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

System Design Document
(SDD)

Order Management Module

for Pharmacy Based

Version	**: 1.0**
Document ID	**: PhIS_CPS/SDD/OM_PB**

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REVISION HISTORY

Version No	Date of Release	Prepared by	Reviewed by	List of changes from Previous Version
1.0	16/5/2018	Sitinor Megawati Saurani	Zainura Said	Document baseline for Order Management Pharmacy Based and follow PhIS version 1.7

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1. Introduction

Pharmaniaga Logistics Sdn. Bhd. executes software development, enhancement and maintenance projects for its clients. The term “project” is used to describe the full set of activities from the time the proposal is accepted and project initiation note or contract is signed to the time all the software and services are delivered according to the acceptance of the proposal/contract.

This process is to ensure both user requirements and software requirements of the projects developments are gathered appropriately from stakeholders and are documented in User Requirements Specification (URS) and System Design Documentation (SDD) specifically.

2. Purpose

The purpose of the document is to describe the purpose and functionality of the software product requested by client. This document outlines the project's details, requirements, interface, design issues, and components to ensure that each requirement has been met.

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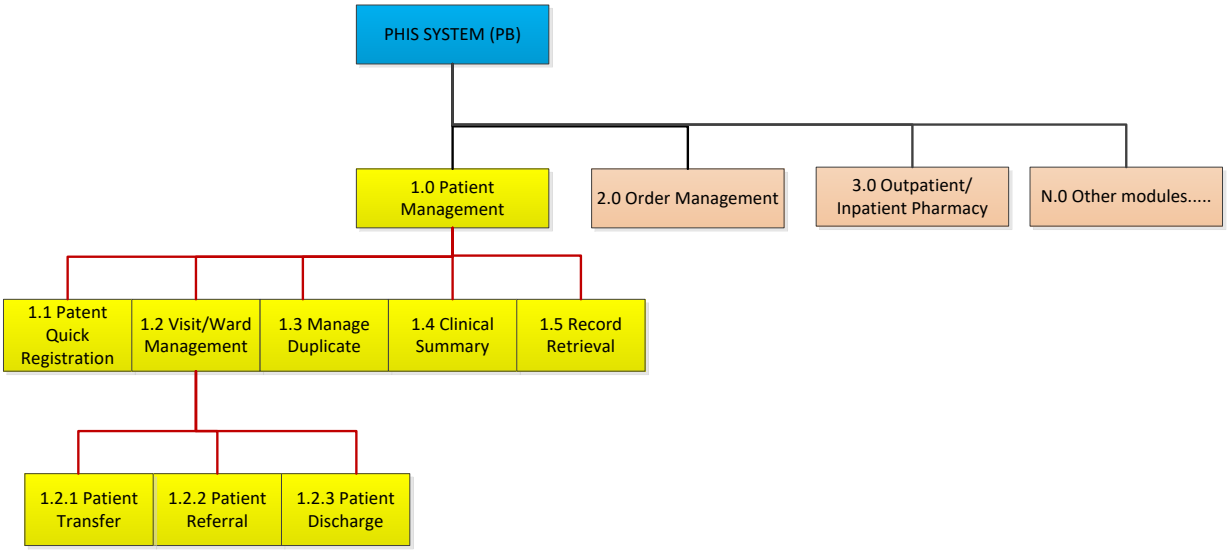
3. Detailed System Design

3.1 Patient Management

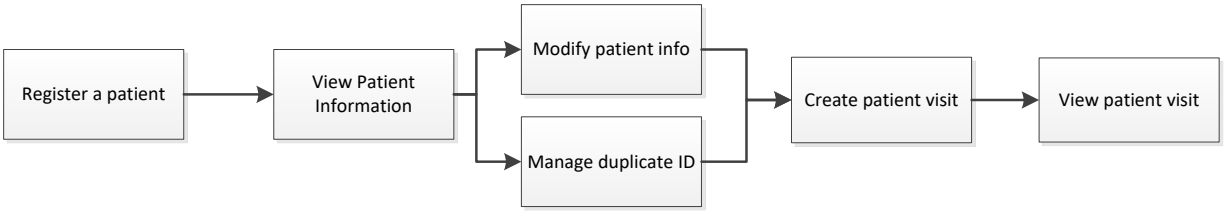
Patient Management in Pharmacy Based allows the authorized users of the system to create, view and manage the unique identification and related information of the Patients visiting the hospital or clinic.

3.1.1 Patient Management Overview



PM.OV1: Patient Management (Pharmacy Based) Overview

3.1.2 Block Diagram



PM.BD1: Patient Management Block Diagram

3.1.3 Purpose

System will require patient to be registered before any transactions are allowed for a patient. Upon registration, every patient will get a unique identification number within the system. The patient registration screen will allow authorized user to create patient registration into the system. If Patient has registered into the system, then user will be allowed to modify the details as needed; given that the user is authorized personnel.

Process will start when patient come to pharmacy with their prescription paper.

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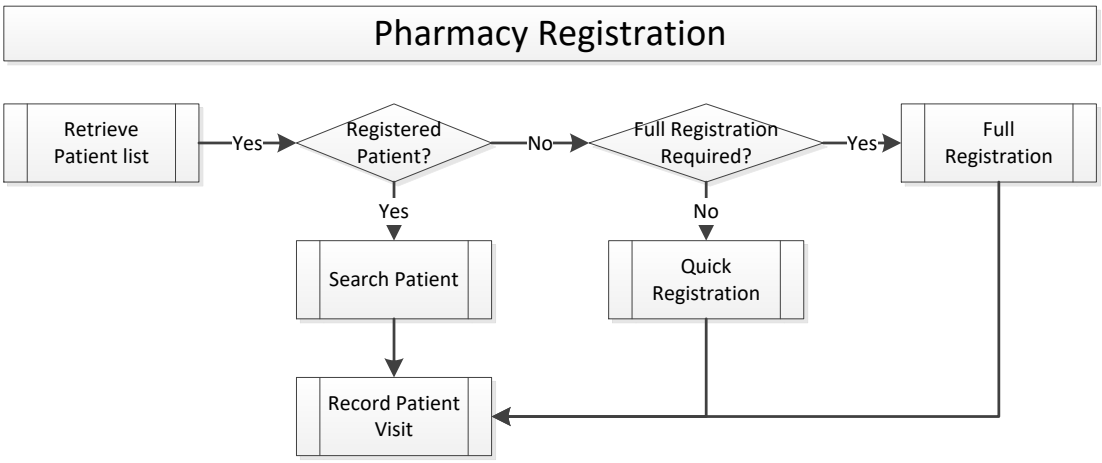
3.1.4 Screen Navigation Diagram

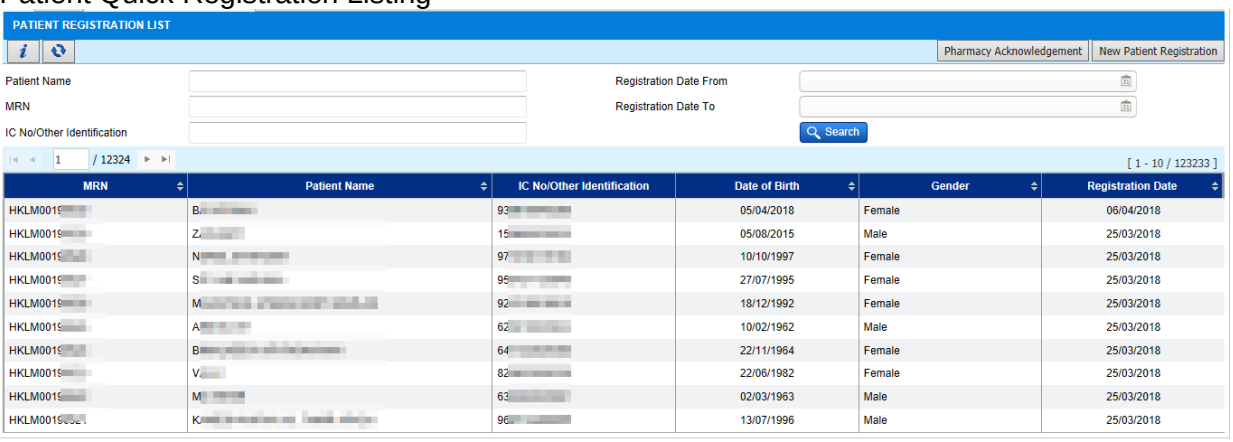


PM.SND1: Patient Registration

3.1.5 Detail Functionality and Screen

3.1.5.1 Patient Quick Registration Listing

3.1.5.1.1 Screen Design

ID	PM.SD1
Description	Patient Quick Registration Listing
Diagram Patient Quick Registration Listing 	
Notes	Patient registration will be done at pharmacy instead of facility registration counter. Process will start when patient come to pharmacy with their prescription. • Click on search button to search for the patient. • Click on patient info to view patient details. • Click on 'Patient Acknowledgement' button to open Pharmacy Acknowledgement screen. • Click on 'New Patient Registration' button to open registration screen.

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Cross References	PM.SD2 - Patient Registration Screen PM.SD3 - View/Update Patient Details Screen PM.SD4 - Visit/Admission Registration Screen

3.1.5.1.2 Application Business Rules

Below are the application business rules for Patient Registration Listing screen

No.	Name	Description
1.	Search existing patient record	Enter the search criteria and click on search button. By default, this screen will allow user to search by the following criteria: i. MRN - Patient listing shall be retrieved from the database for all registered patients based on matching MRN. ii. Patient Name – Patient listing shall be retrieved from the database for all registered patients based on matching Patient Name. iii. ID No. – Patient listing shall be retrieved from the database for all registered patients based on matching ID No. iv. Registration Date range - Patient listing shall be retrieved from the database for all registered patients where registration date within the selected range. After required information is entered; user can click on the 'Search' button to search the information. If user enters multiple criteria; System will return the value based on the criteria.
2.	Patient List	Results of the search will listed below the search criteria section. The patient list will contain the following information: i. MRN ii. Patient Name iii. ID Number iv. DOB v. Gender vi. Registration Date
3.	Patient details	Click on patient record to open patient details screen.
4.	Refresh List	Click on Refresh button and listing will be defaulted back to default value.

3.1.5.1.3 Input Validation Rules

Below is the input validation rules for the above screen:

No.	Name	Description	Mandatory	Format
1.	Patient Name	Medication order listing shall be retrieved from the database for all registered patients with visit based on matching Patient Name.	No	Text field (searching field)
2.	MRN	Medication order listing shall be retrieved from the database for all registered patients with visit based on matching MRN.	No	Text field (searching field)

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No.	Name	Description	Mandatory	Format
3.	IC No/Other Identification	Medication Order listing shall be retrieved from the database for all registered patients with visit on matching IC No/Other Identification number.	No	Text field (searching field)
4.	Registration Date From	Patient listing shall be retrieved from the database for all registered patients where registration date within the selected range.	No	Calendar format in dd/mm/yyyy
5.	Registration Date To	Patient listing shall be retrieved from the database for all registered patients where registration date within the selected range.	No	Calendar format in dd/mm/yyyy

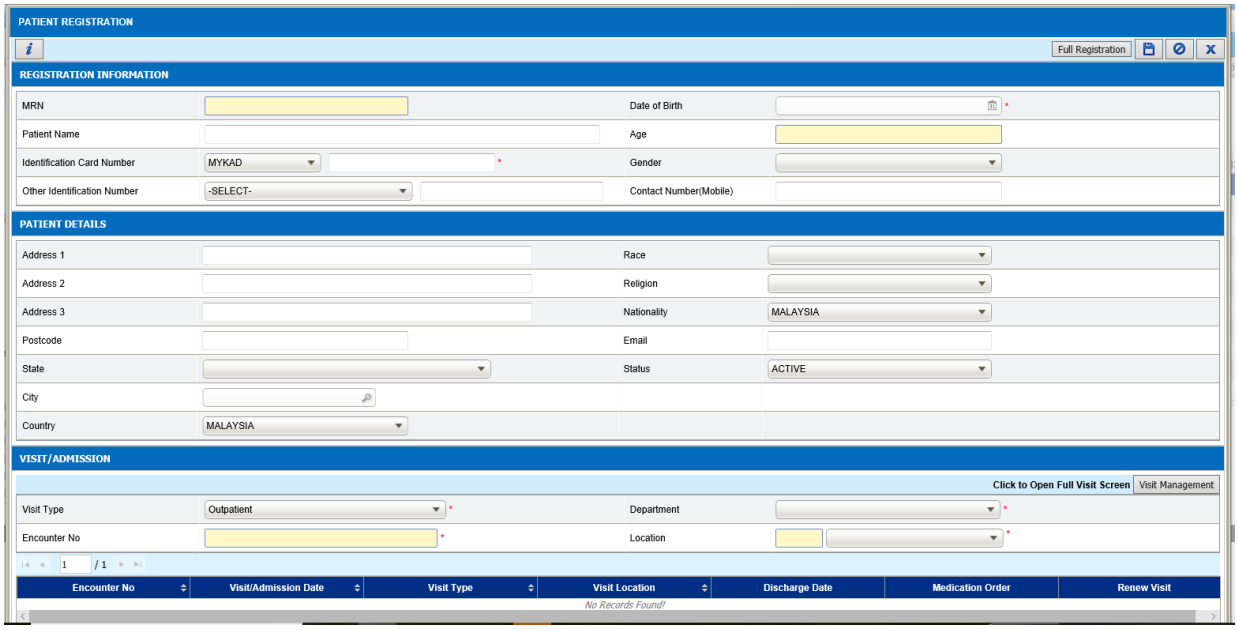
3.1.5.2 Patient Registration Screen

3.1.5.2.1 Screen Design

ID	PM.SD2
Description	Patient Registration Screen

Diagram

Patient Registration Screen



Notes	• Click on 'Save' button to save the registration • Click on 'Full Registration' to view full patient registration screen as in full based. • Click on 'Visit Management' to open View Management screen.
Cross References	PM.SD1 - Patient Registration Listing Screen PM.SD3 - View/Update Patient Details Screen

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3.1.5.2.2 Application Business Rules

Below are the application business rules for Patient Registration Screen

No.	Name	Description
1.	Patient Name	Name of a person as in NRIC / Passport or other identification documents. This field is free text with a capacity of 50 characters. This field is mandatory.
2.	Gender	Biological sex of the patient. Gender is to be selected from the drop down list. Dropdown will be populated from lookup table where domain = 'Gender'.
3.	Date of Birth	Date of birth to be selected from Calendar. This field is mandatory. If user enters MyKad or MyKid value, date of birth will be auto displayed. Refer to formula at id PR.SFM1 DOB.
4.	Identification Card No	Identification Card No – MyKad or MyKid number. Dropdown will be populated from lookup table where domain = 'ID_TYPE_MAIN'. This field is number only with a capacity of 12 characters. IC No Identification is a mandatory field but if user choose this as 'Others', it will not be a mandatory field.
5.	Other Identifications	Unique identification number for police, army and others holding special ID.Dropdown will be populated from lookup table where domain = 'ID_TYPE'. Other identifying types are as follows: • Birth Certificate • Driving License • Father IC • Mother IC • Military Card Number • Old IC No • Passport • Pension Card • Police Card Number • Work Permit • Unknown Patient • UNHCR • Others
6.	Unknown Patient	If ID = "Unknown", user need to enter the following information only: • Gender • Approximate age Name. System will auto generate the Patient Name if this field not entered by user. Refer to PR.SFM5 Patient name.
7.	Race	Race of patient (for Malaysian only). This field will show ethnic type in a combo box based on the 'Ethnicity' values configured in the lookup table. If user choose Race=Others, the race need to be entered in the subsequent textbox. This field is free text with a capacity of 20 characters.
8.	Religion	Religion as per NRIC and relevant documents or as stated by the individual. This field will show type of religion in a combo box based on the 'Religion' values configured in the lookup table.

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No.	Name	Description
		If user choose Religion=Others, the religion need to be entered in the subsequent textbox. This field is free text with a capacity of 20 characters.
9.	Contact Number	This field is number only with a capacity of 20 characters.
10.	Email	This field is free text with a capacity of 50 characters.
11.	Address	i. Address 1 - To capture the patient address. This field is free text with a capacity of 50 characters. ii. Address 2 - To capture the remainder of the patient address if Address 1 does not suffice. This field is free text with a capacity of 50 characters. iii. Address 3 - To capture the remainder of the patient address if Address 1 and Address 2 do not suffice. This field is free text with a capacity of 50 characters. iv. Post code - This field is number only with a capacity of 5 characters. v. State - This field will show list of Malaysian state in a combo box based on the 'State' values configured in the lookup table. vi. City will - This field is free text with a capacity of 30 characters. vii. Country - This field is defaulted to 'Malaysia'. It will show list of country in a combo box based on the 'Country' values configured in the system parameter table.
12.	Status	By default patient status will be ACTIVE, user is allow to change the status to INACTIVE. Inactive patient information is viewable for history purpose but user is not allowed to create new transaction for this patient.
13.	Save patient information	Click on 'Save' button to save the registration information and MRN number will be generated. Refer to PR.SFM4 MRN. Display the visit/admission section. Refer to screen in PM.SD3 View/Update Patient Details Screen.

3.1.5.2.3 Input Validation Rules

No.	Name	Description	Mandatory	Format
1.	MRN	MRN number will be auto generated by system once user save the new patient information. MRN number will be auto generated start with facility code number and 8 running number at the back. This field is a free text but read only field.	Yes	Read only
2.	Patient Name	User shall be able to enter the name of a person as in NRIC / Passport or other identification documents. This field is free text with a capacity of 50 characters.	Yes	Text field
3.	Identification Card Number	User shall be able to enter the identification Card No – MyKad or MyKid number. Once MyKad or MyKid is being entered, system will auto generate the Date of	Yes	Text field

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No.	Name	Description	Mandatory	Format
		Birth, Gender and Age. This field is mandatory unless if use choose identification as 'Others', this field is not mandatory.		
4.	Other Identification Number	Unique identification number for police, army and others holding special ID.Dropdown will be populated from lookup table where domain = 'ID_TYPE'. Other identifying types are as follows: • Birth Certificate • Driving License • Father IC • Mother IC • Military Card Number • Old IC No • Passport • Pension Card • Police Card Number • Work Permit • Unknown Patient • UNHCR • Others If user choose dataset=Unknown Patient, system will auto populate 'Unknown Patient' into patient name. Date of birth and age will not be mandatory.	No	Text field
5.	Date of Birth	User shall be able to enter date of birth selected from Calendar. This field is mandatory. If user enters MyKad or MyKid value, date of birth will be auto displayed.	Yes	Calendar format in dd/mm/yyyy
6.	Age	Age number will be auto calculated based on MyKad OR MyKid number or by date of birth entered by user. For Unknown patient, the age become null.	No	Read only
7.	Gender	Biological sex of the patient. Gender is to be selected from the drop down list. Dropdown will be populated from lookup table where domain = 'Gender'.	No	Drop down
8.	Contact Number (Mobile)	User shall be able to enter the mobile contact number of the patient.	No	Number field
9.	Address 1	User shall be able to enter the first line of patient address.	No	Text field
10.	Address 2	User shall be able to enter the second line of patient address.	No	Text field
11.	Address 3	User shall be able to enter the third line of patient address.	No	Text field
12.	Postcode	User shall be able to enter the postcode of patient address.	No	Text field
13.	State	User shall be able to select the state from drop down	No	Drop down

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No.	Name	Description	Mandatory	Format
		which consist states in within Malaysia.		
14.	City	User shall be able to enter the city. The drop down value consists a city in search field. Enter the Town Code or Town Description and search on the city name. Select the city name from the selected list.	No	Search field
15.	Country	User shall be able to select country from whole world from the drop down dataset.	No	Drop down
16.	Race	Display race of patient (for Malaysian only in a drop down). This field will show ethnic type in a combo box based on the 'Ethnicity' values configured in the lookup table. If user choose Race=Others, the race need to be entered in the subsequent textbox. This field is free text with a capacity of 20 characters.	No	Drop down
17.	Religion	Religion as per NRIC and relevant documents or as stated by the individual. This field will show type of religion in a combo box based on the 'Religion' values configured in the lookup table. If user choose Religion=Others, the religion need to be entered in the subsequent textbox. This field is free text with a capacity of 20 characters.	No	Drop down
18.	Nationality	Display nationality based on country. If user choose other country than Malaysia, system will display as 'Bukan Warganegara' and highlight with yellow color in patient banner.	No	Drop down
19.	Email	User shall be able to enter email of the patient. It is a free text field.	No	Text field
20.	Status	User shall be able to edit the status of the patient to Active or Inactive. By default, after create new patient, status will be updated as Active.	No	Drop down
21.	Visit Type	User able to choose visit type for the created visit. Visit type dataset as below: i. Inpatient: for inpatient visit. ii. Outpatient: for outpatient visit. Patient record visit will be ended by cronjob at 12:00 midnight on the same day of the visit. iii. SPUB: for SPUB order iv. Outsource: for outpatient visit v. Walk In: for outpatient visit vi. Daycare: for inpatient visit. Patient record is displayed until the patient discharge Emergency: for inpatient visit. Patient record is displayed until the patient discharge. System auto discharge after 24 hours.	Yes	Drop down
22.	Encounter No	Encounter number will be auto generate after user save the new visit information.	Yes	Read only
23.	Department	Display the department available in the facility. User	Yes	Drop down

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No.	Name	Description	Mandatory	Format
		shall be able to choose the department from the drop down list.		
24.	Location	Display the location available in the facility in drop down. User shall be able to choose the location from the drop down list.	Yes	Drop down

Formula always corresponding to the field name on above screen.

ID	Name	Formula
PR.SFM1	DOB	Upon Identification Card Number is entered, auto displayed the DOB: First 6 character of MyKad or MyKid (YYMMDD). Convert this value to (DD/MM/YYYY) format. (E.g. 801204092212 → DOB: 04/12/1980)
PR.SFM2	Age	Age will be auto calculated based on DOB *Age = Current date - DOB* Age format 999Y 99M 99D (E.g. 24Y 11M 25D, 02M 13D)
PR.SFM3	Gender	Upon Identification Card Number(MyKad or MyKid) is entered, auto displayed the gender as below: • Female if the ID end with even number. • Male if the ID end with odd number.
PR.SFM4	MRN	MRN is auto generated. It will contain facility prefix and then an 8 digit running sequence no. E.g. HPSFHPSF00000001, KKE08004500000001
PR.SFM5	Patient name	If ID = “Unknown Patient”, upon save, system will auto generate the Patient Name if this field not entered by user. Format: *UNKNOWN.<Gender>.<Approximate Age>* (E.g.: UNKNOWN.MALE.25 Years)

3.1.5.3 View/Update Patient Details Screen

3.1.5.3.1 Screen Design

ID	PM.SD3
Description	View/Update Patient Details screen
Diagram i. View Update Patient Demographic	

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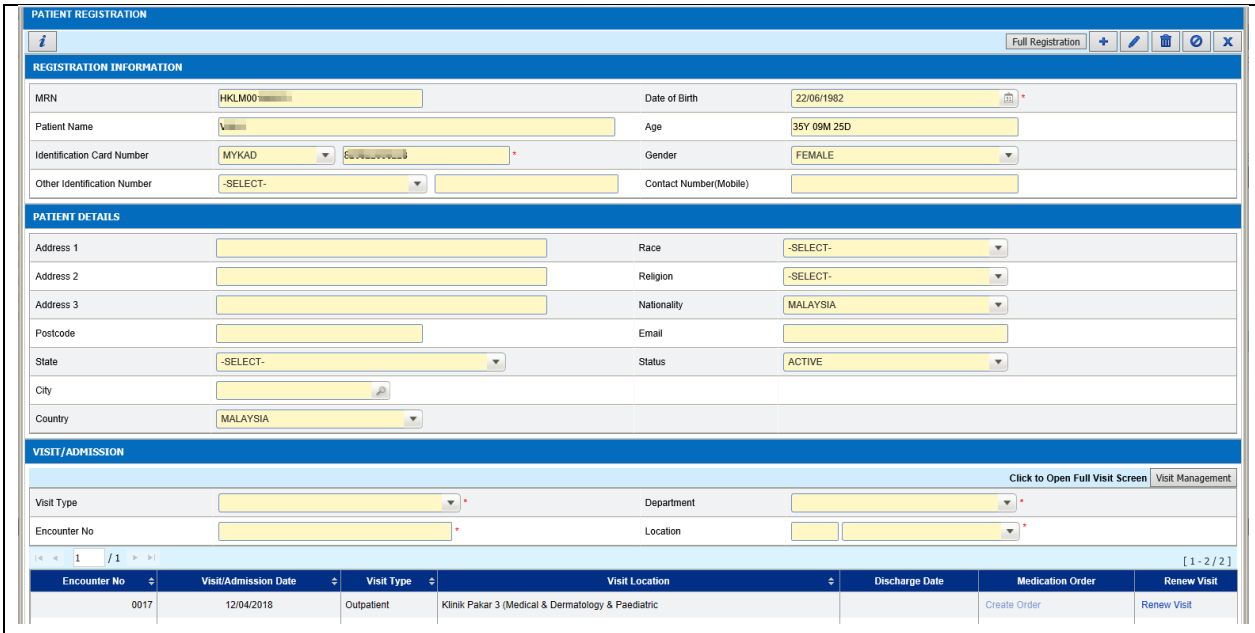

Notes	• Click on 'Edit' button to edit patient information. • Click on 'Save' button to update the registration • Click on 'Add(+)' button to add new visit/admission • Click on visit info to view visit details. • Click on medication order column link (*Create Order*) to key-in the order. • Click on 'Visit Management' to open Visit Management screen.
Cross References	PM.SD4 Visit/Admission Registration Screen

3.1.5.3.2 Application Business Rules

No.	Name	Description
1.	Editable fields	All fields are editable except MRN and Age.
2.	Create new visit	Click on Add button to create new visit. Patient is allowed to have multiple active visits at the same time.
3.	Visit/Admission List.	The visit/admission list will contain the following information: i. Encounter No ii. Visit/Admission Date iii. Visit Type iv. Visit location v. Discharge Date vi. Medication Order vii. Renew Visit
4.	Medication Order	'Create Order' link only enable if the visit is active. • On click of this link, medication order screen will be displayed. If the previous order created still in draft mode, user is able to

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No.	Name	Description
		view the order and proceed with verification. Else, blank order screen will be displayed.
5.	Renew Visit	Click on Renew Visit link to re-create the same visit with current date. If the visit is still active, user shall not be able to click on this link. The link will be 'blur' if the visit still active.

3.1.5.3.3 Input Validation Rules

Refer to section 3.1.5.3.2. The available field for edit are similar with field in new registration.

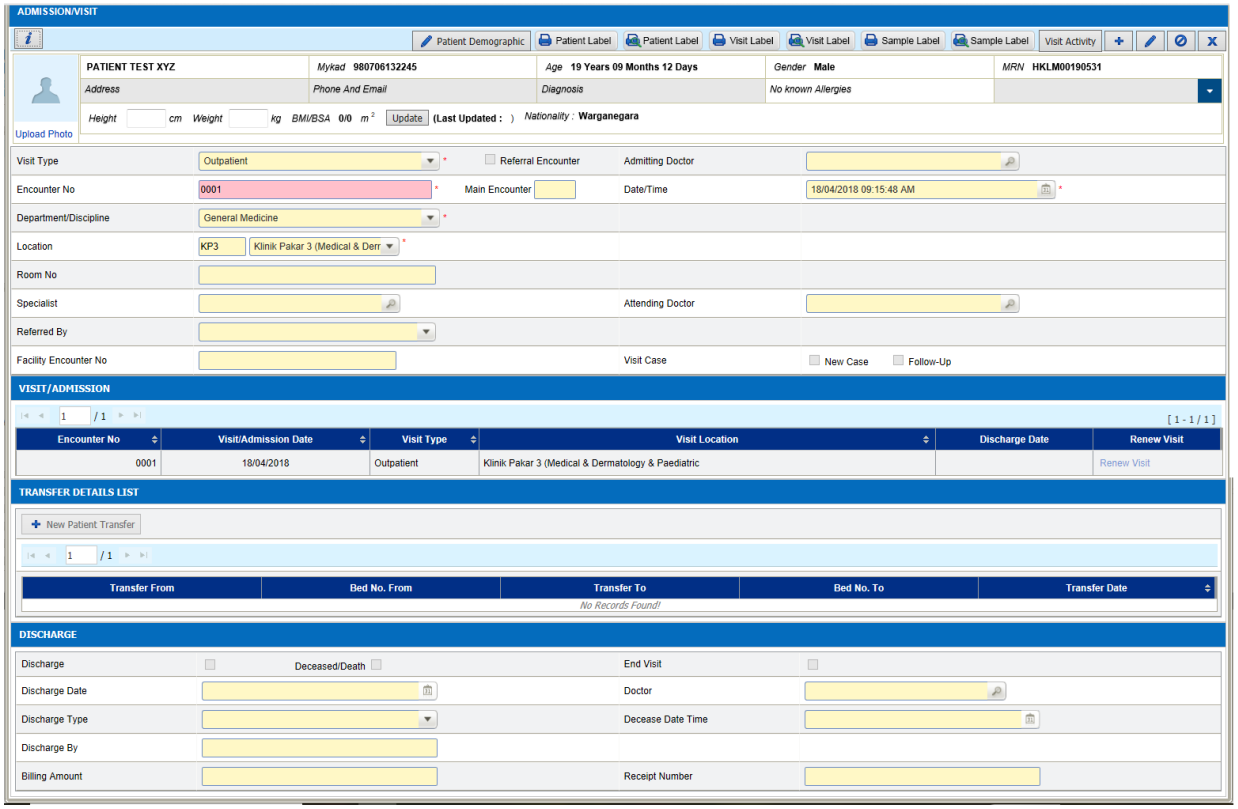
3.1.5.4 Admission/Visit Screen

3.1.5.4.1 Screen Design

ID	PM.SD4
Description	Admission/Visit Screen

Diagram

i. Admission/Visit Screen



ii. Create New Patient Visit

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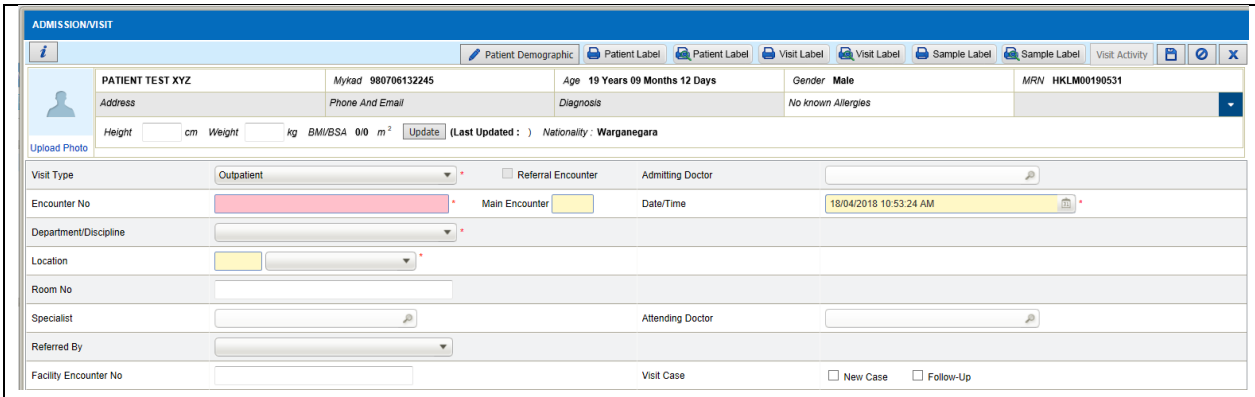

Notes	This function remains as in full PhIS. Additional field required is 'Facility Encounter No'. Transfer and discharge functions remain as in full PhIS. • Click on 'Patient Demographic' to open patient demographic information. • Click on 'Patient Label' to print the patient label. • Click on 'Visit Label' to print the visit label. • Click on 'Sample Label' to print the sample label. • Click on 'Visit Activity' to view the visit activity list. • Click on 'Add(+)' button to add new visit. • Click on 'Save' button to save changes on patient visit information. • Click on 'Edit' button to edit on current visit information or to end visit.
Cross References	PM.SD3 View/Update Patient Details Screen

3.1.5.4.2 Application Business Rules

No.	Name	Description
1.	Facility Encounter No	Encounter number from facility registration.
2.	Encounter Number	Encounter number for the visit created which auto generated once save the visit.
3.	Save visit information	On click of save, after visit successfully created, alert message will be displayed "Proceed to medication order" with OK and Cancel button. On click of OK button, medication order screen will be displayed. On click of Cancel button, remain in visit screen.
4.	End visit	On click of Edit button user able to end the patient visit. Ticked on End Visit checkbox, the visit will be ended.
5.	Referral visit	If patient has existing inpatient visit and user add new visit also as inpatient, the referral visit checkbox will auto ticked and non-editable. However, if existing visit is inpatient and user create new visit as outpatient, the referral visit checkbox is auto ticked but still editable. User can choose to untick this checkbox if the outpatient

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No.	Name	Description
		visit is not a referral visit.

3.1.5.4.3 Input Validation Rules

Refer to section 3.1.5.3.2. The available field are similar with field in new registration. Below are additional input validation rules when add new visit.

No.	Name	Description	Mandatory	Format
Create New Visit				
1.	Visit Type	Search record in Medication Profile by visit type (Outpatient, Inpatient, Emergency, Daycare, SPUB, Walk-In, and Outsource).	Yes	Drop down
2.	Referral Encounter	The checkbox is auto ticked if create new inpatient visit on existing inpatient visit. If new visit is outpatient, the checkbox is ticked but editable.	No	Check box
3.	Encounter Number	Encounter number shall be auto generated for the visit created.	Yes	Read only
4.	Main Encounter	The main encounter number will auto appear if user create new visit on existing patient visit. This number display from the main visit encounter number.	Yes	Read only
5.	Department/ Discipline	Display the department available in the facility. User shall be able to choose the department /discipline from the drop down list. The value display will depends on the selected location.	Yes	Drop down
6.	Location	Display the location available in the facility. User shall be able to choose the location from the drop down list. The value display will depends on the selected department/discipline. Once user choose the location, location code will auto display.	Yes	Drop down
7.	Room No	User shall be able to enter the room number of the patient.	No	Text field
8.	Specialist	User shall be able to select the specialist list from search result.	No	Search field
9.	Referred By	User shall be able to select the referred by value from this selection: Ambulance Call, Day Care Centre, Emergency Department, General Practitioner, Government Health Clinic, Government Specialist, Non-MOH Hospital, Other Government Hospital, Outpatient Department, Police, Preliminary Assessment Centre, Private Hospital, Others.	No	Drop down
10.	Facility Encounter No	User shall be able to enter facility encounter number manually.	No	Text field
11.	Admitting Doctor	User shall be able to choose admitting doctor from the search result.	No	Search field
12.	Date/Time	Date and time will auto populate based on current date and time hen the visit is created.	Yes	Read only
13.	Attending Doctor	User shall be able to select the attending doctor from the search result.	No	Search field
14.	Visit Case	Consists of 2 check boxes value, New Case or Follow-Up case. User shall be able to select either one.	No	Checkbox

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3.1.5.5 Find and Merge Duplicate Patient Record

This function will allow user to find and merge duplicate Patient records. This function remains as in full PhIS. Refer to PhIS_CPS_SDD_PM_v1.0.

3.1.5.6 Cancel Discharge Patient

To function will allow user to cancel discharge the patient. This function remains as in full PhIS. Refer to PhIS_CPS_SDD_PM_v1.0.

3.1.5.7 Clinical Summary

Clinical summary will show summary of patient visit and medical information for the selected patient. It also contains patient diagnosis and allergy information. This function remains as in full PhIS. Refer to PhIS_CPS_SDD_PM_v1.0.

3.1.5.8 Record Retrieval

Record Retrieval will show summary of patient visit and medical information for the selected patient. It also contains dispensing history and current medication order. This function remains as in full PhIS. Refer to PhIS_CPS_SDD_PM_v1.0.

3.1.6 Integration

No.	Name	Description
1.	eGL	1. To display check on non-paying patient through eGL integration. 2. eGL system will send back a notice to indicate the patient information whether it is eligible for non-paying patient.

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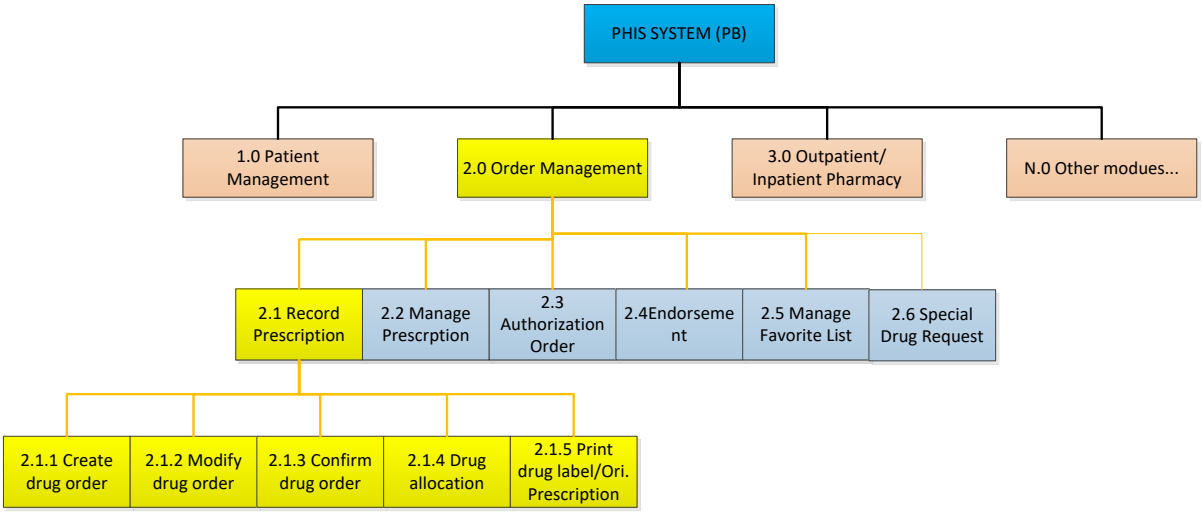
3.2 Record Prescription

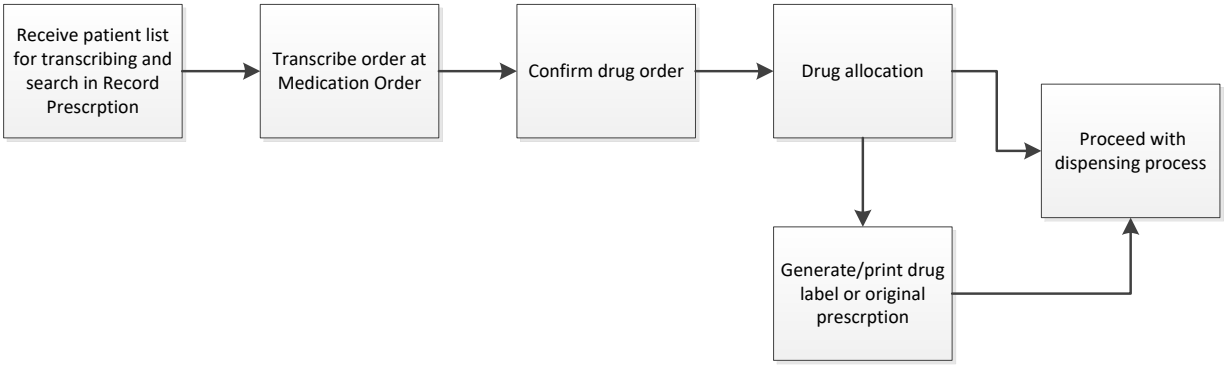
Record Prescription (Medication Order) screen which allows pharmacist to key-in order prepared by doctor during their consultation. This screen is access from Record Prescription link.

3.2.1 Record Prescription Overview



OM.OV1: Overview of Record Prescription for Pharmacy Based

3.2.2 Block Diagram



OM.BD1: Block Diagram of Record Prescription/Medication Order

3.2.3 Purpose

System will require medication order to be transcribed before pharmacist can dispense the drug. Pharmacist will key-in the prescription together with intervention made. Once complete, pharmacist can proceed with preparation of the drug as in full based PhIS. No authorization required if the drug is Category A drug. Endorsement also not required and will be done manually. Medication Order screen which allows pharmacist to key-in order prepared by doctor during their consultation. This screen is access from Record Prescription link.

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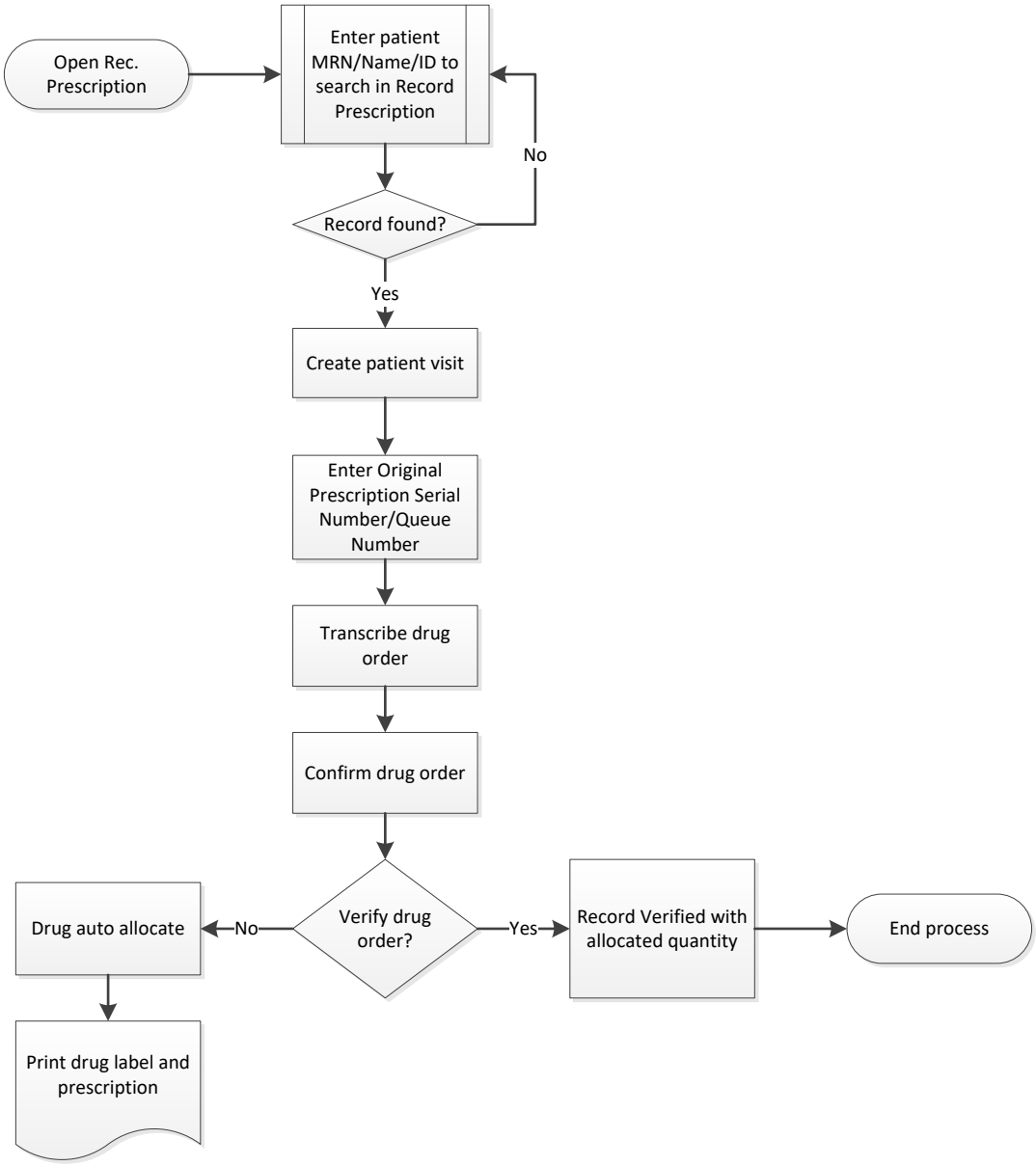
3.2.4 Screen Navigation Diagram



OM.SND1: Medication Order (Pharmacy Based) flow

3.2.5 Detail Functionality and Screen

3.2.5.1 Medication Order screen

3.2.5.1.1 Screen Design

ID	OM.SD1
Description	Medication Order screen
Diagram *i. Search in Record Prescription link*	

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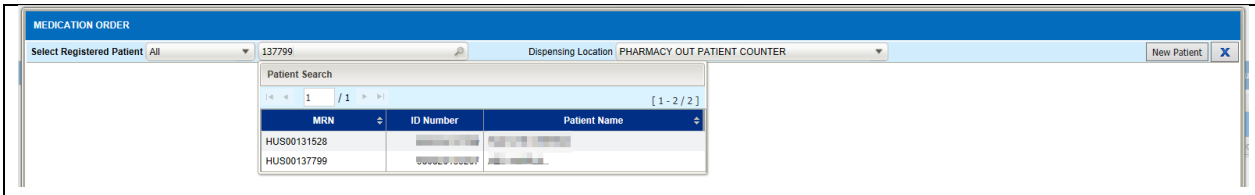
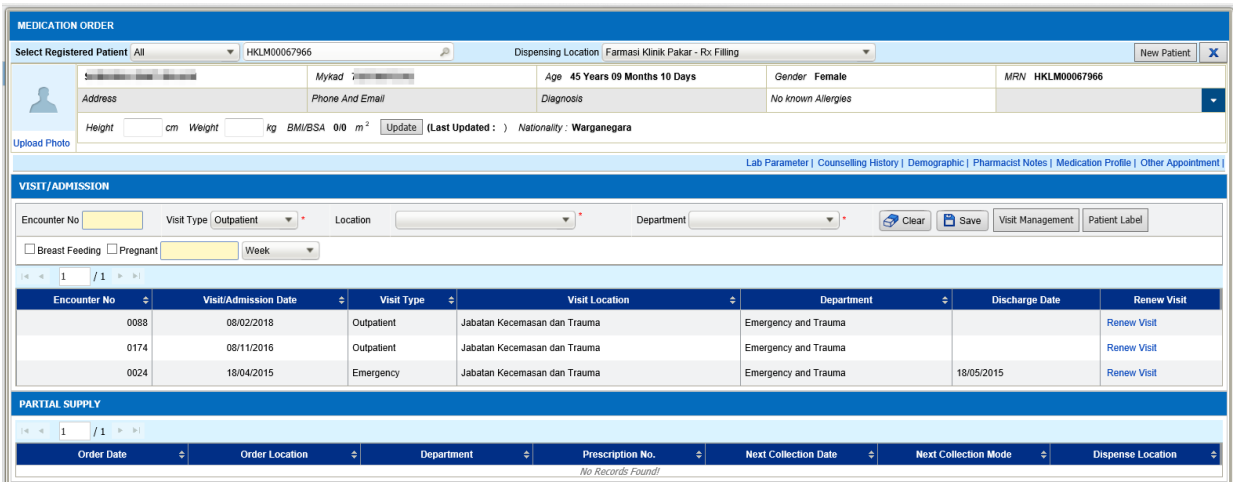


ii. Medication Order screen open



Notes	• Click on search button to search for the patient. • Click on 'Clear' button to clear the visit information. • Click on 'Save' button to save the visit information. • Click on 'Visit Management' button to open Visit Management screen. • Click on 'Patient Label' button to print patient label. • Click on 'New Patient' button to create visit for new patient. • Click on patient visit info to open medication order screen.
Cross References	PM.SD1 Patient Listing

3.2.5.1.2 Application Business Rules

Below are the application business rules for Medication Order screen

No	Name	Description
1.	Search existing patient record	• Enter the search criteria and click on search button to find the patient record. • User able to search patient details by 'All', 'Patient MRN', 'Patient ID' and 'Patient Name'. • Facility will be able to set the default value for search, which this is done at Facility Information (Facility Setting) screen. • Below are rules to search by the following criteria: i. Patient MRN - Patient listing shall be retrieved

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No	Name	Description
		from the database for all registered patients based on matching MRN. ii. Patient Name – Patient listing shall be retrieved from the database for all registered patients based on matching Patient Name. iii. Patient ID – Patient listing shall be retrieved from the database for all registered patients based on matching patient ID number. • If user set the search value to 'All', user able to enters multiple criteria; System will return the value based on AND criteria.

2.	Medication Order	This page consists of:
		• Patient banner – display the important information of the patient
		• Visit/Admission section – display the field as below:
		  ○ Encounter Number
		  ○ Visit Type
		  ○ Location
		  ○ Department
		  ○ Breast Feeding
		  ○ Pregnant
		  ○ A list of previous and current visit in table form with columns (Encounter No, Visit/Admission Date, Visit Type, Visit Location, Department, Discharge Date, Renew Visit)
		• Partial Supply section – display the list of partial supply record from previous visit or current visit
		• User shall be able to save the new visit information by click on 'Save' button.
		• 'Clear' button used to clear the new visit information.
		• By clicks on 'Visit Management' button, Visit Management screen will appear and user shall be able to edit on patient information.
		• By clicks on 'Patient Label' button, a preview of patient will appear and user able to print it.

3.	Transcribe order	• Save on new visit information or click on existing visit record to open medication order screen and pharmacist will be able to transcribe the drug order. • Before confirming on the order, user need to enter the original prescription serial number and queue number (if queue number setting is mandatory).

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3.2.5.1.3 Input Validation Rules

Below is the input validation rules for the above screen.

No.	Name	Description	Mandatory	Format
1.	Encounter No	Auto generated number when new visit is save.	Yes	Read only
2.	Visit Type	Search record in Medication Profile by visit type (Outpatient, Inpatient, Emergency, Daycare, SPUB, Walk-In, and Outsource).	Yes	Drop down
3.	Location	Search on location based on selected visit type in drop down list.	Yes	Drop down
4.	Department	Search on department based on selected location in drop down list..	Yes	Drop down
5.	Breast Feeding	Column name will appear only if the patient is a female. Check on the check box if patient still at breast feed.	No	Checkbox
6.	Pregnant	Tick on the check box if patient is pregnant. Once ticked, a free text column and drop down value consists of 'Day',' Weeks', 'Month' and 'Trimester' will appear. Enter the number in the text field and choose the duration value.	No	Text field with drop down

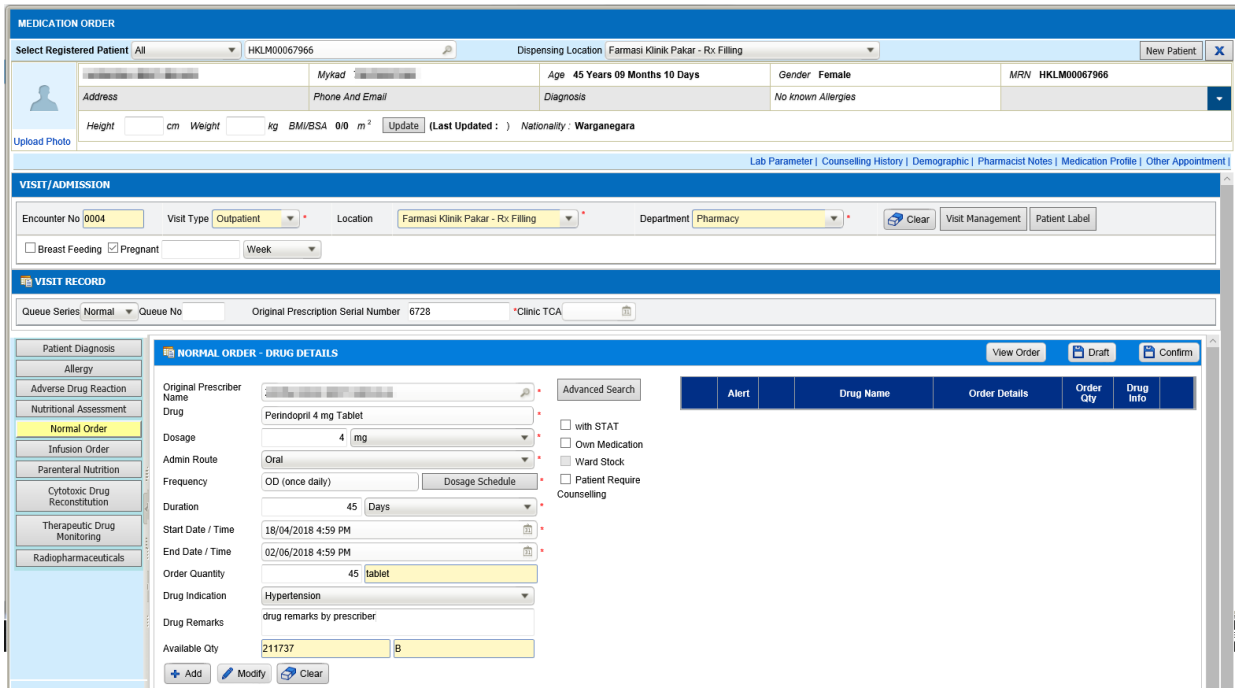
3.2.5.2 Normal Order

3.2.5.2.1 Screen Design

ID	OM.SD2
Description	Normal Order

Diagram

i. Create Normal order



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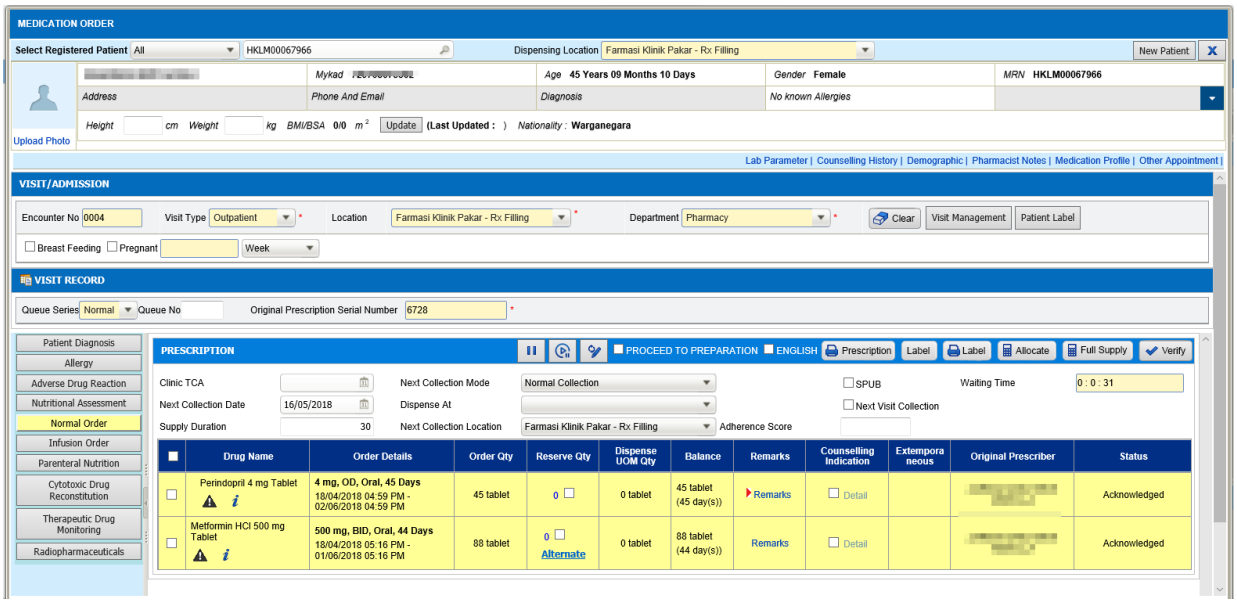
ii. After Confirm Normal Order



Notes	Pharmacist can transcribe the order and do the verification at the same time. During key-in order, fields required are: i. Original Prescriber Name ii. Original Prescription Serial Number Verification process as in full PhIS will be done here after confirm drug order. Create normal order: • Click on 'Add' button to add order detail into draft list. • Click on 'Modify' button to modify the drug from draft list. • Click on 'Clear' button at drug order section to clear the entered drug details and start order for new drug name. • Click on 'Clear' button at visit information section to close the normal order section and go back to medication order screen. • Click on 'Advance Search' button to open drug list from favorite list. • Click on 'View Order' button to view the draft list in table format. • Click on 'Draft' button to save the drug list into draft table. • Click on 'Confirm' button to confirm the draft list order. After confirm normal order: • Click on intervention icon to intervene the order. • Click on 'Hold' icon to hold the drug order. • Click on 'Resume' icon to resume back the hold order. • Click on 'Prescription' button to print the original prescription report. • Click on 'Label' button to print drug label (direct print and preview print). • Click on 'Allocate' button to do allocation for the order. • Click on 'Full Supply' button to do fully supply of the order.

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	• Click on 'Verify' button to verify the drug order.
Cross References	OM.SD1 Medication Order

3.2.5.2.1 Application Business Rules

Below are the application business rules for Normal Order screen

No	Name	Description
1.	Original Prescriber Name	Name of order prescriber. Prescriber to be selected from the drop down list. Dropdown will be populated from prescriber master list. Prescriber name is by drug level. User able to select multiple prescriber name in one prescription order. If the visit type is SPUB or Walk-in, this field is free text with a capacity of 250 characters.
2.	Original Prescription Serial Number	Original Prescription Serial Number entered by pharmacist when create the order. This field is free text with a capacity of 20 characters.
3.	Normal order	Normal order – Create medication order for patient. Consist of the following function: a. Normal Order (default value will follow drug master setup) i. Mandatory information during order are: • Drug Name - Drug name can be search by Active Ingredient, Drug Name and Trade Name. Trade Name is common brand name for this drug. Information defined in drug master. • Dosage – Dosage of the drug required (per administration) • Administration Route [1] - Drug administration route • Frequency [2] – Drug frequency • Duration – Duration of the order • Start and End Date – Start and end date of the order ii. Non-Mandatary Information • Drug Indication • Drug Remarks iii. Auto displayed information • Order Quantity – calculated based dose, frequency, duration and administration route. However, user is allowed to change this value.

[1] *A route of administration in pharmacology and toxicology is the path by which a drug, fluid, poison, or other substance is taken into the body. Routes of administration are generally classified by the location at which the substance is applied. Common examples include oral and intravenous administration.*

[2] Frequency - *The number of regular recurrences in a given time*

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No	Name	Description
		• Drug Category – Category of the drug[i]. Please refer to 'Order Authorisation' • Dispense Location – Order routing for dispensing. Drug Name, Administration Route, Frequency and Indication are define in master table and link to specific drug with default value.
4.	New order	During creation of new order i. Only Add and Clear button will be enabled. ii. User able to select different prescriber name for a different drug order. iii. After select the drug and key-in the information, on click of Add button data will be populated into the prescription draft list. iv. If user click clear button after key-in the drug information, all field will be cleared. User able to select another drug.
5.	Modify order	User can edit the selected drug by clicking on the data from the prescription draft list. Data will be populated into the order details section and update button will be enabled. On click of Modify button, modification on the Drug Details will be updated in order record and prescription draft list again.
6.	Delete order	User can delete the entered drug by select the drug from the prescription list and click on Delete icon. Once click on Delete icon, record will be removed from the list.
7.	Draft	On click of Draft button; i. Order status = 'Draft'. ii. Screen will still remain at Medication Order and user still able to modify on the order..
8.	Confirm	On click on Confirm button; i. Order status = 'Acknowledged. ii. Medication Order screen will display the Screening and Verification stage and user able to verify the order.
9.	Context menu	Function available in Context menu are: i. Add to Favorite ii. Taper Up iii. Taper down
10.	Print prescription	User is able to print the medication prescription after drug order is confirmed. This button will appear at screening stage, after drug is confirm.

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No	Name	Description
11.	Label	User is able to print the drug label once the allocation has been done.
12.	Reserve Quantity	User is able to do drug allocation before verify the drug. Else, system will auto allocate the drug on click of verify button. This function same with verification process in full PhIS.
13.	Verify	On click of Verify button, it will call same function as in Screening and Verification screen in full PhIS. On click of Verify button: i. Confirmation message will be displayed before user proceeds to verify the order. ii. Once user confirms to verify the record, system will update the drug status to 'Verified'. iii. Medication Order screen will be close and bring user back to refresh screen of Record Prescription.
14.	Proceed to Preparation	On click of 'Proceed to Preparation checkbox i. Verify button will be replaced with Prepare button. ii. Drug will be auto allocate to supply duration day, if user has not allocate the drug earlier. iii. On click of Prepare button, it will call same function as in Preparation screen in full PhIS. iv. Order Status = 'Prepared' after user click on Prepare button. v. Medication Order screen will be close and bring user back to refresh screen of Record Prescription.
15.	Dispensing flow	Facility able to select the dispensing flow process which setting are by location. There are 2 types of dispensing flow: i. Multi Stage Dispensing – allow multiple user to do the dispensing. After order is confirm, dispensing flow will go through screening stage, preparation and dispensing by different user. ii. Single Stage Dispensing – allow only one user to do the dispensing after confirm the order. Single Stage screen will appear after user confirm the order.

3.2.5.2.1 Input Validation Rules

Below is the input validation rules for the above screen.

No.	Name	Description	Mandatory	Format
Order Normal Drug				
1.	Queue Series	Able to select queue series from drop down dataset: Normal, Express, Special, Others	No	Drop down
2.	Queue Number	Able to enter the queue number. If facility set the queue number to be mandatory, then this field is mandatory. Otherwise it is not mandatory to fill in.	No	Text field
3.	Original Prescription Serial Number	Able to enter the manual prescription number. It is mandatory for pharmacy based.	Yes	Text field

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No.	Name	Description	Mandatory	Format
4.	Clinic TCA	User able to select on the calendar date for the clinic TCA.	No	Calendar format in dd/mm/yyyy
5.	Original Prescriber Name	User able to search on original prescriber name through search function. Type in few character and click on search icon to find the prescriber name from the list.	Yes	Search field
6.	Drug	Drug name can be search by Active Ingredient, Drug Name and Trade Name. Trade Name is common brand name for this drug. Information defined in drug master.	Yes	Text field (Searching field)
7.	Dosage	Dosage of the drug required (per administration). Value will be defaulted to selected drug strength. If drug without strength, value will be defaulted to quantity value from drug master.	Yes	Drop down list
8.	Admin Route	Drug administration route which refer to Administration Route code table.	Yes	Drop down list
9.	Frequency	Drug frequency which refer to Frequency code table.	Yes	Drop down list
10.	Duration	Duration of the order. Calculated in days. Formula: *Duration = End date - Start date.* On change of this value, order end date will be updated.	Yes	Text field
11.	Duration Unit	Default to 'Day(s)' however user can select specific value: • Day(s) • Weeks • Year	Yes	Drop down list
12.	Start Date/Time	Able to select on date for start order date.	Yes	Calendar in format dd/mm/yyyy
13.	End Date/Time	Able to select on date for end order date.	Yes	Calendar in format dd/mm/yyyy
14.	Order Quantity	Calculated based dose, frequency, duration and administration route. However, user is allowed to change this value.	Yes	Text field
15.	Drug Indication	Indication of the drug on particular disease. Data will appear after user enter the drug name, if any.	No	Drop down list
16.	Drug Remarks	Remarks entered by prescriber. Previous prescriber's remark can been seen once same drug being ordered for the same patient.	No	Text field
17.	Available Qty	Drug name can be search by Active Ingredient, Drug Name and Trade Name. Trade Name is common brand name for this drug. Information defined in drug master.	Yes	Text field (Searching field)
After Confirm Order				
1.	Queue Number	Able to enter the queue number. If facility set the queue number to be mandatory, then this field is mandatory. Otherwise it is not mandatory to fill in.	No	Text field
2.	Clinic TCA	User able to select on the calendar date for the clinic TCA.	No	Calendar format in dd/mm/yyyy
3.	Next Collection Date	Applicable for outpatient order. User able to select from calendar on next collection date of the medication to be collected.	No	Calendar format in dd/mm/yyyy
4.	Supply Duration	User able to change the supply duration before allocate the drug. By default for inpatient visit, supply duration is	Yes	Text field

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No.	Name	Description	Mandatory	Format
		default to 1 day and for outpatient visit, default supply duration is 30 days.		
5.	Next Collection Mode	Applicable for outpatient order. By default it will display 'Normal Collection'. Able to select the next collection mode from drop down dataset: Normal Collection, Appointment Card, Email and Take, Fax and Take, SMS and Take, Telephone and Take, UMP, Others).	Yes	Drop down
6.	Dispense At	Applicable for outpatient order. User able to select the location of dispensing from drop down dataset: Pharmacy Counter, Bedside, Drive Through Counter.	No	Drop down
7.	Next Collection Location	By default it will display the current collection location. User able to choose other location for dispensing for the next visit.	Yes	Drop down
8.	SPUB	A checkbox for user to tick if record need for SPUB.	No	Checkbox
9.	Next Visit Location	A checkbox for user to tick if the order will be collected in future date. Once ticked, drug will be auto allocated but status remain as 'Ordered' after user click on 'Verify' button.	No	Checkbox
10.	Adherence Score	Allow user to enter Compliance Score (in numerical score between 1 until 8) in 2 decimal point.	No	Text field
11.	Waiting Time	Display the waiting time in *hh:mm:ss.*	Yes	Read only

3.2.5.3 Allergy

Remain as in full PhIS. Refer to full based document on Order Management; PhIS_CPS_SDD_OM_FB_v1.0

3.2.5.4 Diagnosis

Mandatory to be filled at first time order (by visit). Remain as in full PhIS. Refer to full based document on Order Management; PhIS_CPS_SDD_OM_FB_v1.0

3.2.6 Integration

No.	Name	Description
1.	MIMS	1. To display popup for Doctor or Pharmacist attention on: i. Drug Interaction by checking **Severity = "Severe"**. ii. Drug Allergy Interaction by checking **Count of Allergy Alerts > "0"**. iii. Duplicate Therapy Interaction by checking **Level = "1" and "2"** iv. Lactation interaction by checking **Severity = "Contraindicated".** v. Drug Pregnancy & Women of Childbearing Age Interaction by checking **FDA Category = "D" or "X"** vi. Dosage Interaction by checking **ID = IDS_DOSE_MAX_<value>** Normal interaction message, by clicking on icon to display the MIMS reply message (inclusive all interaction message that meet MIMS criteria.)

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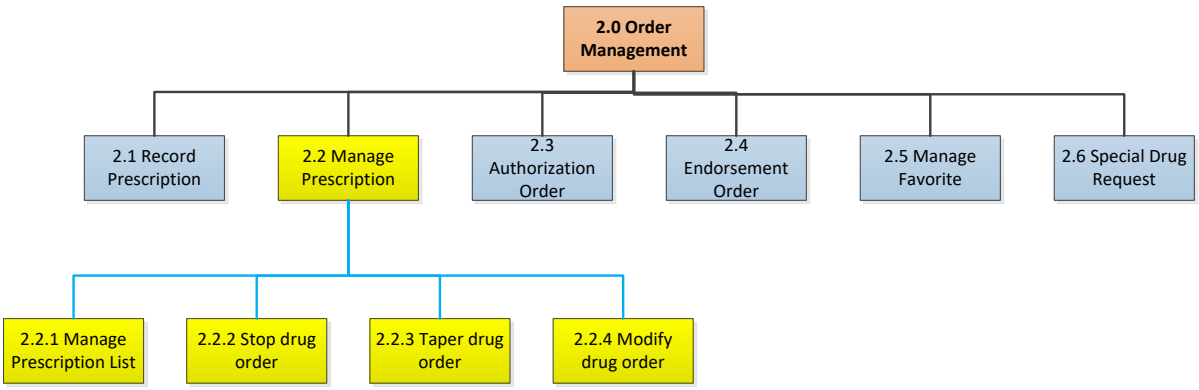
3.3 Manage Prescription

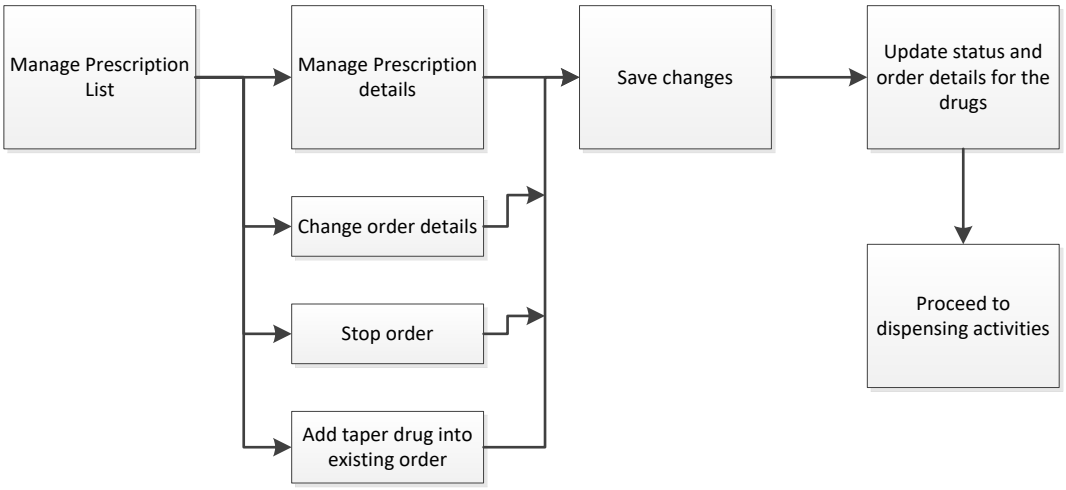
Manage Prescription used to manage the prescription ordered by pharmacist that has prescriber role.

3.3.1 Overview



MP.OMV1: Manage Prescription

3.3.2 Block Diagram



MP:BD1: Manage Prescription flow

3.3.3 Purpose

Manage Prescription screen will allow authorized users to modify order. Authorize user will be able to change the order details, stop the order and add taper drug for the existing drug order.

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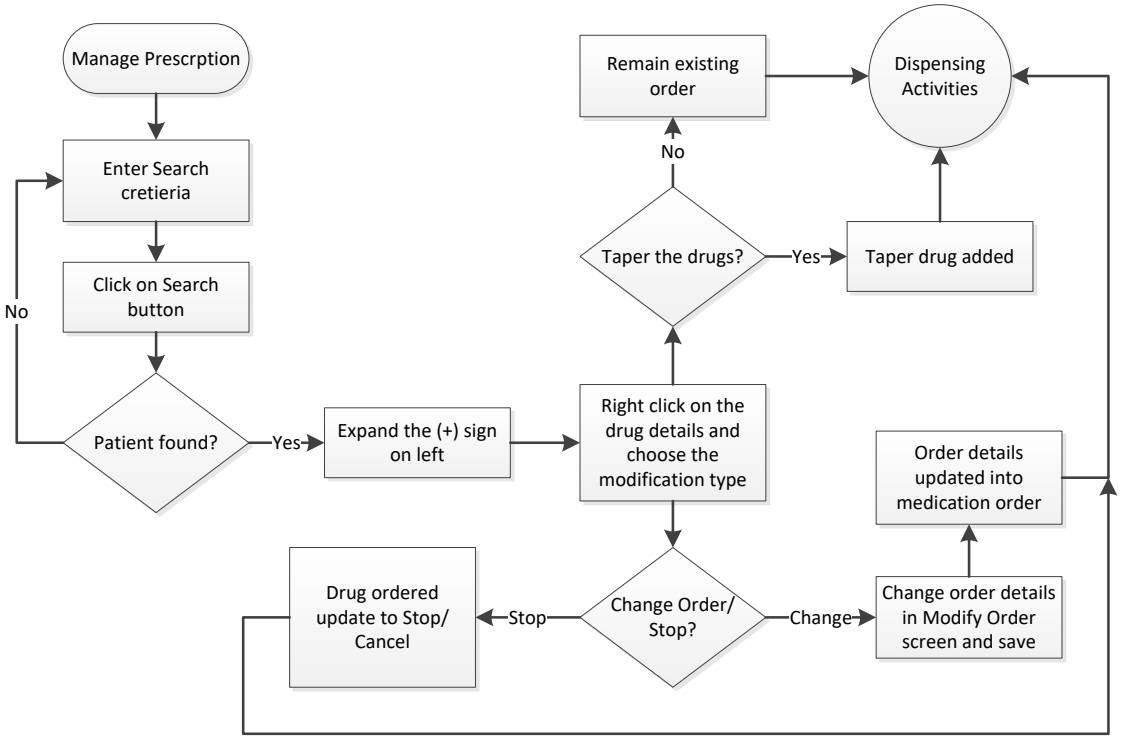
3.3.4 Screen Navigation Diagram



MF.SND1: Manage Favorite

3.3.5 Detail Functionality and Screen

3.3.5.1 Manage Prescription Listing

3.3.5.1.1 Screen Design

ID	MP.SD1
Description	Manage Prescription Listing
Diagram	

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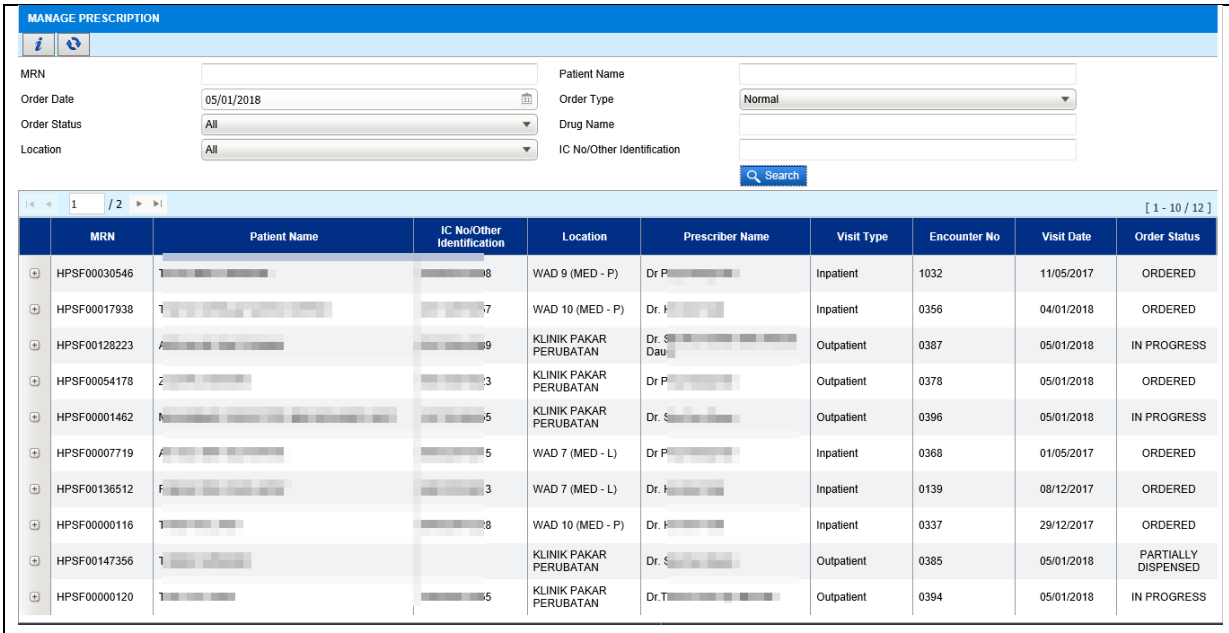

Notes	• Click on Search to search patient name based on filter criteria. • Click on (+) button to expand the record and see the drug order details.
Cross References	OM.SD2 – Medication Order.

3.3.5.1.2 Application Business Rules

No.	Name	Description
1.	Manage order list	Pharmacist able to manage their order if the order is still active. Pharmacist able to view patient list based on Manage Order Configuration. There are 4 options can be configured at facility level based on prescriber category:

Setting	Rules Applied	Impact
All	• Manage order created by other prescriber (all level) from same department and different department	All prescriber can manage other prescriber order including specialist order from other department
Department	• Manage order created by other prescriber (all level) from same department only	All prescriber can manage other prescriber order including specialist order within department
Other MO	• Manage order created by other prescriber (all level) from same department • Manage order created by other MO/HO from different department	i. All prescriber can manage other prescriber order including specialist order within department ii. Prescriber can manage other department's MO/HO order iii. Prescriber not able to manage other department's specialist order

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		Prescriber (Own Order)	• Manage own order only	Other prescriber cannot manage the order if original prescriber is not around.
2.	Refresh Listing	Click on the Refresh button to reset all searched records and searching criteria to default value.		

3.3.5.1.3 Input Validation Rules

Below is the input validation on the above screen.

No.	Name	Description	Mandatory	Format
1.	MRN	Manage Prescription listing shall be retrieved from the database for all registered patients with visit based on matching MRN and related to original prescriber/pharmacist name that create the order.	No	Text field
2.	Order Date	This field will be used to search the record based on order start date.	No	Date
3.	Order Status	By default, Order Status set to All. This field will be used to search the record based on order status (Acknowledge, Dispense, Expired, In Progress, Order is on Hold, Order was Cancelled, Order was Discontinue, Ordered, Partially Dispense, Prepared Hold, Prepared, Uncollected, Verified).	No	Drop down
4.	Order Location	By default, Order Location is set to All. List of Location appear based on granted location of the user.	No	Drop down
5.	Patient Name	Medication order listing shall be retrieved from the database for all registered patients with visit based on matching Patient Name.	No	Text field
6.	Order Type	By default, Order Type set to Normal. List of order type in drop down value (IV, CDR, Normal, PN, and Radiopharmaceutical).	No	Drop down
7.	Drug Name	User able to search patient record based on drug name. Result will display for any order contains the drug name in search value.	No	Text field
8.	IC Number/ Other Identification Number	Manage Prescription listing shall be retrieved from the database for all registered patients with visit based on matching IC number or other identification number and related to original prescriber/pharmacist name that create the order.	No	Text field

3.3.6 Integration

None.

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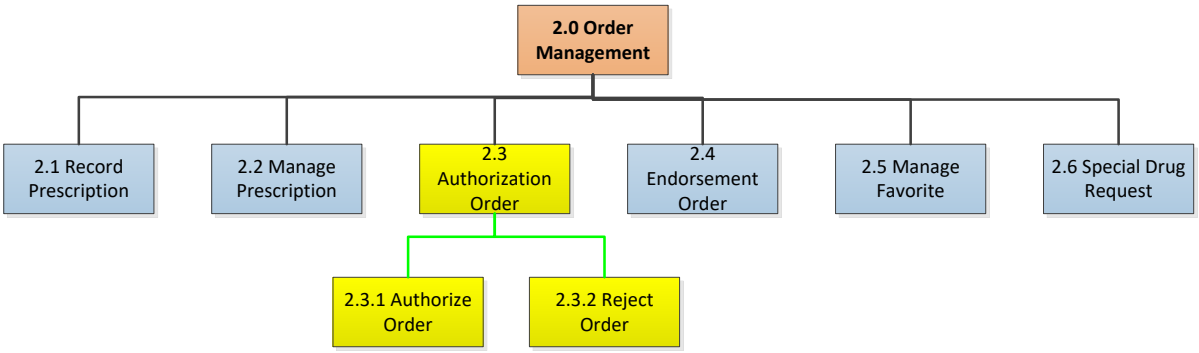
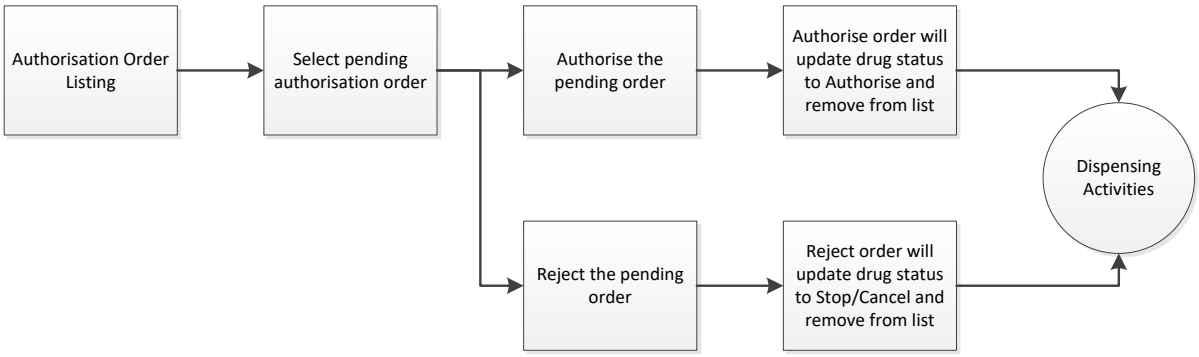
3.4 Order Authorization

3.4.1 Overview



OA.OVW1: Order Authorization

3.4.2 Block Diagram



OA.BD1: Order Authorization

3.4.3 Purpose

Authorization Order screen used by specialist to authorize all pending's drug which ordered by medical officer. Specialist able to authorize the order or reject the order. If drugs has been authorized in an existing visit of the patient, once order same drug for other visit, no authorization is needed. However, it valid for 1 year. After 1 year, same drugs need to be authorize again. Specialist also able to reject the pending authorize drug. If it is being rejected, drug status will be updated to Stop/Cancel.

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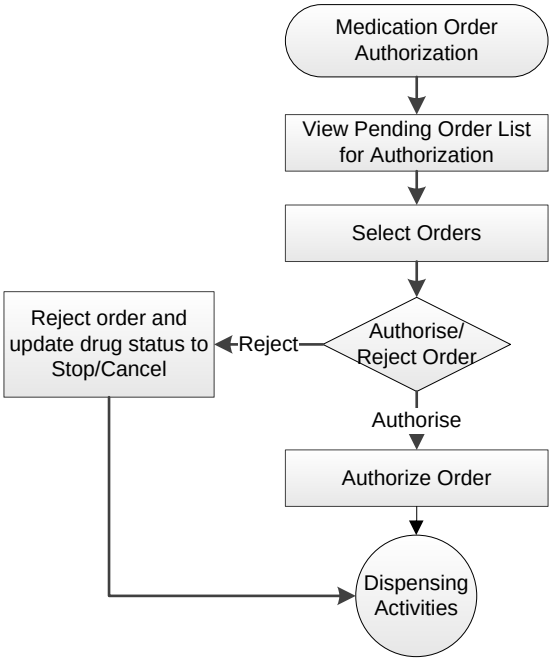
3.4.4 Screen Navigation Diagram



OA.SND1: Order Authorization

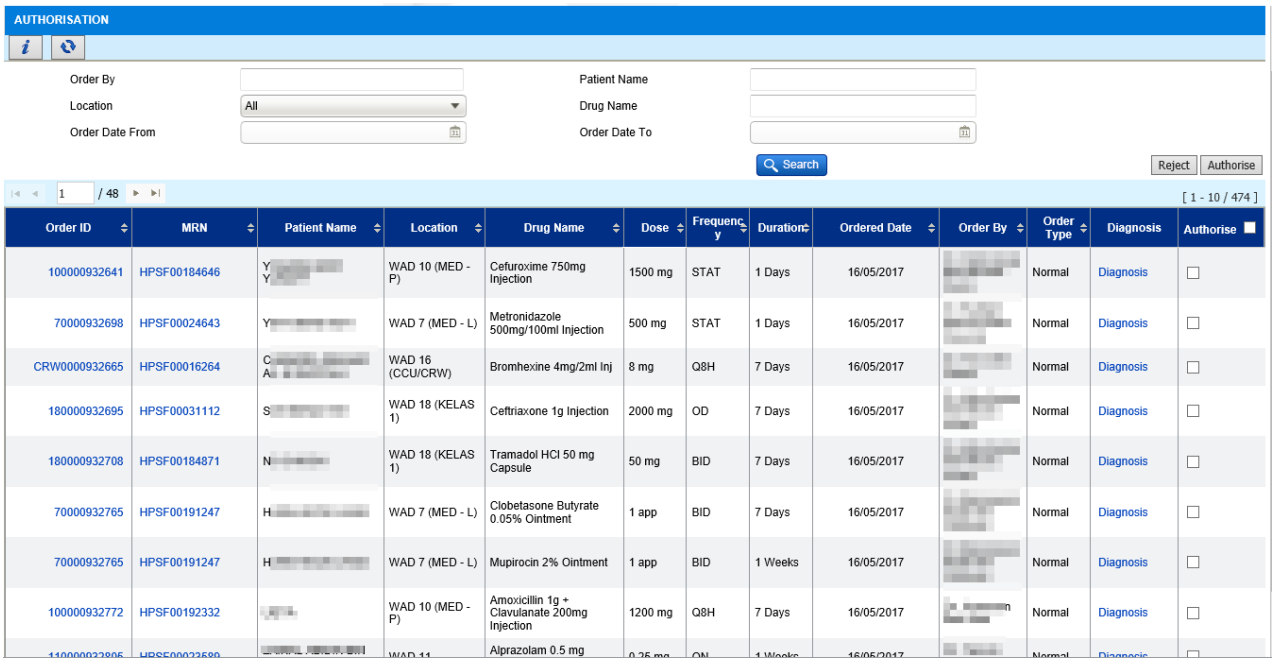
3.4.5 Detail Functionality and Screen

3.4.5.1 Order Authorization Listing

3.4.5.1.1 Screen Design

ID	OA.SD1
Description	Order Authorization Listing

Diagram



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Notes	• Tick on Authorise checkbox to select all pending authorisation record or tick one by one for a selected pending records. • Click on 'Reject' button to reject the pending authorisation order. • Click on 'Authorise' button to authorise the pending authorisation record. • Click on 'Search' button to search the pending authorisation order.
Cross References	Intervention record - Refer to PhIS_CPS_SDD_OPIP_v1.0.

3.4.5.1.2 Application Business Rules

No.	Name	Description
1.	Authorise Order	• Once a medication order is placed and the 'order involves drugs which the user is not authorized to Prescribe' then the Order has to be authorized. Authorization of order will be done on this screen. It will involve: *i. Criteria 1* ○ Order of all category A/KK, A and A* ○ Order of all category B drugs (prescriber category C) *ii. Criteria 2* ○ This only applies for first order of the drug with same active ingredient. No authorization required for subsequent orders of the same active ingredient. ○ No limit on duration to allow repeating orders of the same active ingredient except for Antibiotic. Exception for Antibiotics as below: a. Authorization given for a particular admission/visit expired once the patient is discharged/checkout. (Drug Authorization Category = A#) b. If patient is admitted/visit again and the same antibiotic is used, a new authorization is required for that same antibiotic *iii. Criteria 3* ○ Not SPUB order (pharmacist transcribe SPUB order or drug come from SPUB online, no authorizations required for any type of drugs) • Specialist also able to modify the order if not dispense by pharmacist yet. Specialist able to view authorisation list in their task list too. • Pharmacist can continue dispense the order with manual authorisation. System will not block pharmacist to dispense the drug without authorisation from specialist.
2.	Reject Order	Once order is rejected, drug status will change status to Stop/Cancel. Record will be remove from the pending list and no more status PA (Pending Authorisation) appear at dispensing screen.
3.	Authorisation Listing	Listing for pending authorisation record appear based on prescriber granted role.

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4.	Refresh list	Click on the Refresh button to reset all searched records and searching criteria's to default value.
5.	Diagnosis link	Click on Diagnosis link to open diagnosis info for the visit.

3.4.5.1.3 Input Validation Rules

Below is the input validation rules for the above screen.

No.	Name	Description	Mandatory	Format
1.	Order By	Order By can be search through user ID by name. It can filter any username based on input value as minimum as 1 character.	No	Text field
2.	Location	Default value was set to All. Location will be listed in a drop down format and display based on user granted location.	No	Drop down
3.	Patient Name	Medication order listing shall be retrieved from the database for all registered patients with visit based on matching Patient Name.	No	Text field
4.	Drug Name	Drug name can be search by Active Ingredient, Drug Name and Trade Name. Trade Name is common brand name for this drug. Information defined in drug master.	Yes	Text field
5.	Order Date From	To be selected from calendar control. It will be in dd/mm/yyyy format. Search criteria for start order from which date.	No	Calendar format in dd/mm/yyyy
6.	Order Date To	To be selected from calendar control. It will be in dd/mm/yyyy format. Search criteria for start order to what date.	No	Calendar format in dd/mm/yyyy

3.4.6 Integration

None.

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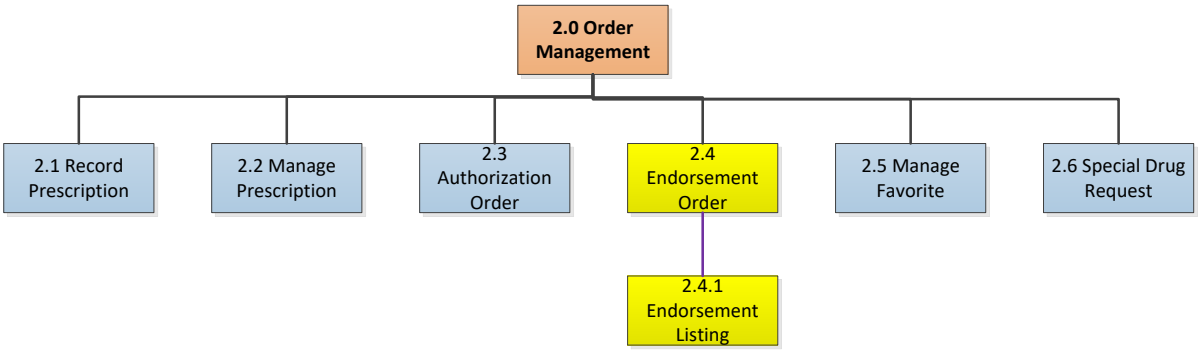
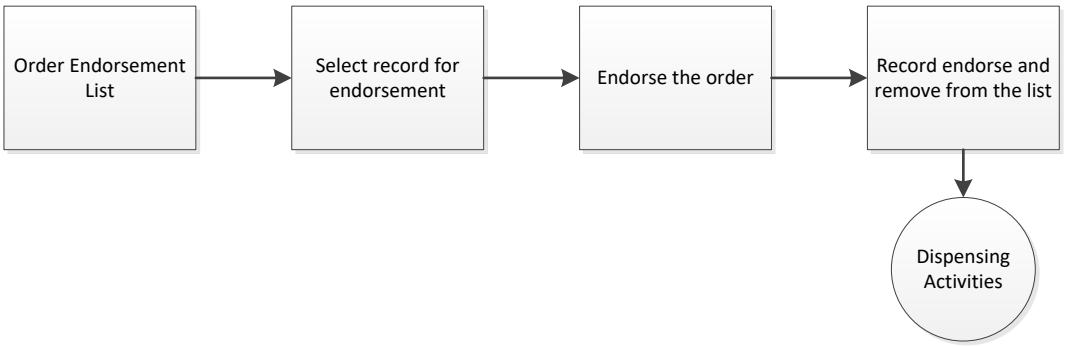
3.5 Order Endorsement

3.5.1 Overview



OE.OVW1: Order Endorsement

3.5.2 Block Diagram

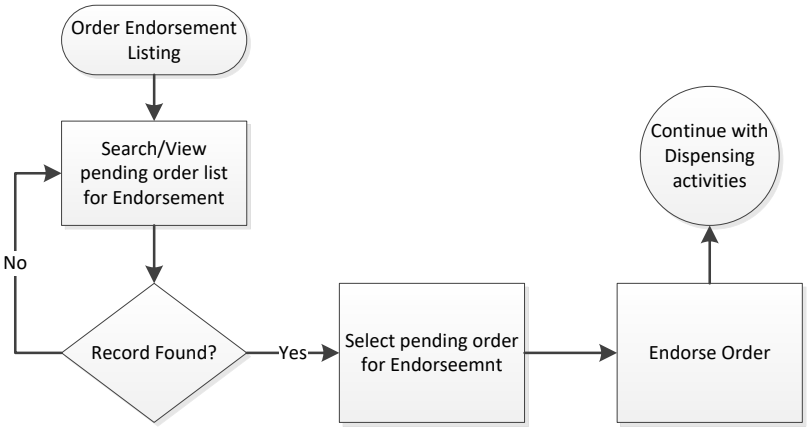


OE.BD1: Order Endorsement

3.5.3 Purpose

Modification of prescription done by pharmacist has to be endorsed except for SPUB order as a validation for prescriber. It also will involve medication order done by pharmacist during MTAC. Only authorized user will be allowed to endorse the medication order.

3.5.4 Screen Navigation Diagram



OE.SND1: Order Endorsement

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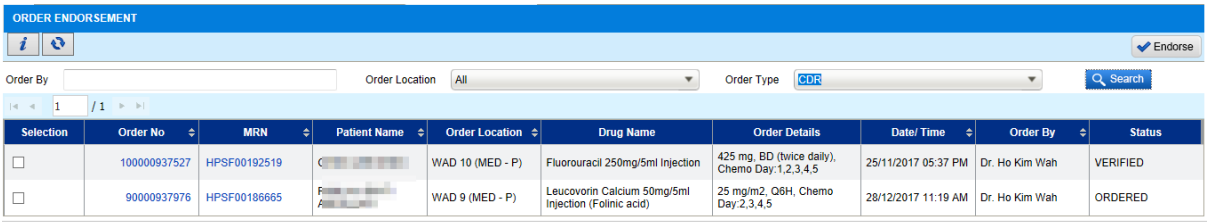
3.5.5 Detail Functionality and Screen

3.5.5.1 Order Endorsement Listing

3.5.5.1.1 Screen Design

ID	OE.SD1
Description	Order Endorsement Listing
Diagram	
Notes	• Click on 'Search' button to search the endorse record. • Click on 'Endorse' button to endorse the record. • Tick on checkbox to select record for endorsement.
Cross Reference	None

3.5.5.1.2 Application Business Rules

No.	Name	Description
1.	Endorsement Order	• All <u>orders modified by Pharmacists</u> or Pharmacy Assistants after consulting, the prescriber must be endorsed by the prescriber. • Endorsement of order will be done on this screen. It will involve: *i. Criteria 1* ○ Modification of prescription done by pharmacist (intervention) *ii. Criteria 2* ○ Medication order done by pharmacist during MTAC. *iii. Criteria 3* ○ Not SPUB/external(walk-in) order (pharmacist modify SPUB/external(walk-in) order, no endorsement required) • Only authorized user will be allowed to endorse the medication order. • Pharmacist can continue dispense the order even without endorsement. • Prescriber able to view endorsement list in their task list too.
2.	Refresh Listing	Click on the Refresh button to reset all searched records and searching criteria's to default value.

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3.5.5.1.3 Input Validation Rules

Below is the input validation for the above screen.

No.	Name	Description	Mandatory	Format
1.	Order By	Order By can be search through user ID by name. It can filter any username based on input value as minimum as 1 character.	No	Text field
2.	Order Location	Default value was set to All. Location will be listed in a drop down format and display based on user granted location.	No	Drop down
3.	Order Type	Default value set to Normal. Order Type will be listed in a drop down menu and consists of data (CDR, IV, Normal, PN, and Radiopharmaceutical).	No	Drop down

3.5.6 Integration

None.

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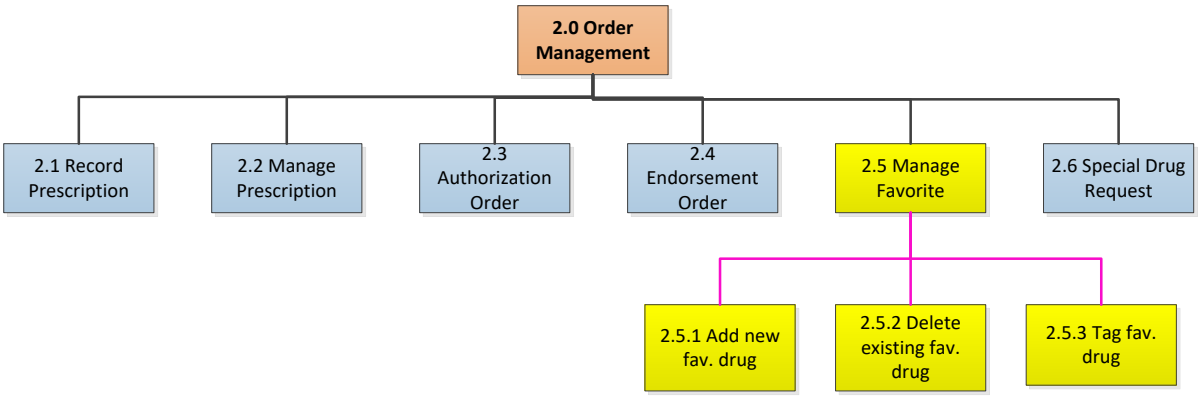
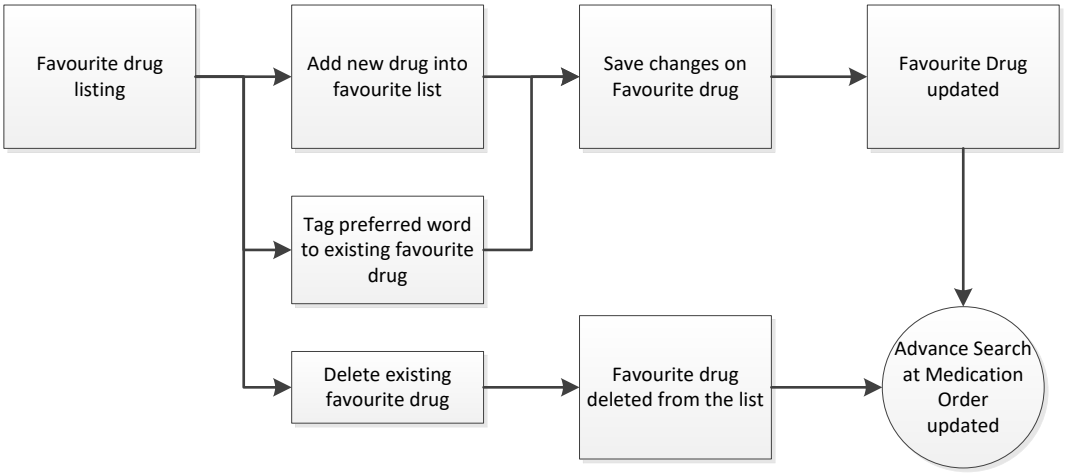
3.6 Manage Favourite

3.6.1 Overview



MF.OMV1: Manage Favourite

3.6.2 Block Diagram



MF.BD1: Manage Favourite

3.6.3 Purpose

Purpose of Manage Favorites screen is to add a favorable drug by specific user. User can create their own favourite drug to help them speed up prescribing/transcribing process. User can manage their own list in this screen. Function available are:

i. Add new drug to favourite list
ii. Remove drug from favourite list
iii. Tag (group) drug by user preference

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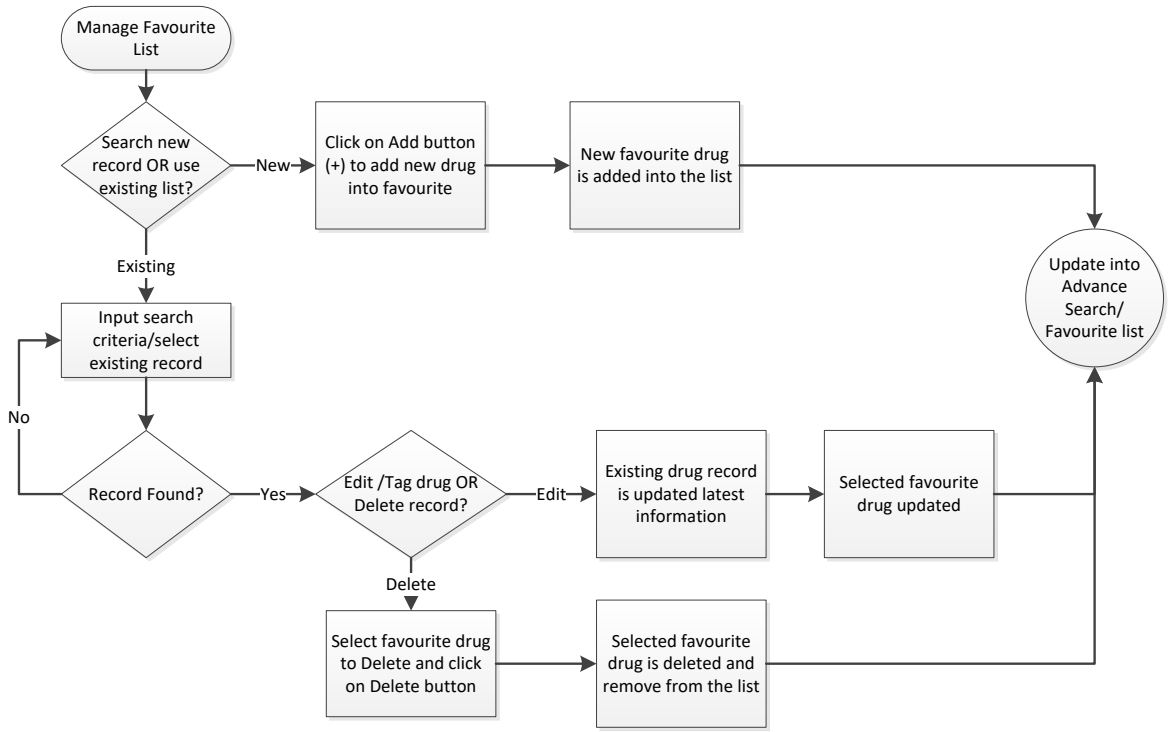
3.6.4 Screen Navigation Diagram



MF.SND1: Manage Favourite

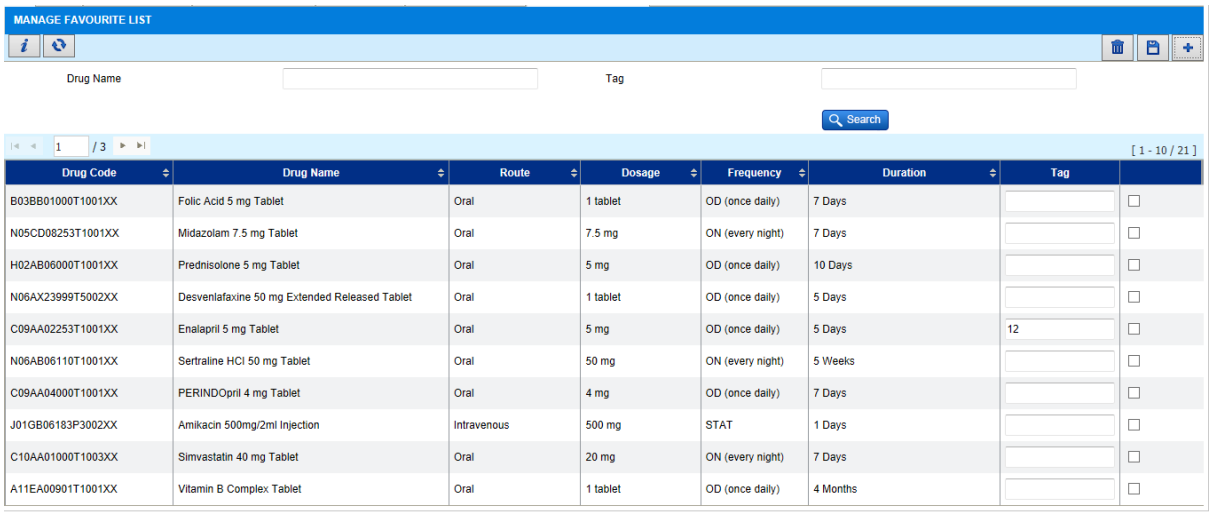
3.6.5 Detail Functionality and Screen

3.6.5.1 Manage Favourite Listing

3.6.5.1.1 Screen Design

ID	MF.SD1
Description	Manage Favourite Listing

Diagram



Drug Code	Drug Name	Route	Dosage	Frequency	Duration	Tag
B03BB01000T1001XX	Folic Acid 5 mg Tablet	Oral	1 tablet	OD (once daily)	7 Days	
N05CD08253T1001XX	Midazolam 7.5 mg Tablet	Oral	7.5 mg	ON (every night)	7 Days	
H02AB06000T1001XX	Prednisolone 5 mg Tablet	Oral	5 mg	OD (once daily)	10 Days	
N06AX23999T5002XX	Desvenlafaxine 50 mg Extended Released Tablet	Oral	1 tablet	OD (once daily)	5 Days	
C09AA02253T1001XX	Enalapril 5 mg Tablet	Oral	5 mg	OD (once daily)	5 Days	12
N06AB06110T1001XX	Sertraline HCl 50 mg Tablet	Oral	50 mg	ON (every night)	5 Weeks	
C09AA04000T1001XX	PERINDOpril 4 mg Tablet	Oral	4 mg	OD (once daily)	7 Days	
J01GB06183P3002XX	Amikacin 500mg/2ml Injection	Intravenous	500 mg	STAT	1 Days	
C10AA01000T1003XX	Simvastatin 40 mg Tablet	Oral	20 mg	ON (every night)	7 Days	
A11EA00901T1001XX	Vitamin B Complex Tablet	Oral	1 tablet	OD (once daily)	4 Months	

Notes	• Click on 'Search' button to search the drug record. • Click on 'Save' button to save the drug record changes.

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	• Click on 'Delete' button to delete the drug record. • Click on 'Add(+)' button to add new drug record. • Double click on drug name to open drug details for edited.
Cross References	OM.SD2 – Medication Order for normal order.

3.6.5.1.2 Application Business Rules

No.	Name	Description
1.	Favourite List	Listing of drugs will be by prescriber. Each prescriber will have different list of favourite drug and they themselves can manage the list.
2.	Refresh Listing	Click on the Refresh button to reset all searched records and searching criteria's to default value.

3.6.5.1.3 Input Validation Rules

Below is the input validation for the above screen.

No.	Name	Description	Mandatory	Format
1.	Drug Name	Drug name can be search by Active Ingredient, Drug Name and Trade Name. Trade Name is common brand name for this drug. Information defined in drug master.	Yes	Text field
2.	Tag (search field)	User can search by preferred name in Tag Text field. Input value is a preferred word set by the prescriber to few drugs which easier for them to find a group of drugs that can refer to a type of diagnosis.	No	Text field (Searching field)
3.	Tag (input field)	Enter a preferred same tag words for few drugs to group it together.	No	Text field

3.6.5.2 Manage Favourite

3.6.5.2.1 Screen Design

ID	MF.SD2
Description	Manage Favourite Add
Diagram i. Add new drugs	

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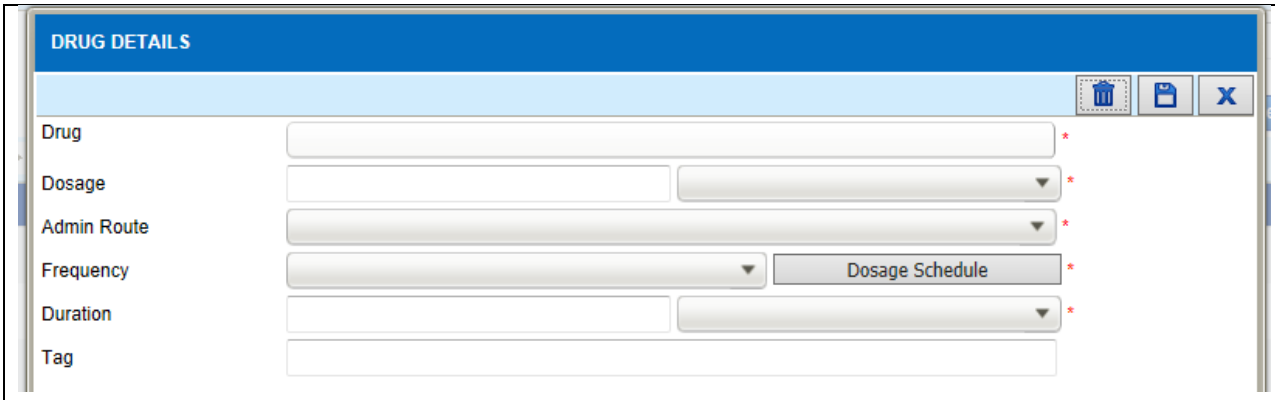
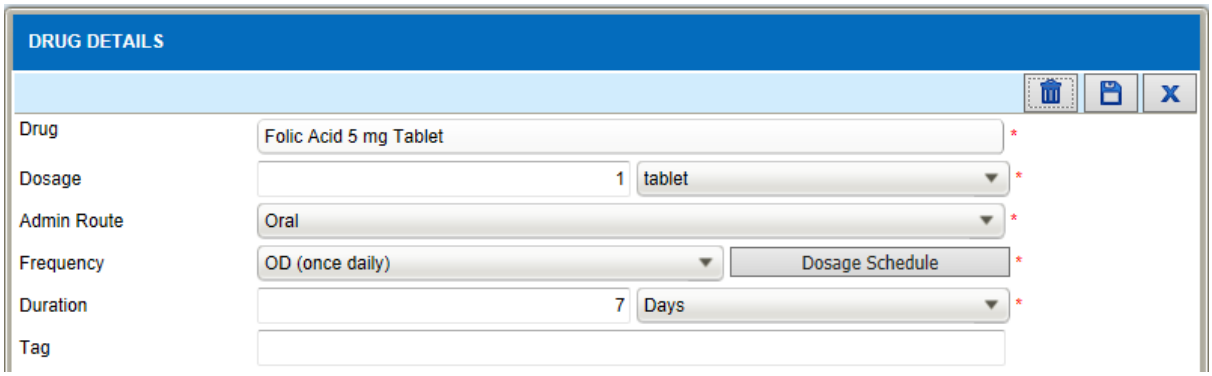


ii. Edit existing drug



Notes	• Click on 'Delete' button to delete the existing drug from favourite list. • Click on 'Save' button to save changes of favourite drug. • Click on 'Close button to close the pop up window. • Click on 'Dosage Schedule' button to open dosage schedule screen.
Cross References	None.

3.6.5.2.2 Application Business Rules

No.	Name	Description
1.	Dosage Schedule (Split dose)	i. The optimum therapeutic dose and optimum interval between doses e.g.: *Prednisolone 5mg tablet, 10 mg (8:00 am), 5 mg (8:00pm)* ii. User also can change the time only without change the dose. (Some patient required specific time and not follow exactly time in frequency master) e.g.: for BD dose instead of 8:00 and 8:00 pm, user want to change to 6:00 am and 6:00am *Prednisolone 5mg tablet, 5 mg (6:00 am), 5 mg (6:00pm)*

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3.6.5.2.3 Input Validation Rules

Below is the input validation for the above screen.

No.	Name	Description	Mandatory	Format
1.	Drug	Drug name can be search by Active Ingredient, Drug Name and Trade Name. Trade Name is common brand name for this drug. Information defined in drug master.	Yes	Text field
2.	Dosage	Dosage of the drug required (per administration). Value will be defaulted to selected drug strength. If drug without strength, value will be defaulted to quantity value from drug master.	Yes	Drop down list
3.	Administration Route	Drug administration route	Yes	Drop down list
4.	Frequency	Drug frequency	Yes	Drop down list
5.	Duration	Duration of the order in days, weeks or months.	Yes	Text field
6.	Tag	Preferred word to the drug	No	Text field

3.6.6 Integration

None.

3.7 Special Drug Request

Special Drug Request will allow pharmacist to key-in the request and send it to KPK for approval before can proceed with procurement of approved special drug.

The main purpose of Special Drug Request module is for pharmacist. Pharmacist will key-in the request after it has been manually recommended by Hospital Director. Only recommended request will be key-in. Not recommended request will not be key-in. This request will then submit to HQ for approval. User in HQ will process the request and send the approval status back to facility. Only approved request can be purchased by facility using procurement of approved special drug function. Refer to SDD on Special Drug Request under document PhIS_CPS_SDD_SDR_v1.0 for details.

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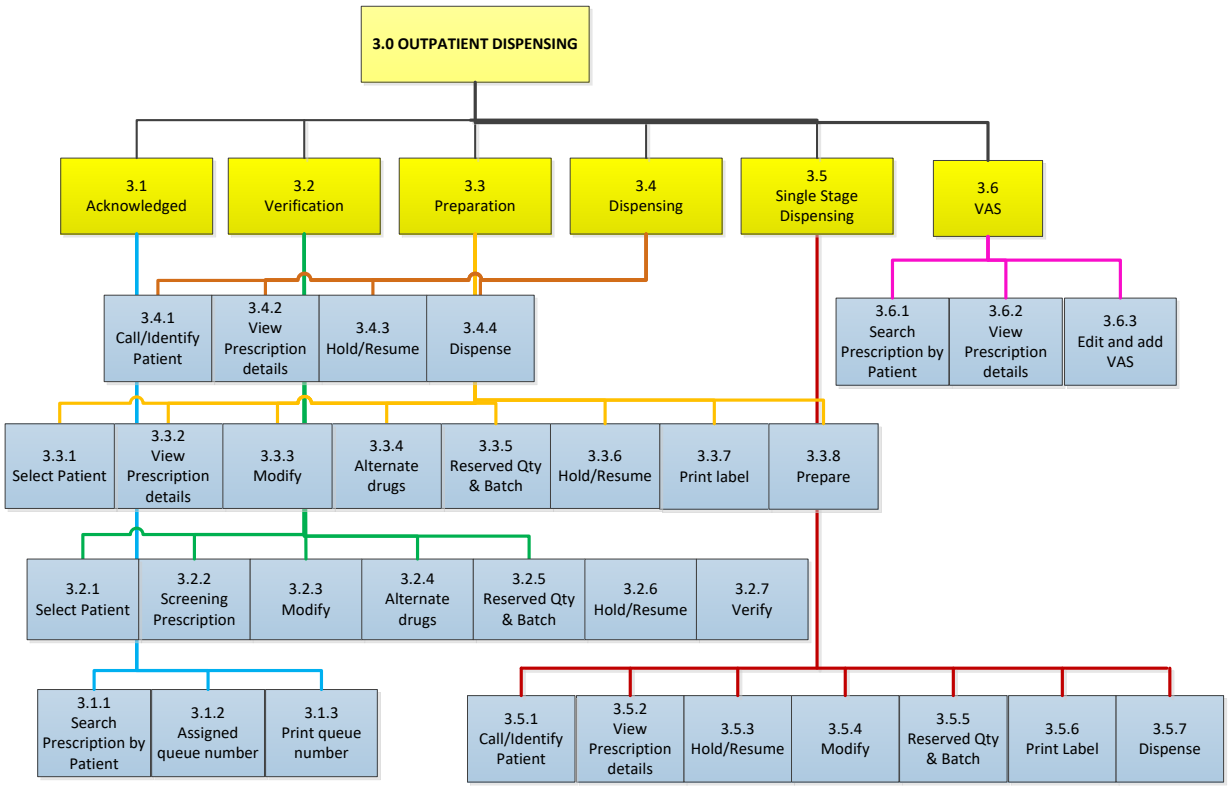
3.8 Outpatient Dispensing

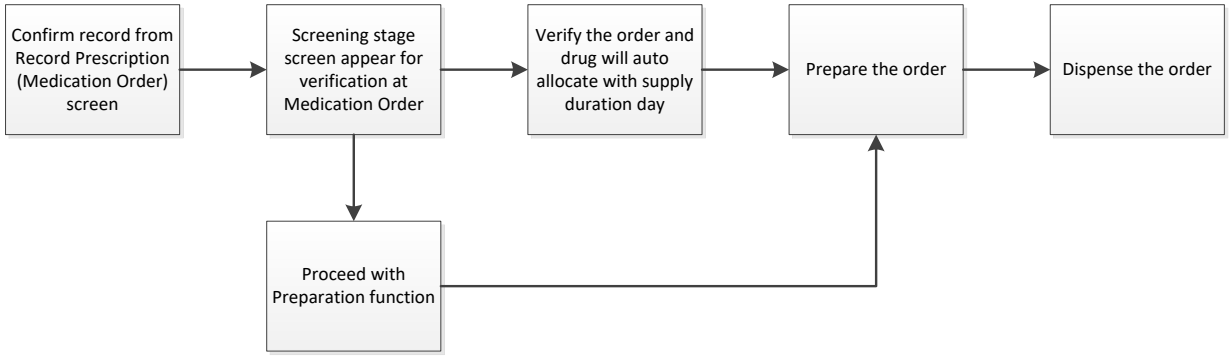
Outpatient dispensing for Pharmacy Based will be done by pharmacist.

3.8.1 Overview



OP.OV1: Outpatient Dispensing Pharmacy Based

3.8.2 Block Diagram



OP.BD1: Multi Stage Dispensing block diagram

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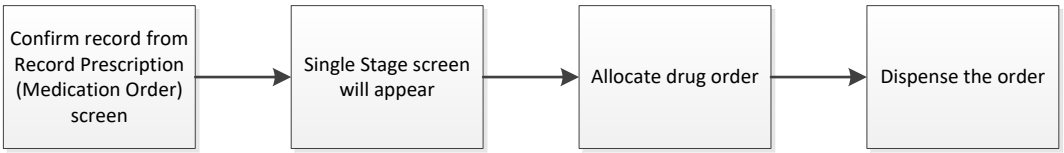


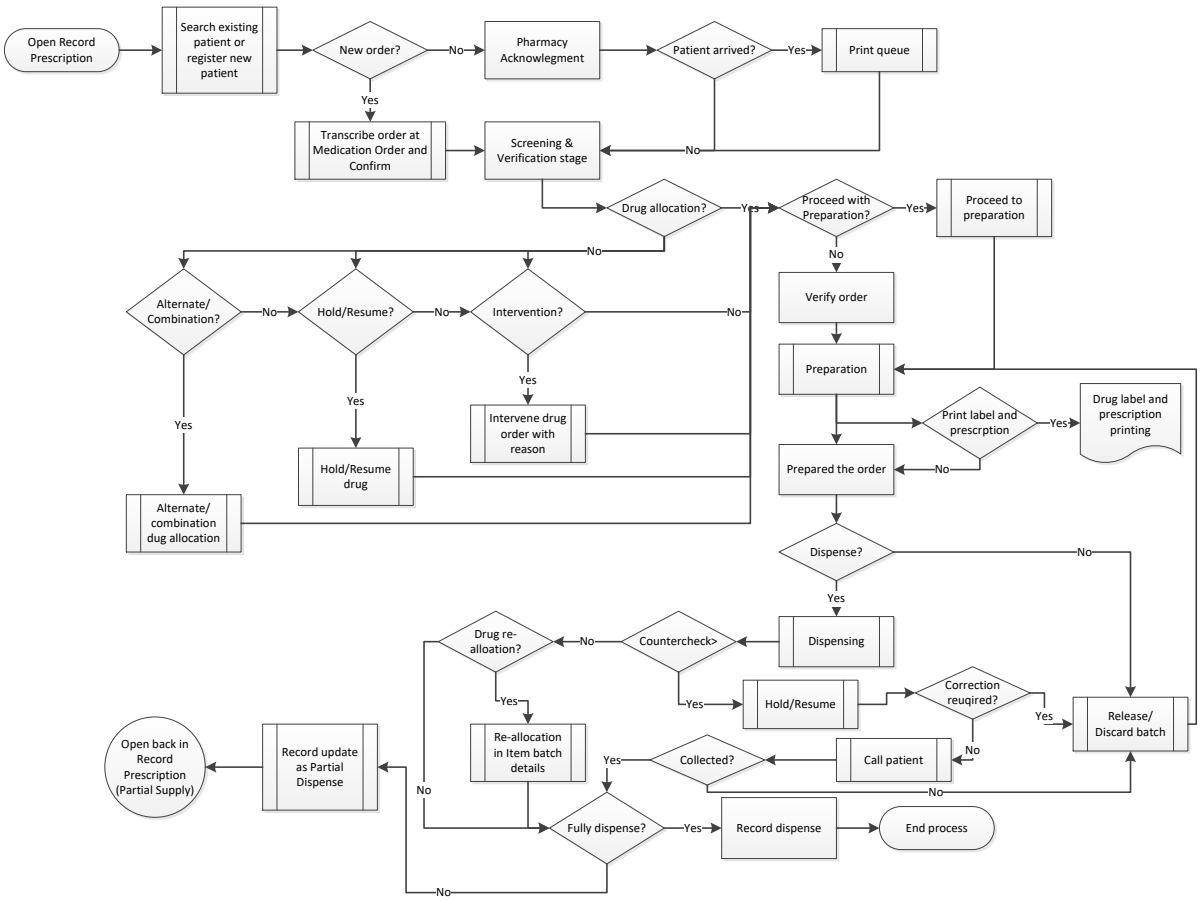
OP.BD2: Single Stage Dispensing block diagram

3.8.3 Purpose

Pharmacist is allowed to dispense the drug after order has been transcribe. Besides normal dispensing, outpatient pharmacy also provides other services such as SPUB and VAS. For pharmacy based, outpatient dispensing flow are divided into 2 types:

- Multi Stage Dispensing
- Single Stage Dispensing

3.8.4 Screen Navigation



OP.SN1: Multi Stage Dispensing Flow

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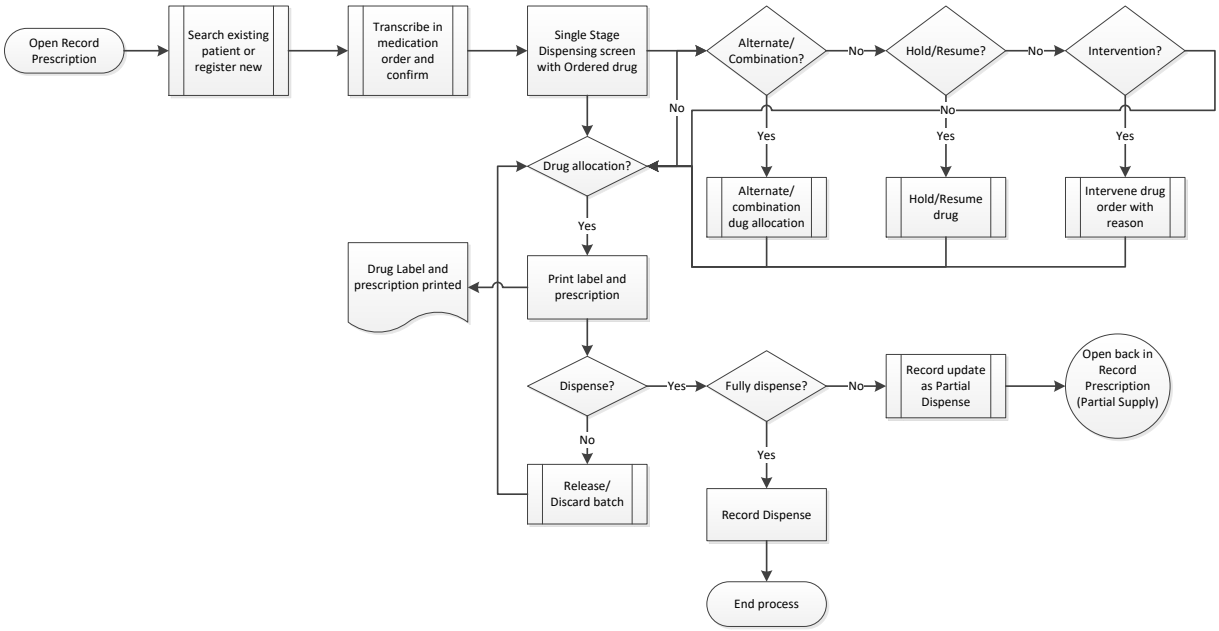


OP.SN2: Single Stage Dispensing flow

3.8.5 Detail Functionality and Screen

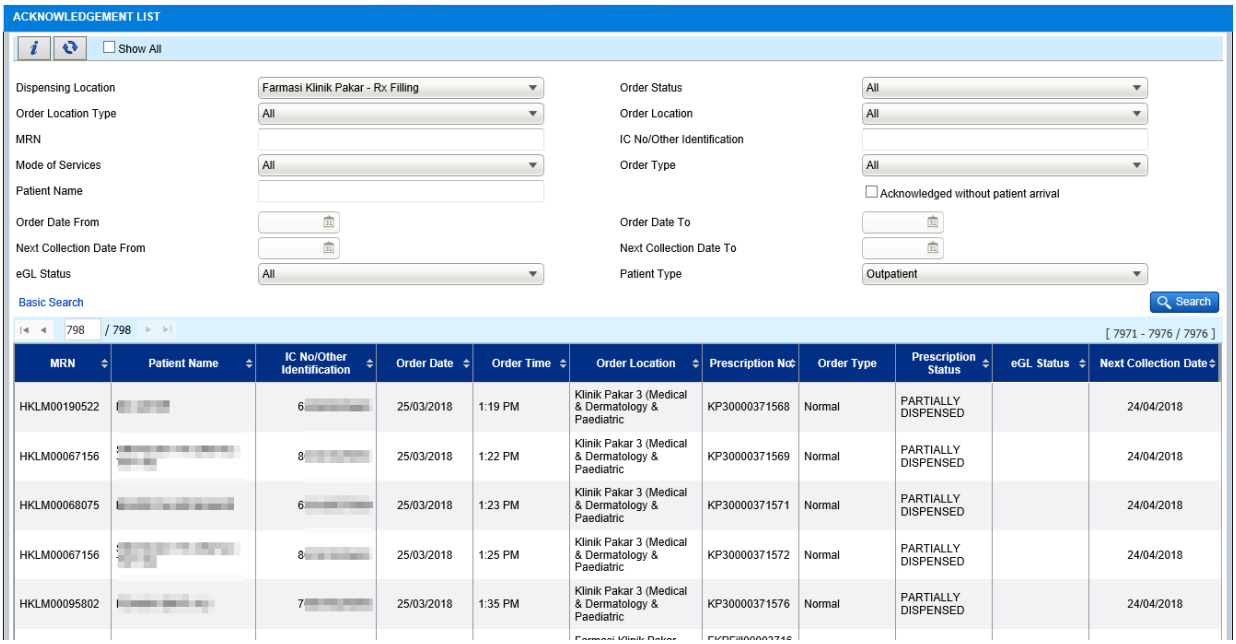
3.8.5.1 Pharmacy Acknowledgements

3.8.5.1.1 Screen Design

ID	ACK.SD1
Description	Pharmacy Acknowledgment Listing

Diagram

i. Pharmacy Acknowledgement listing



MRN	Patient Name	IC No/Other Identification	Order Date	Order Time	Order Location	Prescription No	Order Type	Prescription Status	eGL Status	Next Collection Date
HKLM00190522	[redacted]	6[redacted]	25/03/2018	1:19 PM	Klinik Pakar 3 (Medical & Dermatology & Paediatric	KP30000371568	Normal	PARTIALLY DISPENSED		24/04/2018
HKLM00067156	[redacted]	8[redacted]	25/03/2018	1:22 PM	Klinik Pakar 3 (Medical & Dermatology & Paediatric	KP30000371569	Normal	PARTIALLY DISPENSED		24/04/2018
HKLM00068075	[redacted]	6[redacted]	25/03/2018	1:23 PM	Klinik Pakar 3 (Medical & Dermatology & Paediatric	KP30000371571	Normal	PARTIALLY DISPENSED		24/04/2018
HKLM00067156	[redacted]	8[redacted]	25/03/2018	1:25 PM	Klinik Pakar 3 (Medical & Dermatology & Paediatric	KP30000371572	Normal	PARTIALLY DISPENSED		24/04/2018
HKLM00095802	[redacted]	7[redacted]	25/03/2018	1:35 PM	Klinik Pakar 3 (Medical & Dermatology & Paediatric	KP30000371576	Normal	PARTIALLY DISPENSED		24/04/2018

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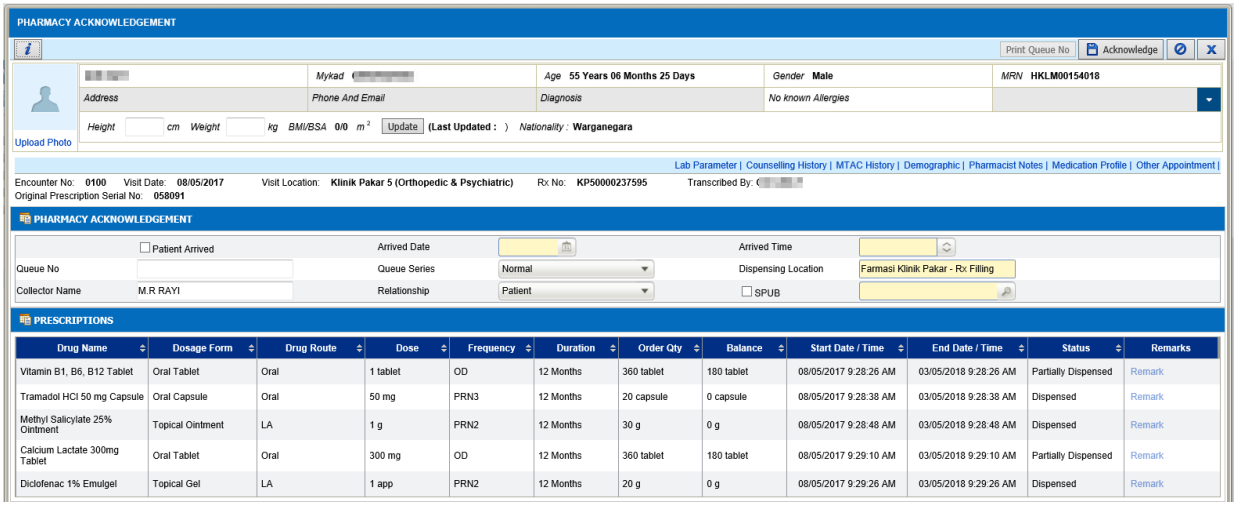
ii. Pharmacy Acknowledgement details screen



Notes	• This function remains as in full PhIS. • Click on Search to search patient name based on filter criteria. • Print queue number functions remain as in full PhIS.
Cross References	**Outpatient and Inpatient Listing** – refer to PhIS_CPS_SDD_OPIP_v1.0. **Acknowledgment in Outpatient/Inpatient** – refer to PhIS_CPS_SDD_OPIP_v0.1

3.8.5.1.2 Application Business Rules

No.	Name	Description
1.	Partial supply	Pharmacist can acknowledge for partial supply dispensing only. For new prescription, pharmacist will acknowledge together while key-in the drug into medication order.
2.	Refresh	Click on the Refresh button to reset all searched records and searching criteria to default value

3.8.5.1.3 Input Validation Rules

Remain as in full PhIS. Refer details in SDD for PhIS_CPS_SDD_OPIP_v1.0.

3.8.5.2 Screening and Verification

This function remains as in full PhIS for partial supply only. For new prescription, pharmacist will verify together while key-in the drug into medication order. Refer to full specification from PhIS_CPS_SDD_OPIP_v1.0.docx.

3.8.5.3 Preparation

Pharmacist can do preparation after prescription has been verified for new order and partial supply. This function remains as in full PhIS. Refer to full specification from PhIS_CPS_SDD_OPIP_v1.0.docx.

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3.8.5.4 Dispensing

Pharmacist can dispense the drug after prescription has been prepared for new order and partial supply. This function remains as in full PhIS. Refer to full specification from PhIS_CPS_SDD_OPIP_v1.0.docx.

3.8.5.1 VAS

Pharmacist can add VAS after prescription for new order and partial supply. This function remains as in full PhIS. Refer to full specification from PhIS_CPS_SDD_OPIP_v1.0.docx.

3.8.5.1 Single Stage Dispensing

This function remains as in full PhIS for single stage dispensing flow. Refer details in SDD for PhIS_CPS_SDD_OPIP_v1.0.docx.

3.8.6 Integration

None.

3.9 Methadone Dispensing

This function remains as in full PhIS for Methadone Dispensing. Refer details in SDD for PhIS_CPS_SDD_OPIP_v1.0.docx.

3.10 Medication Return

This function remains as in full PhIS for return of medication. Refer details in SDD for PhIS_CPS_SDD_OPIP_v1.0.docx.

3.11 Re-Dispensing

This function remains as in full PhIS for re-dispensing. Refer details in SDD for PhIS_CPS_SDD_OPIP_v1.0.docx.

3.12 Release/Discard Batch

This function remains as in full PhIS for release/discard batch of drug. Refer details in SDD for PhIS_CPS_SDD_OPIP_v1.0.docx.

3.13 SPUB Patient List

This function remains as in full PhIS for single stage dispensing flow. Refer details in SDD for PhIS_CPS_SDD_OPIP_v1.0.docx.

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4. References

Document	Description/ Expansion
PhIS_CPS_SDD_OPIP_v1.0	System Design Document (SDD) for Outpatient Inpatient Dispensing Module
PhIS_CPS_SDD_MC_v1.0	System Design Document (SDD) for Medication Counselling module
PhIS_CPS_SDD_Manufacturing_v 1.0	System Design Document (SDD) for Manufacturing of Cytotoxic Drug Reconstitution, Parenteral Nutrition, IV Admixture & Eye Drops, and Radiopharmaceuticals module
PhIS_CPS_SDD_Ward_Pharmacy _v1.0	System Design Document (SDD) for Ward Pharmacy module
PhIS_CPS_SDD_Integration_v1.2	System Design Document (SDD) for Integration
PhIS_CPS_SDD_OM_FB_v1.0	System Design Document (SDD) for Order Management Full Based module
PhIS_CPS_SDD_PM_v1.0	System Design Document (SDD) for Patient Management module

5. Acronyms

Item	Description
URS	User Requirement Specification
SDD	System Design Documentation
SPUB	*Sistem Pendispensan Ubat-Ubatan Bersepadu* (Integrated Drug Dispensing System)
IWP	Integration Web Portal
KPK	*Ketua Penolong Pengarah*
IV	Intravenous
CDR	Cytotoxic Drug Reconstitution
MTAC	Medication Therapy Adherence Clinic
PN	Parenteral Nutrition
TDM	Therapeutic Drug Monitoring
MAR	Medication Administration Record

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6. Appendix

[i] Drug Category - Prescriber category who is allowed to start the medication:

Category	Definition
A*	Consultant/Specialists for specific Indications only
A	Consultant/Specialists
A/KK	Consultant/Specialists/Family Physician Specialists
B	Medical Officer/House Officer
C	Paramedical staff
C+	Paramedical Staff doing midwifery

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