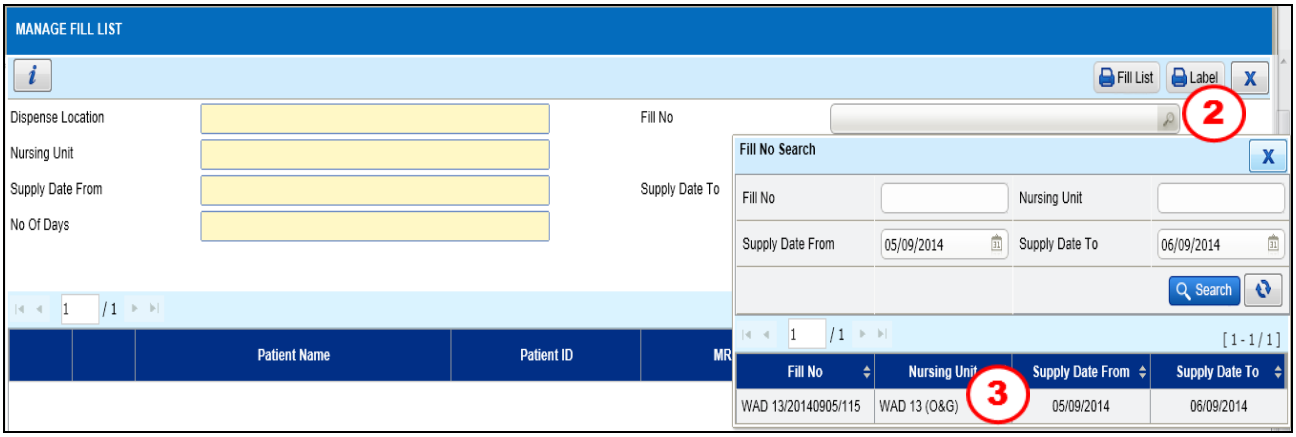


Figure 3.4.2-2 Manage Fill List

STEP 2

Click on the button to search the fill list

Note

Allow and able to search fill list based:-

a) Fill No
b) Nursing Unit
c) Supply Date From
d) Supply Date To

STEP 3

Double click on the selected fill list

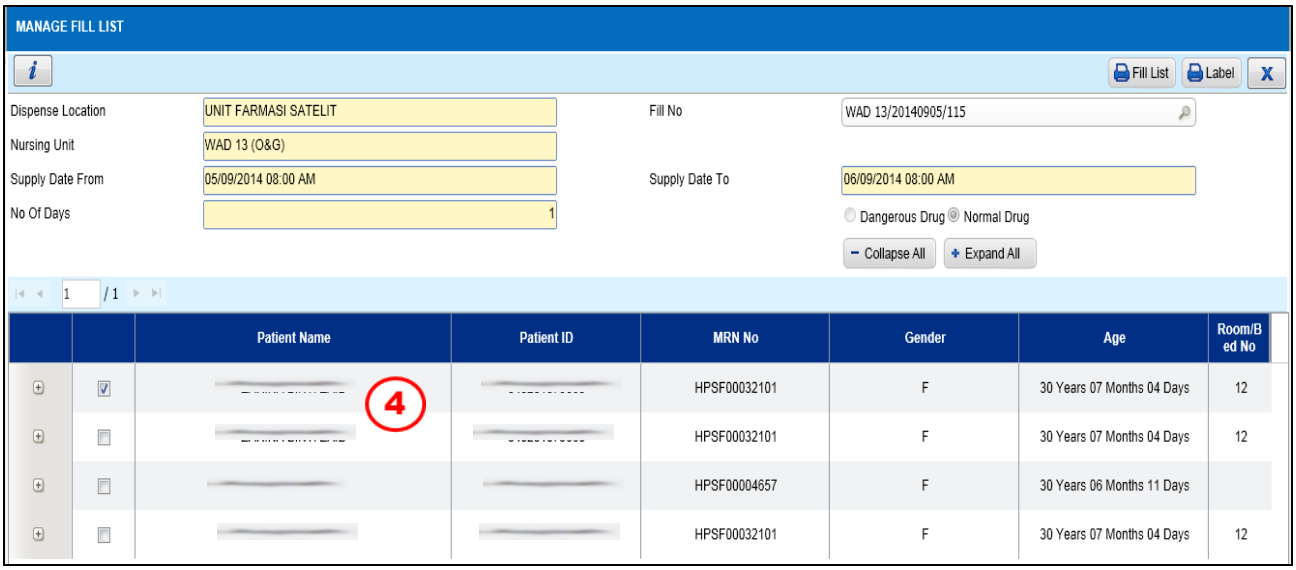


Figure 3.4.2-3 Manage Fill List

STEP 4

Select on the checkbox to print the drug label

STEP 5

Click on the to view or edit drug label

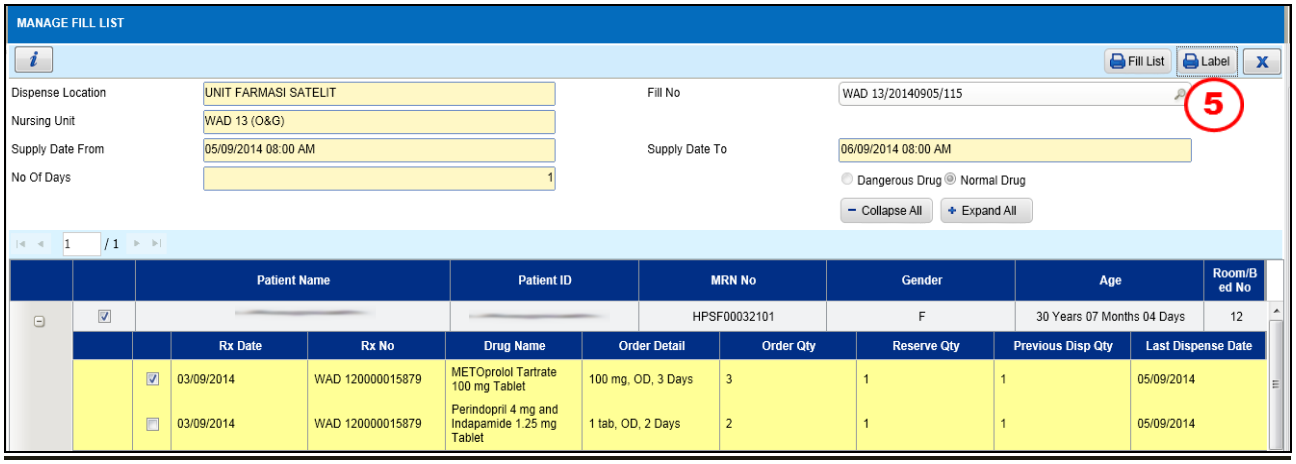


Figure 3.4.2-4 Print Drug Label

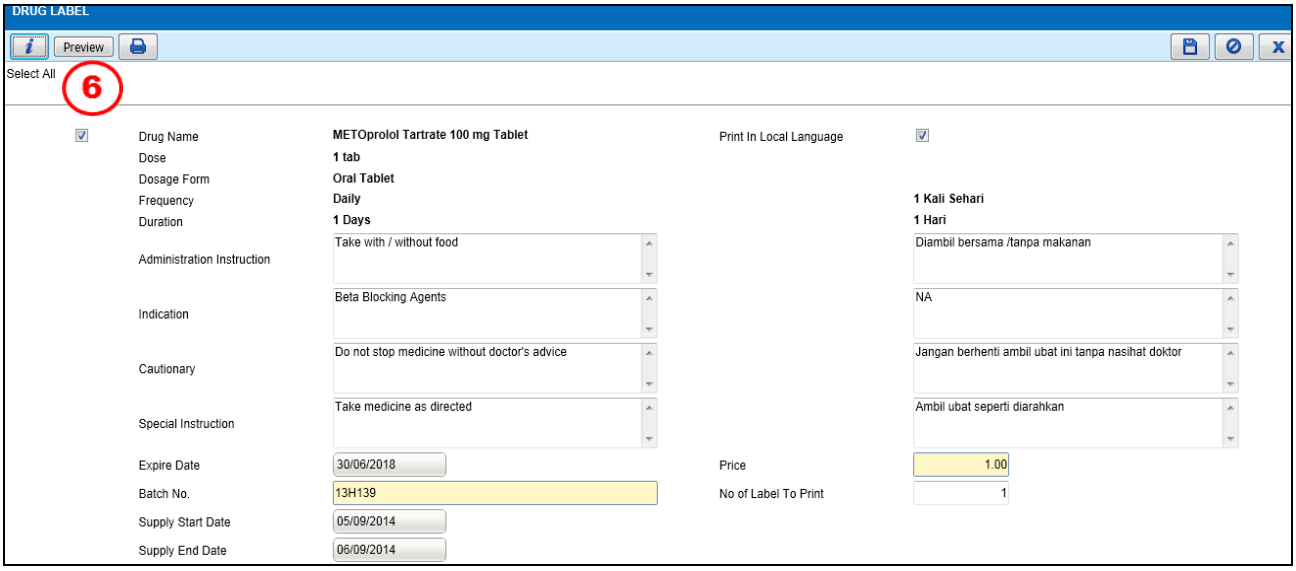


Figure 3.4.2-5 Drug Label

STEP 6

Click on the Preview button to preview the drug label

Note

- *Details as below will be auto generated in Drug Label:*
  a) Drug Name
  b) Dose
  c) Dosage Form
  d) Frequency
  e) Duration
  f) Administration Instruction
  g) Indication
  h) Cautionary
  i) Special Instruction,
  j) Expiry Date
  k) Batch No

- *It is allowed to edit Administration, Indication, Special Instruction, Expiry Date, Batch No, Price, No of Label to Print and select Print in Local Language.*

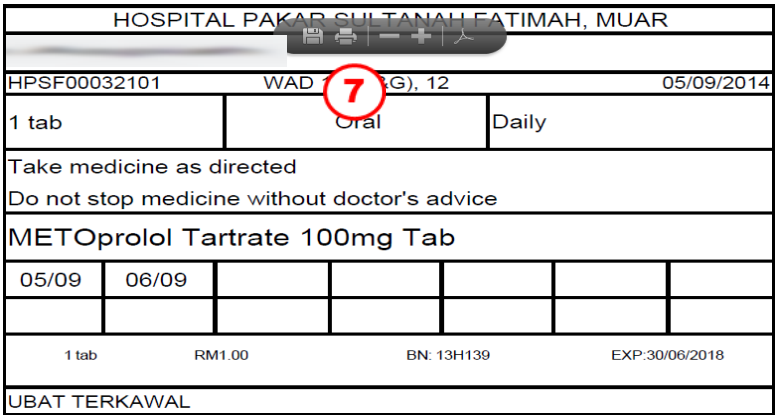


Figure 3.4.2-6 Print Drug Label

STEP 7

Click on the button to print the drug label

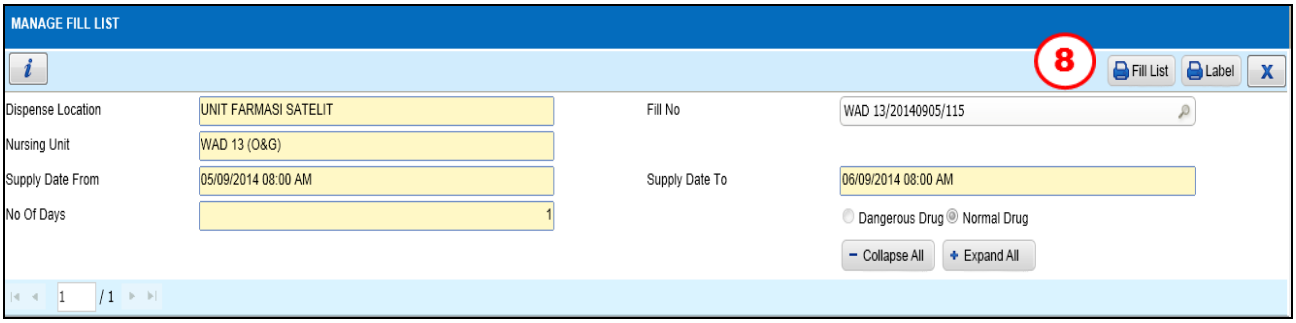
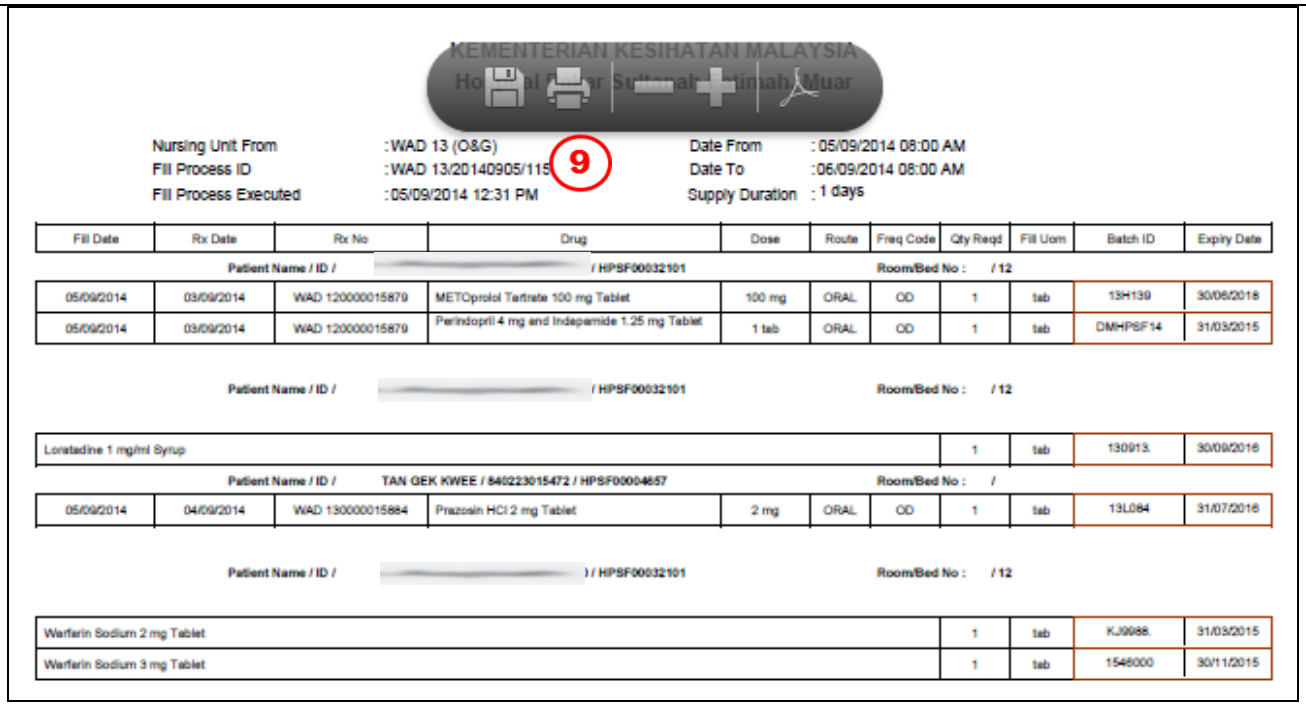


Figure 3.4.2-7 Print Fill List

STEP 8

Click on the

button to print the fill list



KEMENTERIAN KESIHATAN MALAYSIA
Hospital Pakar Sultanah Fatimah, Muar

Nursing Unit From : WAD 13 (O&G)
Fill Process ID : WAD 13/20140905/115
Fill Process Executed : 05/09/2014 12:31 PM
Date From : 05/09/2014 08:00 AM
Date To : 06/09/2014 08:00 AM
Supply Duration : 1 days

Fill Date	Rx Date	Rx No	Drug	Dose	Route	Freq Code	Qty Reqd	Fill Uom	Batch ID	Expiry Date
Patient Name / ID / [redacted] / HPSF00032101						Room/Bed No : / 12				
05/09/2014	03/09/2014	WAD 120000015879	METOprolol Tartrate 100 mg Tablet	100 mg	ORAL	OD	1	tab	13H139	30/06/2018
05/09/2014	03/09/2014	WAD 120000015879	Perindopril 4 mg and Indapamide 1.25 mg Tablet	1 tab	ORAL	OD	1	tab	DMHPSF14	31/03/2015
Patient Name / ID / [redacted] / HPSF00032101						Room/Bed No : / 12				
Loratadine 1 mg/ml Syrup							1	tab	130913.	30/09/2016
Patient Name / ID / TAN GEK KWEE / 840223015472 / HPSF00004657						Room/Bed No : /				
05/09/2014	04/09/2014	WAD 130000015884	Prazosin HCl 2 mg Tablet	2 mg	ORAL	OD	1	tab	13L084	31/07/2016
Patient Name / ID / [redacted] / HPSF00032101						Room/Bed No : / 12				
Warfarin Sodium 2 mg Tablet							1	tab	KJ9988.	31/03/2015
Warfarin Sodium 3 mg Tablet							1	tab	1546000	30/11/2015

Figure 3.4.2-8 Fill List

STEP 9

Click on the button to print the fill list

3.5 Released / Discard Batch

Released / Discard Batch screen is allow user to release any reserved / prepared drugs back into inventory. Released batch is only applicable for drug which is not in liquid form

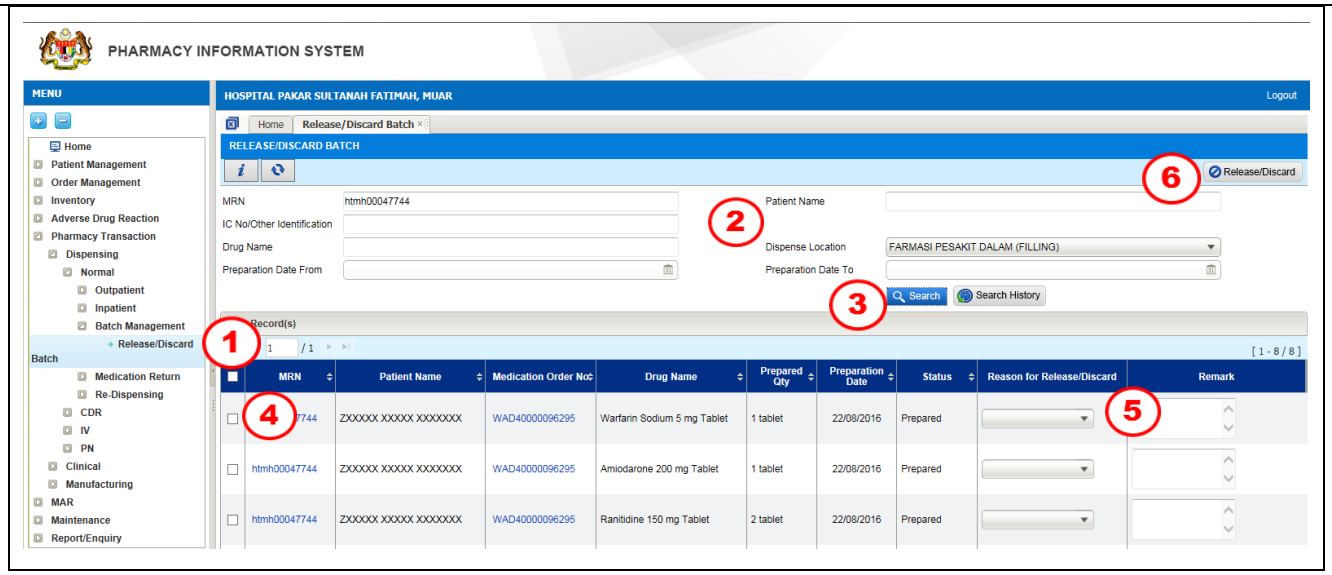


Figure 3.5-1 Release / Discard

STEP 1

Click on 'Release Discharge Batch' sub menu

STEP 2

Search patient record based on:

a) ***MRN***

- ***Patient Name***

c) ***Drug Name***

d) ***Dispense Location***

STEP 3

Click on the button to search the drug

STEP 4

Select check box to select patient drug for release batch

STEP 5

Select ***Reason for Release / Discard***

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

STEP 6

Click on the button to proceed release or discard process

3.6 Medication Return

Medication Return screen will allow user to return any drugs back into inventory

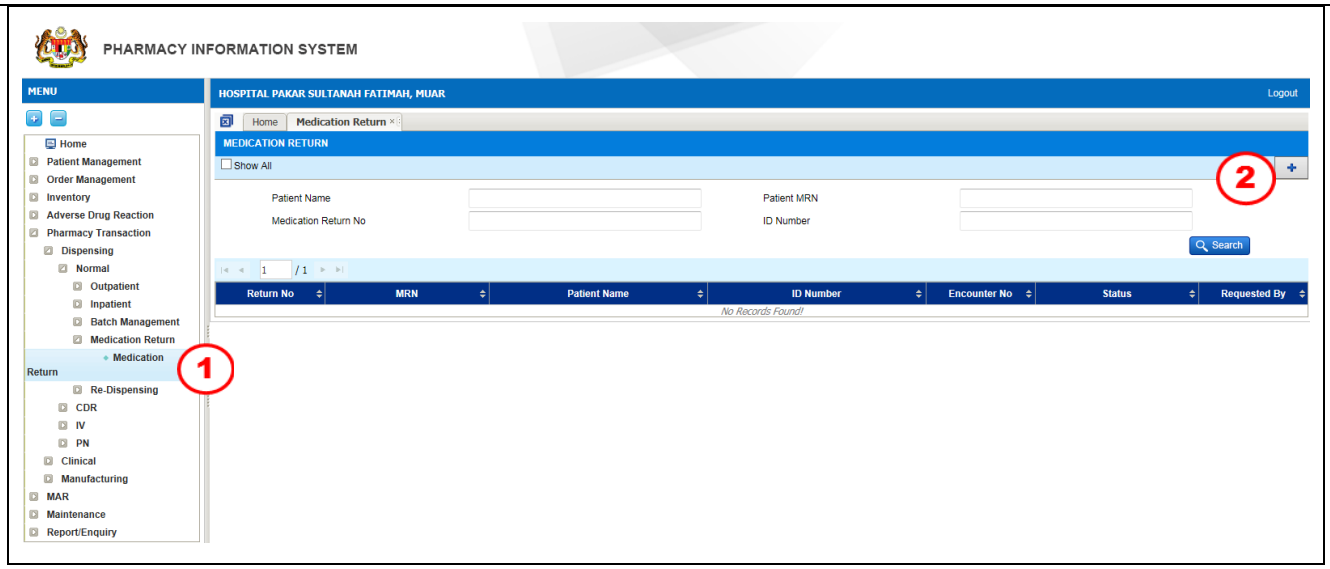


Figure 3.6-1 Medication Return Listing Page

STEP 1

Click on 'Medication Return' sub menu

STEP 2

Click on the button to add new patient record

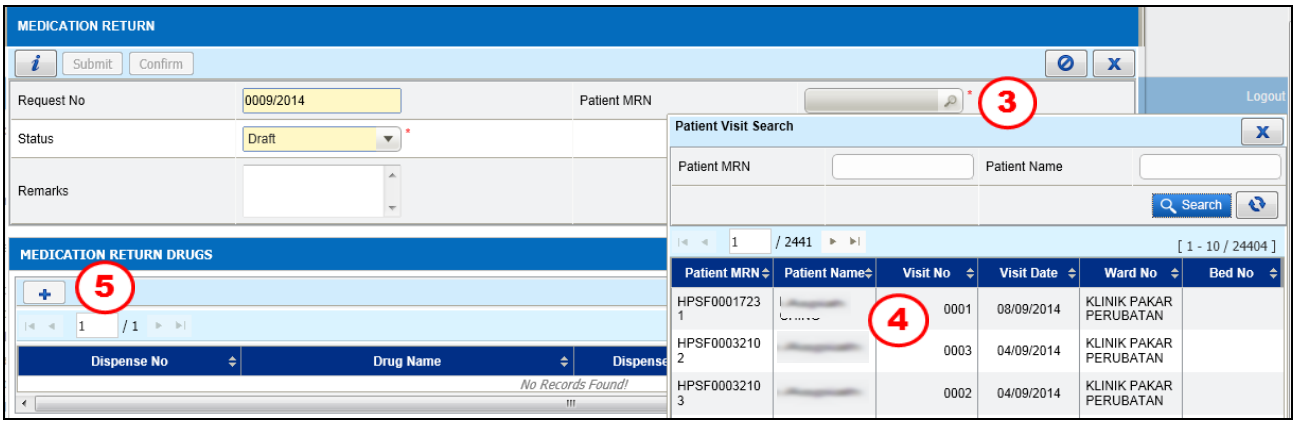


Figure 3.6-2 Medication Return

STEP 3

Click on the button to search the patient

STEP 4

Double Click on the selected patient's name

STEP 5

Click on the button to add drug to medication return list

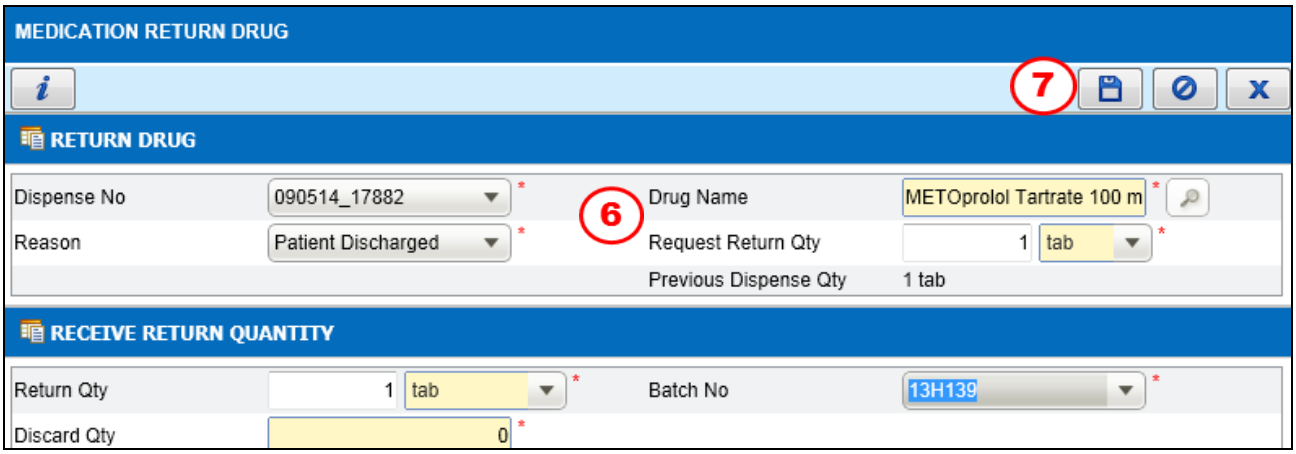


Figure 3.6-3 Medication Return

STEP 6

Select drug to be returned by criteria as below:

a) Dispense No
b) Reason
c) Drug Name
d) Request Return Qty

<u>Note</u>

Receive Return Quantity will be used to record:

a) Return Qty
b) Discard Qty
c) Batch No

STEP 7

Click on the button to save record

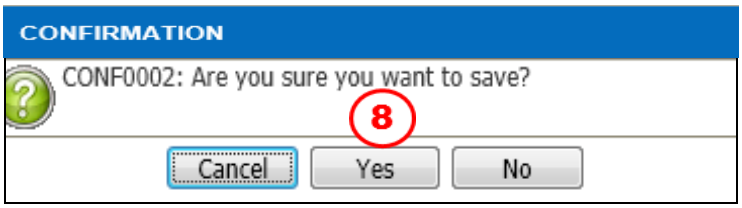


Figure 3.6-4 Confirmation Alert Message

STEP 8

Click on the Yes button to confirm save record

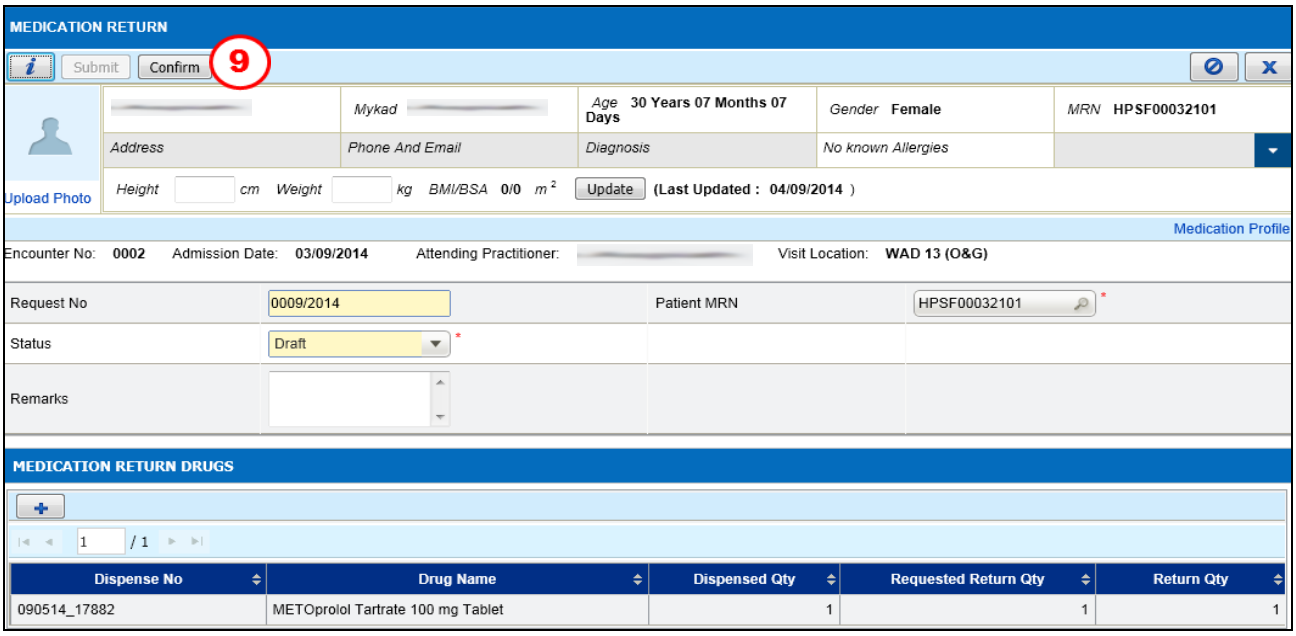


Figure 3.6-5 Medication Return

STEP 9

Click on the Confirm button to confirm medication return process

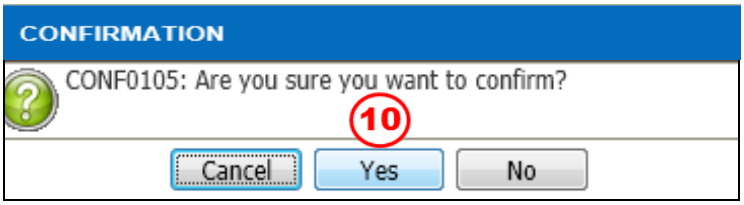


Figure 3.6-6 Confirmation Alert Message

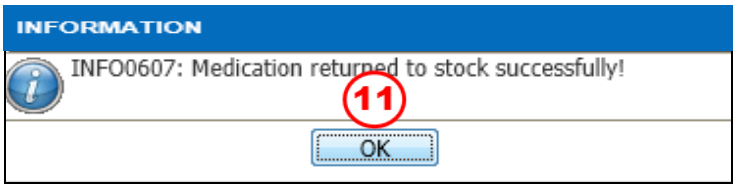


Figure 3.6-7 Information Alert Message

STEP 10

Click on the Yes button

STEP 11

Click on the OK button and screen will be automatically closed

3.7 Re-Dispensing

Re-Dispensing screen allows user to view medication detail by Dispense No and re-dispense medication to the patient.

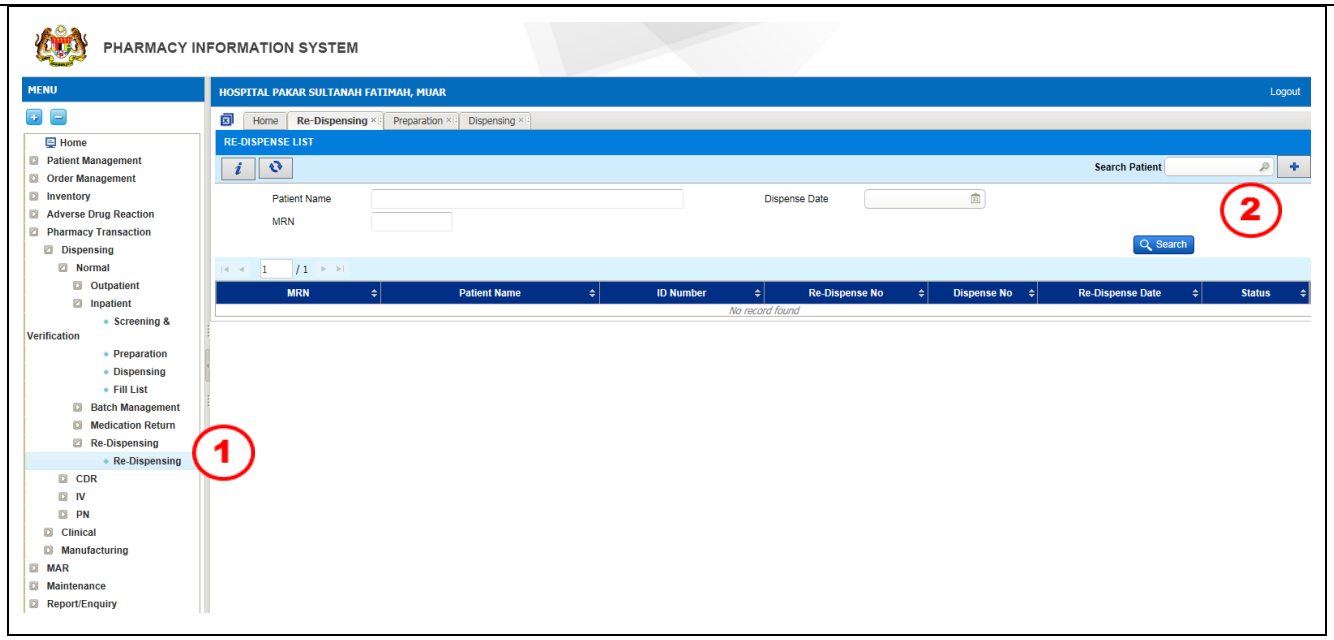


Figure 3.7-1 Re-Dispensing

STEP 1

Click on 'Re-Dispensing' sub menu

STEP 2

Click on the button to search patient

Note

- *Search MRN screen will be displayed as per Figure* 3.7-2.
- *On this screen, user will be able to search existing patient record by:*
  a) ***Patient MRN***
  b) ***ID No***
  c) ***Patient Name***
- *Allow to view the list of re-dispense at the listing page as per Figure 9.0-1.*
- *If need to re-dispense the drug again, click on the selected patient name and continue to proceed dispensing process.*

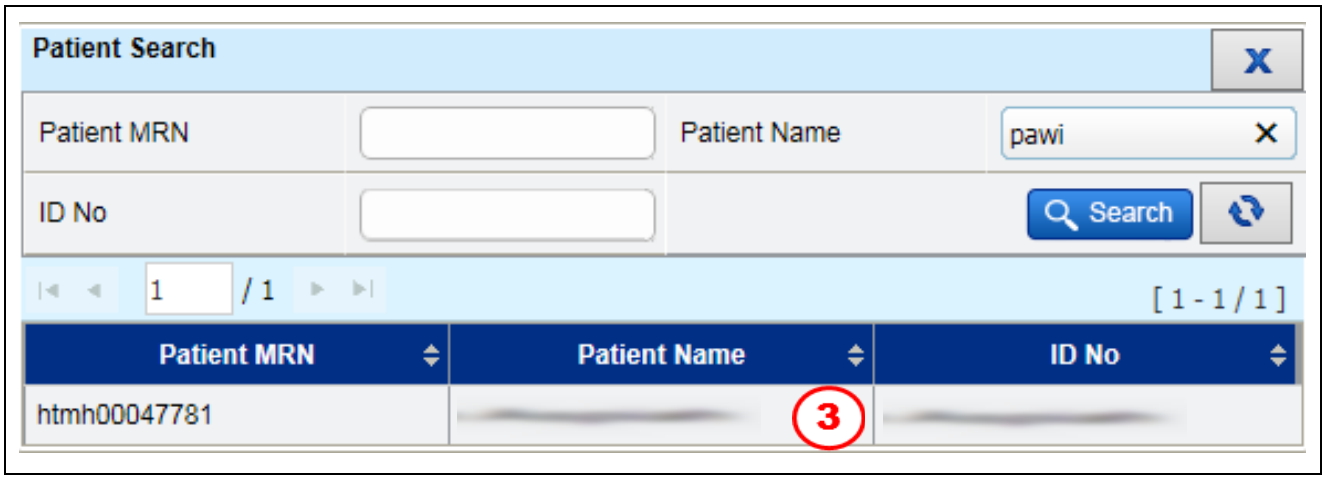


Figure 3.7-2 Search Patient

STEP 3

Click on the selected patient's name

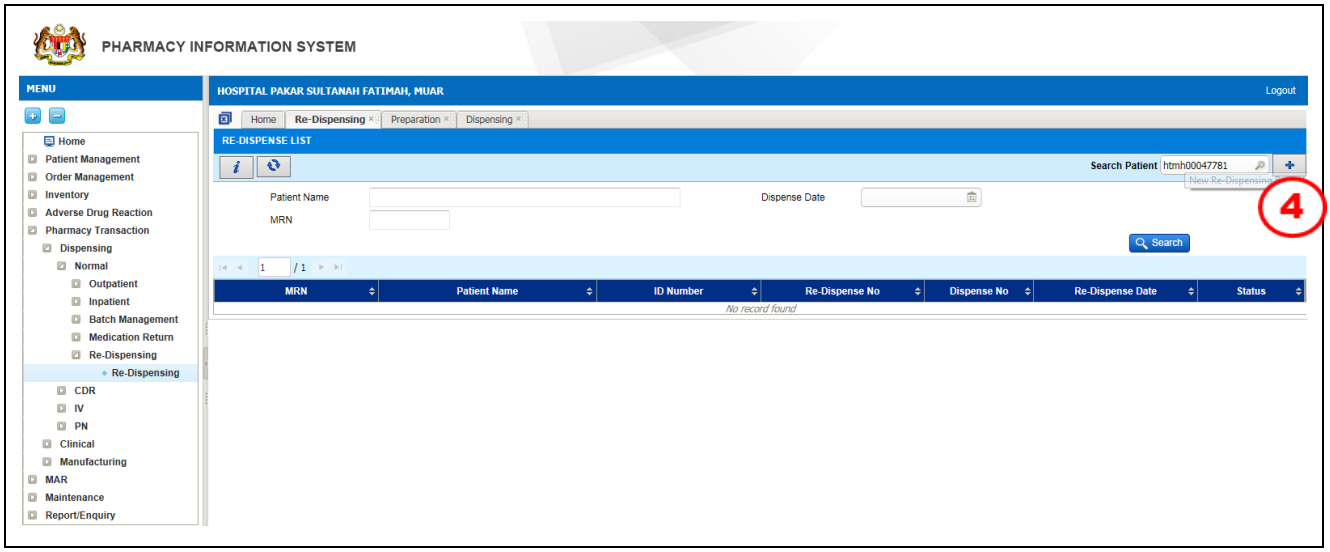


Figure 3.7-3 Re- Dispensing

STEP 4

Click on the button to add new re-dispensing record as Figure 3.7-3

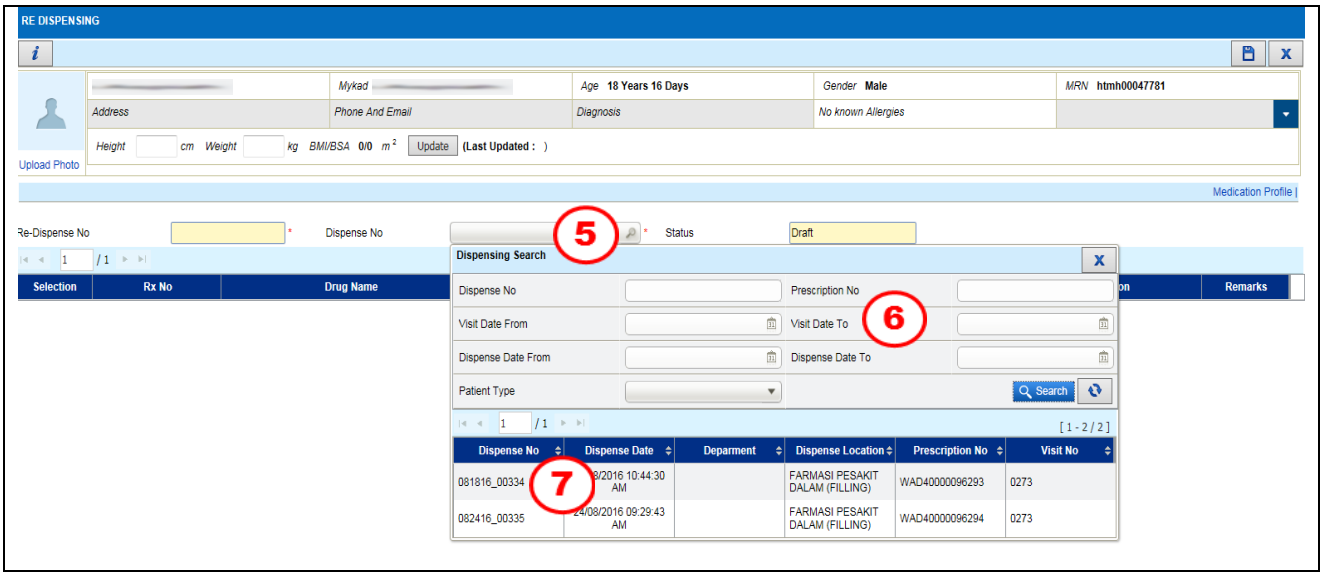


Figure 3.7-4 Re-Dispensing

STEP 5

Click on the ***Dispense No*** button to search dispense record

STEP 6

Select drug to be re-dispense by criteria as below:

a) ***Dispense No***
b) ***Visit Date From***
c) ***Dispense Date From***
d) ***Patient Type***
e) ***Prescription No***
f) ***Visit Date To***
g) ***Visit Date To***
h) ***Dispense Date To***

STEP 7

Double click on the selected *Dispense No*

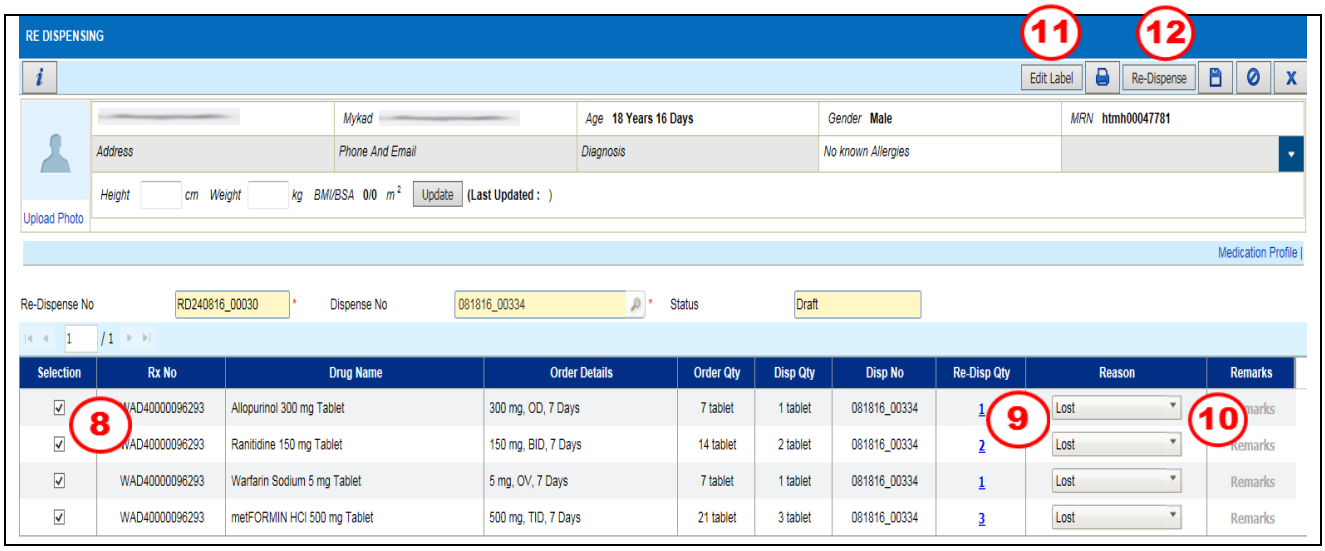


Figure 3.7-5 Re- Dispensing

STEP 8

Click at the Selection ☑ checkbox for selected drug

STEP 9

Enter the *Re-Disp Qty*

STEP 10

Enter the *Reason*

Note

Reason consist of :

a) *Spilled*
b) *Broken*
c) *Lost*
d) *Others*

STEP 11

Click on the Edit Label if necessary (to reprint the drug label)

STEP 12

Click on the Re-Dispense button

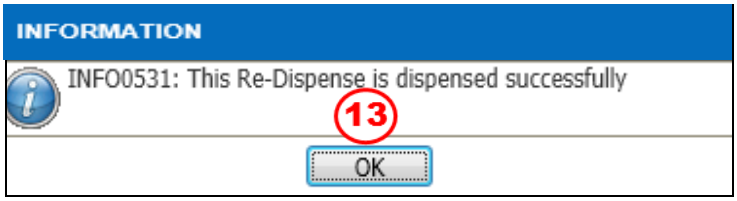


Figure 3.7-6 Confirmation Alert Message

STEP 13

Click on the OK button

4.0 Acronyms

Abbreviation	Definition
PhIS	Pharmacy Information System
CPS	Clinical Pharmacy System
PM	Patient Management
eGL	Electronic Guarantee Letter
HRMIS	Human Resource Management System
MRN	Medical Record Number
MOH	Ministry Of Health

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*		