

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

Full Based

User Manual Medication Administration Record (MAR)

Version	: 13th Edition
Document ID	: U. MANUAL_MAR



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Reference ID : U. MANUAL_MAR-13th E

Application reference: PhIS & CPS v2.6.1



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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, IV Admixture & Eye Drop, Radiopharmaceuticals and Extemporaneous
8. Adverse Drug Reaction & Drug Allergic (ADR & DAC)
9. Clinical Pharmacokinetics Services (TDM)
10. Drug Information & Consumer Education (DICE)
11. Medication Therapy Adherence Clinic (MTAC)
12. Data Mining (PhARM)

1.2 Purpose and Objectives

This user manual outlines the medication administration record (MAR) 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:

- Charting and record patient administration in ward based on drug and time
- To view all medication administration details in a chart
- Time range to record the administration
- Different types of administration form non-infusion and infusion
- To view active inpatient record only

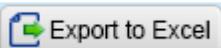
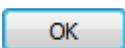
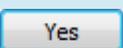
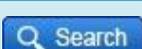
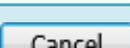
1.3 Organised Sections

These are the sections within this document:

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

2.0 Application Standard Features

2.1 PhIS Legend

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

Medication Administration Record (MAR) Module Legend

<input type="checkbox"/>	Medication Served On time	<input checked="" type="checkbox"/> Not Administered	Medication Not Serve
<input checked="" type="checkbox"/> Late Administered			

3.0 Medical Administration Record (MAR)

Overview

The Medication Administration Record (MAR) module handles all of the active in-patient charting medication administration record for nurses in safe, organized and efficient way.

User Group

This module is intended for registered staff nurses (RN). (subject to the user assigned by the facility).

Functional Diagram

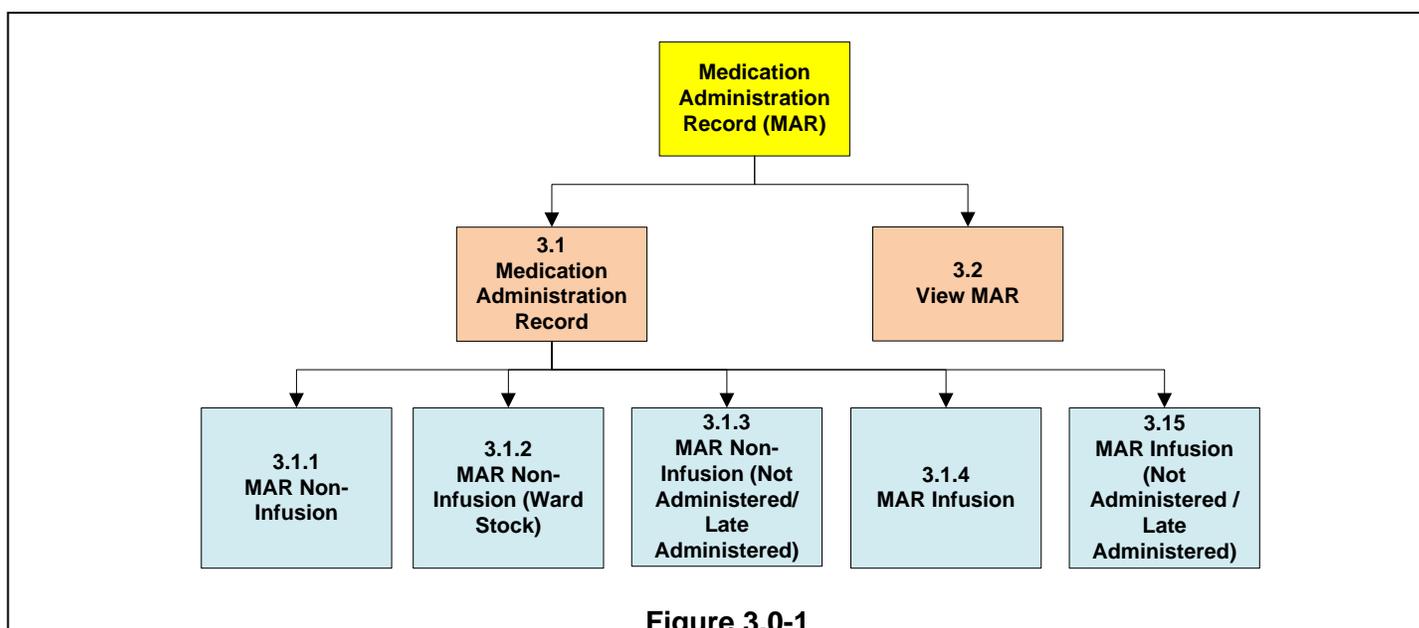


Figure 3.0-1

Functional Description

Medication Administration Record comprises of two (2) main functions:

- **Medication Administration Record**

Medication Administration Record function allows Nurses to chart and record the administration of patient in ward based on drug and time. The time range to record the administration is set to within of one (1) hour before and one (1) hour after. If the time recorded more than scheduled time, recording will not be allowed without any remarks.

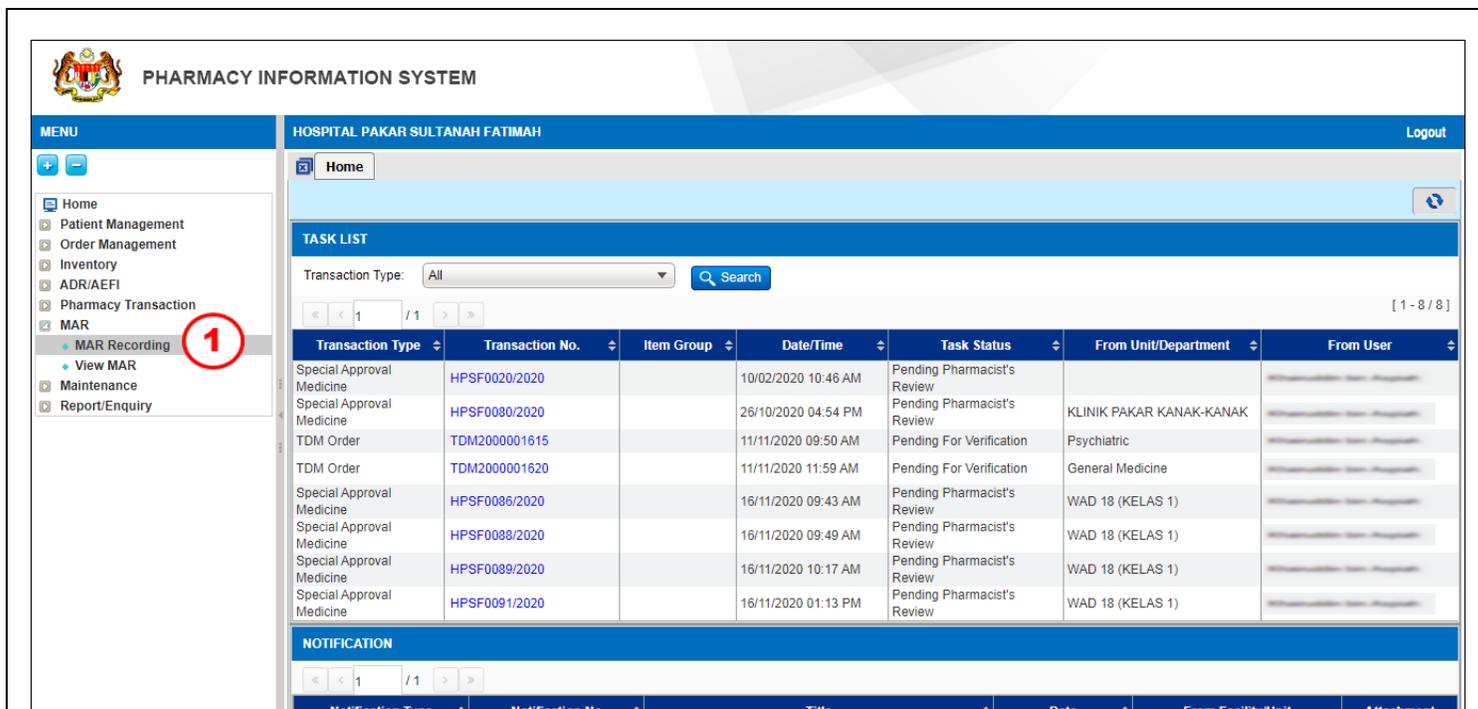
- **View MAR**

This function allows user to view all medication administration details in a chart. It will only show for active in-patient visit.

3.1 Medication Administration Record (MAR)

3.1.1 MAR Non- Infusion

This function is used to administer the medication to patient within the time range (on time)



Transaction Type	Transaction No.	Item Group	Date/Time	Task Status	From Unit/Department	From User
Special Approval Medicine	HPSF0020/2020		10/02/2020 10:46 AM	Pending Pharmacist's Review		
Special Approval Medicine	HPSF0080/2020		26/10/2020 04:54 PM	Pending Pharmacist's Review	KLINIK PAKAR KANAK-KANAK	
TDM Order	TDM2000001615		11/11/2020 09:50 AM	Pending For Verification	Psychiatric	
TDM Order	TDM2000001620		11/11/2020 11:59 AM	Pending For Verification	General Medicine	
Special Approval Medicine	HPSF0086/2020		16/11/2020 09:43 AM	Pending Pharmacist's Review	WAD 18 (KELAS 1)	
Special Approval Medicine	HPSF0088/2020		16/11/2020 09:49 AM	Pending Pharmacist's Review	WAD 18 (KELAS 1)	
Special Approval Medicine	HPSF0089/2020		16/11/2020 10:17 AM	Pending Pharmacist's Review	WAD 18 (KELAS 1)	
Special Approval Medicine	HPSF0091/2020		16/11/2020 01:13 PM	Pending Pharmacist's Review	WAD 18 (KELAS 1)	

Figure 3.1.1-1 MAR Listing Page

Note

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

STEP 1

Click on the MAR menu then click on the MAR recording sub menu

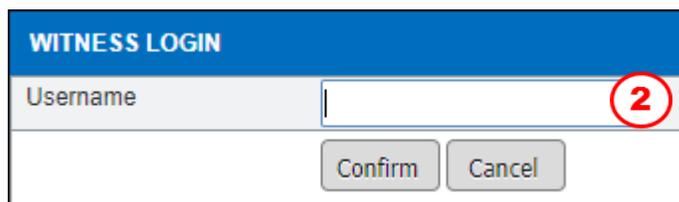


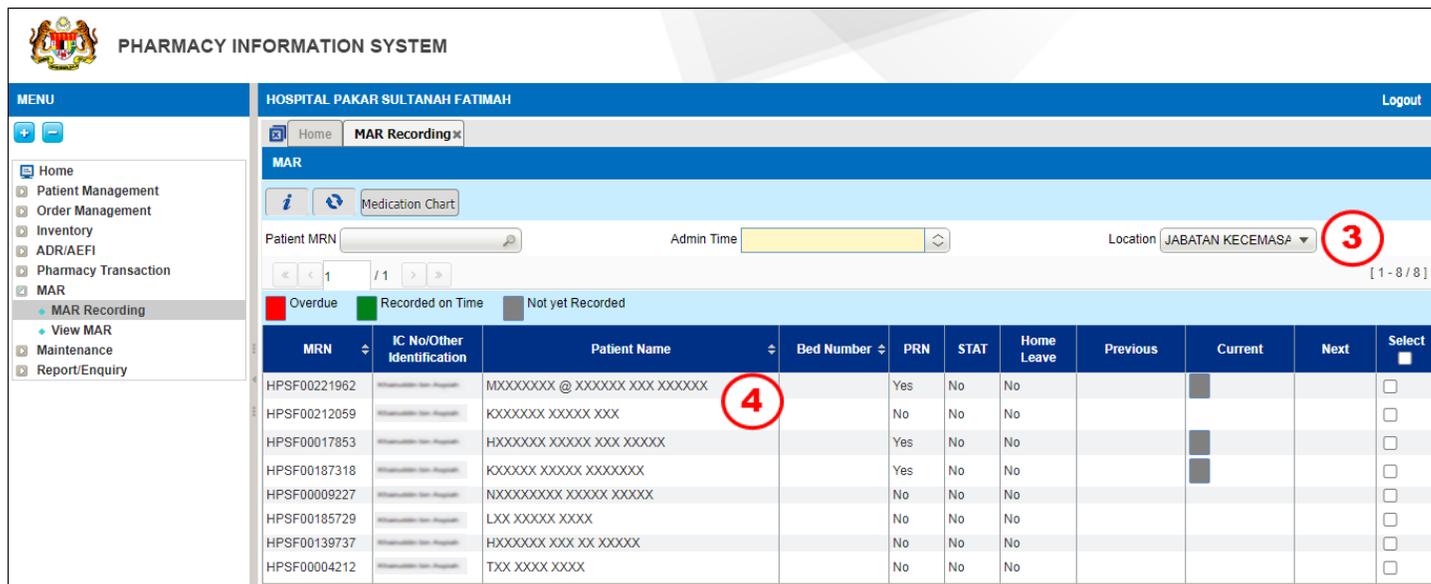
Figure 3.1.1-2 Witness Login

STEP 2

Enter **User ID** in the displayed Witness Login dialog box, then click on the confirm button

Note

- Witness must have system access login.
- Witness must be different with user login.
- Witness shall be from the same discipline and the grade of Jururawat must be U29 and above.
- Witness does not require to login for every patient.



PHARMACY INFORMATION SYSTEM

HOSPITAL PAKAR SULTANAH FATIMAH Logout

Home **MAR Recording**

MAR

Medication Chart

Patient MRN Admin Time Location **JABATAN KECEMASA** 3 [1 - 8 / 8]

Overdue Recorded on Time Not yet Recorded

MRN	IC No/Other Identification	Patient Name	Bed Number	PRN	STAT	Home Leave	Previous	Current	Next	Select
HPSF00221962		MXXXXXXXX @ XXXXXX XXX XXXXXX 4		Yes	No	No				<input type="checkbox"/>
HPSF00212059		KXXXXXX XXXXX XXX		No	No	No				<input type="checkbox"/>
HPSF00017853		HXXXXXX XXXXX XXX XXXXX		Yes	No	No				<input type="checkbox"/>
HPSF00187318		KXXXXX XXXXX XXXXXXXX		Yes	No	No				<input type="checkbox"/>
HPSF00009227		NXXXXXXXX XXXXX XXXXX		No	No	No				<input type="checkbox"/>
HPSF00185729		LXX XXXXX XXXX		No	No	No				<input type="checkbox"/>
HPSF00139737		HXXXXXX XXX XX XXXXX		No	No	No				<input type="checkbox"/>
HPSF00004212		TXX XXXX XXXX		No	No	No				<input type="checkbox"/>

Figure 3.1.1-3 MAR Listing Page

Note

Search MAR record based :-

No	Field	Description	Remark
a	Patient MRN	Patient MRN	Allow to search by patient full or partial MRN No
b	Admin Time	Patient admission time	Allow to search patient by time admitted to ward
c	Location	Location assigned base on user Access	Allow to search patient by user assigned location

Table 3.1.1

STEP 3

Select location from drop box

STEP 4

Click on the selected patient name and system will display as Figure 3.1.1-4

MAR DIALOG

i
X

MXXXXXXX @ XXXXXX XXX XXXXXX	Mykad	Age 83 Years 06 Months 19 Days	Gender Male	MRN HPSF00221962
Address	Phone And Email	Diagnosis	No known Allergies	Vital Sign

Height cm Weight kg BMI/BSA 0/0 m² Update (Last Updated :) Nationality : Warganegara *!*

Medication Chart View: All Drug Name: Refresh Order Date: 06/01/2021

S Served
O Overdue
W Withhold
N Not Serve
D Due
L Late
F Future Dose
E Discontinue
Pharmacist Remarks Medication Profile
Cancel Record

Select	Order Detail	Source
<input type="checkbox"/>	<p>Diclofenac 1% Emulgel <i>i</i></p> <p>1 app , PRN, LA 12 Months [23/07/2020-18/07/2021] <i>Prescriber's Remark :</i> Prescriber's Name : Dr Mohamad Helmi Bin Mohamad Zulkipli Order Date : 23/07/2020</p>	<p style="text-align: center;">D</p> <p>PRN</p> <p><input type="checkbox"/> <input type="text"/></p> <p><input type="checkbox"/> Remarks</p>
<input type="checkbox"/>	<p>Paracetamol 500 mg Tablet <i>i</i></p> <p>2 tablet , PRN, Oral 12 Months [23/07/2020-18/07/2021] <i>Prescriber's Remark :</i> Prescriber's Name : Dr Mohamad Helmi Bin Mohamad Zulkipli Order Date : 23/07/2020</p>	<p style="text-align: center;">D</p> <p>PRN</p> <p>Allocate Qty <input type="text"/> tablet</p> <p>Ward/Unit Stock</p> <p><input type="checkbox"/> <input type="text"/></p> <p><input type="checkbox"/> Remarks</p>
<input type="checkbox"/>	<p>Tramadol HCl 50 mg Capsule/Tablet <i>i</i></p> <p>50 mg , PRN, Oral 12 Months [23/07/2020-18/07/2021] <i>Prescriber's Remark :</i> Prescriber's Name : Dr Mohamad Helmi Bin Mohamad Zulkipli Order Date : 23/07/2020</p>	<p style="text-align: center;">D</p> <p>PRN</p> <p><input type="checkbox"/> <input type="text"/></p> <p><input type="checkbox"/> Remarks</p>

Select
Order Detail
Source

No Records Found!

Figure 3.1.1-4 MAR Patient Screen

Note

Screen will display these two (2) panel functions:

- Non-Infusion
- Infusion

Administration status:

- Due – Record within administration time range
- Overdue - Record the administration after time range
- Served- Record the administration within time range
- Late - Record the administration late
- Withhold - Hold by doctors or pharmacist
- Future Dose - Has not reach the schedule time
- Not Serve - Did Not Serve
- Discontinue - Discontinued by doctor

MAR DIALOG

S Served
 O Overdue
 W Withhold
 N Not Serve
 D Due
 L Late
 F Future Dose
 E Discontinue

5 [Pharmacist Remarks](#)

Select	Order Detail	Source
<input type="checkbox"/>	Diclofenac 1% Emulgel 1 app , PRN, LA 12 Months [23/07/2020-18/07/2021] <i>Prescriber's Remark :</i> Prescriber's Name : Dr Mohamad Helmi Bin Mohamad Zulkipli Order Date : 23/07/2020	<input type="checkbox"/> D PRN <input type="text"/> <input type="button" value="Remarks"/>
<input type="checkbox"/>	Paracetamol 500 mg Tablet 2 tablet , PRN, Oral 12 Months [23/07/2020-18/07/2021] <i>Prescriber's Remark :</i> Prescriber's Name : Dr Mohamad Helmi Bin Mohamad Zulkipli Order Date : 23/07/2020	<input type="checkbox"/> D PRN Allocate Qty <input type="text"/> tablet <input type="button" value="Ward/Unit Stock"/> <input type="checkbox"/> <input type="text"/> <input type="button" value="Remarks"/>
<input type="checkbox"/>	Tramadol HCl 50 mg Capsule/Tablet 50 mg , PRN, Oral 12 Months [23/07/2020-18/07/2021] <i>Prescriber's Remark :</i> Prescriber's Name : Dr Mohamad Helmi Bin Mohamad Zulkipli Order Date : 23/07/2020	<input type="checkbox"/> D PRN <input type="checkbox"/> <input type="text"/> <input type="button" value="Remarks"/>

No Records Found!

Figure 3.1.1-5 Patient Medication List

STEP 5

Click on the checkbox to select the drug with yellow colour box (due status)

Note

- Allow to select the drugs to serve if its show yellow colour box (due status)
- Allow to select multiple drugs to serve one time.
- User able to see the remark by click Pharmacist Remark hyperlink ad it will display as in Figure 3.1.1-6. However, this remark records are shown by patient and not by specific drugs.

Prescription No	Original Prescription No	Drug Name	Pharmacist Remarks	Stage	Date Time	Pharmacist Name
FMW0000954254		Amlodipine 5 mg Tablet	Drug authorisation approved	Dispensing	31/10/2019 06:01:51 PM	
FMW0000954254		Paracetamol 500 mg Tablet	Drug authorisation is required	Verification	31/10/2019 06:00:28 PM	Dr Mohamad Helmi Bin Mohamad Zulkipli
FMW0000954254		Amlodipine 5 mg Tablet	Drug authorisation is required	Verification	31/10/2019 06:00:12 PM	
FMW0000954254		Amikacin 250mg/2ml Injection	Patient need Counselling	Verification	31/10/2019 05:59:55 PM	
FMW0000954256		Thymol Compound Gargle	Drug authorisation is required	Verification	31/10/2019 05:57:03 PM	

Figure 3.1.1-6 Pharmacist Remark

STEP 6

After select the drugs, click on record button to confirm record

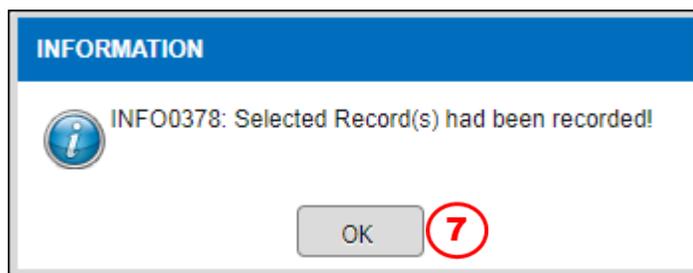
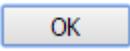
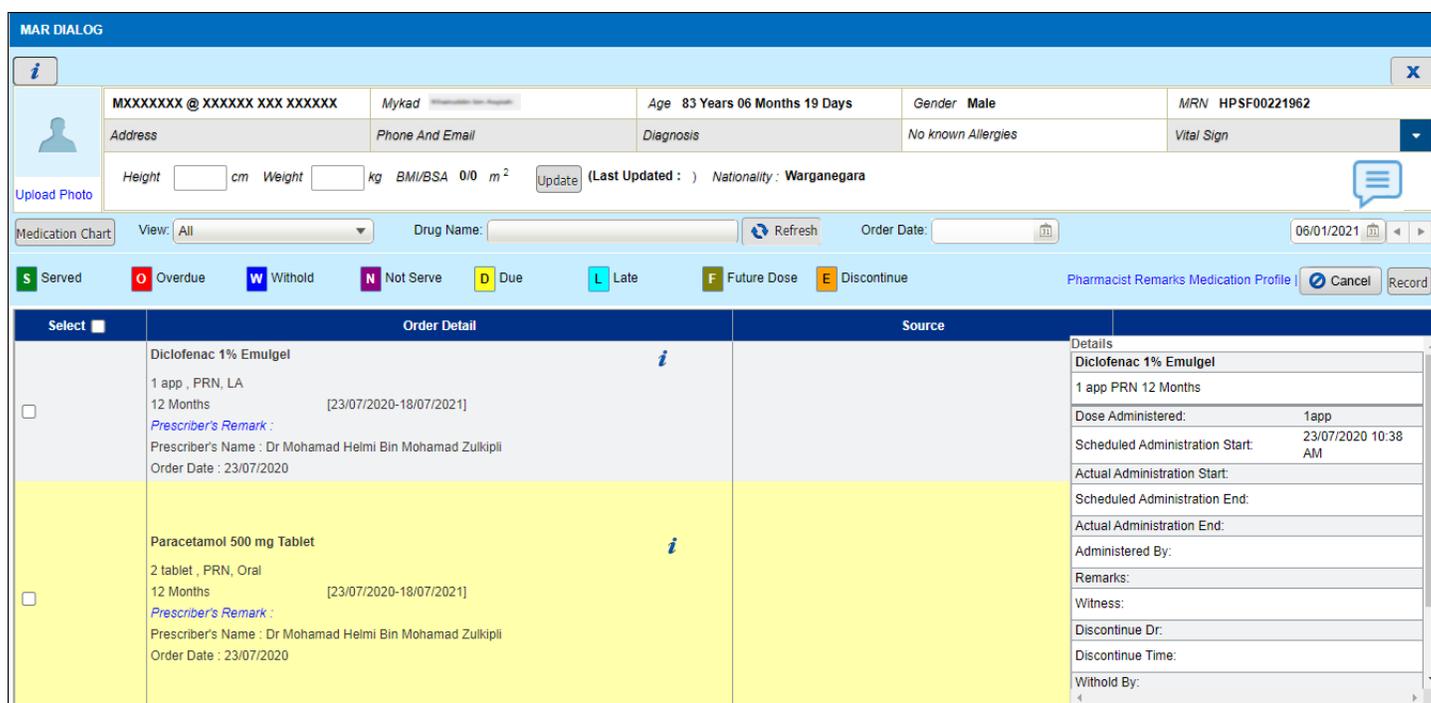


Figure 3.1.1-7 Information Alert Message

STEP 7

Click on the  button to confirm record



MAR DIALOG

MXXXXXXX @ XXXXXX XXX XXXXXX Mykad Age 83 Years 06 Months 19 Days Gender Male MRN HPSF00221962

Address Phone And Email Diagnosis No known Allergies Vital Sign

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

Medication Chart View: All Drug Name: Refresh Order Date: 06/01/2021

S Served O Overdue W Withhold N Not Serve D Due L Late F Future Dose E Discontinue Pharmacist Remarks Medication Profile Cancel Record

Select	Order Detail	Source	Details
<input type="checkbox"/>	Diclofenac 1% Emulgel 1 app , PRN, LA 12 Months [23/07/2020-18/07/2021] Prescriber's Remark : Prescriber's Name : Dr Mohamad Helmi Bin Mohamad Zulkipili Order Date : 23/07/2020		Diclofenac 1% Emulgel 1 app PRN 12 Months Dose Administered: 1app Scheduled Administration Start: 23/07/2020 10:38 AM Actual Administration Start: Scheduled Administration End: Actual Administration End: Administered By: Remarks: Witness: Discontinue Dr: Discontinue Time: Withhold By:
<input type="checkbox"/>	Paracetamol 500 mg Tablet 2 tablet , PRN, Oral 12 Months [23/07/2020-18/07/2021] Prescriber's Remark : Prescriber's Name : Dr Mohamad Helmi Bin Mohamad Zulkipili Order Date : 23/07/2020		

Figure 3.1.1-8 MAR – Drug Dose Detail

Note

- Checkbox will be available for drug with yellow colour box (due status)
- After drug has been recorded, the box will turn to green colour (served status)
- User can view the drug dose details by mouse over on the status box as shown in figure 3.1.1-8
- Different color highlighted for each drug rows as shown in Figure 3.1.1-8 have different meaning.
- User can enter remarks to update as not administered (not serve) for the drug with status due (D)

S Served	O Overdue	W Withhold	N Not Serve	D Due	L Late	F Future Dose	E Discontinue	Pharmacist Remarks Medication Profile	Cancel	Record
Select	Order Detail				Source					
<input type="checkbox"/>	Oral Rehydration Salt 1 sachet, PRN, Oral 5 Days [30/10/2019-04/11/2019] <i>Prescriber's Remark:</i> Prescriber's Name : System Administrator Order Date : 30/10/2019							PRN Allocate City sachet Ward/Unit Stock <input type="checkbox"/> Remarks		
<input type="checkbox"/>	Salbutamol 2 mg Tablet 2 mg, TDS (3 times a day), Oral 5 Days [30/10/2019-04/11/2019] <i>Prescriber's Remark:</i> Prescriber's Name : System Administrator Order Date : 30/10/2019				Own Medication			6:00 PM F 2mg <input type="checkbox"/> Remarks		
<input type="checkbox"/>	Tramadol HCl 50 mg Capsule/Tablet 50 mg, PRN, Oral 5 Days [30/10/2019-04/11/2019] <i>Prescriber's Remark:</i> Prescriber's Name : System Administrator Order Date : 30/10/2019							PRN <input type="checkbox"/> Remarks		
<input type="checkbox"/>	Paracetamol 600mg Tablet 1 tablet, STAT, Oral 1 Days [30/10/2019-31/10/2019] <i>Prescriber's Remark:</i> Prescriber's Name : System Administrator Order Date : 30/10/2019							STAT <input type="checkbox"/> Remarks		
<input type="checkbox"/>	Paracetamol 600 mg Tablet 1000 mg, TDS (3 times a day), Oral 5 Days [30/10/2019-04/11/2019] <i>Prescriber's Remark:</i> Prescriber's Name : System Administrator Order Date : 30/10/2019							12:28 PM E 1000mg Allocate City tablet Ward/Unit Stock <input type="checkbox"/> Remarks	5:00 PM E 1000mg Allocate City tablet Ward/Unit Stock <input type="checkbox"/> Remarks	

Figure 3.1.1-9 MAR – Patient Medication List

- White/Gray for normal, IV, PN order as shown in Figure 3.1.1-10

<input type="checkbox"/>	Tramadol HCl 50 mg Capsule/Tablet 50 mg, PRN, Oral 2 Days [24/10/2019-26/10/2019] <i>Prescriber's Remark:</i> Prescriber's Name : System Administrator Order Date : 24/10/2019							PRN <input type="checkbox"/> Remarks		
Select	Order Detail				Source					
<input type="checkbox"/>	Human Albumin 20%, 50ml IV Soln 10 g, Single Dose, Intravenous Infusion 3 Days [24/10/2019-27/10/2019] <i>Prescriber's Remark:</i> Prescriber's Name : System Administrator Order Date : 24/10/2019							1:00 PM D 10g Start End <input type="checkbox"/> Remarks		

Figure 3.1.1-10 MAR – Order Detail List

- Light purple for CDR order as shown in Figure 3.1.1-11

Select	Order Detail				Source					
<input type="checkbox"/>	Cytarabine 100mg/1mL Injection 152 mg, OD (once daily), Intravenous Slow Bolus Day: 1,2,3,4,5 [30/10/2019-04/11/2019] <i>Prescriber's Remark:</i> Prescriber's Name : System Administrator Order Date : 30/10/2019							8:00 AM O 152mg Start End <input type="checkbox"/> Remarks		
<input type="checkbox"/>	Etoposide 100mg/5ml Injection 152 mg, OD (once daily), Intravenous Infusion Day: 1,2,3,4,5 [30/10/2019-04/11/2019] Diluent : Sodium Chloride 0.9% 500mL IV soln [Vol: 192ml] Infuse Over : 4 Hour 0 Min Infusion Rate : 0.83ml/Min <i>Prescriber's Remark:</i> Prescriber's Name : System Administrator Order Date : 30/10/2019							8:00 AM O 152mg Start End <input type="checkbox"/> Remarks		

Figure 3.1.1-11 MAR – CDR Order Detail

- Yellow for ward stock drug shown in Figure 3.1.1-12

Select	Order Detail	Source	
<input type="checkbox"/>	<p>Oral Rehydration Salt</p> <p>1 sachet , PRN, Oral</p> <p>5 Days [30/10/2019-04/11/2019]</p> <p>Prescriber's Remark : Prescriber's Name : System Administrator Order Date : 30/10/2019</p>		<p>D</p> <p>PRN</p> <p>Allocate Qty <input type="text"/> sachet</p> <p>Ward/Unit Stock</p> <p><input type="text"/></p> <p><input type="checkbox"/> Remarks</p>

Figure 3.1.1-12 MAR – Ward Stock Order Detail

- Pink for own medication drug as shown in Figure 3.1.1-13

<input type="checkbox"/>	<p>Salbutamol 2 mg Tablet</p> <p>2 mg , TDS (3 times a day), Oral</p> <p>5 Days [30/10/2019-04/11/2019]</p> <p>Prescriber's Remark : Prescriber's Name : System Administrator Order Date : 30/10/2019</p>	Own Medication	<p>5:00 PM F</p> <p>2mg</p> <p><input type="text"/></p> <p><input type="checkbox"/> Remarks</p>
--------------------------	--	----------------	--

Figure 3.1.1-13 MAR – Own Medication Order Detail

- Red strike line refer as inactive drug, as shown in Figure 3.1.1-14

<input type="checkbox"/>	<p>Ferrous-500mg-Folite-500mg-Vit-G-B1-B2-B3-B6-B12-Co-Pantothenate-Tablet</p> <p>1 tablet , STAT, Oral</p> <p>1 Days [30/10/2019-31/10/2019]</p> <p>Prescriber's Remark : Prescriber's Name : System Administrator Order Date : 30/10/2019</p>		<p>E</p> <p>STAT</p> <p><input type="text"/></p> <p><input type="checkbox"/> Remarks</p>
<input type="checkbox"/>	<p>Roxacetamol-1000mg-Tablet</p> <p>1000 mg , TDS (3 times a day), Oral</p> <p>5 Days [30/10/2019-04/11/2019]</p> <p>Prescriber's Remark : Prescriber's Name : System Administrator Order Date : 30/10/2019</p>		<p>12:28 PM E</p> <p>1000mg</p> <p>Allocate Qty <input type="text"/> tablet</p> <p>Ward/Unit Stock</p> <p><input type="text"/></p> <p><input type="checkbox"/> Remarks</p>
			<p>5:00 PM E</p> <p>1000mg</p> <p>Allocate Qty <input type="text"/> tablet</p> <p>Ward/Unit Stock</p> <p><input type="text"/></p> <p><input type="checkbox"/> Remarks</p>

Figure 3.1.1-14 MAR – Inactive Drug Order Detail

3.1.2 MAR Non-Infusion [Ward Stock (WS)]

This function is used to administer the medication to patient within the time range (on time) using ward stock.



Figure 3.1.2-1 MAR Menu

STEP 1

Click on the MAR menu then click on the MAR Recording sub menu

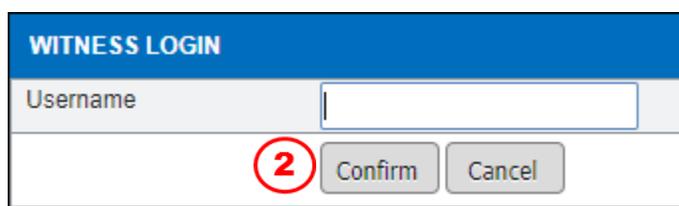


Figure 3.1.2-2 Witness Login

STEP 2

Enter **User ID** in the displayed Witness Login dialog box then click on the confirm button

Note

- Witness must have system access login.
- Witness must be different with user login.
- Witness shall be from the same discipline and the grade of Jururawat must be U29 and above.
- Witness does not require to login for every patient.

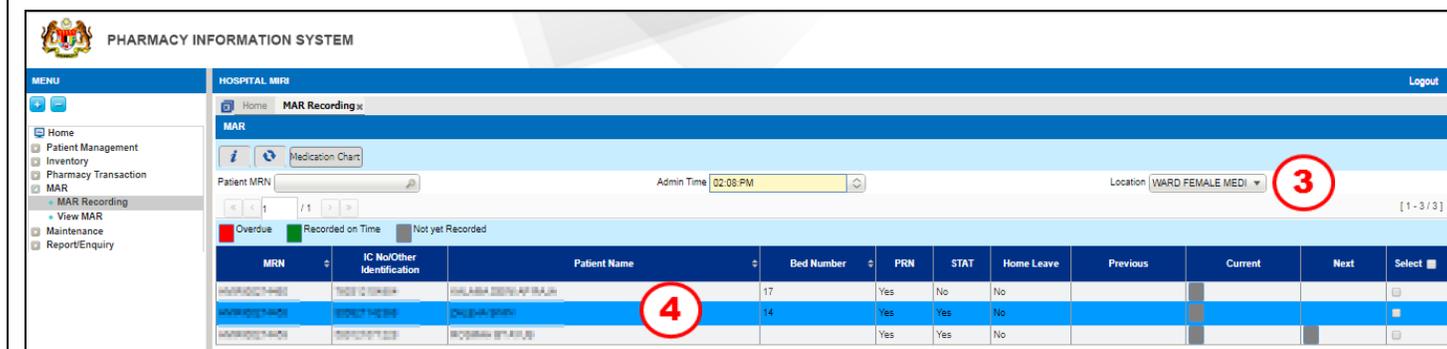


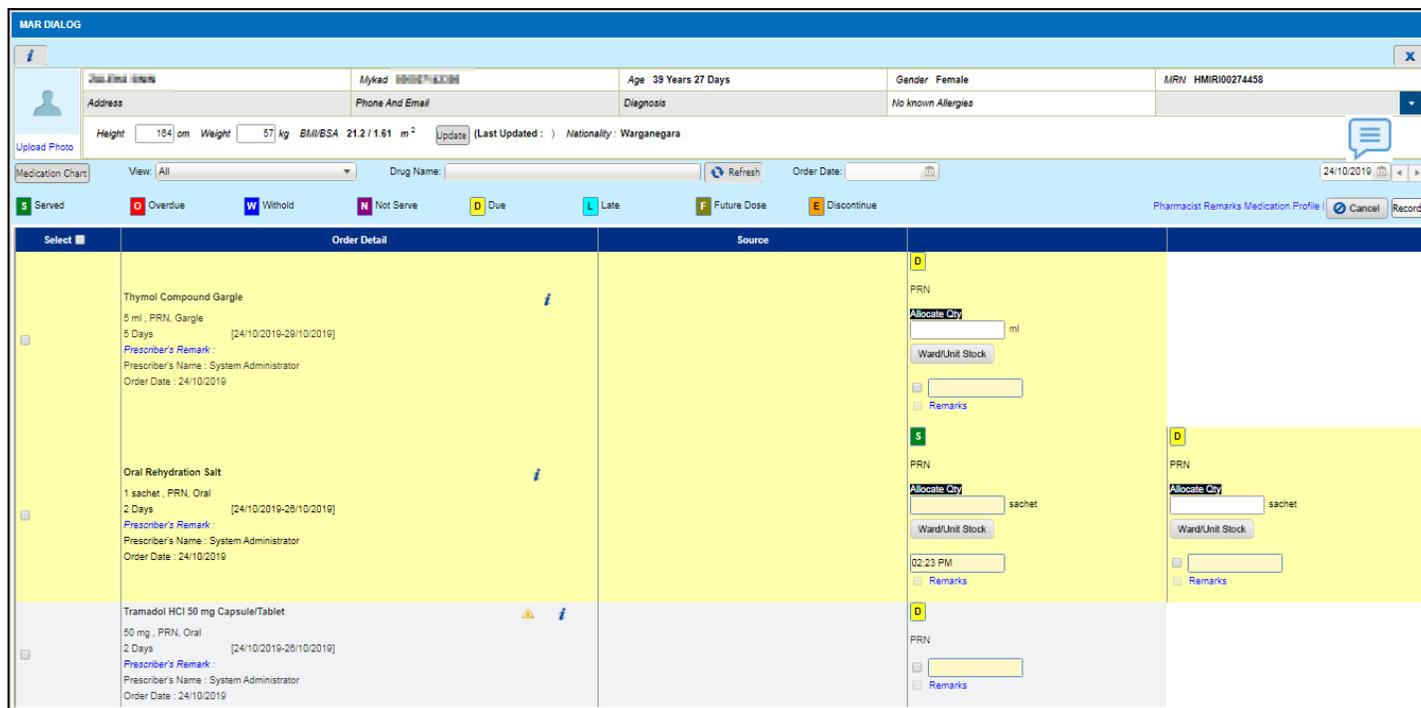
Figure 3.1.2-3 MAR Listing Page

STEP 3

Select location from drop box

STEP 4

Click on the selected patient name and system will display as Figure 3.1.2-4

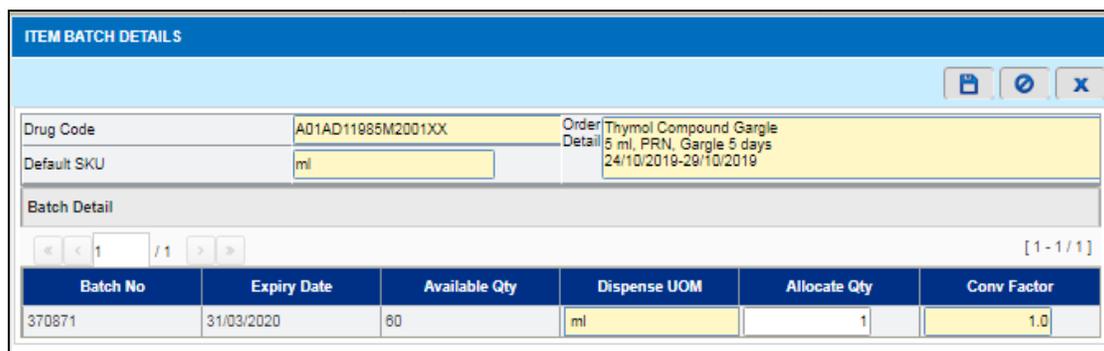


The screenshot displays the 'MAR DIALOG' window for a patient. At the top, patient information is shown: Name (Jusi, Fima), Mykad (8808174338), Age (39 Years 27 Days), Gender (Female), and I/R/N (HMIR00274458). Below this, fields for Address, Phone And Email, Diagnosis, and No known Allergies are visible. Patient vitals include Height (164 cm), Weight (57 kg), BMI/BSA (21.2 / 1.61 m²), and Nationality (Warganegara). A 'Medication Chart' section shows a list of medications with columns for 'Order Detail' and 'Source'. The medications listed are Thymol Compound Gargle, Oral Rehydration Salt, and Tramadol HCl 50 mg Capsule/Tablet. Each medication entry includes dosage, frequency, and order date. The 'Source' column shows administration status icons (S, O, W, N, D, L, F, E) and a 'Ward/Unit Stock' button. The 'Ward/Unit Stock' button for Thymol Compound Gargle is highlighted in yellow, indicating no stock available. The 'Ward/Unit Stock' button for Oral Rehydration Salt is also highlighted in yellow. The 'Ward/Unit Stock' button for Tramadol HCl 50 mg Capsule/Tablet is not highlighted.

Figure 3.1.2-4 MAR Patient Screen

Note

- Screen will display two (2) panel functions:
 - a) Non-Infusion
 - b) Infusion
- Administration status:
 - a) Due – Record within administration time range
 - b) Overdue - Record the administration after time range
 - c) Served- Record the administration within time range
 - d) Late - Record the administration late
 - e) Withhold - Hold by doctors or pharmacist
 - f) Future Dose - Has not reach the schedule time
 - g) Not Serve - Did Not Serve
 - h) Discontinue - Discontinued by doctor
- Click on **Ward/Unit Stock** button to allocate quantity and item batch details appear as per Figure 3.1.2-5
- **Ward/Unit Stock** button change to yellow colour refer as no stock available.



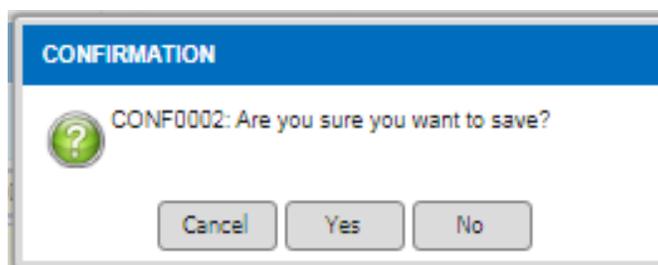
The screenshot shows a window titled "ITEM BATCH DETAILS" with a light blue header and standard window controls (save, refresh, close). The main content area is divided into several sections:

- Drug Code:** A01AD11985M2001XX
- Default SKU:** ml
- Order Detail:** Thymol Compound Gargle
5 ml, PRN, Gargle 5 days
24/10/2019-29/10/2019
- Batch Detail:** A navigation bar with left and right arrows, a page indicator "1 / 1", and a refresh icon. Below this is a table with the following data:

Batch No	Expiry Date	Available Qty	Dispense UOM	Allocate Qty	Conv Factor
370871	31/03/2020	60	ml	1	1.0

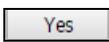
Figure 3.1.2-5 Drug Batch details

- Choose the batch no and insert the Allocate Qty field
- Batch nearest to expiration will be selected automatically and calculated for the drugs to be administered.
- Click on save  button to save record



The screenshot shows a "CONFIRMATION" dialog box with a blue header. It contains a question mark icon and the text "CONF0002: Are you sure you want to save?". At the bottom, there are three buttons: "Cancel", "Yes", and "No".

Figure 3.1.2.6 Confirm Message

- Click on the  button to confirm record

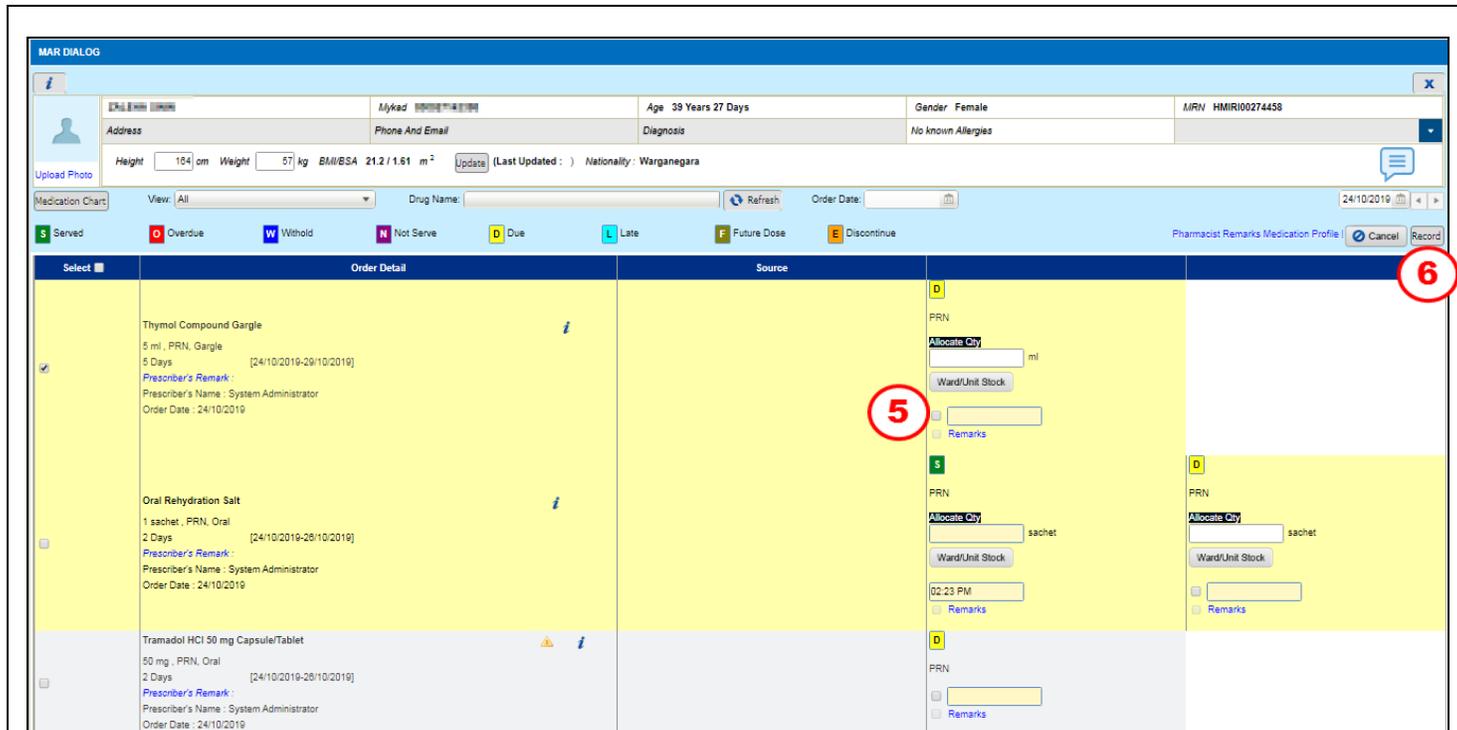


Figure 3.1.2-7 Patient Medication List

STEP 5

Click on the checkbox to select the drug with yellow colour box (due status)

Note

- Allow to select the drugs to serve if its show yellow colour box (due status)
- Allow to select multiple drugs to serve.
- Checkbox will be available for drug with yellow colour box (due status)
- User is allowed to select for multiple drugs to allocate quantity.
- User can enter remarks to update as not administered (not serve) for the drug with status due (D)

STEP 6

After select the drugs, click on record button to confirm record

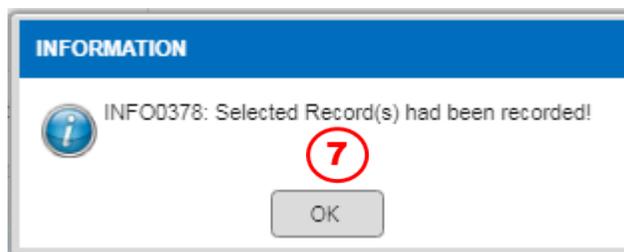
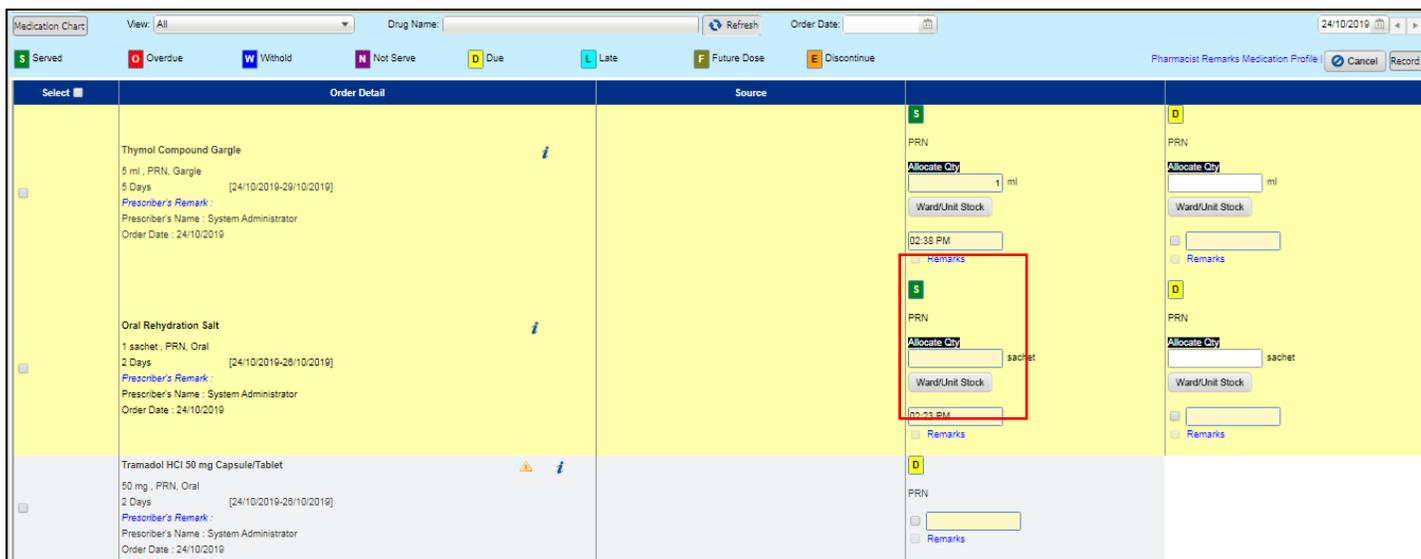


Figure 3.1.2-8 Information Alert Message

STEP 7

Click on the button to confirm record



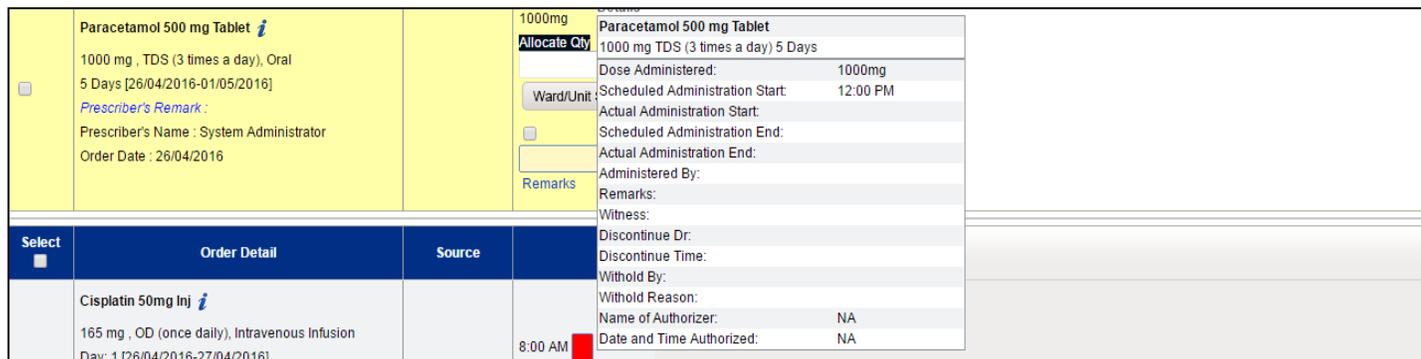
The screenshot shows a Medication Chart interface with a top navigation bar containing status buttons: S Served (green), O Overdue (red), W Withhold (blue), N Not Serve (purple), D Due (yellow), L Late (light blue), F Future Dose (light green), and E Discontinue (orange). The main area is a table with columns for 'Order Detail' and 'Source'. Three rows are visible:

- Thymol Compound Gargle:** 5 ml, PRN, Gargle, 5 Days [24/10/2019-29/10/2019]. Prescriber's Remark: System Administrator. Order Date: 24/10/2019. Status: Served (S).
- Oral Rehydration Salt:** 1 sachet, PRN, Oral, 2 Days [24/10/2019-26/10/2019]. Prescriber's Remark: System Administrator. Order Date: 24/10/2019. Status: Served (S).
- Tramadol HCl 50 mg Capsule/Tablet:** 50 mg, PRN, Oral, 2 Days [24/10/2019-26/10/2019]. Prescriber's Remark: System Administrator. Order Date: 24/10/2019. Status: Discontinue (D).

The 'Served' status is highlighted in green, and a red box highlights the 'Record' button in the 'Source' column for the Oral Rehydration Salt row.

Figure 3.1.2-9 Drug Served

- After drug has been recorded, the box will turn to green colour (served status) as per Figure 3.1.2-9
- When the **Record** button is clicked, the current time will be recorded.



The screenshot shows a 'Drug Dose Detail' window for Paracetamol 500 mg Tablet. The window is divided into 'Order Detail' and 'Source' sections. The 'Order Detail' section shows:

- Paracetamol 500 mg Tablet** (with an information icon)
- 1000 mg, TDS (3 times a day), Oral
- 5 Days [26/04/2016-01/05/2016]
- Prescriber's Remark: System Administrator
- Order Date: 26/04/2016

The 'Source' section shows:

- 1000mg
- Allocate Qty: [input field]
- Ward/Unit: [input field]
- Remarks: [input field]

Below the 'Source' section, a table displays administration details:

Dose Administered:	1000mg
Scheduled Administration Start:	12:00 PM
Actual Administration Start:	
Scheduled Administration End:	
Actual Administration End:	
Administered By:	
Remarks:	
Witness:	
Discontinue Dr:	
Discontinue Time:	
Withhold By:	
Withhold Reason:	
Name of Authorizer:	NA
Date and Time Authorized:	NA

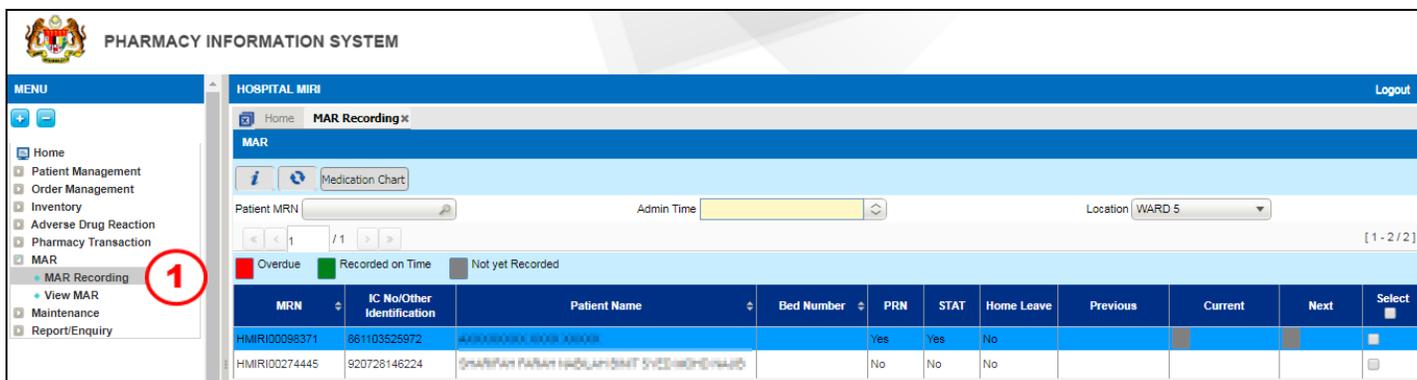
The 'Status' box in the 'Source' column is highlighted in red and shows '8:00 AM'.

Figure 3.1.2-10 Drug Dose Detail

- User can view the drug dose details by mouse over on the status box as shown figure 3.1.2-10

3.1.3 MAR Non-Infusion (Late Administered/Not Administered)

This function is used to administer the medication to patient outside the time range (overdue) and for Cancel administration (not served).



PHARMACY INFORMATION SYSTEM

HOSPITAL MIRI

Home MAR Recording x Logout

MAR

Medication Chart

Patient MRN Admin Time Location WARD 5 [1 - 2 / 2]

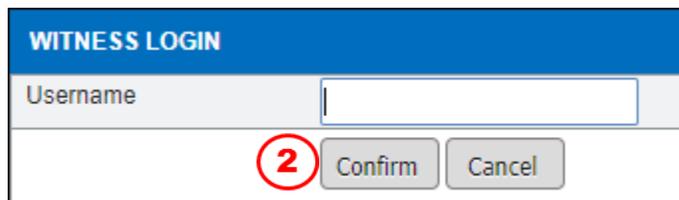
Overdue Recorded on Time Not yet Recorded

MRN	IC No/Other Identification	Patient Name	Bed Number	PRN	STAT	Home Leave	Previous	Current	Next	Select
HMIRI00098371	861103525972	XXXXXXXXXXXX XXXX		Yes	Yes	No				
HMIRI00274445	920728146224	SHARIFAT FARAH HADLAMHAT SYEDIMRAN		No	No	No				

Figure 3.1.3-1 MAR Menu

STEP 1

Click on the MAR menu then click on the MAR Recording sub menu



WITNESS LOGIN

Username

Confirm Cancel

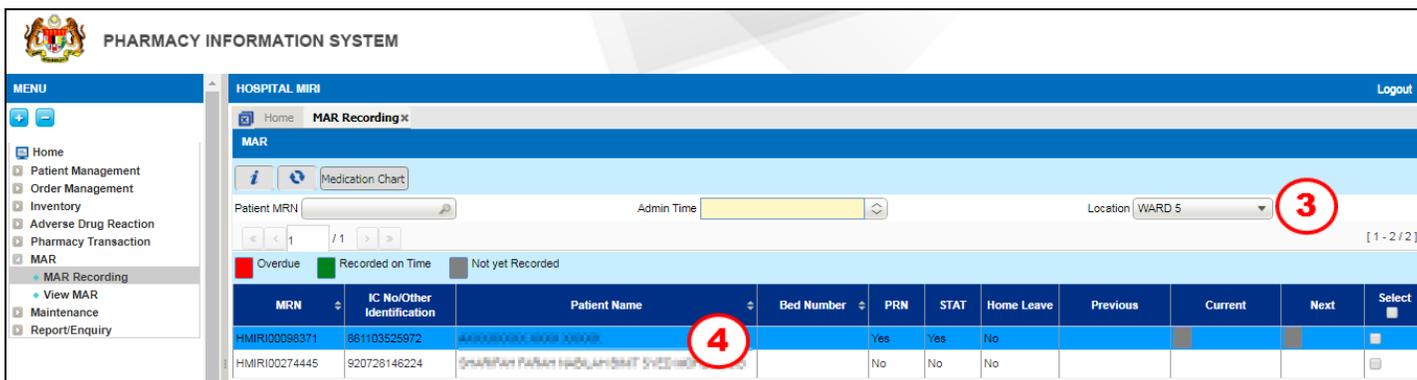
Figure 3.1.3-2 Witness Login

STEP 2

Enter **User ID** in the displayed Witness Login dialog box then click on the confirm button

Note

- Witness must have system access login.
- Witness must be different with user login.
- Witness shall be from the same discipline and the grade of Jururawat must be U29 and above.
- Witness does not require to login for every patient.



PHARMACY INFORMATION SYSTEM

HOSPITAL MIRI

Home MAR Recording x Logout

MAR

Medication Chart

Patient MRN Admin Time Location WARD 5 [1 - 2 / 2]

Overdue Recorded on Time Not yet Recorded

MRN	IC No/Other Identification	Patient Name	Bed Number	PRN	STAT	Home Leave	Previous	Current	Next	Select
HMIRI00098371	861103525972	XXXXXXXXXXXX XXXX		Yes	Yes	No				
HMIRI00274445	920728146224	SHARIFAT FARAH HADLAMHAT SYEDIMRAN		No	No	No				

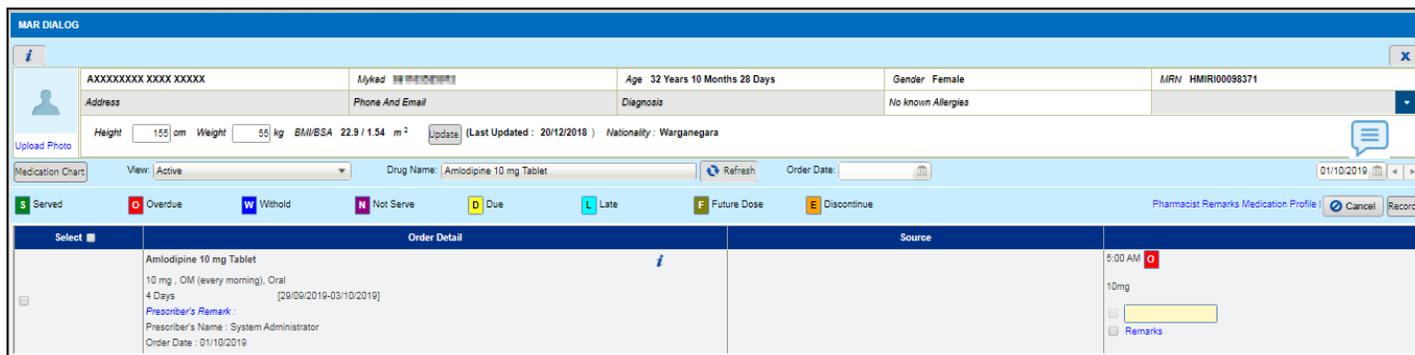
Figure 3.1.3-3 MAR Listing Page

STEP 3

Select location from drop box

STEP 4

Click on the selected patient name and system will display as Figure 3.1.3-4

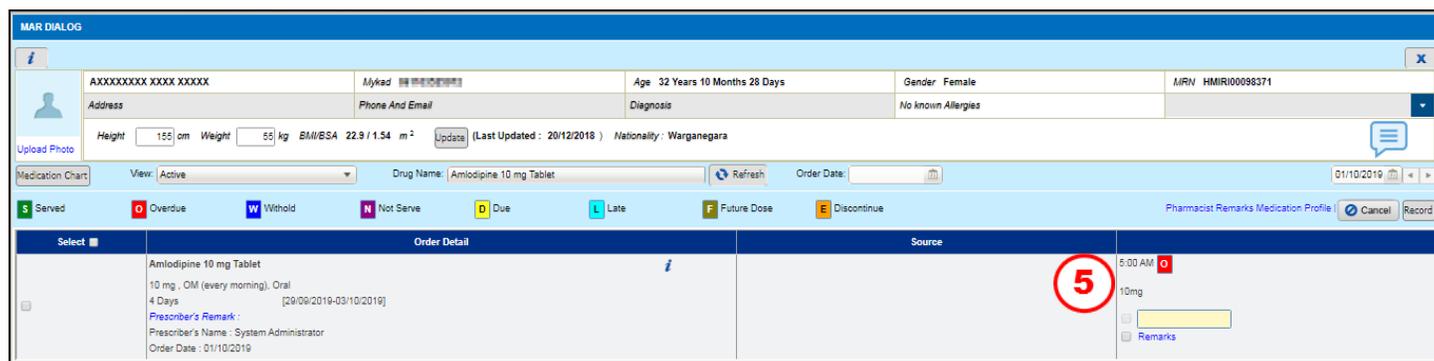


The screenshot shows the 'MAR DIALOG' window. At the top, there is a patient information section with fields for Mykad, Age (32 Years 10 Months 28 Days), Gender (Female), and M/RN (HMIRI00098371). Below this is a medication chart for 'Amiodipine 10 mg Tablet'. The chart includes a table with columns for 'Select', 'Order Detail', and 'Source'. The 'Order Detail' column contains the medication name, dosage (10 mg, OM every morning), frequency (Oral), and duration (4 Days). The 'Source' column shows the scheduled time (5:00 AM) and dose (10mg). A red 'O' icon indicates an overdue status. There are also buttons for 'Served', 'Overdue', 'Withhold', 'Not Serve', 'Due', 'Late', 'Future Dose', and 'Discontinue'.

Figure 3.1.3-4 MAR Patient Screen

Note

- Screen will display two (2) panel functions:
 - a) Non-Infusion
 - b) Infusion
- Administration status:
 - a) Due – Record within administration time range
 - b) Overdue - Record the administration after time range
 - c) Served- Record the administration within time range
 - d) Late - Record the administration late
 - e) Withhold - Hold by doctors or pharmacist
 - f) Future Dose - Has not reach the schedule time
 - g) Not Serve - Did Not Serve
 - h) Discontinue - Discontinued by doctor



This screenshot is identical to Figure 3.1.3-4, but with a red circle containing the number '5' highlighting the 'Remarks' field in the medication chart table. The 'Remarks' field is currently empty and has a yellow background.

Figure 3.1.3-5 Remarks

STEP 5

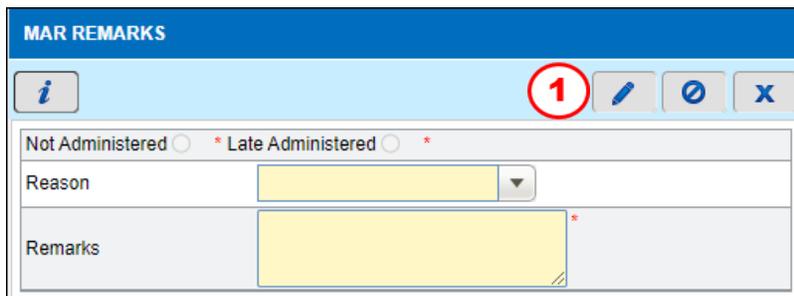
To record the late administration or not administered, click on Remarks and system will display as figure 3.1.3-6(a)

Note

Remarks can be entered if:

- Drug status still active.
- Reach and exceeding the time range of Administration time

LATE ADMINISTERED



The screenshot shows the 'MAR REMARKS' form. At the top, there is a blue header with the text 'MAR REMARKS'. Below the header is a light blue bar containing an information icon (i) on the left and three action icons (edit, refresh, close) on the right. A red circle with the number '1' is drawn around the edit icon. Below this bar are two radio buttons: 'Not Administered' (unselected) and '* Late Administered' (unselected). Below the radio buttons is a 'Reason' dropdown menu and a 'Remarks' text area. The 'Reason' dropdown is currently empty, and the 'Remarks' text area is also empty.

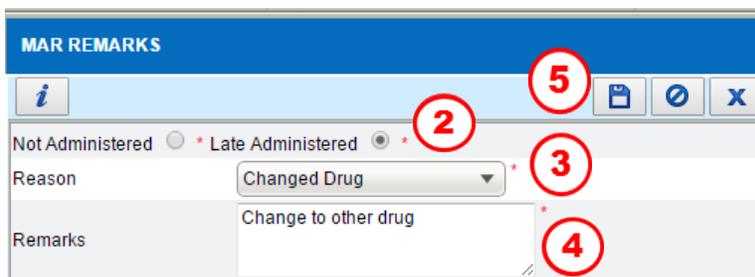
Figure 3.1.3-6(a) MAR Remarks

STEP 1

Click on  button to edit or add the new remarks

Note

- Users allow to select Reason but it is not mandatory.



The screenshot shows the 'MAR REMARKS' form with the 'Late Administered' checkbox selected. The 'Reason' dropdown menu is set to 'Changed Drug'. The 'Remarks' text area contains the text 'Change to other drug'. Red circles with numbers 2, 3, 4, and 5 are drawn around the 'Late Administered' checkbox, the 'Reason' dropdown, the 'Remarks' text area, and the edit icon, respectively.

Figure 3.1.3-6(b) MAR Remarks

STEP 2

Click on the Late Administered checkbox

STEP 3

Chose one (1) reason from the drop down box:

- Allergy
- Change Drug
- Hemodialysis
- Medication/Drug With Hold
- Nil By Mouth
- Nil In Stock
- No IV Access
- Not In Bed
- Patient Discharge
- Refused
- Others

STEP 4

Enter the remarks

STEP 5

Click on save  button to save record

The screenshot shows the 'MAR DIALOG' window. At the top, there is a patient information section with fields for Mykad, Age (32 Years 10 Months 28 Days), Gender (Female), and MRN (HMIR00098371). Below this is a section for Height (155 cm), Weight (55 kg), BMI/BSA (22.9 / 1.54 m²), and Nationality (Warganegara). The medication section shows 'Amlodipine 10 mg Tablet' with an order date of 01/10/2019. A status bar at the bottom indicates 'S Served', 'O Overdue', 'W Withhold', 'N Not Serve', 'D Due', 'L Late', 'F Future Dose', and 'E Discontinue'. The 'L Late' status is highlighted in cyan.

Figure 3.1.3-6(c) MAR Remarks

Note

When step 5 is performed, the box will turn to cyan colour (late status)

NOT ADMINISTERED

The screenshot shows the 'MAR REMARKS' dialog box. It has a title bar with an information icon and a red circle '1' around the edit button. Below the title bar, there are radio buttons for 'Not Administered' and '* Late Administered'. A 'Reason' dropdown menu is set to a default value, and a 'Remarks' text area is empty.

Figure 3.1.3-7 MAR Remarks

STEP 1

Click on  button to edit or add the new remarks

The screenshot shows the 'MAR REMARKS' dialog box with 'Not Administered' selected. The 'Reason' dropdown menu is set to 'Changed Drug'. The 'Remarks' text area contains the text 'Change to other drug'. Red circles '2', '3', and '4' highlight the information icon, the text area, and the save button respectively.

Figure 3.1.3-8 MAR Not Administered

STEP 2

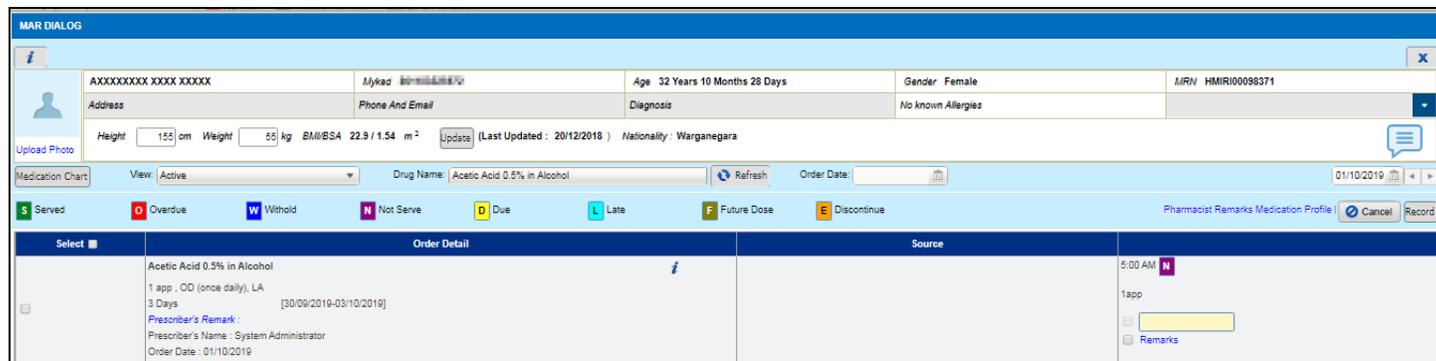
Click on the Not Administered checkbox

STEP 3

Enter the remarks

STEP 4

Click on save  button to save record



The screenshot shows the 'MAR DIALOG' window. At the top, there is a patient information section with fields for Mykad, Age (32 Years 10 Months 28 Days), Gender (Female), and M/RN (HMIR00098371). Below this is a section for Height (155 cm), Weight (55 kg), BMI/BSA (22.9 / 1.54 m²), and Nationality (Warganegara). The medication section shows 'Acetic Acid 0.5% in Alcohol' with an order date of 01/10/2019. A status bar at the bottom of the dialog includes buttons for Served, Overdue, Withhold, Not Serve (highlighted in purple), Due, Late, Future Dose, and Discontinue. Below the status bar is a table with columns for 'Select', 'Order Detail', 'Source', and a time/status column. The table contains one row for 'Acetic Acid 0.5% in Alcohol' with a 'Not Serve' status and a time of 5:00 AM. The 'Remarks' field is empty.

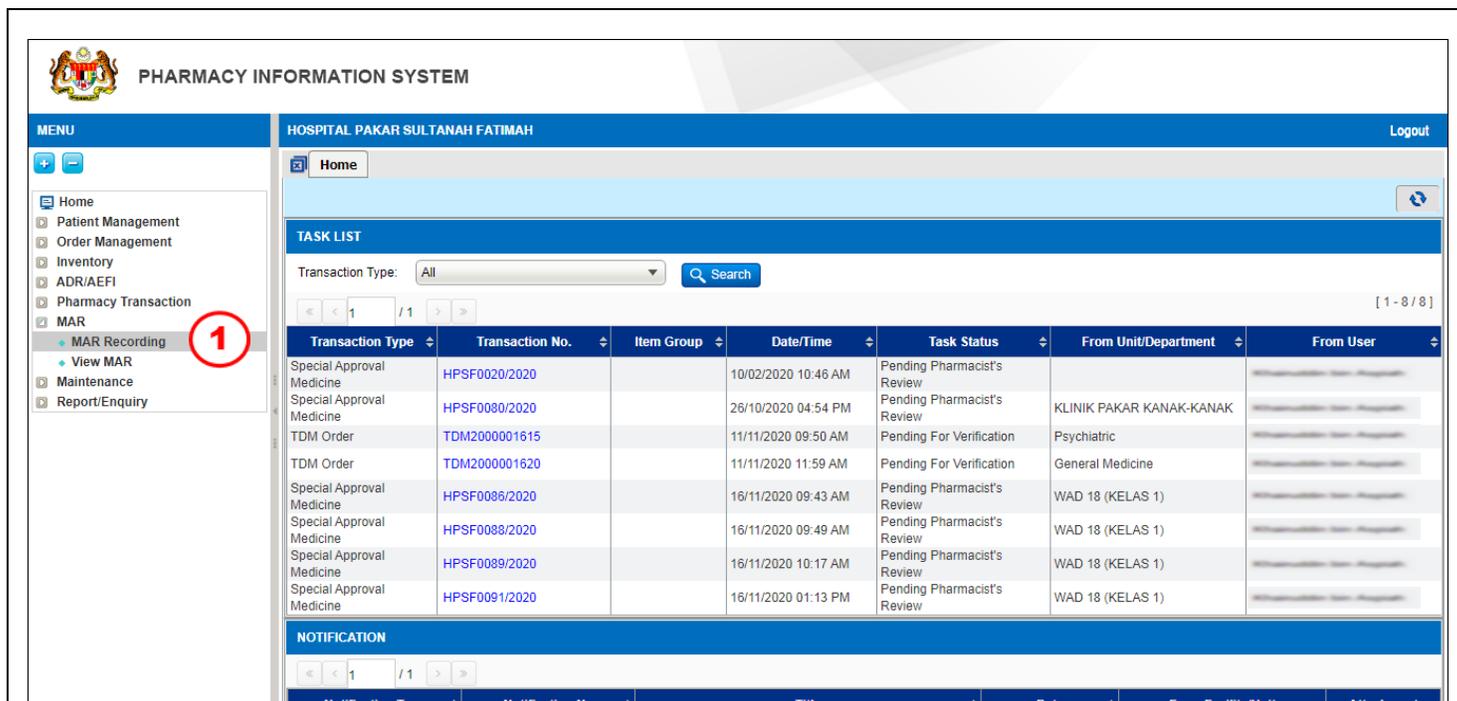
Figure 3.1.3-9 MAR Not Administered

Note

When step 5 is performed, the box will turn to purple colour box (Not Serve status)

3.1.4 MAR Infusion

This function is used to administer the medication to patient within the time range (On time) for infusion type of medication.

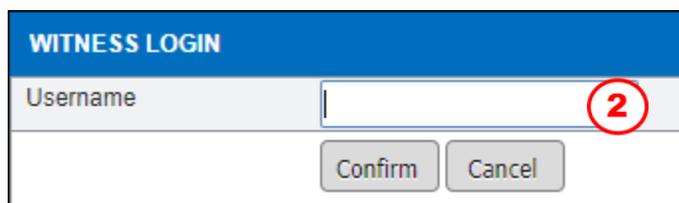


The screenshot shows the 'PHARMACY INFORMATION SYSTEM' interface for 'HOSPITAL PAKAR SULTANAH FATIMAH'. On the left is a 'MENU' sidebar with options: Home, Patient Management, Order Management, Inventory, ADR/AEFI, Pharmacy Transaction, MAR, MAR Recording (highlighted with a red circle '1'), View MAR, Maintenance, and Report/Enquiry. The main area displays a 'TASK LIST' table with columns: Transaction Type, Transaction No., Item Group, Date/Time, Task Status, From Unit/Department, and From User. The table contains several rows of medication orders, including 'Special Approval Medicine' and 'TDM Order'.

Figure 3.1.4-1 MAR Menu

STEP 1

Click on the MAR menu then click on the MAR Recording sub menu



The 'WITNESS LOGIN' dialog box has a blue header. Below the header is a 'Username' label followed by an empty text input field (highlighted with a red circle '2'). At the bottom are two buttons: 'Confirm' and 'Cancel'.

Figure 3.1.4-2 Witness Login

STEP 2

Enter **User ID** in the displayed Witness Login dialog box screen and click confirm

Note

- Witness must have system access login.
- Witness must be different with user login.
- Witness shall be from the same discipline and the grade of Jururawat must be U29 and above.
- Infusion drug only available after pharmacist do the dispensing.
- The drug that displayed at infusion Panel will be with 'INF' Intravenous Infusion or 'INSB Intravenous Slow Bolus admin route.
- There is no STAT or PRN dose for Infusion drug.
- Witness does not require to login for every patient.

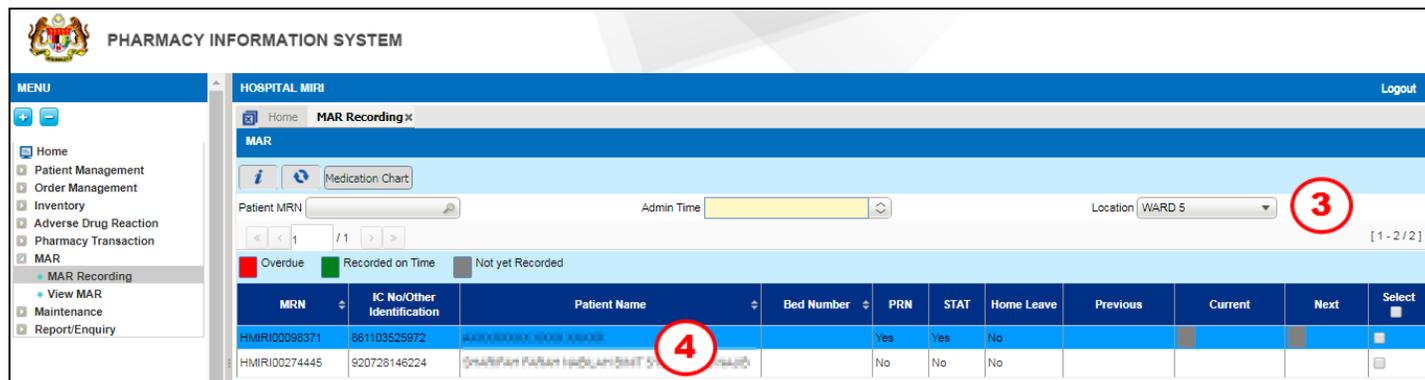


Figure 3.1.4-3 MAR Listing Page

STEP 3

Select location from drop box

STEP 4

Click on the selected patient name and system will display as Figure 3.1.4-4

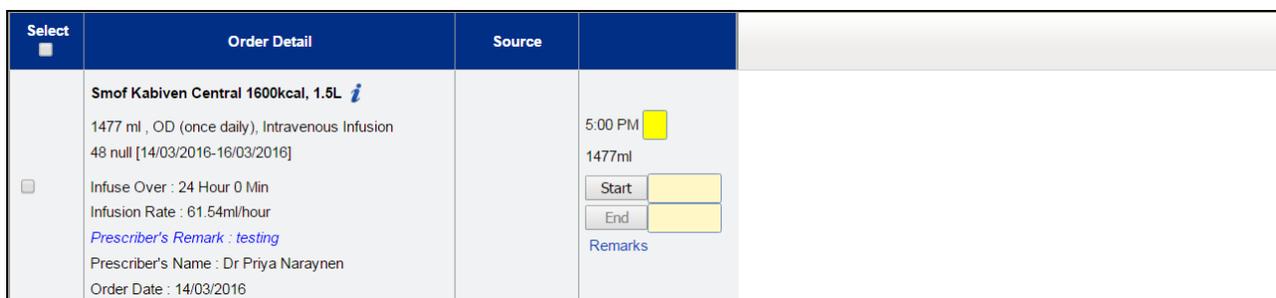


Figure 3.1.4-4 MAR Patient Screen

Note

- Screen will display two (2) panel functions and which is
 - a) Non-Infusion
 - b) Infusion
- Administration status:
 - a) Due – Record within administration time range
 - b) Overdue - Record the administration after time range
 - c) Served- Record the administration within time range
 - d) Late - Record the administration late
 - e) Withhold - Hold by doctors or pharmacist
 - f) Future Dose - Has not reach the schedule time
 - g) Not Serve - Did Not Serve
 - h) Discontinue - Discontinued by doctor

Select	Order Detail	Source	
<input type="checkbox"/>	Smof Kabiven Central 1600kcal, 1.5L <i>i</i> 1477 ml , OD (once daily), Intravenous Infusion 48 null [14/03/2016-16/03/2016] Infuse Over : 24 Hour 0 Min Infusion Rate : 61.54ml/hour <i>Prescriber's Remark : testing</i> Prescriber's Name : Dr Priya Naraynen Order Date : 14/03/2016		5:00 PM 1477ml 5 Start <input type="text"/> End <input type="text"/> Remarks

Figure 3.1.4-5 Start Infusion

STEP 5

Click on the button to enter the start time

Note

- When button is clicked, the current time will be recorded.
- If the time is one (1) hour more than duration time, recording will be not allowed without any remarks.

Select	Order Detail	Source	
<input type="checkbox"/>	Smof Kabiven Central 1600kcal, 1.5L <i>i</i> 1477 ml , OD (once daily), Intravenous Infusion 48 null [14/03/2016-16/03/2016] Infuse Over : 24 Hour 0 Min Infusion Rate : 61.54ml/hour <i>Prescriber's Remark : testing</i> Prescriber's Name : Dr Priya Naraynen Order Date : 14/03/2016		5:00 PM 1477ml 6 Start <input type="text" value="04:50 PM"/> End <input type="text"/> Remarks

Figure 3.1.4-6 End Infusion

STEP 6

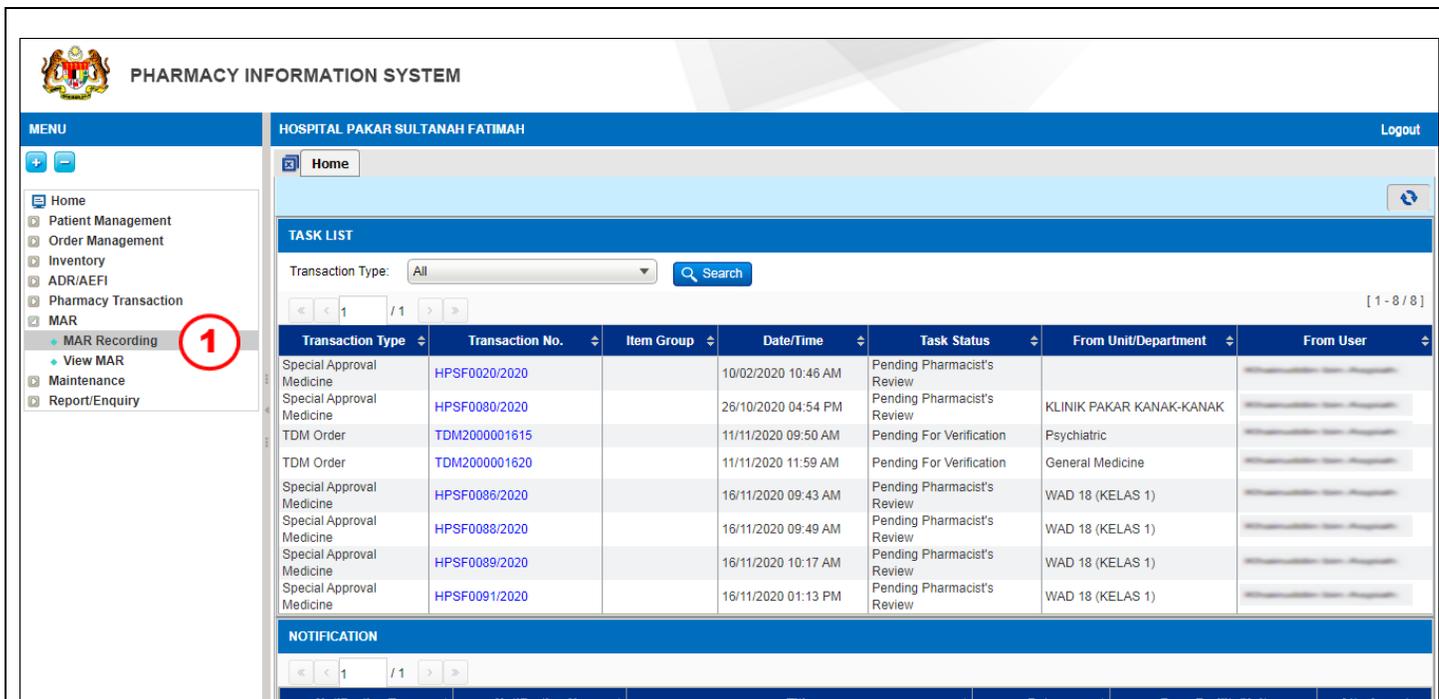
Click on the button to enter the end time.

Note

- button will be available for drug with yellow colour box (due status)
- After recording is performed, the box will turn to green colour box (served status)

3.1.5 MAR Infusion (Late Administered/Not Administered)

This function is used to administer the medication to patient within the Time range (on time) for infusion type of medication.



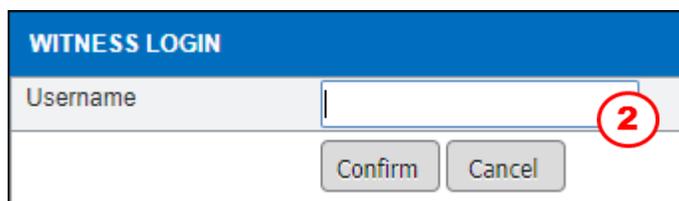
The screenshot shows the PHARMACY INFORMATION SYSTEM interface for HOSPITAL PAKAR SULTANAH FATIMAH. On the left is a MENU sidebar with 'MAR Recording' circled in red with the number '1'. The main area displays a 'TASK LIST' table with columns: Transaction Type, Transaction No., Item Group, Date/Time, Task Status, From Unit/Department, and From User. The table contains several rows of medication transactions, including Special Approval Medicines and TDM Orders.

Transaction Type	Transaction No.	Item Group	Date/Time	Task Status	From Unit/Department	From User
Special Approval Medicine	HPSF0020/2020		10/02/2020 10:46 AM	Pending Pharmacist's Review		
Special Approval Medicine	HPSF0080/2020		26/10/2020 04:54 PM	Pending Pharmacist's Review	KLINIK PAKAR KANAK-KANAK	
TDM Order	TDM2000001615		11/11/2020 09:50 AM	Pending For Verification	Psychiatric	
TDM Order	TDM2000001620		11/11/2020 11:59 AM	Pending For Verification	General Medicine	
Special Approval Medicine	HPSF0086/2020		16/11/2020 09:43 AM	Pending Pharmacist's Review	WAD 18 (KELAS 1)	
Special Approval Medicine	HPSF0088/2020		16/11/2020 09:49 AM	Pending Pharmacist's Review	WAD 18 (KELAS 1)	
Special Approval Medicine	HPSF0089/2020		16/11/2020 10:17 AM	Pending Pharmacist's Review	WAD 18 (KELAS 1)	
Special Approval Medicine	HPSF0091/2020		16/11/2020 01:13 PM	Pending Pharmacist's Review	WAD 18 (KELAS 1)	

Figure 3.1.5-1 MAR Menu

STEP 1

Click on the MAR menu then click on the MAR Recording sub menu



The screenshot shows a 'WITNESS LOGIN' dialog box with a 'Username' input field, a 'Confirm' button, and a 'Cancel' button. The input field is circled in red with the number '2'.

Figure 3.1.5-2 Witness Login

STEP 2

Enter User ID in Witness Login Dialog Box screen and click confirm

Note

- Witness must have system access login.
- Witness must be different with user login.
- Witness shall be from the same discipline and the grade of Jururawat must be U29 and above.
- Infusion drug will be available after pharmacist do the dispensing.
- Drug which are displayed at infusion Panel will be with 'INF' Intravenous Infusion or 'INSB' Intravenous Slow Bolus admin route.
- There is no STAT or PRN dose for Infusion drug
- Witness does not require to login for every patient.

Figure 3.1.5-3 MAR Listing Page

STEP 3

Select location from drop box

STEP 4

Click on the selected patient name and system will display as Figure 3.1.5-4

Figure 3.1.5-4 MAR Patient Screen

Note

- Screen will display two (2) panel functions:
 - a) Non-Infusion
 - b) Infusion
- Administration status:
 - a) Due – Record within administration time range
 - b) Overdue - Record the administration after time range
 - c) Served- Record the administration within time range
 - d) Late - Record the administration late
 - e) Withhold - Hold by doctors or pharmacist
 - f) Future Dose - Has not reach the schedule time
 - g) Not Serve - Did Not Serve
 - h) Discontinue - Discontinued by doctor

Figure 3.1.5-5 Remarks

STEP 5

To record the late administration or not administered, click on Remarks and system will display as Figure 3.1.5-6(a)

Note

Remarks can be entered if:

- Drug status is Active.
- Time range is reaching and exceeding of Administration time

LATE ADMINISTERED

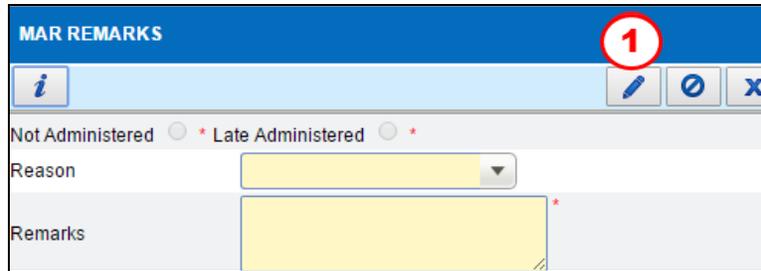


Figure 3.1.5-6(a) MAR Remarks

STEP 1

Click on  button to edit or add the new remarks

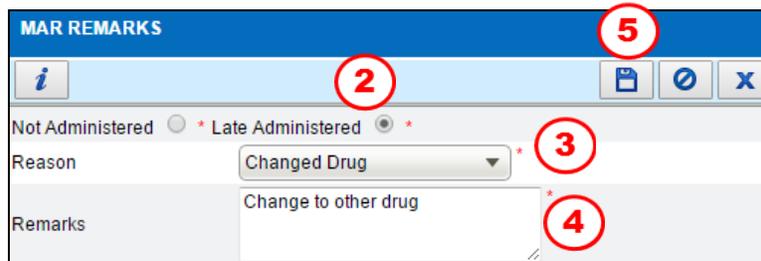


Figure 3.1.5-6(b) MAR Remarks

STEP 2

Click on the **Late Administered** radio button

STEP 3

Chose one reason from the drop down box:

- Allergy
- Change Drug
- Hemodialysis
- Medication/Drug With Hold
- Nil By Mouth
- Nil In Stock
- No IV Access
- Not In Bed
- Patient Discharge
- Refused
- Others

STEP 4

Enter the remarks

STEP 5

Click on save  button to save record

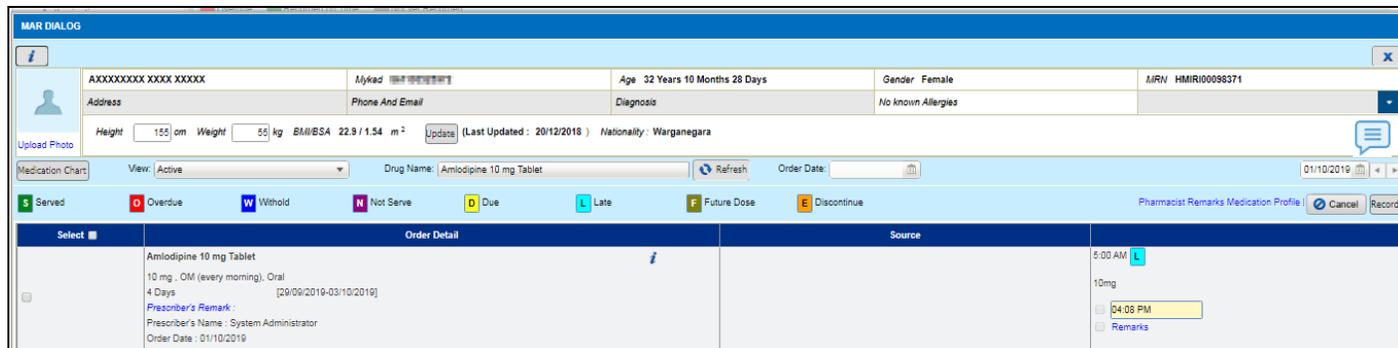


Figure 3.1.5-7 MAR Late

Note

When step 5 is performed, the box will turn to cyan colour (late status)

NOT ADMINISTERED

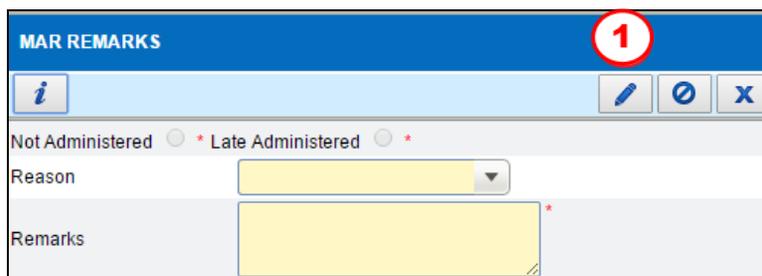


Figure 3.1.5-8 MAR Remarks

STEP 1

Click on  button to edit or add the new remarks

Note

- Users allow to select Reason but it is not mandatory.

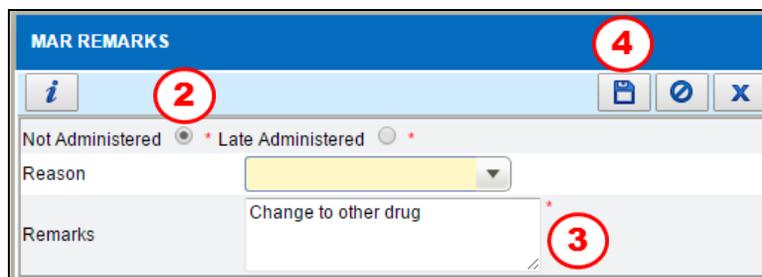


Figure 3.1.5-9 MAR Not Administered

STEP 2

Click on the ***Not Administered*** radio button

STEP 3

Enter the remarks

STEP 4

Click on save  button to save record

Select	Order Detail	Source	
<input type="checkbox"/>	<p>Sodium Chloride 3% 500mL IV soln</p> <p>1 ml, OD (once daily), Intravenous Infusion</p> <p>7 Days [24/10/2019-31/10/2019]</p> <p><i>Prescriber's Remark:</i></p> <p>Prescriber's Name : System Administrator</p> <p>Order Date : 24/10/2019</p>		<p>12:09 PM</p> <p>1ml</p> <p>Start: <input type="text"/></p> <p>End: <input type="text"/></p> <p><input type="checkbox"/> Remarks</p>

Figure 3.1.5-10 MAR Not Administered

3.2 Medication Chart

This function is used to generate the medication chart to serve medication.

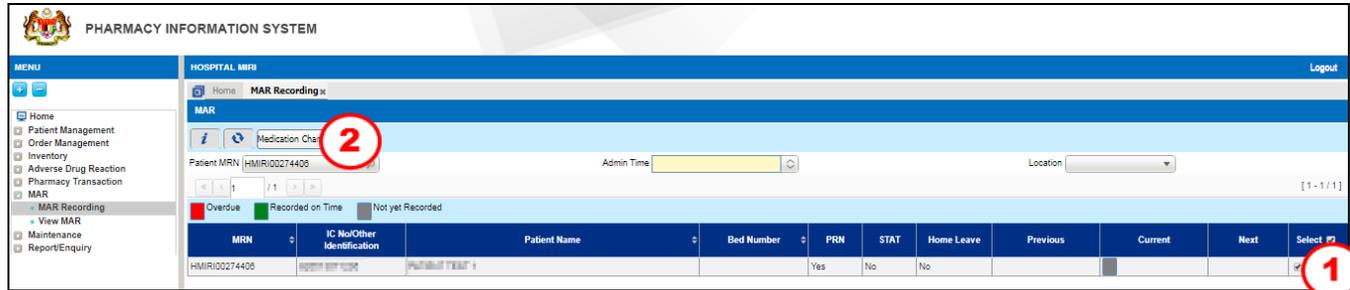


Figure 3.2-1 MAR Listing Page

STEP 1

Click on the checkbox to select the patient as per Figure 3.2-1

STEP 2

Click on the [Medication Chart](#) button to view print the record as figure 3.2-2

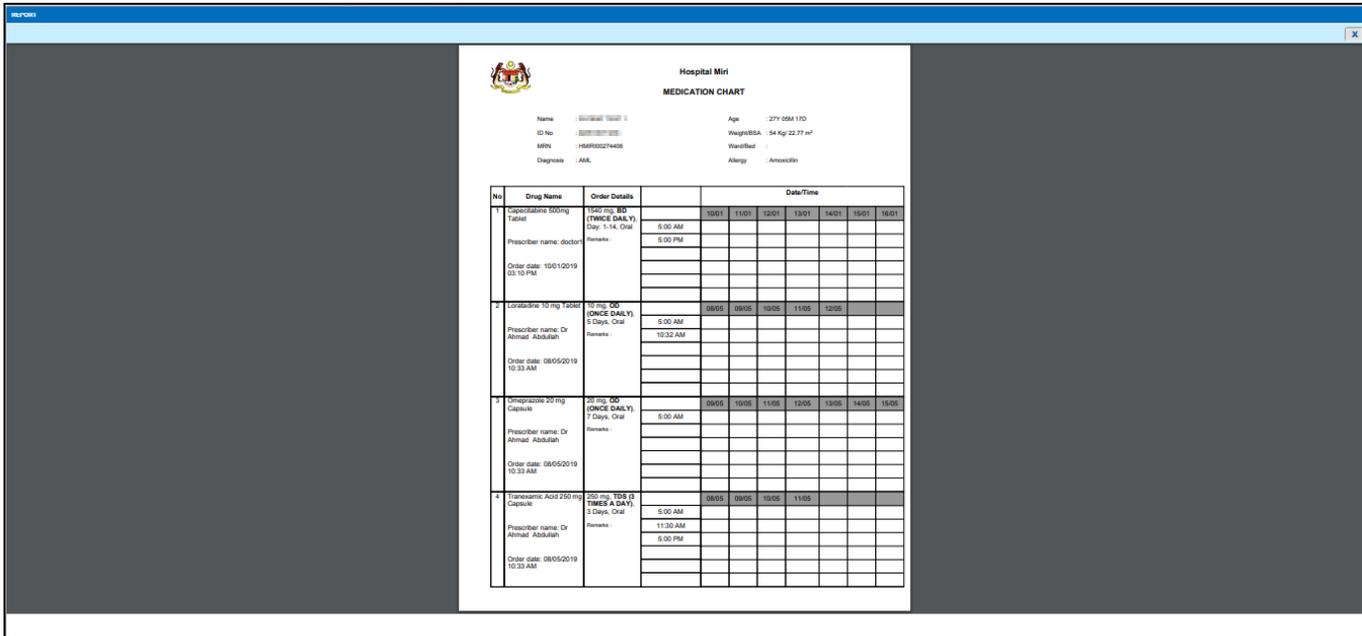
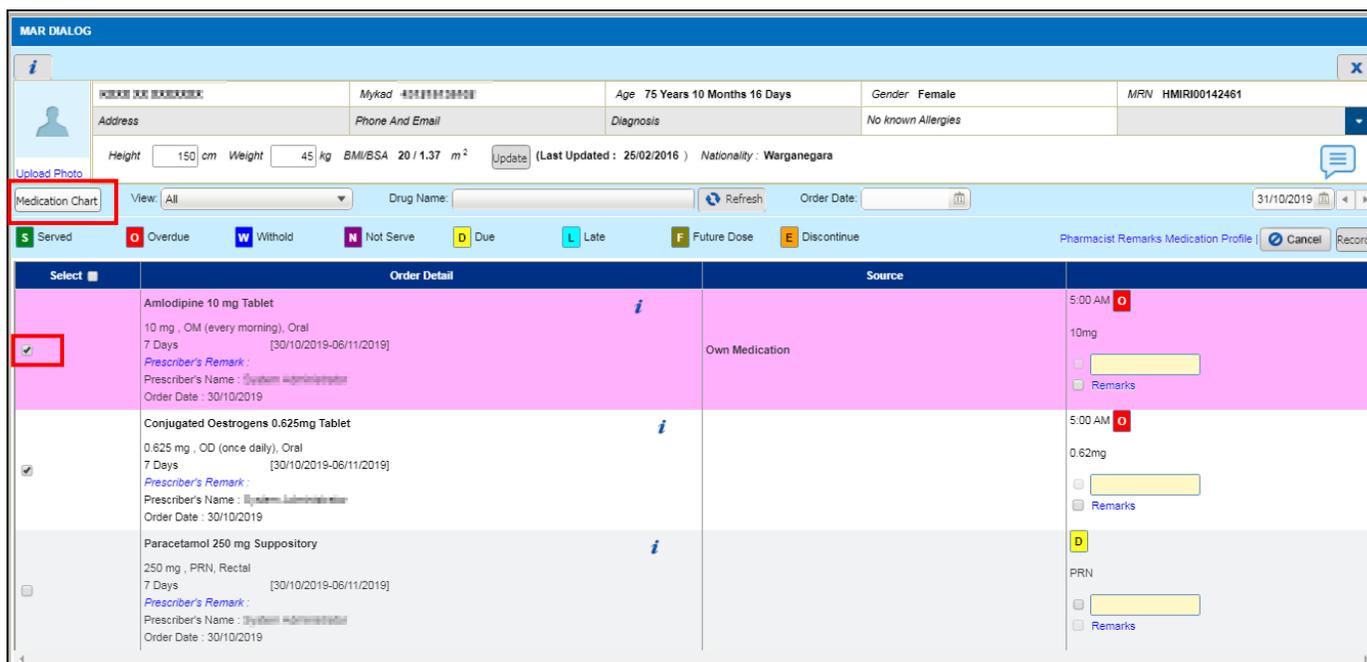


Figure 3.2-2 Medication Chart

Note

- Medication chart able to filter by **Patient MRN, Admin Time** and by **Location**

- User can select Medication chart by drug at patient MAR listing screen as per Figure 3.2-3



MAR DIALOG

Mykad: [REDACTED] Age: 75 Years 10 Months 16 Days Gender: Female MRN: HMIRI00142461

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

Height: 150 cm Weight: 45 kg BMI/BSA: 20 / 1.37 m² Update (Last Updated: 25/02/2016) Nationality: Warganegara

Medication Chart View: All Drug Name: Refresh Order Date: 31/10/2019

S Served O Overdue W Withhold N Not Serve D Due L Late F Future Dose E Discontinue Pharmacist Remarks Medication Profile Cancel Record

Select	Order Detail	Source	
<input checked="" type="checkbox"/>	Amlodipine 10 mg Tablet 10 mg, OM (every morning), Oral 7 Days [30/10/2019-06/11/2019] Prescriber's Remark: Prescriber's Name: [REDACTED] Order Date: 30/10/2019	Own Medication	5:00 AM O 10mg Remarks
<input checked="" type="checkbox"/>	Conjugated Oestrogens 0.625mg Tablet 0.625 mg, OD (once daily), Oral 7 Days [30/10/2019-06/11/2019] Prescriber's Remark: Prescriber's Name: [REDACTED] Order Date: 30/10/2019		5:00 AM O 0.62mg Remarks
<input type="checkbox"/>	Paracetamol 250 mg Suppository 250 mg, PRN, Rectal 7 Days [30/10/2019-06/11/2019] Prescriber's Remark: Prescriber's Name: [REDACTED] Order Date: 30/10/2019		D PRN Remarks

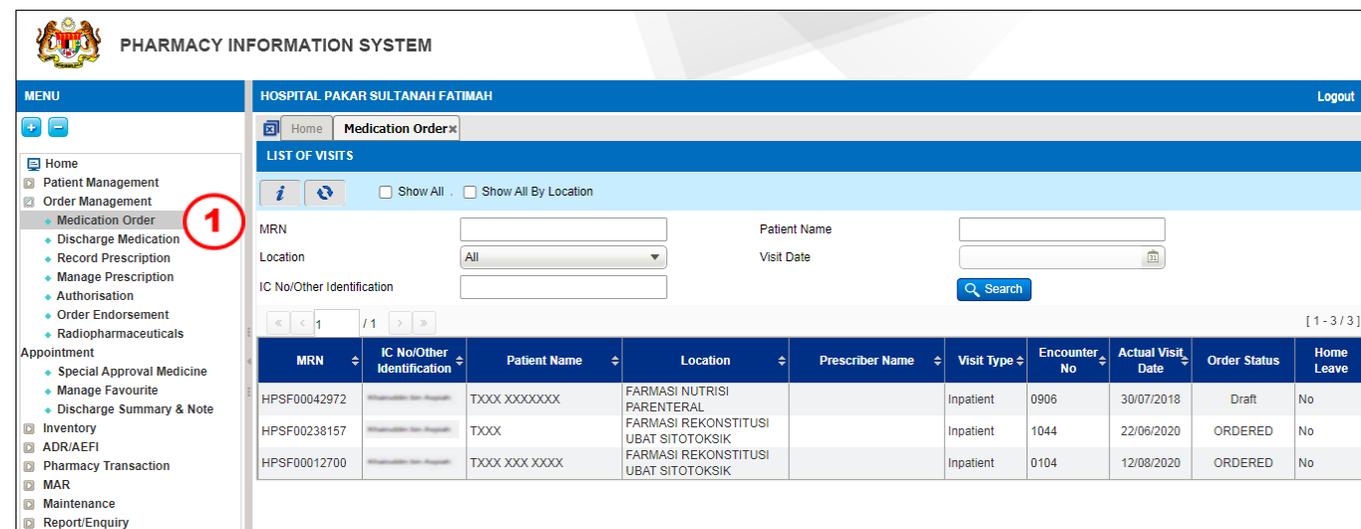
Figure 3.2-3 Patient Drug Listing Page

- Click on the checkbox to select the drug as per Figure 3.2-3
- Click on the **Medication Chart** button to view print the record as figure 3.2-3

3.3 View MAR

This function is for the doctor to view the medication administration record of the patient.

MEDICATION ORDER VIEW MAR



MRN	IC No/Other Identification	Patient Name	Location	Prescriber Name	Visit Type	Encounter No	Actual Visit Date	Order Status	Home Leave
HPSF00042972		TXXX XXXXXXXX	FARMASI NUTRISI PARENTERAL		Inpatient	0906	30/07/2018	Draft	No
HPSF00238157		TXXX	FARMASI REKONSTITUSI UBAT SITOTOKSIK		Inpatient	1044	22/06/2020	ORDERED	No
HPSF00012700		TXXX XXX XXXX	FARMASI REKONSTITUSI UBAT SITOTOKSIK		Inpatient	0104	12/08/2020	ORDERED	No

Figure 3.2-1 Medication Order Listing Page

STEP 1

Click on 'Order Management' menu and follow by 'Medication Order' sub-menu

Note

- Prescriber have the option to view patients by clicking the check box:
 - Show All
 - Show All By Location
- By default list of patients will be displayed according to prescriber's location access.
- Various search criteria is provided as below:

No	Field	Description	Remark
a	MRN	Patient Medical Record Number	Search option: <ul style="list-style-type: none"> Type the MRN either full or partial: Example: HPSF00001234 or "1234"
b	Patient Name	Patient Name	Allow to search by patient full name or partial
c	Location	Patient visit location	Able to filter and search patient by visit location
d	Visit Date	Visit Date	Patient visits on the facility
e	IC No/Other Identification	IC No/Other Identification	Able to filter and search patient by IC No/Other Identification

Table 3.1.12-1

Note

Search result of patient record list will be displayed:

- MRN
- ID No
- Patient Name
- Location
- Prescriber Name

- Visit Type
- Encounter No
- Visit Date
- Order Status
- Home Leave

PHARMACY INFORMATION SYSTEM

HOSPITAL PAKAR SULTANAH FATIMAH

Home Medication Order

LIST OF VISITS

MRN: [] Patient Name: []
 Location: All Visit Date: []
 IC No/Other Identification: [] Search

MRN	IC No/Other Identification	Patient Name	Location	Prescriber Name	Visit Type	Encounter No	Actual Visit Date	Order Status	Home Leave
HPSF00042972		TXXX XXXXXXX	FARMASI NUTRISI PARENTERAL		Inpatient	0906	30/07/2018	Draft	No
HPSF00238157		TXXX	FARMASI REKONSTITUSI UBAT SITOTOKSIK		Inpatient	1044	22/06/2020	ORDERED	No
HPSF00012700		TXXX XXX XXXX	FARMASI REKONSTITUSI UBAT SITOTOKSIK		Inpatient	0104	12/08/2020	ORDERED	No

Figure 3.1.12-2 Medication Order Listing Page

STEP 2

Double click on the selected patient

MEDICATION ORDER

TXXX XXX XXX Mykad Age 65 Years 02 Months 22 Days Gender Male MRN HMIR00197439
 Address Phone And Email Diagnosis No known Allergies
 Height [] cm Weight [] kg BMI/BSA 00 m² G6PD [] Update (Last Updated :) Nationality: Warganegara

Encounter No: 0034 Actual Admission Date: 24/09/2016 Attending Practitioner: DR WONG ZHAI SING Visit Location: WARD ICU Pensioner [] -SELECT- Update

VIEW MAR

Order Detail

Order Detail	24-Sep-16	25-Sep-16	26-Sep-16	27-Sep-16	28-Sep-16	29-Sep-16	30-Sep-16	01-Oct-16	02-Oct-16	03-Oct-16	04-Oct-16	04-Sep-19	05-Sep-19	06-Sep-19	07-Sep-19
Amiodarone 150mg/3ml Injection 300 mg STAT Intravenous Infusion 1 Days Prescriber's Name : DR GAN SHEE YIN															
Amiodarone 150mg/3ml Injection 900 mg CONT Intravenous Infusion 1 Days Prescriber's Name : DR GAN SHEE YIN					28/09/2016 04:53 AM										
Amlodipine 5 mg Tablet 5 mg OM (every morning) Oral 7 Days Prescriber's Name : System Administrator											5:00 AM	5:00 AM	5:00 AM	5:00 AM	
STAT Intravenous Bolus 1 Days Prescriber's Name : DR NORAISSAH BINTI MD SAAD															
Ascorbic Acid 100 mg Tablet 100 mg OD (once daily) Oral 7 Days Prescriber's Name : DR PHANG CHIN TONG				5:00 AM	28/09/2016 04:53 AM	5:00 AM	5:00 AM	5:00 AM	5:00 AM	5:00 AM	5:00 AM				

Figure 3.1.12-3 Medication Order Screen

STEP 3

Click on the  button.

Note



Figure 3.1.12-4 Administration Status Color

- **Served:** The medication have been served within the time range and recorded in the system.
- **Not serve:** The medication recorded as not served within the time range in the system.
- **Not Admin:** User has not recorded the administration details in the system.
- **Late:** User has late recorded the administration details in the system
- Move the cursor to the administration status box and the administration details will appear as Figure 3.1.12-5

Order Detail	29-May-19	30-May-19	31-May-19	01-Jun-19	02-Jun-19	03-Jun-19	04-Jun-19	05-Jun-19	06-Jun-19
Amoxicillin 500mg Capsule 1000 mg BD (twice daily) Oral 10 Days Prescriber's Name : Dr Nur Afiza Amira Binti Katimon	<input type="checkbox"/> 8:00 PM	<input type="checkbox"/> 8:00 AM <input type="checkbox"/> 8:00 PM	<input type="checkbox"/> 8:00 AM <input type="checkbox"/> 8:00 AM <input type="checkbox"/> 8:00 AM	<input type="checkbox"/> 8:00 AM					
Clarithromycin 250 mg Tablet 500 mg Q12H Oral 10 Days Prescriber's Name : Dr Nur Afiza Amira Binti Katimon	<input type="checkbox"/> 6:00 PM	<input type="checkbox"/> 6:00 AM <input type="checkbox"/> 6:00 PM	<input type="checkbox"/> 6:00 AM <input type="checkbox"/> 6:00 AM <input type="checkbox"/> 6:00 AM	<input type="checkbox"/> 6:00 AM					
Pantoprazole 40 mg Tablet 40 mg Q12H Oral 2 Weeks Prescriber's Name : Dr Nur Afiza Amira Binti Katimon	<input type="checkbox"/> 6:00 PM	<input type="checkbox"/> 6:00 AM <input type="checkbox"/> 6:00 PM	<input type="checkbox"/> 6:00 AM <input type="checkbox"/> 6:00 AM <input type="checkbox"/> 6:00 AM	<input type="checkbox"/> 6:00 AM					
Pantoprazole 40 mg Tablet 40 mg OD (once daily) Oral 4 Months Prescriber's Name : Dr Nur Afiza Amira Binti Katimon		<input type="checkbox"/> 8:00 AM	<input type="checkbox"/> 8:00 AM	<input type="checkbox"/> 8:00 AM	<input type="checkbox"/> 8:00 AM				
Propranolol HCl 40 mg Tablet	<input type="checkbox"/> 8:00 PM	<input type="checkbox"/> 8:00 AM	<input type="checkbox"/> 8:00 AM	<input type="checkbox"/> 8:00 AM	<input type="checkbox"/> 8:00 AM				

Figure 3.1.12-5 Administration Details

VIEW MAR

MRN	Patient Name	IC No/Other Identification	Location	Last Visit Date	Home Leave
HPSF00025918	MXXXXXXXXXXXXXXXXXXXX	040218015283	DAYCARE WAD 15	12/04/2020	No
HPSF00212764	PXXXXXXXXXXXX		WAD 6	24/12/2019	No
HPSF00212059	KXXXXXXXXXXXX		JABATAN KECEMASAN & TRAUMA	11/08/2020	No
HPSF00185729	LXX XXXXX		JABATAN KECEMASAN & TRAUMA	01/07/2020	No
HPSF00019265	RXXXX XXXXXXX		WAD 8 (MED - L)	05/09/2020	No
HPSF00062399	YXX XXX		UNIT ENDOSCOPY	13/02/2020	No
HPSF00025918	MXXXXXXXXXXXXXXXXXXXX		DAYCARE WAD 15	12/04/2020	No
HPSF00289895	MXXXXXXXXXXXX		UNIT ENDOSCOPY	27/08/2020	No
HPSF00055678	NX XXXX		UNIT ENDOSCOPY	04/06/2020	No
HPSF00258211	AJXXXX XXXX		WAD 10 (MED - P)	07/09/2020	No

Figure 3.2-1 View MAR Listing Page

STEP 1

Click on 'MAR' menu and follow by 'View Mar' sub-menu

Note

- By default list of patients will be displayed according to user location access.
- Various search criteria is provided as below:

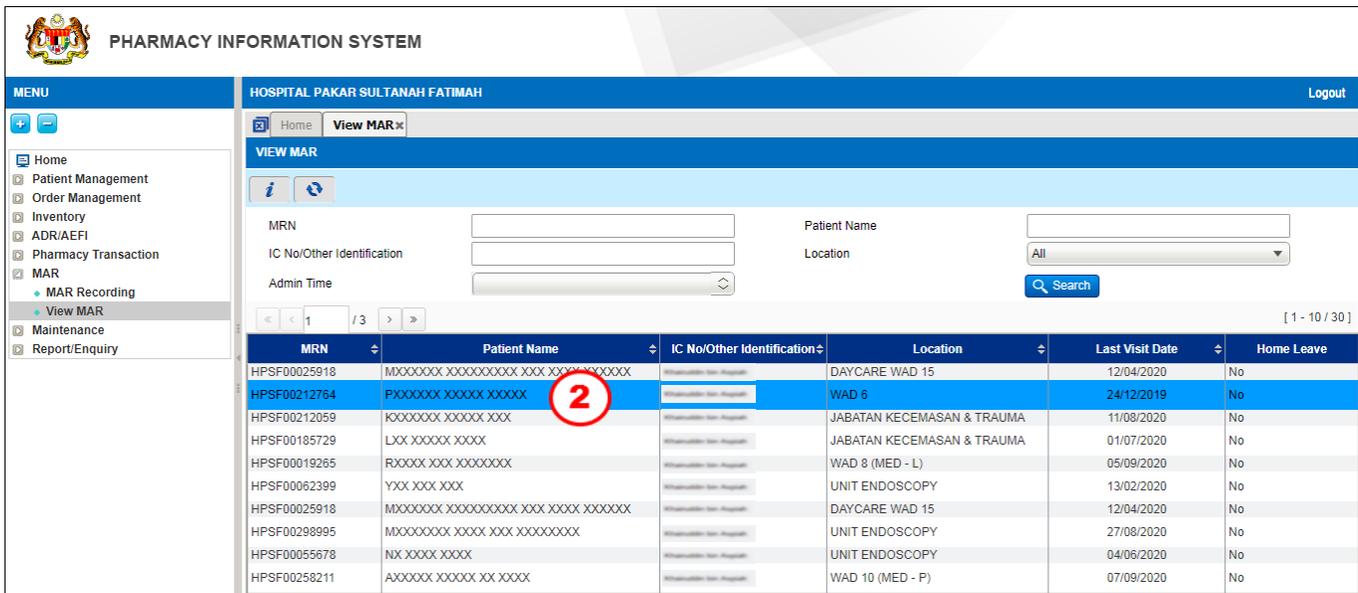
No	Field	Description	Remark
a	MRN	Patient Medical Record Number	Search option: • Type the MRN either full or partial: <i>Example: HPSF00001234 or "1234"</i>
b	Patient Name	Patient Name	Allow to search by patient full name or partial
c	Location	Patient visit location	Able to filter and search patient by visit location
d	IC No/Other Identification	Patient IC No/Other Identification	Allow to search by patient IC No/Other Identification
e	Admin Time	Patient Admin time	Allow to search patient admin time

Table 3.2-2

Note

Search result of patient record list will be displayed:

- MRN
- Patient name
- IC No/Other Identification
- Location
- Last Visit Date
- Home Leave



PHARMACY INFORMATION SYSTEM

HOSPITAL PAKAR SULTANAH FATIMAH

MENU: Home, Patient Management, Order Management, Inventory, ADR/AEFI, Pharmacy Transaction, MAR, MAR Recording, View MAR, Maintenance, Report/Enquiry

VIEW MAR Search Filters:

- MRN:
- Patient Name:
- IC No/Other Identification:
- Location:
- Admin Time:

Search [1 - 10 / 30]

MRN	Patient Name	IC No/Other Identification	Location	Last Visit Date	Home Leave
HPSF00025918	MXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	DAYCARE WAD 15	12/04/2020	No
HPSF00212764	PXXXXXXXXXXXX	XXXXXXXXXXXX	WAD 6	24/12/2019	No
HPSF00212059	XXXXXXXXXXXXXXX	XXXXXXXXXXXX	JABATAN KECEMASAN & TRAUMA	11/08/2020	No
HPSF00185729	LXX XXXXX XXXX	XXXXXXXXXXXX	JABATAN KECEMASAN & TRAUMA	01/07/2020	No
HPSF00019265	RXXXX XXX XXXXXXX	XXXXXXXXXXXX	WAD 8 (MED - L)	05/09/2020	No
HPSF00062399	YXX XXX XXX	XXXXXXXXXXXX	UNIT ENDOSCOPY	13/02/2020	No
HPSF00025918	MXXXXXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXX	DAYCARE WAD 15	12/04/2020	No
HPSF00298995	MXXXXXXXXXXXXXXX	XXXXXXXXXXXX	UNIT ENDOSCOPY	27/08/2020	No
HPSF00055678	NX XXXXX XXXX	XXXXXXXXXXXX	UNIT ENDOSCOPY	04/06/2020	No
HPSF00258211	AXXXXX XXXXXX XX XXXX	XXXXXXXXXXXX	WAD 10 (MED - P)	07/09/2020	No

Figure 3.2-3 View MAR Listing Page

STEP 2

Double click on the selected patient

MAR DIALOG									
i X Mykad: XXXXXXXXXX Age: 61 Years 09 Months 09 Days Gender: Female MRN: XXXXXXXXXX Address: XXXXXXXXXX Phone And Email: XXXXXXXXXX Diagnosis: XXXXXXXXXX Height: <input type="text"/> cm Weight: <input type="text"/> kg BMI/BSA: <input type="text"/> m ² Update (Last Updated:) Nationality: Warganegara View: All Drug Name: <input type="text"/> Refresh Order Date: <input type="text"/>									
<input checked="" type="checkbox"/> Served <input type="checkbox"/> Not Serve <input type="checkbox"/> Late <input type="checkbox"/> Not Admin									
Order Detail	24-Oct-19	25-Oct-19	26-Oct-19	27-Oct-19	28-Oct-19	29-Oct-19	30-Oct-19	31-Oct-19	
Amlodipine 10 mg Tablet 10 mg OM (every morning) Oral 7 Days Prescriber's Name : System Administrator	<input type="checkbox"/>	<input type="checkbox"/>							
Dextrose 20% 500mL IV soln 500 ml OD (once daily) Intravenous Infusion 7 Days Prescriber's Name : System Administrator	<input type="checkbox"/>	<input type="checkbox"/>							
Insulin regularisophane (Insugen-30/70) 100 IU/mL Penfill 1 IU BD HD/PO day (3x a week) Subcutaneous 7 Days Prescriber's Name : System Administrator	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
Lactulose 3.35 g/5 ml Liquid 5 ml OD (once daily) Oral 7 Days Prescriber's Name : System Administrator	<input type="checkbox"/>	<input type="checkbox"/>							
Lactulose 3.35 g/5 ml Liquid 5 ml STAT Oral 1 Days Prescriber's Name : System Administrator	<input type="checkbox"/>	<input type="checkbox"/>							
Losartan 50 mg Tablet 50 mg OD (once daily) Oral 7 Days Prescriber's Name : System Administrator	<input type="checkbox"/>	<input type="checkbox"/>							
Nystatin 100,000 units/ml Suspension 100000 unit OD (once daily) Oral 7 Days Prescriber's Name : System Administrator	<input type="checkbox"/>	<input type="checkbox"/>							
Nystatin 100,000 units/ml Suspension 100000 unit STAT Oral 1 Days Prescriber's Name : System Administrator	<input type="checkbox"/>	<input type="checkbox"/>							
Oral Rehydration Salt 1 sachet, 2 sachet, 1 sachet TDS (3 times a day) Oral 7 Days Prescriber's Name : System Administrator	<input type="checkbox"/>	<input type="checkbox"/>							

Figure 3.2-4 Medication Order Screen

Note

- User able to view active, inactive or all by clicking



Figure 3.2-5 Administration Status Color

- Served: The medication have been served within the time range and recorded in the system.
- Not serve: The medication recorded as not served within the time range in the system.
- Not Admin: User has not recorded the administration details in the system.
- Late: User has late recorded the administration details in the system
- Move the cursor to the administration status box and the administration details will appear as Figure 3.2-6

MAR DIALOG

Mykad XXXXXXXXXX

Age 61 Years 09 Months 09 Days

Gender Female

MRN XXXXXXXXXX

Address XXXXXXXXXX

Phone And Email XXXXXXXXXX

Diagnosis XXXXXXXXXX

No known Allergies

Height cm **Weight** kg **BM/BSA** m² Update (Last Updated:) **Nationality:** Warganegara

View: All Drug Name: Refresh Order Date:

Served Not Serve Late Not Admin

Order Detail	24-Oct-19	25-Oct-19	26-Oct-19	27-Oct-19	28-Oct-19	29-Oct-19	30-Oct-19	31-Oct-19
Amlodipine 10 mg Tablet 10 mg OM (every morning) Oral 7 Days	<input type="checkbox"/>	<input type="checkbox"/>						
Prescriber's Name : XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>						
Dextrose 20% 500mL IV soln 500 ml OD (once daily) Intravenous Infusion 7 Days	<input type="checkbox"/>	<input type="checkbox"/>						
Prescriber's Name : XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>						
Insulin regular/isophane (insugen-30/70) 100 IU/mL Penfill 1 IU BD HD/ID day (3x a week) Subcutaneous 7 Days	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
Prescriber's Name : XXXXXXXXXX	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>					
Lactulose 3.35 g/5 ml Liquid 5 ml OD (once daily) Oral 7 Days	<input type="checkbox"/>	<input type="checkbox"/>						
Prescriber's Name : XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>						
Lactulose 3.35 g/5 ml Liquid 5 ml STAT Oral 1 Days	<input type="checkbox"/>	<input type="checkbox"/>						
Prescriber's Name : XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>						
Losartan 50 mg Tablet 50 mg OD (once daily) Oral 7 Days	<input type="checkbox"/>	<input type="checkbox"/>						
Prescriber's Name : XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>						
Nystatin 100,000 units/ml Suspension 100000 unit OD (once daily) Oral 7 Days	<input type="checkbox"/>	<input type="checkbox"/>						
Prescriber's Name : XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>						
Nystatin 100,000 units/ml Suspension 100000 unit STAT Oral 1 Days	<input type="checkbox"/>	<input type="checkbox"/>						
Prescriber's Name : XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>						
Oral Rehydration Salt 1 sachet, 2 sachet, 1 sachet TDS (3 times a day) Oral 7 Days	<input type="checkbox"/>	<input type="checkbox"/>						
Prescriber's Name : XXXXXXXXXX	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>						
	<input type="checkbox"/>	<input type="checkbox"/>						

Details

Insulin regular/isophane (insugen-30/70) 100 IU/mL Penfill

1 IU BD HD/ID day (3x a week) 7 Days

Dose Administered: 1 IU

Scheduled Administration Start: 30/10/2019 01:00 PM

Actual Administration Start: 30/10/2019 12:10 PM

Scheduled Administration End:

Actual Administration End:

Administered By: XXXXXXXXXX

Remarks:

Witness: ZUBIDAH BINTI HAMDAN

Discontinue Dr:

Prescription Time: 4

Figure 3.2-6 Administration Details

4.0 Acronyms

Abbreviation	Definition
PhIS	Pharmacy Information System
CPS	Clinical Pharmacy System
MRN	Medical Registration Number
MAR	Medication Administration Report
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	Radiopharmaceutical	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		