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

Pharmacy Based

User Manual
Medication Therapy Adherence Clinic
(MTAC)

Version	**: 9th EDITION**
Document ID	**: PB_U. MANUAL_MTAC**

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Application reference: PhIS & CPS v2.0.1

Table of Contents

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:
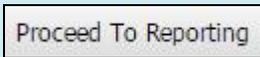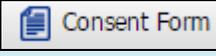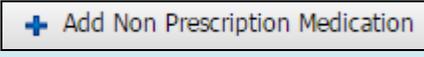
•   MTAC Reporting

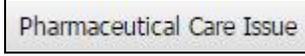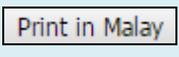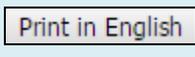### 1.3   Organised Sections

These are the sections within this document:
•   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
C	Reset Login	LOGIN	Login to PhIS
+	Expand Menu	−	Collapse Menu
Home	Display Home Tab	▶	Expand Module
	Collapse Module	Logout	Logout from PhIS
	Close All Tabs	↻	Refresh
◀◀	Search First Page/ Previous Page	▶ ▶	Search Next Page/Last Page
⬍	Search Up/Down Button	F02FBW-0003984	Hyperlink
💾	Save	i	Show Help
🔍	Search Icon	+	Add/Create New Record
31	Calendar Icon	🔍 Search	Search Record
X	Close Window	Add/Update	Add/Update Button
HPSF00088304	Auto generate an information by the system	SPUB5656569	Auto generate record no by the system
*	Mandatory Field	Cancel	Cancel Button
Yes	Yes Button	No	No Button
OK	OK Button	✎	Edit Record
🖨	Print	Export to Excel	Export report from PDF to Excel
☐	Check Box	○	Radio Button
⊘	Cancel	🗑	Delete Record

MTAC Module Legend

Lab Parameter	Lab Parameter Button	Proceed To Reporting	Proceed To Reporting Button
Search History	Search History Button	Audit Trail	Audit Trail Hyperlink
Consent Form	Consent Form Button	CP1	CP1 Button
CP4	CP4 Button	➕ Add Prescription Medication	Add Prescription Medication Button
Calculate Score	Calculate Score Hyperlink	➕ Add Non Prescription Medication	Add Non Prescription Medication Button
Save & Continue	Save & Continue Button	Pharmaceutical Care Issue	Pharmaceutical Care Issue Button
Malay	Malay Language Button	Assessment Form For Diabetes Mellitus	Assessment Form for Diabetes Mellitus Button
Medication Order	Medication Order Button	✔ Confirm	Confirm Button
Print in Malay	Print In Malay Button	Print in English	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
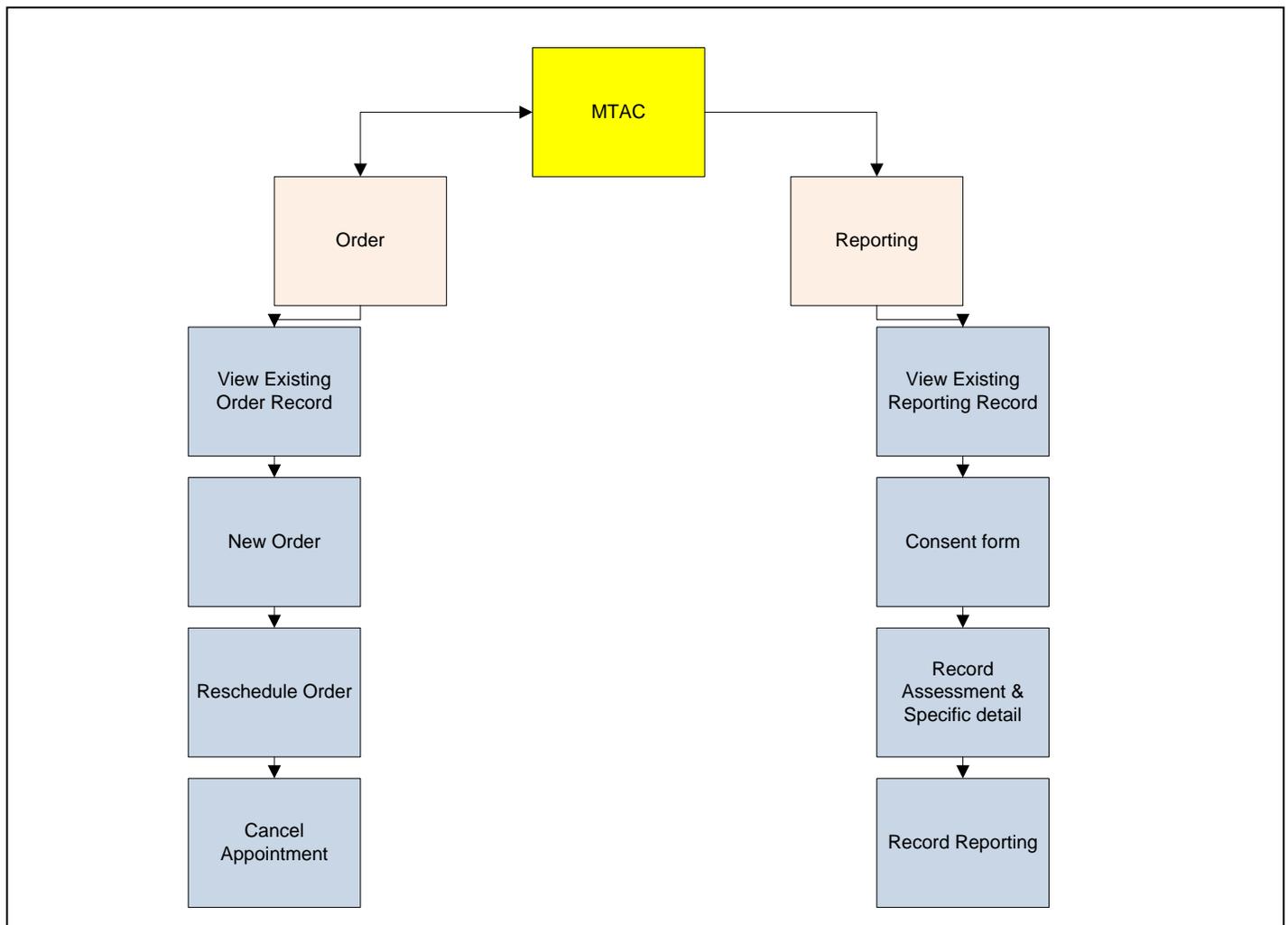
Figure 3.0-1

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.
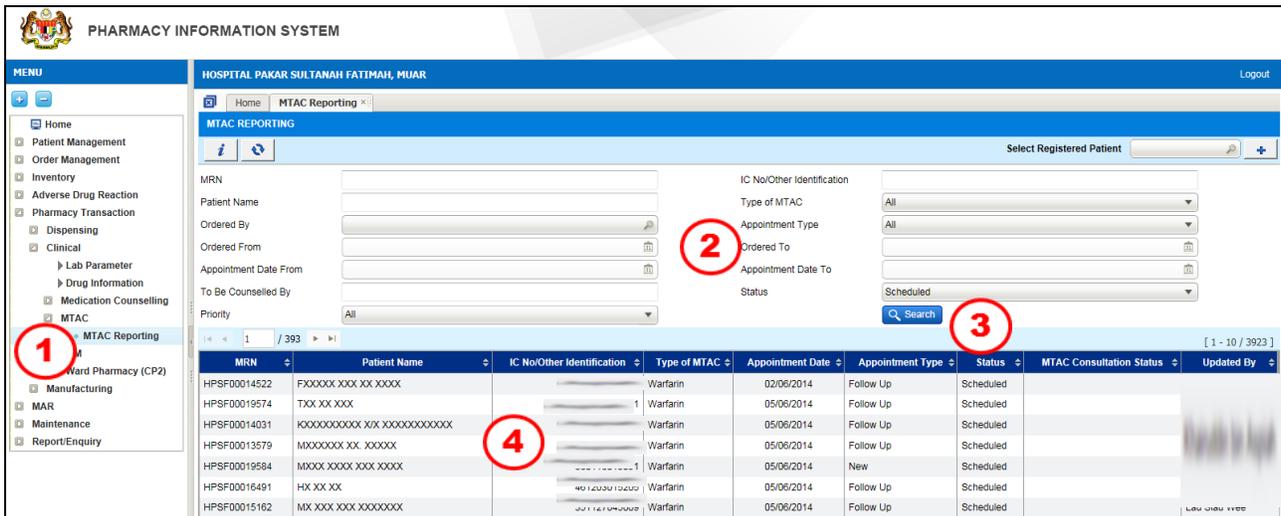
Figure 3.1.1-1 MTAC Reporting Listing Page

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 Counselled by	To Be Counselled by	Able to filter and search by to be counselled 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 [Q Search] button to search the patient
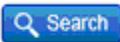
Note

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
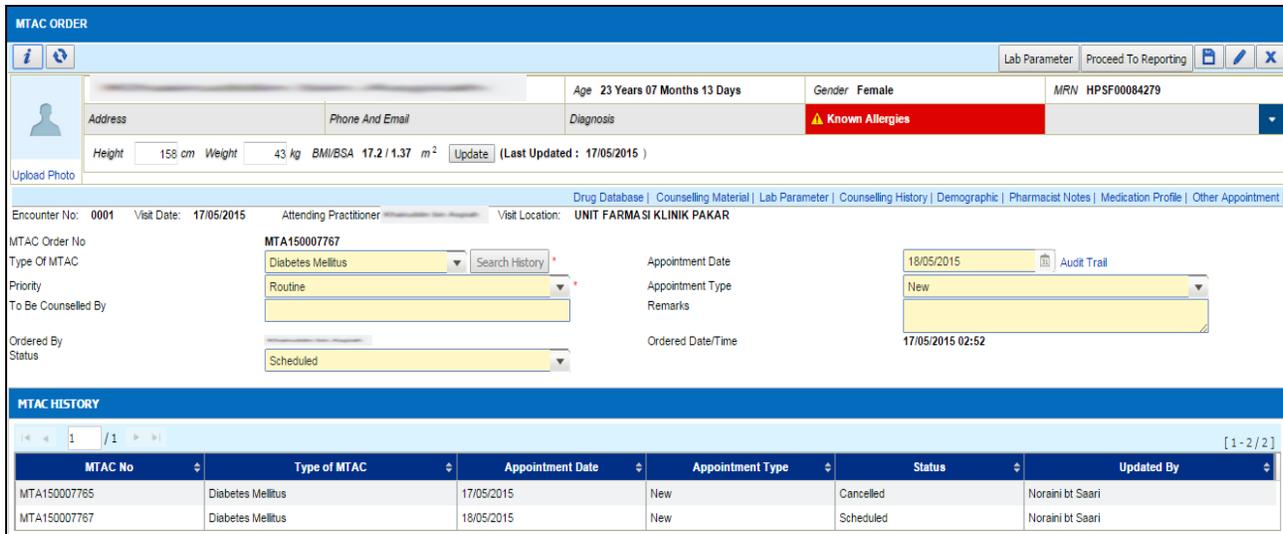
Figure 3.1.1-2 MTAC Order

<u>*Note*</u>

- *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:*
    a) **Counselling Material**
        - *User able to download and use medication counselling material during the counselling session*
    b) **Lab Parameter**
        - *Patient's laboratory test results and standard parameter results for laboratory test*
    c) **Counselling History**
        - *Patient's previous medication counselling history records*
    d) **MTAC History**
        - *Patient's previous MTAC History records*
    e) **Demographic**
        - *Patient's demographic details*

    f) **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 Counselled 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.

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

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:*

   a) *MRN*
   b) *Patient Name*
   c) *Ordered By*
   d) *Ordered From*
   e) *Appointment Date*
   f) *To Be Counseled By*
   g) *ID No*
   h) *Type of MTAC*
   i) *Appointment Type*
   j) *Ordered To*
   k) *Priority*
   l) *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 ⌕ Search 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
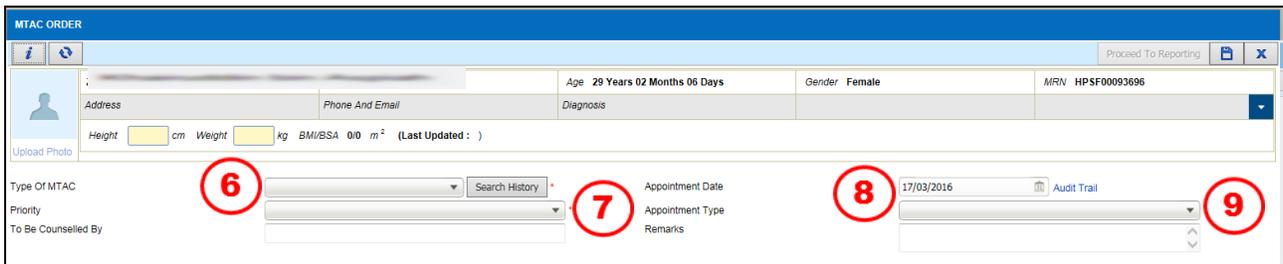
Figure 3.1.2-3 MTAC Order

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.*
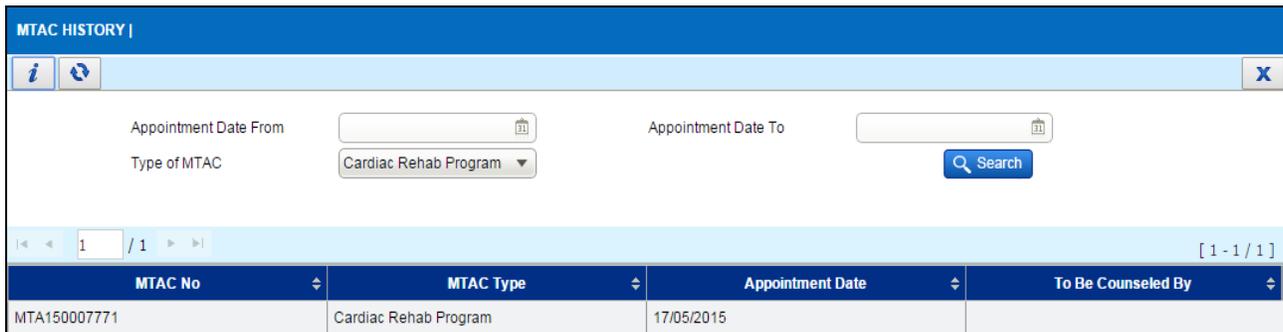
Figure 3.1.2-4 MTAC History

STEP 7

Select *Priority* as listed from the drop down box
- Routine
- Urgent

STEP 8

Click on the [📅] button to select *Appointment Date*
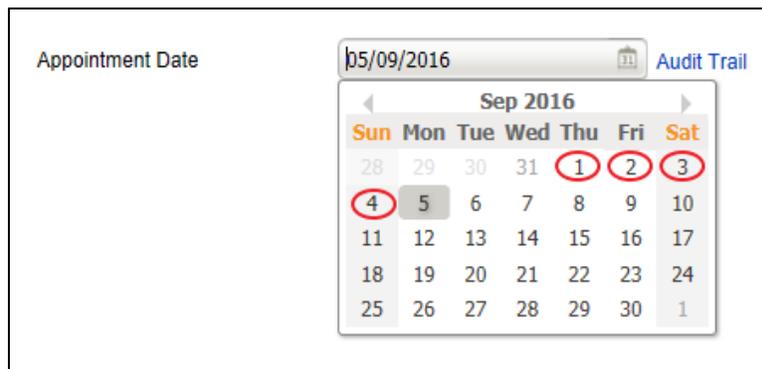
Note

- *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* Proceed To Reporting *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.***
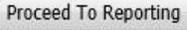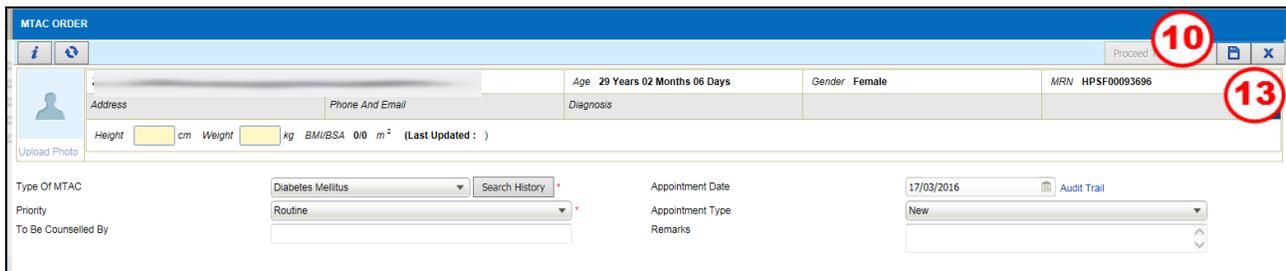
Figure 3.1.2-5 MTAC Order

STEP 10

Click on the 💾 button to save the record

STEP 11

Click on the Yes button to confirm saving of order
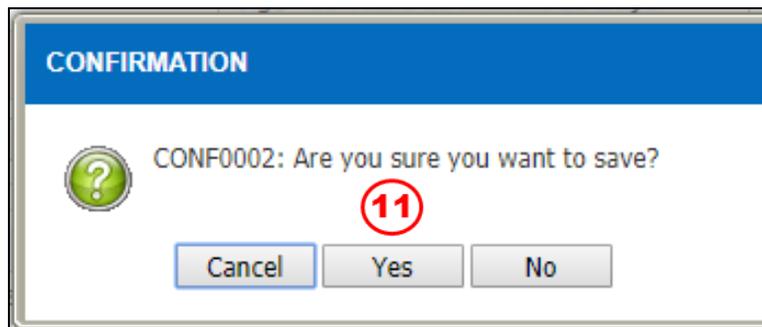
Figure 3.1.2-6 Confirmation Alert Message

STEP 12

Click on the [OK] button to confirm record
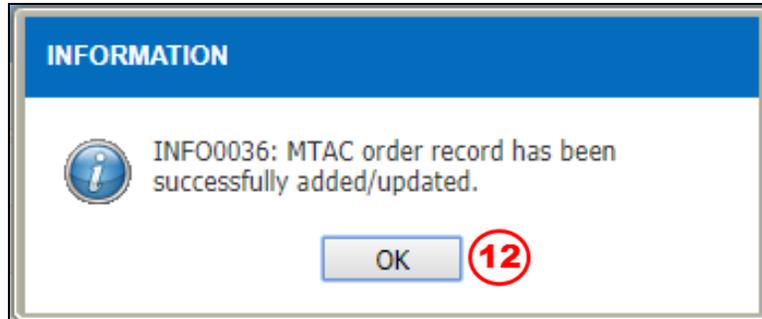
Figure 3.1.2-7 Information Alert Message

STEP 13

Click on the [X] 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

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 [pencil] button to edit MTAC order

STEP 2

Click on the [calendar] 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._

Figure 3.1.3-2 MTAC Order

STEP 3

Click on the [💾] button to save the record

STEP 4

Click on the [Yes] button to confirm saving of order
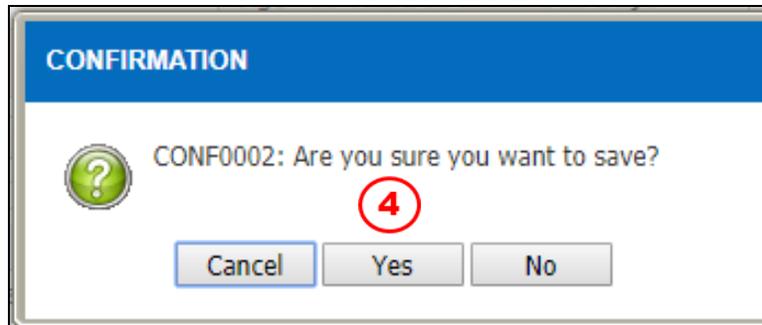
Figure 3.1.3-3 Confirmation alert message

STEP 5

Click on the [OK] button to confirm record
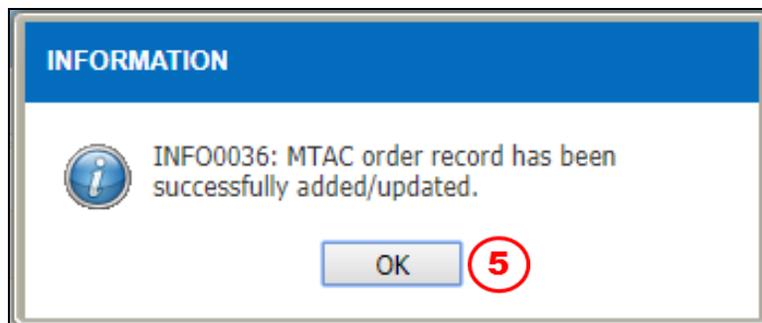
Figure 3.1.3-4 Information alert message

STEP 6

Click on the [X] 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
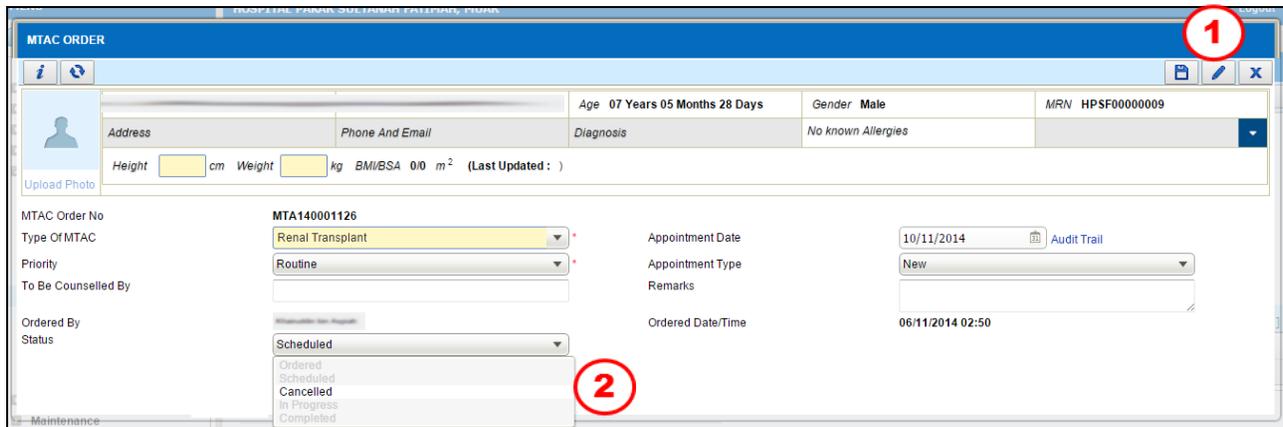
Figure 3.1.4-1 MTAC Order

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 [pencil] 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.*
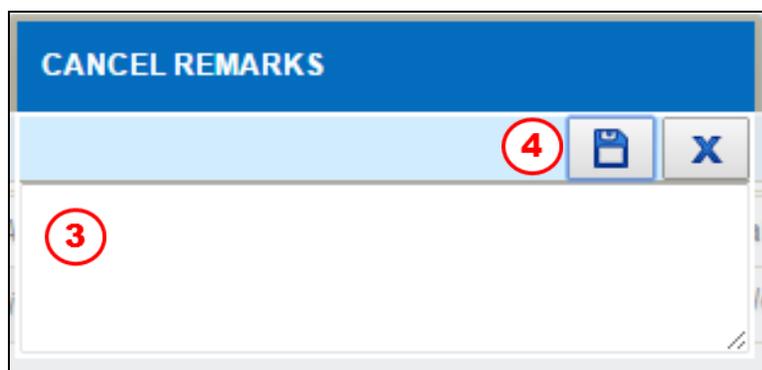
Figure 3.1.4-2 Cancel Remarks

STEP 3
Enter **Cancel Remarks** and save the record

STEP 4

Click on the [save] button to save record

STEP 5

Click on the [Yes] button to confirm saving of order

CONFIRMATION

CONF0002: Are you sure you want to save?

⑤

Cancel   Yes   No
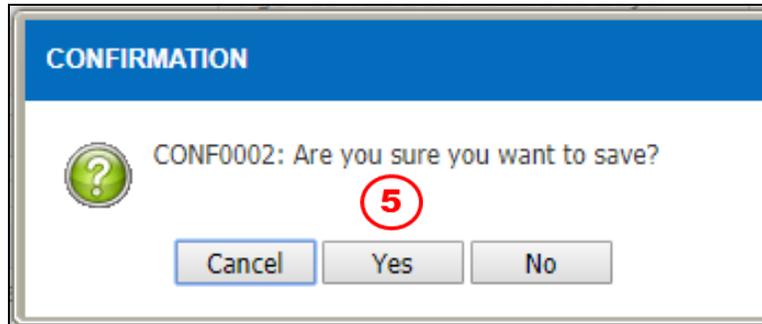
Figure 3.1.4-3 Confirmation Alert Message

STEP 6

Click on the [OK] button to confirm record

INFORMATION

INFO0036: MTAC order record has been successfully added/updated.

OK   ⑥
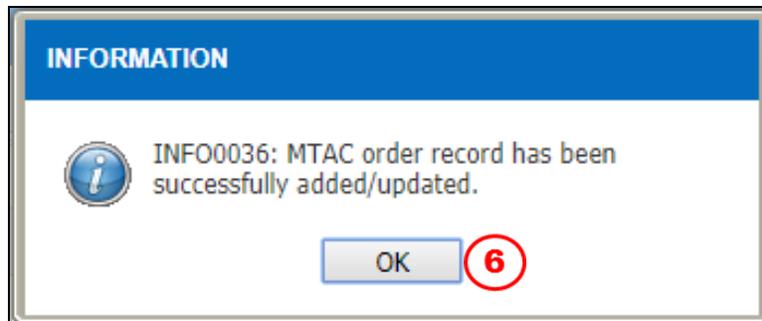
Figure 3.1.4-4 Information Alert Message

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
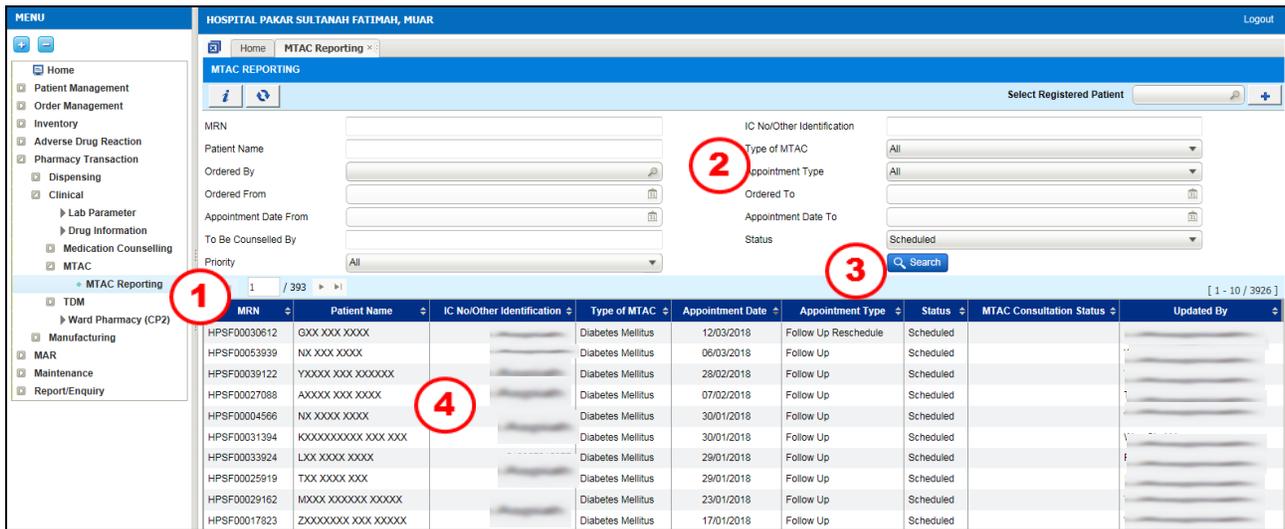
Figure 3.2.1-1 MTAC Reporting Listing Page

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 Counselled by	To Be Counselled by	Able to filter and search by to be counselled 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 [Q Search] 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
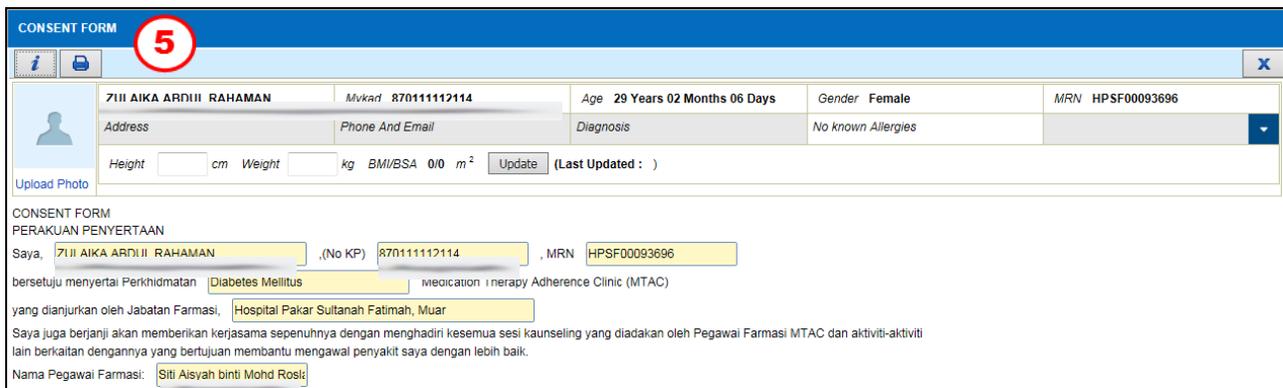
Figure 3.2.1-2 Consent Form

STEP 5

Click on the [printer] button to print the consent form

STEP 6

Click on the [Yes] to confirm printing Consent form and new screen will be displayed for user to print Consent Form as per Figure 3.2.1-4
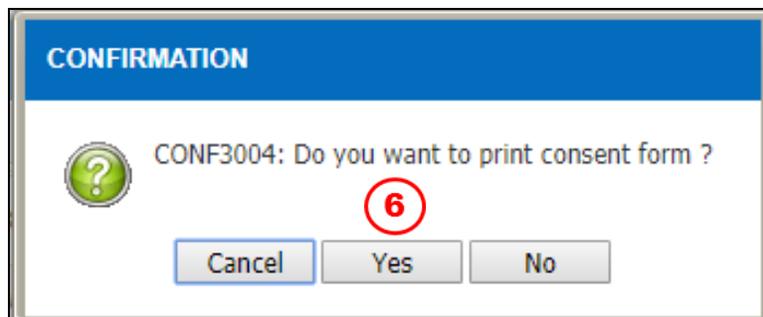
Figure 3.2.1-3 Print Report Alert Message

MEDICATION THERAPY ADHERENCE CLINIC (MTAC)

Jabatan Farmasi, Hospital Pakar Sultanah Fatimah, Muar

PERAKUAN PENYERTAAN

S_____ A, (No KP _____ MRN <u>HPSF00186863</u> bersetuju menyertai Perkhidmatan <u>DIABETES MELLITUS</u> Medication Therapy Adherence Clinic (MTAC) oleh Jabatan Farmasi, <u>HOSPITAL PAKAR SULTANAH FATIMAH, MUAR</u>. 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:*
  - a) *Patient name*
  - b) *ID No*
  - c) *MRN*
  - d) *Type of MTAC*
  - e) *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* [📋 Consent Form] *button at the 'MTAC Reporting' screen*

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:*
  - a) *Social History*
  - b) *Family History*
  - c) *Medical History*
  - d) *Past Medication History*

Social History

STEP 7
Enter **Estimated Dry Body Weight in Kg**

Figure 3.2.1-6 MTAC Reporting – Assessment on Social History
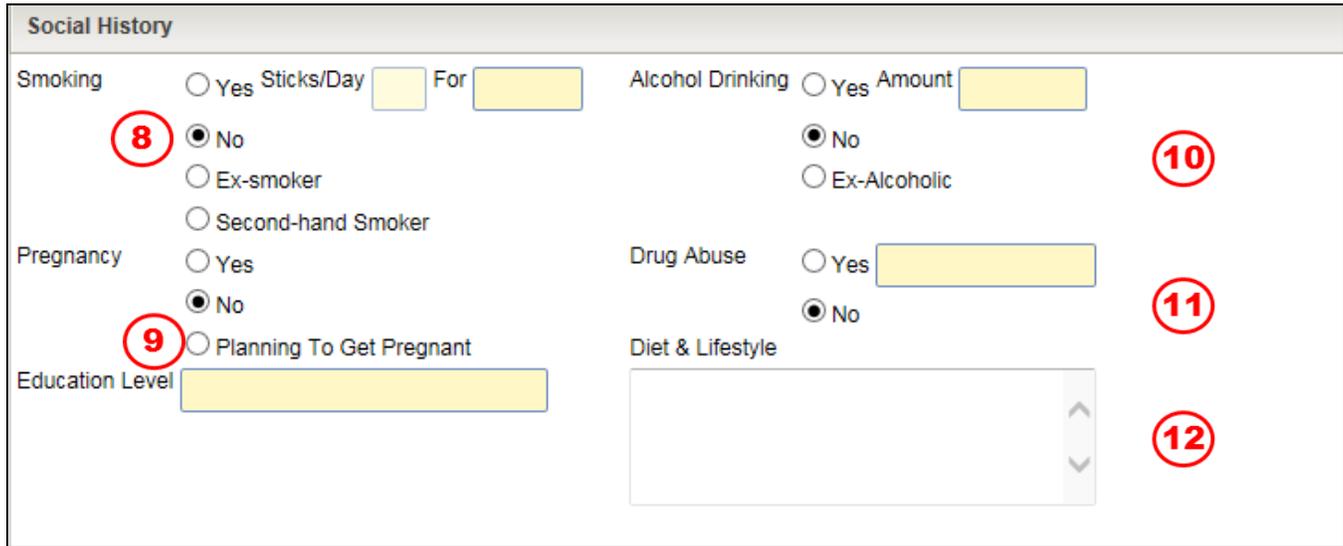
STEP 8
Select on *Smoking* radio button
 - Yes
 - No
 - Ex-smoker
 - Second-hand Smoker

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
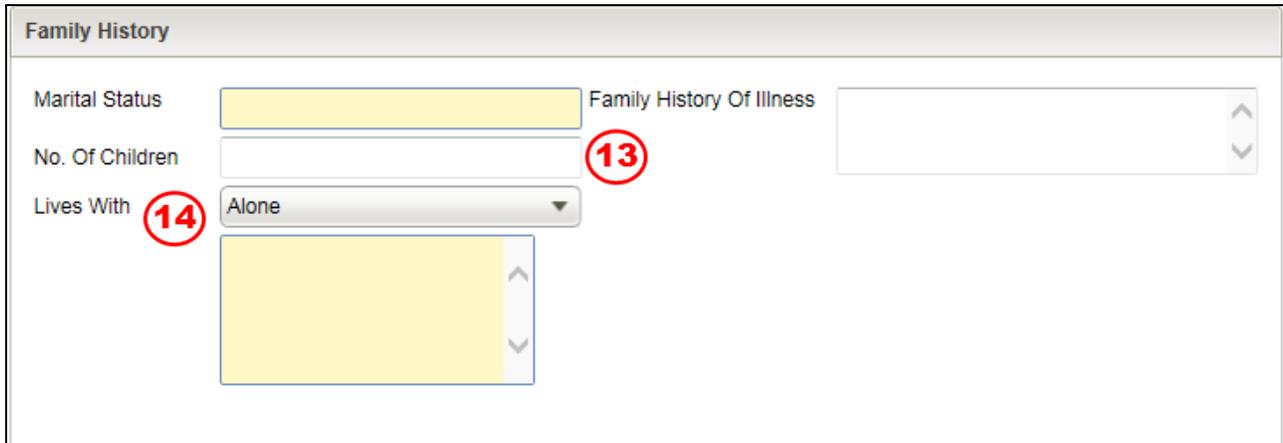
Figure 3.2.1-7 MTAC Reporting – Assessment on Family History

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
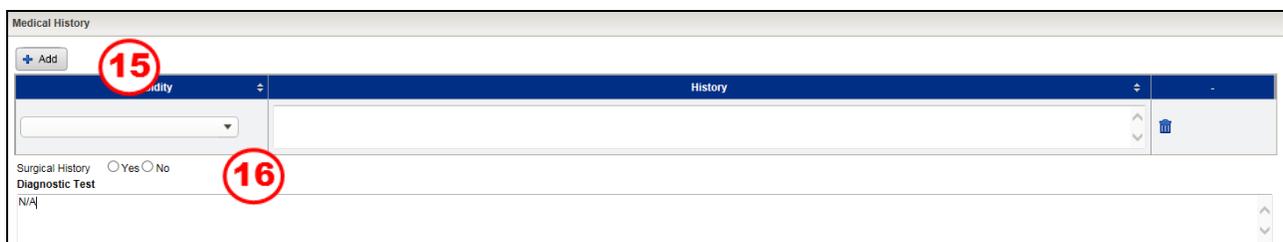
Figure 3.2.1-8 MTAC Reporting – Assessment on Medical History

STEP 15

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

Note

- *User can enter multiple Comorbidity record by click [+ Add] 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.*

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

Note

Click on the CP1 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
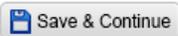
Click on the Save & Continue button as shown in Figure 3.2.1-10 to save assessment and continue with reporting section

Figure 3.2.1-10 MTAC Reporting – Assessment Past Medication History

STEP 18

Click on the Yes button to confirm
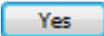
Figure 3.2.1-11 Confirmation Alert Message

STEP 19
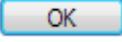
Click on the [OK] button to confirm record
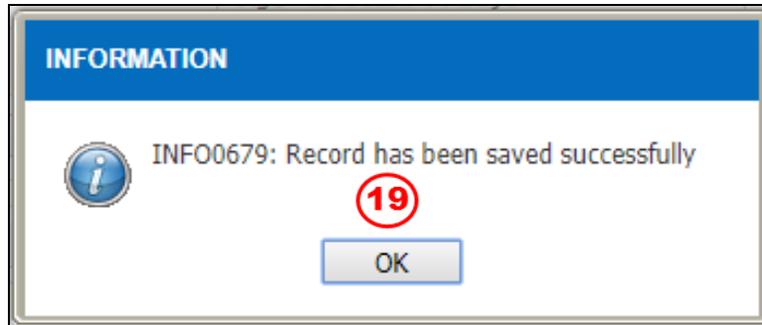
Figure 3.2.1-12 Information Alert Message

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".*
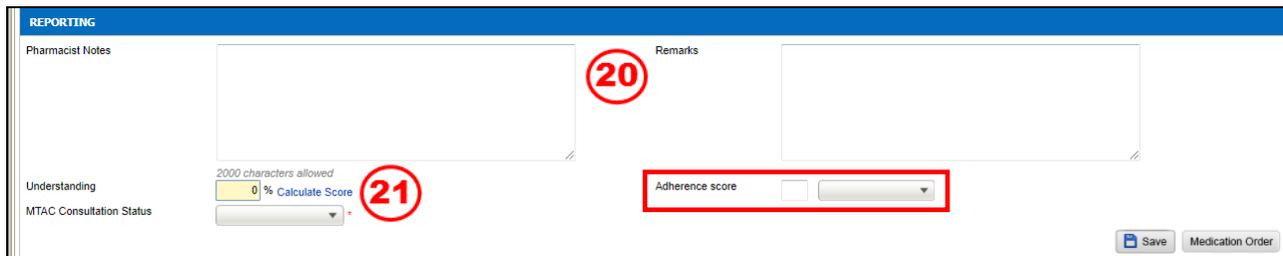
Figure 3.2.1-13 MTAC Reporting

STEP 20

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

STEP 21

Click on the [Calculate Score] 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 [Add/Update] 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
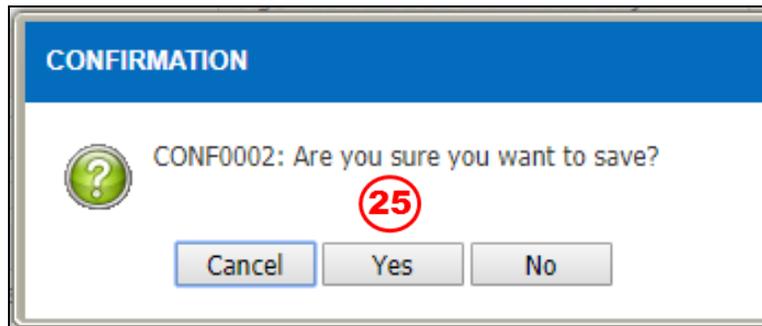
Figure 3.2.1-16 Confirmation alert message

STEP 25

Click on the [Yes] button to confirm save record
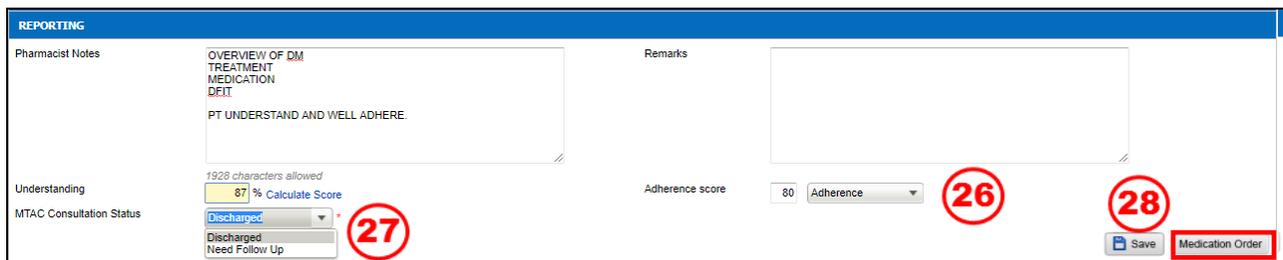
Figure 3.2.1-17 MTAC Reporting - Reporting

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 [Medication Order] button to view medication order screen and perform MTAC medication order if necessary.*

STEP 28

Click on the [Save] button as shown in Figure 3.2.1-17
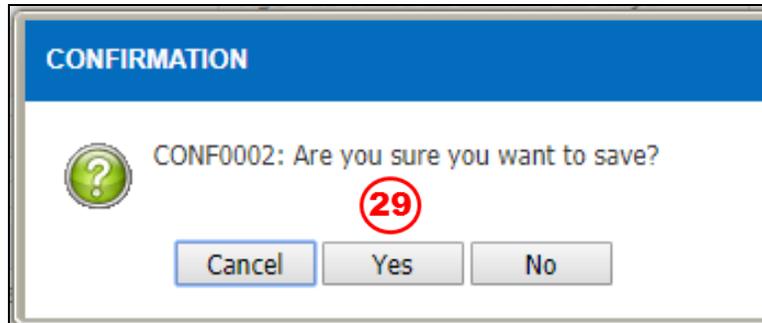
Figure 3.2.1-18 Confirmation Alert Message

STEP 29

Click on the ⬚ Yes ⬚ button to confirm save record
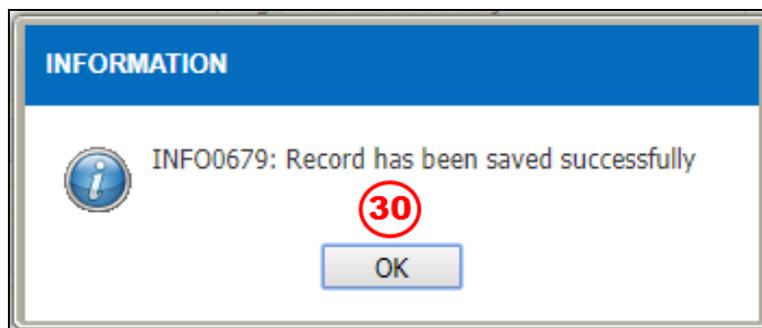
Figure 3.2.1-19 Information Alert Message

STEP 30
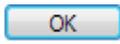
Click on the ⬚ OK ⬚ button
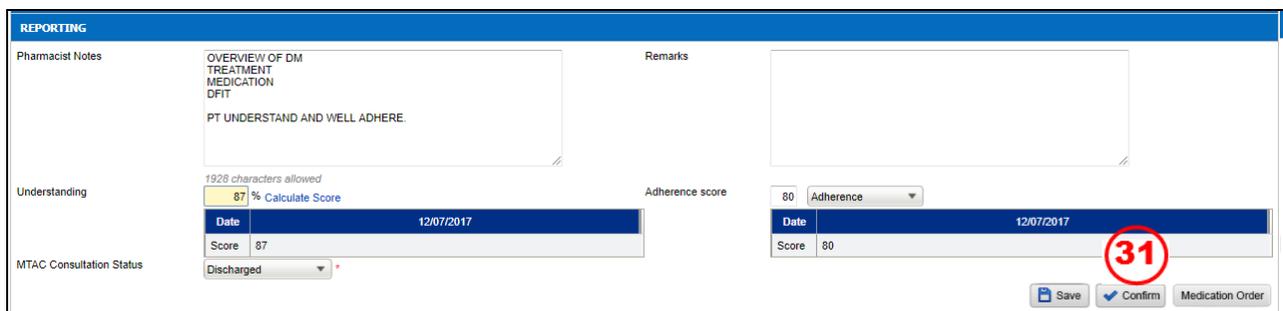
Figure 3.2.1-19 MTAC Reporting – Reporting

STEP 31

Click on the ⬚ Confirm ⬚ button to confirm reporting
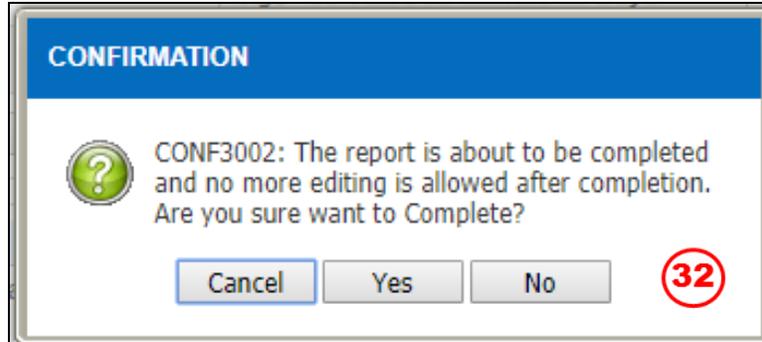
Figure 3.2.1-20 Confirmation Alert Message

STEP 32

Click on the [Yes] 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* [MTAC Order] *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).*
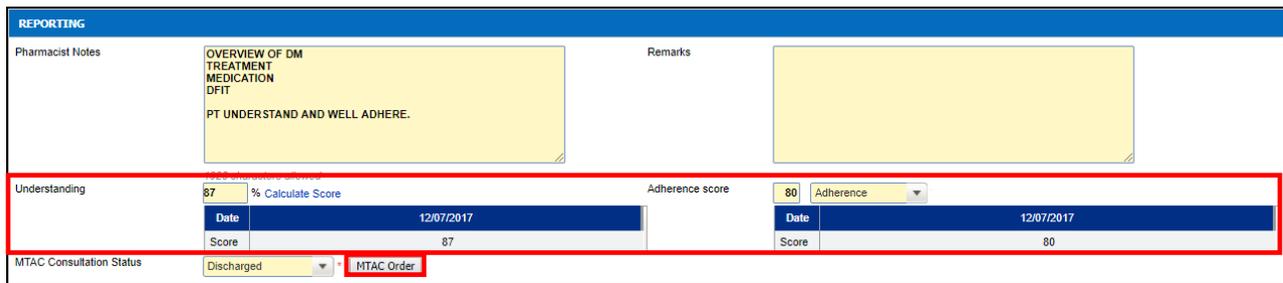
Figure 3.2.1-21 Confirmation Alert Message

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	Diagnosis	: FEVER, DIABETES MELLITUS, DIABETES MELLITUS, severe pneumonia, severe pneumonia
MRN	: HPSF00186555	Allergy	: No Known Allergies
ID No	:	Number of MTAC Visit	: 1
Type of MTAC	: Diabetes Mellitus	MTAC Visit Date	: 12/07/2017

Assessment:

Social History	Smoking	: No	Family History	No of children	: 2
	Alcohol Intake	: No		Family history of illness	: DM, HPT
	Drug Abuse	: No			
	Pregnancy	: No		Lives with	: Family Members
	Diet & Lifestyle	: PASSIVE			

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: _____ i   **Date:** 19/07/2017

Figure 3.2.1-23 MTAC Printed Report

3.2.2 Other Tabs

Lab Parameter

Figure 3.2.2-1 MTAC Reporting Screen

STEP 1

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

Figure 3.2.2-2 Lab Parameter Screen

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

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 Add/Update button and **Result List** will be updated as per Figure 3.2.2-4

Figure 3.2.2-4 Lab Parameter Screen

STEP 6
Click on the 💾 button to save the record
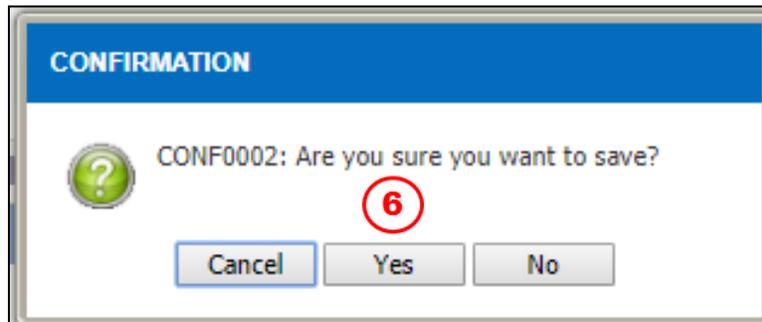
Figure 3.2.2-5 Confirmation Alert Message

STEP 6
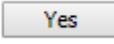
Click on the [Yes] button to confirm
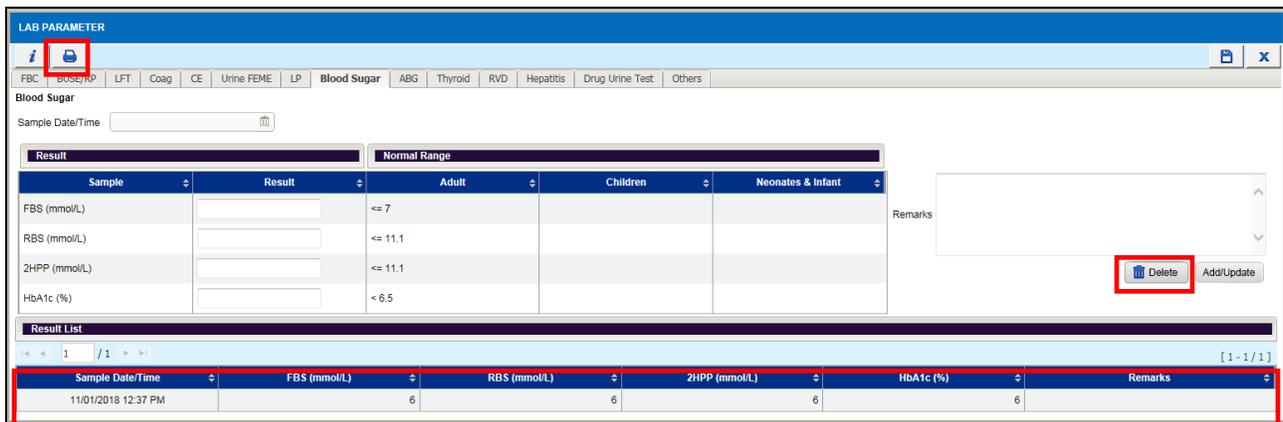
Figure 3.2.2-6 Lab Parameter Screen

Note

- *To delete the record, double click the Result List and click the* [🗑 Delete] *button.*
- *To print the lab report, click on the* [🖨] *button as per Figure 3.2.2-6*
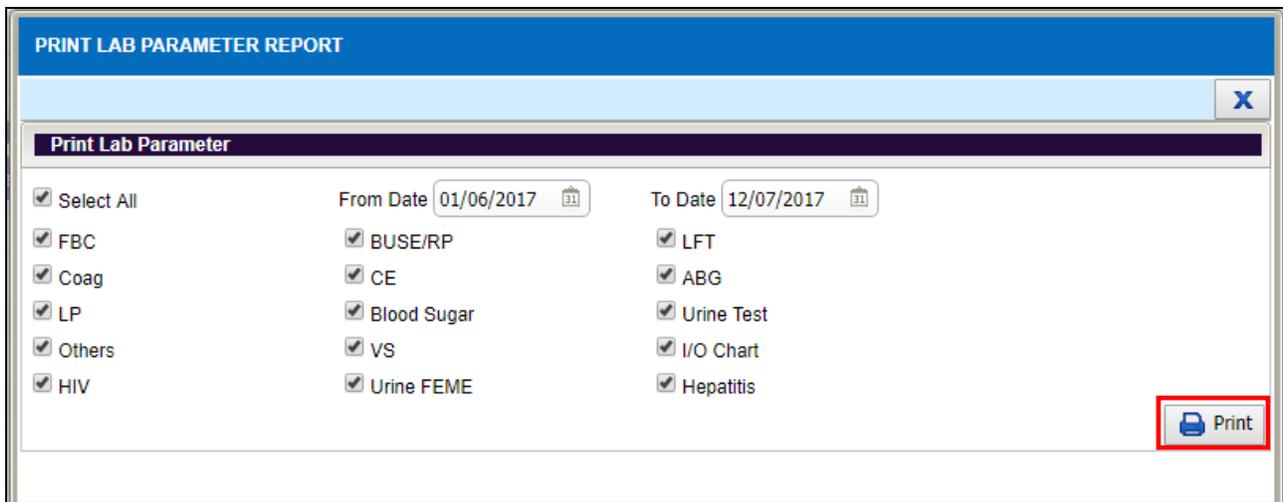
Figure 3.2.2-7 Print Lab Parameter Report

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

CONFIRMATION

❓ CONF0112: Do you want to print the Lab Parameter?

Cancel   Yes   No
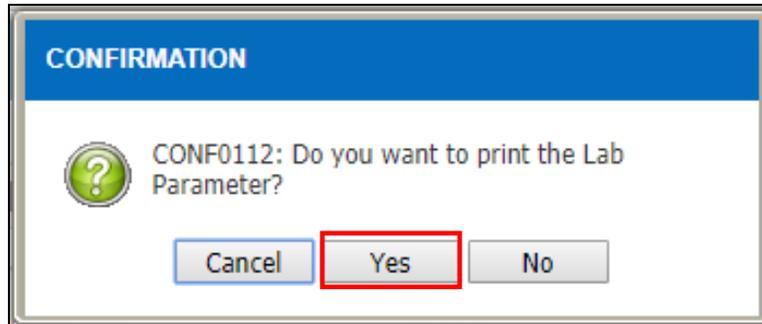
Figure 3.2.2-8 Confirmation Alert Message
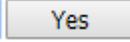
- Click the Yes button to confirm and the system will show the Lab Parameter Report as per Figure 3.2.2-9

KEMENTERIAN KESIHATAN MALAYSIA   Lab Parameter
LAB PARAMETER REPORT
Hospital Pakar Sultanah Fatimah, Muar

PATIENT NAME : PT TEST		IC NO :	AGE : 68 Years 03 Months 25 Days
MRN NO : HPSF00186555		Weight/Height : Kg / Cm	GENDER : Female
WARD/BED : KLINIK PAKAR PERUBATAN /		ADMISSION DATE : 12/07/2017	REASON FOR ADMISSION :

BUSE/RP

Sample Date\Type	Urea	Na	K	SrCr	CrCl	Cl	Ca	Mg	PO4-	Remarks

Coag

Sample Date\Type	PT	APTT	INR	Remarks
26/06/2017	13	28	1.2	All Normal

Blood Sugar

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

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

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*
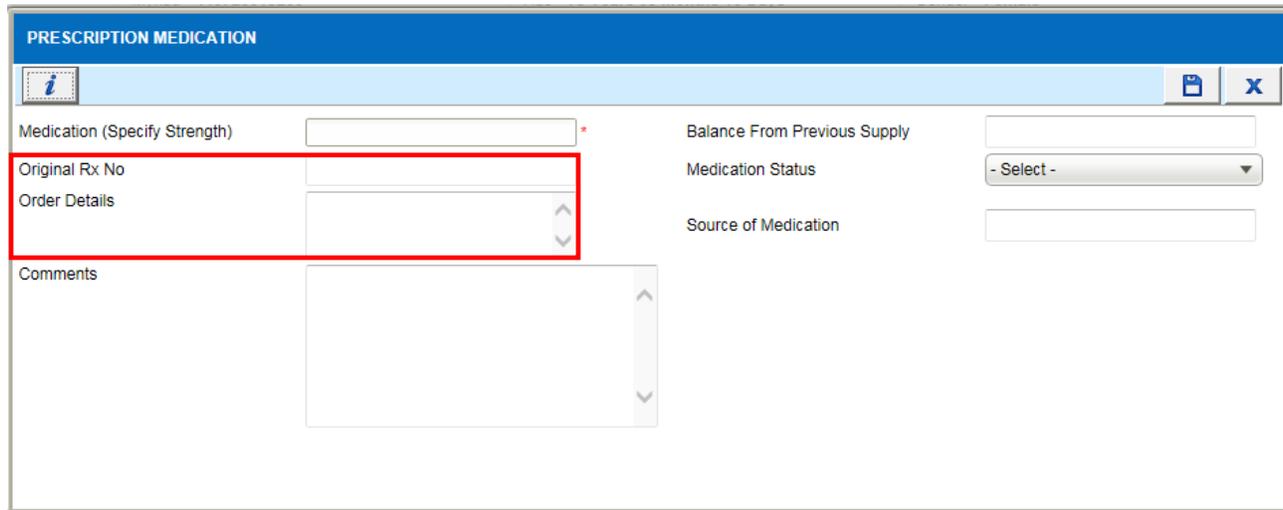
Figure 3.2.2-12 Prescription Medication

STEP 3
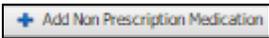
Click on the [+ Add Non Prescription Medication] button and the 'Non-Prescription Medication' window will be displayed as shown in Figure 3.2.2-13. Enter the necessary information and save

Note

Past Medication History:
- *Non-Prescription Medication.*
  - *User can add any none prescription medication that has been taken by patient in system*
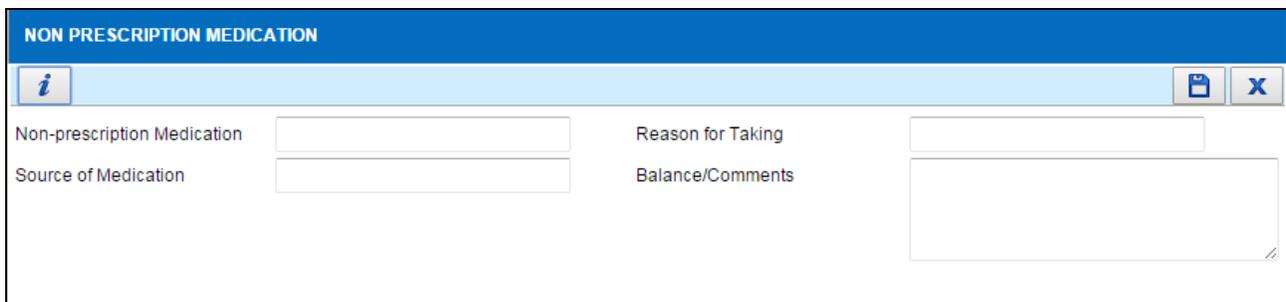
Figure 3.2.2-13 Non-Prescription Medication

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

Figure 3.2.2-15 CP4 Screen

STEP 1

Click on the [CP4] button to enter the details
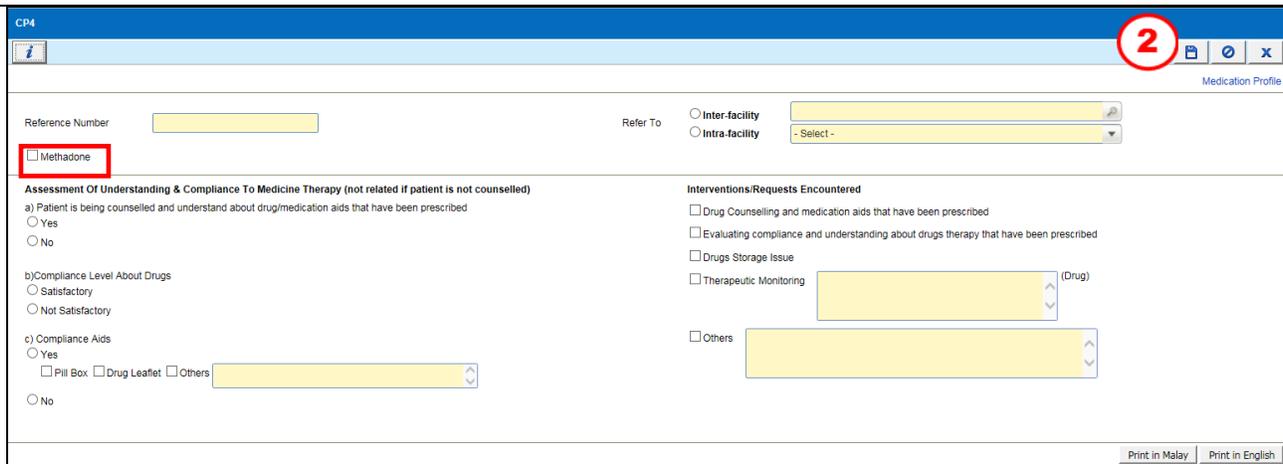
Figure 3.2.2-16 CP4 Assessment Of Understanding & Compliance Screen

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***

Figure 3.2.2-17 CP4 – Methadone Screen

STEP 2

Click on the 🖫 button to save the record
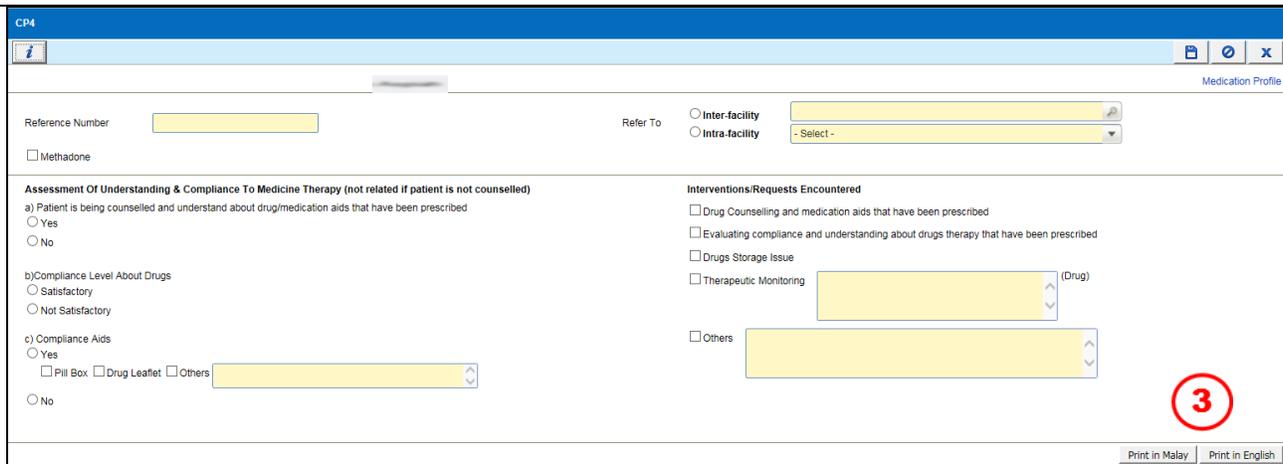
Figure 3.2.2-18 CP4 Print Report

STEP 3

Click on the Print in Malay or Print in English to print the CP4 as per Figure 3.2.2-18
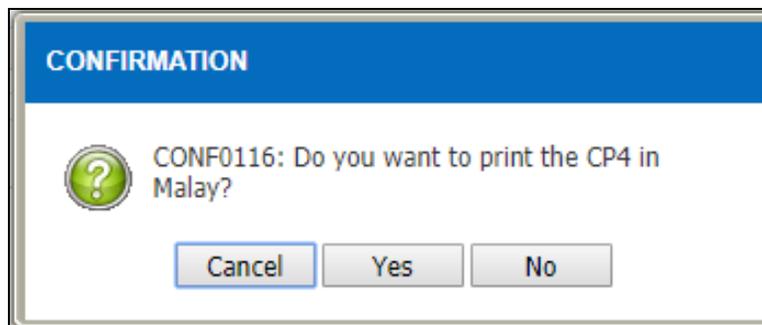
Figure 3.2.2-19 Confirmation Alert Message
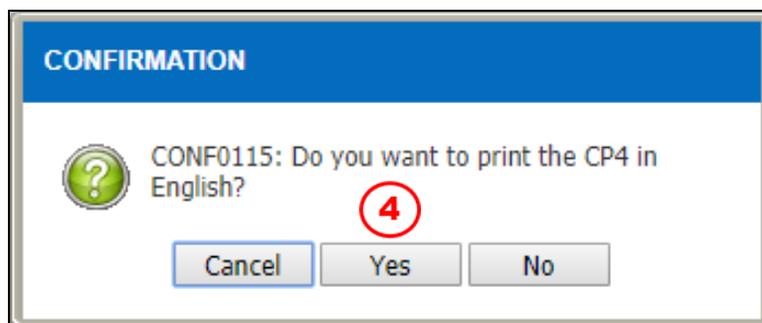
Figure 3.2.2-20 Confirmation Alert Message

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 **Pharmaceutical Care Issue** button and the system will show Figure 3.2.2-22

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.
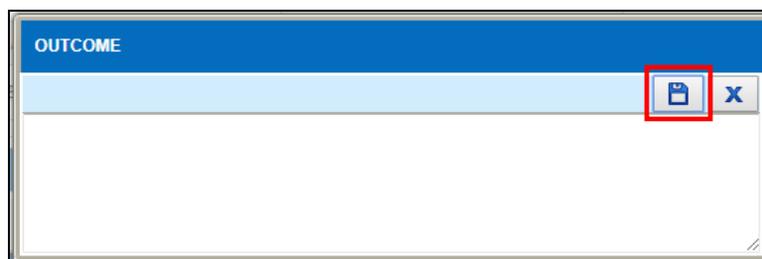
Figure 3.2.2-24 Outcome Screen

STEP 3

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

Figure 3.2.2-25 Other Issues Screen

STEP 4

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

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 **Checklist** ☐ *checkbox and click the* 🗑 Delete *button to delete the intervention record.*
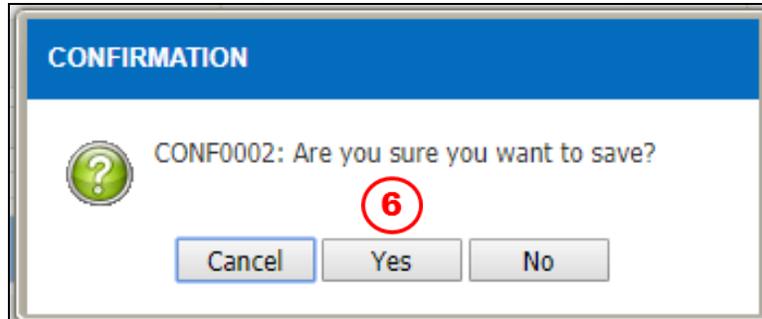
Figure 3.2.2-27 Confirmation Alert Message

STEP 6
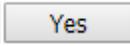
Click on the Yes button to confirm
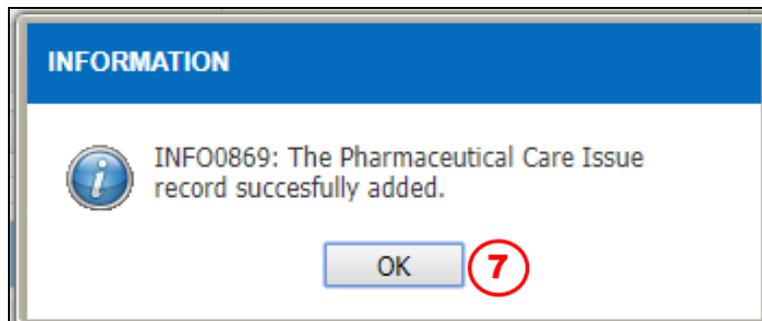
Figure 3.2.2.28 Information Alert Message

STEP 7
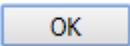
Click on the OK button

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.
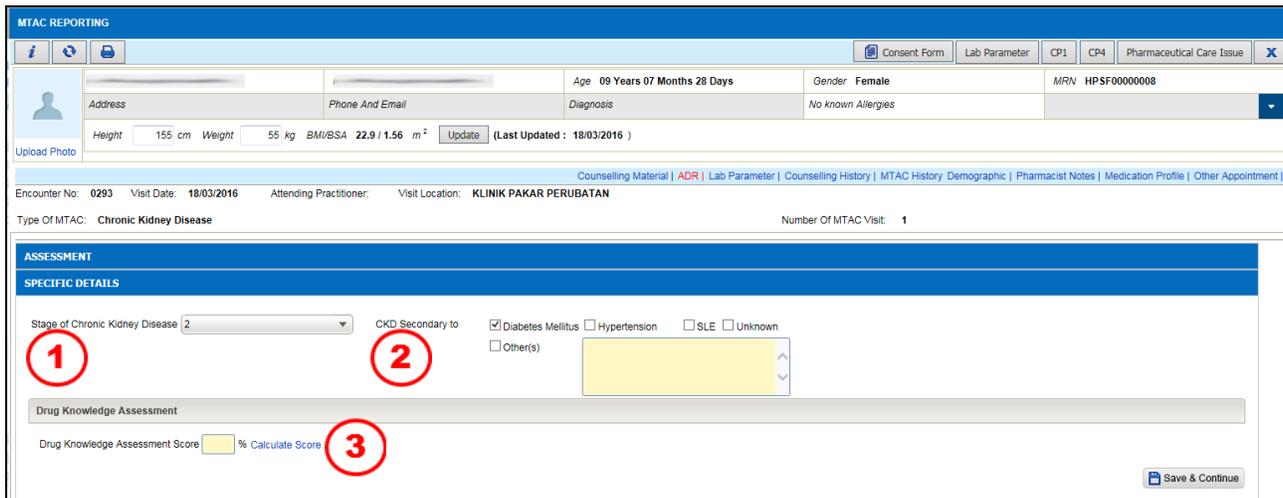
Figure 3.2.3.1-1 Specific Details – Chronic Kidney Disease

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:
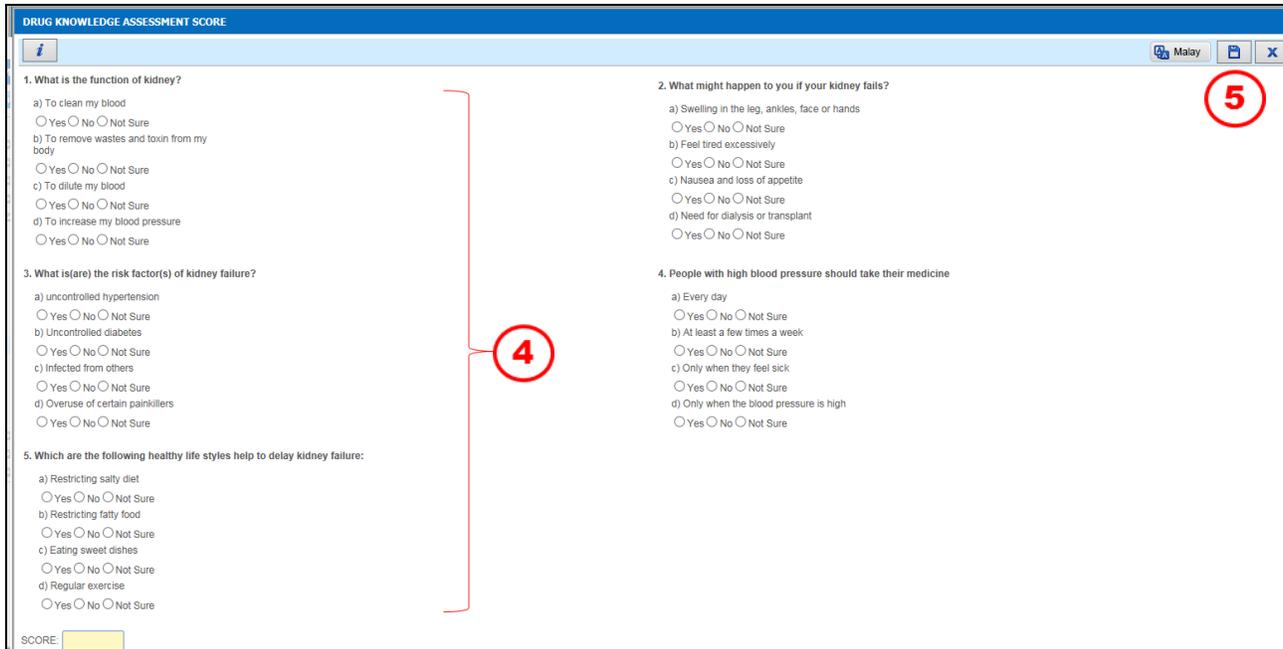
1. **What is the function of kidney?**

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* [Malay] *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 [Yes] button to confirm save record
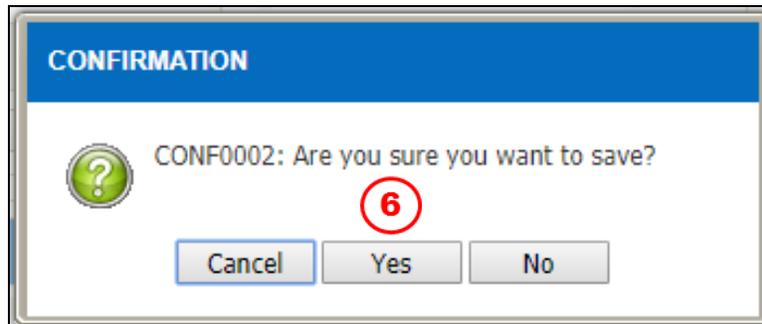
Figure 3.2.3.1-3 Confirmation Alert Message

STEP 7

Click on the [Save & Continue] button as shown in Figure 3.2.3.1-4 to save and continue with reporting section

Figure 3.2.3.1-4 Specific Details – Chronic Kidney Disease

STEP 8

Click on the [Yes] button to confirm save record
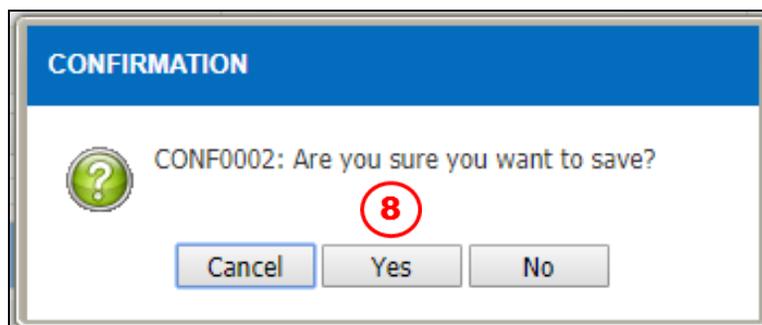
Figure 3.2.3.1-5 Confirmation Alert Message

STEP 9

Click on the [OK] button to confirm record
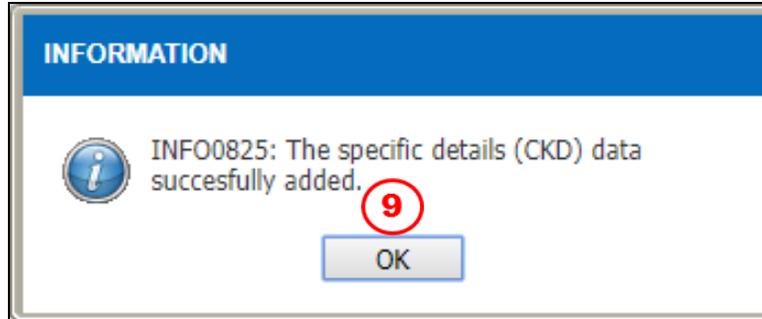
Figure 3.2.3.1-6 Information alert message

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

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   `Assessment Form For Diabetes Mellitus`   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*

Figure 3.2.3.2-2 Diabetes Mellitus Assessment

STEP 3

Click on the [icon] button to save the answered question(s)
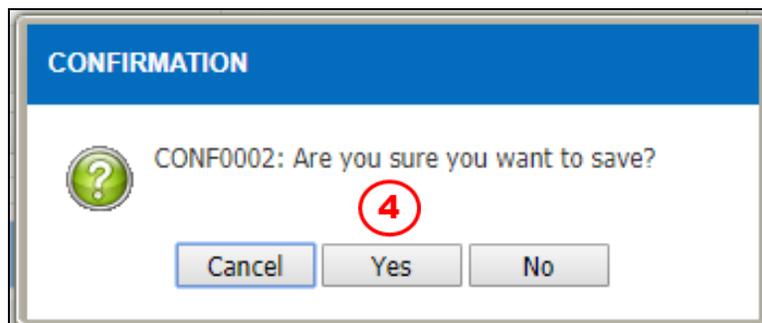
Figure 3.2.3.2-3 Confirmation Alert Message

STEP 4

Click on the [Yes] button to confirm save record

INFORMATION

INFO3296: The specific details (Diabetes Mellitus) data succesfully added.

OK (5)
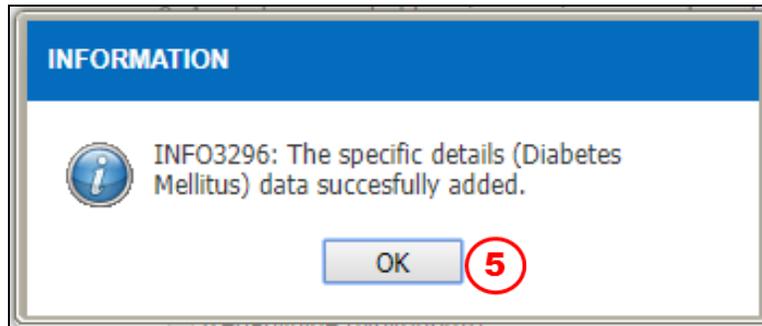
Figure 3.2.3.2-4 Information Alert Message

STEP 5

Click on the [OK] 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

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

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* [Malay] *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)
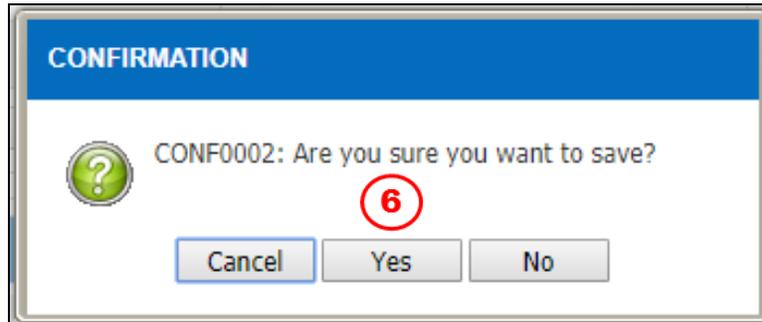
Figure 3.2.3.3-3 Confirmation Alert Message

STEP 6

Click on the [Yes] button to confirm save record

STEP 7

Click on the [Save & Continue] button as shown in Figure 3.2.3.3-1 to save and continue with reporting section
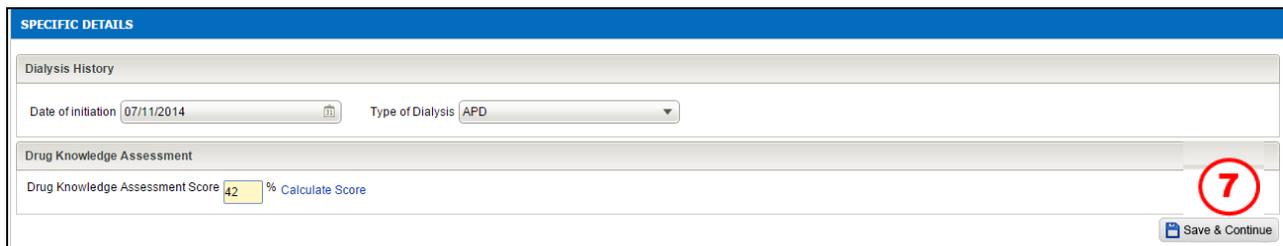
STEP 8

Click on the [Yes] button to confirm save record
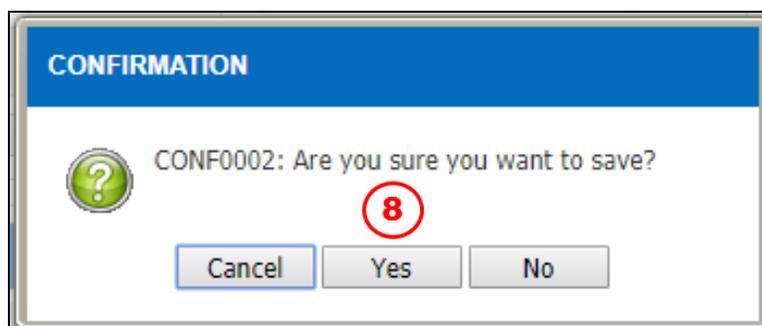
Figure 3.2.3.3-4 Confirmation Alert Message

STEP 9

Click on the [OK] button to confirm record
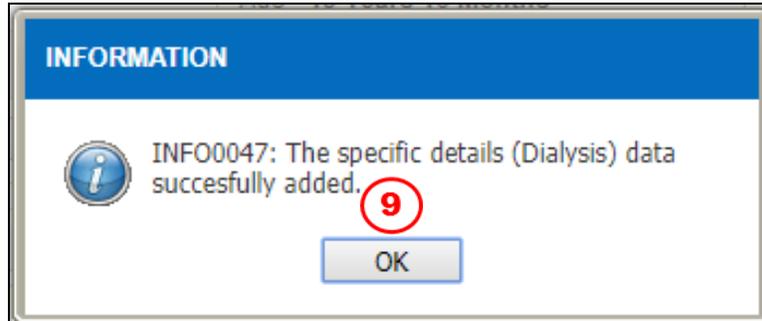
Figure 3.2.3.3-5 Information alert message

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

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.*
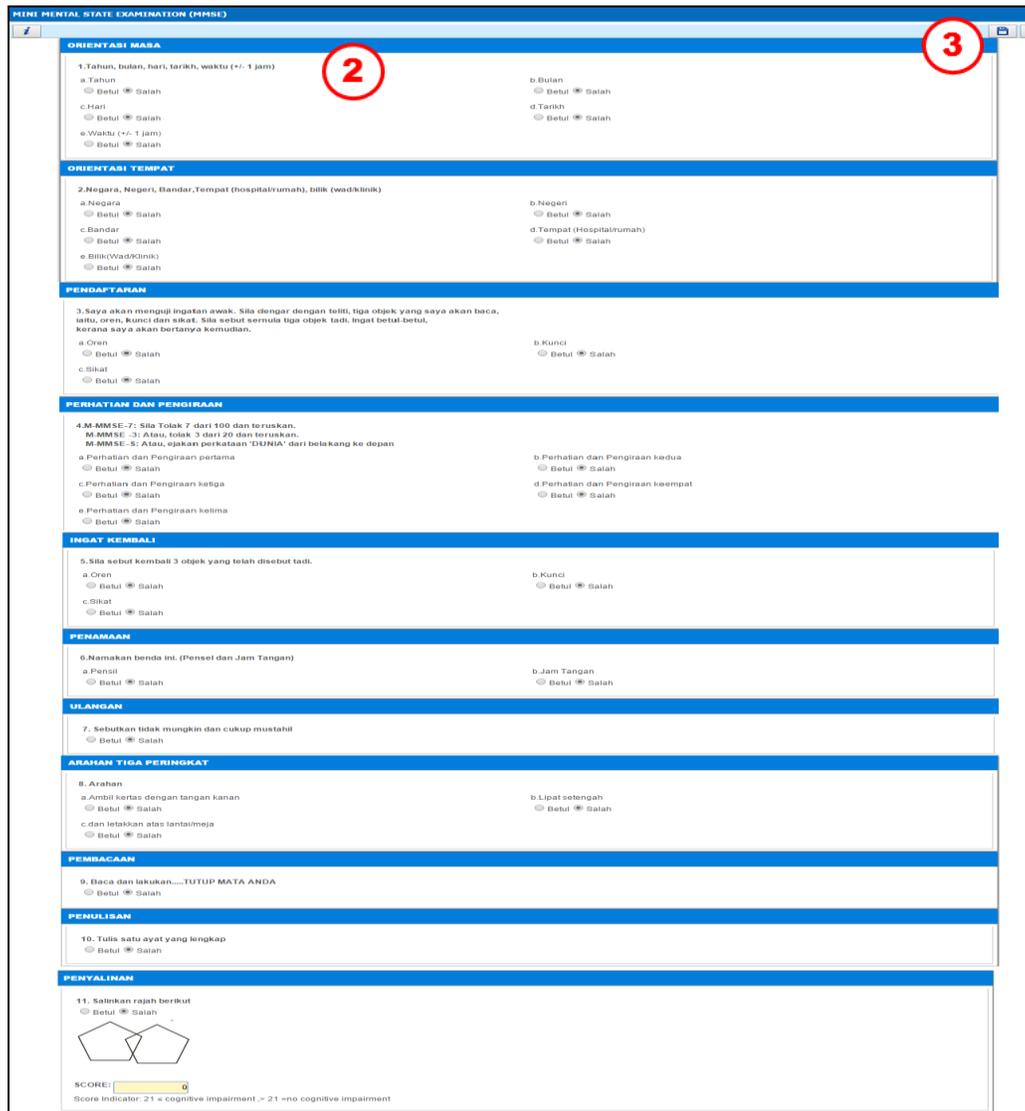
Figure 3.2.3.4-2 Mini Mental State Examination (MMSE)

STEP 3

Click on the ![save] button to save the answered questions(s)

STEP 4

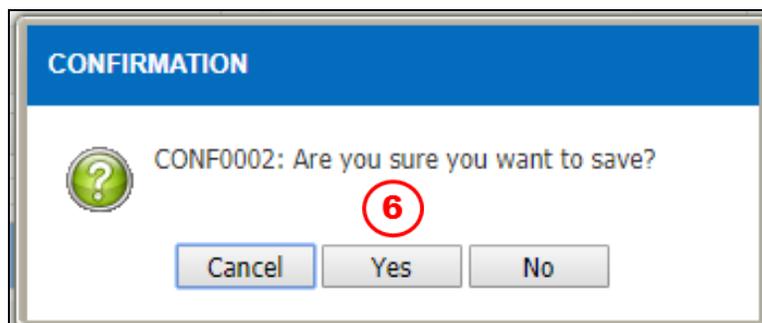Click on the ![Yes] button to confirm save record
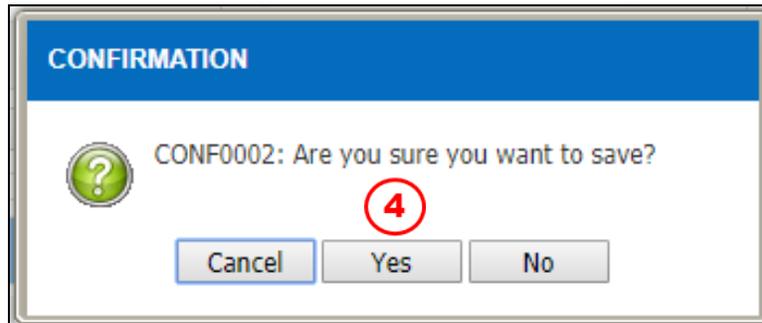
Figure 3.2.3.4-3 Confirmation Alert Message

STEP 5

Click on the [Save & Continue] 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 [Yes] button to confirm save record

Figure 3.2.3.4-5 Confirmation Alert Message
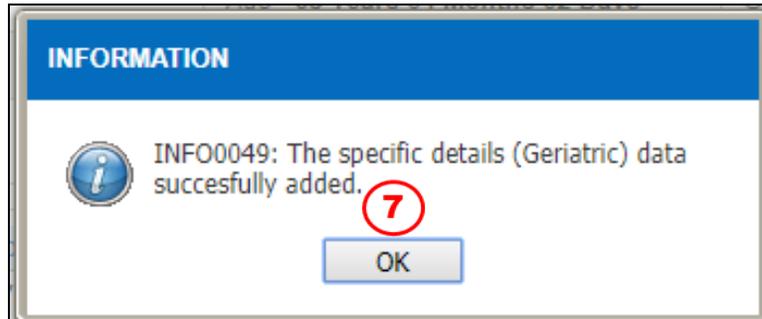
STEP 7

Click on the [OK] 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

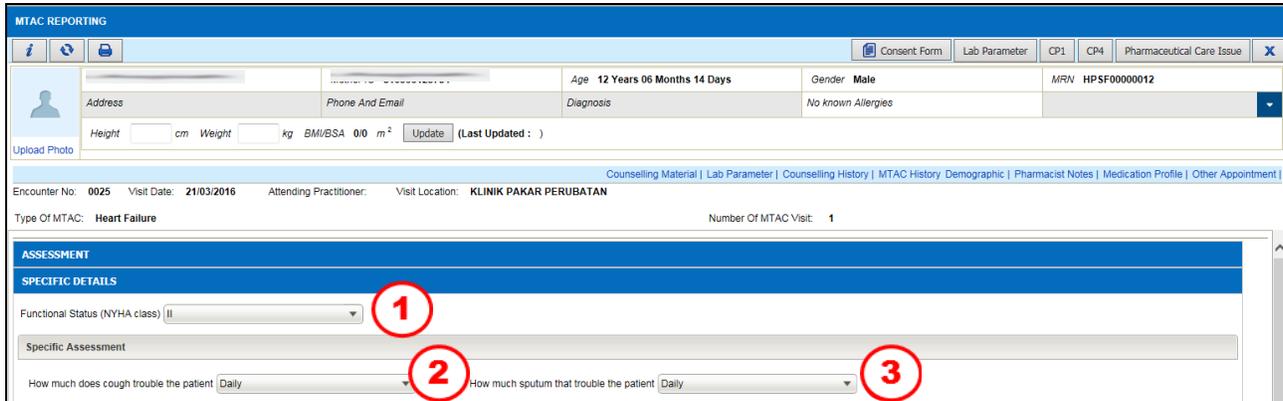This function allow user to record Specific Details for Heart Failure for MTAC patient.

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
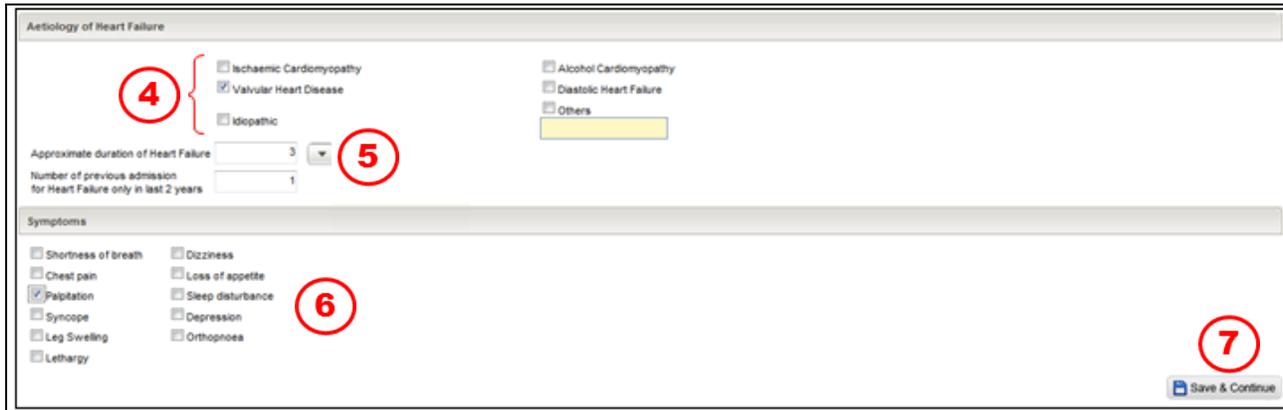
- I
- II
- III
- IV

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

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 [Save & Continue] button as shown in Figure 3.2.3.5-1 to save and continue with reporting section

STEP 8
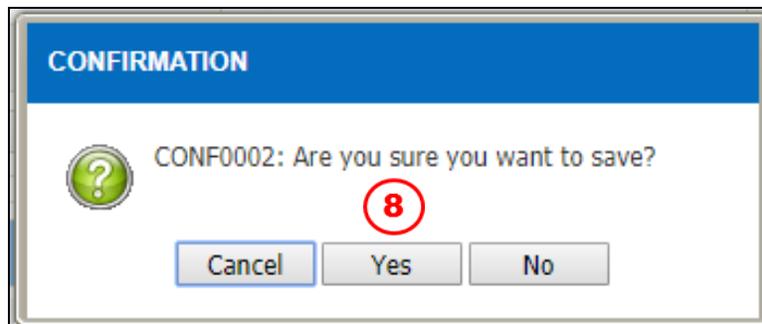
Click on the [Yes] button to confirm save record

Figure 3.2.3.5-3 Confirmation Alert Message

STEP 9

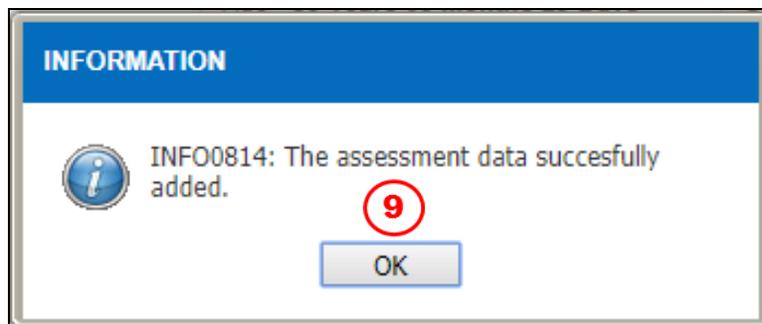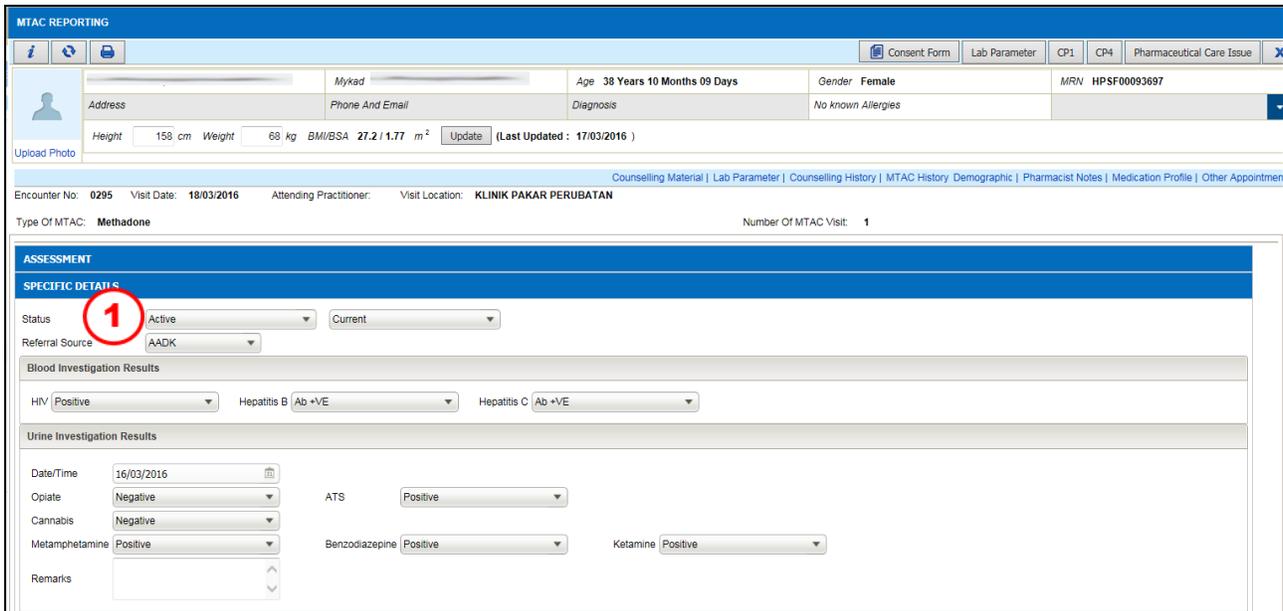Click on the [OK] button to confirm record

Figure 3.2.3.5-4 Information Alert Message

<u>***Note***</u>

*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

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.*

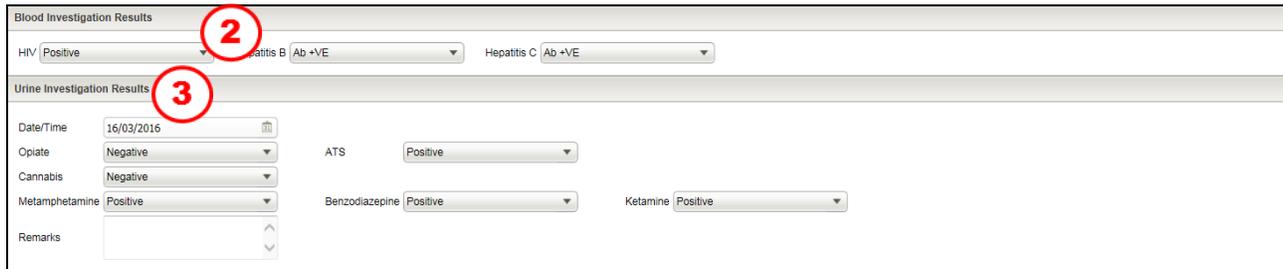**Blood Investigation Results**

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

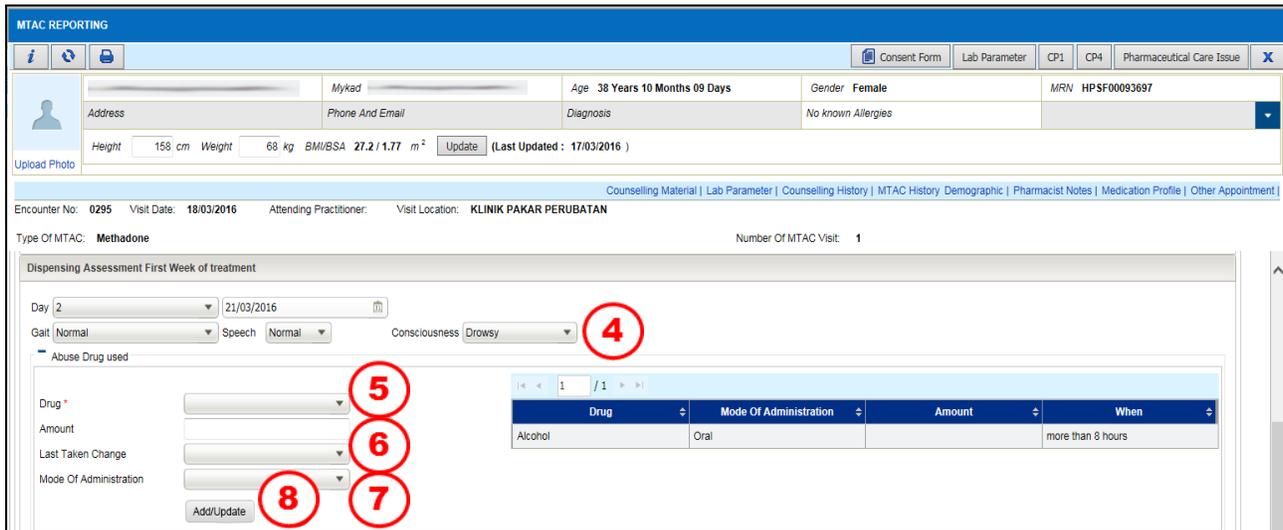Click on the 🗓 button to select *sample **Date/Time.***

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

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
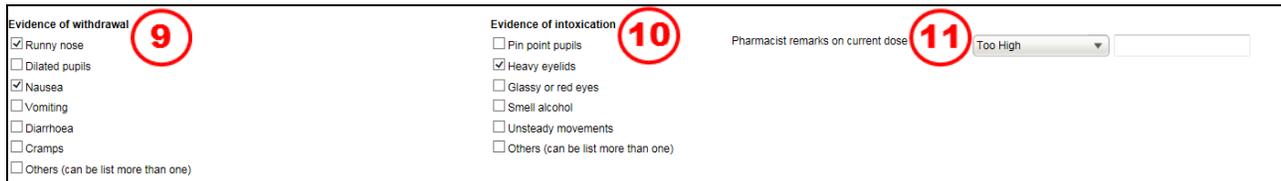- Past 8 hours
- More than 8 hours

STEP 7

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

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

STEP 8

Click on the [Add/Update] button to add drug information on the list.

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
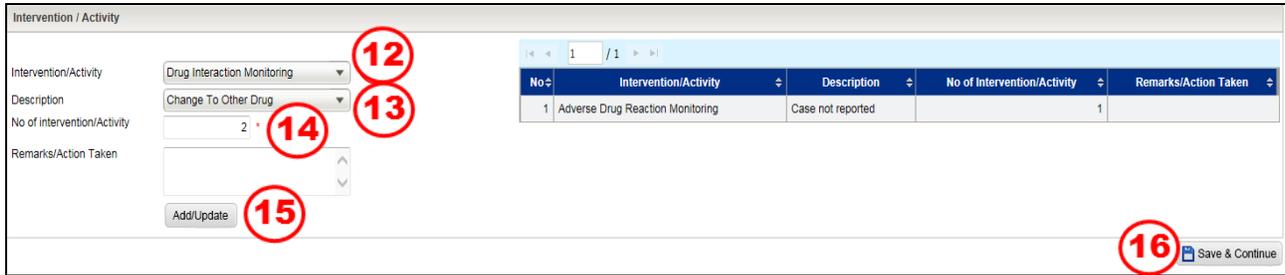
- Unsteady movements

- 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

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 [Add/Update] button to add drug information on the list

STEP 16

Click on the [Save & Continue] button to save and continue with reporting record

STEP 17
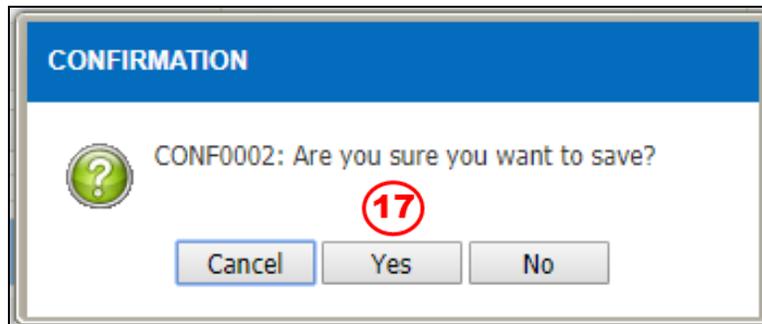
Click on the [Yes] button to confirm save order

Figure 3.2.3.6-6 Confirmation Alert Message

STEP 18

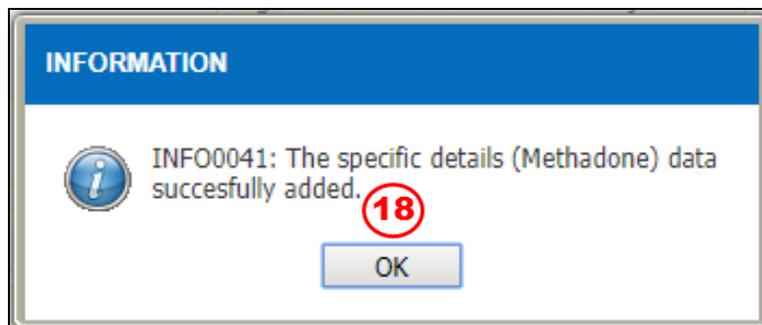Click on the [OK] button to add record

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

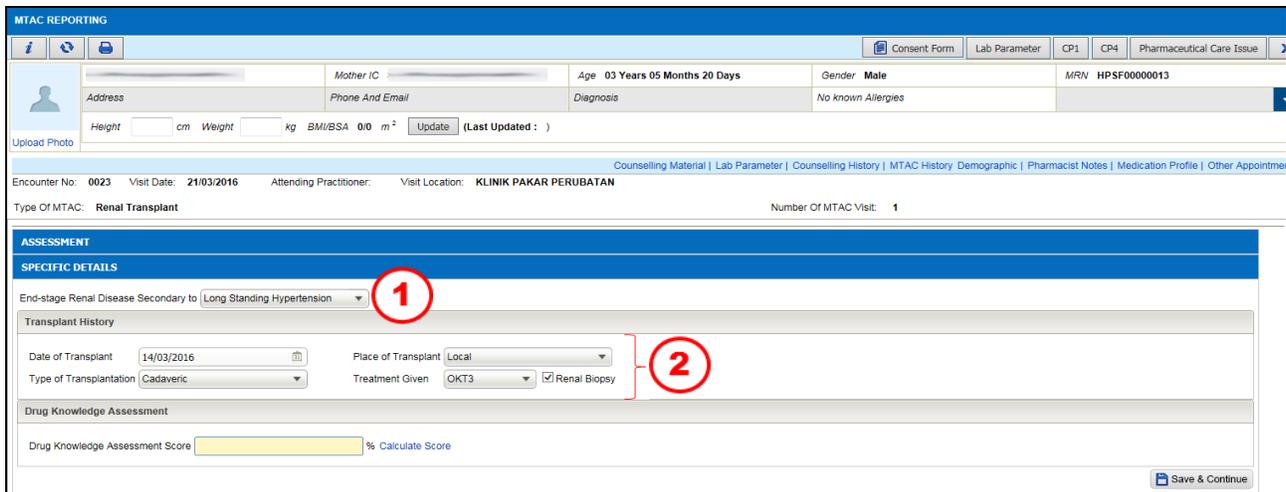This function allow user to record Specific Details for Renal Transplant for MTAC patient.

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*** *fr*om the drop down box

- Long Standing Hypertension

- Diabetic Nephropathy

- Lupus Nephritis

- Unknown

Transplant History

STEP 2

Click on the [icon] 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

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* Malay *button to view in Malay language.*

- *Score will be automatically calculated and automatically displayed*

STEP 5

Click on the button to save record

REVIEW OF PATIENT'S UNDERSTANDING (MEDICATION) DFIT

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
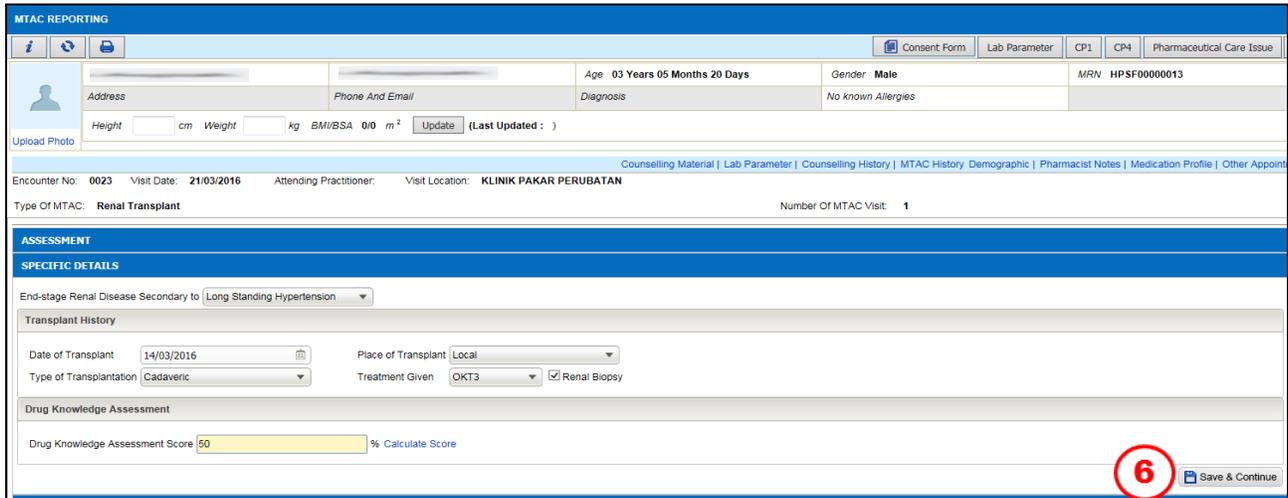○ Yes ○ No ○ Not Sure

c) Take supplement and stop immunosuppressant
○ Yes ○ No ○ Not Sure

SCORE: 0

Figure 3.2.3.7-3 Drug Knowledge Assessment

STEP 6

Click on the [Save & Continue] button as shown in Figure 3.2.3.7-4 to save and continue with reporting section

Figure 3.2.3.7-4 Specific Details - Renal Transplant

STEP 7
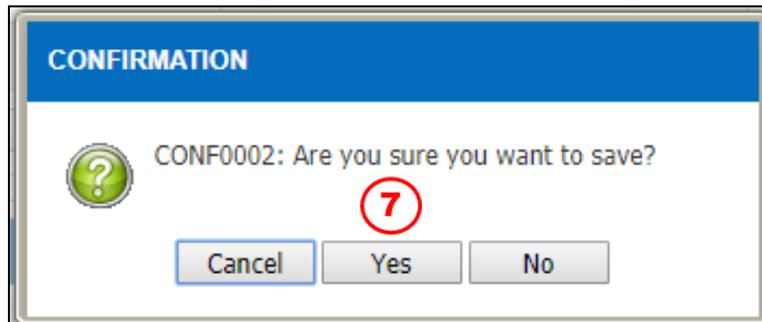
Click on the [Yes] button to confirm save record

Figure 3.2.3.7-5 Confirmation Alert Message

STEP 8
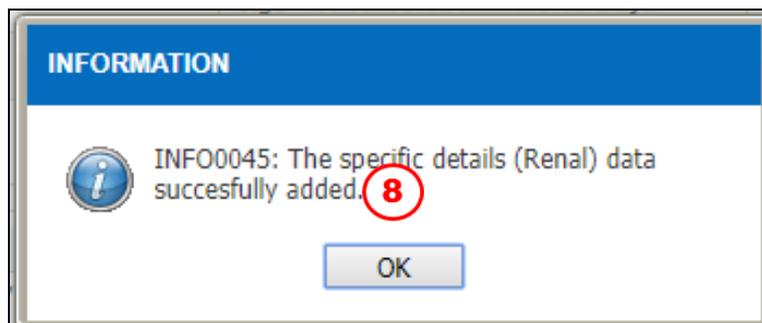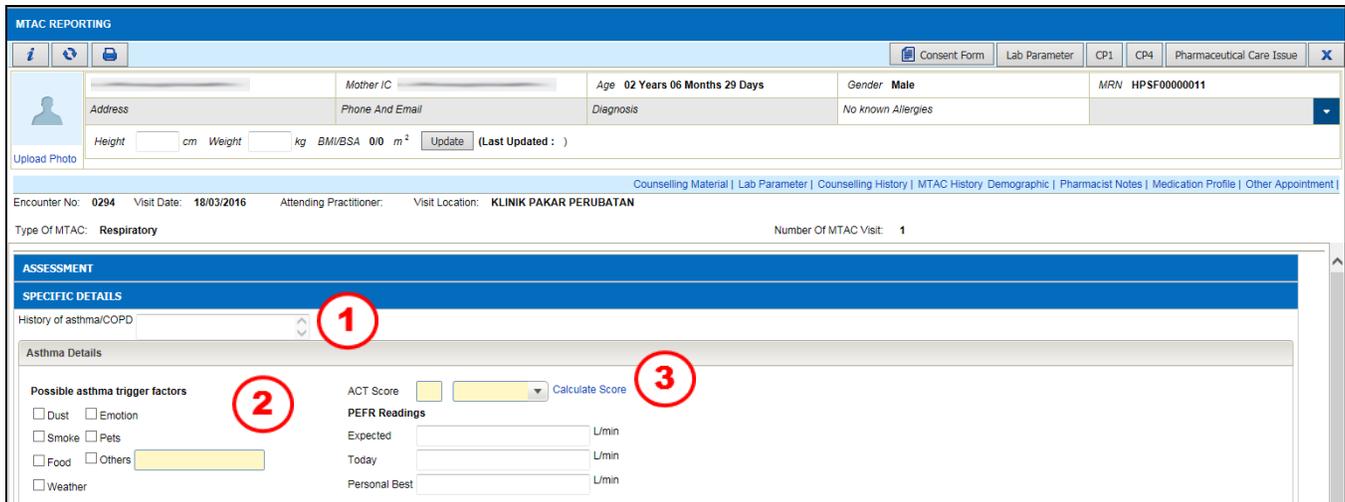
Click on the [OK] button to confirm record

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

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
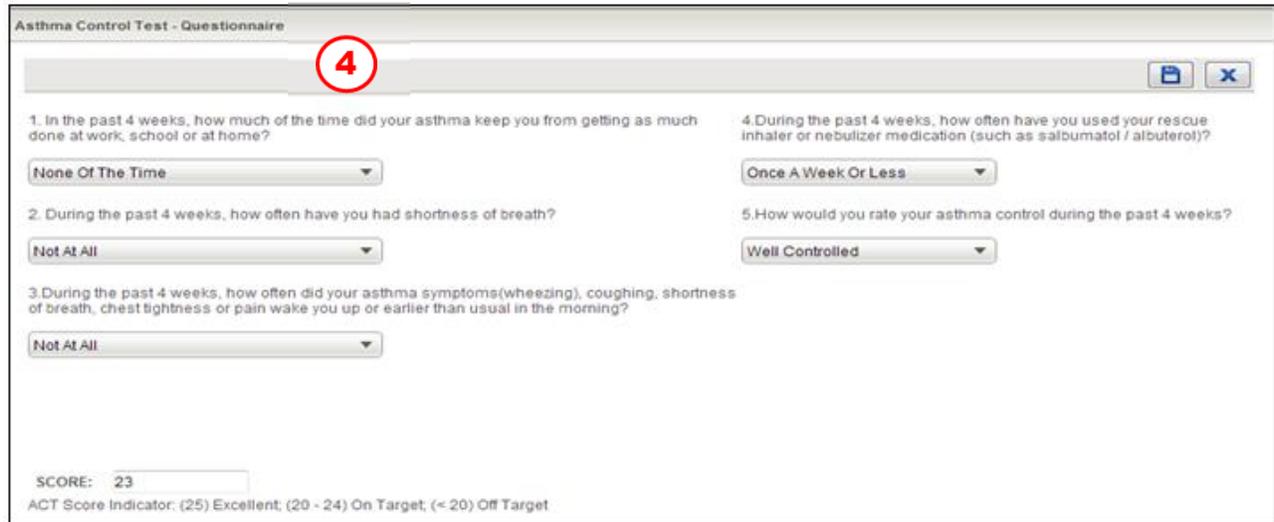
Note

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

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

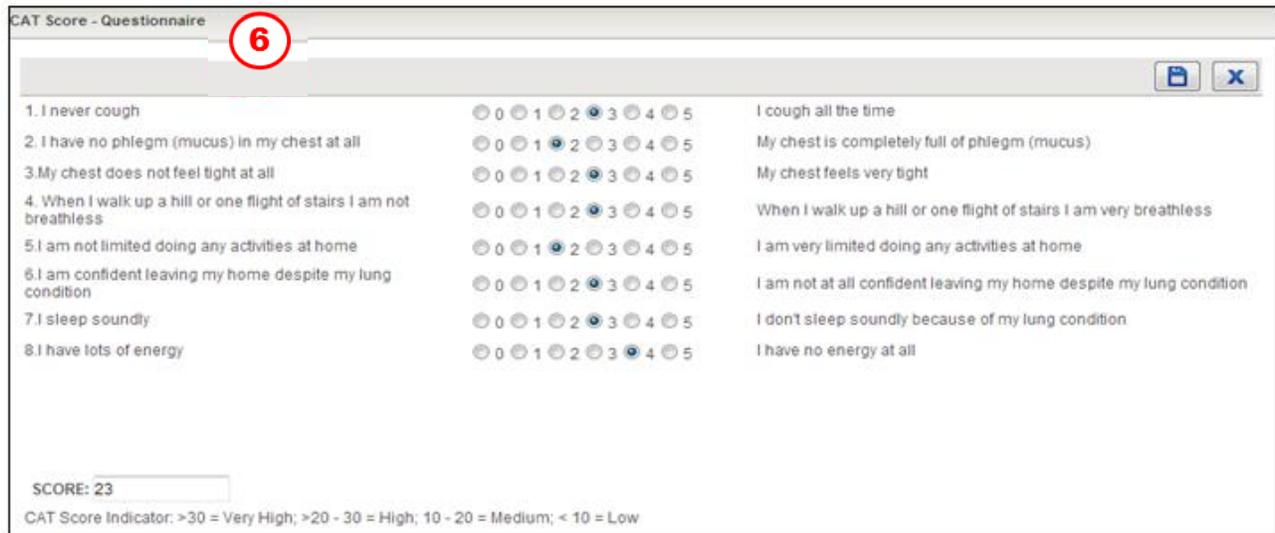**Figure 3.2.3.8-3 Specific Details – COPD Details**

STEP 6

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

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:**

a) MDI Score
b) Turbuhaler Score
c) Accuhaler Score
d) Handihaler Score
e) MDI and Spacer Score

Figure 3.2.3.8-5 Inhaler Technique Understanding

STEP 8

Click on the [Save & Continue] button as shown in Figure 3.2.3.8-5 to save and continue with reporting section

STEP 9
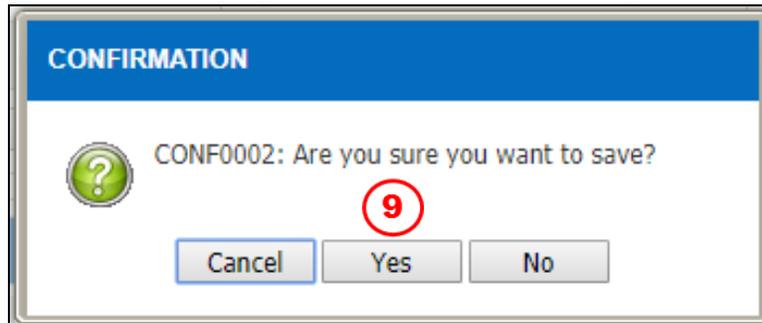
Click on the [Yes] button to confirm save order

Figure 3.2.3.8-6 Confirmation Alert Message

STEP 10

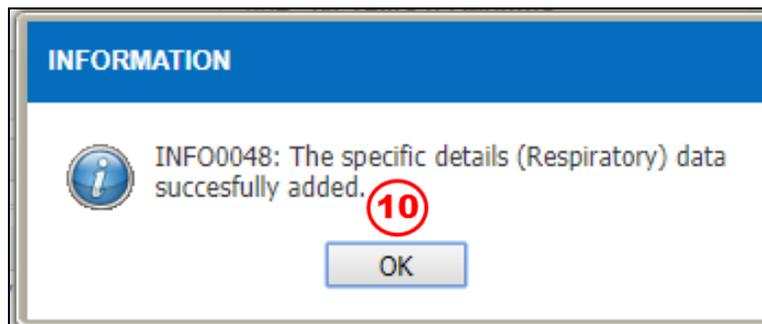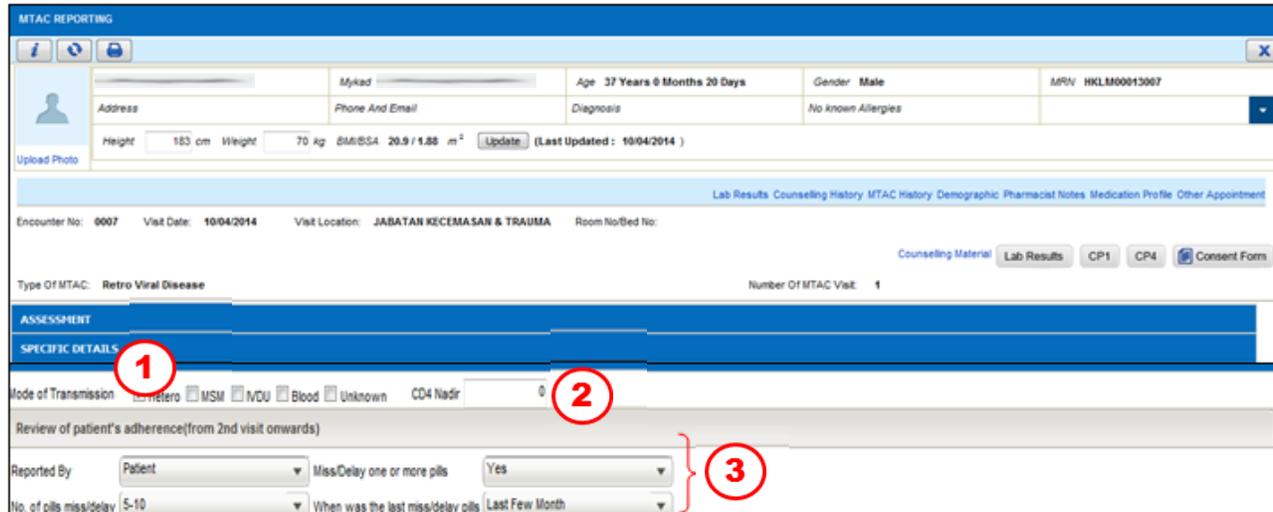Click on the [OK] button to confirm record

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 Vital Disease for MTAC patients.

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
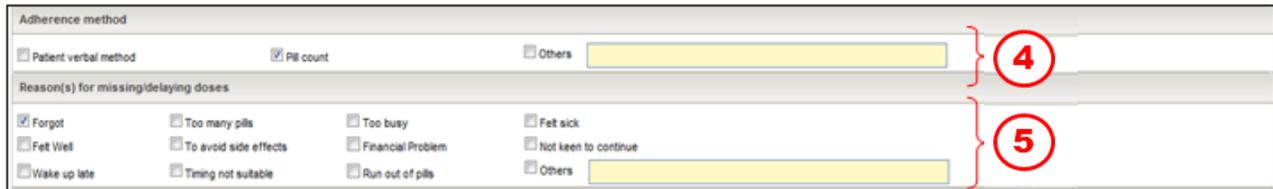
Figure 3.2.3.9-2 Specific Details - Retro Viral Disease

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

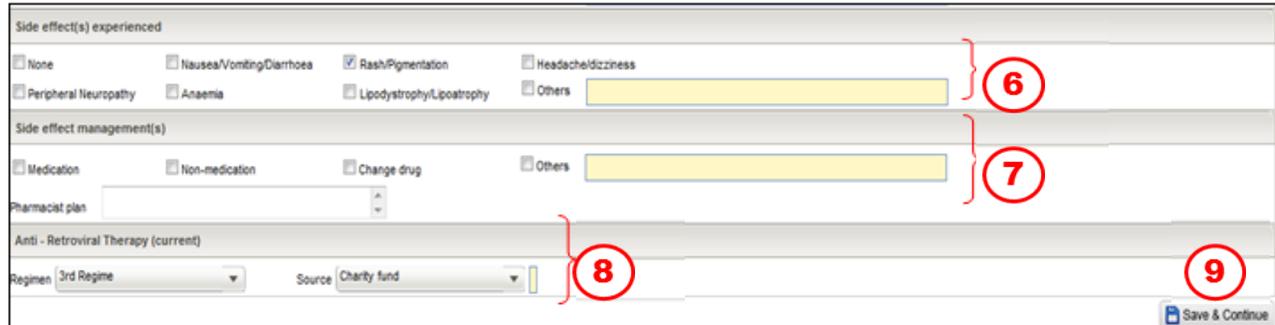*Blank field will be enabled if user selects 'Others' from the check box.*

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
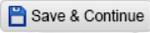
- 1st line

- 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 [Save & Continue] button as shown in Figure 3.2.3.9-3 to save and continue with reporting section

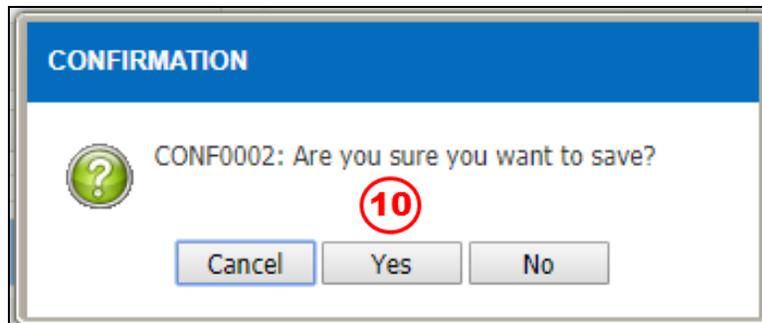**STEP 10**

Click on the [Yes] button to confirm save record

Figure 3.2.3.9-4 Confirmation Alert Message

STEP 11
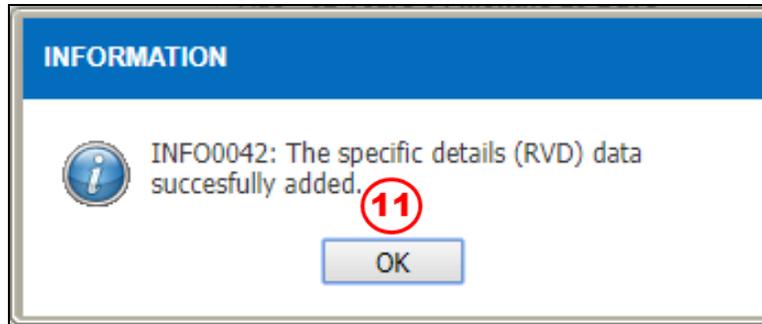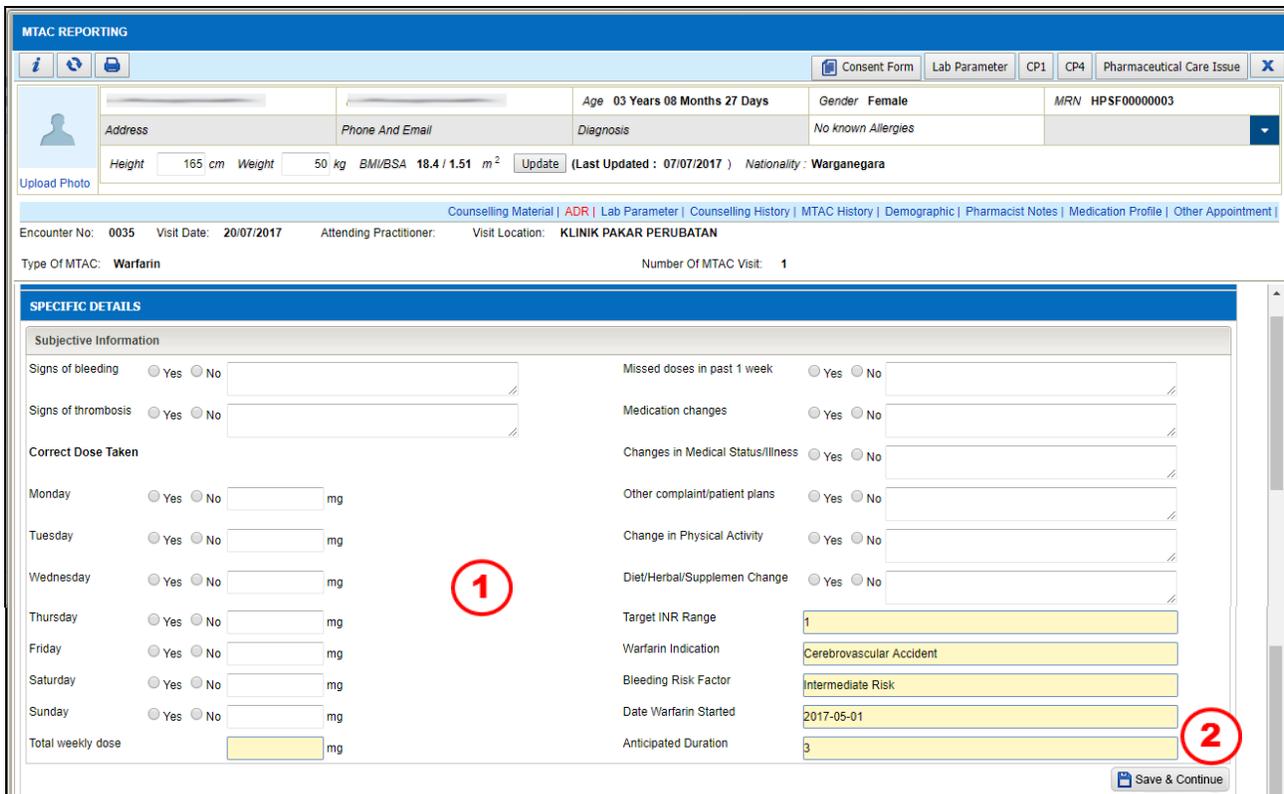Click on the [OK] button to confirm record

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.

Figure 3.2.3.10-1 Specific Details - Warfarin

<u>Note</u>

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 [Save & Continue] button to save and continue with reporting section

STEP 3

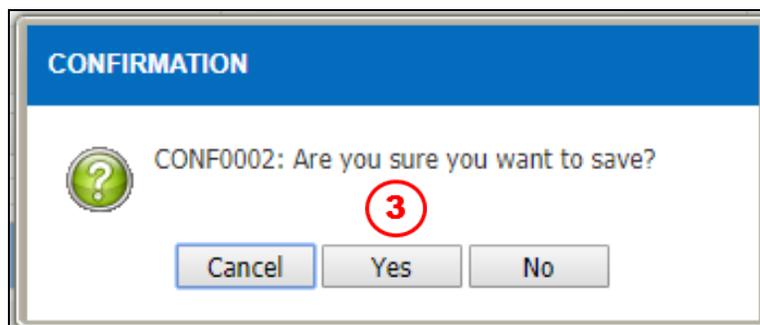Click on the [Yes] button to confirm save record

Figure 3.2.3.10-2 Confirmation Alert Message

STEP 4
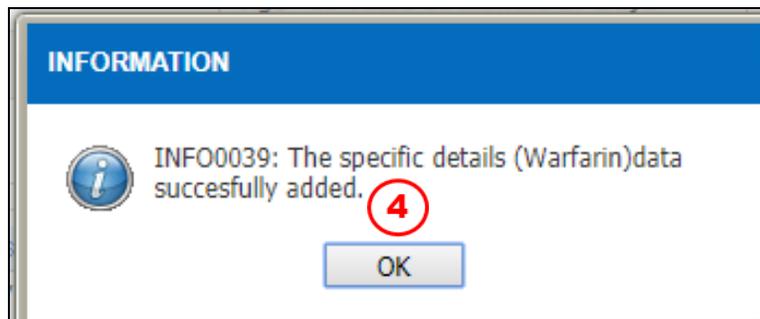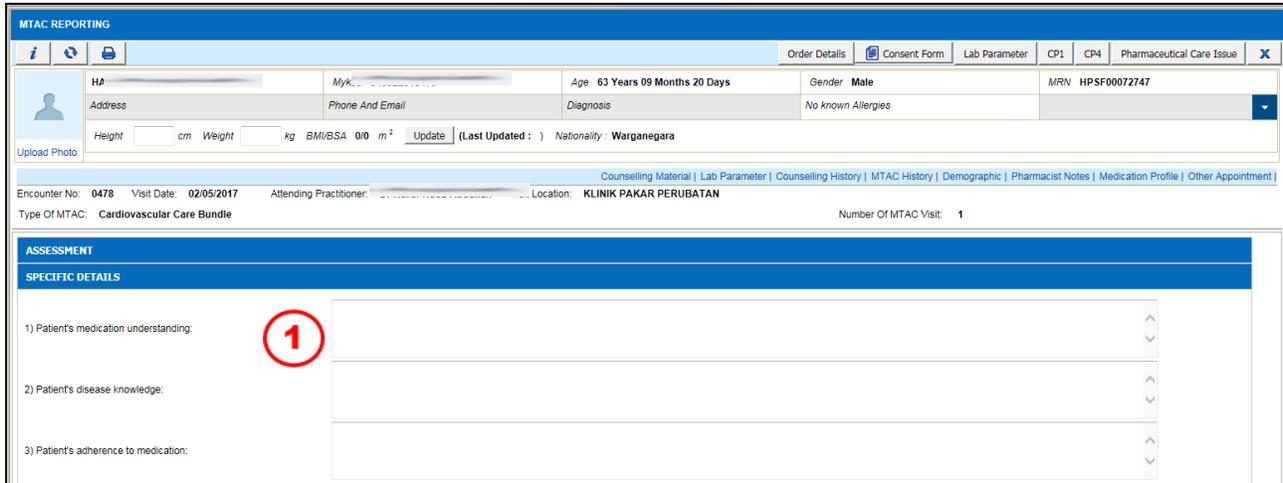
Click on the [OK] button to confirm record

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.

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		