

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

Full Based User Manual Medication Therapy Adherence Clinic (MTAC)

Version	: 9th EDITION
Document ID	: FB_U. MANUAL_MTAC



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Application reference: PhIS & CPS v2.0.1

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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 to benefit facility end user in the health care sector.

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

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

1.2 Purpose and Objectives

This user manual outlines the Medication Therapy Adherence Clinic (MTAC) sub-module and its key features and functionalities. The primary objective is to guide user through the process of completing PhIS application process.

User will understand the following activities in detail:

- MTAC Reporting

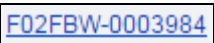
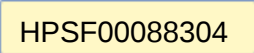
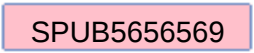
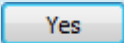
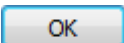
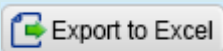
1.3 Organised Sections

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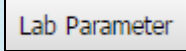
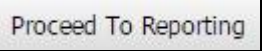
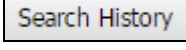
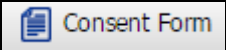
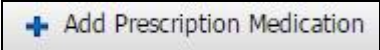
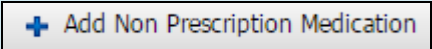
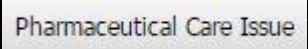
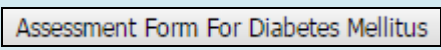
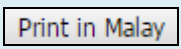
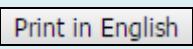
- Section 1 : Introduction
- Section 2 : Application Standard Features
- Section 3 : MTAC
- Section 4 : Acronyms
- Section 5 : Links to clinical modules

2.0 Application Standard Features

2.1 PhIS Legend

Standard Legend			
	Blank Field		Drop Down Box
	Reset Login		Login to PhIS
	Expand Menu		Collapse Menu
	Display Home Tab		Expand Module
	Collapse Module		Logout from PhIS
	Close All Tabs		Refresh
	Search First Page/ Previous Page		Search Next Page/Last Page
	Search Up/Down Button		Hyperlink
	Save		Show Help
	Search Icon		Add/Create New Record
	Calendar Icon		Search Record
	Close Window		Add/Update Button
	Auto generate an information by the system		Auto generate record no by the system
	Mandatory Field		Cancel Button
	Yes Button		No Button
	OK Button		Edit Record
	Print		Export report from PDF to Excel
	Check Box		Radio Button
	Cancel		Delete Record

MTAC Module Legend

	Lab Parameter Button		Proceed To Reporting Button
	Search History Button	Audit Trail	Audit Trail Hyperlink
	Consent Form Button		CP1 Button
	CP4 Button		Add Prescription Medication Button
Calculate Score	Calculate Score Hyperlink		Add Non Prescription Medication Button
	Save & Continue Button		Pharmaceutical Care Issue Button
	Malay Language Button		Assessment Form for Diabetes Mellitus Button
	Medication Order Button		Confirm Button
	Print In Malay Button		Print In English Button

Note

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

2.2 Latest Enhancement and Updates

Latest Functions	Page
Combine screen for MTAC Order at MTAC Reporting Screen. No More MTAC Order Sub Menu	Related screen
CP1 Change from merged Past Medical History to individual table: i. Past Medication - CP1 ii. Non-Prescription Medication (including Herbal/Vitamin/Herbal/Vitamin/Another Supplement) - CP1 Column for i) and ii) should include: a) Original Rx no. b) Order details (like in preparation screen) c) Supply details d) Remark/Balance/Comments List of medication to be included in all 2 table in the printed report will be indicated by a checkbox	41
Assessment a. Change 'Comorbidity' from check box selection into drop down menu with History field (free text 500 characters) - For Old data, Comorbidity History will be empty	27
b. Diagnostic test change to be in 1 box only (2000 char)	27
New MTAC -Cardiovascular Care Bundle(CCB) Add specific detail for MTAC Type = CCB	91
New screenshot-Remove mandatory field for adherence score	30

3.0 MTAC

Overview

The MTAC module emphasis on medication management to improve quality and safety include. Implementing safe, organized, and efficient drug-dispensing systems is essential for controlling costs and assuring that the medical prescription is safely followed as requested and within the relevant deadline. An appropriate dispensing system and cost-effectiveness of patient care. MTAC is operated to drug therapy monitoring and patient's education in improving their ability to successfully manage disease condition and reducing medication error.

User Group

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

Functional Diagram

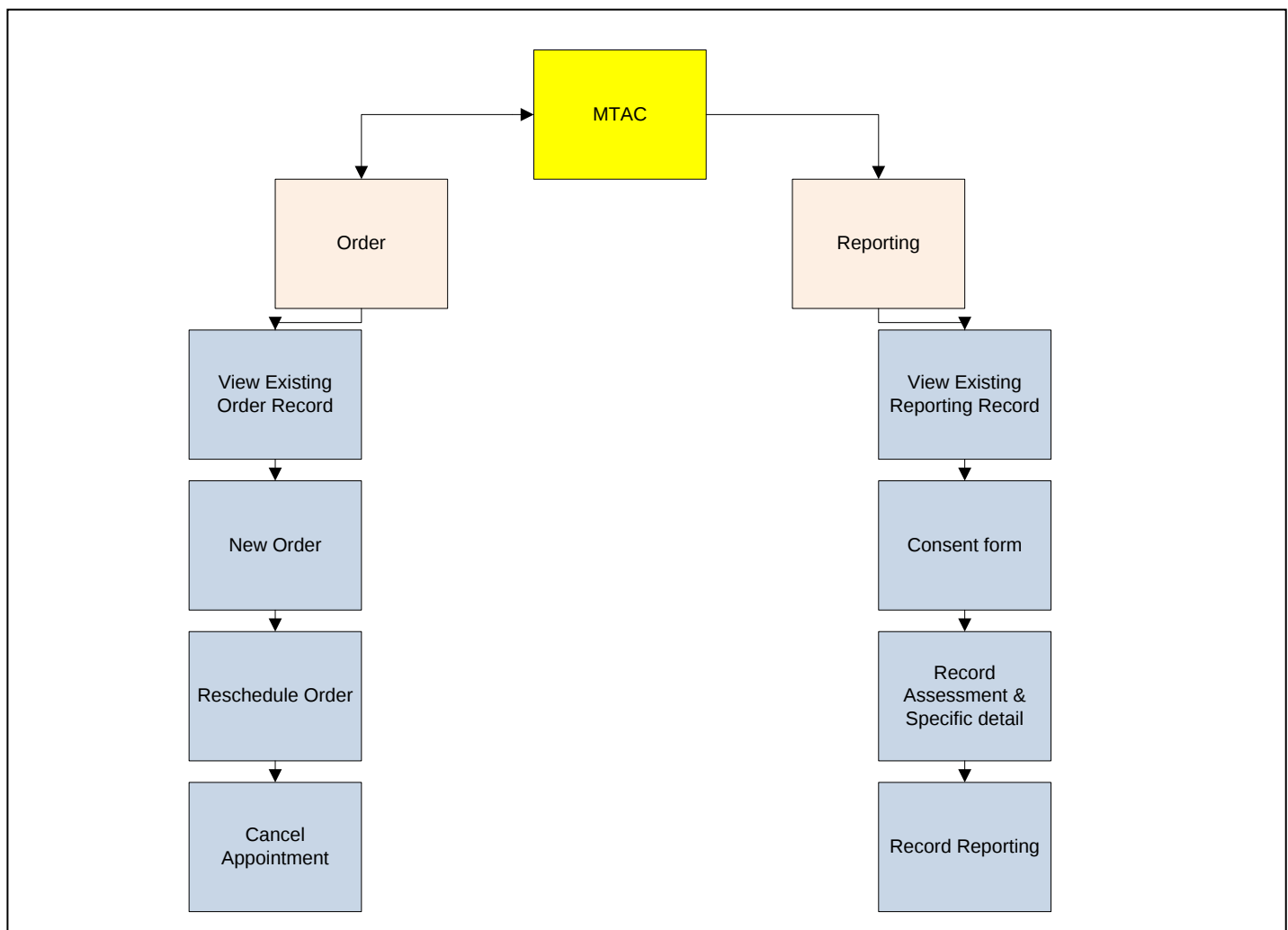


Figure 3.0-1

Functional Description:

MTAC Reporting

MTAC Reporting is to record the type of MTAC for counselling and to schedule appointment dates. Reporting is used to record assessment, specific details and report of counselling

There are ten (10) types of MTAC with No Specific Details

1. Cardiac Rehab Program
2. Chronic Pain
3. Gastrohepatology
4. Hemophilia
5. Hepatitis
6. Neurology
7. Osteoporosis
8. Psoriasis
9. Psychiatry
10. Rheumatology

There are ten (11) types of MTAC with Specific Details

1. Chronic Kidney Disease
2. Diabetes Mellitus
3. Dialysis
4. Geriatric
5. Heart Failure
6. Methadone
7. Renal Transplant
8. Respiratory
9. Retro Viral Disease
10. Warfarin
11. Cardiovascular Care Bundle

3.1 MTAC

Order will be ordered by prescriber from order management. Pharmacists are also able to create a new order at the MTAC Reporting screen

3.1.1 View Existing Order at MTAC Reporting

MTAC Reporting screen allow users to search and view existing patients' MTAC order records.

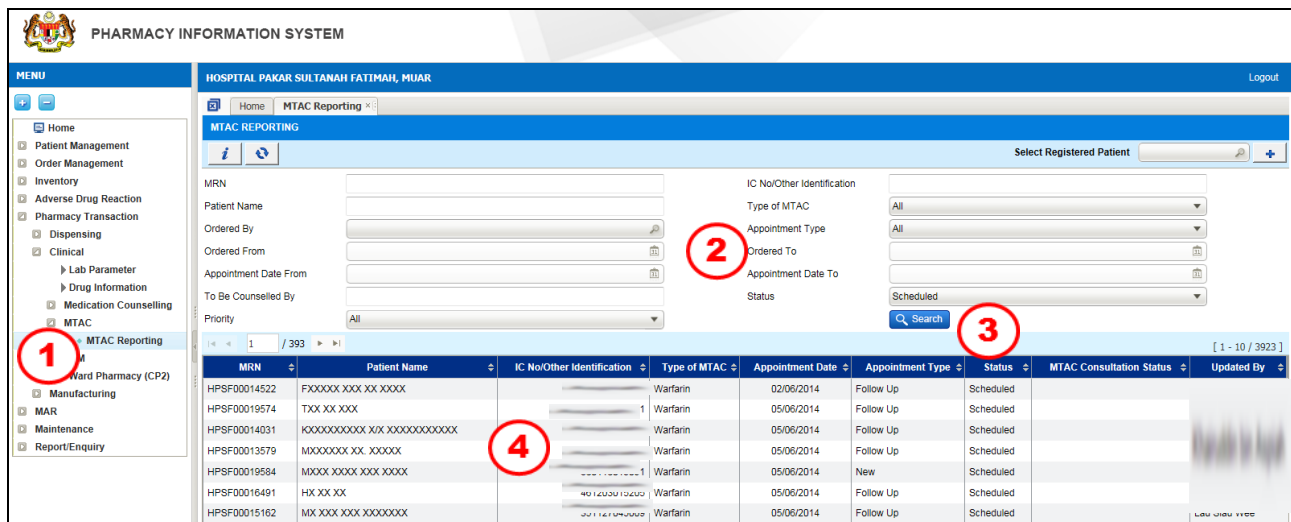


Figure 3.1.1-1 MTAC Reporting Listing Page

STEP 1

Click on 'Pharmacy Transaction' menu followed by 'Clinical' then 'MTAC' and 'MTAC Reporting' sub menu

STEP 2

Search existing patient record by: -

Field	Description	Remark
MRN	Patient Medical Record Number	Search option: Type the MRN either full or partial: Example: HPSF00001234 or "1234"
Patient Name	Patient Name	Allow to search by patient full name or partial
Ordered by	Ordered by	Able to filter and search by ordered by
Ordered from	Ordered from	Able to filter and search by ordered from
Appointment Date From	Appointment Date From	Able to filter and search by appointment date before
To Be Counselling by	To Be Counselling by	Able to filter and search by to be counselling by
Priority	- All - Urgent - Routine	Able to filter and search by priority
ID No/ Other Identification	Identification Number	Allow to search by full or partial ID Number
Type of MTAC	- All	Able to filter and search by type of MTAC order

		- Cardiac Rehab Program - Chronic Kidney Disease - Chronic Pain - Diabetes Mellitus - Dialysis - Gastrohepatology - Geriatric - Hemophilia - Heart Failure - Hepatitis - Methadone - Neurology - Osteoporosis - Psoriasis - Psychiatry - Renal Transplant - Respiratory - Retro Viral Disease - Rheumatology - Warfarin	
	Appointment Type	- All - Follow Up - Follow Up Reschedule - New - New Reschedule	Able to filter and search by appointment type
	Ordered to	Ordered to	Able to filter and search by ordered to
	Appointment Date To	Appointment Date To	Able to filter and search by appointment date the latest
	Status	- All - Ordered - Scheduled - Cancelled - In Progress - Completed	Able to filter and search by status

Table 3.1.1-1

STEP 3

Click on the  button to search the patient

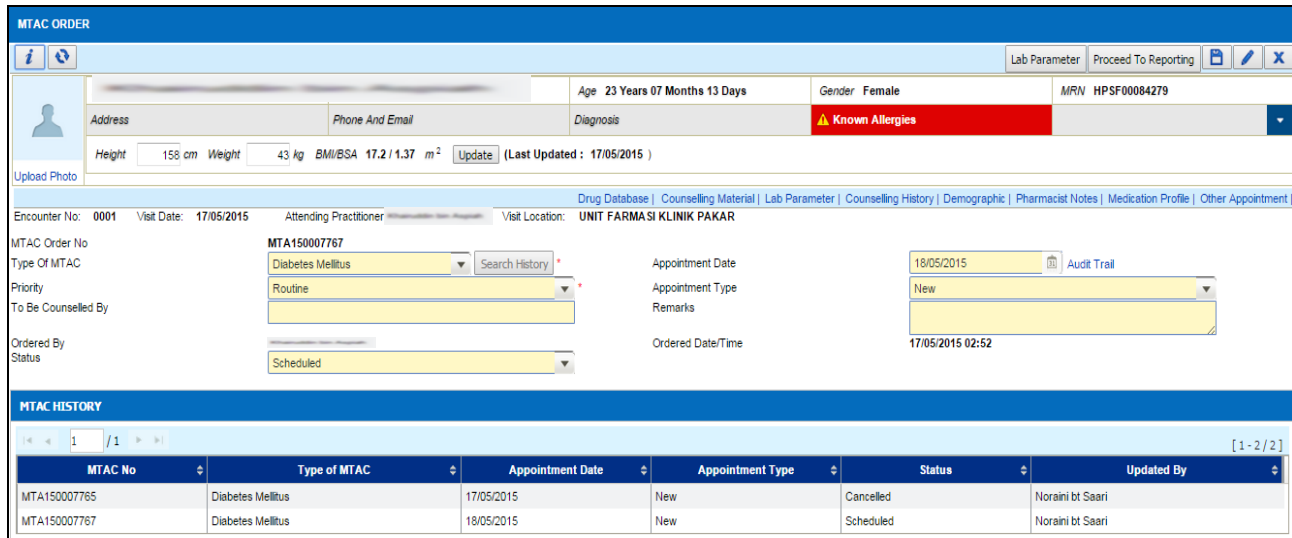
Note

Search result of current order patient list will be displayed:

- MRN
- Patient Name
- ID No
- Type of MTAC
- Appointment Date
- Appointment Type
- Status
- Updated By

STEP 4

Double click on the selected patient's name and Order record will be displayed



MTAC No	Type of MTAC	Appointment Date	Appointment Type	Status	Updated By
MTA150007765	Diabetes Mellitus	17/05/2015	New	Cancelled	Noraini bt Saari
MTA150007767	Diabetes Mellitus	18/05/2015	New	Scheduled	Noraini bt Saari

Figure 3.1.1-2 MTAC Order

Note

- Once click on the selected patient name, the summary of patient information will be displayed in the patient banner. The patient banner will be displayed at the specific screen which is required patient information. Below is the list of patient information:
 - Patient Name
 - Patient Address
 - Patient IC No
 - Patient Phone and Email
 - Patient Age
 - Patient Diagnosis
 - Patient Gender
 - Patient Allergy
 - Patient MRN
- Below options are provided for user to view the additional patient's information. Click on the hyperlink as below:
 - Counselling Material**
 - User able to download and use medication counselling material during the counselling session
 - Lab Parameter**
 - Patient's laboratory test results and standard parameter results for laboratory test
 - Counselling History**
 - Patient's previous medication counselling history records
 - MTAC History**
 - Patient's previous MTAC History records
 - Demographic**
 - Patient's demographic details
 - Pharmacist Notes**
 - Pharmacist notes according to type of service such as CP1, CP2, MTAC, TDM and etc

g) **Medication Profile**

- Patient's current medication and previous medication history records

h) **Other Appointments**

- Provides information if there are any other appointments recorded for the patient

- MTAC Order Details will be displayed as below:

- MTAC Order No – Auto generated by system
- Type of MTAC
- Priority
- To Be Counselling By
- Ordered By
- Status - Status of the order
- Appointment Date
- Appointment Type
- Remarks
- Ordered Date/Time

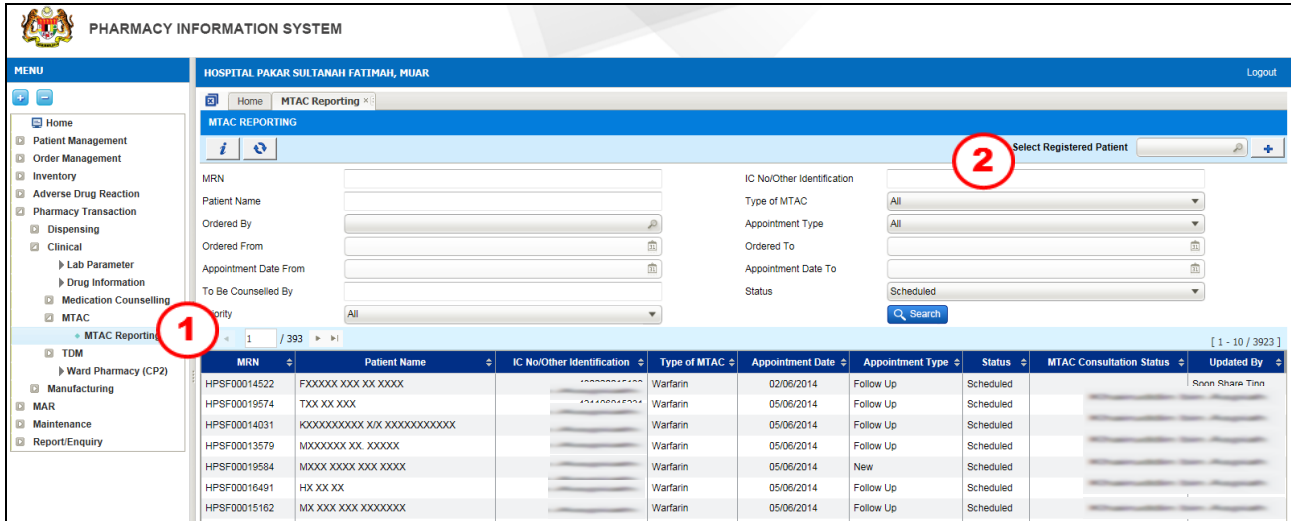
- Search result of MTAC History order list of the patient will be displayed:

- MTAC No
- Type of MTAC
- Appointment Date
- Appointment Type
- Status
- Updated By

- User able to edit and schedule MTAC Order. Status will be defaulted as Scheduled

3.1.2 Create New MTAC Order

This function allows user to create a new order for MTAC patients.



MRN	Patient Name	IC No/Other Identification	Type of MTAC	Appointment Date	Appointment Type	Status	MTAC Consultation Status	Updated By
HPSF00014522	FX000X XXX XX XXXX		Warfarin	02/06/2014	Follow Up	Scheduled		Roon Shara Tim
HPSF00019574	TX0X XX XXXX		Warfarin	05/06/2014	Follow Up	Scheduled		
HPSF00014031	XXXXXXX XXX X/X XXXXXXXXXX		Warfarin	05/06/2014	Follow Up	Scheduled		
HPSF00013579	MX0000X XX XXXXX		Warfarin	05/06/2014	Follow Up	Scheduled		
HPSF00019584	MX0X XXXX XXX XXXX		Warfarin	05/06/2014	New	Scheduled		
HPSF00016491	HX XX XX		Warfarin	05/06/2014	Follow Up	Scheduled		
HPSF00015162	MX XXX XXX XXXXXXX		Warfarin	05/06/2014	Follow Up	Scheduled		

Figure 3.1.2-1 MTAC Reporting Listing Page

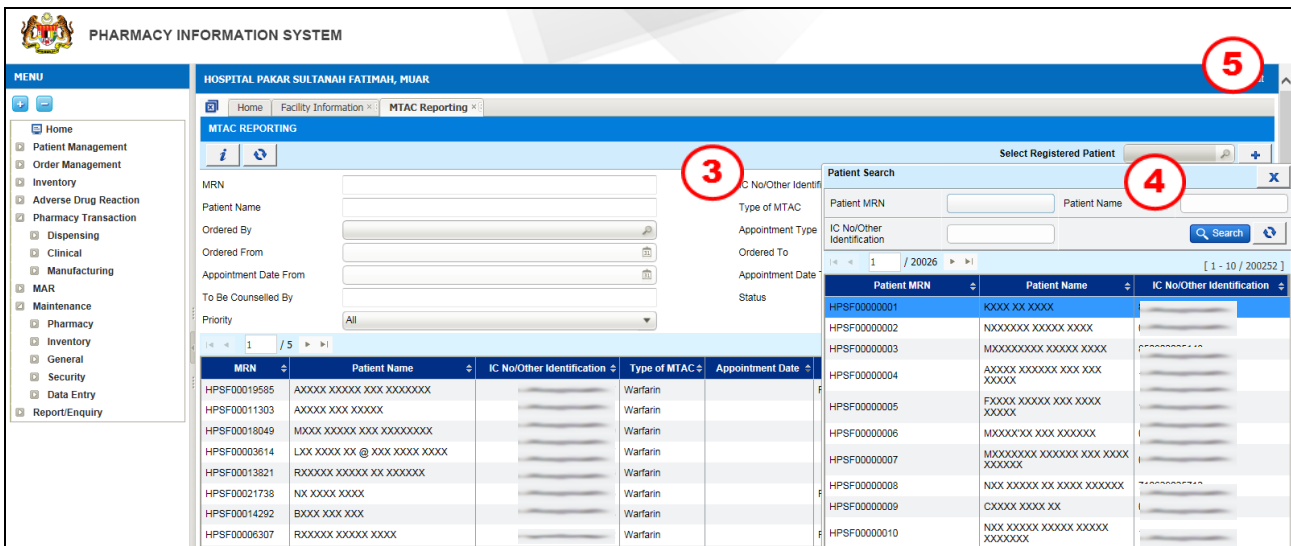
STEP 1

Click on 'Pharmacy Transaction' menu followed by 'Clinical' then 'MTAC' and 'MTAC Reporting' sub menu

STEP 2

Click on the  button to search for registered patient at the

Select Registered Patient  



MRN	Patient Name	IC No/Other Identification	Type of MTAC	Appointment Date
HPSF00019585	AXXXX XXXXX XXX XXXXXXX		Warfarin	
HPSF00011303	AXXXX XXX XXXXX		Warfarin	
HPSF00018049	MX0X XXXXX XXX XXXXXXX		Warfarin	
HPSF00003614	LXX XXXX XX @ XXX XXXX XXXX		Warfarin	
HPSF00013821	RXXXXX XXXXX XX XXXXXXX		Warfarin	
HPSF00021738	NX XXXX XXXX		Warfarin	
HPSF00014292	BXXX XXX XXXX		Warfarin	
HPSF00006307	RXXXXX XXXXX XXXX		Warfarin	

Figure 3.1.2-2 Patient Search

Note

- Search MRN screen will be displayed as per Figure Patient search screen will be displayed as shown in Figure 3.1.2-2
- On this screen, user will be able to search existing patient record by:
 - MRN
 - Patient Name
 - Ordered By
 - Ordered From
 - Appointment Date
 - To Be Counseled By
 - ID No
 - Type of MTAC
 - Appointment Type
 - Ordered To
 - Priority
 - Status
- User able to view the list of MTAC order at the listing page as per Figure 3.1.2-2
- If need to re-schedule the order again, click on the selected patient name and continue to proceed re-schedule process.

STEP 3

Search existing patient record as follow: -

Field	Description	Remark
Patient MRN	Patient Medical Record Number	Search option: Type the MRN either in full or partially: Example: HPSF00001234 or "1234"
Patient Name	Patient's name	Allow to search by full or partial patient name
ID No	Identification Number	Allow to search by full or partial ID Number

Table 3.1.2-1

STEP 4

Click on the  button to search for the patient and system will display all the registered patients

STEP 5

Click on  button to add a new MTAC order record as Figure 3.1.2-3

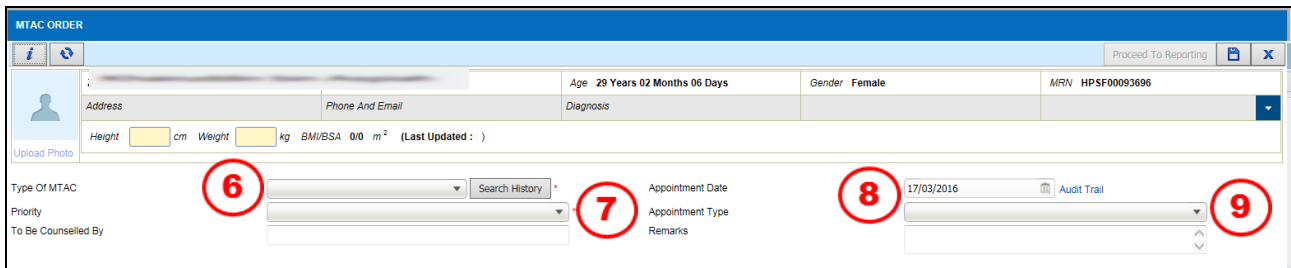


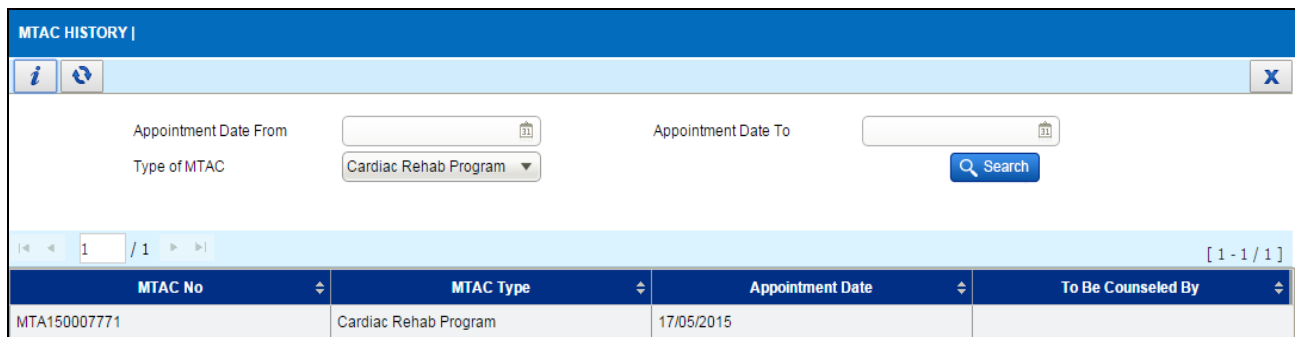
Figure 3.1.2-3 MTAC Order

STEP 6

Select **Type Of MTAC** from the drop-down box

Note

- **Type of MTAC** listed depends on the facility's MTAC availability.
- Select **Type of MTAC** and click on the **Search History** button. System will display previous MTAC History details (according to the selected MTAC type) in the pop up window as shown in Figure 3.1.2-4.
- MTAC History will also be listed at the bottom of the 'MTAC Order' screen.



MTAC HISTORY			
Appointment Date From Appointment Date To Type of MTAC Cardiac Rehab Program Search			
1 / 1 [1 - 1 / 1]			
MTAC No	MTAC Type	Appointment Date	To Be Counseled By
MTA150007771	Cardiac Rehab Program	17/05/2015	

Figure 3.1.2-4 MTAC History

STEP 7

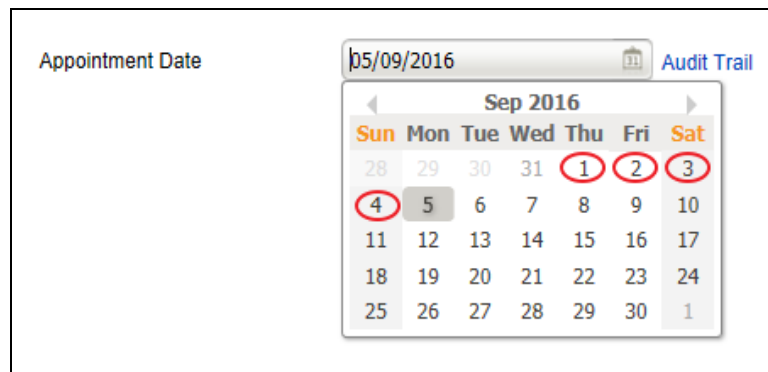
Select **Priority** as listed from the drop down box

- Routine
- Urgent

STEP 8

Click on the  button to select **Appointment Date**

Note



Appointment Date Audit Trail

Sep 2016						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
28	29	30	31	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	1

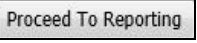
- Click on the [Audit Trail](#) hyperlink to view a list of changes/amendment on the same MTAC report if there is any.
- User is allow to select the date from 5 days back. For example today is **5/9/2016**, user can select **31 Aug, 1, 2, 3 and 4 Sept**.

STEP 9

Select **Appointment Type** as listed from the drop-down box

- New
- New Reschedule
- Follow Up
- Follow Up Reschedule

Note

- User will be able to enter **To Be Counseled By** person name and **Remarks** if required.
- The **Status** of the order will be changed to 'Scheduled' if the **Appointment Date** is selected.
- Additional information will be displayed for the **Type of MTAC** 'Warfarin'.
- User can click on the  button to save the MTAC Order and system will proceed to 'MTAC Reporting' window.
- Assessment section is automatically copied from the previous/latest visit.
- 'Specific details' will be automatically copied from the latest record only for the same **Type of MTAC**.

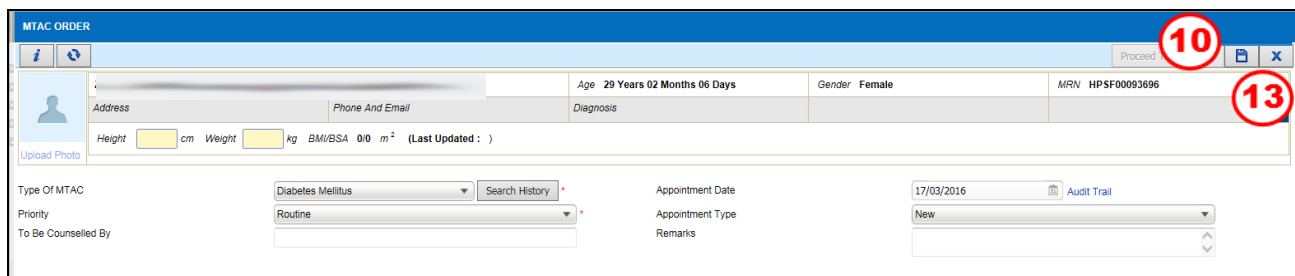


Figure 3.1.2-5 MTAC Order

STEP 10

Click on the  button to save the record

STEP 11

Click on the  button to confirm saving of order

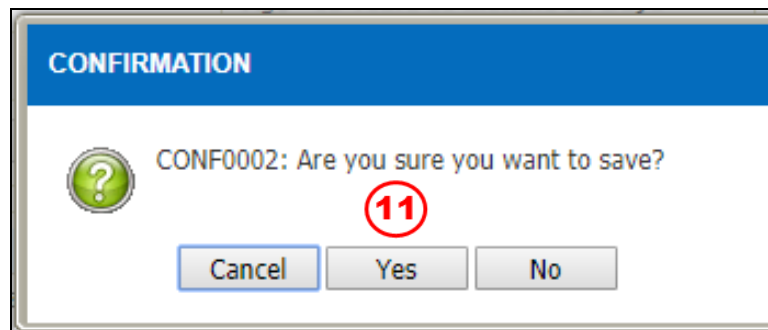


Figure 3.1.2-6 Confirmation Alert Message

STEP 12

Click on the  button to confirm record

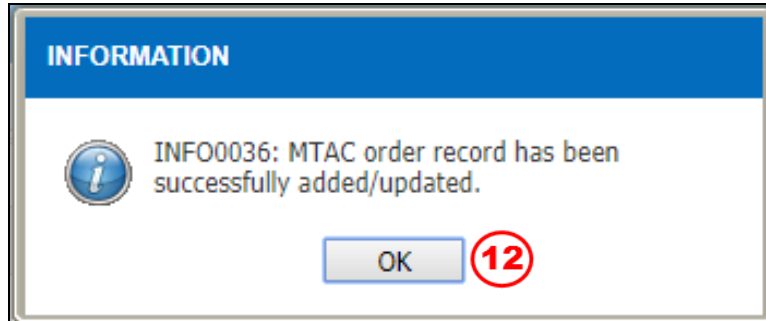


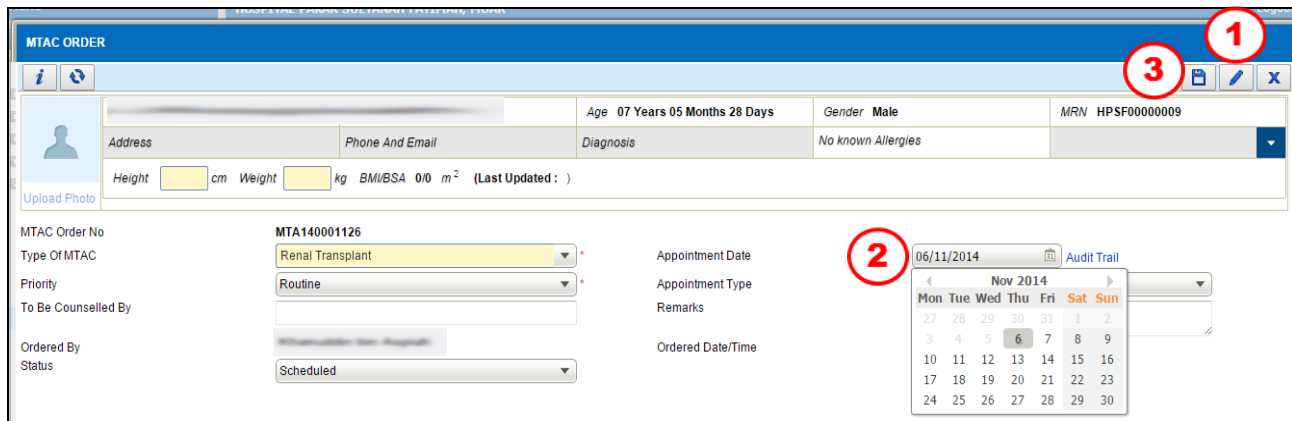
Figure 3.1.2-7 Information Alert Message

STEP 13

Click on the  button to close record as shown in Figure 3.1.2-5

3.1.3 Reschedule MTAC Order

This function is used to reschedule MTAC appointment date



MTAC ORDER

Age: 07 Years 05 Months 28 Days | Gender: Male | MRN: HPSF00000009

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

Height: cm | Weight: kg | BMI/BSA: 0/0 m² (Last Updated:)

MTAC Order No: MTA140001126

Type Of MTAC: Renal Transplant

Priority: Routine

To Be Counselling By:

Ordered By:

Status: Scheduled

Appointment Date: 06/11/2014

Appointment Type:

Remarks:

Ordered Date/Time:

[Audit Trail](#)

Figure 3.1.3-1 MTAC Order

Note

Repeat **STEP 1** to **4** as in section [3.1.1 View Existing Order](#) before performing reschedule MTAC order for patient.

STEP 1

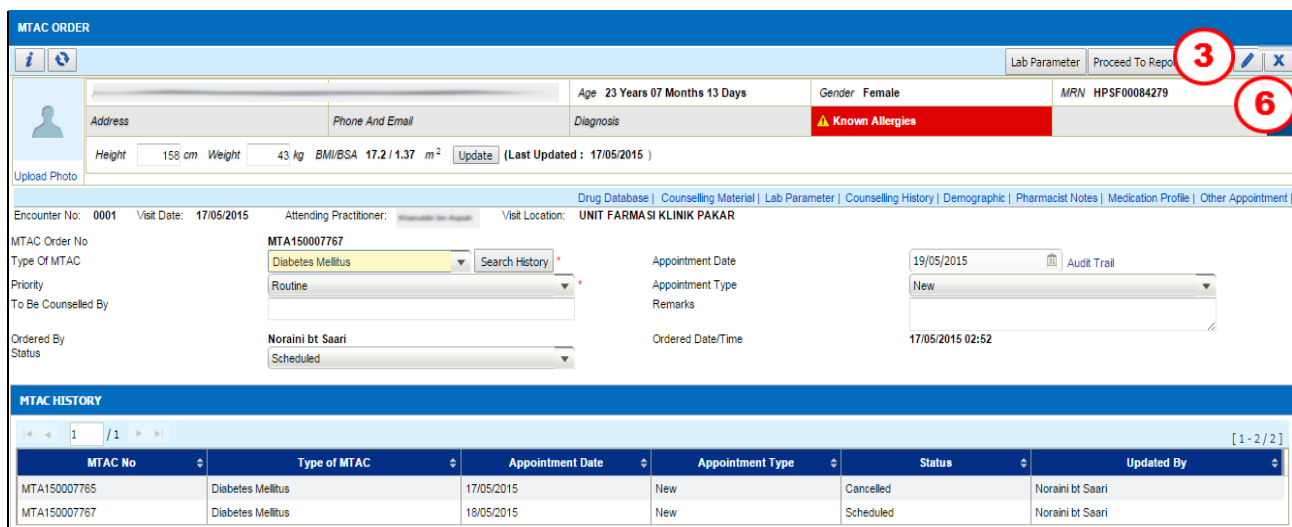
Click on the  button to edit MTAC order

STEP 2

Click on the  button to select a different **Appointment Date**

Note

- User have to change the **Appointment Type** to **New Reschedule** or **Follow Up Reschedule** after selecting the new Appointment Date.
- User will be able to edit **Appointment Date** at 'MTAC Order' screen only before the MTAC Reporting is saved.
- Click on the [Audit Trail](#) hyperlink to view a list of changes/amendment on the same MTAC report if there is any.



MTAC ORDER

Age: 23 Years 07 Months 13 Days | Gender: Female | MRN: HPSF00084279

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

Height: 158 cm | Weight: 43 kg | BMI/BSA: 17.2 / 1.37 m² | Update (Last Updated: 17/05/2015)

MTAC Order No: MTA150007767

Type Of MTAC: Diabetes Mellitus

Priority: Routine

To Be Counselling By:

Ordered By: Noraini bt Saari

Status: Scheduled

Appointment Date: 19/05/2015

Appointment Type: New

Remarks:

Ordered Date/Time: 17/05/2015 02:52

[Audit Trail](#)

MTAC HISTORY

MTAC No	Type of MTAC	Appointment Date	Appointment Type	Status	Updated By
MTA150007765	Diabetes Mellitus	17/05/2015	New	Cancelled	Noraini bt Saari
MTA150007767	Diabetes Mellitus	18/05/2015	New	Scheduled	Noraini bt Saari

Figure 3.1.3-2 MTAC Order

STEP 3

Click on the  button to save the record

STEP 4

Click on the  button to confirm saving of order

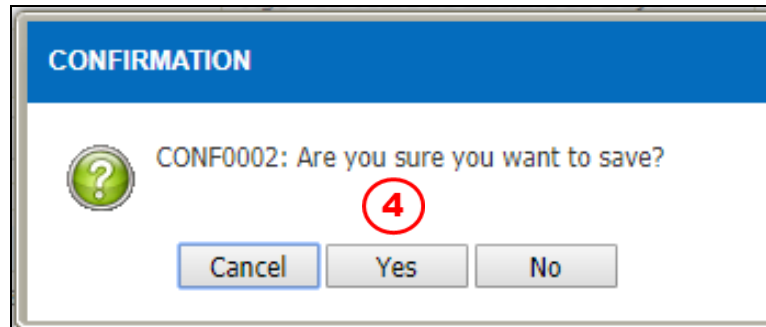


Figure 3.1.3-3 Confirmation alert message

STEP 5

Click on the  button to confirm record

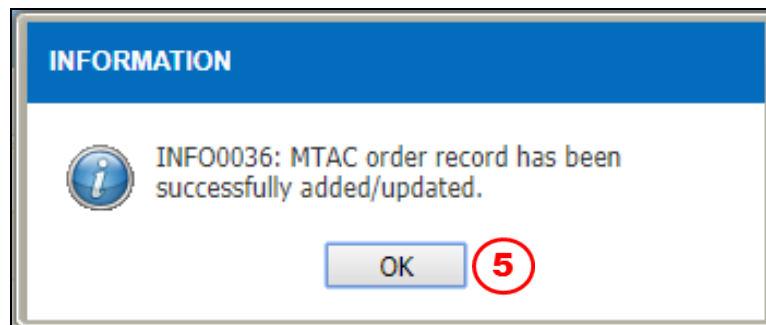


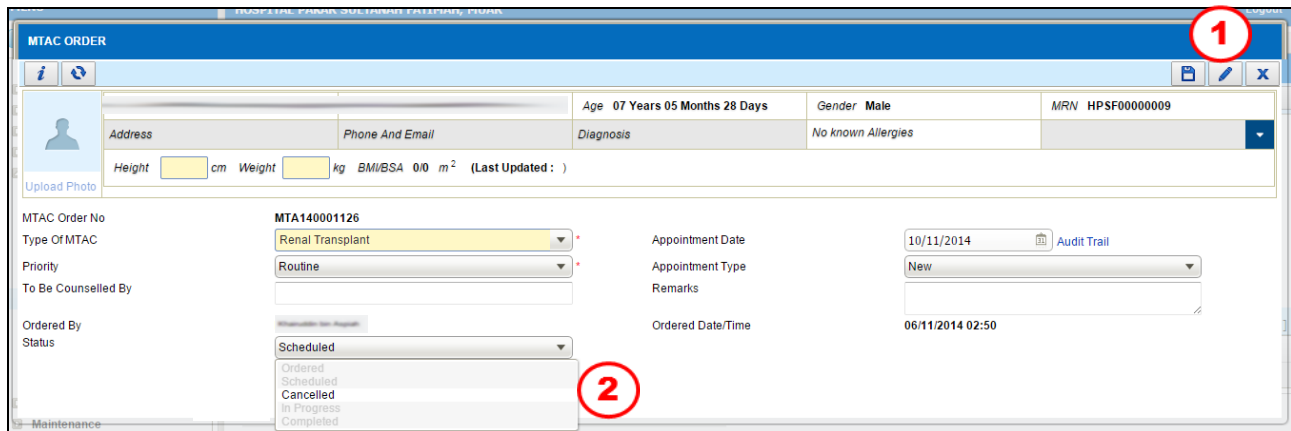
Figure 3.1.3-4 Information alert message

STEP 6

Click on the  button to close record as shown in Figure 3.1.3-2

3.1.4 Cancel MTAC Order

This function is used to cancel an existing MTAC order



MTAC ORDER

Age: 07 Years 05 Months 28 Days | Gender: Male | MRN: HPSF00000009

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

Height: cm | Weight: kg | BMI/BSA: 0/0 m² (Last Updated:)

MTAC Order No: MTA140001126

Type Of MTAC: Renal Transplant

Priority: Routine

To Be Counseled By:

Ordered By:

Status: Scheduled

Appointment Date: 10/11/2014 | Appointment Type: New

Remarks:

Ordered Date/Time: 06/11/2014 02:50

Figure 3.1.4-1 MTAC Order

Note

Repeat **STEP 1** to **4** as in section [3.1.1 View Existing Order](#) to cancel an existing MTAC order for patient.

STEP 1

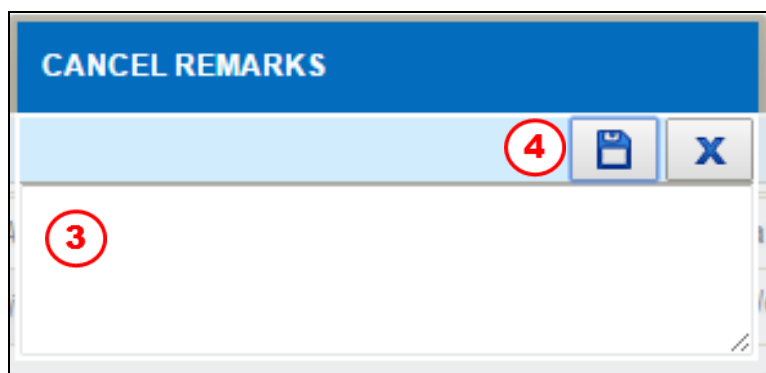
Click on the  button to edit MTAC order

STEP 2

Select **Status** as 'Cancelled' from the drop down box

Note

- User will be able to cancel order at 'MTAC order' screen only before the MTAC Reporting is saved.
- Only order with **Status** 'Ordered' and 'Scheduled' can be cancelled.



CANCEL REMARKS

4

3

Figure 3.1.4-2 Cancel Remarks

STEP 3

Enter **Cancel Remarks** and save the record

STEP 4

Click on the  button to save record

STEP 5

Click on the  button to confirm saving of order

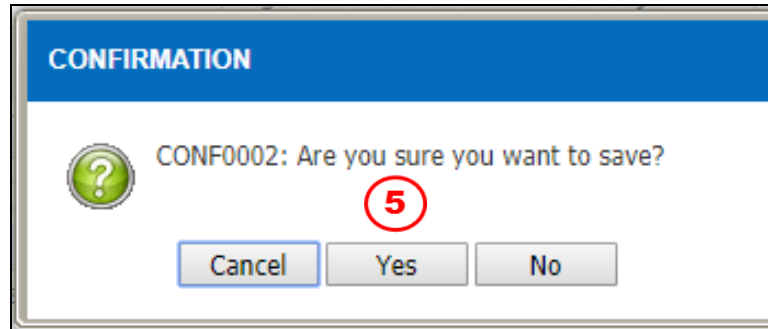


Figure 3.1.4-3 Confirmation Alert Message

STEP 6

Click on the  button to confirm record

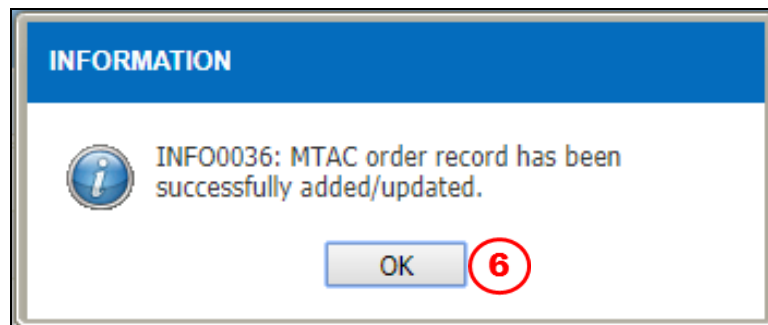


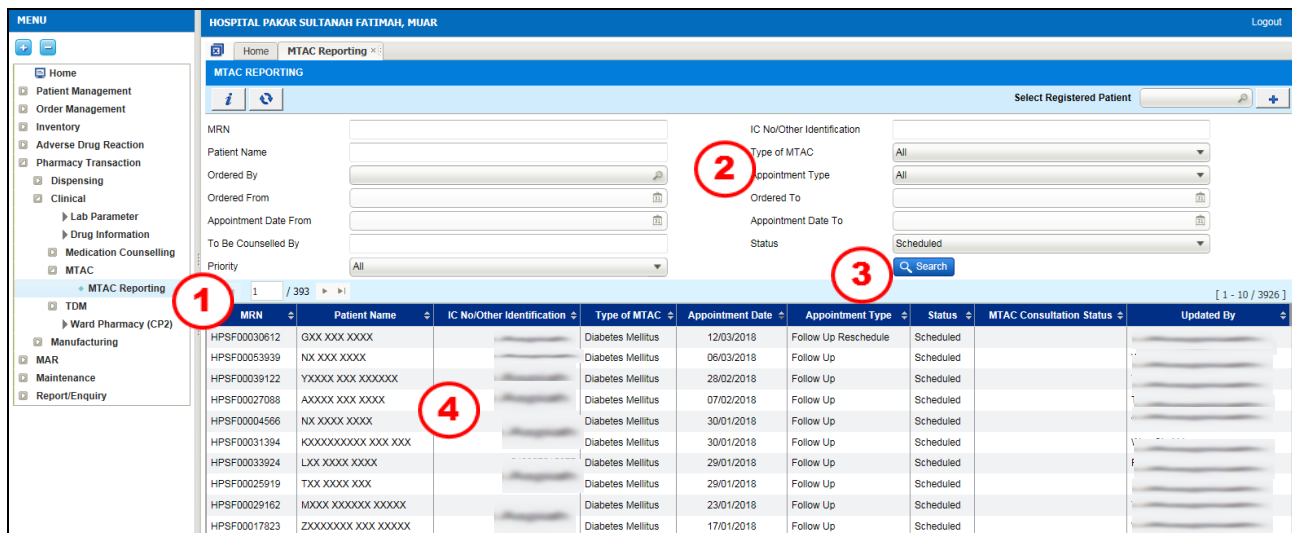
Figure 3.1.4-4 Information Alert Message

3.2 MTAC Reporting

This function is used to search and view existing MTAC reporting or record new MTAC reporting

3.2.1 Create New MTAC Reporting With No Specific Details

This function allow user to record new MTAC reporting with no specific details for MTAC patient



MRN	Patient Name	IC No/Other Identification	Type of MTAC	Appointment Date	Appointment Type	Status	MTAC Consultation Status	Updated By
HPSF00030612	GXX XXX XXXX		Diabetes Mellitus	12/03/2018	Follow Up Reschedule	Scheduled		
HPSF00053939	NX XXX XXXX		Diabetes Mellitus	06/03/2018	Follow Up	Scheduled		
HPSF00039122	YXXXX XXX XXXXXX		Diabetes Mellitus	29/02/2018	Follow Up	Scheduled		
HPSF00027088	AXXXX XXX XXXX		Diabetes Mellitus	07/02/2018	Follow Up	Scheduled		
HPSF00004566	NX XXXX XXXX		Diabetes Mellitus	30/01/2018	Follow Up	Scheduled		
HPSF00031394	KXXXXXXX XXX XXX		Diabetes Mellitus	30/01/2018	Follow Up	Scheduled		
HPSF00033924	LXX XXXX XXXX		Diabetes Mellitus	29/01/2018	Follow Up	Scheduled		
HPSF00025919	TX XXXX XXX		Diabetes Mellitus	29/01/2018	Follow Up	Scheduled		
HPSF00029162	XXXX XXXXXX XXXXX		Diabetes Mellitus	23/01/2018	Follow Up	Scheduled		
HPSF00017923	ZXXXXXX XXX XXXXX		Diabetes Mellitus	17/01/2018	Follow Up	Scheduled		

Figure 3.2.1-1 MTAC Reporting Listing Page

STEP 1

Click on 'Pharmacy Transaction' menu followed by 'Clinical' then 'MTAC' and 'MTAC Reporting' sub menu

STEP 2

Search for existing patient record by below criteria:

Field	Description	Remark
MRN	Patient Medical Record Number	Search option: Type the MRN either full or partial: Example: HPSF00001234 or "1234"
Patient Name	Patient Name	Allow to search by patient full name or partial
Ordered by	Ordered by	Able to filter and search by ordered by
Ordered from	Ordered from	Able to filter and search by ordered from
Appointment Date From	Appointment Date From	Able to filter and search by appointment date before
To Be Counselling by	To Be Counselling by	Able to filter and search by to be counselling by
Priority	- All - Urgent - Routine	Able to filter and search by priority
ID No/ Other Identification	Identification Number	Allow to search by full or partial ID Number

Type of MTAC	- All - Cardiac Rehab Program - Chronic Kidney Disease - Chronic Pain - Diabetes Mellitus - Dialysis - Gastrohepatology - Geriatric - Hemophilia - Heart Failure - Hepatitis - Methadone - Neurology - Osteoporosis - Psoriasis - Psychiatry - Renal Transplant - Respiratory - Retro Viral Disease - Rheumatology - Warfarin	Able to filter and search by type of MTAC order
Appointment Type	- All - Follow Up - Follow Up Reschedule - New - New Reschedule	Able to filter and search by appointment type
Ordered to	Ordered to	Able to filter and search by ordered to
Appointment Date To	Appointment Date To	Able to filter and search by appointment date the latest
Status	- All - Ordered - Scheduled - Cancelled - In Progress - Completed	Able to filter and search by status

Table 3.2.1-1

STEP 3

Click on the  button to search the patient

Note

Search results of current order patient list will display:

- MRN
- ID No
- Patient Name
- Type of MTAC
- Appointment Date
- Appointment Type
- Status
- MTAC Consultation Status
- Updated By

STEP 4

Double click on the selected patient's record and the 'Consent Form' window will be displayed as shown in Figure 3.2.1-2

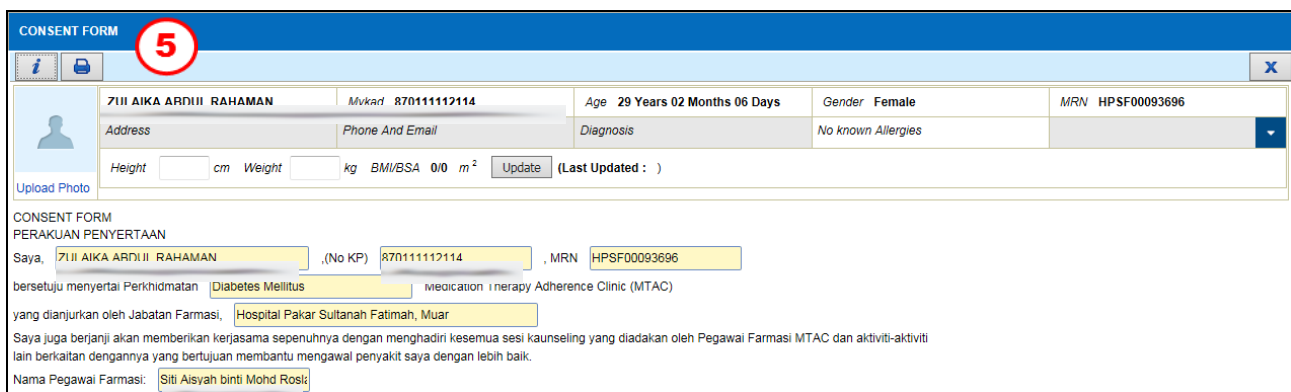


Figure 3.2.1-2 Consent Form

STEP 5

Click on the  button to print the consent form

STEP 6

Click on the  to confirm printing Consent form and new screen will be displayed for user to print Consent Form as per Figure 3.2.1-4

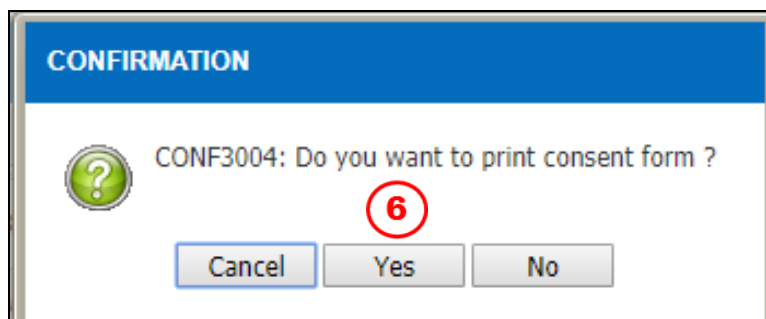


Figure 3.2.1-3 Print Report Alert Message



MEDICATION THERAPY ADHERENCE CLINIC (MTAC)

Jabatan Farmasi, Hospital Pakar Sultanah Fatimah, Muar

PERAKUAN PENYERTAAN

S  A, (No KP  MRN HPSF00186863 bersetuju menyertai Perkhidmatan DIABETES MELLITUS Medication Therapy Adherence Clinic (MTAC) oleh Jabatan Farmasi, HOSPITAL PAKAR SULTANAH FATIMAH, MUAR. Saya juga berjanji akan memberikan kerjasama sepenuhnya dengan menghadiri kesemua sesi kaunseling yang diadakan oleh Pegawai Farmasi MTAC dan aktiviti-aktiviti lain berkaitan dengannya yang bertujuan membantu mengawal penyakit saya dengan lebih baik.

.....
Tandatangan

Nama pesakit: 

Tarikh: 06/09/2017

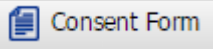
.....
Tandatangan

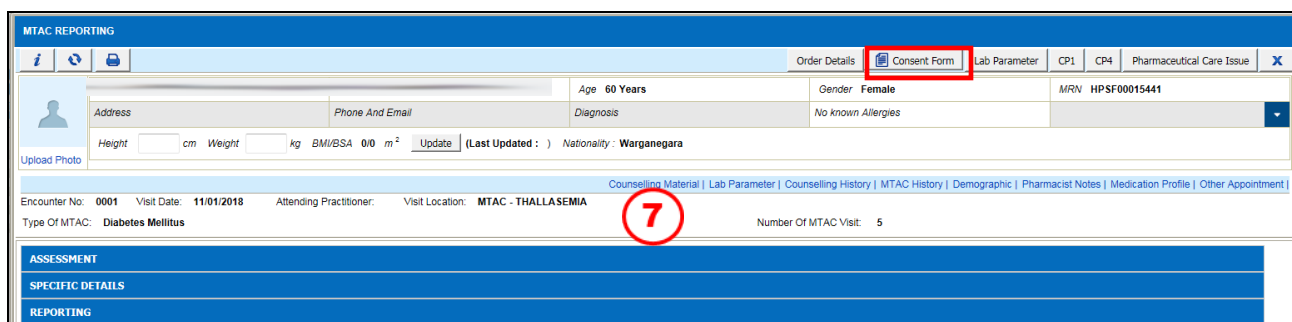
Nama Peg. Farmasi: 

Tarikh: 06/09/2017

Figure 3.2.1-4 Print Consent Form

Note

- Consent form details will automatically display:
 - Patient name
 - ID No
 - MRN
 - Type of MTAC
 - Facility Name
- Consent form is mandatory to be printed for new visit of MTAC appointment only. For subsequent visits, user can print the consent form by click on the  button at the 'MTAC Reporting' screen



The screenshot displays the 'MTAC REPORTING' interface. At the top, there's a navigation bar with tabs: 'Order Details', 'Consent Form' (highlighted with a red box), 'Lab Parameter', 'CP1', 'CP4', and 'Pharmaceutical Care Issue'. Below this, patient information is shown, including 'Age: 60 Years', 'Gender: Female', and 'MRN: HPSF00015441'. A section for 'Encounter No: 0001' and 'Visit Date: 11/01/2018' is visible. The bottom navigation bar has tabs: 'ASSESSMENT' (highlighted with a red circle containing the number 7), 'SPECIFIC DETAILS', and 'REPORTING'.

Figure 3.2.1-5 MTAC Reporting Screen

Note

- Type of MTAC
- No of MTAC Visit
- Assessment Tab
- Reporting Tab

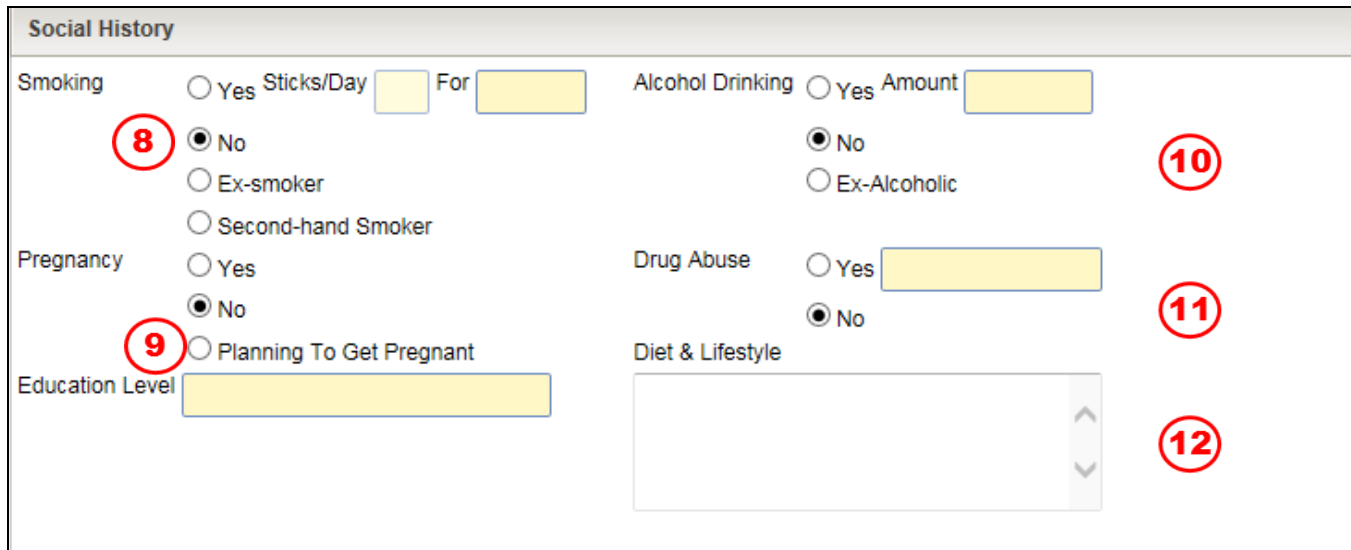
Assessment

- Click on the Assessment tab
- There are 4 sections under the Assessment tab as below:
 - Social History
 - Family History
 - Medical History
 - Past Medication History

Social History

STEP 7

Enter **Estimated Dry Body Weight in Kg**



Social History

Smoking ☐ Yes Sticks/Day For ☒ No ☐ Ex-smoker ☐ Second-hand Smoker

Pregnancy ☐ Yes ☒ No ☐ Planning To Get Pregnant

Education Level

Alcohol Drinking ☐ Yes Amount ☒ No ☐ Ex-Alcoholic

Drug Abuse ☐ Yes ☒ No

Diet & Lifestyle

Figure 3.2.1-6 MTAC Reporting – Assessment on Social History

STEP 8

Select on **Smoking** radio button

- Yes
- No
- Ex-smoker
- Second-hand Smoker

Note

Sticks/Day and **for** fields will be enabled only if user select Yes and Ex-smoker radio button

STEP 9

Select on **Pregnancy** radio button

- Yes
- No
- Planning to Get Pregnant

STEP 10

Select on **Alcohol Drinking** radio button

- Yes
- No
- Ex-Alcoholic

Note

Amount field will be enabled if user select 'Yes' radio button

STEP 11

Select **Drug Abuse** radio button

- Yes
- No

Note

Blank field will be enabled if user select 'Yes' radio button

STEP 12

Enter **Diet & Lifestyle**

Note

- **Pregnancy** field will only be available for married female
- **Education Level** and **Marital Status** information will be retrieved from Patient's Demographic

Family History

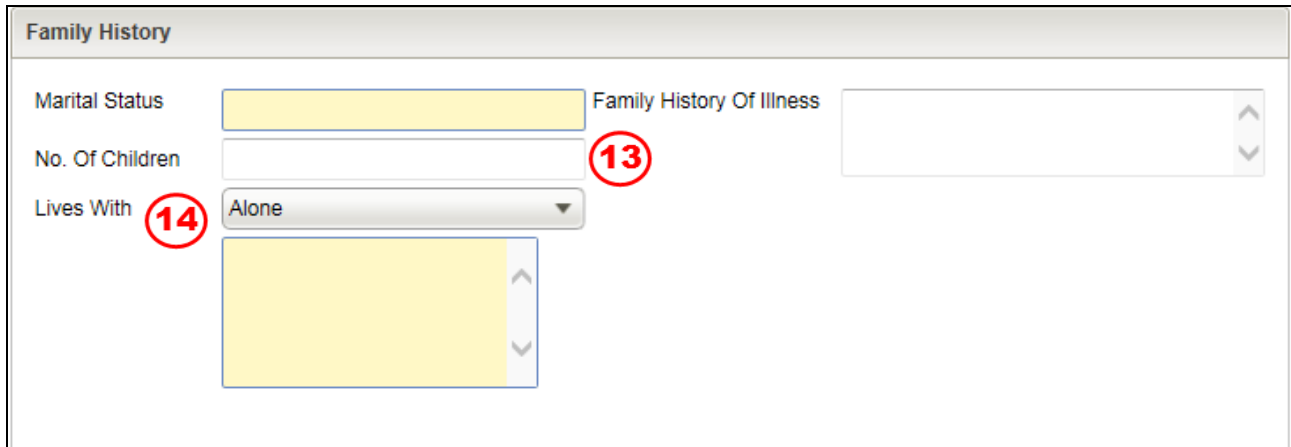


Figure 3.2.1-7 MTAC Reporting – Assessment on Family History

STEP 13

Enter **No. Of Children**

STEP 14

Select **Lives with** from the drop-down box

- Alone
- Family Members
- Nursing Home
- Others

Note

- Blank fields will be enabled if user select 'Others' from the drop-down box
- Enter **Family History of Illness** if available

Medical History

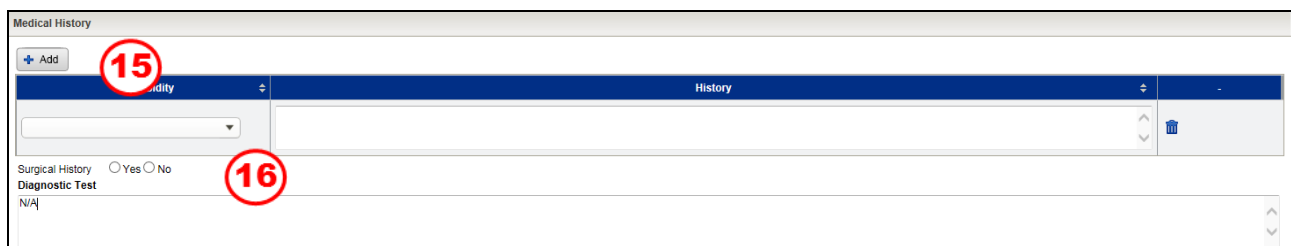


Figure 3.2.1-8 MTAC Reporting – Assessment on Medical History

STEP 15

Click  button and select any **Comorbidity** from drop-down menu and Fill up at **History** field.

Note

- User can enter multiple Comorbidity record by click  button.

- There are several type **Comorbidity**:
 - Hypertension
 - Diabetes Mellitus
 - Tuberculosis
 - AF
 - Asthma
 - Hepatitis B
 - Hepatitis C
 - Heart Failure
 - ESRD
 - COPD
 - RVD
 - Other
- **The History field can be free text 500 characters**

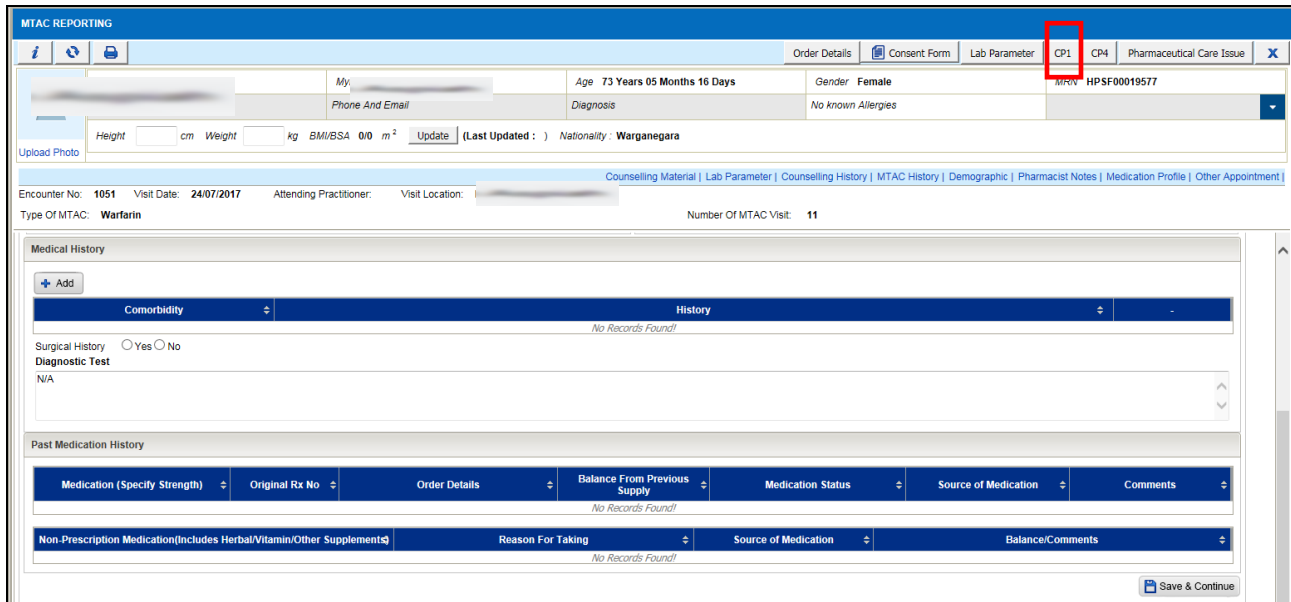
STEP 16

Select **Surgical History** radio button

- Yes
- No

Note

- User can enter *Diagnosis Test* that already change to 1 box only and can be fill up 2000 characters.



MTAC REPORTING

Order Details | Consent Form | Lab Parameter | **CP1** | CP4 | Pharmaceutical Care Issue | X

My: [Redacted] Age: 73 Years 05 Months 16 Days Gender: Female MRN: HPSF00019577
Phone And Email: [Redacted] Diagnosis: [Redacted] No known Allergies

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

Encounter No: 1051 Visit Date: 24/07/2017 Attending Practitioner: [Redacted] Visit Location: [Redacted]
Type Of MTAC: Warfarin Number Of MTAC Visit: 11

Medical History

+ Add

Comorbidity	History
No Records Found!	

Surgical History: ☐ Yes ☐ No
Diagnostic Test: N/A

Past Medication History

Medication (Specify Strength)	Original Rx No	Order Details	Balance From Previous Supply	Medication Status	Source of Medication	Comments
No Records Found!						

Non-Prescription Medication(Includes Herbal/Vitamin/Other Supplements)	Reason For Taking	Source of Medication	Balance/Comments
No Records Found!			

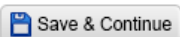
Save & Continue

Figure 3.2.1-9 MTAC Reporting – Assessment on Past Medication History

Note

Click on the  button to add 'Past Medication History' as shown in Figure 3.2.1-9. Further details in Section 3.2.2 Other Tabs

STEP 17

Click on the  button as shown in Figure 3.2.1-10 to save assessment and continue with reporting section



Past Medication History

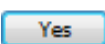
Medication (Specify Strength)	Dose	Frequency	Balance From Previous Supply	Medication Status	Source of Medication	Comments
No Records Found!						

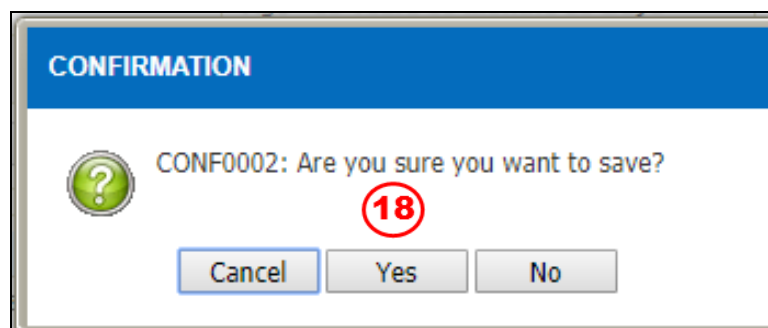
Non-Prescription Medication(Includes Herbal/Vitamin/Other Supplements)	Reason For Taking	Source of Medication	Balance/Comments
No Records Found!			

17 Save & Continue

Figure 3.2.1-10 MTAC Reporting – Assessment Past Medication History

STEP 18

Click on the  button to confirm



CONFIRMATION

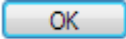
CONF0002: Are you sure you want to save?

18

Cancel Yes No

Figure 3.2.1-11 Confirmation Alert Message

STEP 19

Click on the  button to confirm record

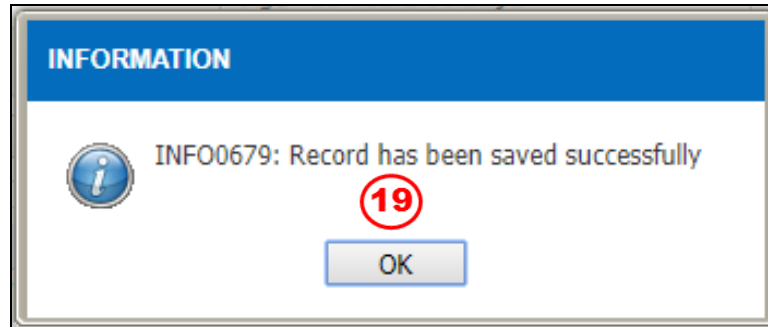


Figure 3.2.1-12 Information Alert Message

Note

- User will be able to close the record at reporting screen or continue with the reporting section.
- Click on the **Reporting** row (blue color) once and scroll down to continue with the reporting process.
- “Recommended Lab Test field” was removed and rearranged the Pharmacist Note and Remarks field.
- ‘Compliance Score’ was renamed to “Adherence Score”.

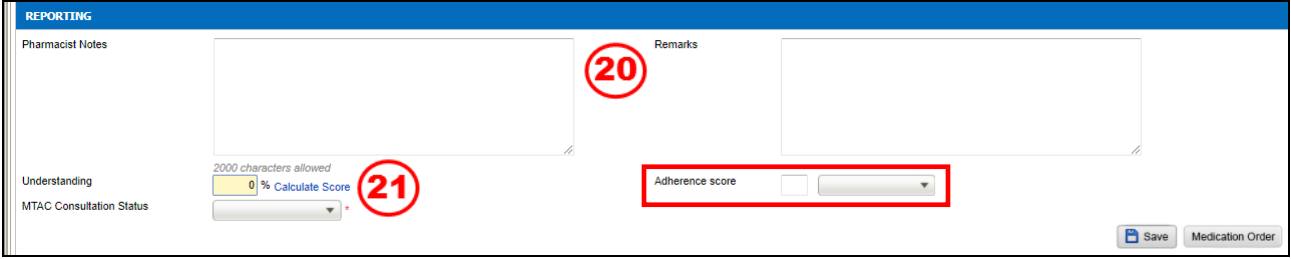
A screenshot of the MTAC Reporting screen. The header is 'REPORTING'. There are two main text areas: 'Pharmacist Notes' on the left and 'Remarks' on the right. Below 'Pharmacist Notes' is a 'Calculate Score' button, which is circled in red with the number '21'. Below 'Remarks' is an 'Adherence score' dropdown menu, which is also circled in red with the number '20'. At the bottom right are 'Save' and 'Medication Order' buttons.

Figure 3.2.1-13 MTAC Reporting

STEP 20

Enter the **Pharmacist Notes** and **Remarks** if available

STEP 21

Click on the  hyperlink for **Understanding** and the ‘**Review of Patient’s Understanding (Medication) DFIT**’ will be displayed as shown in Figure 3.2.1-14

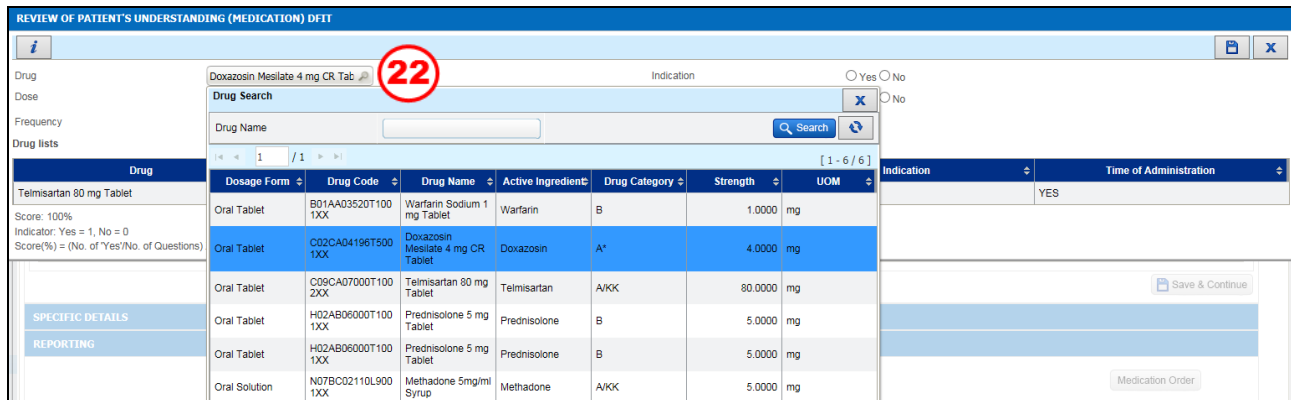


Figure 3.2.1-14 Review of Patient's Understanding (Medication) DFIT

STEP 22

Select **Drug** by clicking on the  button

Note

- Select **Dose, Frequency, Indication and Time of Administration** from the radio button:
 - Yes
 - No
- Score will be automatically calculated and displayed.

STEP 23

Click on the  button to add and update at drug list

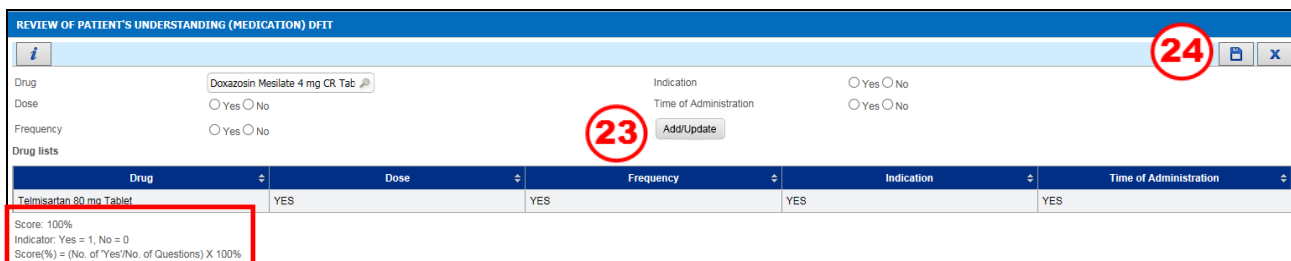


Figure 3.2.1-15 Review of Patient's Understanding (Medication) DFIT

STEP 24

Click on the  button to save the Understanding calculator record

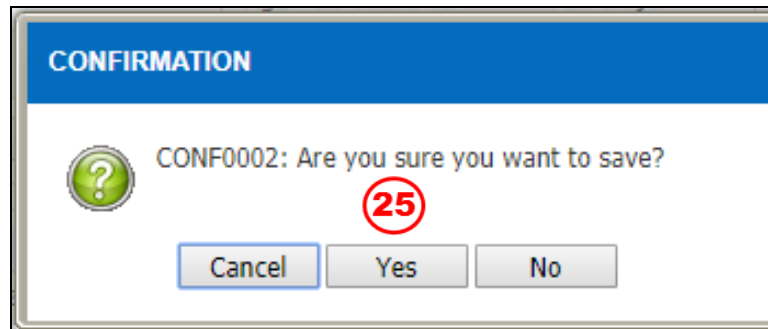


Figure 3.2.1-16 Confirmation alert message

STEP 25

Click on the  button to confirm save record

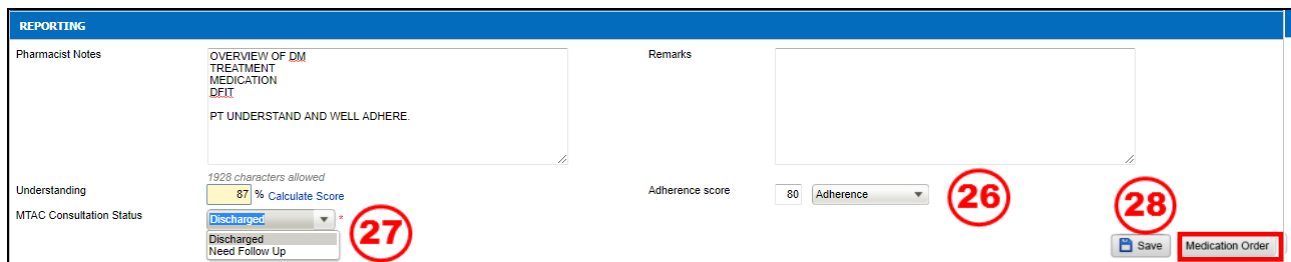


Figure 3.2.1-17 MTAC Reporting - Reporting

STEP 26

Enter the Adherence Score and select the status

- Adherence
- Non-Adherence

Note

Adherence Score is not mandatory

STEP 27

Select **MTAC Consultation Status** from the drop-down box

- Discharged
- Need Follow Up

Note

- Medication Order button reallocate at the bottom of the screen.
- Click on the  button to view medication order screen and perform MTAC medication order if necessary.

STEP 28

Click on the  button as shown in Figure 3.2.1-17

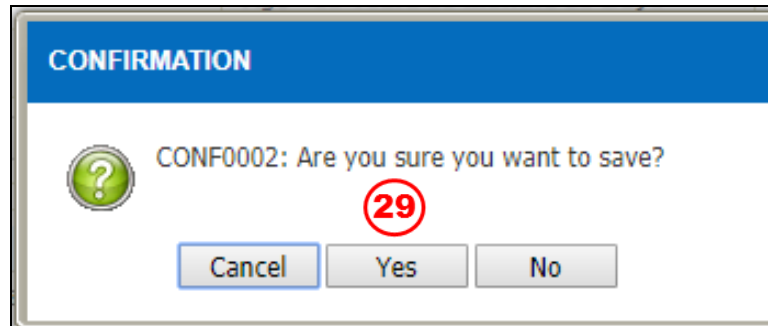


Figure 3.2.1-18 Confirmation Alert Message

STEP 29

Click on the  button to confirm save record

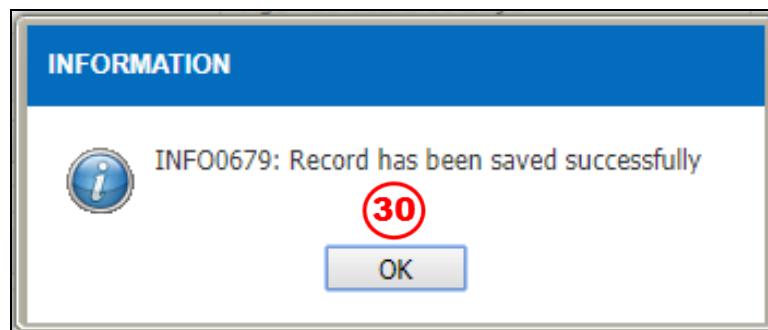
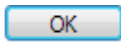
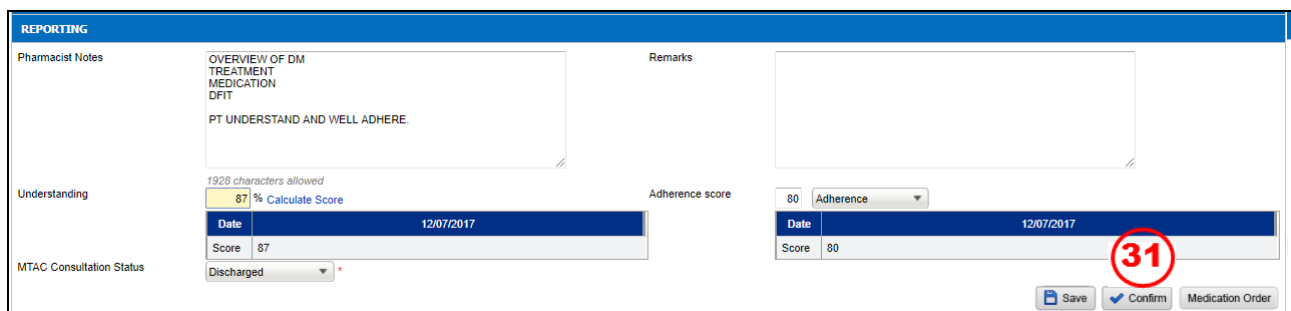


Figure 3.2.1-19 Information Alert Message

STEP 30

Click on the  button



The MTAC Reporting form is divided into two main sections: "REPORTING" and "Adherence score". The "REPORTING" section includes a "Pharmacist Notes" field with the text "OVERVIEW OF DM TREATMENT MEDICATION DFIT PT UNDERSTAND AND WELL ADHERE." and a "Remarks" field. Below the "Pharmacist Notes" field is a "Calculate Score" button. The "Adherence score" section includes a table with columns "Date" and "Score". The table has two rows: one with "Date" 12/07/2017 and "Score" 87, and another with "Date" 12/07/2017 and "Score" 80. A red circle with the number "31" is placed over the "Score" 80 cell. At the bottom right of the form are buttons for "Save", "Confirm", and "Medication Order".

Figure 3.2.1-19 MTAC Reporting – Reporting

STEP 31

Click on the  button to confirm reporting

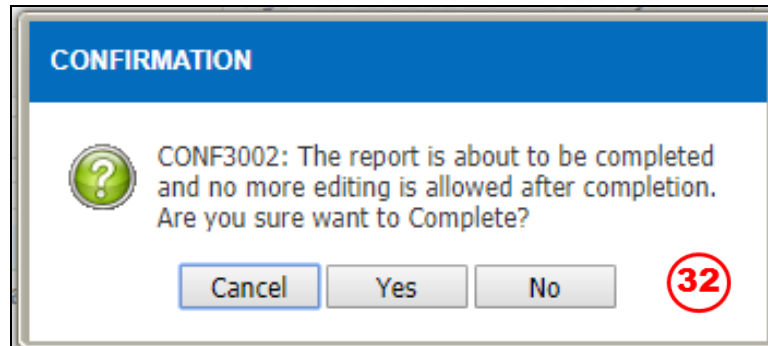
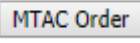


Figure 3.2.1-20 Confirmation Alert Message

STEP 32

Click on the  button to complete

Note

- After user has confirmed the record, no more editing is allowed, and the boxes change to yellow color.
- User can click on the  button to schedule an appointment as per Figure 3.2.1-21
- Previous Adherence Score record from previous visit is display (if any – max 5 newest record).

REPORTING																					
Pharmacist Notes	OVERVIEW OF DM TREATMENT MEDICATION DFT PT UNDERSTAND AND WELL ADHERE.		Remarks																		
<table border="1"> <tr> <td>Understanding</td> <td>87</td> <td>% Calculate Score</td> <td>Adherence score</td> <td>80</td> <td>Adherence</td> </tr> <tr> <td>Date</td> <td colspan="2">12/07/2017</td> <td>Date</td> <td colspan="2">12/07/2017</td> </tr> <tr> <td>Score</td> <td colspan="2">87</td> <td>Score</td> <td colspan="2">80</td> </tr> </table>				Understanding	87	% Calculate Score	Adherence score	80	Adherence	Date	12/07/2017		Date	12/07/2017		Score	87		Score	80	
Understanding	87	% Calculate Score	Adherence score	80	Adherence																
Date	12/07/2017		Date	12/07/2017																	
Score	87		Score	80																	
MTAC Consultation Status	Discharged																				

Figure 3.2.1-21 Confirmation Alert Message

MTAC REPORTING					
			Order Details  Consent Form Lab Parameter CP1 CP4 Pharmaceutical Care Issue X		
	Mykad	Age 73 Years 05 Months 16 Days	Gender Female	MRN HPSF00019577	
Address	Phone And Email	Diagnosis	No known Allergies		
Height	cm	Weight	kg	BMI/BSA 0/0 m ²	Update (Last Updated :) Nationality : Warganegara
Counseling Material Lab Parameter Counseling History MTAC History Demographic Pharmacist Notes Medication Profile Other Appointment					
Encounter No: 1051 Visit Date: 24/07/2017 Attending Practitioner: Visit Location: KLINIK PAKAR PERUBATAN					
Type Of MTAC: Warfarin Number Of MTAC Visit: 11					
ASSESSMENT					
SPECIFIC DETAILS					
REPORTING					

Figure 3.2.1-22 MTAC Reporting - Print

- Click on the  button to print the MTAC report as per Figure 3.2.1-22 and the system will show the report as per Figure 3.2.1-23

- Default to "No history of taking Non-Prescription Medication" if no data in table (in printed report).
- Add "Prescriber Review" Column
- If there is no data in both table, please display as below:
 - No Prescribed Medication Related Issue
 - No Other Issue
- Show "Current Medication" in the report printing
- Add Intervention Date in PCI reporting screen for prescribed Medication issue.



MEDICATION THERAPY ADHERENCE REPORT

Hospital Pakar Sultanah Fatimah, Muar

Patient Name : PT TEST

MRN : HPSF00186555

ID No :

Type of MTAC : Diabetes Mellitus

Diagnosis : FEVER, DIABETES MELLITUS, DIABETES MELLITUS, severe pneumonia, severe pneumonia

Allergy : No Known Allergies

Number of MTAC Visit : 1

MTAC Visit Date : 12/07/2017

Assessment:

Social History	Smoking : No Alcohol Intake : No Drug Abuse : No Pregnancy : No Diet & Lifestyle : PASSIVE	Family History	No of children : 2 Family history of illness : DM, HPT Lives with : Family Members
Medical History	Comorbidity : Hypertension, Diabetes Mellitus, Asthma, Surgical History : No		

Past Medication History	Medication (Specify Strength)	Dose	Frequency	Balance From Previous Supply	Medication Status	Comment
	No history of taking Prescription Medication					
	Non-Prescription Medication (Includes Herbal/Vitamin/Other Supplement)				Reason For Taking	Balance/Comments
	No history of taking Non-Prescription Medication					
	Medication (Specify Strength)	Dose	Frequency	Balance From Previous Supply	Medication Status	Comment
Current Medication	metFORMIN HCl 500 mg Tablet	500 mg	TDS (3 times a day)	90	DS	KLINIK PAKAR PERUBATAN/2017-07-11 16:50:27.137/ EncounterNo.0008
	Insulin regular (Insuman Rapid) 100 IU/mL Penfill	1.0000 IU	OD (once daily)	1	DS	KLINIK PAKAR PERUBATAN/2017-07-11 16:50:27.137/ EncounterNo.0008
	Acetylsalicylic Acid 100 mg, Glycine 45 mg Tablet	1.0000 tablet	OM (every morning)	30	DS	KLINIK PAKAR PERUBATAN/2017-07-11 16:50:27.137/ EncounterNo.0008
	Simvastatin 40 mg Tablet	20.0000 mg	ON (every night)	15	DS	KLINIK PAKAR PERUBATAN/2017-07-11 16:50:27.137/ EncounterNo.0008

Report:

MTAC Consultation Status: Discharged

Pharmaceutical Care Issues:

Prescribed Medication Related Issues:

No.	Intervention Date	Prescription Start Date	Original Rx No.	Drug Name	Order Details	Modified Order Details	Intervention Remarks	Intervention Details		Prescriber Review
								Types	Description	
1	12/07/2017	12/07/2017		Paracetamol 500 mg Tablet	500 mg,PRN,5 Days	1000 mg,PRN,5 Days	CHANGE FROM 500MG TO 1000MG	Inappropriate Dose		

Other Issue:

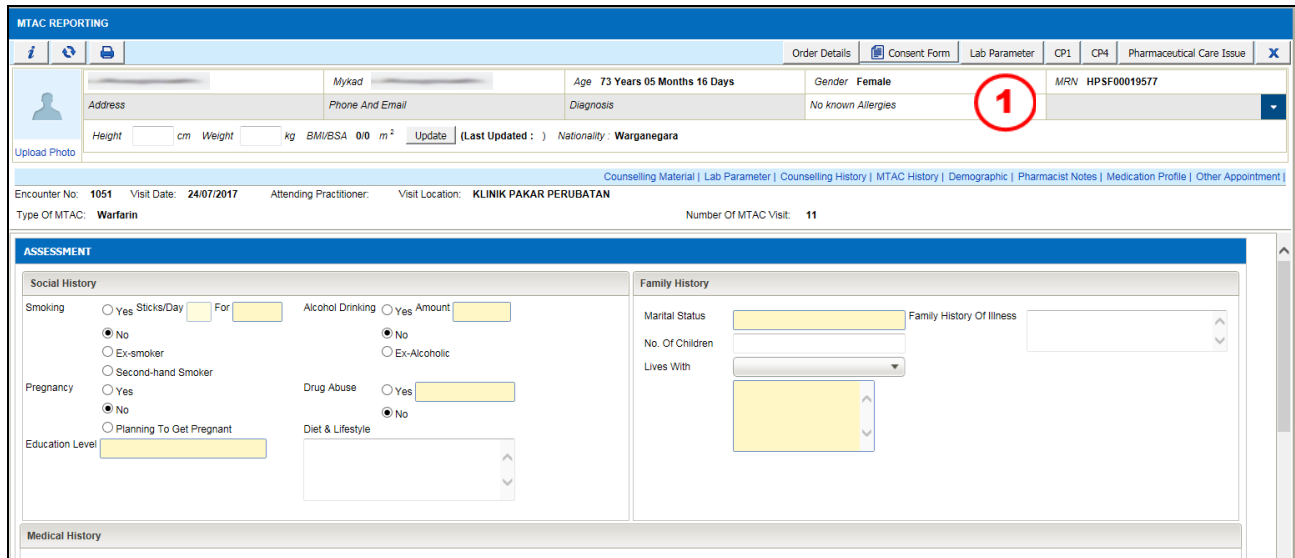
No.	Intervention Date	Intervention Details		Pharmaceutical Care Issues	Pharmacist Recommendation	Prescriber Review
		Types	Description			
1	12/07/2017	Incorrect/Inappropriate/Inadequate Regimen	Dose	PCM DOSAGE 500MG	1000MG	

Patient Understanding (medication) DFIT : 87%
 Patient Adherence Score : 80 - Adherence
 Pharmacist Notes : OVERVIEW OF DM
 : TREATMENT
 : MEDICATION
 : DFIT
 : PT UNDERSTAND AND WELL ADHERE.
 Other remarks : -
 Pharmacist Name: _____ Date: 19/07/2017

Figure 3.2.1-23 MTAC Printed Report

3.2.2 Other Tabs

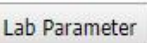
Lab Parameter

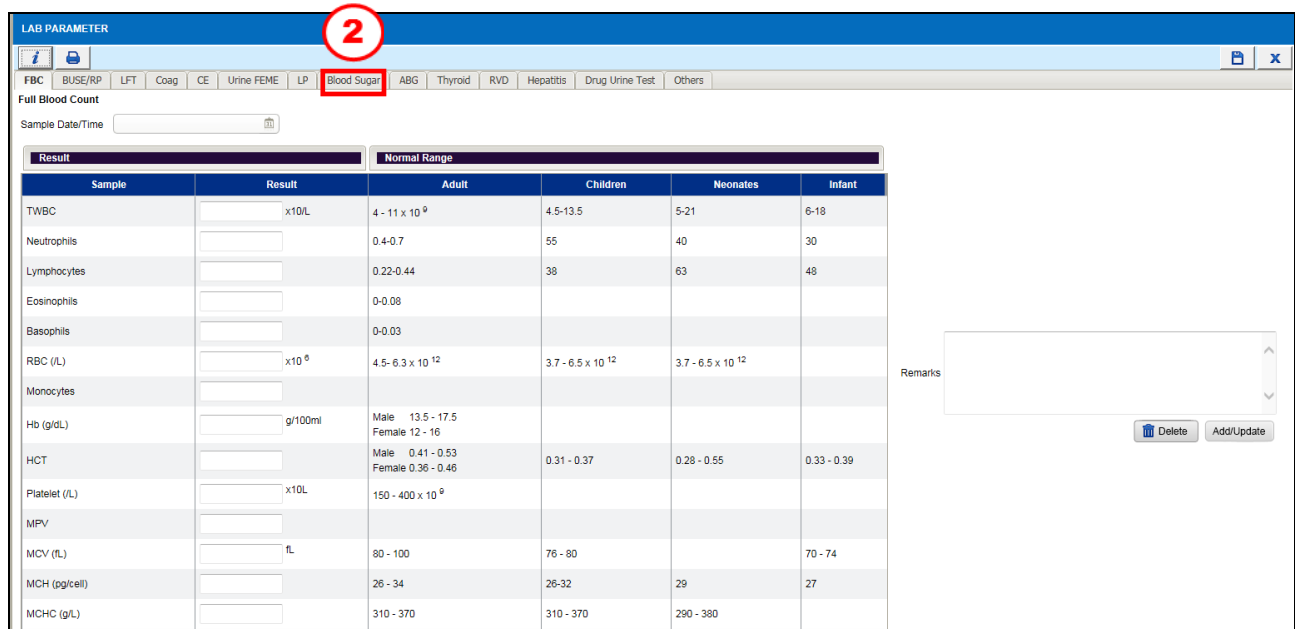


The screenshot shows the MTAC Reporting interface. At the top, there's a navigation bar with tabs: Order Details, Consent Form, Lab Parameter (highlighted with a red circle and '1'), CP1, CP4, and Pharmaceutical Care Issue. Below this, a patient information form includes fields for Mykad, Age (73 Years 05 Months 16 Days), Gender (Female), MRN (HPSF00019577), Address, Phone And Email, Diagnosis, No known Allergies, Height, Weight, BMI/BSA, and Nationality (Warganegara). A section for 'ASSESSMENT' contains sub-tabs for Social History, Family History, and Medical History. Social History includes fields for Smoking, Alcohol Drinking, Pregnancy, and Education Level. Family History includes Marital Status, No. Of Children, and Lives With. Medical History is currently empty.

Figure 3.2.2-1 MTAC Reporting Screen

STEP 1

Click on the  button to enter Lab Test Result and the system will show Figure 3.2.2-2



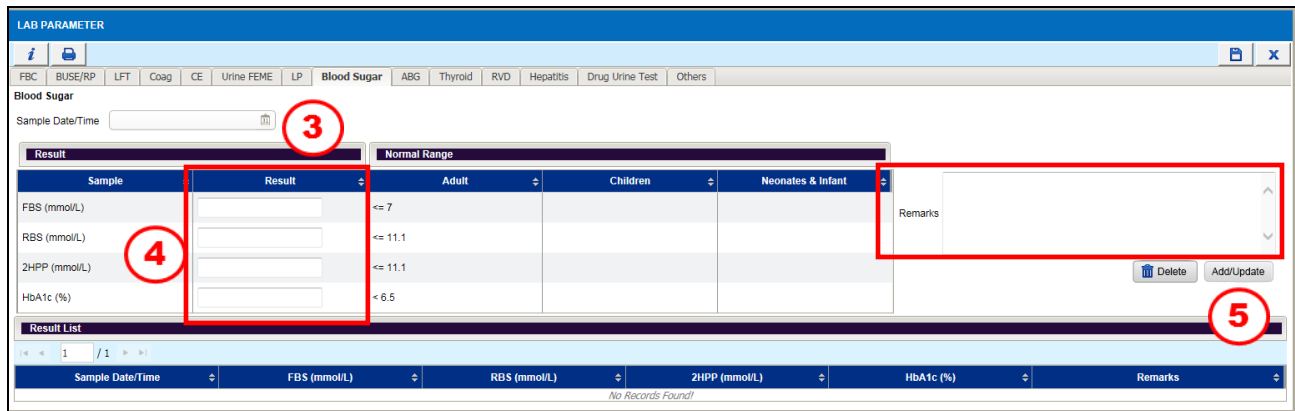
The screenshot shows the Lab Parameter screen. At the top, there's a navigation bar with tabs: FBC, BUSE/RP, LFT, Coag, CE, Urine FEME, LP, Blood Sugar (highlighted with a red circle and '2'), ABG, Thyroid, RVD, Hepatitis, Drug Urine Test, and Others. Below this, a 'Full Blood Count' section includes a 'Sample Date/Time' field. The main area is a table with columns for 'Result' and 'Normal Range'. The 'Normal Range' column is further divided into 'Adult', 'Children', 'Neonates', and 'Infant'. The table lists various blood count parameters and their corresponding results and normal ranges. A 'Remarks' field is located on the right side of the table.

Sample	Result	Normal Range			
		Adult	Children	Neonates	Infant
TWBC	x10 ⁹ /L	4 - 11 x 10 ⁹	4.5-13.5	5-21	6-18
Neutrophils		0.4-0.7	55	40	30
Lymphocytes		0.22-0.44	38	63	48
Eosinophils		0-0.08			
Basophils		0-0.03			
RBC (/L)	x10 ⁶	4.5 - 6.3 x 10 ¹²	3.7 - 6.5 x 10 ¹²	3.7 - 6.5 x 10 ¹²	
Monocytes					
Hb (g/dL)	g/100ml	Male 13.5 - 17.5 Female 12 - 16			
HCT		Male 0.41 - 0.53 Female 0.36 - 0.46	0.31 - 0.37	0.28 - 0.55	0.33 - 0.39
Platelet (/L)	x10 ⁹	150 - 400 x 10 ⁹			
MPV					
MCV (fL)	fL	80 - 100	76 - 80		70 - 74
MCH (pg/cell)		26 - 34	26-32	29	27
MCHC (g/L)		310 - 370	310 - 370	290 - 380	

Figure 3.2.2-2 Lab Parameter Screen

STEP 2

Click on the Lab Test Tabs as per Figure 3.2.2-2



The screenshot shows the 'LAB PARAMETER' window with the 'Blood Sugar' tab selected. A calendar icon (3) is next to the 'Sample Date/Time' field. The 'Result' table (4) has columns for Sample, Result, and Normal Range. The 'Normal Range' table has columns for Adult, Children, and Neonates & Infant. The 'Remarks' field (5) is on the right. The 'Result List' table at the bottom shows a list of results with columns for Sample Date/Time, FBS (mmol/L), RBS (mmol/L), 2HPP (mmol/L), HbA1c (%), and Remarks.

Sample	Result	Normal Range	Adult	Children	Neonates & Infant
FBS (mmol/L)		<= 7			
RBS (mmol/L)		<= 11.1			
2HPP (mmol/L)		<= 11.1			
HbA1c (%)		< 6.5			

Sample Date/Time	FBS (mmol/L)	RBS (mmol/L)	2HPP (mmol/L)	HbA1c (%)	Remarks
No Records Found!					

Figure 3.2.2-3 Lab Parameter Screen

STEP 3

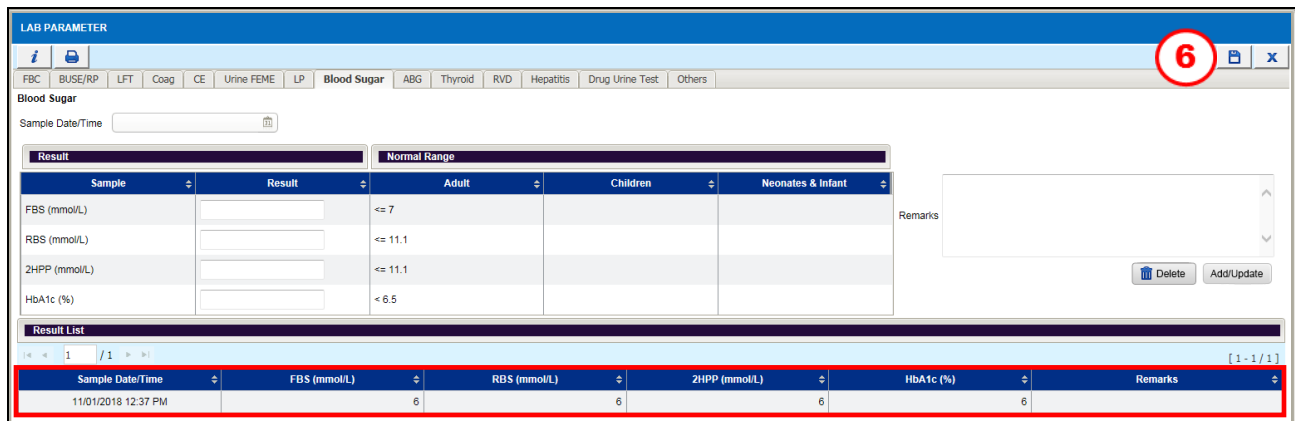
Click on the  calendar button to select the **Sample Date/Time**

STEP 4

Enter the Lab Test **Result** and **Remarks**

STEP 5

Click the  button and **Result List** will be updated as per Figure 3.2.2-4



The screenshot shows the 'LAB PARAMETER' window with the 'Blood Sugar' tab selected. A calendar icon (3) is next to the 'Sample Date/Time' field. The 'Result' table (4) has columns for Sample, Result, and Normal Range. The 'Normal Range' table has columns for Adult, Children, and Neonates & Infant. The 'Remarks' field (5) is on the right. The 'Result List' table at the bottom shows a list of results with columns for Sample Date/Time, FBS (mmol/L), RBS (mmol/L), 2HPP (mmol/L), HbA1c (%), and Remarks. The 'Add/Update' button (6) is in the top right corner.

Sample	Result	Normal Range	Adult	Children	Neonates & Infant
FBS (mmol/L)		<= 7			
RBS (mmol/L)		<= 11.1			
2HPP (mmol/L)		<= 11.1			
HbA1c (%)		< 6.5			

Sample Date/Time	FBS (mmol/L)	RBS (mmol/L)	2HPP (mmol/L)	HbA1c (%)	Remarks
11/01/2018 12:37 PM	6	6	6	6	

Figure 3.2.2-4 Lab Parameter Screen

STEP 6

Click on the  button to save the record

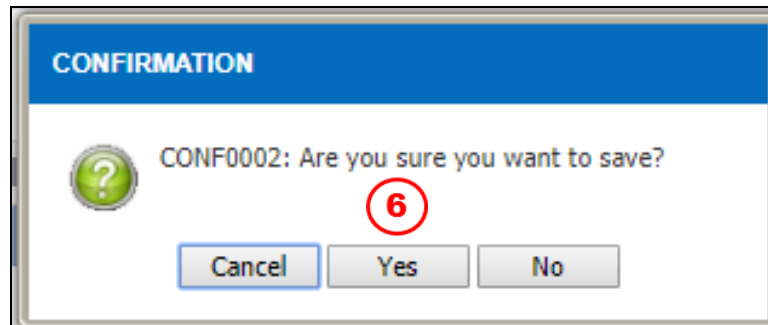
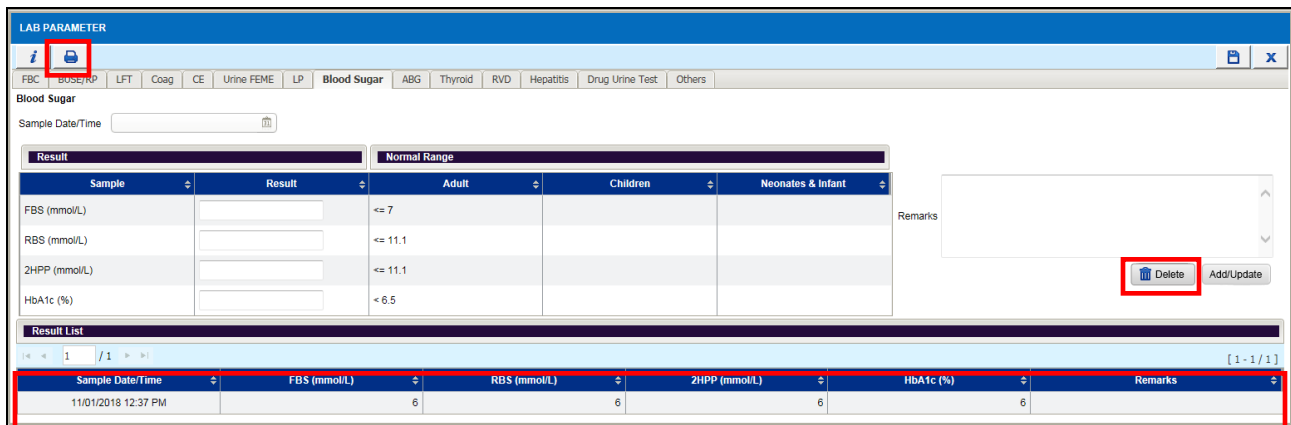


Figure 3.2.2-5 Confirmation Alert Message

STEP 6

Click on the  button to confirm



The Lab Parameter screen shows a form for entering lab results. It includes a "Result" table with columns for Sample, Result, and Normal Range. The "Result List" table below shows a list of results. A red box highlights the "Delete" button in the bottom right corner.

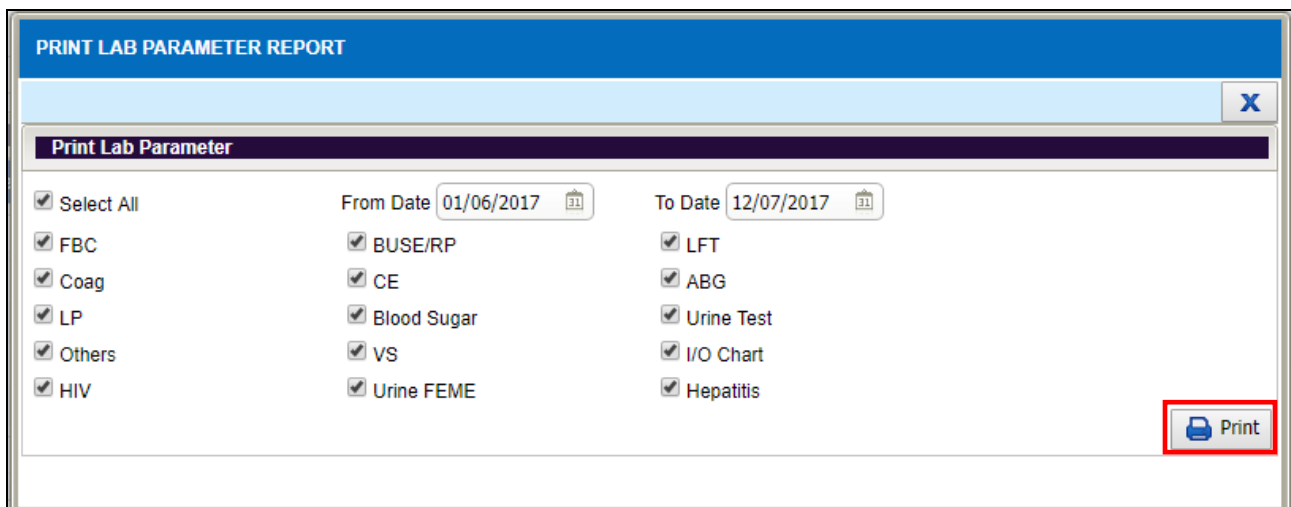
Sample	Result	Normal Range
FBS (mmol/L)		<= 7
RBS (mmol/L)		<= 11.1
2HPP (mmol/L)		<= 11.1
HbA1c (%)		< 6.5

Sample Date/Time	FBS (mmol/L)	RBS (mmol/L)	2HPP (mmol/L)	HbA1c (%)	Remarks
11/01/2018 12:37 PM	6	6	6	6	

Figure 3.2.2-6 Lab Parameter Screen

Note

- To delete the record, double click the Result List and click the  button.
- To print the lab report, click on the  button as per Figure 3.2.2-6



The Print Lab Parameter Report dialog box shows a list of lab parameters to be printed. It includes a "Select All" checkbox and a "Print" button. The "Print" button is highlighted with a red box.

From Date: 01/06/2017 To Date: 12/07/2017

☒ FBC	☒ BUSE/RP	☒ LFT
☒ Coag	☒ CE	☒ ABG
☒ LP	☒ Blood Sugar	☒ Urine Test
☒ Others	☒ VS	☒ I/O Chart
☒ HIV	☒ Urine FEME	☒ Hepatitis

Figure 3.2.2-7 Print Lab Parameter Report

- Tick the ☒ checkbox to select the **Lab Test** and Select **From Date & To Date** by clicking the  button.
- Click the  button to print the Lab Parameter Report as per Figure 3.2.2-7

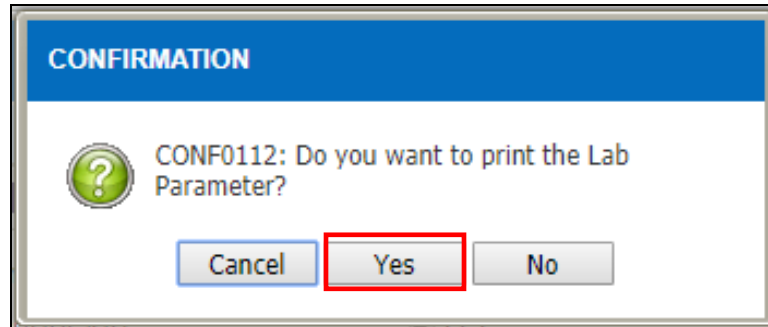
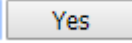


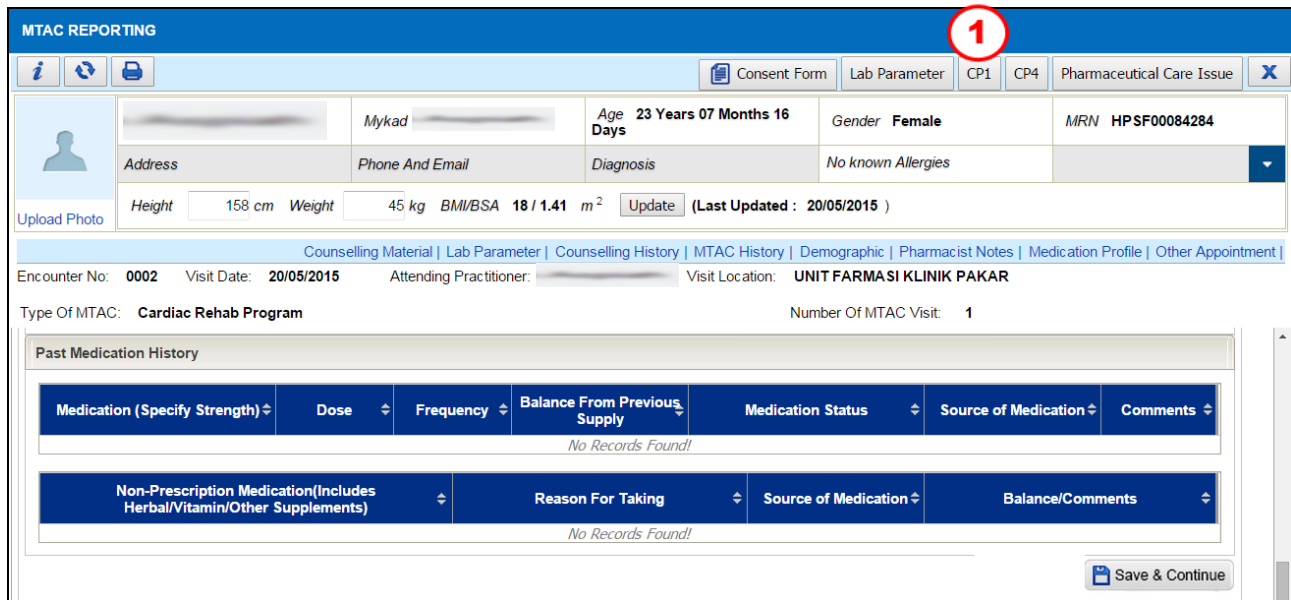
Figure 3.2.2-8 Confirmation Alert Message

- Click the  button to confirm and the system will show the Lab Parameter Report as per Figure 3.2.2-9

 KEMENTERIAN KESIHATAN MALAYSIA LAB PARAMETER REPORT Hospital Pakar Sultanah Fatimah, Muar		Lab Parameter																						
PATIENT NAME : PT TEST MRN NO : HPSF00186555 WARD/BED : KLINIK PAKAR PERUBATAN /		IC NO : Weight/Height : Kg / Cm ADMISSION DATE : 12/07/2017 AGE : 68 Years 03 Months 25 Days GENDER : Female REASON FOR ADMISSION :																						
BUSE/RP <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sample Date\Type</th> <th>Urea</th> <th>Na</th> <th>K</th> <th>SrCr</th> <th>CrCl</th> <th>Cl</th> <th>Ca</th> <th>Mg</th> <th>PO4-</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			Sample Date\Type	Urea	Na	K	SrCr	CrCl	Cl	Ca	Mg	PO4-	Remarks											
Sample Date\Type	Urea	Na	K	SrCr	CrCl	Cl	Ca	Mg	PO4-	Remarks														
Coag <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sample Date\Type</th> <th>PT</th> <th>APTT</th> <th>INR</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>26/06/2017</td> <td>13</td> <td>28</td> <td>1.2</td> <td>All Normal</td> </tr> </tbody> </table>			Sample Date\Type	PT	APTT	INR	Remarks	26/06/2017	13	28	1.2	All Normal												
Sample Date\Type	PT	APTT	INR	Remarks																				
26/06/2017	13	28	1.2	All Normal																				
Blood Sugar <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sample Date\Type</th> <th>FBS</th> <th>RBS</th> <th>2HPP</th> <th>HbA1c</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>10/07/2017</td> <td>6</td> <td>12</td> <td>10</td> <td>5</td> <td>FBS 2HPP & HbA1c are normal. RBS slightly high.</td> </tr> </tbody> </table>			Sample Date\Type	FBS	RBS	2HPP	HbA1c	Remarks	10/07/2017	6	12	10	5	FBS 2HPP & HbA1c are normal. RBS slightly high.										
Sample Date\Type	FBS	RBS	2HPP	HbA1c	Remarks																			
10/07/2017	6	12	10	5	FBS 2HPP & HbA1c are normal. RBS slightly high.																			

Figure 3.2.2-9 Lap Parameter Printed Report

CP1



MTAC REPORTING

Consent Form | Lab Parameter | CP1 | CP4 | Pharmaceutical Care Issue

Mykad: [Redacted] Age: 23 Years 07 Months 16 Days Gender: Female MRN: HPSF00084284

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

Height: 158 cm Weight: 45 kg BMI/BSA: 18 / 1.41 m² Update (Last Updated : 20/05/2015)

Encounter No: 0002 Visit Date: 20/05/2015 Attending Practitioner: [Redacted] Visit Location: UNIT FARMASI KLINIK PAKAR

Type Of MTAC: Cardiac Rehab Program Number Of MTAC Visit: 1

Past Medication History

Medication (Specify Strength)	Dose	Frequency	Balance From Previous Supply	Medication Status	Source of Medication	Comments
No Records Found!						

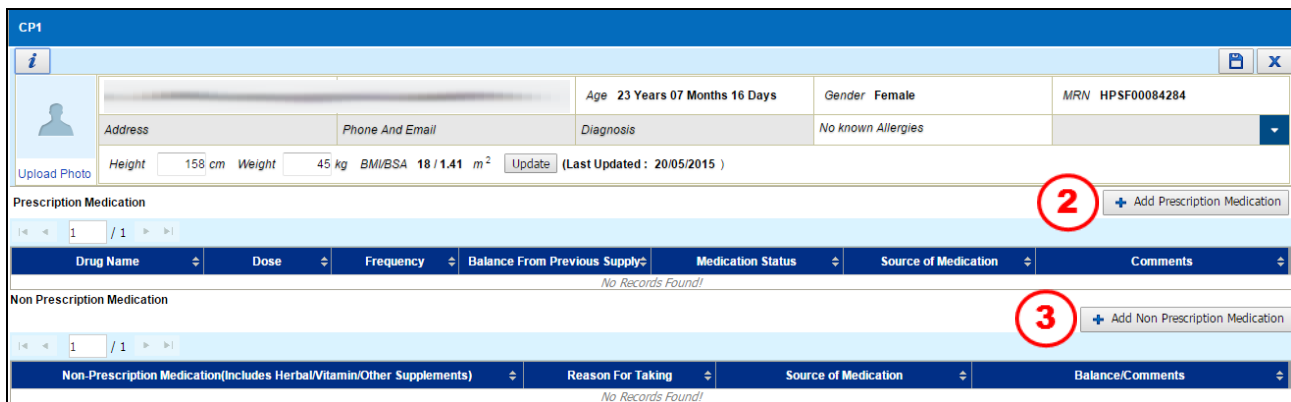
Non-Prescription Medication(Includes Herbal/Vitamin/Other Supplements)	Reason For Taking	Source of Medication	Balance/Comments
No Records Found!			

Save & Continue

Figure 3.2.2-10 MTAC Reporting – Assessment on Past Medication History

STEP 1

Click on the **CP1** button to add 'Past Medication History' as shown in Figure 3.2.2-10



CP1

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

Height: 158 cm Weight: 45 kg BMI/BSA: 18 / 1.41 m² Update (Last Updated : 20/05/2015)

Prescription Medication ➕ Add Prescription Medication

Drug Name	Dose	Frequency	Balance From Previous Supply	Medication Status	Source of Medication	Comments
No Records Found!						

Non Prescription Medication ➕ Add Non Prescription Medication

Non-Prescription Medication(Includes Herbal/Vitamin/Other Supplements)	Reason For Taking	Source of Medication	Balance/Comments
No Records Found!			

Figure 3.2.2-11 CP1

STEP 2

Click on the **➕ Add Prescription Medication** button and the 'Prescription Medication' window will be displayed as shown in Figure 3.2.2-12. Enter the necessary information and save

Note

Past Medication History:

- Prescription Medication.
 - It has certain condition whereby the drug display at prescription medication come from the latest visit patient at that facility

- User can add prescriptions medication from other facility too
- User can fill up **Original Rx No & Order Details** drug at prescription medication

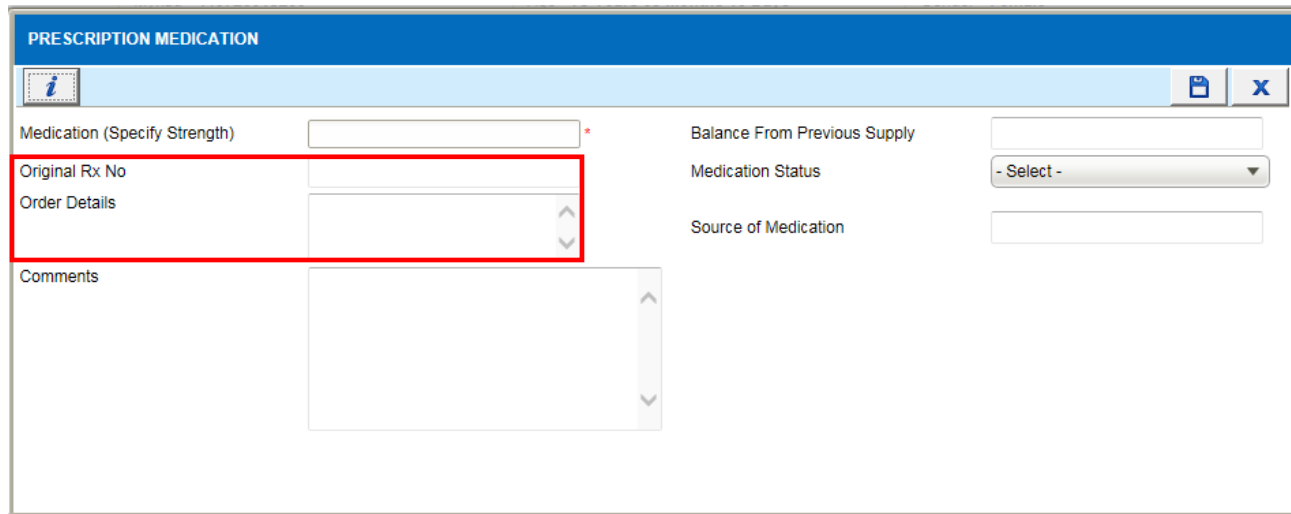


Figure 3.2.2-12 Prescription Medication

STEP 3

Click on the  button and the 'Non-Prescription Medication' window will be displayed as shown in Figure 3.2.2-13. Enter the necessary information and save

Note

Past Medication History:

- *Non-Prescription Medication.*
 - User can add any none prescription medication that has been taken by patient in system

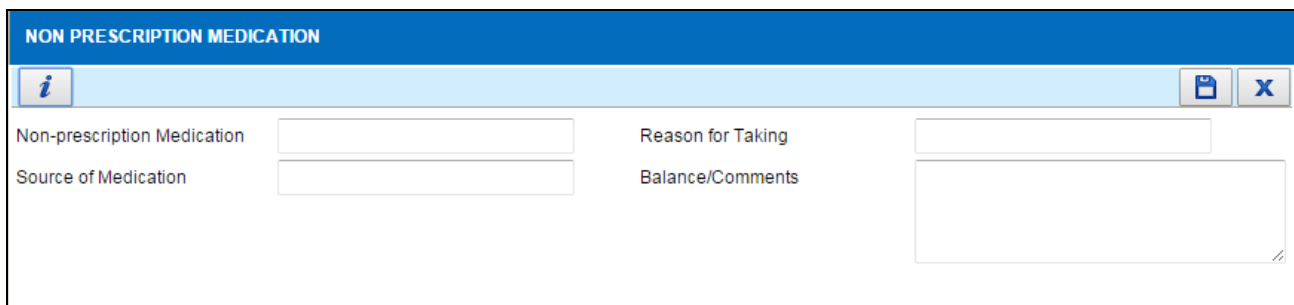
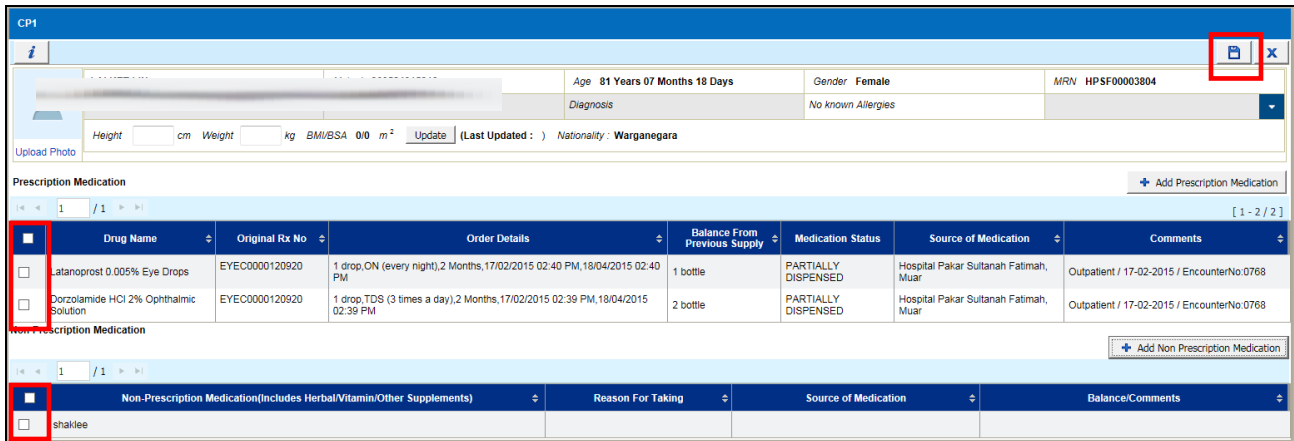


Figure 3.2.2-13 Non-Prescription Medication



CP1

Age: 81 Years 07 Months 18 Days | Gender: Female | MRN: HPSF00003804

Diagnosis: No known Allergies

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

Prescription Medication

Drug Name	Original Rx No	Order Details	Balance From Previous Supply	Medication Status	Source of Medication	Comments
☐ Latanoprost 0.005% Eye Drops	EYEC0000120920	1 drop ON (every night), 2 Months, 17/02/2015 02:40 PM, 18/04/2015 02:40 PM	1 bottle	PARTIALLY DISPENSED	Hospital Pakar Sultanah Fatimah, Muar	Outpatient / 17-02-2015 / EncounterNo:0768
☐ Dorzolamide HCl 2% Ophthalmic Solution	EYEC0000120920	1 drop, TDS (3 times a day), 2 Months, 17/02/2015 02:39 PM, 18/04/2015 02:39 PM	2 bottle	PARTIALLY DISPENSED	Hospital Pakar Sultanah Fatimah, Muar	Outpatient / 17-02-2015 / EncounterNo:0768

Non-Prescription Medication

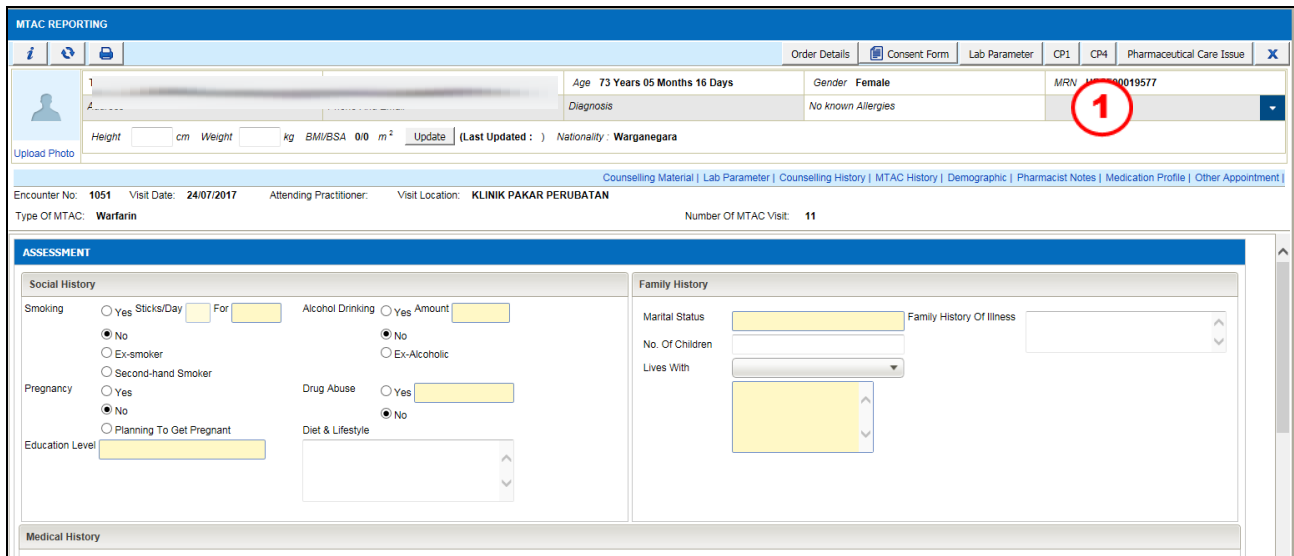
Non-Prescription Medication(Includes Herbal/Vitamin/Other Supplements)	Reason For Taking	Source of Medication	Balance/Comments
☐ shaklee			

Figure 3.2-2-14 CP1 (Edit)

Note

- Click on the  button as shown in Figure 3.2.1-14 to edit or to add details to the medication
- Now user can select(ticked) prescription medication or non-prescription medication the they want and will be display at the report

CP4



MTAC REPORTING

Order Details | **Consent Form** | Lab Parameter | **CP1** | **CP4** | Pharmaceutical Care Issue

Age: 73 Years 05 Months 16 Days | Gender: Female | MRN: HPSF000019577

Diagnosis: No known Allergies

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

Encounter No: 1051 | Visit Date: 24/07/2017 | Attending Practitioner: | Visit Location: KLINIK PAKAR PERUBATAN

Type Of MTAC: Warfarin | Number Of MTAC Visit: 11

ASSESSMENT

Social History

Smoking: ☐ Yes Sticks/Day For | ☐ No | Alcohol Drinking: ☐ Yes Amount | ☐ No | ☐ Ex-Alcoholic

Pregnancy: ☐ Second-hand Smoker | ☐ Yes | ☒ No | Drug Abuse: ☐ Yes | ☒ No | Planning To Get Pregnant: | Diet & Lifestyle:

Education Level:

Family History

Marital Status: | Family History Of Illness:

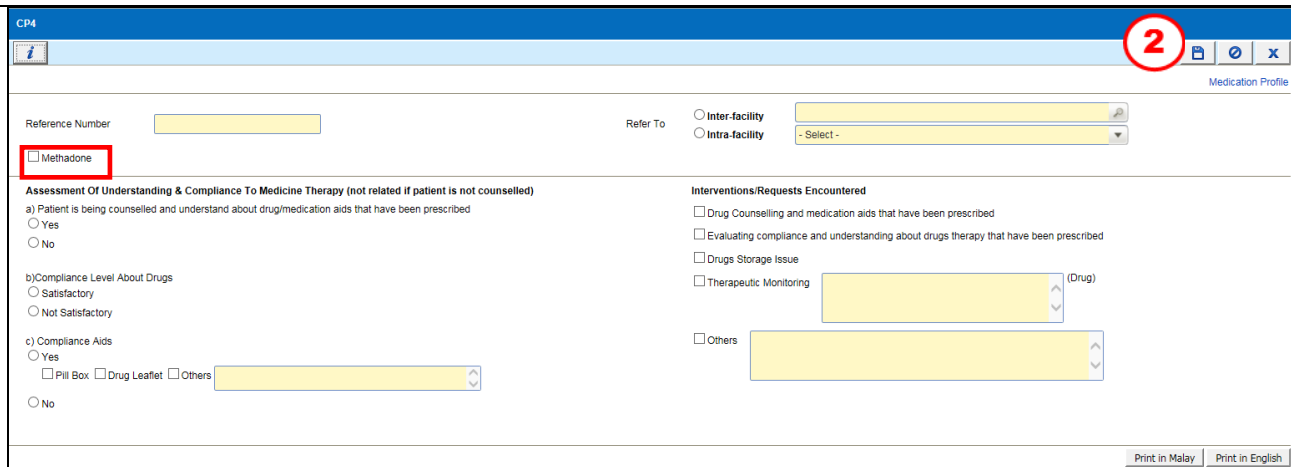
No. Of Children: | Lives With:

Medical History

Figure 3.2.2-15 CP4 Screen

STEP 1

Click on the  button to enter the details



CP4

Reference Number

Refer To ☐ Inter-facility
☐ Intra-facility

☐ Methadone

Assessment Of Understanding & Compliance To Medicine Therapy (not related if patient is not counselled)

a) Patient is being counselled and understand about drug/medication aids that have been prescribed
☐ Yes
☐ No

b) Compliance Level About Drugs
☐ Satisfactory
☐ Not Satisfactory

c) Compliance Aids
☐ Yes
☐ Pill Box ☐ Drug Leaflet ☐ Others
☐ No

Interventions/Requests Encountered

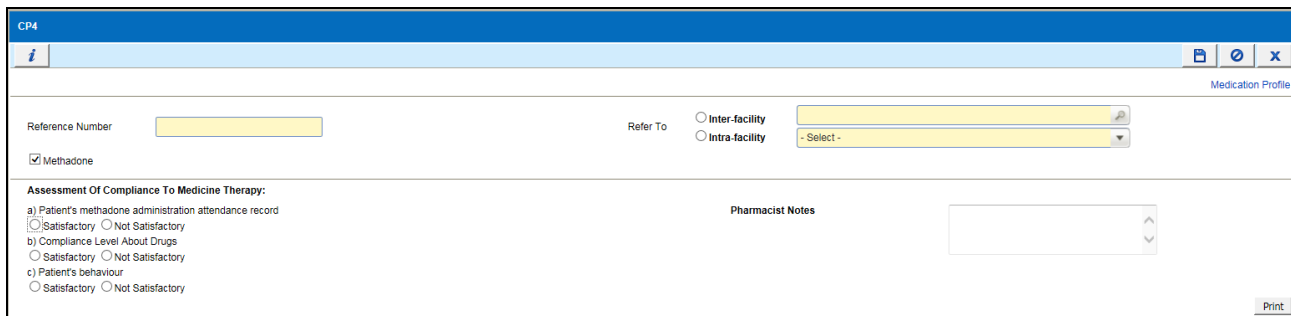
☐ Drug Counselling and medication aids that have been prescribed
☐ Evaluating compliance and understanding about drugs therapy that have been prescribed
☐ Drugs Storage Issue
☐ Therapeutic Monitoring
☐ Others

Print in Malay Print in English

Figure 3.2.2-16 CP4 Assessment Of Understanding & Compliance Screen

Note

- For Methadone, user can click on the Methadone checkbox ☒ **Methadone** to assess the compliance as per Figure or proceed with the **Assessment Of Understanding & Compliance To Medicine Therapy** below and enter the **Interventions/Requests Encountered**



CP4

Reference Number

Refer To ☐ Inter-facility
☐ Intra-facility

☒ Methadone

Assessment Of Compliance To Medicine Therapy:

a) Patient's methadone administration attendance record
☐ Satisfactory ☐ Not Satisfactory

b) Compliance Level About Drugs
☐ Satisfactory ☐ Not Satisfactory

c) Patient's behaviour
☐ Satisfactory ☐ Not Satisfactory

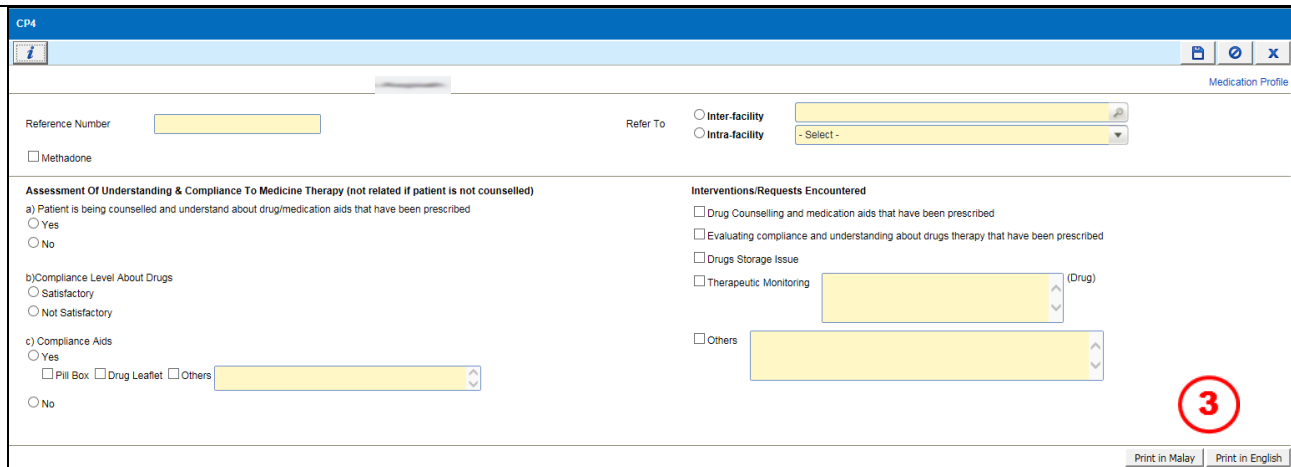
Pharmacist Notes

Print

Figure 3.2.2-17 CP4 – Methadone Screen

STEP 2

Click on the  button to save the record

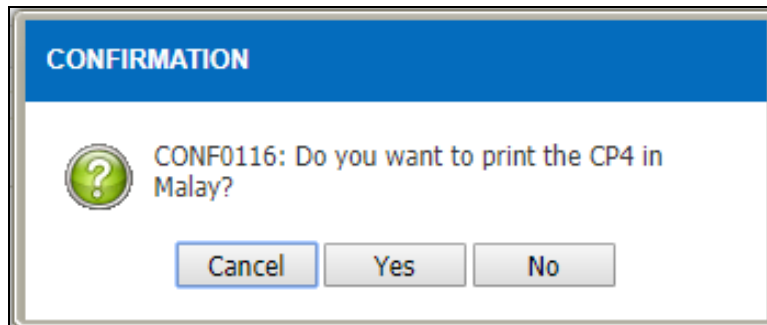


The image shows a screenshot of the CP4 Print Report form. It includes fields for Reference Number, Refer To (Inter-facility or Intra-facility), and a checkbox for Methadone. There are two main sections: 'Assessment Of Understanding & Compliance To Medicine Therapy' and 'Interventions/Requests Encountered'. The first section has sub-sections a, b, and c, each with radio button options. The second section has checkboxes for various interventions and a text area for others. A red circle with the number 3 is located in the bottom right corner of the form.

Figure 3.2.2-18 CP4 Print Report

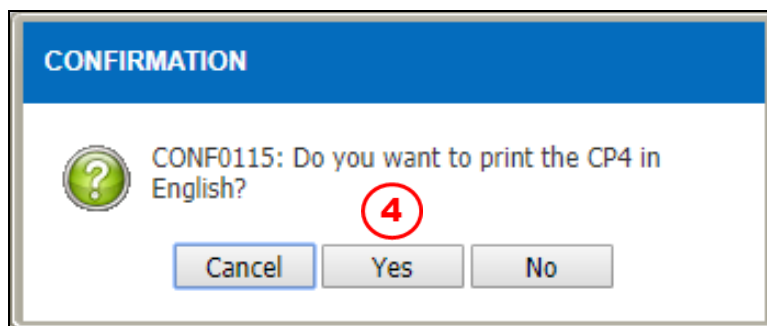
STEP 3

Click on the **Print in Malay** or **Print in English** to print the CP4 as per Figure 3.2.2-18



The image shows a confirmation alert message box titled 'CONFIRMATION'. It contains a question mark icon and the text 'CONF0116: Do you want to print the CP4 in Malay?'. Below the text are three buttons: 'Cancel', 'Yes', and 'No'.

Figure 3.2.2-19 Confirmation Alert Message



The image shows a confirmation alert message box titled 'CONFIRMATION'. It contains a question mark icon and the text 'CONF0115: Do you want to print the CP4 in English?'. Below the text are three buttons: 'Cancel', 'Yes', and 'No'. A red circle with the number 4 is located next to the 'Yes' button.

Figure 3.2.2-20 Confirmation Alert Message

STEP 4

Click on the **Yes** button to confirm and the Referral Note will be display as per Figure 3.2.2-20

KEMENTERIAN KESIHATAN MALAYSIA

Hospital Pakar Sultanah Fatimah, Muar

Pharmacy Department

REFERRAL NOTE

CP4/151

TO:

Medical Officer / Pharmacist : Hospital Pakar Sultanah Fatimah, Muar

RE: PATIENT REFERRAL

PT TEST / HPSF00186555 / 490318015646
Name MRN

This patient HAS / NOT BEEN GIVEN MEDICATION COUNSELING for understanding of the treatment that have been prescribed. We expect that you can give the counselling & further evaluation that needed to increase the effectiveness of the treatment.

2. DIAGNOSIS :

None

3. LIST OF CURRENT DRUG :

Drug Name	Dose	Frequency	Start Date	End Date	Supply Period
Insulin regular (Insuman Rapid) 100 IU/mL Penfill	1 IU	OD (once daily)	11/07/2017	10/08/2017	30 Days
Simvastatin 40 mg Tablet	20 mg	ON (every night)	11/07/2017	10/08/2017	30 Days
metFORMIN HCl 500 mg Tablet	500 mg	TDS (3 times a day)	11/07/2017	10/08/2017	30 Days
Acetylsalicylic Acid 100 mg, Glycine 45 mg Tablet	1 tablet	OM (every morning)	11/07/2017	10/08/2017	30 Days

4. UNDERSTANDING ASSESSMENT & COMPLIANCE TO DRUG

(not applicable if the patient has not been counseled):

a) The patient has been counseled and understand the drug/medication aids prescribed

☒ Yes ☐ No

b) Compliance level about Drugs

☒ Satisfactory ☐ Not-Satisfactory

c) Compliance Aids ☐ Pill Box ☒ Drug Message

☐ Others ☐ No

5. INFORMATION / REQUESTS ENCOUNTERED :

[Please tick (☒) in the box provided]

☒	Drug counselling and medication aids that have been prescribed
☒	Evaluate compliance with and understanding of the prescribed drug therapy
☐	Therapeutic monitoring: (Drug)
☒	Drug storage issues
☐	Other:

Thank You,

Noraini Binti Saari

PF54

069521901

12/07/2017

Figure 3.2.2-21 CP4 / Referral Note Printed Report

Pharmaceutical Care Issue

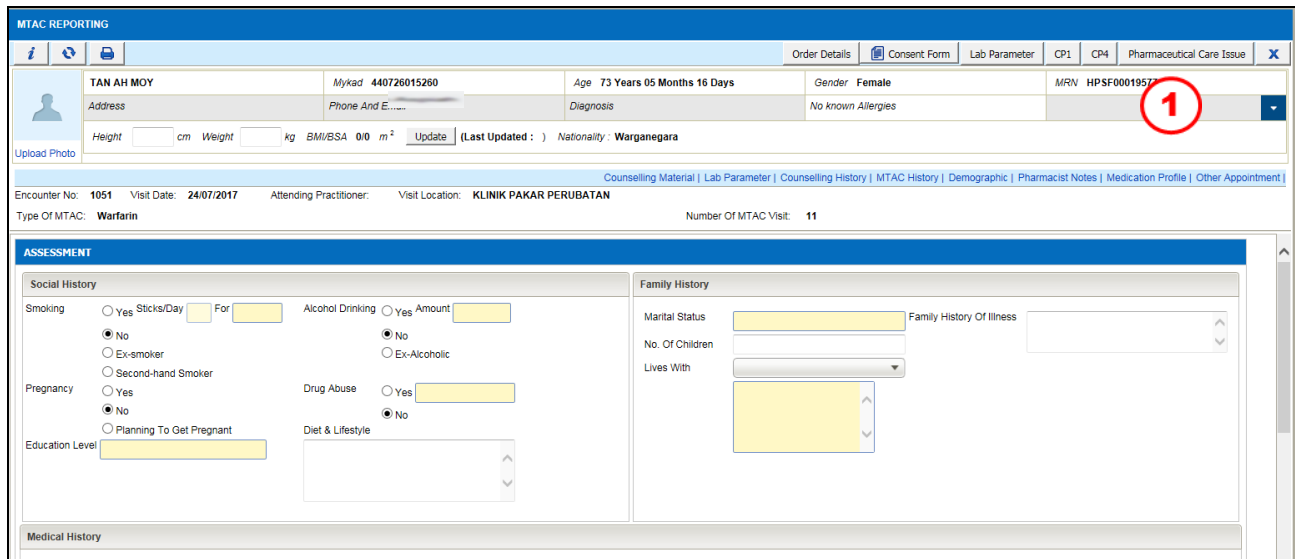
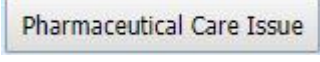
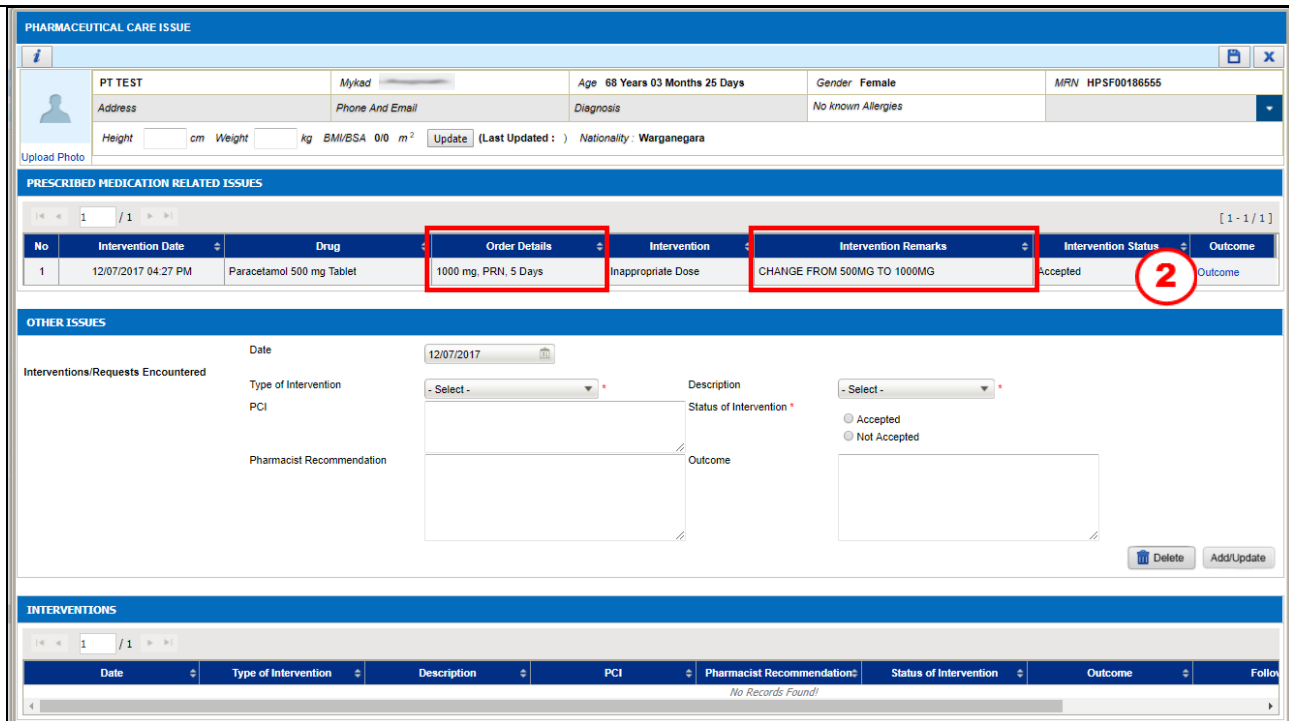


Figure 3.2.2-22 MTAC Reporting Screen

STEP 1

Click on the  button and the system will show Figure 3.2.2-22



PHARMACEUTICAL CARE ISSUE

PT TEST: Mykad, Age: 68 Years 03 Months 25 Days, Gender: Female, MRN: HPSF00186555

Address, Phone And Email, Diagnosis, No known Allergies

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

PRESCRIBED MEDICATION RELATED ISSUES

No	Intervention Date	Drug	Order Details	Intervention	Intervention Remarks	Intervention Status	Outcome
1	12/07/2017 04:27 PM	Paracetamol 500 mg Tablet	1000 mg, PRN, 5 Days	Inappropriate Dose	CHANGE FROM 500MG TO 1000MG	Accepted	Outcome

OTHER ISSUES

Interventions/Requests Encountered

Date: 12/07/2017

Type of Intervention: - Select -

PCI

Pharmacist Recommendation

Description: - Select -

Status of Intervention: ☐ Accepted ☐ Not Accepted

Outcome

Delete Add/Update

INTERVENTIONS

Date	Type of Intervention	Description	PCI	Pharmacist Recommendation	Status of Intervention	Outcome	Follow
No Records Found!							

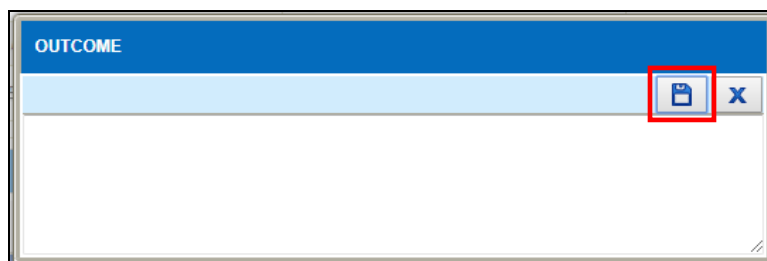
Figure 3.2.2-23 PCI Screen

Note

- The column for **Intervention Remarks** in PCI screen has been added.
- Other Details** was renamed to **Order Details** as per Figure 3.2.2-23

STEP 2

Click on the [Outcome](#) hyperlink to enter the details. The system will display as per Figure 3.2.2-24. Save when done.



OUTCOME

Save Close

Figure 3.2.2-24 Outcome Screen

STEP 3

Fill up the **Interventions/Requests Encountered** under **Other Issues** section as per Figure 3.2.2-24

PHARMACEUTICAL CARE ISSUE

PT TEST Mykad Age 68 Years 03 Months 25 Days Gender Female MRN HPSF00186555

Address Phone And Email Diagnosis No known Allergies

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

Upload Photo

PRESCRIBED MEDICATION RELATED ISSUES

No	Intervention Date	Drug	Order Details	Intervention	Intervention Remarks	Intervention Status	Outcome
1	12/07/2017 04:27 PM	Paracetamol 500 mg Tablet	1000 mg, PRN, 5 Days	Inappropriate Dose	CHANGE FROM 500MG TO 1000MG	Accepted	Outcome

OTHER ISSUES

Interventions/Requests Encountered Date 12/07/2017

Type of Intervention - Select - Description - Select -

PCI Status of Intervention * ☐ Accepted ☐ Not Accepted

Pharmacist Recommendation Outcome

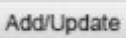
Delete Add/Update

INTERVENTIONS

Date	Type of Intervention	Description	PCI	Pharmacist Recommendation	Status of Intervention	Outcome	Follow-up	Checklist
No Records Found!								

Figure 3.2.2-25 Other Issues Screen

STEP 4

Click on the  button to update and it will appear below under **Interventions** section as per Figure 3.2.2-26

OTHER ISSUES

Interventions/Requests Encountered Date 12/07/2017

Type of Intervention - Select - Description - Select -

PCI Status of Intervention * ☐ Accepted ☐ Not Accepted

Pharmacist Recommendation Outcome

Delete Add/Update

INTERVENTIONS

Date	Type of Intervention	Description	PCI	Pharmacist Recommendation	Status of Intervention	Outcome	Follow-up	Checklist
12/07/2017	Incorrect/inappropriate/inadequate Regimen	Dose	PCM DOSAGE 500MG	1000MG	Accepted	TEMPERATURE DECREASE		

Figure 3.2.2-26 Interventions Section

STEP 5

Click on the  button to save the record as per Figure 3.2.2-23

Note

Tick on the  checkbox and click the  button to delete the intervention record.

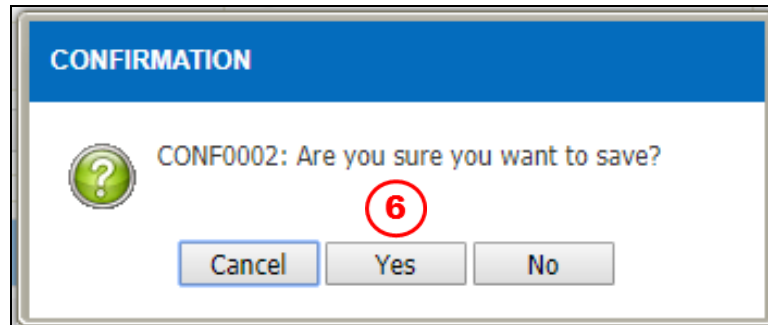
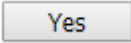


Figure 3.2.2-27 Confirmation Alert Message

STEP 6

Click on the  button to confirm

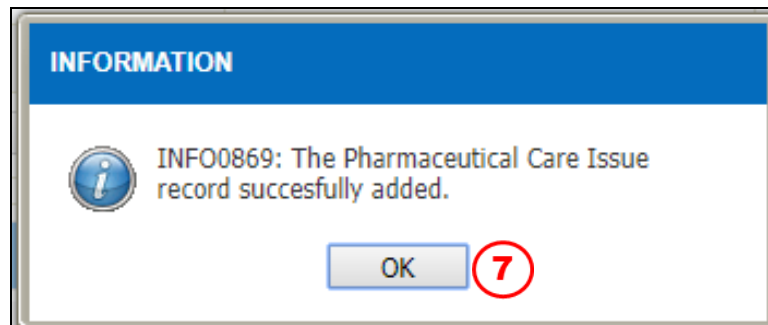
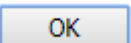


Figure 3.2.2.28 Information Alert Message

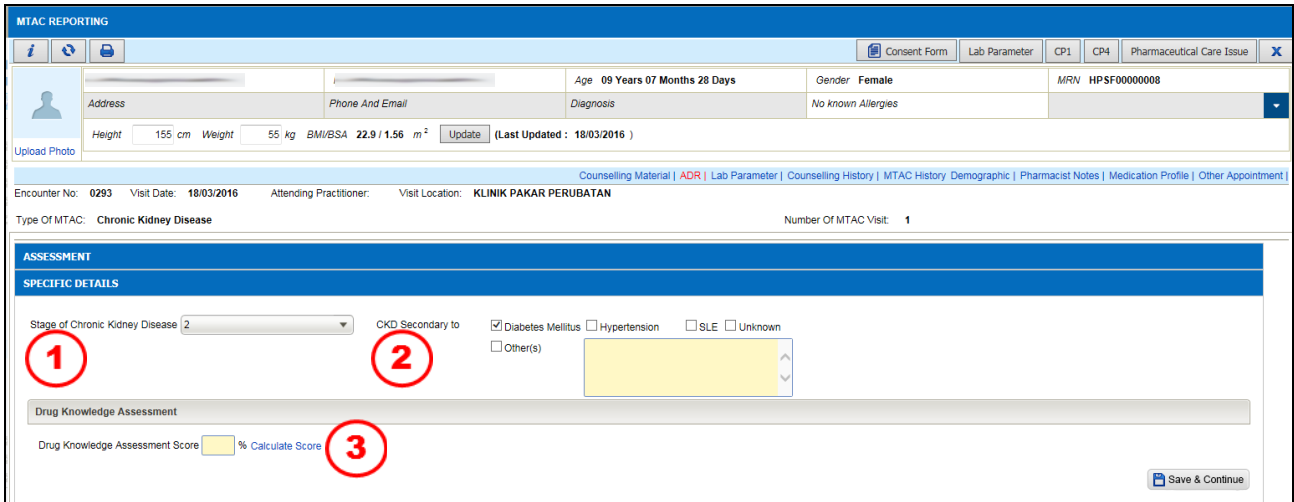
STEP 7

Click on the  button

3.2.3 Create New MTAC Reporting With Specific Details

3.2.3.1 Chronic Kidney Disease

This function allows user to record Specific Details for Chronic Kidney Disease for MTAC patients.



The screenshot displays the 'MTAC REPORTING' interface. At the top, there are tabs for 'Consent Form', 'Lab Parameter', 'CP1', 'CP4', and 'Pharmaceutical Care Issue'. Below this, patient information is shown, including Age (09 Years 07 Months 28 Days), Gender (Female), and MRN (HPSF00000008). The 'Type Of MTAC' is set to 'Chronic Kidney Disease'. The 'ASSESSMENT' section is active, showing 'SPECIFIC DETAILS'. In this section, three red circles highlight specific elements: (1) The 'Stage of Chronic Kidney Disease' dropdown menu, which is currently set to '2'. (2) The 'CKD Secondary to' section, which includes checkboxes for 'Diabetes Mellitus', 'Hypertension', 'SLE', 'Unknown', and 'Other(s)'. (3) The 'Calculate Score' button, which is located next to the 'Drug Knowledge Assessment Score' field.

Figure 3.2.3.1-1 Specific Details – Chronic Kidney Disease

Note

Repeat **STEP 1 to 16** as in 3.2.1 Create New MTAC Reporting with No Specific Details before performing MTAC Reporting - Specific Details for Chronic Kidney Disease.

STEP 1

Select **Stage of Chronic Kidney Disease** from the drop down box

- 1
- 2
- 3a
- 3b
- 4
- 5

STEP 2

Select the check box for **CKD Secondary to** as below:

- Diabetes Mellitus
- Hypertension
- SLE
- Unknown
- Other(s)

Note

Blank fields will be enabled if user selects 'Other(s)' radio button.

STEP 3

Click on the [Calculate Score](#) hyperlink and window for '**Drug Knowledge Assessment Score**' will be displayed as shown in Figure 3.2.3.1-2

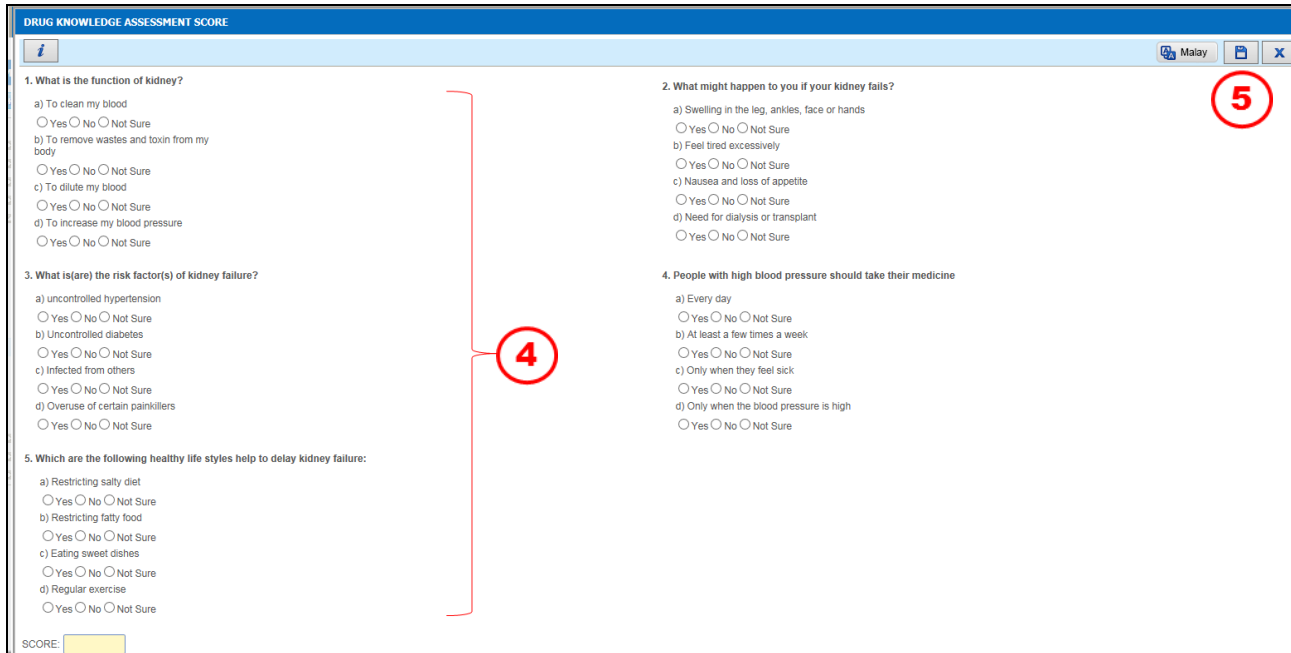


Figure 3.2.3.1-2 Drug Knowledge Assessment Score

STEP 4

Answer the questions for **Drug Knowledge Assessment** by checking the radio button for below:

1. **What is the function of kidney?**
2. **What might happen to you if your kidney fails?**
3. **What is (are) the risk factor(s) of kidney failure?**
4. **People with high blood pressure should take their medicine**
5. **Which are the following healthy life styles help to delay kidney failure:**

Note

- The questions are not mandatory to be answered.
- Click on the  button to view the questions in Malay language.
- Score will be automatically calculated and automatically displayed.

STEP 5

Click on the  button to save the answered question(s)

STEP 6

Click on the  button to confirm save record

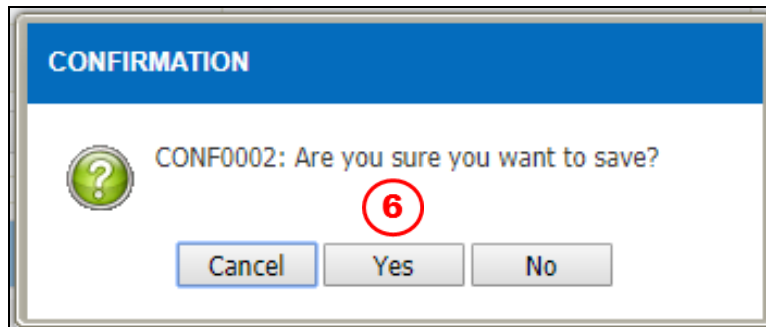
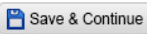


Figure 3.2.3.1-3 Confirmation Alert Message

STEP 7

Click on the  button as shown in Figure 3.2.3.1-4 to save and continue with reporting section

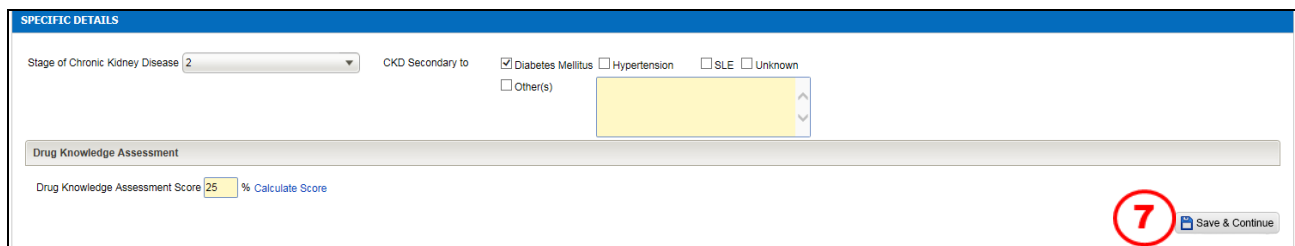
A screenshot of a web form titled "SPECIFIC DETAILS". The form contains several fields: "Stage of Chronic Kidney Disease" with a dropdown menu showing "2", "CKD Secondary to" with checkboxes for "Diabetes Mellitus", "Hypertension", "SLE", "Unknown", and "Other(s)", and a "Drug Knowledge Assessment" section with a "Drug Knowledge Assessment Score" field showing "25" and a "Calculate Score" button. In the bottom right corner, there is a "Save & Continue" button with a floppy disk icon, which is circled in red with the number "7" inside the circle.

Figure 3.2.3.1-4 Specific Details – Chronic Kidney Disease

STEP 8

Click on the  button to confirm save record

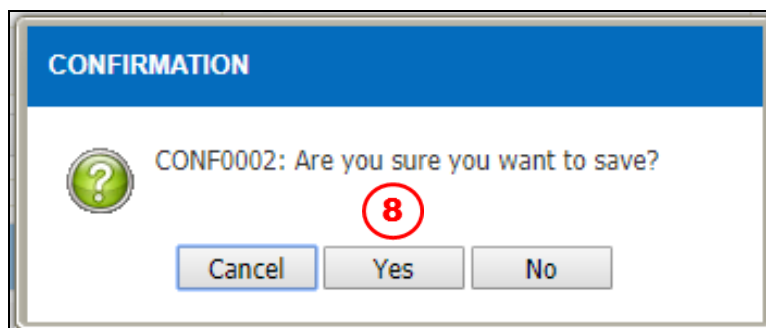


Figure 3.2.3.1-5 Confirmation Alert Message

STEP 9

Click on the  button to confirm record

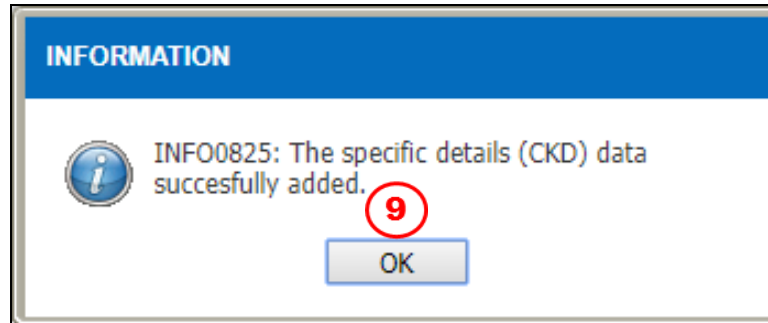


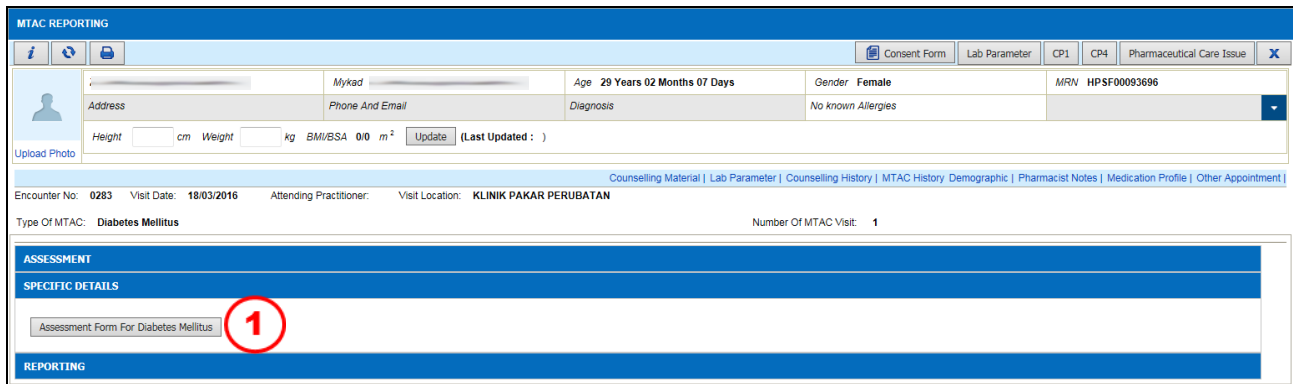
Figure 3.2.3.1-6 Information alert message

Note

For '**Reporting**' section, repeat steps from the **Note (page 28) to Step 32** as in 3.2.1 Create New MTAC Reporting with No Specific Details.

3.2.3.2 Diabetes Mellitus

This function allow user to record Specific Details for Diabetes Mellitus for MTAC patient



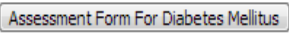
The screenshot shows the 'MTAC REPORTING' interface. At the top, there are tabs for 'Consent Form', 'Lab Parameter', 'CP1', 'CP4', and 'Pharmaceutical Care Issue'. Below these, a patient information form is visible with fields for Address, Mykad, Age (29 Years 02 Months 07 Days), Gender (Female), MRN (HPSF00093696), Height, Weight, BMI/BSA, and a 'Last Updated' timestamp. The 'Type Of MTAC' is set to 'Diabetes Mellitus'. The 'Number Of MTAC Visit' is 1. The 'ASSESSMENT' section is expanded, showing 'SPECIFIC DETAILS' with a button labeled 'Assessment Form For Diabetes Mellitus' circled in red with the number '1'. Below this is the 'REPORTING' section.

Figure 3.2.3.2-1 Specific Details - Diabetes Mellitus

Note

Repeat **STEP 1 to 16** as in 3.2.1 Create New MTAC Reporting with No Specific Details before performing MTAC Reporting - Specific Details Assessment Form for Diabetes Mellitus.

STEP 1

Click on the  button to view the specific details

STEP 2

Select the check box to answer the question(s)

Note

- The questions are not mandatory to be answered
- Click on the  button to print the assessment form
- 'Diabetes Mellitus Assessment' as shown in Figure 3.2.3.2-2 will be used during MTAC counselling

DIABETES MELLITUS ASSESSMENT

1. Kencing manis (Diabetes Mellitus) adalah penyakit?

☐ Paras gula dalam darah tinggi

☐ Kolesterol dalam darah tinggi

☐ Tekanan Darah Tinggi

☐ Tidak pasti

2. Fungsi gula (glukosa) di dalam badan adalah untuk?

☐ Menghasilkan tenaga

☐ Menghasilkan Oksigen

☐ Membina tisu badan

☐ Tidak pasti

3. Penyakit kencing manis disebabkan oleh factor berikut?

☐ Berat badan berlebihan

☐ Insulin dalam badan tidak mencukupi atau resistant

☐ Sejarah keluarga

☐ Virus atau jangkitan kuman

☐ Tidak pasti

4. Yang manakah antara berikut tanda-tanda paras gula di dalam darah tinggi (Hiperglisemia)?

☐ Mulut kering dan dahaga

☐ Turun berat badan

☐ Kerap kencing

☐ Kabur penglihatan

☐ Lapar

5. Yang manakah antara berikut tanda-tanda paras gula di dalam darah rendah (Hipoglisemia)?

☐ Tangan menggigil

☐ Berpeluh sejuk

☐ Kerap kencing

☐ Lapar

☐ Leth dan tidak bertenaga

6. Paras gula didalam darah rendah juga boleh berlaku sekiranya anda?

☐ Bersenam keterlaluan

☐ Tidak makan selepas mengambil ubat

☐ Mengambil ubat atau insulin berlebihan

☐ Makan berlebihan

7. Jika anda mengalami tanda-tanda hipoglisemia, apa yang patut dilakukan?

☐ Minum jus atau ambil gula-gula

☐ Periksa paras gula menggunakan glucometer

☐ Baring dan rehat

☐ Suntik insulin

☐ Bersenam

8. Apakah komplikasi (kesan buruk) penyakit kencing manis?

☐ Penglihatan kabur / katarak

☐ Penyakit buah pinggang

☐ Penyakit jantung

☐ Penyakit saraf? kebas-kebas

☐ Strok

☐ Mudah dapat jangkitan kuman

☐ Ulser

9. Apakah nama ubat kencing manis yang anda ambil?

☐ Metformin (Glucophage)

☐ Gliclazide (Diamicon)

☐ Gliclazide MR (Diamicon MR)

☐ Glibenclamide

☐ Rosiglitazone (Avandia)

☐ Acarbose

☐ Repaglinide (Novonorm)

☐ Insulin _____

☐ Tidak pasti

10. Bagaimana cara anda mengambil ubat-ubatan berkenaan?

☐ 30 minit sebelum makan

☐ Bersama makanan

☐ Sebaik selepas makan

☐ Sebaik sebelum makan

☐ Pada bila-bila masa

11. Adakah anda ada mengalami tanda-tanda berikut selepas mengambil ubat-ubatan kencing manis?

☐ Berat badan meningkat

☐ Kembang perut

☐ Loya / muntah

☐ Cirit-birit / sembelit

☐ Perut berasa pedih / tidak selesa

12. Sekiranya anda terlupa mengambil /makan ubat-ubatan kencing manis, apakah yang anda lakukan?

☐ Makan ubat sebaik teringat

☐ Lupakan saja dos yang tertinggal

☐ Gandakan dos ubat seterusnya

☐ Memeriksa paras gula dalam darah

13. Apakah sasaran? paras gula dalam darah yang perlu dicapai oleh setiap pesakit diabetes?

☐ HbA1c <7 %

☐ Plasma glukosa (puasa) 4.4 ? 6.1 mmol/L

☐ 2 jam selepas makan /rambang 4.4 ?8.0mmol/l

☐ Plasma Glukosa > 10.00mmol/l (puasa)

Sila jawab soalan berikut, sekiranya anda mengambil suntikan insulin?

14. Dimanakah anda menyimpan Stok insulin?

☐ Dalam peti sejuk beku (0u00EFu00BFu00BDC)

☐ Dalam peti sejuk (2 ?8 u00BAC)

☐ Atas peti sejuk

☐ Dalam almari

15. Dimanakah anda menyimpan Novopen /Humapen yang mengandungi insulin atau insulin yang sedang digunakan?

☐ Di dalam almari berkunci

☐ Di dalam peti sejuk

☐ Di dalam beg tangan

☐ Pada suhu bilik

16. Berapa kerap anda menukar jarum untuk suntikan insulin?

☐ Setiap kali digunakan

☐ Selepas 3 ?4 kali digunakan

☐ Sehingga jarum tumpul

☐ Sekali seminggu

Figure 3.2.3.2-2 Diabetes Mellitus Assessment

STEP 3

Click on the button to save the answered question(s)

CONFIRMATION

CONF0002: Are you sure you want to save?

Cancel
Yes
No

Figure 3.2.3.2-3 Confirmation Alert Message

STEP 4

Click on the  button to confirm save record

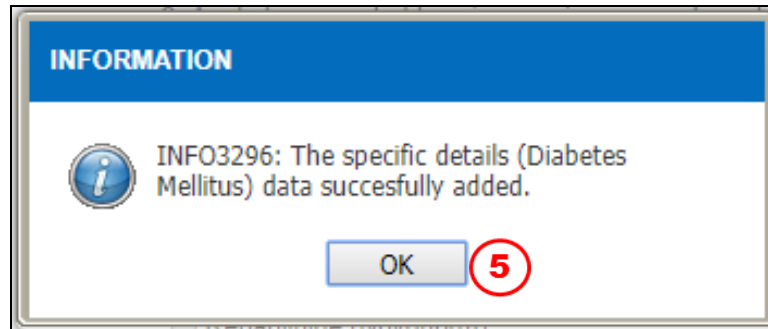


Figure 3.2.3.2-4 Information Alert Message

STEP 5

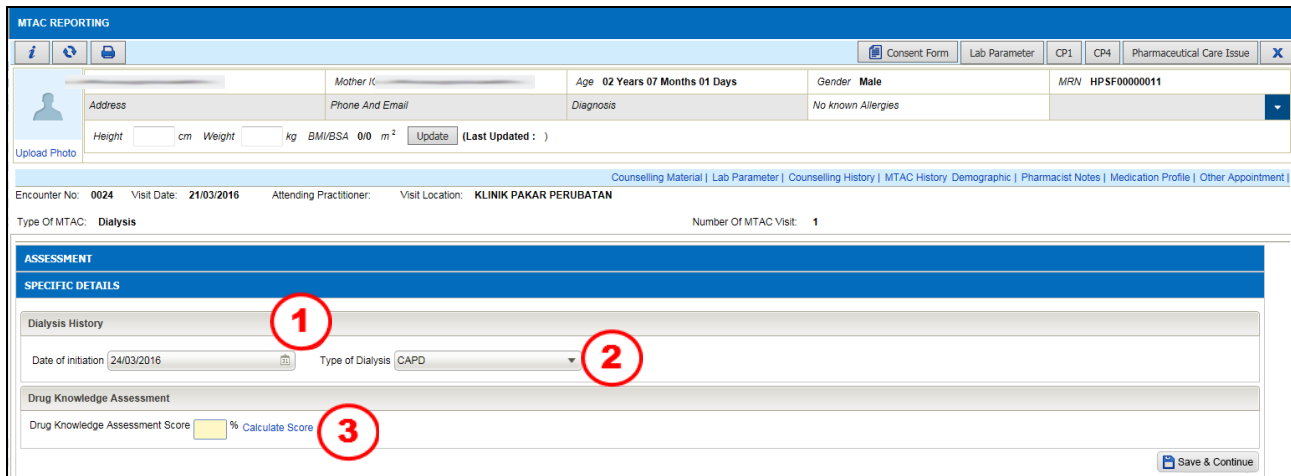
Click on the  button to confirm record

Note

For 'Reporting' section, repeat **Note (Page 28) to Step 32** as in 3.2.1 Create New MTAC Reporting with No Specific Details.

3.2.3.3 Dialysis

This function allows users to record Specific Details for Dialysis for MTAC patients



The screenshot shows the 'MTAC REPORTING' interface. At the top, there's a patient information section with fields for Address, Mother IC, Age (02 Years 07 Months 01 Days), Gender (Male), and MRN (HPSF00000011). Below this is a navigation bar with links like 'Consent Form', 'Lab Parameter', 'CP1', 'CP4', and 'Pharmaceutical Care Issue'. The main content area is titled 'ASSESSMENT' and contains a 'SPECIFIC DETAILS' section. This section has two sub-sections: 'Dialysis History' and 'Drug Knowledge Assessment'. In the 'Dialysis History' section, there's a 'Date of initiation' field with a calendar icon (highlighted with a red circle 1) and a 'Type of Dialysis' dropdown menu (highlighted with a red circle 2). The 'Drug Knowledge Assessment' section has a 'Drug Knowledge Assessment Score' field with a percentage sign and a 'Calculate Score' button (highlighted with a red circle 3). A 'Save & Continue' button is at the bottom right.

Figure 3.2.3.3-1 Specific Details - Dialysis

Note

Repeat **STEP 1 to 16** as in 3.2.1 Create New MTAC Reporting with No Specific Details before performing MTAC Reporting - Specific Details for Dialysis.

Dialysis History

STEP 1

Click on the  button to select **Date of initiation**

STEP 2

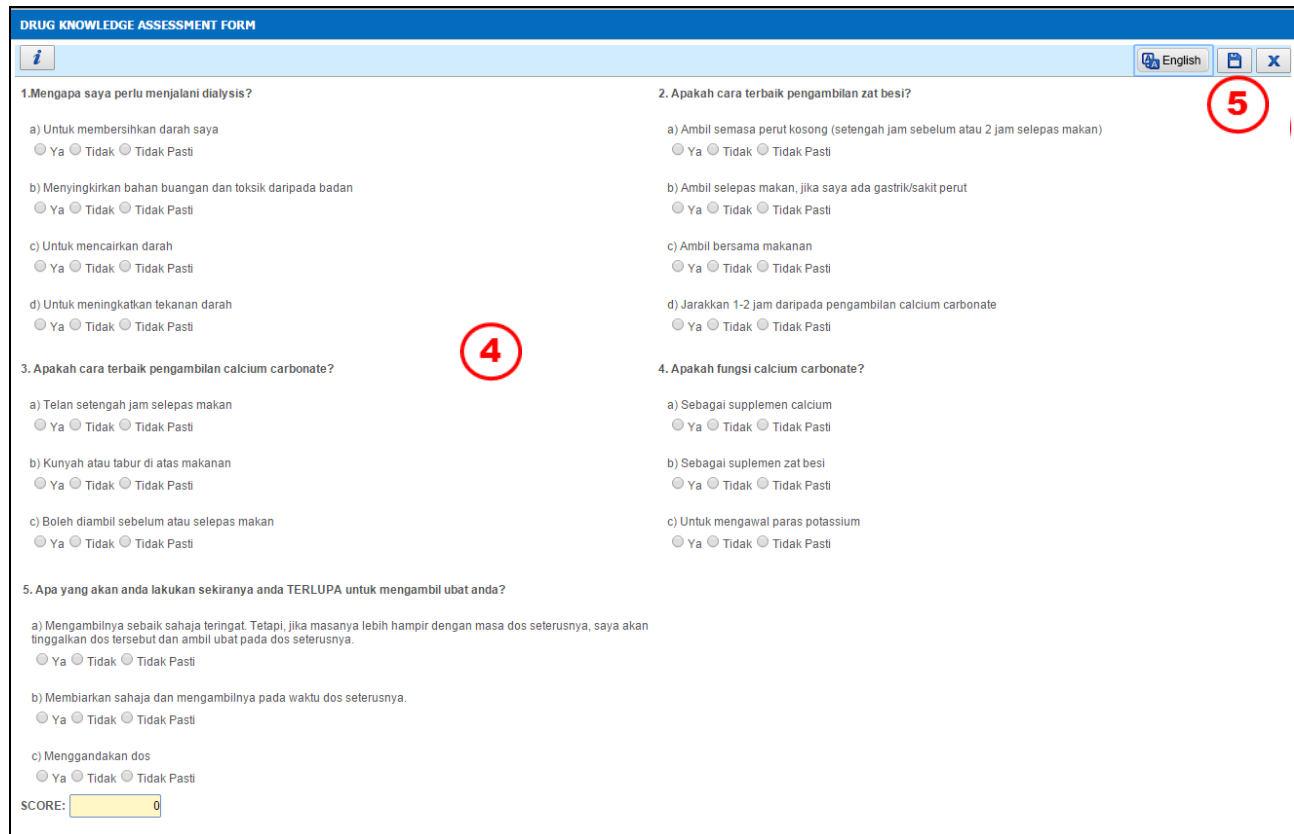
Select **Type of Dialysis** from the dropdown box

- APD
- CAPD
- HD

Drug Knowledge Assessment

STEP 3

Click on the [Calculate Score](#) and hyperlink '**Drug Knowledge Assessment Score** and '**Drug Knowledge Assessment Form**' window will be displayed as shown in Figure 3.2.3.3-2



DRUG KNOWLEDGE ASSESSMENT FORM

English

1. Mengapa saya perlu menjalani dialysis?

a) Untuk membersihkan darah saya
☐ Ya ☐ Tidak ☐ Tidak Pasti

b) Menyingkirkan bahan buangan dan toksik daripada badan
☐ Ya ☐ Tidak ☐ Tidak Pasti

c) Untuk mencairkan darah
☐ Ya ☐ Tidak ☐ Tidak Pasti

d) Untuk meningkatkan tekanan darah
☐ Ya ☐ Tidak ☐ Tidak Pasti

2. Apakah cara terbaik pengambilan zat besi?

a) Ambil semasa perut kosong (setengah jam sebelum atau 2 jam selepas makan)
☐ Ya ☐ Tidak ☐ Tidak Pasti

b) Ambil selepas makan, jika saya ada gastrik/sakit perut
☐ Ya ☐ Tidak ☐ Tidak Pasti

c) Ambil bersama makanan
☐ Ya ☐ Tidak ☐ Tidak Pasti

d) Jarakkan 1-2 jam daripada pengambilan calcium carbonate
☐ Ya ☐ Tidak ☐ Tidak Pasti

3. Apakah cara terbaik pengambilan calcium carbonate?

a) Telan setengah jam selepas makan
☐ Ya ☐ Tidak ☐ Tidak Pasti

b) Kunyah atau tabur di atas makanan
☐ Ya ☐ Tidak ☐ Tidak Pasti

c) Boleh diambil sebelum atau selepas makan
☐ Ya ☐ Tidak ☐ Tidak Pasti

4. Apakah fungsi calcium carbonate?

a) Sebagai suplemen calcium
☐ Ya ☐ Tidak ☐ Tidak Pasti

b) Sebagai suplemen zat besi
☐ Ya ☐ Tidak ☐ Tidak Pasti

c) Untuk mengawal paras potassium
☐ Ya ☐ Tidak ☐ Tidak Pasti

5. Apa yang akan anda lakukan sekiranya anda TERLUPA untuk mengambil ubat anda?

a) Mengambilnya sebaik sahaja teringat. Tetapi, jika masanya lebih hampir dengan masa dos seterusnya, saya akan tinggalkan dos tersebut dan ambil ubat pada dos seterusnya.
☐ Ya ☐ Tidak ☐ Tidak Pasti

b) Membiarkan sahaja dan mengambilnya pada waktu dos seterusnya.
☐ Ya ☐ Tidak ☐ Tidak Pasti

c) Menggandakan dos
☐ Ya ☐ Tidak ☐ Tidak Pasti

SCORE: 0

Figure 3.2.3.3-2 Specific Details - Dialysis

STEP 4

Answer the questions for **Drug Knowledge Assessment Form** by checking the radio button for below:

1. **Why do I have to do dialysis?**
2. **What is (are) the appropriate way(s) to take iron tablet?**
3. **What is (are) the appropriate way(s) to take calcium carbonate?**
4. **What is (are) function(s) of calcium carbonate?**
5. **What do you usually do when you missed a dose(s)?**

Note

- The questions are not mandatory to be answered.
- Click on the  button to view the questions in Malay language
- Score will be automatically calculated and automatically displayed

STEP 5

Click on the  button to save the answered questions(s)

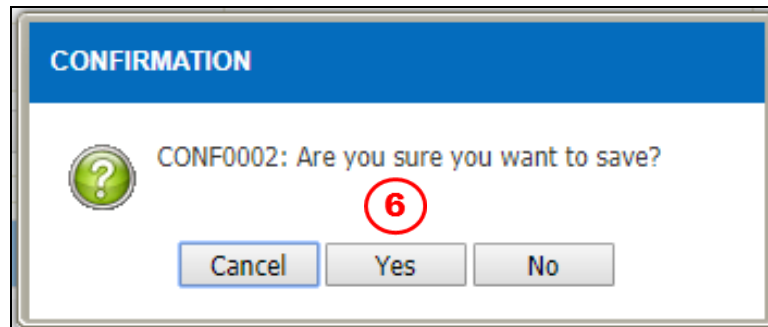
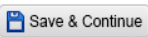


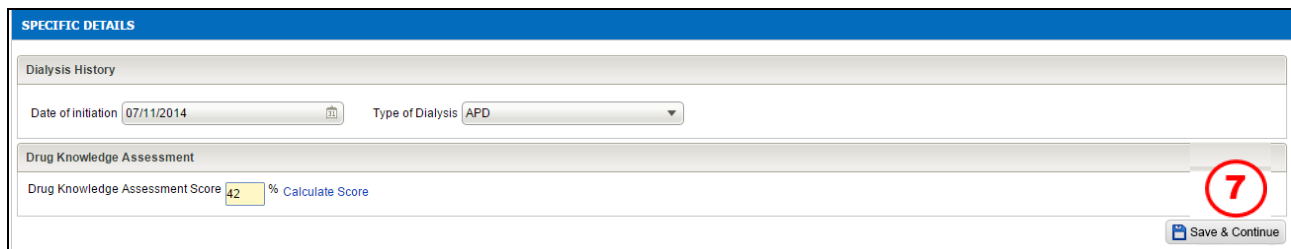
Figure 3.2.3.3-3 Confirmation Alert Message

STEP 6

Click on the  button to confirm save record

STEP 7

Click on the  button as shown in Figure 3.2.3.3-1 to save and continue with reporting section



A form titled "SPECIFIC DETAILS" with a blue header. It contains two sections: "Dialysis History" and "Drug Knowledge Assessment". The "Dialysis History" section has a "Date of Initiation" field with the value "07/11/2014" and a "Type of Dialysis" dropdown menu with the value "APD". The "Drug Knowledge Assessment" section has a "Drug Knowledge Assessment Score" field with the value "42" and a "Calculate Score" button. The "Save & Continue" button at the bottom right is circled in red with the number 7.

STEP 8

Click on the  button to confirm save record

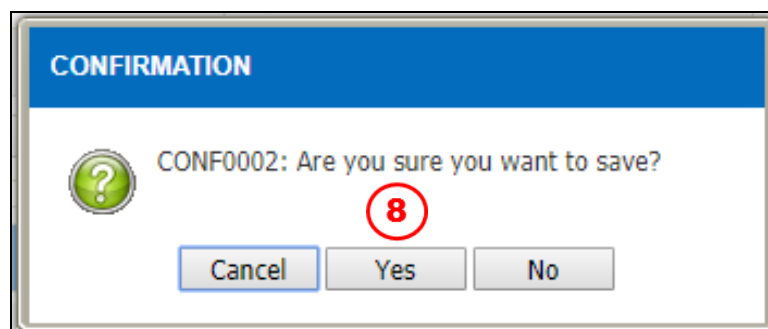


Figure 3.2.3.3-4 Confirmation Alert Message

STEP 9

Click on the  button to confirm record

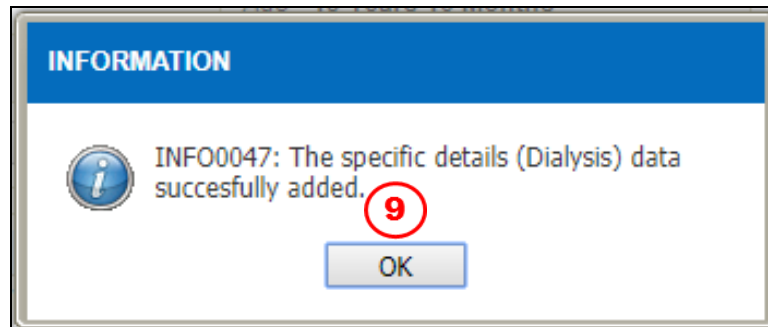


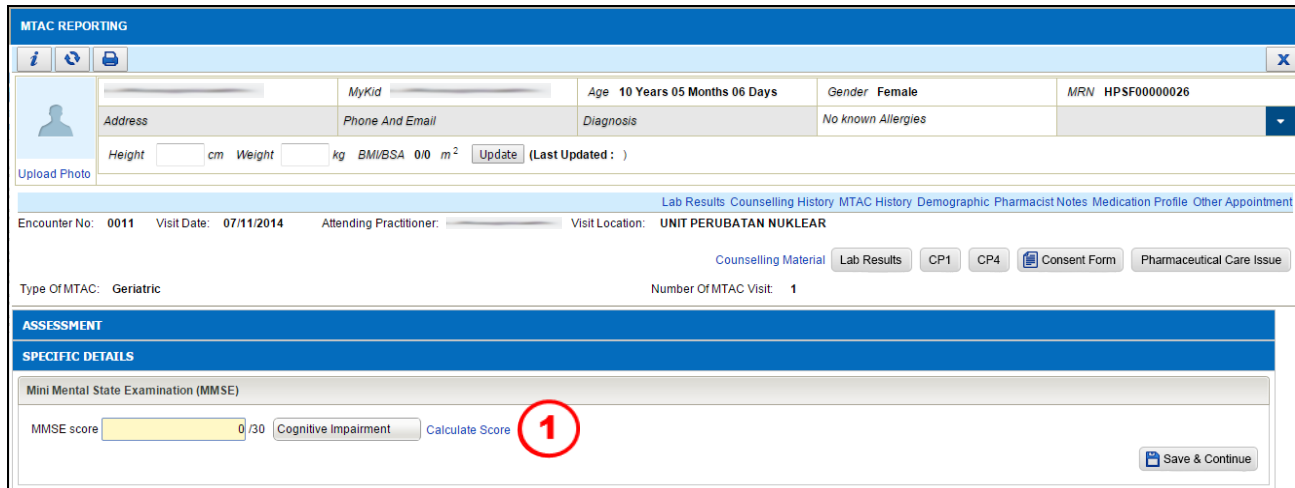
Figure 3.2.3.3-5 Information alert message

Note

For 'Reporting' section, repeat **Note (Page 28) to Step 32** as in 3.2.1 Create New MTAC Reporting with No Specific Details.

3.2.3.4 Geriatric

This function allows users to record Specific Details for Geriatric for MTAC patients



The screenshot shows the 'MTAC REPORTING' interface. At the top, there's a header with 'MTAC REPORTING' and a close button. Below this is a patient information section with fields for MyKid, Age (10 Years 05 Months 06 Days), Gender (Female), MRN (HPSF00000026), Address, Phone And Email, Diagnosis, and No known Allergies. There are also fields for Height, Weight, BMI/BSA, and an 'Update' button. Below this is a section for 'Encounter No: 0011', 'Visit Date: 07/11/2014', 'Attending Practitioner', and 'Visit Location: UNIT PERUBATAN NUKLEAR'. There are also buttons for 'Counselling Material', 'Lab Results', 'CP1', 'CP4', 'Consent Form', and 'Pharmaceutical Care Issue'. The 'Type Of MTAC: Geriatric' and 'Number Of MTAC Visit: 1' are also displayed. The 'ASSESSMENT' section is expanded, showing 'SPECIFIC DETAILS' for 'Mini Mental State Examination (MMSE)'. The 'MMSE score' is 0/30, and there is a 'Calculate Score' button circled with a red '1'. A 'Save & Continue' button is at the bottom right.

Figure 3.2.3.4-1 Specific Details - Geriatric

Note

Repeat **STEP 1 to 16** as in 3.2.1 Create New MTAC Reporting with No Specific Details before performing MTAC Reporting - Specific Details for Geriatric.

STEP 1

Click on the [Calculate Score](#) hyperlink for **MMSE Score** and 'Mini Mental State Examination (MMSE) – Orientasi Masa' window will be displayed as shown in Figure 3.2.3.4-2

STEP 2

Answer questions in **Mini Mental State Examination (MMSE)** by selecting radio button as shown in Figure 3.2.3.4-2

Note

- The questions are not mandatory to be answered.
- Score will be automatically calculated and automatically displayed.

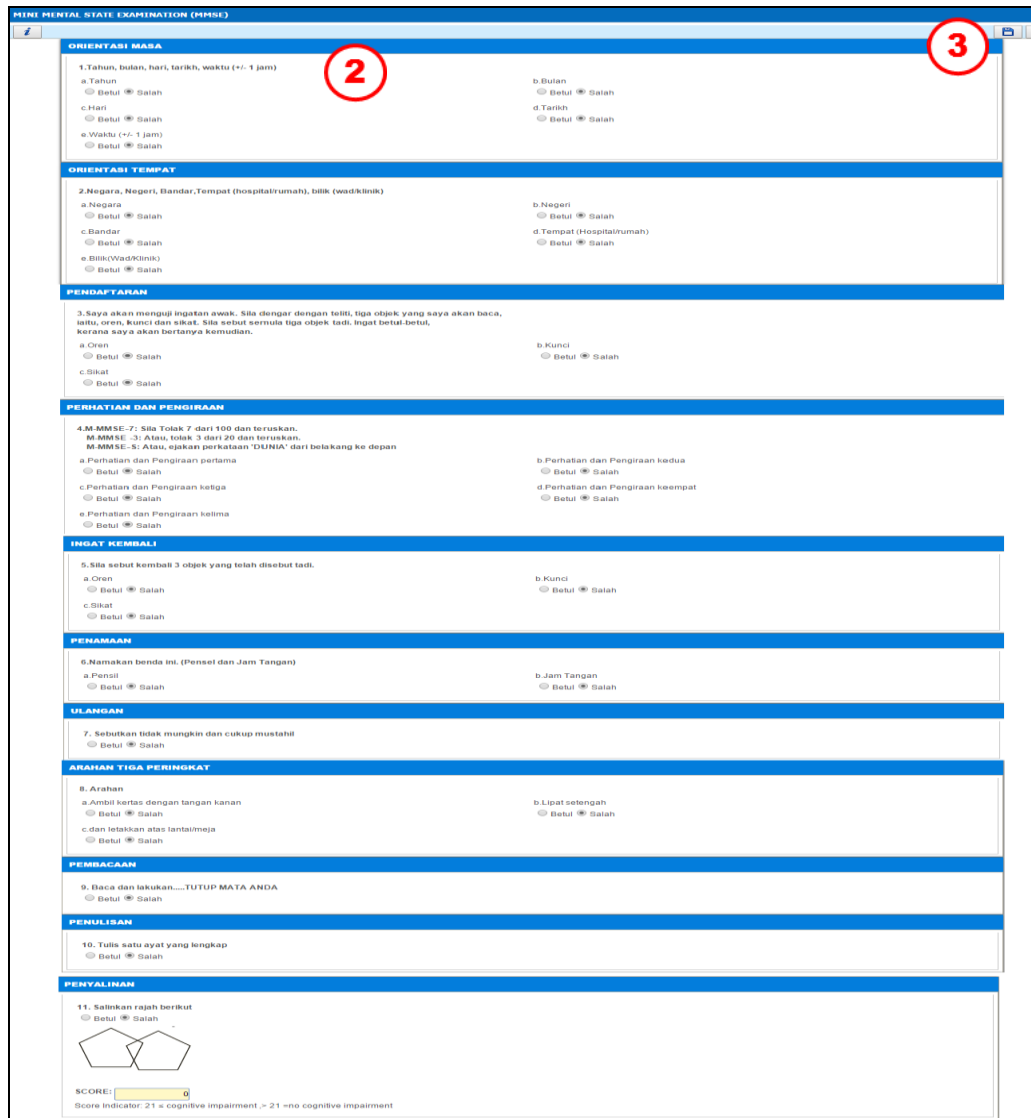


Figure 3.2.3.4-2 Mini Mental State Examination (MMSE)

STEP 3

Click on the  button to save the answered questions(s)

STEP 4

Click on the  button to confirm save record

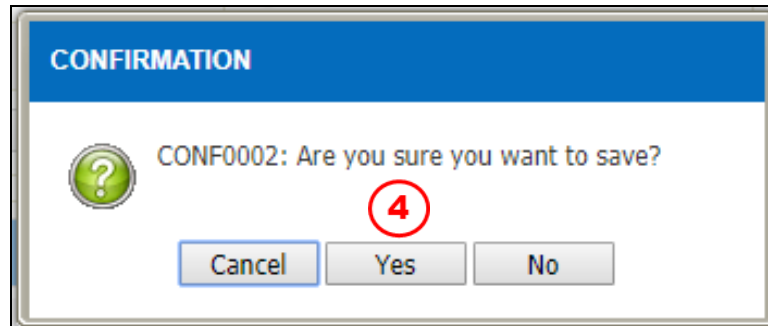
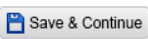


Figure 3.2.3.4-3 Confirmation Alert Message

STEP 5

Click on the  button as shown in Figure 3.2.3.4-1 to save and continue with reporting section

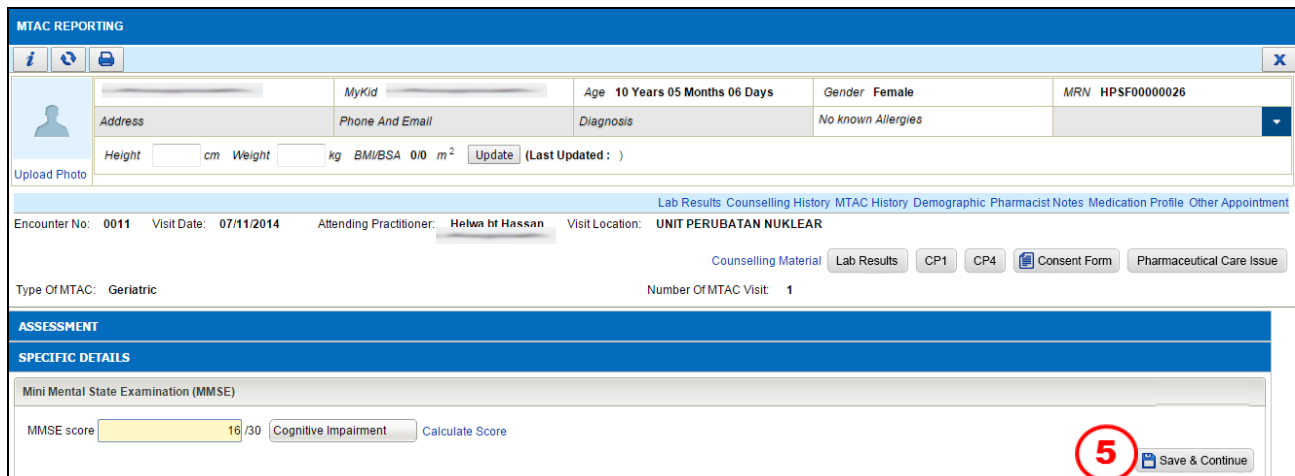


Figure 3.2.3.4-4 Specific Details - Geriatric

STEP 6

Click on the  button to confirm save record

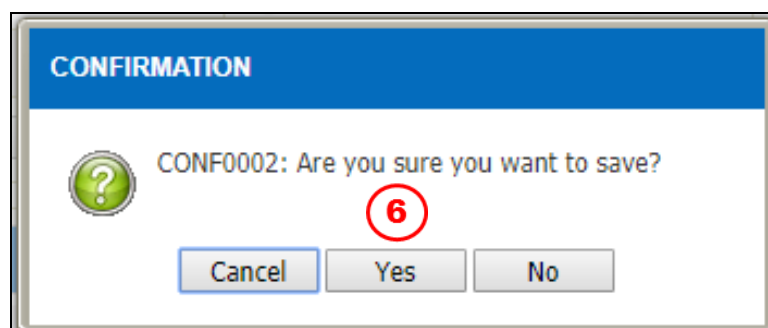
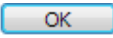


Figure 3.2.3.4-5 Confirmation Alert Message

STEP 7

Click on the  button to confirm record

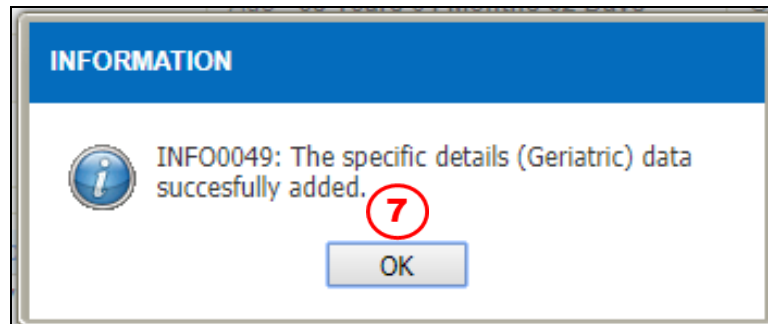


Figure 3.2.3.4-6 Information alert message

Note

For 'Reporting' section, repeat **Note (Page 28) to Step 32** as in 3.2.1 Create New MTAC Reporting with No Specific Details.

3.2.3.5 Heart Failure

This function allow user to record Specific Details for Heart Failure for MTAC patient.

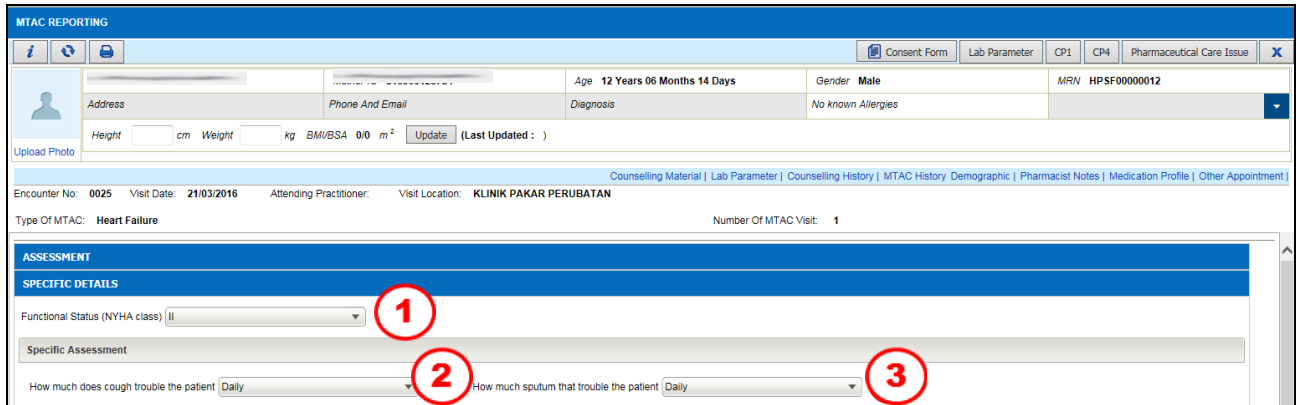


Figure 3.2.3.5 Specific Details - Heart Failure

Note

Repeat **STEP 1 to 16** as in 3.2.1 Create New MTAC Reporting with No Specific Details before performing MTAC Reporting - Specific Details for Heart Failure

STEP 1

Select **Functional Status (NYHA class)** from the drop down box

- I
- II
- III
- IV

Specific Assessment

STEP 2

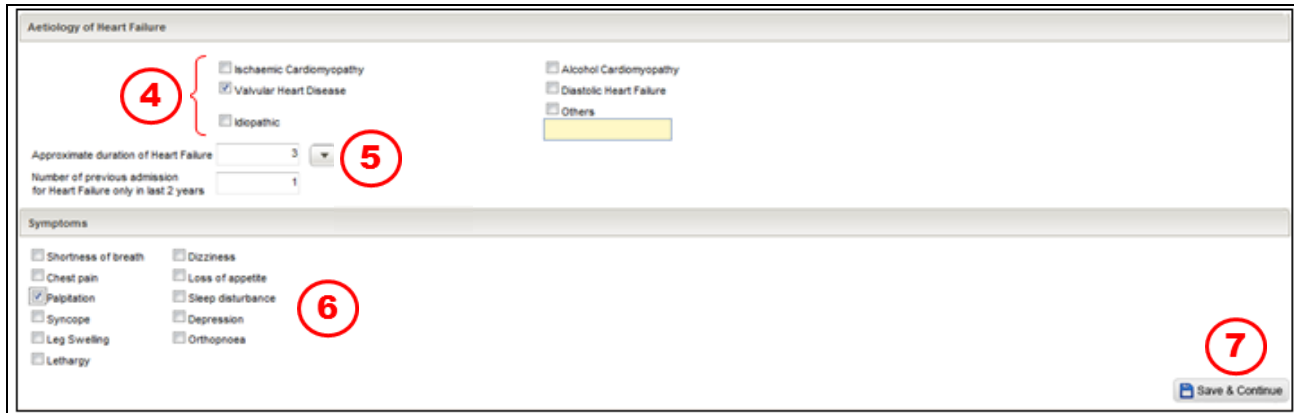
Select **How much does cough trouble the patient** from the drop down box

- Not Present
- Few Days/Month
- Few Days/Week
- Daily

STEP 3

Select **How much sputum that trouble the patient** from the drop down box

- Not Present
- Few Days/Month
- Few Days/Week
- Daily



The screenshot shows the 'Aetiology of Heart Failure' form. Callout 4 points to the 'Aetiology of Heart Failure' section, which includes checkboxes for Ischaemic Cardiomyopathy, Valvular Heart Disease, Idiopathic, Alcohol Cardiomyopathy, Diastolic Heart Failure, and Others. Callout 5 points to the 'Approximate duration of Heart Failure' dropdown menu, which is set to '3'. Callout 6 points to the 'Symptoms' section, which includes checkboxes for Shortness of breath, Chest pain, Palpitation, Syncope, Leg Swelling, Lethargy, Dizziness, Loss of appetite, Sleep disturbance, Depression, and Orthopnoea. Callout 7 points to the 'Save & Continue' button at the bottom right.

Figure 3.2.3.5-2 Specific details - Heart Failure

STEP 4

Select the check box for **Aetiology of Heart Failure** as below:

- Ischaemic Cardiomyopathy
- Valvular Heart Disease
- Idiopathic
- Alcohol Cardiomyopathy
- Diastolic Hear Failure
- Others

Note

Blank fields will be enabled only if user selects 'Others' from the check box

STEP 5

Enter **Approximate duration of Heart Failure** and select from the drop down box

- Months
- Years

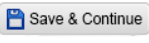
STEP 6

Select the check box for **Symptoms** as below:

- Shortness of breath
- Chest pain
- Palpitation
- Syncope
- Leg Swelling
- Lethargy
- Dizziness
- Loss of appetite

- Sleep disturbance
- Depression
- Orthopnea

STEP 7

Click on the  button as shown in Figure 3.2.3.5-1 to save and continue with reporting section

STEP 8

Click on the  button to confirm save record

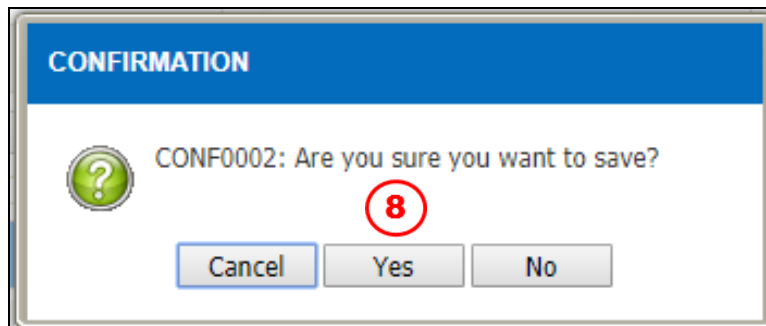


Figure 3.2.3.5-3 Confirmation Alert Message

STEP 9

Click on the  button to confirm record

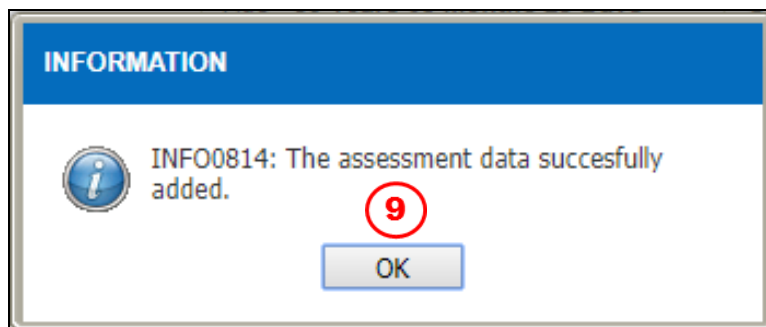


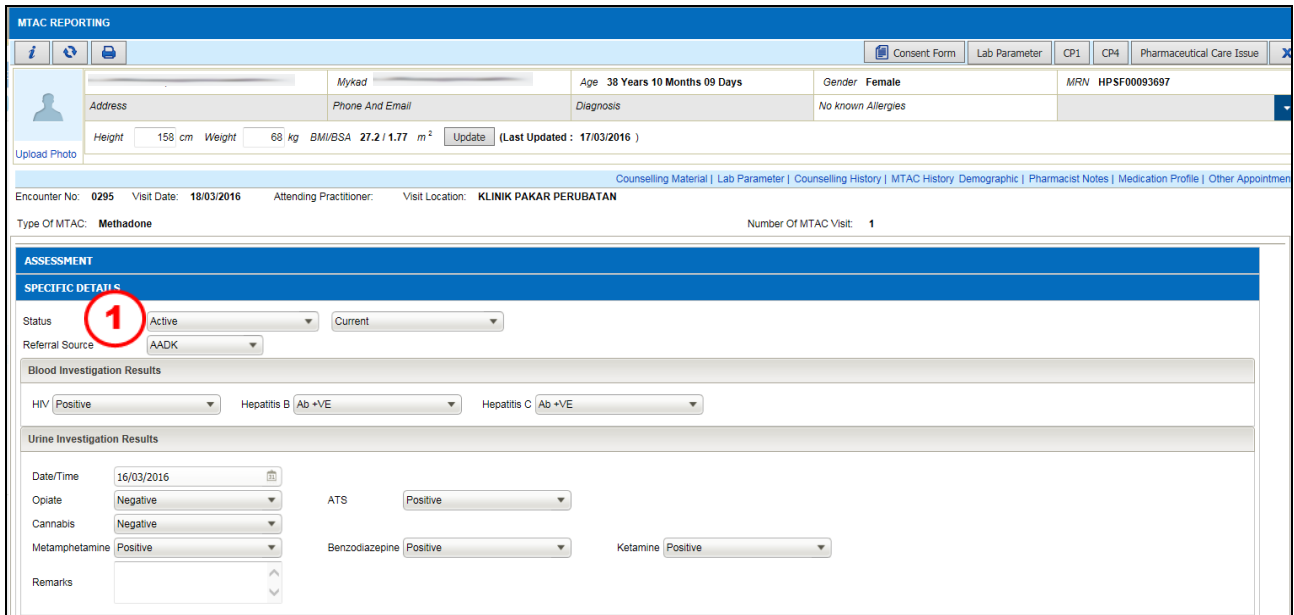
Figure 3.2.3.5-4 Information Alert Message

Note

For 'Reporting' section, repeat **Note (Page 28) to Step 32** as in 3.2.1 Create New MTAC Reporting with No Specific Details

3.2.3.6 Methadone

This function allow user to record Specific Details for Methadone for MTAC patient



The screenshot displays the 'MTAC REPORTING' interface. At the top, there are tabs for 'Consent Form', 'Lab Parameter', 'CP1', 'CP4', and 'Pharmaceutical Care Issue'. Below these, patient information is shown: Mykad, Age (38 Years 10 Months 09 Days), Gender (Female), MRN (HPSF00093697), Address, Phone And Email, Diagnosis, and No known Allergies. Physical attributes include Height (158 cm), Weight (68 kg), BMI/BSA (27.2 / 1.77 m²), and an 'Update' button. The 'Type Of MTAC' is set to 'Methadone' and the 'Number Of MTAC Visit' is '1'. The 'ASSESSMENT' section is expanded, showing 'SPECIFIC DETAILS'. A red circle with the number '1' highlights the 'Status' dropdown menu, which is currently set to 'Active'. Other fields include 'Referral Source' (AADK), 'Blood Investigation Results' (HIV Positive, Hepatitis B Ab +VE, Hepatitis C Ab +VE), and 'Urine Investigation Results' (Date/Time: 16/03/2016, Opiate Negative, Cannabis Negative, Metamphetamine Positive, ATS Positive, Benzodiazepine Positive, Ketamine Positive). A 'Remarks' field is also present.

Figure 3.2.3.6-1 Specific Details - Methadone

Note

Repeat **STEP 1 to 16** as in 3.2.1 Create New MTAC Reporting with No Specific Details before performing MTAC Reporting - Specific Details for Methadone.

STEP 1

Select **Status** from the drop down box

- Active
- Inactive
- Current
- Re-entry
- Transfer

Select **Referral Source** from the drop down box

- AADK
- NGO
- NSEP
- Others
- Walk In

Note

Blank field will be enabled if user select **Other** from the **Referral Source** drop down box.

Blood Investigation Results

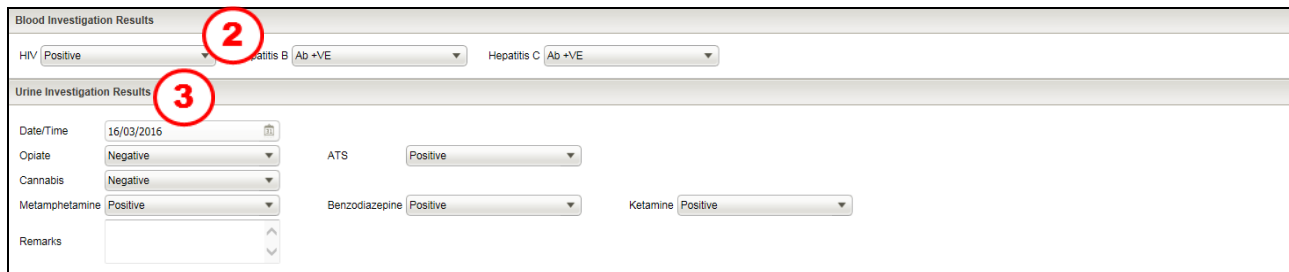


Figure 3.2.3.6-2 Specific Details – Methadone

STEP 2

Select **HIV** from the drop down box

- Negative
- Positive
- Unknown

Select **Hepatitis B** from the drop down box:

- Ab +VE
- Ab –VE
- Ag +VE
- Non-Reactive
- Unknown

Select **Hepatitis C** from the drop down box:

- Ab +VE
- Ab –VE
- Non-Reactive
- Unknown

Urine Investigation Results

STEP 3

Click on the  button to select *sample Date/Time*.

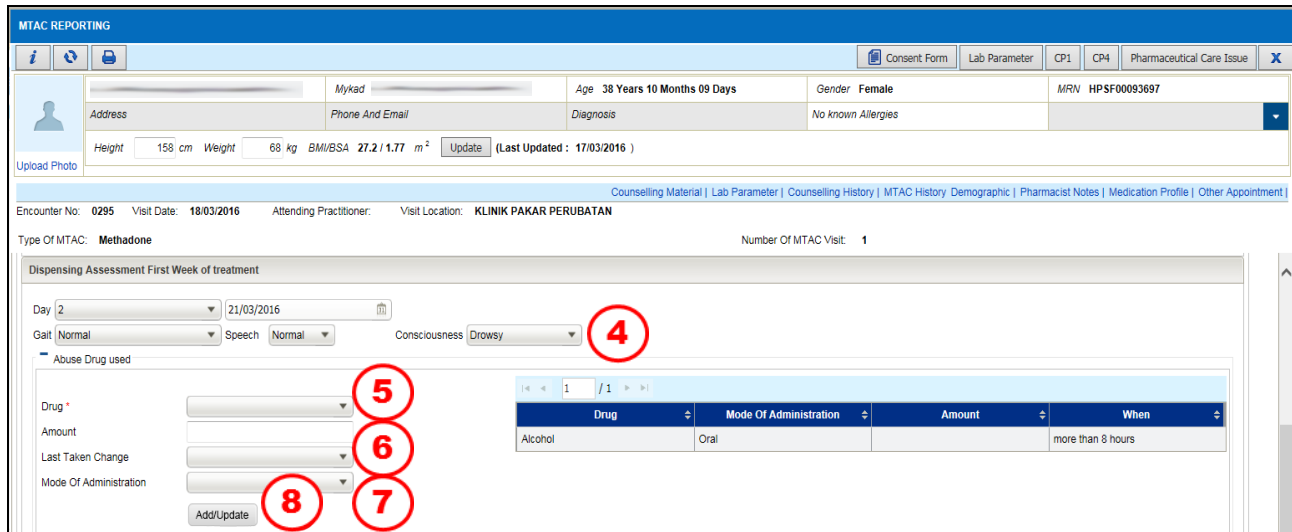
Select **Opiate**, **ATS**, **Cannabis**, **Methamphetamine**, **Benzodiazepine**, and **Ketamine** from the drop down box

- Negative
- Positive

Note

Enter **Remarks** if necessary

Dispensing Assessment First Week of Treatment



MTAC REPORTING

Consent Form | Lab Parameter | CP1 | CP4 | Pharmaceutical Care Issue

Mykad: [Blank] Age: 38 Years 10 Months 09 Days Gender: Female MRN: HPSF00093697

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

Height: 158 cm Weight: 68 kg BMI/BSA: 27.2 / 1.77 m² Update (Last Updated : 17/03/2016)

Encounter No: 0295 Visit Date: 18/03/2016 Attending Practitioner: [Blank] Visit Location: KLINIK PAKAR PERUBATAN

Type Of MTAC: Methadone Number Of MTAC Visit: 1

Dispensing Assessment First Week of treatment

Day: 2 21/03/2016

Gait: Normal Speech: Normal Consciousness: Drowsy

Abuse Drug used

Drug: [Blank] Amount: [Blank] Last Taken Change: [Blank] Mode Of Administration: [Blank]

Add/Update

Drug	Mode Of Administration	Amount	When
Alcohol	Oral		more than 8 hours

Figure 3.2.3.6-3 Specific Details – Methadone

STEP 4

Select **Day** from the drop down box and click on the  button to select date

Select **Gait** from the drop down box

- Impaired
- Normal

Select **Speech** from the drop down box

- Normal
- Pressured
- Slurred

Select **Consciousness** from the drop down box

- Agitated
- Alert
- Drowsy

Abuse Drug used

STEP 5

Select **Drug** from the drop down box

- ATS
- Alcohol
- Benzodiazepine
- Cannabis
- Mitragynine (Air Ketum)
- Opiate
- Others

Note

Enter **Amount** of drug

STEP 6

Select **Last Taken Change** from the drop down box

- Past 1 hour
- Past 2 hours
- Past 3 hours
- Past 4 hours
- Past 5 hours
- Past 6 hours
- Past 7 hours
- Past 8 hours
- More than 8 hours

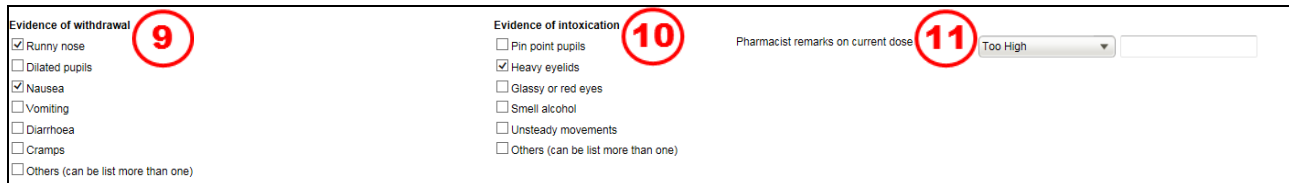
STEP 7

Select **Mode of Administration** from the drop down button

- Oral
- Others (please specify)
- Inhale/Snort/Smoke
- Injection

STEP 8

Click on the  button to add drug information on the list.



Evidence of withdrawal 9 ☒ Runny nose ☐ Dilated pupils ☒ Nausea ☐ Vomiting ☐ Diarrhoea ☐ Cramps ☐ Others (can be list more than one)	Evidence of intoxication 10 ☐ Pin point pupils ☒ Heavy eyelids ☐ Glassy or red eyes ☐ Smell alcohol ☐ Unsteady movements ☐ Others (can be list more than one)	Pharmacist remarks on current dose 11 Too High
--	--	---

Figure 3.2.3.6-4 Specific Details – Methadone

STEP 9

Select **Evidence of withdrawal** from the drop down box

- Runny nose
- Dilated pupils
- Nausea and/or vomiting
- Diarrhoea
- Cramps
- Others

STEP 10

Select **Evidence of intoxication** from the drop down box

- Pin point pupils
- Heavy eyelids
- Glassy or red eyes
- Smell alcohol
- Unsteady movements
- Others

Note

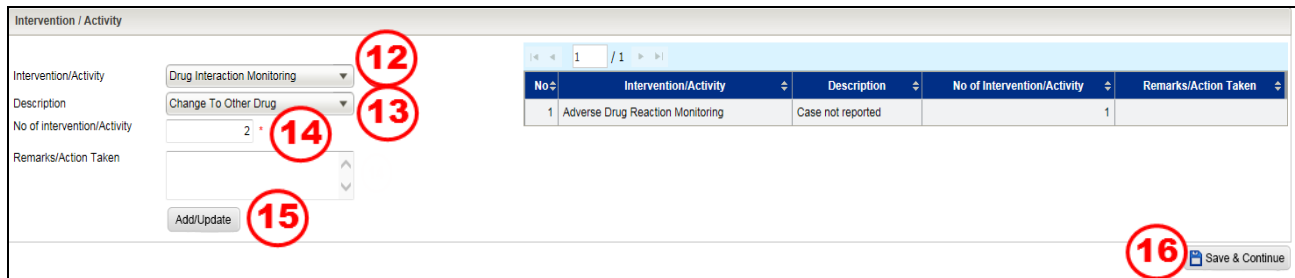
Blank fields will be enabled if user selects 'Other' from the drop down box of Evidence of withdrawal and Evidence of intoxication.

STEP 11

Select **Pharmacist remarks on current dose** from the drop down box

- Sufficient
- Too High
- Too Low

Intervention / Activity



The screenshot shows the 'Intervention / Activity' form. On the left, there are dropdown menus for 'Intervention/Activity' (labeled 12) and 'Description' (labeled 13). Below these is a text input field for 'No of Intervention/Activity' (labeled 14) containing the number '2'. At the bottom left is an 'Add/Update' button (labeled 15). On the right, there is a table with columns: 'No', 'Intervention/Activity', 'Description', 'No of Intervention/Activity', and 'Remarks/Action Taken'. The table contains one row with '1', 'Adverse Drug Reaction Monitoring', 'Case not reported', and '1'. At the bottom right is a 'Save & Continue' button (labeled 16).

Figure 3.2.3.6-5 Specific Details – Methadone

STEP 12

Select **Intervention / Activity** from the drop down box

- Adverse Drug Reaction Monitoring
- Drug Information
- Drug Interaction Monitoring
- Methadone Dose Modification
- Type of side affect

STEP 13

Select **Description** from the drop down box

STEP 14

Enter **No of Intervention/Activity**

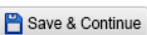
Note

Description will be according to the Intervention/Activity selected from the drop down box

STEP 15

Click on the  button to add drug information on the list

STEP 16

Click on the  button to save and continue with reporting record

STEP 17

Click on the  button to confirm save order

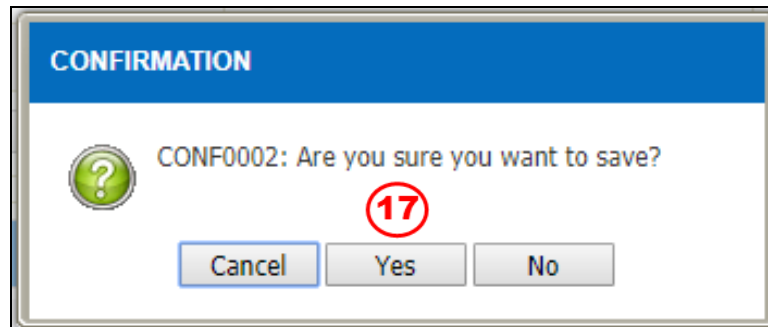


Figure 3.2.3.6-6 Confirmation Alert Message

STEP 18

Click on the  button to add record

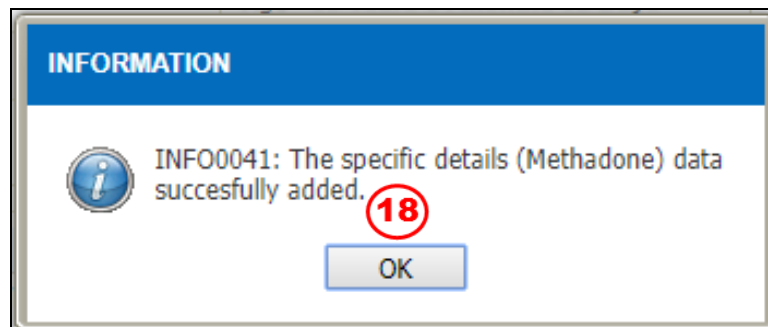


Figure 3.2.3.6-7 Information Alert Message

Note

For 'Reporting' section, repeat **Note (Page 28) to Step 32** as in 3.2.1 Create New MTAC Reporting with No Specific Details.

3.2.3.7 Renal Transplant

This function allow user to record Specific Details for Renal Transplant for MTAC patient.

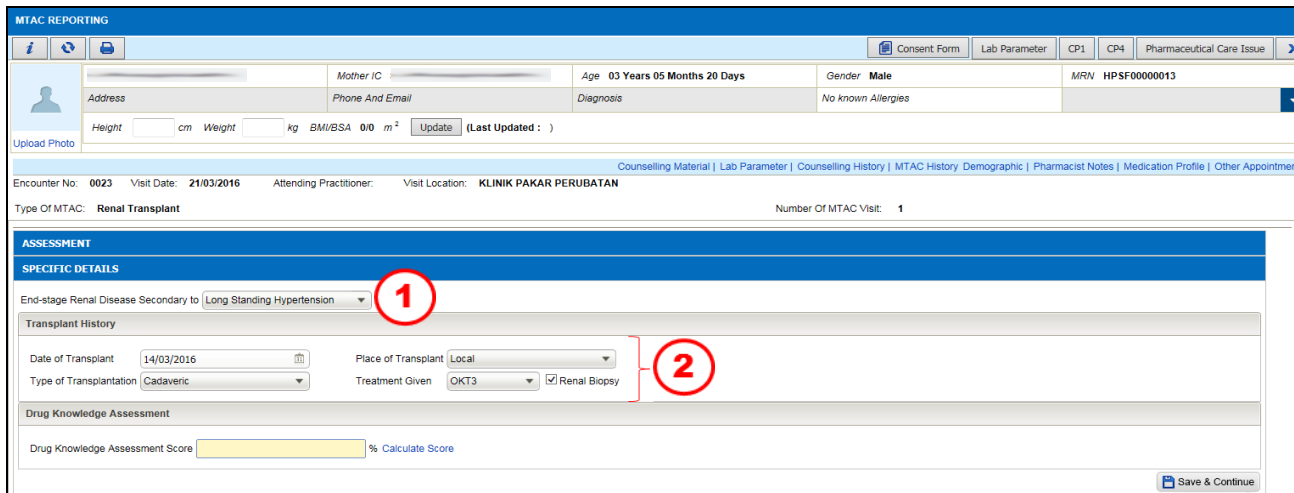


Figure 3.2.3.7-1 Specific Details - Renal Transplant

Note

Repeat **STEP 1 to 16** as in 3.2.1 Create New MTAC Reporting with No Specific Details before performing MTAC Reporting - Specific Details for Renal Transplant.

STEP 1

Select **End-stage Renal Disease Secondary to** from the drop down box

- Long Standing Hypertension
- Diabetic Nephropathy
- Lupus Nephritis
- Unknown

Transplant History

STEP 2

Click on the  button to select **Date of Transplant**

Select **Type of Transplantation** from the drop down box

- Cadaveric
- Living Non Related
- Living Related

Select **Place of Transplant** from the drop down box

- Local
- Overseas

Select **Treatment Given** from the drop down box

- Simulect
- OKT3
- Anti-Thymocyte

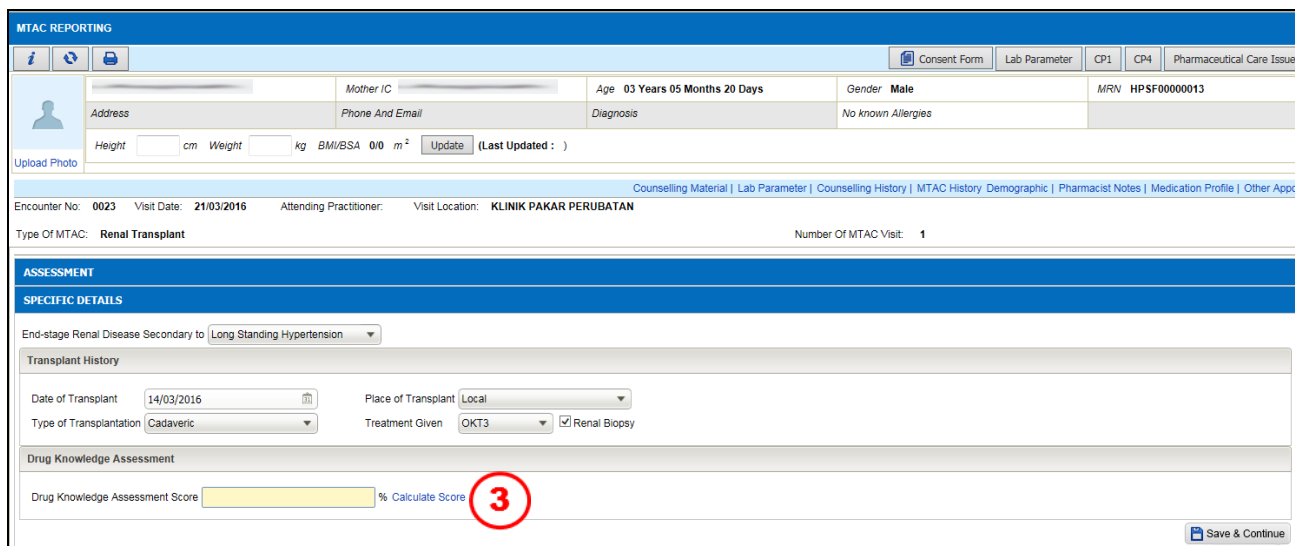
Note

User can check on the **Renal Biopsy** check box.

Drug Knowledge Assessment

STEP 3

Click on the [Calculate Score](#) hyperlink for **Drug Knowledge Assessment Score** and the 'Review of Patient's Understanding (Medication) DFIT' window will be displayed as shown in Figure 3.2.3.7-2



The screenshot displays the 'MTAC REPORTING' interface. The top section contains patient information: Address, Mother IC, Age (03 Years 05 Months 20 Days), Gender (Male), MRN (HPSF00000013), Height, Weight, BMI/BSA, and Diagnosis (No known Allergies). Below this is the 'ASSESSMENT' section, specifically the 'SPECIFIC DETAILS' for a 'Renal Transplant'. It includes fields for 'End-stage Renal Disease Secondary to' (Long Standing Hypertension), 'Transplant History' (Date of Transplant: 14/03/2016, Place of Transplant: Local, Type of Transplantation: Cadaveric, Treatment Given: OKT3, and a checked 'Renal Biopsy' box). The 'Drug Knowledge Assessment' section shows a 'Drug Knowledge Assessment Score' field and a '% Calculate Score' button, which is circled in red with the number 3. A 'Save & Continue' button is at the bottom right.

Figure 3.2.3.7-2 Specific Details - Renal Transplant

STEP 4

Answer all questionnaire in the **Review of Patient's Understanding** window by selecting the radio button to answer every questions

Note

- Click on the  button to view in Malay language.
- Score will be automatically calculated and automatically displayed

STEP 5

Click on the  button to save record



Malay

1. What does immunosuppressant medicines means?

a) Medicines that lowers the body immune system

☐ Yes
☐ No
☐ Not Sure

b) Medicines that prevent rejection of the transplanted organ

☐ Yes
☐ No
☐ Not Sure

c) Medicines that promotes graft cell production

☐ Yes
☐ No
☐ Not Sure

3. How do I take immunosuppressant?

a) After meal

☐ Yes
☐ No
☐ Not Sure

b) Before meal

☐ Yes
☐ No
☐ Not Sure

c) Chew/Swallow with food

☐ Yes
☐ No
☐ Not Sure

5. Why do you have to do regular blood tests while on immunosuppressant treatment?

a) To check the presence of infections

☐ Yes
☐ No
☐ Not Sure

b) To check the function of the transplanted organ

☐ Yes
☐ No
☐ Not Sure

c) To check the concentration of immunosuppressant in the blood

☐ Yes
☐ No
☐ Not Sure

7. What to do if you have any side effects while taking immunosuppressant?

a) Stop taking without notify the doctor/pharmacist

☐ Yes
☐ No
☐ Not Sure

b) Stop take it and consult doctor immediately

☐ Yes
☐ No
☐ Not Sure

c) Take another medication to resolve it without notify the doctor/pharmacist

☐ Yes
☐ No
☐ Not Sure

2. Why do you have to take immunosuppressant?

a) To protect myself from infections

☐ Yes
☐ No
☐ Not Sure

b) To prevent rejection of my newly tansplanted organ

☐ Yes
☐ No
☐ Not Sure

c) To prolong the life of my newly transplanted organ

☐ Yes
☐ No
☐ Not Sure

4. What is the correct way to keep your immunosuppressant?

a) Keep in fridge

☐ Yes
☐ No
☐ Not Sure

b) Keep in a car for a long time

☐ Yes
☐ No
☐ Not Sure

c) Keep in an airtight container, at a dry place away from direct sunlight

☐ Yes
☐ No
☐ Not Sure

6. What do you usually do when you MISSED a dose(s) of your immunosuppressant?

a) I will take it as soon as I remember. But, if its time for the next dose, I will omit the missed dose and continue with next scheduled dose

☐ Yes
☐ No
☐ Not Sure

b) Leave it out and continue with the next scheduled dose

☐ Yes
☐ No
☐ Not Sure

c) Accumulate the missed dose together with the next dose

☐ Yes
☐ No
☐ Not Sure

8. What to do if you want to take supplement and traditional medication while taking immunosuppressant?

a) Notify doctor/pharmacist before taking it

☐ Yes
☐ No
☐ Not Sure

b) Take it together with immunosuppressant without notify doctor /pharmacist

☐ Yes
☐ No
☐ Not Sure

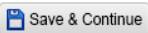
c) Take supplement and stop immunosuppressant

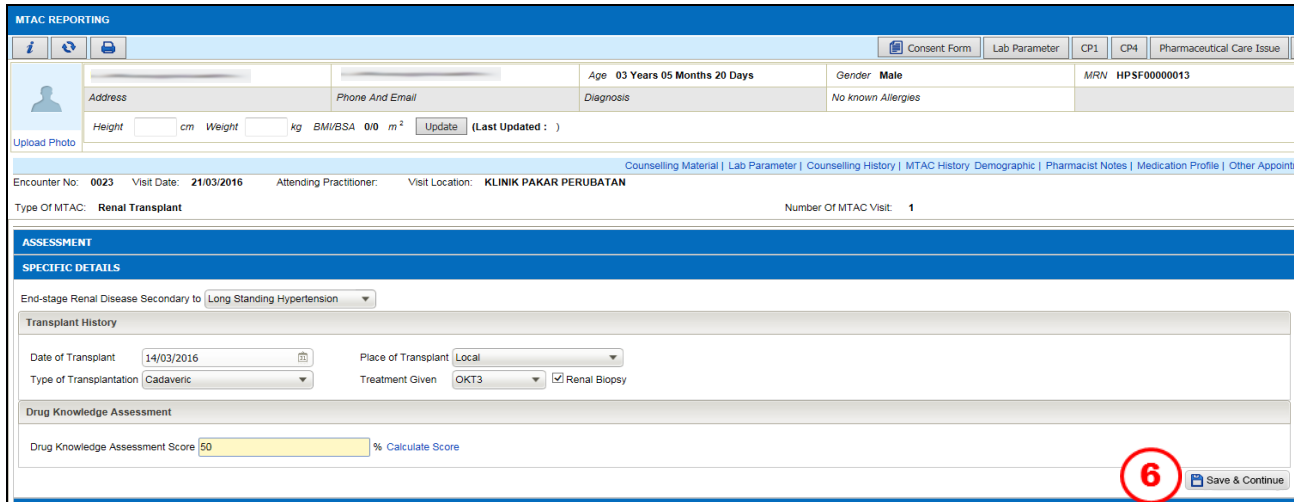
☐ Yes
☐ No
☐ Not Sure

SCORE:

Figure 3.2.3.7-3 Drug Knowledge Assessment

STEP 6

Click on the  button as shown in Figure 3.2.3.7-4 to save and continue with reporting section



MTAC REPORTING

Consent Form | Lab Parameter | CP1 | CP4 | Pharmaceutical Care Issue

Age: 03 Years 05 Months 20 Days | Gender: Male | MRN: HPSF00000013

Address | Phone And Email | Diagnosis | No known Allergies

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

Encounter No: 0023 | Visit Date: 21/03/2016 | Attending Practitioner: | Visit Location: KLINIK PAKAR PERUBATAN

Type Of MTAC: Renal Transplant | Number Of MTAC Visit: 1

ASSESSMENT

SPECIFIC DETAILS

End-stage Renal Disease Secondary to: Long Standing Hypertension

Transplant History

Date of Transplant: 14/03/2016 | Place of Transplant: Local

Type of Transplantation: Cadaveric | Treatment Given: OKT3 | ☒ Renal Biopsy

Drug Knowledge Assessment

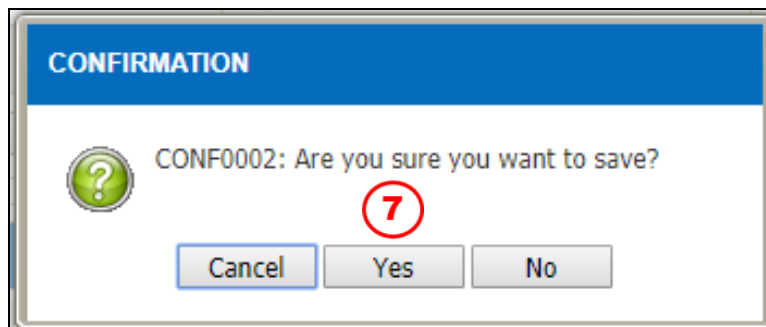
Drug Knowledge Assessment Score: 50 % Calculate Score

6 Save & Continue

Figure 3.2.3.7-4 Specific Details - Renal Transplant

STEP 7

Click on the **Yes** button to confirm save record



CONFIRMATION

CONF0002: Are you sure you want to save?

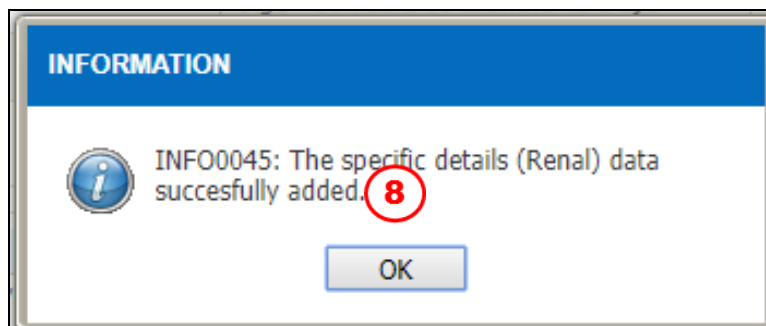
7

Cancel Yes No

Figure 3.2.3.7-5 Confirmation Alert Message

STEP 8

Click on the **OK** button to confirm record



INFORMATION

INFO0045: The specific details (Renal) data successfully added.

8

OK

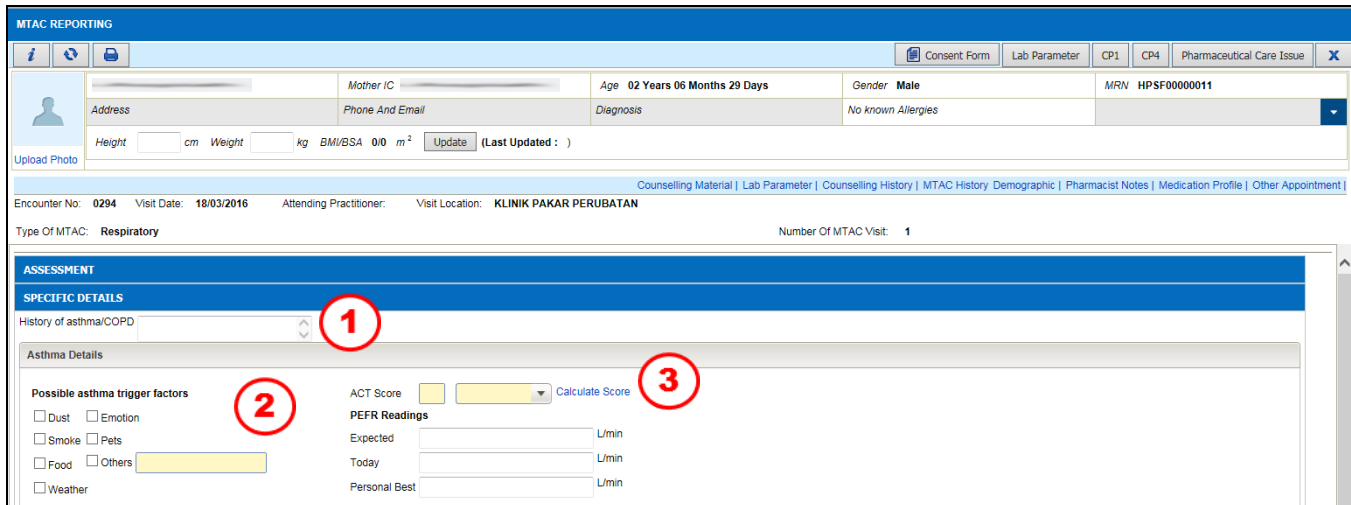
Figure 3.2.3.7-6 Information Alert Message

Note

For 'Reporting' section, repeat **Note (Page 28) to Step 32** as in 3.2.1 Create New MTAC Reporting with No Specific Details.

3.2.3.8 Respiratory

This function allow user to record Specific Details for Respiratory for MTAC patient



The screenshot displays the 'MTAC REPORTING' interface. At the top, there's a patient information header with fields for Mother IC, Age (02 Years 06 Months 29 Days), Gender (Male), and MRN (HPSF00000011). Below this is a navigation bar with links like 'Consent Form', 'Lab Parameter', 'CP1', 'CP4', and 'Pharmaceutical Care Issue'. The main content area is titled 'ASSESSMENT' and contains a 'SPECIFIC DETAILS' section. Within this section, there's a 'History of asthma/COPD' dropdown menu (1). Below it is the 'Asthma Details' section (2), which includes a list of 'Possible asthma trigger factors' (Dust, Emotion, Smoke, Pets, Food, Others, Weather) and a 'Calculate Score' button (3). The 'Calculate Score' button is highlighted with a red circle.

Figure 3.2.3.8-1 Specific Details – Asthma Details

Note

Repeat **STEP 1 to 16** as in 3.2.1 Create New MTAC Reporting with No Specific Details before performing MTAC Reporting - Specific Details for Respiratory

STEP 1

Enter **History of asthma/COPD**

Asthma Details

STEP 2

Select **Possible asthma trigger factors** from the check box. User is allowed to select more than one (1)

- Dust
- Smoke
- Food
- Weather
- Emotion
- Pets
- Others

Note

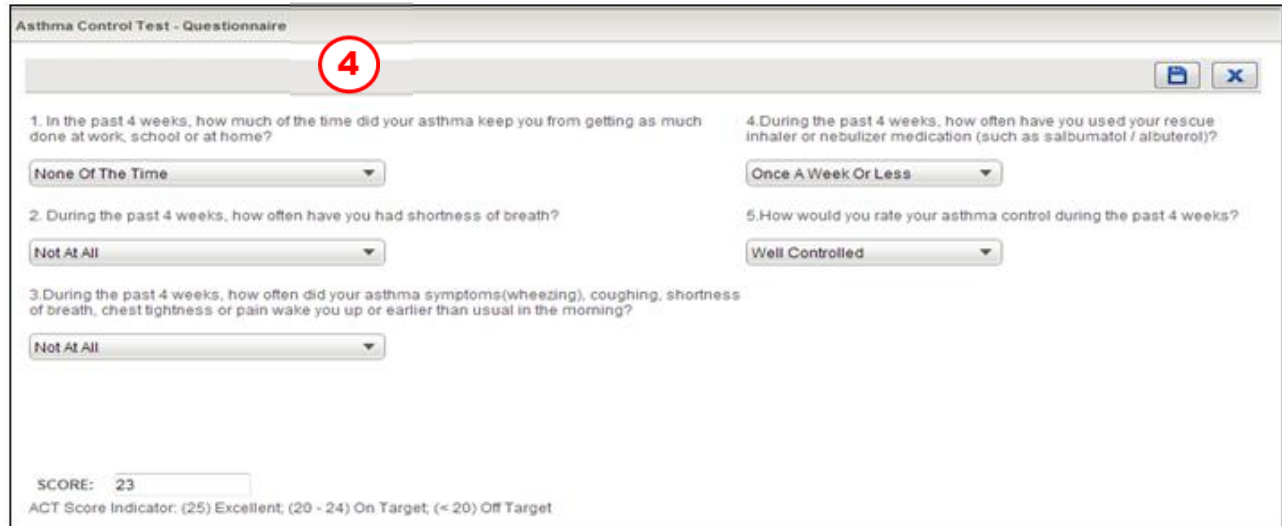
Blank field will be enabled only if user selects 'Others' from the check box.

STEP 3

Click on the [Calculate Score](#) hyperlink for **ACT Score** and the 'Asthma Control Test - Questionnaire' window will be displayed as shown in Figure 3.2.3.8-2

STEP 4

Select the drop down box to answer the questionnaire



Asthma Control Test - Questionnaire

1. In the past 4 weeks, how much of the time did your asthma keep you from getting as much done at work, school or at home?
None Of The Time

2. During the past 4 weeks, how often have you had shortness of breath?
Not At All

3. During the past 4 weeks, how often did your asthma symptoms(wheezing), coughing, shortness of breath, chest tightness or pain wake you up or earlier than usual in the morning?
Not At All

4. During the past 4 weeks, how often have you used your rescue inhaler or nebulizer medication (such as salbutamol / albuterol)?
Once A Week Or Less

5. How would you rate your asthma control during the past 4 weeks?
Well Controlled

SCORE: 23
ACT Score Indicator: (25) Excellent; (20 - 24) On Target; (< 20) Off Target

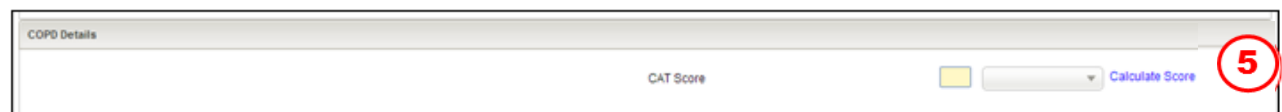
Figure 3.2.3.8-2 Asthma Control Test - Questionnaire

Note

Score will be automatically calculated and automatically displayed.

STEP 5

Click on the [Calculate Score](#) hyperlink and window of 'CAT Score – Questionnaire' will be display as per Figure 3.2.3.8-3



COPD Details

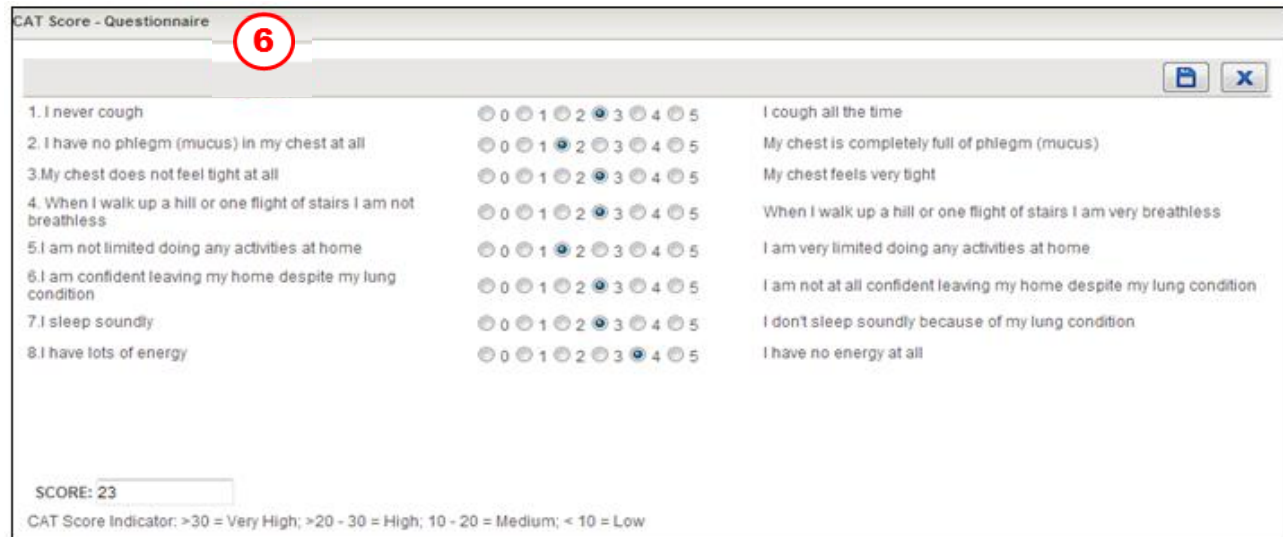
CAT Score

Calculate Score

Figure 3.2.3.8-3 Specific Details – COPD Details

STEP 6

Select **CAT Score – Questionnaire** check box and save record



6

CAT Score - Questionnaire

1. I never cough	0 1 2 3 4 5	I cough all the time
2. I have no phlegm (mucus) in my chest at all	0 1 2 3 4 5	My chest is completely full of phlegm (mucus)
3. My chest does not feel tight at all	0 1 2 3 4 5	My chest feels very tight
4. When I walk up a hill or one flight of stairs I am not breathless	0 1 2 3 4 5	When I walk up a hill or one flight of stairs I am very breathless
5. I am not limited doing any activities at home	0 1 2 3 4 5	I am very limited doing any activities at home
6. I am confident leaving my home despite my lung condition	0 1 2 3 4 5	I am not at all confident leaving my home despite my lung condition
7. I sleep soundly	0 1 2 3 4 5	I don't sleep soundly because of my lung condition
8. I have lots of energy	0 1 2 3 4 5	I have no energy at all

SCORE: 23

CAT Score Indicator: >30 = Very High; >20 - 30 = High; 10 - 20 = Medium; < 10 = Low

Figure 3.2.3.8-4 CAT Score – Questionnaire

STEP 7

Click on the [Calculate Score](#) hyperlink of Before and After Counseling to do questionnaire as below:

- MDI Score
- Turbuhaler Score
- Accuhaler Score
- Handihaler Score
- MDI and Spacer Score



Inhaler Technique Understanding

	Before counselling		After counselling	
MDI Score	5 High	Calculate Score	6 Excellent	Calculate Score
TURBUHALER Score		Calculate Score		Calculate Score
ACCUHALER Score		Calculate Score		Calculate Score
HANDIHALER Score		Calculate Score		Calculate Score
MDI and SPACER Score		Calculate Score		Calculate Score

7

8

Save & Continue

Figure 3.2.3.8-5 Inhaler Technique Understanding

STEP 8

Click on the  button as shown in Figure 3.2.3.8-5 to save and continue with reporting section

STEP 9

Click on the  button to confirm save order

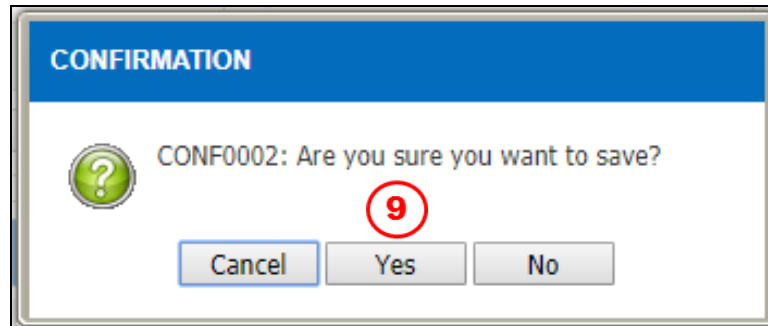


Figure 3.2.3.8-6 Confirmation Alert Message

STEP 10

Click on the  button to confirm record

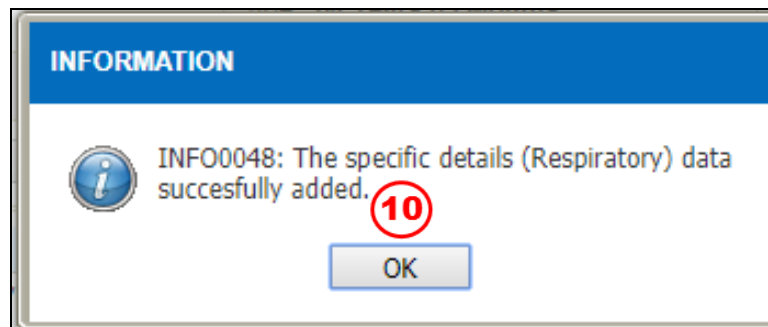


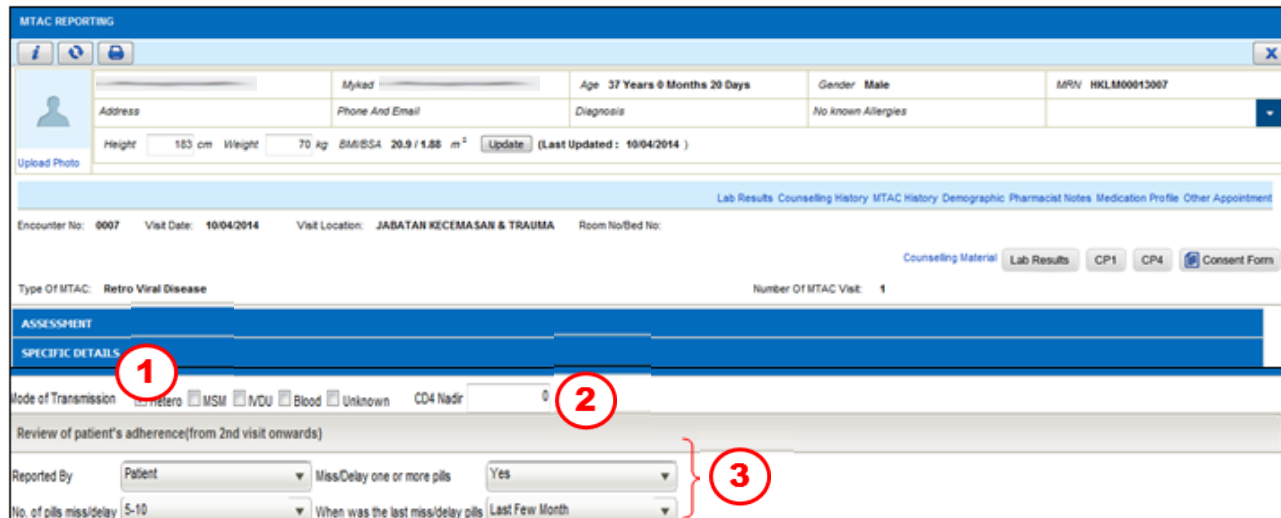
Figure 3.2.3.8-7 Information Alert Message

Note

For 'Reporting' section, repeat **Note (Page 28) to Step 32** as in 3.2.1 Create New MTAC Reporting with No Specific Details.

3.2.3.9 Retro Viral Disease

This function allows users to record Specific Details for Retro Viral Disease for MTAC patients.



The screenshot shows the 'MTAC REPORTING' interface. At the top, there's a patient summary section with fields for Mykad, Age (37 Years 0 Months 20 Days), Gender (Male), and MRN (HKL00013007). Below this is a section for 'Specific Details' under the 'ASSESSMENT' tab. This section includes a 'Mode of Transmission' dropdown menu (highlighted with a red circle 1), a 'CD4 Nadir' field (highlighted with a red circle 2), and a 'Review of patient's adherence (from 2nd visit onwards)' section. The adherence section includes a 'Reported By' dropdown menu (highlighted with a red circle 3), a 'Miss/Delay one or more pills' dropdown, and a 'When was the last miss/delay pills' dropdown.

Figure 3.2-3.9-1 Specific Details - Retro Viral Disease

Note

Repeat **Step 1 to Step 16** as in 3.2.1 Create New MTAC Reporting with No Specific Details before performing MTAC Reporting - Specific Details for Retro Viral Disease.

STEP 1

Select **Mode of Transmission** from the check box

- Hetero
- MSM
- IVDU
- Blood
- Unknown

STEP 2

Enter **CD4 Nadir**

Review of patient's adherence (from 2nd visit onwards)

STEP 3

Select **Reported By** from the drop down box

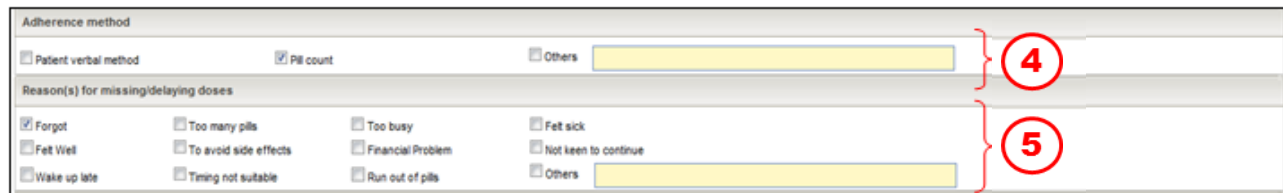
- Caregiver
- Patient

Select **Miss/Delay one or more pills** from the drop down box

- Yes
- No

Note

No. of pills miss/delay and when was the last miss/delay pills will be enabled only if user selects 'Yes' from the **Miss/Delay one or more pills** drop down box



The screenshot shows a form with two main sections. The first section, 'Adherence method', has three options: 'Patient verbal method', 'Pill count' (which is checked), and 'Others' (with a text input field). A red bracket labeled '4' groups the 'Others' option and its input field. The second section, 'Reason(s) for missing/delaying doses', has a grid of checkboxes: 'Forgot' (checked), 'Too many pills', 'Too busy', 'Felt sick', 'Felt Well', 'To avoid side effects', 'Financial Problem', 'Not keen to continue', 'Wake up late', 'Timing not suitable', 'Run out of pills', and 'Others' (with a text input field). A red bracket labeled '5' groups the 'Others' option and its input field.

Figure 3.2.3.9-2 Specific Details - Retro Viral Disease

STEP 4

Select **Adherence Method** from the check box

- Patient verbal method
- Pill count
- Others

Note

Blank field will be enabled if user selects 'Others' from the check box.

STEP 5

Select **Reason(s) for missing/delaying doses** from the check box

- Forgot
- Felt Well
- Wake up late
- Too many pills
- To avoid side effects
- Timing not suitable
- Too busy
- Financial Problem
- Run out of pills
- Felt sick
- Not keen to continue
- Others

Note

Blank field will be enabled if user selects 'Others' from the check box.

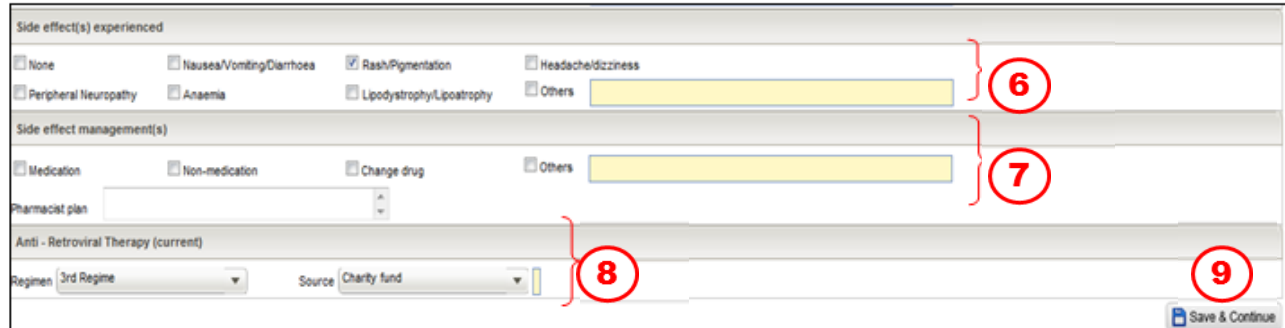


Figure 3.2.3.9-3 Specific Details - Retro Viral Disease

STEP 6

Select **Side effect(s) experienced** from the check box

- None
- Peripheral Neuropathy
- Nausea/Vomiting/Diarrhoea
- Anaemia
- Rash/Pigmentation
- Lipodystrophy/Lipoatrophy
- Headache/dizziness
- Others

Note

Blank field will be enabled if user selects 'Others' from the check box.

STEP 7

Select **Side effect management(s)** from the check box

- Medication
- Non-medication
- Change drug
- Others

Note

Blank field will be enabled if user selects 'Others' from the check box

Enter **Pharmacist plan** if necessary

Anti-Retroviral Therapy (current)

STEP 8

Select **Regimen** from the drop down box

- 1st line
- 2nd line
- 3rd line

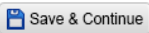
Select **Source** from the drop down box

- Baitulmal
- Charity fund
- Hospital
- NGO
- Others
- Self
- UNHCR

Note

Blank field will be enabled if user selects 'Others' from the check box.

STEP 9

Click on the  button as shown in Figure 3.2.3.9-3 to save and continue with reporting section

STEP 10

Click on the  button to confirm save record

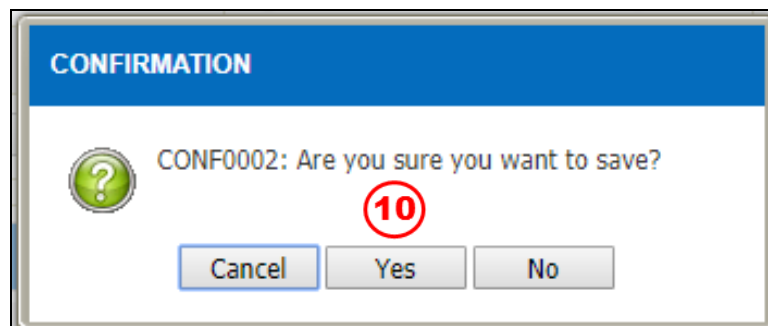


Figure 3.2.3.9-4 Confirmation Alert Message

STEP 11

Click on the  button to confirm record

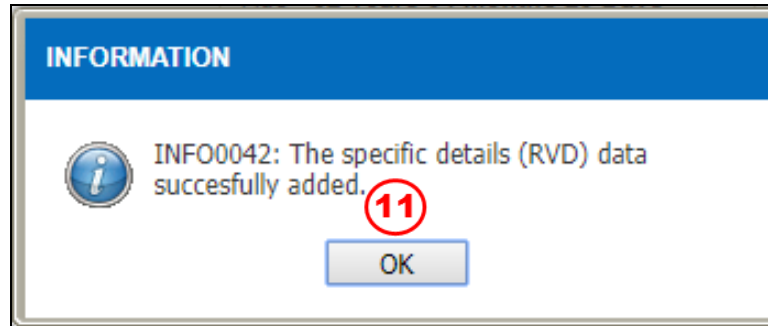


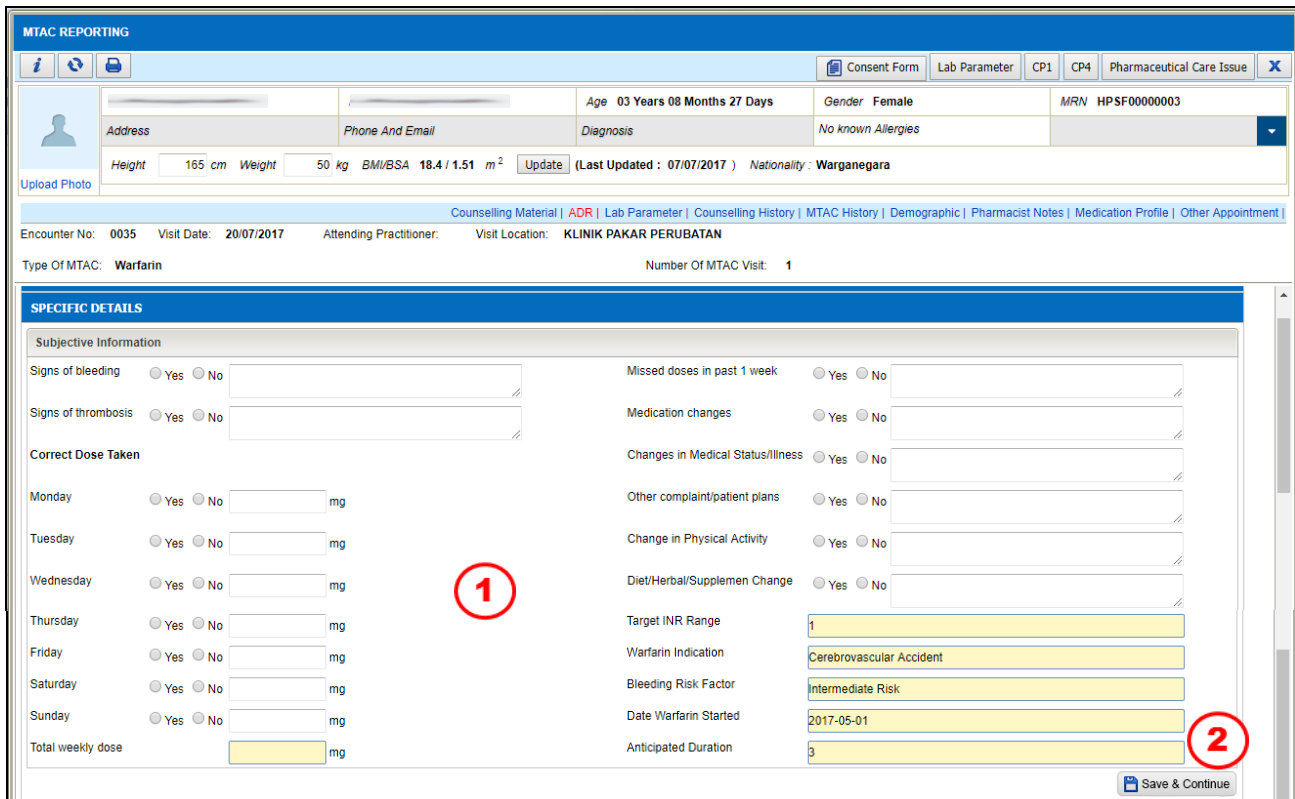
Figure 3.2.3.9-5 Information Alert Message

Note

For 'Reporting' section, repeat **Note (Page 28) to Step 32** as in 3.2.1 Create New MTAC Reporting with No Specific Details.

3.2.3.10 Warfarin

This function allow user to record Specific Details for Warfarin for MTAC patients.



MTAC REPORTING

Consent Form | Lab Parameter | CP1 | CP4 | Pharmaceutical Care Issue

Age 03 Years 08 Months 27 Days | Gender Female | MRN HPSF00000003

Address | Phone And Email | Diagnosis | No known Allergies

Height 165 cm | Weight 50 kg | BMI/BSA 18.4 / 1.51 m² | Update (Last Updated : 07/07/2017) | Nationality : Warganegara

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

Encounter No: 0035 | Visit Date: 20/07/2017 | Attending Practitioner: | Visit Location: KLINIK PAKAR PERUBATAN

Type Of MTAC: Warfarin | Number Of MTAC Visit: 1

SPECIFIC DETAILS

Subjective Information

Signs of bleeding ☐ Yes ☐ No

Signs of thrombosis ☐ Yes ☐ No

Correct Dose Taken

Monday ☐ Yes ☐ No mg

Tuesday ☐ Yes ☐ No mg

Wednesday ☐ Yes ☐ No mg

Thursday ☐ Yes ☐ No mg

Friday ☐ Yes ☐ No mg

Saturday ☐ Yes ☐ No mg

Sunday ☐ Yes ☐ No mg

Total weekly dose mg

Missed doses in past 1 week ☐ Yes ☐ No

Medication changes ☐ Yes ☐ No

Changes in Medical Status/Illness ☐ Yes ☐ No

Other complaint/patient plans ☐ Yes ☐ No

Change in Physical Activity ☐ Yes ☐ No

Diet/Herbal/Supplement Change ☐ Yes ☐ No

Target INR Range 1

Warfarin Indication Cerebrovascular Accident

Bleeding Risk Factor Intermediate Risk

Date Warfarin Started 2017-05-01

Anticipated Duration 3

Save & Continue

Figure 3.2.3.10-1 Specific Details - Warfarin

Note

Repeat **STEP 1 to 16** as in 3.2.1 Create New MTAC Reporting with No Specific Details before performing MTAC Reporting - Specific Details for Warfarin.

STEP 1

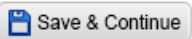
For **Subjective Information**, select 'Yes' or 'No' radio buttons for below:

- **Signs of bleeding**
- **Correct Dose Taken**
- **Signs of thrombosis**
- **Missed doses in past 1 week**
- **Medication changes**
- **Changes in Medical Status/Illness**
- **Other complaint/patient plans**
- **Change in Physical Activity**

Note

- Enter remark (if available) and dosage for **Correct Dose Taken** at the blank field provided
- **Total weekly dose, Target INR Range, Warfarin Indication, Bleeding Risk Factor, Date Warfarin Started** and **Anticipated Duration** will be automatically displayed based on what user key in in MTAC order details as shown in Figure 3.2.3.10-1.

STEP 2

Click on the  button to save and continue with reporting section

STEP 3

Click on the  button to confirm save record

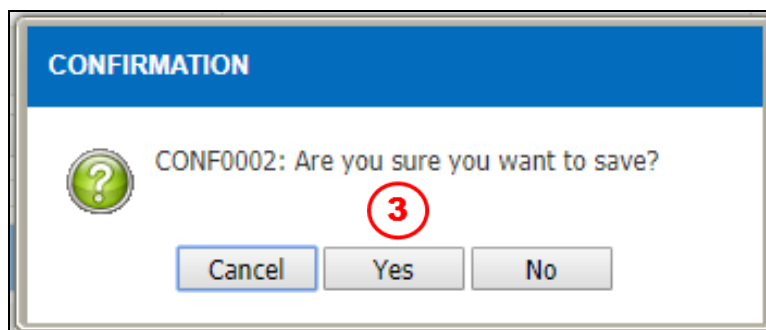
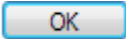


Figure 3.2.3.10-2 Confirmation Alert Message

STEP 4

Click on the  button to confirm record

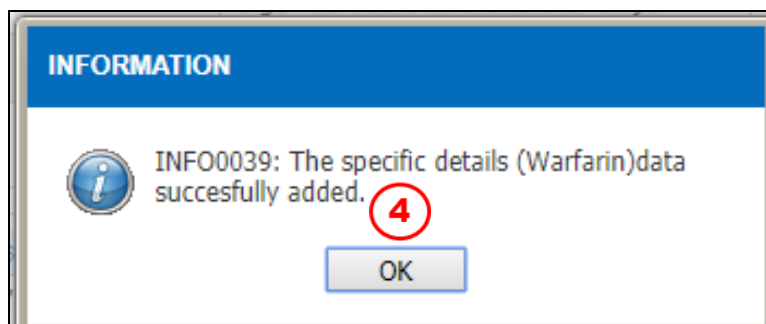


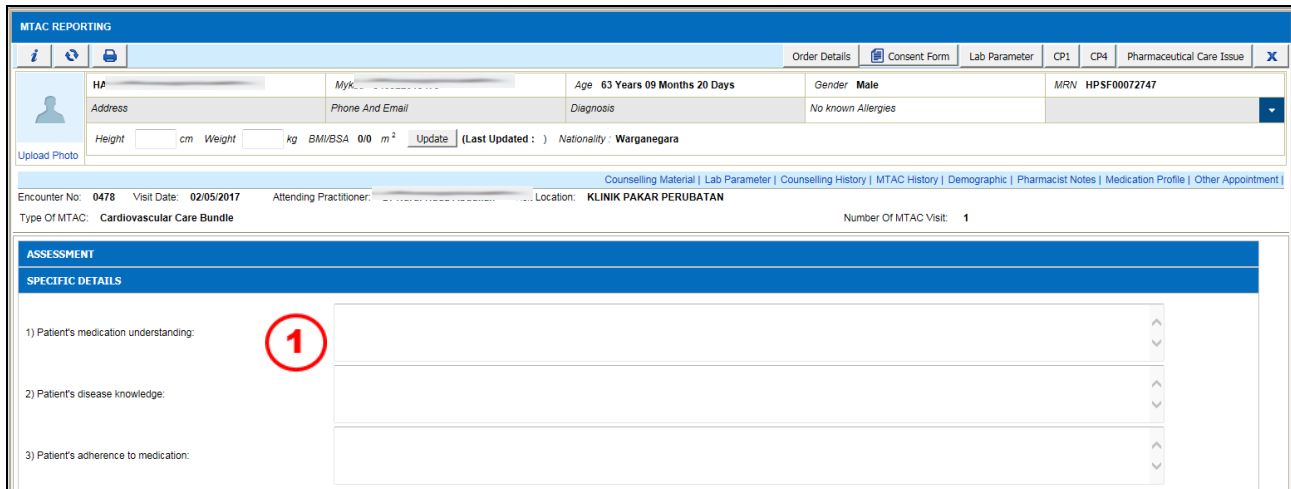
Figure 3.2.3.10-3 Information Alert Message

Note

- For 'Reporting' section, repeat **Note (Page 28) to Step 32** as in 3.2.1 Create New MTAC Reporting with No Specific Details.
- If patient has previous history, Target INR will appear in MTAC History

3.2.3.11 Cardiovascular Care Bundle

This function allow user to record Specific Details for Cardiovascular Care Bundle for MTAC patients.



The screenshot shows the 'MTAC REPORTING' interface. At the top, there are tabs for 'Order Details', 'Consent Form', 'Lab Parameter', 'CP1', 'CP4', and 'Pharmaceutical Care Issue'. Below these, patient information is displayed: Name (Myk...), Age (63 Years 09 Months 20 Days), Gender (Male), MRN (HPSF00072747), Address, Phone And Email, Diagnosis, and No known Allergies. There are also fields for Height, Weight, BMI/BSA, and Nationality (Warganegara). The 'Encounter No' is 0478, 'Visit Date' is 02/05/2017, 'Attending Practitioner' is [Name], and 'Location' is KLINIK PAKAR PERUBATAN. The 'Type Of MTAC' is Cardiovascular Care Bundle, and 'Number Of MTAC Visit' is 1. The 'ASSESSMENT' section is expanded, showing 'SPECIFIC DETAILS'. A red circle with the number 1 highlights the first text area for '1) Patient's medication understanding:'. Below it are two more text areas for '2) Patient's disease knowledge:' and '3) Patient's adherence to medication:'.

Figure 3.2.3.11-1 Specific Details - Warfarin

Note

Repeat **STEP 1 to 16** as in 3.2.1 Create New MTAC Reporting with No Specific Details before performing MTAC Reporting - Specific Details for Warfarin.

STEP 1

For **Subjective Information**, user need to fill up the patient specific detail based on:

- **Patient medication understanding**
- **Patient disease knowledge**
- **Patient adherence to medication**

Note

- For 'Reporting' section, repeat **Note (Page 28) to Step 32** as in 3.2.1 Create New MTAC Reporting with No Specific Details.
- User can save the specific detail after doing reporting part.

4.0 Acronyms

Abbreviation	Definition
PhIS	Pharmacy Information System
MOH	Ministry of Health
CPS	Clinical Pharmacy System
PM	Patient Management
eGL	Electronic Guarantee Letter
HRMIS	Human Resource Management System
MRN	Medical Record Number
MTAC	Medication Therapy Adherence Clinic

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		