



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

User Manual Parenteral Nutrition (PN)

Version : 13th Edition
Document ID : PB_U. MANUAL_PN



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Application reference: PhIS & CPS v2.6.1



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1.0 Introduction

1.1 Overview of Phis

Pharmacy Information System or better known as PhIS, is a complete and comprehensive system that integrates pharmacy related services geared towards pharmacy excellence. PhIS implementation would transform most of current manual process to electronic system would benefit facility end user in the health care sector.

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

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

1.2 Purpose and Objectives

This user manual outlines the Parenteral Nutrition module and its key features/functionality. The primary objective is to help guide user through the process of completing PhIS application process.

User will understand the following activities in details:

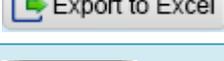
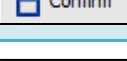
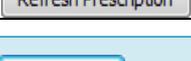
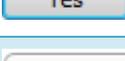
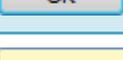
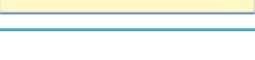
1.3 Organised Sections

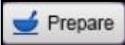
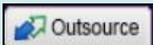
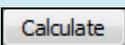
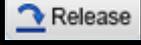
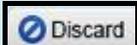
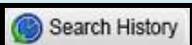
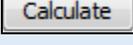
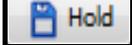
These are the sections within this document:

- Section 1 : Introduction
- Section 2 : Application Standard Features
- Section 3 : Parenteral Nutrition
- Section 4 : Acronyms

2.0 Application Standard Features

2.1 PhIS Legend

	Login to PhIS		Logout from PhIS
	Change Login Password		Reset Login Screen
	Expand Menu		Collapse Menu
	Display Home Tab		Expand Module
	Collapse Module		Close All Open Tabs
	Refresh Screen		Search Record
	Add/Create New Record		Show Help
	Print	*	Mandatory Field
	Calendar Icon		Search Icon
	Close Window		Radio Button
<input type="checkbox"/>	Checkbox		Edit Record
	Cancel		Delete Record
	Save		Export and Open Report in Excel Format
	Confirm Button		Delete Item from the list
	Refresh Prescription		Yes Button
	OK Button		Dropdown Box
	Automatically Display/Retrieve Box		Empty Text Box

Parenteral Nutrition Module Legend			
	Verification Prescription		Preparation Prescription
	Dispensing		Edit and Print Label
	Outsource Product		Calculate
	Generate Worksheet		Release Batch
	Discard Batch		Search History
	Nutritional Assessment		Cancel Button
	Calorie Calculator		Calculate
	Hold Button		Auto allocation
	Sent Outsource Request		

Note

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

3.0 Parenteral Nutrition (PN)

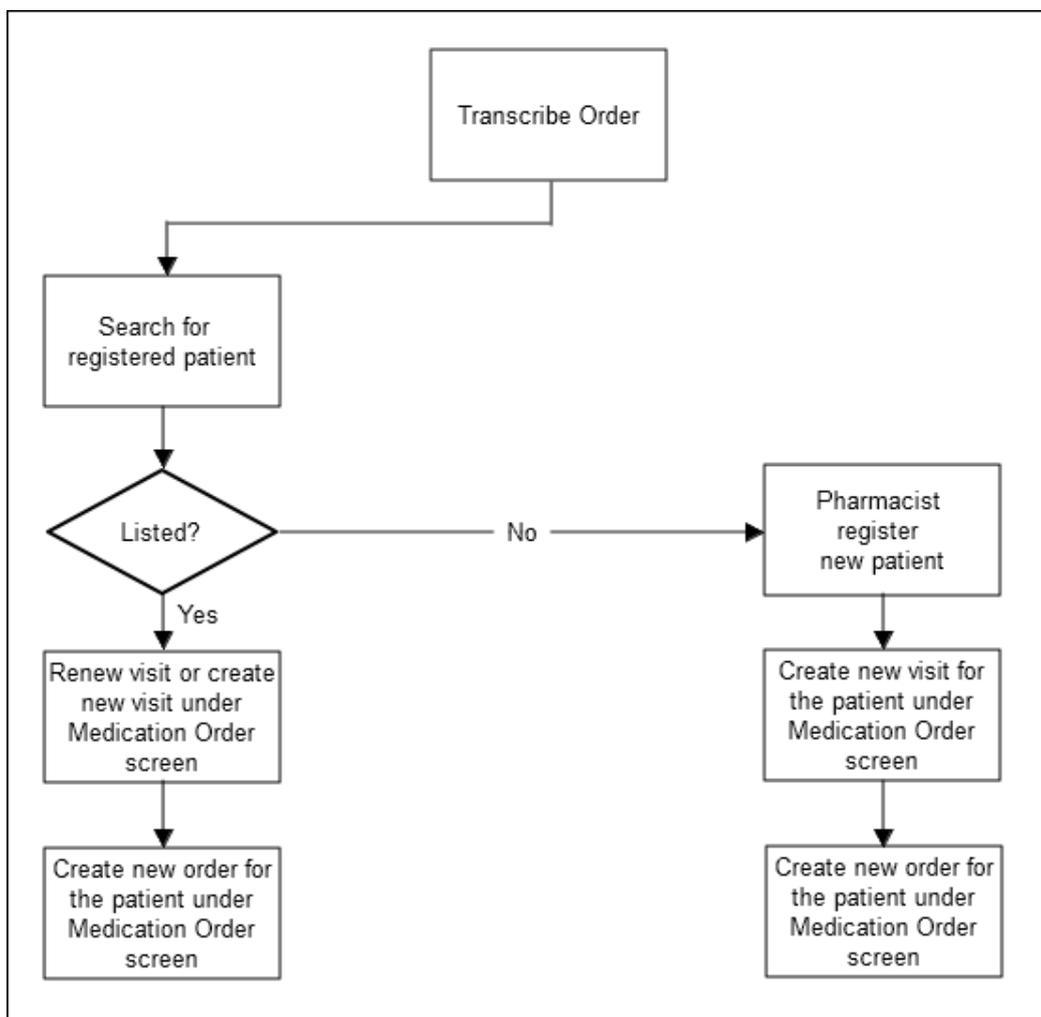
Overview

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

User Group

This module is intended for Authorized Pharmacist

Transcribe Order



Transcribe Order Process Flow

Functional Diagram

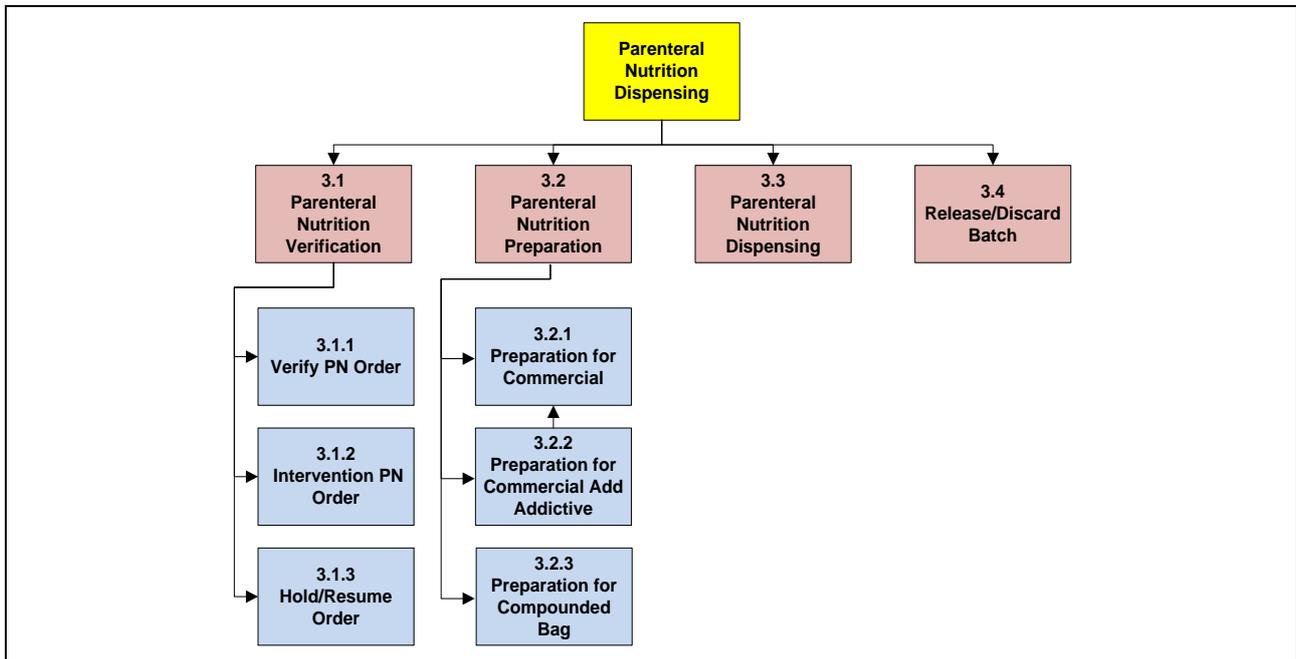


Figure 3.0-1

Functional Description

Parenteral Nutrition (PN) comprises of four (4) main functions:

- Verification**
 Verification is for pharmacist to verify the prescriptions received from transcribe order. This process is mandatory for all prescriptions receive before the user can proceed with dispensing preparation
- Preparation**
 The prescription and the drug preparation are made in the system that may integrate with inventory system. Professionals access system data directly with no need to send files or manual drug labeling.
- Dispensing**
 The prescription and the dispensing report are made in the system that may integrate with inventory system.
- Release/Discard Batch**
 Allow the user to release/discard the drug reserved for the patient back into inventory. User need to release this drug in order for it to be available in the drug inventory list.

3.1 Search Registered Patient

To view an existing patient record, please perform the steps below.

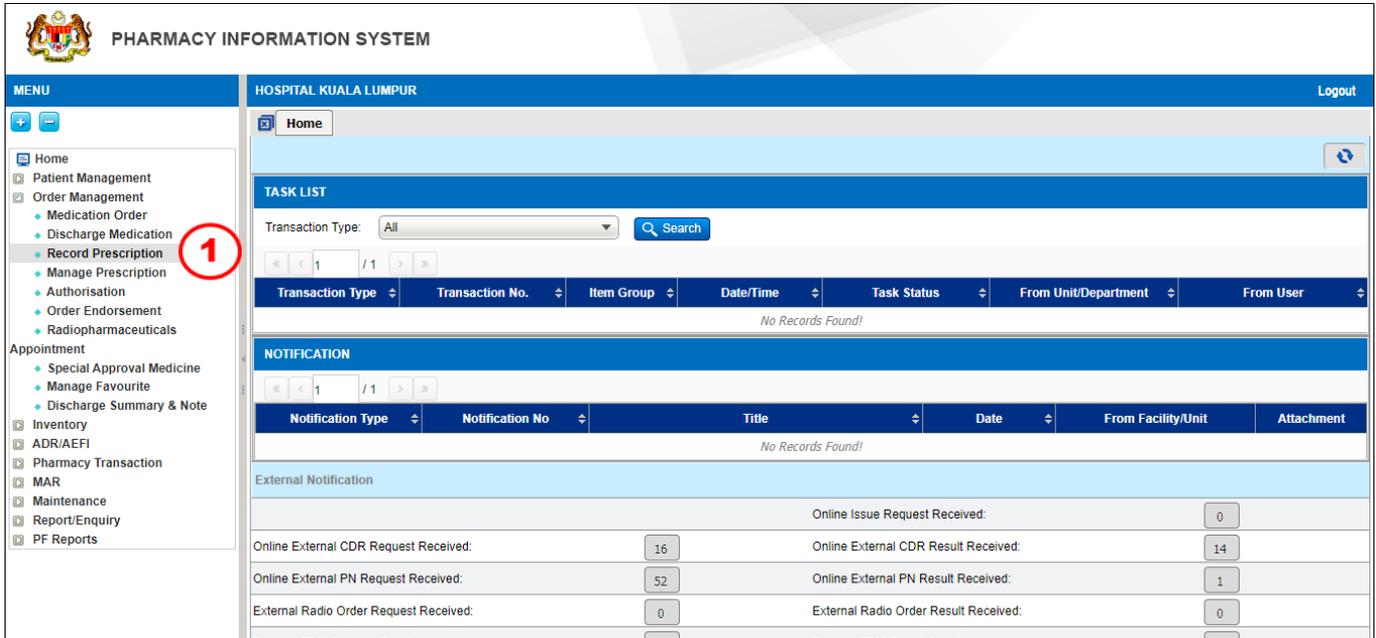


Figure 3.1-1 PhIS Home page

This page is used to search for a registered patient

STEP 1

Click on 'Order Management' menu followed by 'Record Prescription' and screen will be displayed as per Figure 3.1-1



Figure 3.1-2 Medication Order

STEP 2

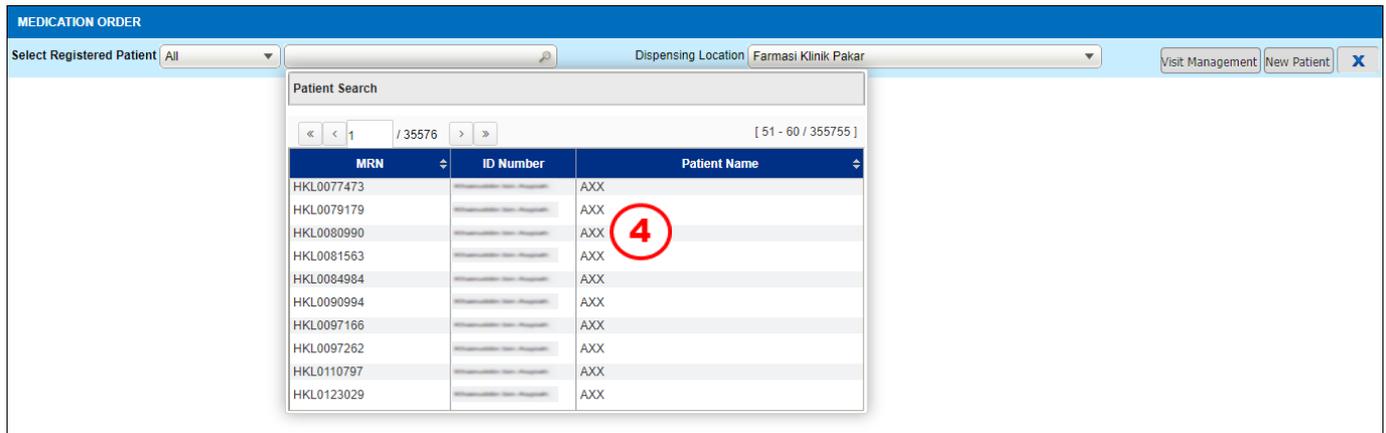
Select registration type from dropdown box

STEP 3

Click on the  button to search for a registered patient based on the type selected

Note

If the patient is not registered, click on the  button and the 'Patient Registration' screen will be displayed.



MRN	ID Number	Patient Name
HKL0077473		AXX
HKL0079179		AXX
HKL0080990		AXX
HKL0081563		AXX
HKL0084984		AXX
HKL0090994		AXX
HKL0097166		AXX
HKL0097262		AXX
HKL0110797		AXX
HKL0123029		AXX

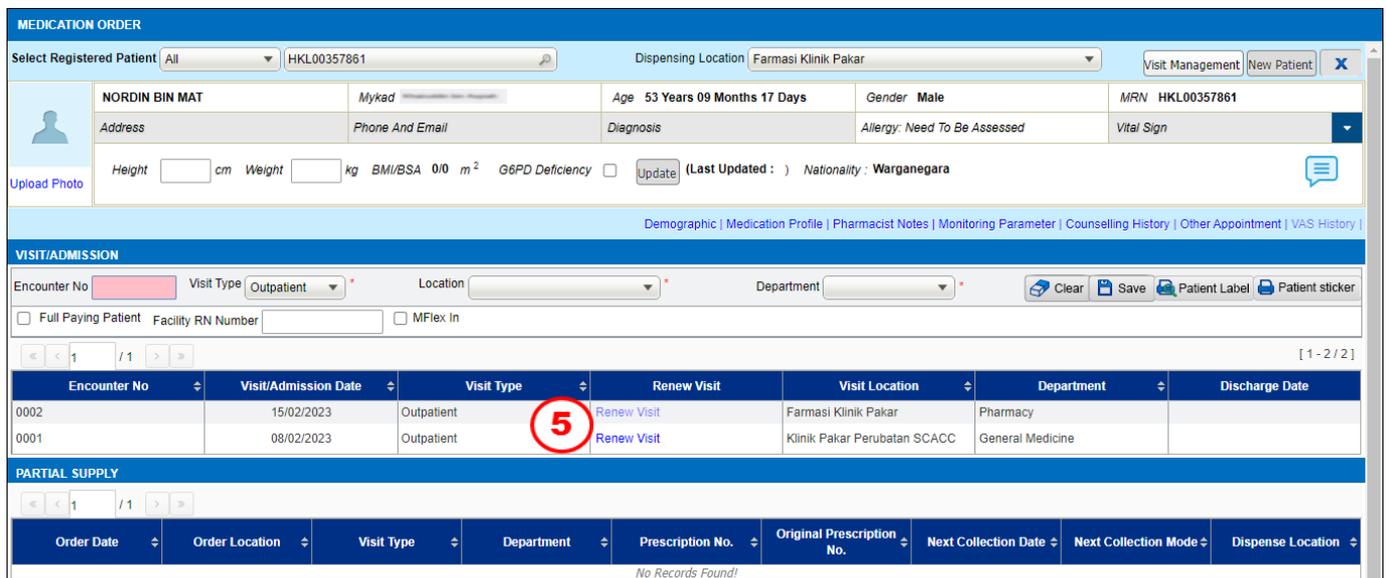
Figure 3.1-3 Search Patient

STEP 4

Double-click on the selected patient and the details will be displayed as per Figure 3.1-4

Note

- Click on the 'Renew Visit' hyperlink to renew a visit for the same location.
- Select the 'Visit Type' and 'Location' to create a new visit.
- Click on the **Visit Management** button to access to 'Visit Management' screen.



Encounter No	Visit/Admission Date	Visit Type	Renew Visit	Visit Location	Department	Discharge Date
0002	15/02/2023	Outpatient	Renew Visit	Farmasi Klinik Pakar	Pharmacy	
0001	08/02/2023	Outpatient	Renew Visit	Klinik Pakar Perubatan SCACC	General Medicine	

Figure 3.1-4 Visit/Admission Detail

STEP 5

Double-click on the selected visit

Note

- Once double click on patient system will pop up message to declare allergy for the patient as shown in Figure 3.1-5

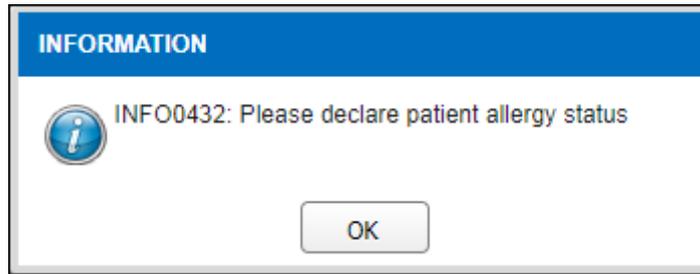


Figure 3.1-5 Information Message

- Click on  button and ordering screen will be shown in Figure 3.1-6

MEDICATION ORDER

Select Registered Patient: All HKL00357861 Dispensing Location: Farmasi Klinik Pakar Visit Management New Patient X

	NORDIN BIN MAT	Mykad: XXXXXXXXXX	Age: 53 Years 09 Months 17 Days	Gender: Male	MRN: HKL00357861
Address: XXXXXXXXXX		Phone And Email: XXXXXXXXXX		Diagnosis: XXXXXXXXXX	Allergy: Need To Be Assessed
Height: <input type="text"/> cm Weight: <input type="text"/> kg BMI/BSA: <input type="text"/> / <input type="text"/> m ² G6PD Deficiency: <input type="checkbox"/> Update (Last Updated:) Nationality: Warganegara					

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment | VAS History |

VISIT/ADMISSION

Encounter No: 0002 Visit Type: Outpatient Location: Farmasi Klinik Pakar Department: Pharmacy Clear Patient Label Patient sticker

Facility RN Number: MFlex In

VISIT RECORD

Queue Series: Normal Queue No: Original Prescription Serial Number: Clinic TCA:

NORMAL ORDER - DRUG DETAILS

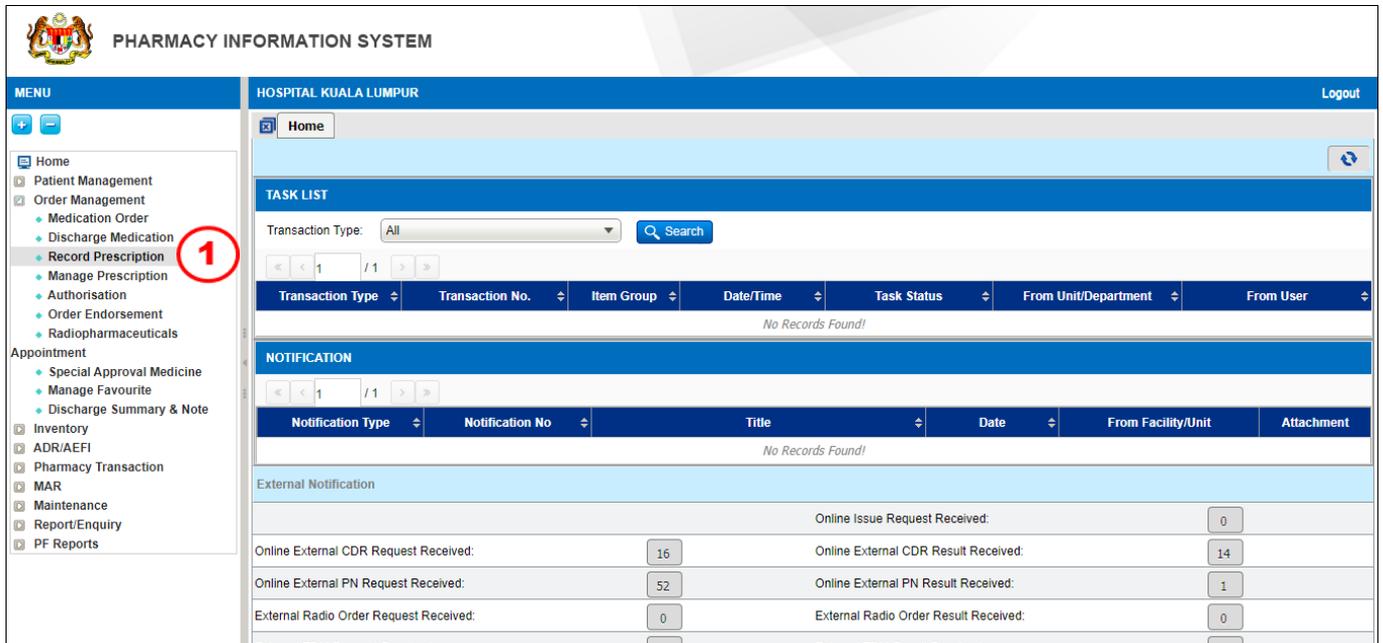
View Order Draft Confirm Total Price: RM 0.00

<div style="background-color: #0070C0; color: white; padding: 2px; text-align: center;">Patient Diagnosis</div> <div style="background-color: #0070C0; color: white; padding: 2px; text-align: center;">Allergy</div> <div style="background-color: #0070C0; color: white; padding: 2px; text-align: center;">Adverse Drug Reaction</div> <div style="background-color: #0070C0; color: white; padding: 2px; text-align: center;">Nutritional Assessment</div> <div style="background-color: #0070C0; color: white; padding: 2px; text-align: center; font-weight: bold;">Normal Order</div> <div style="background-color: #0070C0; color: white; padding: 2px; text-align: center;">Infusion Order</div> <div style="background-color: #0070C0; color: white; padding: 2px; text-align: center;">Parenteral Nutrition</div> <div style="background-color: #0070C0; color: white; padding: 2px; text-align: center;">Cytotoxic Drug</div>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Original Prescriber Name: <input type="text"/></td> <td style="width: 50%;">Advanced Search</td> </tr> <tr> <td>Drug: <input type="text"/></td> <td><input type="checkbox"/> Patient Own Medication</td> </tr> <tr> <td>Dosage: <input type="text"/> 0</td> <td><input type="checkbox"/> Ward Stock</td> </tr> <tr> <td>Admin Route: <input type="text"/></td> <td><input type="checkbox"/> Patient Require Counselling</td> </tr> <tr> <td>Frequency: <input type="text"/></td> <td>Dosage Schedule</td> </tr> </table>	Original Prescriber Name: <input type="text"/>	Advanced Search	Drug: <input type="text"/>	<input type="checkbox"/> Patient Own Medication	Dosage: <input type="text"/> 0	<input type="checkbox"/> Ward Stock	Admin Route: <input type="text"/>	<input type="checkbox"/> Patient Require Counselling	Frequency: <input type="text"/>	Dosage Schedule	<table border="1" style="width: 100%; border-collapse: collapse; background-color: #0070C0; color: white;"> <thead> <tr> <th style="width: 15%;">Alert</th> <th style="width: 25%;">Drug Name</th> <th style="width: 20%;">Order Details</th> <th style="width: 15%;">Order Qty</th> <th style="width: 25%;">Drug Info</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">■</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Alert	Drug Name	Order Details	Order Qty	Drug Info	■				
Original Prescriber Name: <input type="text"/>	Advanced Search																					
Drug: <input type="text"/>	<input type="checkbox"/> Patient Own Medication																					
Dosage: <input type="text"/> 0	<input type="checkbox"/> Ward Stock																					
Admin Route: <input type="text"/>	<input type="checkbox"/> Patient Require Counselling																					
Frequency: <input type="text"/>	Dosage Schedule																					
Alert	Drug Name	Order Details	Order Qty	Drug Info																		
■																						

Figure 3.1-6 Medication Order Detail

3.2 New Patient Registration

This page is used to register new patient



Notification Type	Notification No	Title	Date	From Facility/Unit	Attachment
No Records Found!					

External Notification	
Online Issue Request Received:	0
Online External CDR Request Received:	16
Online External CDR Result Received:	14
Online External PN Request Received:	52
Online External PN Result Received:	1
External Radio Order Request Received:	0
External Radio Order Result Received:	0

Figure 3.2-1 PhIS Home Page

To register a new patient, please perform the steps below

STEP 1

Click on 'Order Management' menu followed by 'Record Prescription' and screen will be displayed as per Figure 3.2-1



Figure 3.2-2 Transcribe Order Create New Patient

STEP 2

Click on the  to register for new patient

PATIENT REGISTRATION	
Full Registration  	
REGISTRATION INFORMATION	
MRN <input type="text"/>	Date of Birth <input type="text"/>
Patient Name <input type="text"/>	Age <input type="text"/>
Identification Card Number <input type="text"/> MYKAD <input type="text"/>	Gender <input type="text"/>
Other Identification Number <input type="text"/> -SELECT- <input type="text"/>	Contact Number(Mobile) <input type="text"/>
Pensioner <input type="checkbox"/>	<input type="text"/>
PATIENT DETAILS	
VISIT/ADMISSION	
Click to Open Full Visit Screen <input type="button" value="Visit Management"/>	
Visit Type <input type="text"/> Outpatient <input type="text"/>	Department <input type="text"/>
Encounter No <input type="text"/>	Location <input type="text"/>
Collection Mode <input type="text"/>	
Facility RN Number <input type="text"/>	<input type="checkbox"/> (MFlex In)
<input type="button" value="1"/> / <input type="button" value="1"/>	
Encounter No	Visit/Admission Date
Visit Type	Visit Location
Discharge Date	Medication Order
Renew Visit	
<i>No Records Found!</i>	

Figure 3.2-3 Registration Information

STEP 3

Enter **Patient Name**

STEP 4

Select from **Identification Card Number** drop down box:

- MYKAD
- MYKID

and enter the relevant number

Note

- After enter the **Identification Card Number** the below details will be displayed:
 - Date of Birth (dd/mm/yy)
 - Age (42Y 05M 21D)
 - Gender (Male/Female)
- If MYKAD/MYKID is unavailable, user is required to select the **Other Identification Number** dropdown box:
 - Birth Certificate
 - Driving License
 - Father IC
 - Military Card Number
 - Mother IC
 - MyKAS
 - MyPR
 - Old IC
 - Others
 - Passport
 - Pension Card
 - Police Card Number
 - UNHCR
 - Unknown Patient
 - Work Permit

and enter the relevant number.

STEP 5

Enter **Contact Number (Mobile)**

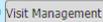
PATIENT REGISTRATION						
Full Registration  						
REGISTRATION INFORMATION						
MRN <input type="text"/>	Date of Birth <input type="text"/>					
Patient Name <input type="text"/>	Age <input type="text"/>					
Identification Card Number MYKAD <input type="text"/>	Gender <input type="text"/>					
Other Identification Number <input type="text"/>	Contact Number(Mobile) <input type="text"/>					
Pensioner <input type="checkbox"/>	<input type="text"/>					
PATIENT DETAILS						
VISIT/ADMISSION						
Click to Open Full Visit Screen 						
Visit Type <input type="text"/>	Department <input type="text"/>					
Encounter No <input type="text"/>	Location <input type="text"/>					
Collection Mode <input type="text"/>	<input type="checkbox"/> (MFlex In)					
Facility RN Number <input type="text"/>						
<input type="button" value="Previous"/> <input type="button" value="1"/> <input type="button" value="Next"/>						
Encounter No	Visit/Admission Date	Visit Type	Visit Location	Discharge Date	Medication Order	Renew Visit
No Records Found!						

Figure 3.2-4 Visit/Admission

STEP 6

Select the **Visit Type** from dropdown box:

- Daycare
- Emergency
- Inpatient
- Outpatient
- Outsource
- SPUB
- Walk-in

STEP 7

Select the **Department** from dropdown box

Note

Department will tie to the selected visit type.

STEP 8

Select **Location** from dropdown box

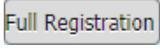
Note

Location will tie to the selected Department.

STEP 9

Click on the  button to save the record. The 'Medication Order' screen will be displayed as per Figure 3.2-6

Note

- After click the save button, system will automatically generate the **MRN** (Medical Record Number) and ,  and  buttons will be enabled.
- Click on the  button to access to 'Visit Management' screen.
- Another option to register a new patient is to click on the  button located under Patient Quick Registration
- Once complete patient registration pop up message for alert allergy will be shown as Figure 3.2-5.

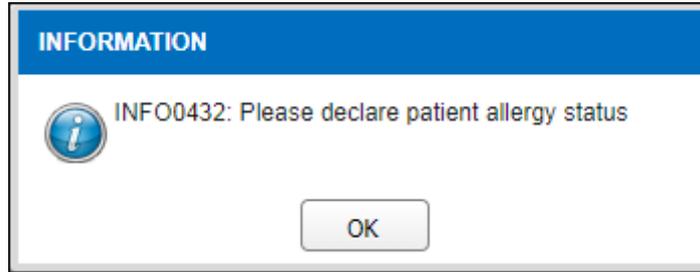


Figure 3.2-5 Information Message

- Click on  button and ordering screen will be shown in Figure 3.2-6

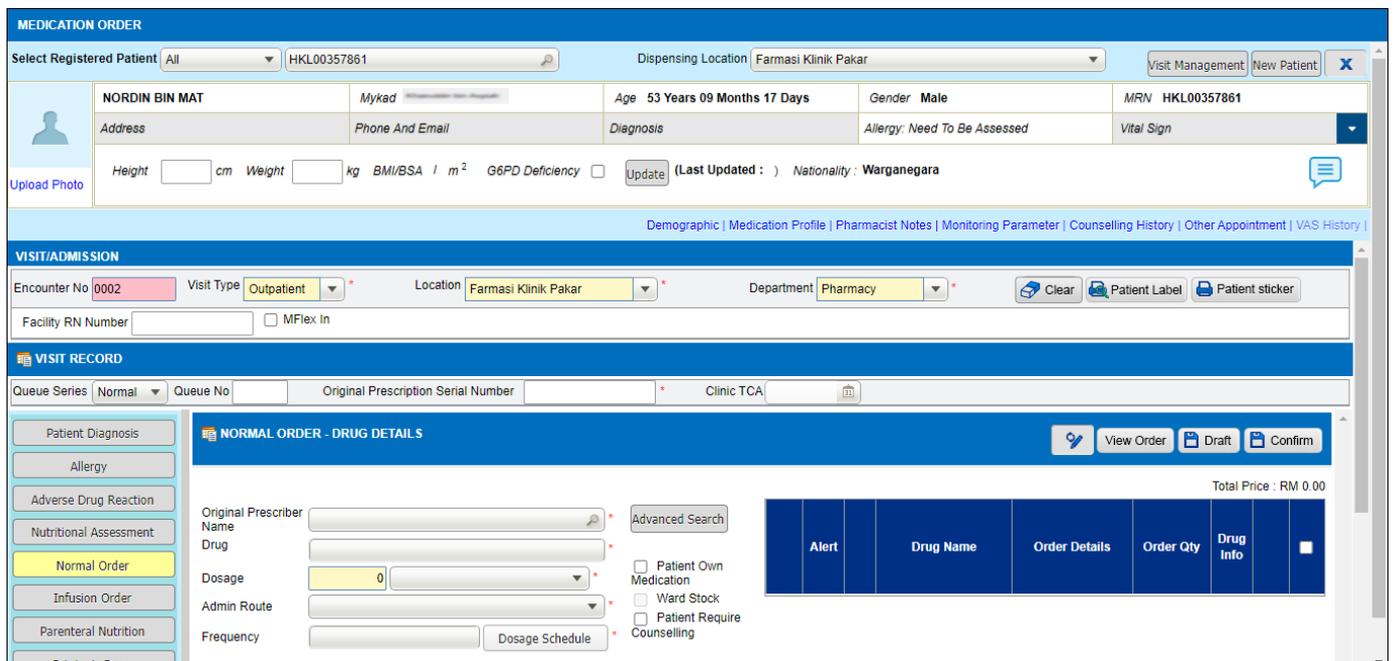


Figure 3.2-5 Medication Order Details

- Prescriber able to update on G6PD. G6PD checkbox will appear as Figure 3.1.1-5. G6PD refer as Deficiency enzyme of Glukosa-6-Fostat Dehydrogenase.

4.0 Parenteral Nutrition (PN) Transcribe Order, Verify, Prepare and Dispense

Verification is for pharmacist to verify the prescriptions received from order management. In this stage, user has an option to do an intervention and hold/resume function.

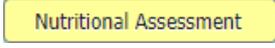
4.1 Nutritional Assessment

To do nutritional assessment for new patient or existing patient's.

Nutritional Assessment allow user to record all nutritional assessment for new patient and existing patient

Figure 4.1-1 Nutritional Assessment

STEP 1

Click on the  button to do nutritional assessment for new patient or existing patient

STEP 2

Click on the  button to add new nutritional assessment record

Note

To enter nutritional assessment user need to enter value for weight and height of patient or system will be alert message as shown in Figure 4.1-2

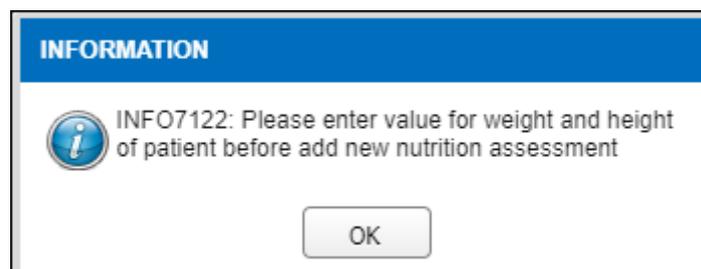


Figure 4.1-2 Information Message

NUTRITIONAL ASSESSMENT

NUTRITIONAL RISK SCREENING

Initial Screening

1. Is BMI < 20.5 ? Yes No

2. Has the patient lost weight within the last 3 months ? Yes No

3. Has the patient had a reduced dietary intake in the last week ? Yes No

4. Is the patient severely ill ? (e.g. in intensive therapy) Yes No

Yes: if the answer is "Yes" to any question, the final screening is performed.
No: if the answer is "No" to any question, the patient is re-screened at weekly intervals. If the patient e.g. is scheduled for a major operation, a preventive nutritional care plan is considered to avoid the associated risk status.

FINAL SCREENING

Impaired nutritional status	<input type="text"/>	Severity of disease	<input type="text"/>
Score	<input type="text"/>	Score	<input type="text"/>
Note: Absent: Normal nutritional status Mild: Wt loss > 5% in 3 mths or Food intake below 50-75% of normal requirement in preceding week Moderate: Wt loss > 5% in 2 mths or BMI 18.5-20.5 + impaired general condition or Food intake 25-60% of normal requirement in preceding week Severe: Wt loss 45% in 1 mth (> 15% in 3mths) or BMI < 18.5 + impaired general condition or Food intake 0-25% of normal requirement in preceding week		Note: Absent: Normal nutritional status Mild: Hip fracture* Chronic patients, in particular with acute complications: cirrhosis*, COPD*. Chronic hemodialysis, diabetes, oncology Moderate: Major abdominal surgery* Stroke* Severe pneumonia, hematologic malignancy Severe: Head injury* Bone marrow transplantation* Intensive care patients	
Total Score :	<input type="text"/>		

If Age is ≥ 70 years, total score above is inclusive +1
Score ≥ 3: the patient is nutritionally at-risk and a nutritional care plan is initiated

Figure 4.1-3 Nutritional Assessment

Note

- Answer all question by selecting "Yes" or "No" for **Nutritional Risk Screening**.
- User have to select the **Impaired Nutritional Status** from the dropdown menu:
 - Absent
 - Mild Score
 - Moderate Score
 - Severe Score
- User have to select the **Severity of Disease** from the dropdown menu:
 - Absent
 - Mild Score
 - Moderate Score
 - Severe Score
- **Total Score** for final screening will automatically calculate and display by system.

NUTRITIONAL ASSESSMENT

Severe: or Food intake 0-25% of normal requirement in preceding week in preceding week

Severe: Head injury* Bone marrow transplantation* Intensive care patients

Total Score :

If Age is ≥ 70 years, total score above is inclusive +1
Score ≥ 3: the patient is nutritionally at-risk and a nutritional care plan is initiated
Score < 3: weekly rescreening of the patient. If the patient e.g. is scheduled for a major operation, a preventive nutritional care plan is considered to avoid the associated risk status.

<p>SGA HISTORY (Subjective Global Assessment of Nutritional Status HISTORY)</p> <p>1. Weight change</p> <p>Overall in past 6 months: <input type="text"/> kg % loss: <input type="text"/></p> <p>Change in past 2 weeks: <input type="text"/></p> <p>2. Dietary intake change: <input type="radio"/> Yes <input type="radio"/> No</p> <p>3. Gastrointestinal symptoms(persisted>2 weeks)</p> <p><input type="checkbox"/> Nausea <input type="checkbox"/> Loss of Appetite</p> <p><input type="checkbox"/> Vomiting <input type="checkbox"/> Diarrhea</p> <p>4. Functional Capacity <input type="radio"/> No Dysfunction <input type="radio"/> Dysfunction</p>	<p>PHYSICAL EXAMINATION</p> <p>Specify for each sign: 0=normal 1=light 2=moderate 3=serious</p> <p><input type="text"/> Loss of subcutaneous fat (triceps, chest)</p> <p><input type="text"/> Loss of muscle mass (quadriceps, femoris, deltoids, loss of bulk and tone detectable by palpation)</p> <p><input type="text"/> Ankle edema</p> <p><input type="text"/> Sacral edema</p> <p><input type="text"/> Ascites</p> <p>SGA score <input type="text"/></p> <p>Score Description: A - Well nourished B - Malnourished C - Severe malnourished</p>
--	--

Figure 4.1-4 Nutritional Assessment

Note

- All fields for 'SGA - Subjective Global Assessment of Nutritional Status (HISTORY)' section has to be entered by user.
- All field for 'Physical Examination' section has to be entered by user.

STEP 3

Click on the  button to save record and alert message will be displayed as per Figure 4.1-5.

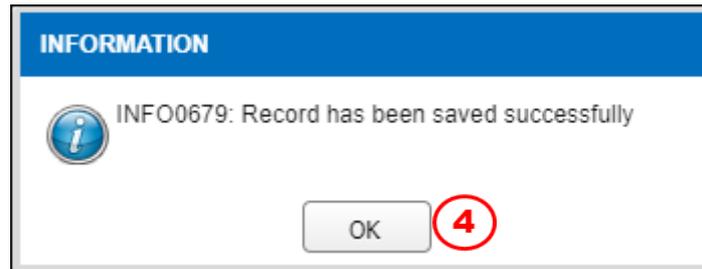


Figure 4.1-5 Information Alert Message

STEP 4

Click on the  button and 'Nutritional Assessment' listing screen will be displayed as per Figure 4.1-6.

MEDICATION ORDER

Select Registered Patient: All | HKL00357861 | Dispensing Location: Farmasi Klinik Pakar | Visit Management | New Patient

NORDIN BIN MAT
 Mykad: [REDACTED] | Age: 53 Years 09 Months 17 Days | Gender: Male | MRN: HKL00357861
 Address: [REDACTED] | Phone And Email: [REDACTED] | Diagnosis: [REDACTED] | Allergy: Need To Be Assessed | Vital Sign: [REDACTED]
 Height: 168 cm | Weight: 75 kg | BMI/BSA: 26.6 / 1.87 m² | G6PD Deficiency: | Update (Last Updated: 15/02/2023) | Nationality: Warganegara

VISIT/ADMISSION

Encounter No: 0002 | Visit Type: Outpatient | Location: Farmasi Klinik Pakar | Department: Pharmacy | Clear | Patient Label | Patient sticker

VISIT RECORD

Original Prescriber Name: [REDACTED] | Original Prescription Serial Number: [REDACTED]

NUTRITIONAL ASSESSMENT

Nutritional Assessment No: [REDACTED] | Recorded By: [REDACTED]
 Date From: [REDACTED] | Date To: [REDACTED] | Search

NA No.	Date	Recorded By	Details
NA23-02-0002	15/02/2023	[REDACTED]	NRS Total Score: 3, SGA Score: B - Malnourished

Figure 4.1-6 Nutritional Assessment Listing

4.2 Calorie Calculator

To calculate patient's calorie

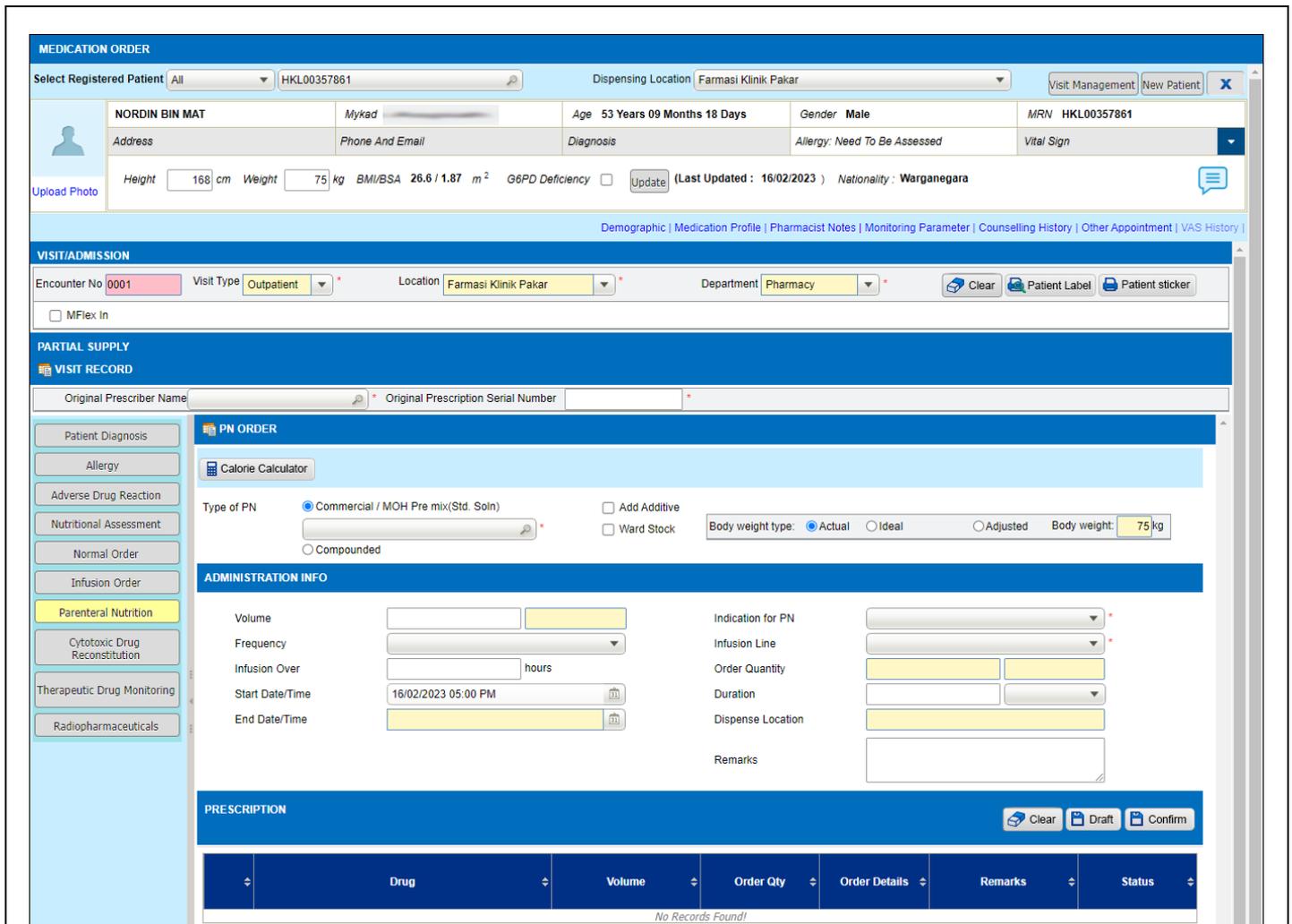


Figure 4.2-1 Calorie Calculator

Note

- Calorie calculator allow user to calculate patient's calorie requirement.
- This value will be used as a guideline for user to order the required TPN order for patient.
- Click on the  button to calculate patient calorie.
- 'Calorie Calculator' screen will be displayed as per Figure 4.2-2.

CALORIE CALCULATOR

PN Calculator

Body Weight kg

Actual Body Weight
 Ideal
 Adjusted

Energy Requirement

Total Energy Calculated kCal

Figure 4.2-2 Calorie Calculator

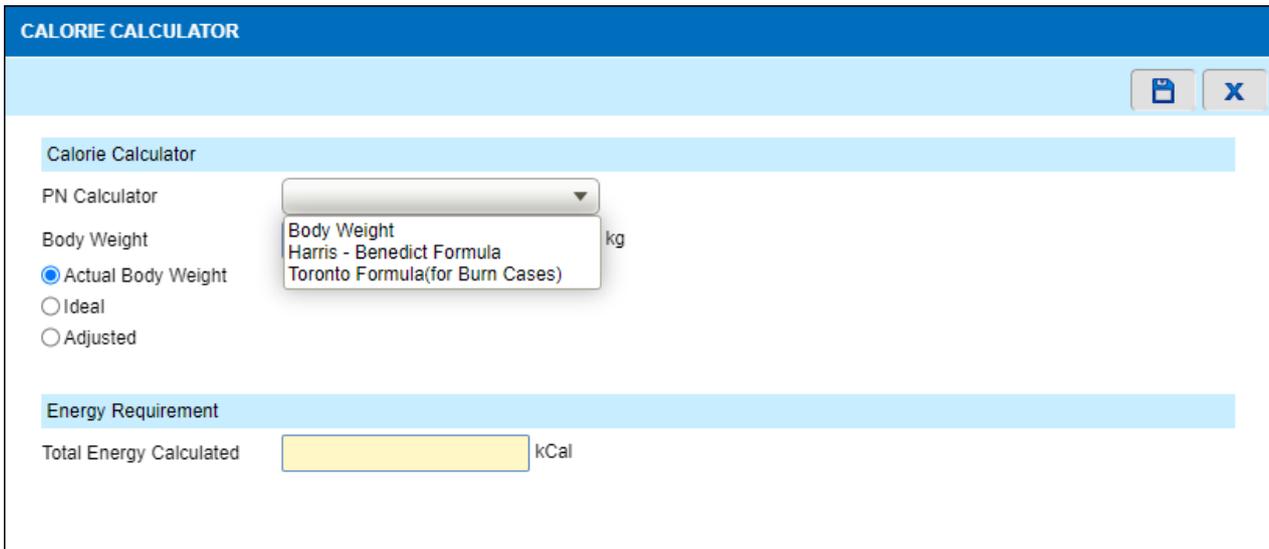
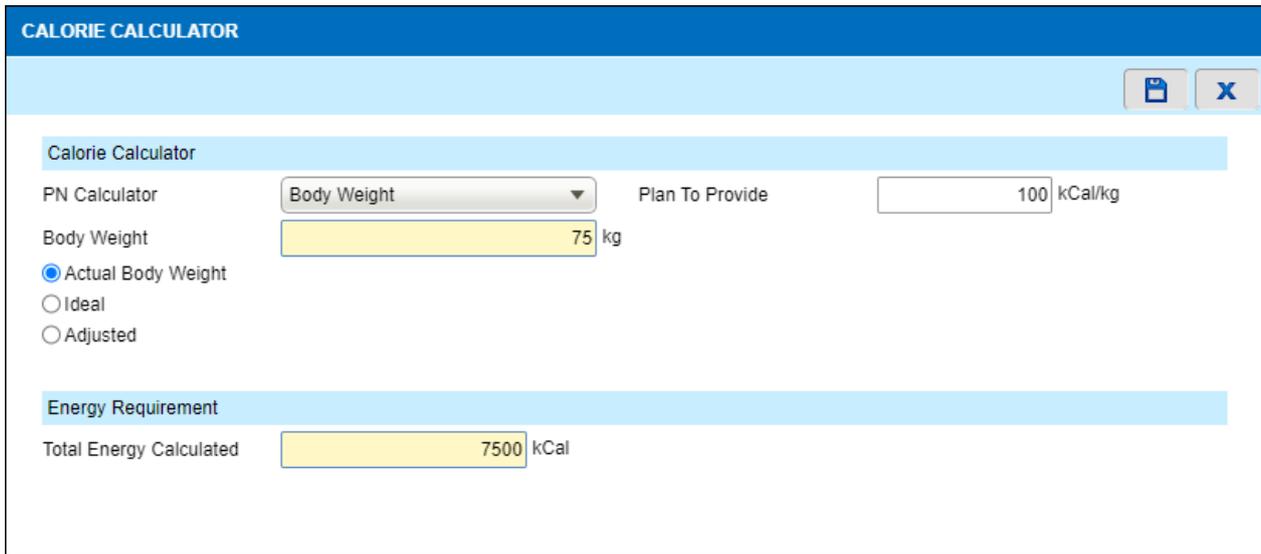


Figure 4.2-3 Calorie Calculator

Note

- By default the 'Body Weight' radio button will auto select the Actual Body Weight of the patient.
- User have to select either one of the following 'Body Weight' radio button:
 - Actual Body Weight
 - Ideal
 - Adjusted
- Body Weight value will automatically display based on the information from 'Patient Banner'.
- There are three types of PN Calculator:
 - Body Weight
 - Harris-Benedict Formula
 - Toronto Formula(for Burn Cases)



CALORIE CALCULATOR

Calorie Calculator

PN Calculator: Body Weight (dropdown) Plan To Provide: 100 kCal/kg

Body Weight: 75 kg

Actual Body Weight
 Ideal
 Adjusted

Energy Requirement

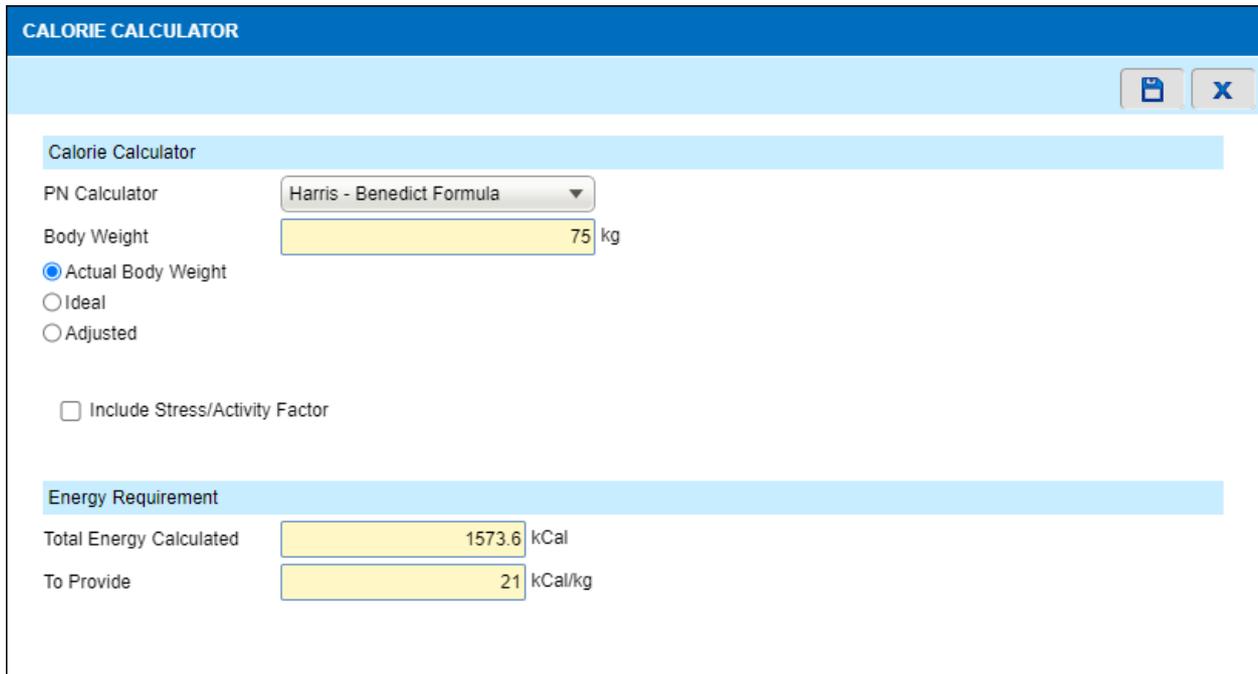
Total Energy Calculated: 7500 kCal

Figure 4.2-4 Calorie Calcutor

Note

PN Calculator : Body Weight

- Select 'Body Weight' from 'PN Calculator' dropdown box.
- Enter the amount in 'Plan To Provide (kCal/kg)'.
- 'Total Energy Calculated' will be automatically calculated and displayed as per Figure 4.2-4.
- The  button to save record.
- The  button to close the screen.



CALORIE CALCULATOR

Calorie Calculator

PN Calculator: Harris - Benedict Formula

Body Weight: 75 kg

Actual Body Weight
 Ideal
 Adjusted

Include Stress/Activity Factor

Energy Requirement

Total Energy Calculated: 1573.6 kCal

To Provide: 21 kCal/kg

Figure 4.2-5 Calorie Calculator

Note

PN Calculator : Harris-Benedict Formula

- Select 'Harris – Benedict Formula' from 'PN Calculator' dropdown box.
- Select the 'Include Stress/Activity Factor' checkbox.
- 'Stress Factor', 'Activity Factor' and 'To Provide (kCal/kg)' will display after selected the 'Include Stress/ Activity Factor' checkbox as shown in Figure 4.2-6.

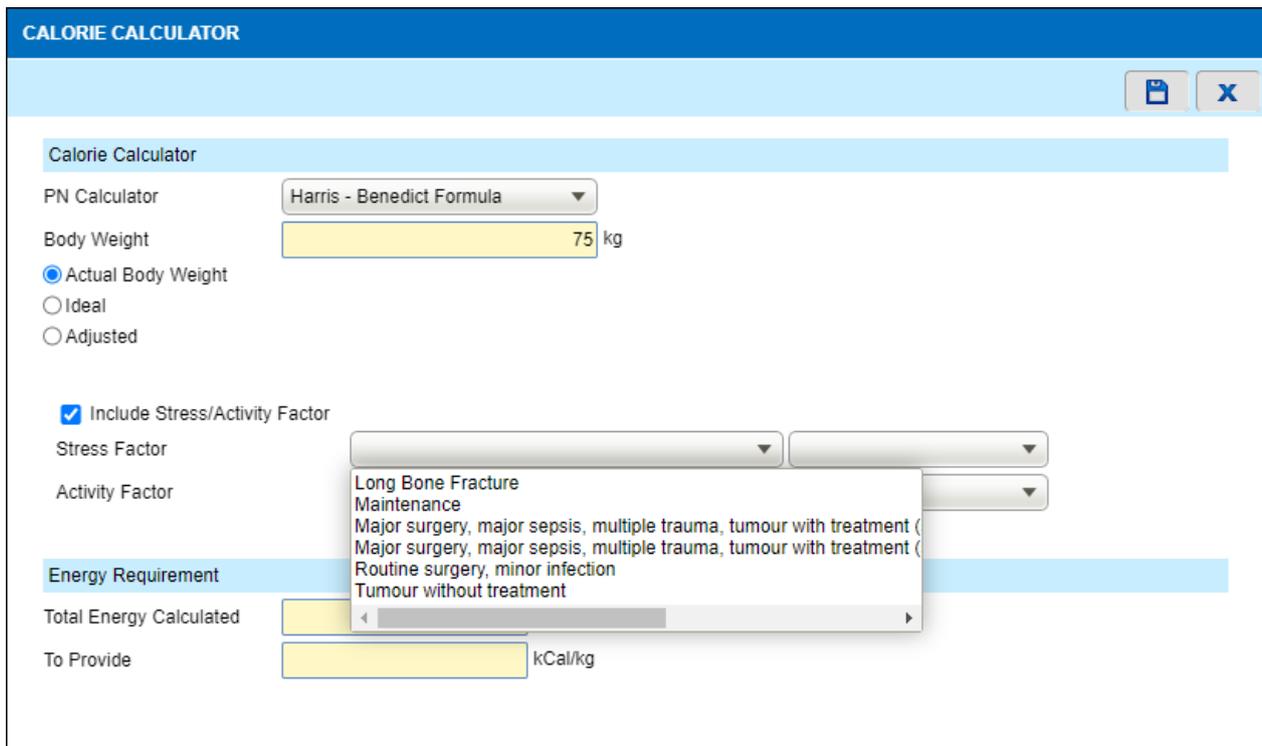
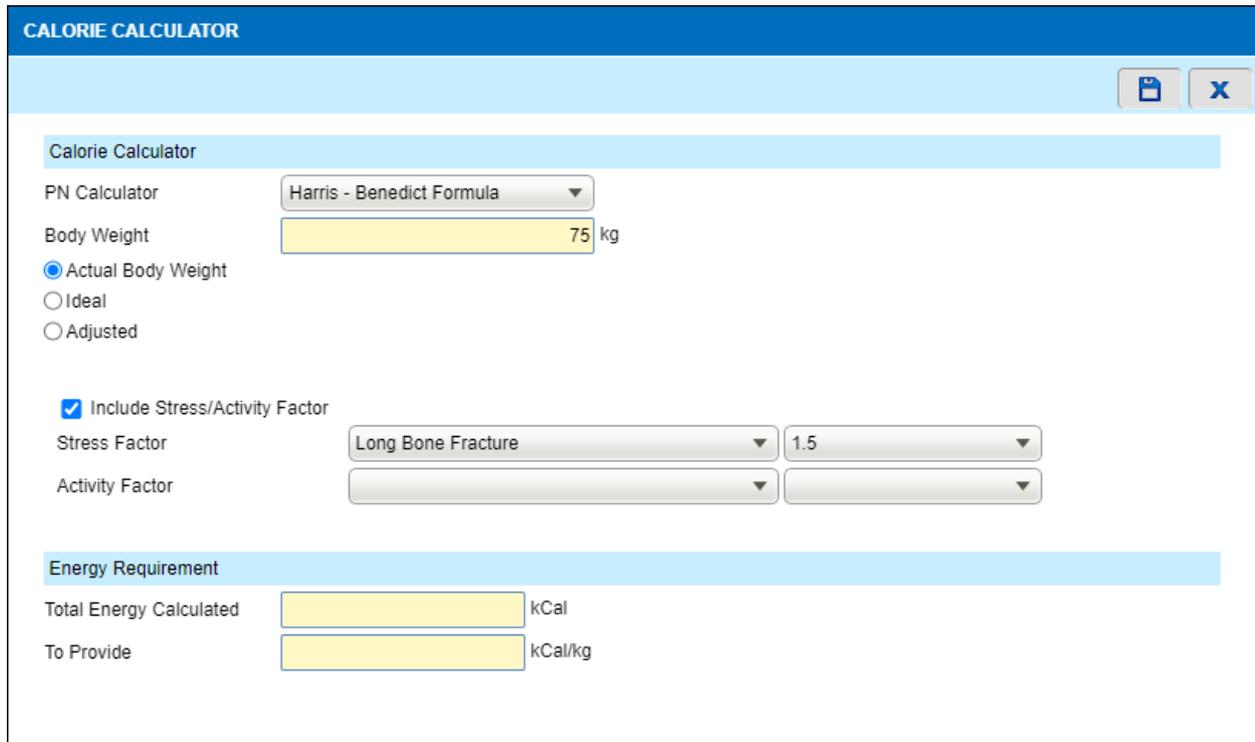


Figure 4.2-6 Calorie Calculator

Note

User have to select the type of 'Stress Factor' from the dropdown box:

- Long Bone Fracture.
- Maintenance.
- Major surgery, major sepsis, multipletrauma, tumour with treatment (surgery, chemotherapy or radiotherapy)(anabolic state).
- Major surgery, major sepsis, multipletrauma, tumour with treatment (surgery, chemotherapy or radiotherapy)(catabolic state).
- Routine sugery, minor infection.
- Tumour without treatment.

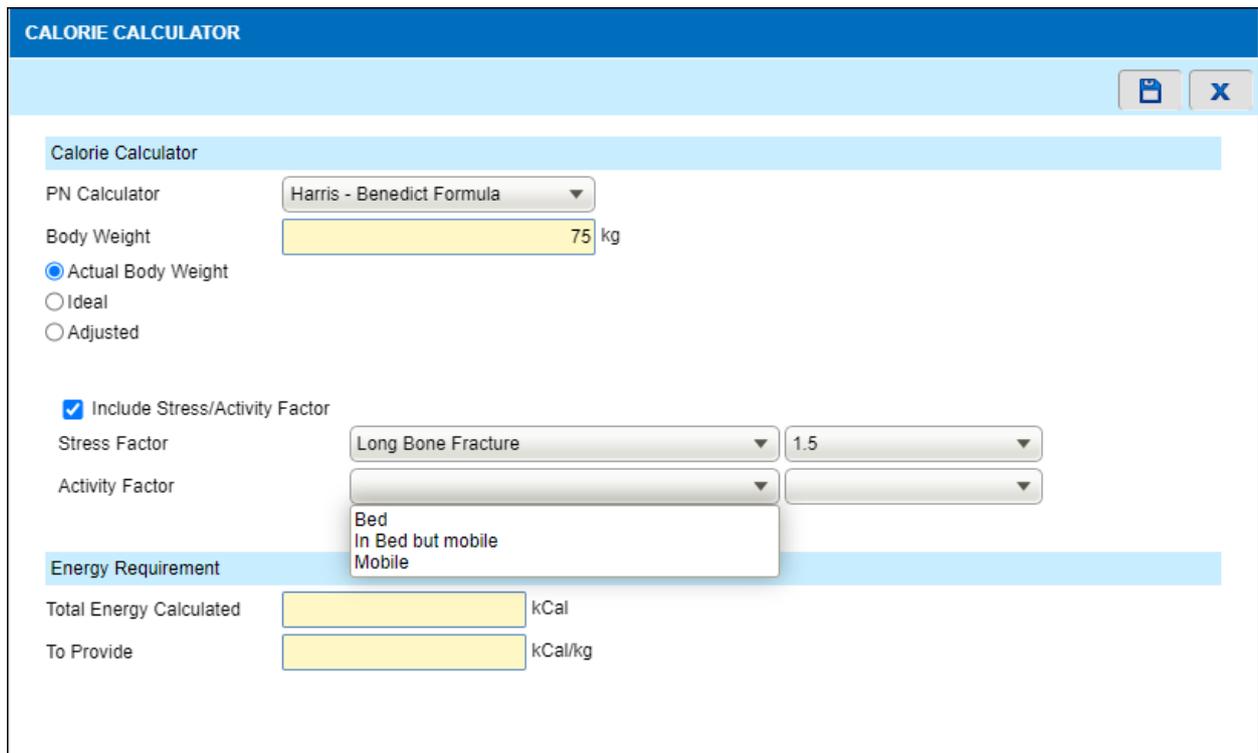


The screenshot shows a web-based 'CALORIE CALCULATOR' interface. At the top, there is a blue header with the title 'CALORIE CALCULATOR' and two buttons: a save icon and a close 'X' icon. Below the header, the main content area is titled 'Calorie Calculator'. It features a 'PN Calculator' dropdown menu set to 'Harris - Benedict Formula'. The 'Body Weight' field is a yellow input box containing '75 kg'. There are three radio button options: 'Actual Body Weight' (selected), 'Ideal', and 'Adjusted'. A checked checkbox labeled 'Include Stress/Activity Factor' is present. Below it, the 'Stress Factor' is a dropdown menu set to 'Long Bone Fracture' with a value of '1.5' displayed in a small box. The 'Activity Factor' is another dropdown menu, currently empty. At the bottom, under the heading 'Energy Requirement', there are two yellow input boxes: 'Total Energy Calculated' (with 'kCal' to its right) and 'To Provide' (with 'kCal/kg' to its right).

Figure 4.2-7 Calorie Calculator

Note

Value of the 'Stress Factor' will be automatically calculated by system.



CALORIE CALCULATOR

Calorie Calculator

PN Calculator: Harris - Benedict Formula

Body Weight: 75 kg

Actual Body Weight
 Ideal
 Adjusted

Include Stress/Activity Factor

Stress Factor: Long Bone Fracture (1.5)

Activity Factor: Bed, In Bed but mobile, Mobile

Energy Requirement

Total Energy Calculated: [] kCal

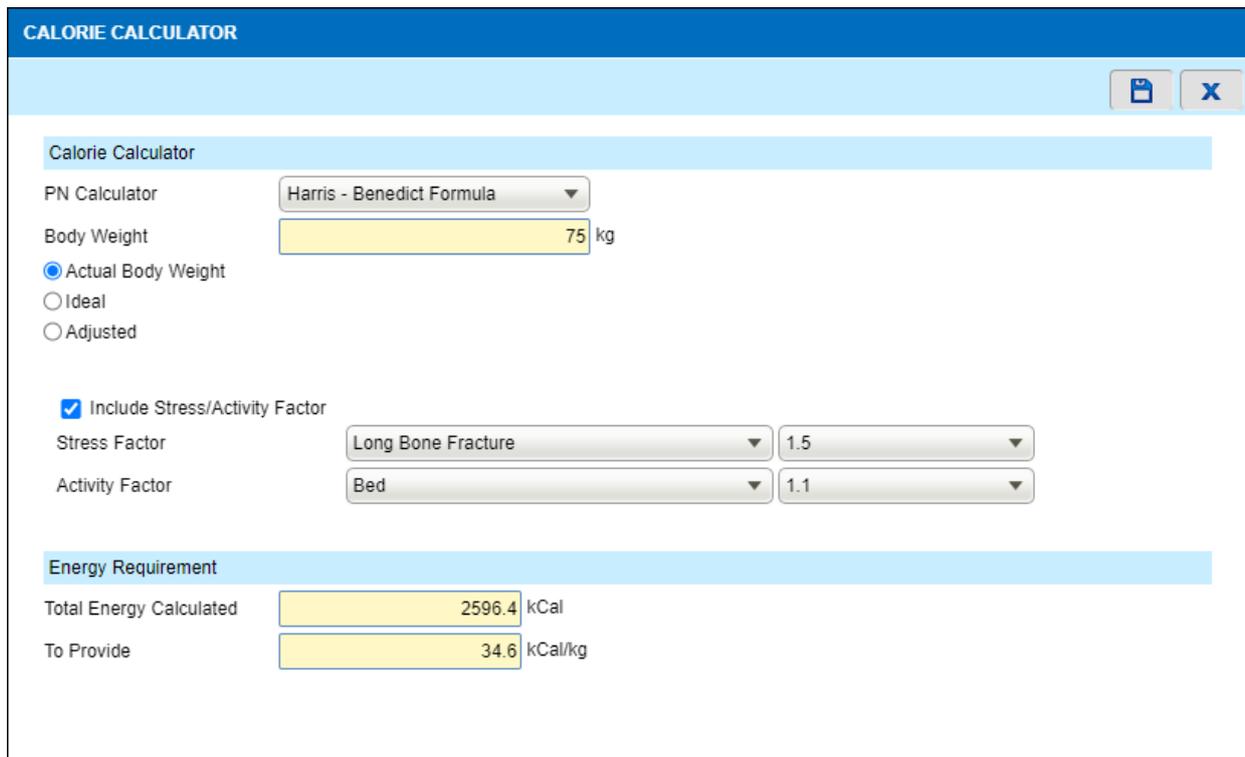
To Provide: [] kCal/kg

Figure 4.2-8 Calorie Calculator

Note

From the dropdown box user have to select type of 'Activity Factor' list which are:

- Bed
- In Bed but mobile
- Mobile



CALORIE CALCULATOR

Calorie Calculator

PN Calculator: Harris - Benedict Formula

Body Weight: 75 kg

Actual Body Weight
 Ideal
 Adjusted

Include Stress/Activity Factor

Stress Factor: Long Bone Fracture (1.5)

Activity Factor: Bed (1.1)

Energy Requirement

Total Energy Calculated: 2596.4 kCal

To Provide: 34.6 kCal/kg

Figure 4.2-9 Calorie Calculator

Note

- Value of the 'Activity Factor' will be automatically calculated by system.
- Amount of 'Total Energy Calculated' and 'To Provide (kCal/kg)' will be automatically calculated after selected the 'Activity Factor' as per Figure 4.2-9.
- The  button to save record.
- The  button to close the screen

CALORIE CALCULATOR

📄
X

Calorie Calculator

PN Calculator Toronto Formula(for Burn Cases) ▼

Body Weight 75 kg

Actual Body Weight
 Ideal
 Adjusted

Burn Surface Area %

Body Temperature °C

Post Burn Days Days

Caloric intake kCal

Activity Factor Bed ▼ 1.1 ▼

Energy Requirement

Total Energy Calculated kCal

To Provide kCal/kg

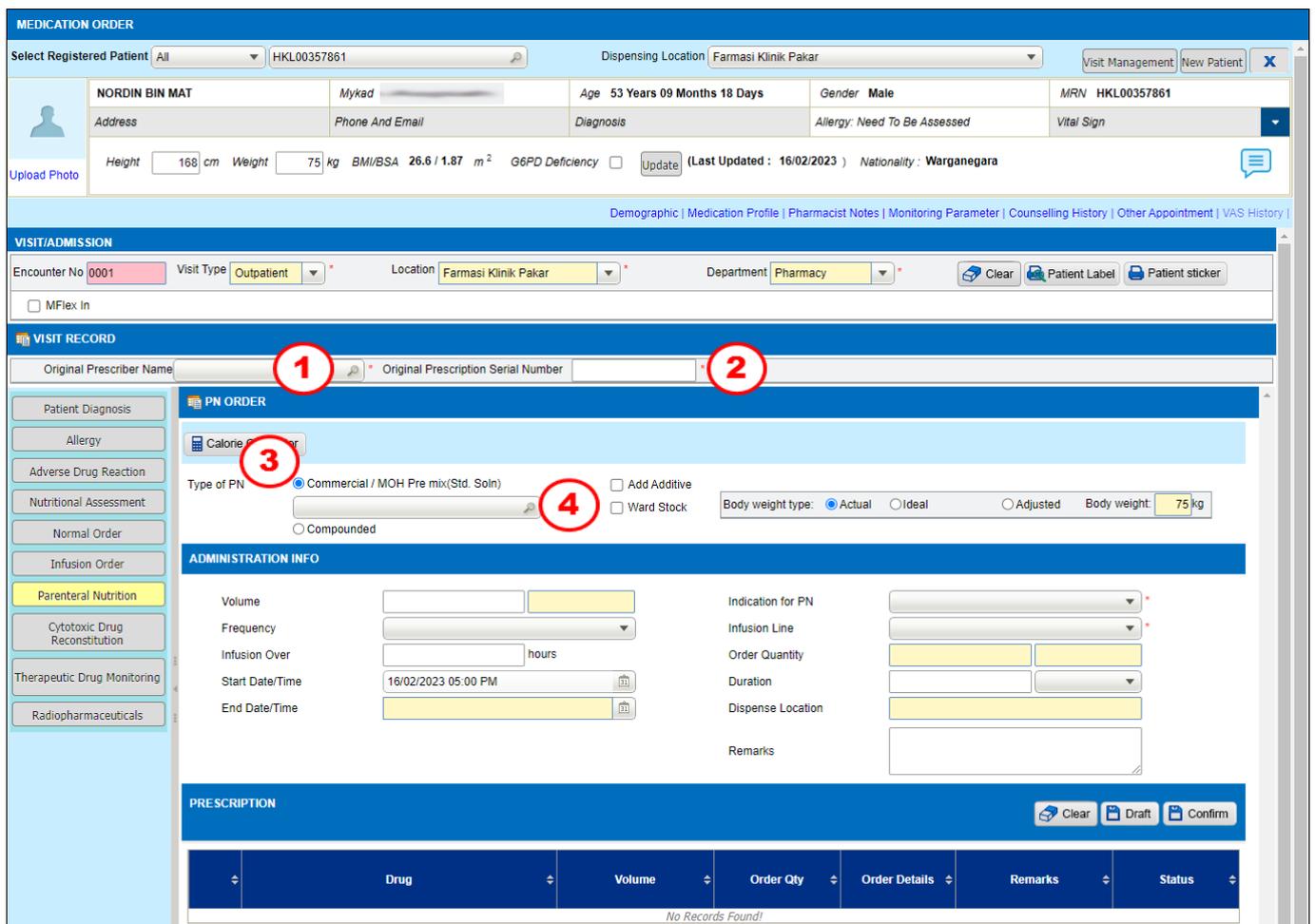
Figure 4.2-10 Calorie Calculator

Note

PN Calculator : Toronto Formula

- Select 'Toronto Formula (for Burn Cases)' from 'PN Calculator' dropdown box.
- Enter fields as below:
 - Burn Surface Area
 - Body Temperature
 - Post Burn Days
 - Calorie Intake
- User have to select type of 'Activity Factor' from the dropdown box:
 - Bed
 - In Bed but Mobile
 - Mobile
- Value of the 'Activity Factor' will be automatically calculated by system.
- 'Total Total Energy Calculated' and 'To Provide (kCal/kg)' will be automatically calculated after selected the 'Activity Factor' as per Figure 4.2-10.
- The  button to save record.
- The  button to close the screen.

4.3 Commercial / MOH Pre mix (Std Soln)



MEDICATION ORDER

Select Registered Patient: All | HKL00357861 | Dispensing Location: Farmasi Klinik Pakar | Visit Management | New Patient

PATIENT INFORMATION:
 NORDIN BIN MAT | Mykad: [REDACTED] | Age: 53 Years 09 Months 18 Days | Gender: Male | MRN: HKL00357861
 Address: [REDACTED] | Phone And Email: [REDACTED] | Diagnosis: [REDACTED] | Allergy: Need To Be Assessed | Vital Sign: [REDACTED]
 Height: 168 cm | Weight: 75 kg | BMI/BSA: 26.6 / 1.87 m² | G6PD Deficiency: [] | Update (Last Updated: 16/02/2023) | Nationality: Warganegara

VISIT/ADMISSION:
 Encounter No: 0001 | Visit Type: Outpatient | Location: Farmasi Klinik Pakar | Department: Pharmacy | Clear | Patient Label | Patient sticker

VISIT RECORD:
 Original Prescriber Name: [REDACTED] **1** | Original Prescription Serial Number: [REDACTED] **2**

PN ORDER:
 Calorie: [REDACTED] **3**
 Type of PN: Commercial / MOH Pre mix(Std. Soln) **4** | Add Additive | Ward Stock | Body weight type: Actual | Ideal | Adjusted | Body weight: 75 kg
 Compounded

ADMINISTRATION INFO:
 Volume: [REDACTED] | Indication for PN: [REDACTED]
 Frequency: [REDACTED] | Infusion Line: [REDACTED]
 Infusion Over: [REDACTED] hours | Order Quantity: [REDACTED]
 Start Date/Time: 16/02/2023 05:00 PM | Duration: [REDACTED]
 End Date/Time: [REDACTED] | Dispense Location: [REDACTED]
 Remarks: [REDACTED]

PRESCRIPTION: Clear | Draft | Confirm

Drug	Volume	Order Qty	Order Details	Remarks	Status
No Records Found!					

Figure 4.3-1 PN Order : Commercial / MOH Pre Mix (Std. Soln)

Commercial / MOH Pre Mix (Std. Soln) allow user to order ready made product from manufacturer or facility

STEP 1

Click on the  button to search for **Original Prescriber Name**

STEP 2

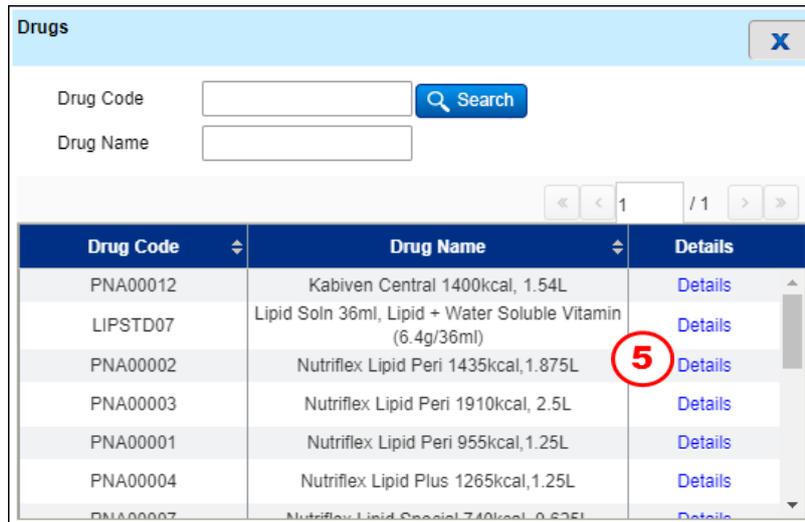
Enter the **Original Prescription Serial Number**

STEP 3

Select on the **Commercial / MOH Pre mix(Std. Soln)** radio button for 'Type of PN'

STEP 4

Click on the  button to search for product



Drug Code	Drug Name	Details
PNA00012	Kabiven Central 1400kcal, 1.54L	Details
LIPSTD07	Lipid Soln 36ml, Lipid + Water Soluble Vitamin (6.4g/36ml)	Details
PNA00002	Nutriflex Lipid Peri 1435kcal, 1.875L	Details
PNA00003	Nutriflex Lipid Peri 1910kcal, 2.5L	Details
PNA00001	Nutriflex Lipid Peri 955kcal, 1.25L	Details
PNA00004	Nutriflex Lipid Plus 1265kcal, 1.25L	Details
PNA00007	Nutriflex Lipid Special 740kcal, 0.525L	Details

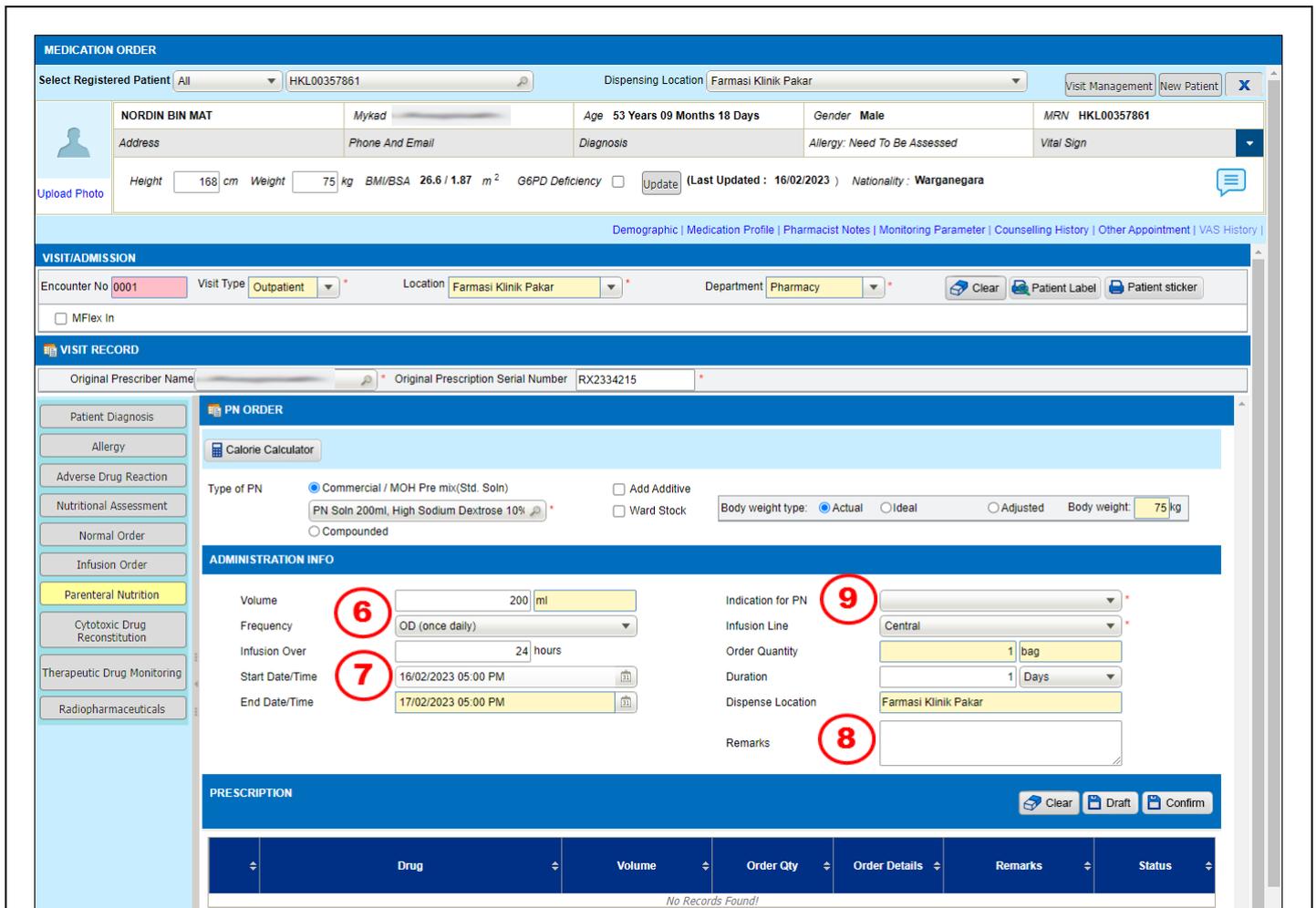
Figure 4.3-2 Drugs Listing

STEP 5

Select product that required for patient

Note

- To search for product record(s), user may search by criteria as follow:
 - Drug Code
 - Drug Name
- Click on the  button to search for the product.
- Click on the  button to view product ingredients and content.



MEDICATION ORDER

Select Registered Patient: All | HKL00357861 | Dispensing Location: Farmasi Klinik Pakar | Visit Management | New Patient

NORDIN BIN MAT | Mykad: [REDACTED] | Age: 53 Years 09 Months 18 Days | Gender: Male | MRN: HKL00357861

Address: [REDACTED] | Phone And Email: [REDACTED] | Diagnosis: [REDACTED] | Allergy: Need To Be Assessed | Vital Sign: [REDACTED]

Height: 168 cm | Weight: 75 kg | BMI/BSA: 26.6 / 1.87 m² | G6PD Deficiency: [] | Update (Last Updated: 16/02/2023) | Nationality: Warganegara

VISIT/ADMISSION

Encounter No: 0001 | Visit Type: Outpatient | Location: Farmasi Klinik Pakar | Department: Pharmacy | Clear | Patient Label | Patient sticker

VISIT RECORD

Original Prescriber Name: [REDACTED] | Original Prescription Serial Number: RX2334215

PN ORDER

Calorie Calculator

Type of PN: Commercial / MOH Pre mix (Std. Soln) | Add Additive | Ward Stock | Body weight type: Actual | Ideal | Adjusted | Body weight: 75 kg

PN Soln 200ml, High Sodium Dextrose 10% | Compounded

ADMINISTRATION INFO

Volume: 200 ml | Indication for PN: [REDACTED]

Frequency: OD (once daily) | Infusion Line: Central

Infusion Over: 24 hours | Order Quantity: 1 bag

Start Date/Time: 16/02/2023 05:00 PM | Duration: 1 Days

End Date/Time: 17/02/2023 05:00 PM | Dispense Location: Farmasi Klinik Pakar

Remarks: [REDACTED]

PRESCRIPTION

Clear | Draft | Confirm

Drug	Volume	Order Qty	Order Details	Remarks	Status
No Records Found!					

Figure 4.3-3 PN Order : Commercial / MOH Pre mix (Std. Soln)

STEP 6

Enter **Volume** and select **Frequency** field

Note

- All details under coloum administartion info field will be automatically displayed based on the information from PN Source Content and PN Constituents Reference Range. Selected coloum need to fill up based on mandatory requirements.
- This field still can be change by the user if applicable.

STEP 7

Select **Start Date/Time**

Note

- Start Date/Time** and will be automatically default to current date but still can be change by the user if applicable.
- End Date/Time** will be displayed according to duration product given.
- Order Quantity** will be automatically displayed and base on the information from PN Source Content and PN Constituents Reference Range.

STEP 8

Enter **Remarks** if applicable

STEP 9

Select **Indication for PN** from the dropdown menu

Figure 4.3-4 PN Order : Commercial / MOH Pre mix (Std. Soln)

STEP 10

Select **Infusion Line** from drop down menu

STEP 11

Enter/select **Duration** field

STEP 12

Click on the button to save record and alert message will be displayed as per Figure 4.3-5

Figure 4.3-5 Information Alert Message

STEP 13

Click on the button to save order record

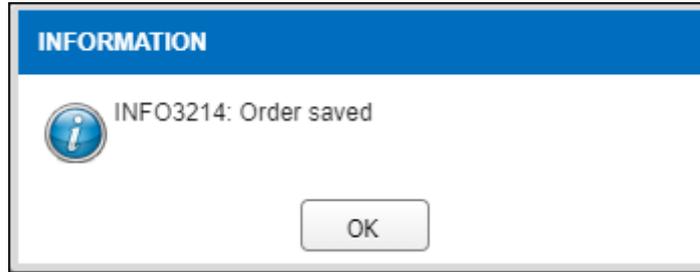


Figure 4.3-6 Information Alert Message

Note

Click on  button to proceed ordering

MEDICATION ORDER

Select Registered Patient: All | HKL00357861 | Dispensing Location: Farmasi Klinik Pakar | Visit Management | New Patient

NORDIN BIN MAT | Mykad: [redacted] | Age: 53 Years 09 Months 18 Days | Gender: Male | MRN: HKL00357861

Address: [redacted] | Phone And Email: [redacted] | Diagnosis: [redacted] | Allergy: Need To Be Assessed | Vital Sign: [redacted]

Height: 168 cm | Weight: 75 kg | BMI/BSA: 26.6 / 1.87 m² | G6PD Deficiency: | Update (Last Updated: 16/02/2023) | Nationality: Warganegara

VISIT/ADMISSION

Encounter No: 0001 | Visit Type: Outpatient | Location: Farmasi Klinik Pakar | Department: Pharmacy | Clear | Patient Label | Patient sticker

VISIT RECORD

Original Prescriber Name: [redacted] | Original Prescription Serial Number: RX2334215

PN ORDER

Calorie Calculator

Type of PN: Commercial / MOH Pre mix(Std. Soln) | Add Additive | Ward Stock | Compounded

PN Soln 200ml, High Sodium Dextrose 10% | Body weight type: Actual | Ideal | Adjusted | Body weight: 75 kg

ADMINISTRATION INFO

Volume: 200 ml | Indication for PN: Intractable vomiting | Infusion Line: Central | Order Quantity: 1 bag | Duration: 1 Days | Dispense Location: Farmasi Klinik Pakar

Frequency: OD (once daily) | Start Date/Time: 16/02/2023 05:00 PM | End Date/Time: 17/02/2023 05:00 PM

Remarks: [redacted] **15** **14**

PRESCRIPTION | Modify | Preview Prescription | Confirm | Delete

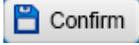
Drug	Volume	Order Qty	Order Details	Remarks	Prev. Disp. Qty	Status
PN Soln 200ml, High Sodium Dextrose 10%	200 ml	1 bag	Details	Remarks	0 bag	DRAFT

Figure 4.3-7 PN Order : Commercial / MOH Pre mix (Std. Soln)

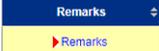
STEP 14

Click on the  button to confirm prescription

Note

- User can directly click on  button to directly confirm order without clicking on  button first.

- Click on the  link and 'PN Order Details' screen will be displayed as per Figure 4.3-7.

- Click on the  link and 'PN Remarks' screen will be displayed as per Figure 4.3-7.

STEP 15

Click on the  button to preview and print PN prescription as per Figure 4.3-8

PN ORDER DETAILS									
		Mykad 690428085277	Age 53 Years 09 Months 18 Days	Gender Male	MRN HKL00357861				
Address		Phone And Email		Diagnosis	Allergy: Need To Be Assessed		Vital Sign		
Upload Photo	Height 168 cm	Weight 75 kg	BMI/BSA 26.6 / 1.87 m ²		(Last Updated : 16/02/2023)		Nationality : Warganegara		
Drug Name	Total Volume (ml)	Total calorie (kcal)	Infusion Over (hour)	Infusion Rate (ml/hour)	Quantity	Freq	Duration	Start Date / Time	End Date / Time
PN Soln 200ml, High Sodium Dextrose 10%	200	104	24	8.33 ml/hour	1 bag	OD (once daily)	1 Days	16/02/2023 05:00 PM	17/02/2023 05:00 PM
Calorie Calculator					Infusion Line				
NA					Central				
Intervention Reason			Intervention Remarks			Intervention Accepted			

Figure 4.3-9 PN Order Details

Note

'PN Order Details' screen as per Figure 4.3-9.

PN REMARKS	
Prescriber Remark	
Order Stage	Verified with food nutritionist
Pharmacist Remark	
Verification Stage	

Figure 4.3-10 PN Remarks

Note

'PN Remarks' screen as per Figure 4.3-10.

Ministry Of Health, Malaysia
HOSPITAL KUALA LUMPUR
PARENTERAL NUTRITION

Patient Name: [REDACTED] **Patient ID:** 690428085277

Age: 53 Years 09 Months 18 Days **MRN:** HKL00357861

Gender: Male **Prescription :** FKP0001371618

Height / Weight / BSA: 168 cm/75 kg/1.9 m² **Order Date / Time :**

Room No / Bed: **Location:** Farmasi Klinik Pakar

Diagnosis: **Allergy:**

TPN Order: PN Soln 200ml, High Sodium Dextrose 10% **Order Quantity:** 1 bag

Start Date/Time: 16/02/2023 05:00 PM **End Date/Time:** 17/02/2023 05:00 PM

	Content / kg	Content / bag
Volume (ml)	2.67	200
Calorie (kCal)	1.39	104
Protein (g)	0.08	6
Carbohydrate (g)	0.27	20
Lipid (g)	NA	NA
Sodium (mmol)	0.16	12
Potassium (mmol)	0.05	4
Calcium (mmol)	0.03	2.5
Magnesium (mmol)	0.01	0.6
Phosphate (mmol)	0.03	2.4
Chloride (mmol)	0.06	4.36
Acetate (mmol)	0.09	6.8
Trace Element (ml)	0.02	1.5
Combine Vitamin (ml)	NA	NA
Water Soluble Vitamin (ml)	NA	NA
Fat Soluble Vitamin (ml)	NA	NA

Infusion Over: 24 hr **Infusion Rate:** 8.33 ml/hr

Prescriber: [REDACTED] **Frequency:** OD (once daily)

Designation: Pegawai Perubatan Pelatih **Infusion Route:** Central

Department: General Medicine **Remarks:**

Figure 4.3-11 Sample of PN Prescription

Note

Sample of PN prescription is as shown in Figure 4.3-11.

MEDICATION ORDER

Select Registered Patient: All | HKL00357861 | Dispensing Location: Farmasi Klinik Pakar | Visit Management | New Patient

Patient Information:
 Name: NORDIN BIN MAT | Mykad: [Redacted] | Age: 53 Years 09 Months 18 Days | Gender: Male | MRN: HKL00357861
 Address: [Redacted] | Phone And Email: [Redacted] | Diagnosis: [Redacted] | Allergy: Need To Be Assessed | Vital Sign: [Redacted]
 Height: 168 cm | Weight: 75 kg | BMI/BSA: 26.6 / 1.87 m² | G6PD Deficiency: | Update (Last Updated: 16/02/2023) | Nationality: Warganegara

VISIT/ADMISSION
 Encounter No: 0001 | Visit Type: Outpatient | Location: Farmasi Klinik Pakar | Department: Pharmacy | Clear | Patient Label | Patient sticker

VISIT RECORD
 Original Prescriber Name: [Redacted] | Original Prescription Serial Number: RX2334215

PN ORDER
 Patient Diagnosis: [Redacted] | Allergy: [Redacted] | Adverse Drug Reaction: [Redacted] | Nutritional Assessment: [Redacted] | Normal Order: [Redacted] | Infusion Order: [Redacted] | Parenteral Nutrition: **Selected** | Cytotoxic Drug Reconstitution: [Redacted] | Therapeutic Drug Monitoring: [Redacted] | Radiopharmaceuticals: [Redacted]

PN ORDER Details:
 Type of PN: Commercial / MOH Pre mix (Std. Soln) | Add Additive | Ward Stock | Body weight type: Actual | Ideal | Adjusted | Body weight: 75 kg
 PN Soln 200ml, High Sodium Dextrose 10% | Compounded

ADMINISTRATION INFO
 Volume: 200 ml | Indication for PN: Intractable vomiting | Frequency: OD (once daily) | Infusion Line: Central | Infusion Over: 24 hours | Order Quantity: 1 bag | Duration: 1 Days | Start Date/Time: 16/02/2023 05:00 PM | End Date/Time: 17/02/2023 05:00 PM | Dispense Location: Farmasi Klinik Pakar

PRESCRIPTION
 [Modify] [Preview Prescription] [Confirm] [Delete]

Drug	Volume	Order Qty	Order Details	Remarks	Prev. Disp. Qty	Status
PN Soln 200ml, High Sodium Dextrose 10%	200 ml	1 bag	Details	Remarks	0 bag	DRAFT

Figure 4.3-12 PN Order : Commercial / MOH Pre mix (Std. Soln)

STEP 16

Click on the button to confirm record order and alert message will be appeared as per Figure 4.3-12

CONFIRMATION

CONF3219: Are you sure want to confirm the order?

Figure 4.3-13 Information Alert Message

STEP 17

Click on the button to confirm ordered saved and to verify PN Order screen will be appeared as per Figure 4.3-13

MEDICATION ORDER

Select Registered Patient: All | HKL00357861 | Dispensing Location: Farmasi Klinik Pakar | Visit Management | New Patient

NORDIN BIN MAT | Mykad: [REDACTED] | Age: 53 Years 09 Months 19 Days | Gender: Male | MRN: HKL00357861

Address: [REDACTED] | Phone And Email: [REDACTED] | Diagnosis: [REDACTED] | Allergy: Need To Be Assessed | Vital Sign: [REDACTED]

Height: 168 cm | Weight: 75 kg | BMI/BSA: 26.6 / 1.87 m² | G6PD Deficiency: | Update (Last Updated: 17/02/2023) | Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment | VAS History

VISIT/ADMISSION

Encounter No: 0001 | Visit Type: Outpatient | Location: Farmasi Klinik Pakar | Department: Pharmacy | Clear | Patient Label | Patient sticker

MFlex In

PARTIAL SUPPLY

VISIT RECORD

Original Prescriber Name: [REDACTED] | Original Prescription Serial Number: RX2334215

PN ORDER 18

PRESCRIPTION | Preview Prescription | PROCEED TO PREPARATION | Verify

Drug	Volume	Order Qty	Order Details	Remarks	Prev. Disp. Qty	Status
PN Soln 200ml, High Sodium Dextrose 10%	200 ml	1 bag	Details	Remarks	0 bag	ORDERED

Figure 4.3-14 PN Order : Verification

STEP 18

Click on the  button to verify the order and alert message will be displayed as per Figure 4.3-15

Note

- Click on the  button to confirm the verification.
- Verified order will be flowed to preparation stage.

CONFIRMATION

 CONF0061: Do you want to proceed with the verification?

Cancel | Yes | No

Figure 4.3-15 Confirmation Alert Message

PN PREPARATION

Prescription [X]

NORDIN BIN MAT Mykad [REDACTED] Age 53 Years 09 Months 19 Days Gender Male MRN HKL00357861

Address [REDACTED] Phone And Email [REDACTED] Diagnosis [REDACTED] Allergy: Need To Be Assessed Vital Sign [REDACTED]

Height 168 cm Weight 75 kg BMI/BSA 26.6 / 1.87 m² Update (Last Updated : 17/02/2023) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counseling History | Other Appointment

Encounter No: 0001 Actual Visit Date: 17/02/2023 Visit Location: Farmasi Klinik Pakar Room No/Bed No: Rx No: FKP0001371619 Order By: Ordered By:

Original Prescription Serial No: RX2334215

PHARMACY ORDER

Prepared Date/Time 17/02/2023 10:19 AM

PRESCRIPTION PROCEED TO DISPENSING Prepare Label

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Remarks	Prev Disp	Status
PN Soln 200ml, High Sodium Dextrose 10%	200 ml	1 bag	Details	0 bag	1 bag	Remarks	0 bag	VERIFIED

Figure 4.3-16 PN Preparation

STEP 19

Click on the **0 bag** link to allocate quantity and 'Item Batch Details' screen will be displayed as per Figure 4.3-17

ITEM BATCH DETAILS

Drug Code PNP00021 Default SKU bag

Drug Name PN Soln 200ml, High Sodium Dextrose 10%

BATCH DETAIL

Batch No.	Expiry Date	Available Qty	Balance Qty	Allocated Qty
WCD23112	10/07/2025	100	1	1

Total Location Quantity 100 Total Allocated Quantity 1

Figure 4.3-17 Item Batch Details

STEP 20

Enter **Allocated Qty**

STEP 21

Click on the  button to save record

CONFIRMATION

CONF0002: Are you sure you want to save?

Cancel Yes No

Figure 4.3-18 Confirmation Alert Message

STEP 22

Click on the  button to confirm save

PN PREPARATION

 Prescription X

	NORDIN BIN MAT	Mykad	Age 53 Years 09 Months 19 Days	Gender Male	MRN HKL00357861
	Address	Phone And Email	Diagnosis	Allergy: Need To Be Assessed	Vital Sign

Upload Photo Height cm Weight kg BMI/BSA 26.6 / 1.87 m² Update (Last Updated : 17/02/2023) Nationality : Warganegara

[Demographic](#) | [Medication Profile](#) | [Pharmacist Notes](#) | [Monitoring Parameter](#) | [Counseling History](#) | [Other Appointment](#)

Encounter No: 0001 Actual Visit Date: 17/02/2023 Visit Location: Farmasi Klinik Pakar Room No/Bed No: Rx No: FKP0001371619 Order By: Ordered By:

PHARMACY ORDER

Prepared Date/Time

PRESCRIPTION

PROCEED TO DISPENSING  Prepare  Label

	Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Remarks	Prev Disp	Status
▼	PN Soln 200ml, High Sodium Dextrose 10%	200 ml	1 bag	Details	1 bag	1 bag	Remarks	0 bag	VERIFIED

Figure 4.3-19 PN Preparation

Note

Edit Label

Click on the  button to edit label and 'PN Edit Label' window will display as per Figure 4.3-20.

PN EDIT LABEL

  X

Select for print Drug Name PN Soln 200ml, High Sodium Dextrose 10%

Total Volume	<input type="text" value="200"/> ml	Infusion Over	<input type="text" value="24"/> Hour(s)
Infusion Rate	<input type="text" value="8.33"/> mL/Hour	Infusion Line	<input type="text" value="Central"/>
Prepared Date/Time	<input type="text" value="17/02/2023 10:19 AM"/>	Shelf Life *	<input type="text" value="24"/> Hours
Expiry Date/Time	<input type="text" value="18/02/2023 10:19 AM"/>		
Batch/Worksheet No	<input type="text" value="WCD23112"/>		

Figure 4.3-20 PN Edit Label

Note

- Select the Select for print radio button to print label.
- User allows to edit **Infusion Over** and enter/select **Shelf Life** field.
- **Prepared Date/Time** and **Expiry Date/Time** field will be automatically displayed after enter the **Shelf Life** field.
- **Drug Name**, **Total Volume**, **Infusion Rate** and **Batch/Worksheet No** field will be automatically displayed by system.
- The  button to print label.
- The  button to close 'PN Edit Label' window.
- Sample PN Label as per Figure 4.3-21.

HOSPITAL KUALA LUMPUR		
PN Soln 200ml, High Sodium Dextrose 10%		
NAME : NORDIN BIN MAT		
ID NO : _____		
AGE : 53 Years 09 Months 19 Days		
MRN : HKL00357861	WARD/BED NO: Farmasi Klinik Pakar	
Total <u>200</u> ml/bag		
Content	/ kg	/ bag
Protein (g)	0.08	6
Dextrose (g)	0.27	20
Lipid (g)	0	0
Sodium (mmol)	0.16	12
Potassium (mmol)	0.05	4
Calcium (mmol)	0.03	2.5
Magnesium (mmol)	0.01	0.6
Phosphate (mmol)	0.03	2.4
Chloride (mmol)	0.06	4.36
Acetate (mmol)	0.09	6.8
Trace Element (ml)	0.02	1.5
Vitamins (ml)	0	0
Calories (kcal)	1.39	104
Osmolarity (mOsm/l)	0	0
Admin Date/Time :		
Infusion Rate	<u>8.33</u> mL/Hrs	
Infusion Over	<u>24</u> Hrs	
Batch No : WCD23112	Expiry Date : 18/02/2023	Price : RM
Do not use if any visible solid particles, growth or precipitation appears.		
Store in refrigerator (2-8 °C). Protect from light (Once open use within 48 hours) Ensure PN Solution is at room temperature before infusion.		
TO BE INFUSED : CENTRAL LINE		

Figure 4.3-21 Sample PN Label

PN PREPARATION

Prescription X

	NORDIN BIN MAT	Mykad: _____	Age: 53 Years 09 Months 19 Days	Gender: Male	MRN: HKL00357861
	Address: _____	Phone And Email: _____	Diagnosis: _____	Allergy: Need To Be Assessed	Vital Sign: _____

Upload Photo Height: 168 cm Weight: 75 kg BMI/BSA: 26.6 / 1.87 m² Update (Last Updated: 17/02/2023) Nationality: Warganegara

[Demographic](#) | [Medication Profile](#) | [Pharmacist Notes](#) | [Monitoring Parameter](#) | [Counseling History](#) | [Other Appointment](#)

Encounter No: 0001 Actual Visit Date: 17/02/2023 Visit Location: Farmasi Klinik Pakar Room No/Bed No: _____ Rx No: FKP0001371619 Order By: _____ Ordered By: _____

PHARMACY ORDER

Prepared Date/Time: 17/02/2023 10:19 AM

PRESCRIPTION

PROCEED TO DISPENSING Prepare Label

1 / 1

	Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Remarks	Prev Disp	Status
▼	PN Soln 200ml, High Sodium Dextrose 10%	200 ml	1 bag	Details	1 bag	1 bag	Remarks	0 bag	VERIFIED

Figure 4.3-22 PN Preparation

STEP 23

Click on the  button to prepare PN order

Note

Proceed to Dispensing function will allow user to go the next stage screen for each patient record.

CONFIRMATION

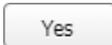


INFO0577: Please make sure already print worksheet and label before proceed to dispensing stage. Do you want to proceed with the preparation?

Cancel
Yes
No

Figure 4.3-23 Confirmation Alert Message

STEP 24

Click on the  button to confirm prepare order

PN DISPENSING

Prescription X

	NORDIN BIN MAT	Mykad: [REDACTED]	Age: 53 Years 09 Months 19 Days	Gender: Male	MRN: HKL00357861
Address: [REDACTED]		Phone And Email: [REDACTED]		Diagnosis: [REDACTED]	
Allergy: Need To Be Assessed		Vital Sign: [REDACTED]			

Upload Photo Height: 168 cm Weight: 75 kg BMI/BSA: 26.6 / 1.87 m² Update (Last Updated: 17/02/2023) Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counseling History | Other Appointment |

Encounter No: 0001 Actual Visit Date: 17/02/2023 Visit Location: Farmasi Klinik Pakar Room No/Bed No: [REDACTED] Rx No: FKP0001371619 Ordered By: [REDACTED]

Original Prescription Serial No: RX2334215

PHARMACY ORDER

Dispensed To:	NORDIN BIN MAT *	Dispensed Date and Time:	17/02/2023 11:09:16 AM *	Remarks:	
Dispensed At:	Pharmacy Counter *	Collected By:	[REDACTED]		

PRESCRIPTION

Release/Discard Label Dispense

Drug	Volume	Order Qty	Order Details	Prepared Qty	Prev Disp	Balance Qty	Remarks	Status	Complete
PN Soln 200ml, High Sodium Dextrose 10%	200 ml	1 bag	Details	1 bag	0 bag	1 bag	Remarks	PREPARED	<input type="checkbox"/>

Figure 4.3-24 PN Dispensing

STEP 25

Click on the  button and alert message will be displayed as per Figure 4.3-25

CONFIRMATION

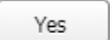


CONF0064: Do you want to dispense now?

Cancel
Yes
No

Figure 4.3-24 Confirmation Alert Message

STEP 26

Click on the  button to confirm prepare order

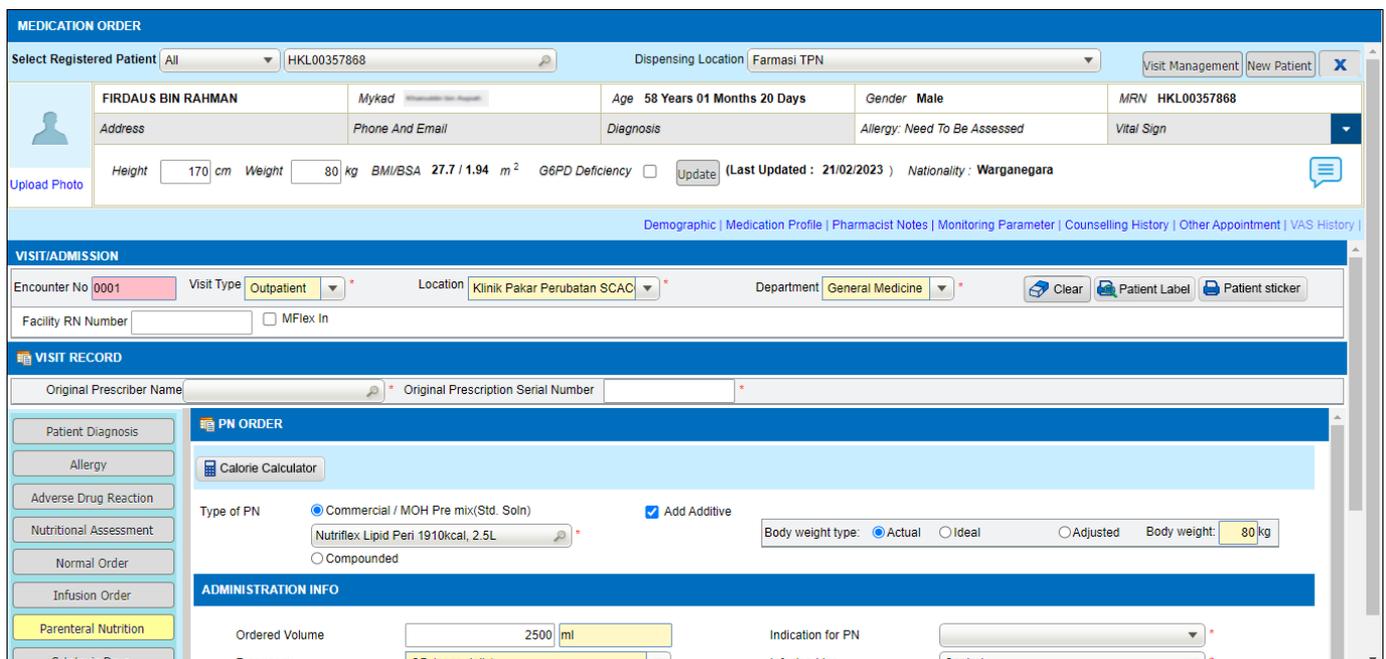
Note

User can do **Release/Discard** Order at dispensing activity stage.

PB_U. MANUAL_PN-13th E

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4.4 Commercial/MOH Pre Mix (Std. Soln) Add Additive



The screenshot displays the 'MEDICATION ORDER' interface. At the top, it shows patient selection (FIRDAUS BIN RAHMAN, MRN: HKL00357868) and dispensing location (Farmasi TPN). Below this, patient demographics and physical characteristics are listed, including height (170 cm), weight (80 kg), and BMI/BSA (27.7 / 1.94 m²). The 'VISIT/ADMISSION' section shows an outpatient visit at Klinik Pakar Perubatan SCAC. The 'PN ORDER' section is active, showing 'Type of PN' set to 'Commercial / MOH Pre mix (Std. Soln)' with the 'Add Additive' checkbox checked. The selected product is 'Nutriflex Lipid Peri 1910kcal, 2.5L'. The 'ADMINISTRATION INFO' section shows an ordered volume of 2500 ml.

Figure 4.4-1 Medication Order

'Commercial Add Additive' function allows user to order ready made product with additional PN component

Note

- Repeat **STEP 1 – STEP 5** at section 4.3. Commercial/MOH Pre mix (Std Soln).
- Select product and check on the 'Add Additive' checkbox.
- Select product and check on the 'Ward Stock' checkbox.
- Check the 'Ward Stock' checkbox if the drug available in ward unit. Only applicable for Inpatient and where pharmacist do not supply medication to the wards
- Repeat **STEP 6 – STEP 12** at section 4.3. Commercial/MOH Pre mix (Std Soln)

MEDICATION ORDER

Select Registered Patient: All | HKL00357868 | Dispensing Location: Farmasi TPN | Visit Management | New Patient

PATIENT INFORMATION:
 Name: FIRDAUS BIN RAHMAN | Mykad: | Age: 58 Years 01 Months 20 Days | Gender: Male | MRN: HKL00357868
 Address: | Phone And Email: | Diagnosis: | Allergy: Need To Be Assessed | Vital Sign:
 Height: 170 cm | Weight: 80 kg | BMI/BSA: 27.7 / 1.94 m² | G6PD Deficiency: | Update (Last Updated: 21/02/2023) | Nationality: Warganegara

VISIT/ADMISSION:
 Encounter No: 0001 | Visit Type: Outpatient | Location: Klinik Pakar Perubatan SCAC | Department: General Medicine

PN ORDER:
 Type of PN: Commercial / MOH Pre mix(Std. Soln) | Add Additive
 Nutriflex Lipid Peri 1910kcal, 2.5L | Body weight type: Actual | Body weight: 80 kg

ADMINISTRATION INFO:

PN COMPONENT	Initial Content	Additional Requirement	Total Per Day
Electrolytes			
Sodium(Natrium), Na ⁺	100 mmol		100 mmol
Potassium(Kalium), K ⁺	60 mmol		60 mmol
Calcium, Ca ²⁺	6 mmol		6 mmol
Magnesium, Mg ²⁺	6 mmol		6 mmol
Phosphate, PO ₄ ³⁻	15 mmol		15 mmol
Acetate, CH ₃ COO ⁻	80 mmol		80 mmol
Trace elements	0 ml		0 ml
L-Glutamin	0 ml		0 ml
Vitamin			
<input checked="" type="radio"/> Single Vitamin <input type="radio"/> Combine Vitamin			
Water soluble	0 ml		0 ml
Fat soluble	0 ml		0 ml

Figure 4.4-2 Single Vitamin

STEP 1

Enter value of **Electrolytes** that require for patient per day

Note

- User need to enter total electrolytes required for patient per day.
- All value must be more than per bag ordering.
- All value in all **Per Bag (Per Ordering)** field will be automatically default by system.

STEP 2

Select **Single Vitamin** radio button

Note

- **Water soluble** and **Fat soluble** field will be automatically displayed as per Figure 4.4-3.
- Enter value of **Water soluble** and **Fat soluble**.

Vitamin
 Single Vitamin | Combine Vitamin

Water soluble: 0 ml

Fat soluble: 0 ml

Figure 4.4-3 Single Vitamin

Or
Select **Combine Vitamin** radio button

Note
Vitamin(Water and Fat soluble) field will be automatically displayed as per Figure 4.4-4.

Figure 4.4-4 Combine Vitamin

PN COMPONENT	Initial Content	Additional Requirement	Total Per Day
Electrolytes			
Sodium(Natrium), Na ⁺	100 mmol	mmol	100 mmol
Potassium(Kalium), K ⁺	60 mmol	mmol	60 mmol
Calcium, Ca ²⁺	6 mmol	mmol	6 mmol
Magnesium, Mg ²⁺	6 mmol	mmol	6 mmol
Phosphate, PO ₄ ³⁻	15 mmol	mmol	15 mmol
Acetate, CH ₃ COO ⁻	80 mmol	mmol	80 mmol
Trace elements			
L-Glutamin	0 ml	ml	0 ml
Vitamin			
<input checked="" type="radio"/> Single Vitamin			
<input type="radio"/> Combine Vitamin			
Water soluble	0 ml	ml	0 ml
Fat soluble	0 ml	ml	0 ml

Figure 4.4-5 Medication Order

STEP 3

Click on the button to confirm record order and alert message will be appeared as per Figure 4.4-6

Note

- Click on the button to save prescription as a draft and the alert message as below will appear.
- Click on the button as per Figure 4.4-5 to clear data in order details.

Figure 4.4-6 Confirmation Alert Message

- Click on button to proceed the order and verify PN Order screen will be displayed as Figure 4.4-7

MEDICATION ORDER

FIRDAUS BIN RAHMAN Mykad: Age: 58 Years 01 Months 20 Days Gender: Male MRN: HKL00357868

Address: Phone And Email: Diagnosis: Allergy: Need To Be Assessed Vital Sign:

Height: cm Weight: kg BMI/BSA: 27.7 / 1.94 m² G6PD Deficiency: Update (Last Updated: 21/02/2023) Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment | VAS History

VISIT/ADMISSION

Encounter No: 0001 Visit Type: Outpatient Location: Klinik Pakar Perubatan SCAC Department: General Medicine

Facility RN Number: MFlex In:

VISIT RECORD

Original Prescriber Name: Original Prescription Serial Number: RX14900

PN ORDER

PRESCRIPTION PROCEED TO PREPARATION

Drug	Volume	Order Qty	Order Details	Remarks	Status
Nutriflex Lipid Peri 1910kcal, 2.5L with Additive	2500 ml	1 bag	Details	Remarks	ORDERED

Figure 4.4-7 PN Order : Verify

STEP 4

Click on the button to verify the order and alert message will be displayed as per Figure 4.4-8

CONFIRMATION

 CONF0061: Do you want to proceed with the verification?

Figure 4.4-8 Confirmation Alert Message

Note

- Click on the button to confirm the verification.
- Verified order will be flowed to preparation stage.



PN PREPARATION

Prescription

FIRDAUS BIN RAHMAN Mykad: [Redacted] Age: 58 Years 01 Months 20 Days Gender: Male MRN: HKL00357868

Address: [Redacted] Phone And Email: [Redacted] Diagnosis: [Redacted] Allergy: Need To Be Assessed Vital Sign: [Redacted]

Height: 170 cm Weight: 80 kg BMI/BSA: 27.7 / 1.94 m² Update (Last Updated: 21/02/2023) Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counseling History | Other Appointment

Encounter No: 0001 Actual Visit Date: 21/02/2023 Visit Location: Klinik Pakar Perubatan SCACC Room No/Bed No: [Redacted] Rx No: PC0001371622 Order By: [Redacted] Ordered By: [Redacted]

Original Prescription Serial No: RX14900

PHARMACY ORDER

Prepared Date/Time: 21/02/2023 02:22 PM

PRESCRIPTION PROCEED TO DISPENSING Prepare Worksheet Label Outsource

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
Nutriflex Lipid Peri 1910kcal, 2.5L with Additive	2500 ml	1 bag	Details	0 bag	1 bag	Details	Remarks	0 bag	VERIFIED

Figure 4.4-9 PN Preparation

STEP 5

Click on the **0 bag** link to allocate quantity and 'Item Batch Details' screen will be displayed as per Figure 4.4-10

ITEM BATCH DETAILS

Drug Code: PNA00003 Default SKU: bag

Drug Name: Nutriflex Lipid Peri 1910kcal, 2.5L

BATCH DETAIL

Batch No.	Expiry Date	Available Qty	Balance Qty	Allocated Qty
W3222	12/06/2025	100	1	1

Total Location Quantity: 100 Total Allocated Quantity: 1

Figure 4.4-10 Item Batch Details

STEP 6

Enter **Allocated Qty**

STEP 7

Click on the button to save record

CONFIRMATION

CONF0002: Are you sure you want to save?

Buttons: Cancel Yes No

Figure 4.4-11 Confirmation Alert Message



STEP 8

Click on the button to confirm save

PN PREPARATION Prescription X

FIRDAUS BIN RAHMAN Mykad Age 58 Years 01 Months 20 Days Gender Male MRN HKL00357868

Address Phone And Email Diagnosis Allergy: Need To Be Assessed Vital Sign

Height cm Weight kg BMI/BSA 27.7 / 1.94 m² Update (Last Updated : 21/02/2023) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment

Encounter No: 0001 Actual Visit Date: 21/02/2023 Visit Location: Klinik Pakar Perubatan SCACC Room No/Bed No: Rx No: PC0001371622 Order By: Ordered By:

Original Prescription Serial No: RX14900

PHARMACY ORDER

Prepared Date/Time 21/02/2023 02:22 PM

PRESCRIPTION PROCEED TO DISPENSING Prepare Worksheet Label Outsource

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
Nutriflex Lipid Peri 1910kcal, 2.5L with Additive	2500 ml	1 bag	Details	1 bag	1 bag	Details	Remarks	0 bag	VERIFIED

9

Figure 4.4-12 PN Preparation

STEP 9

Click on the **Prepare Worksheet** button to prepare worksheet as per Figure 4.4-13

PREPARE WORKSHEET Intervention Auto Allocation

DETAIL

Macronutrient

Glucose g Vitamin ml Trace elements ml

Lipid g Water soluble ml Acetate mmol

Protein g Fat soluble ml L-Glutamin ml

Electrolytes

Sodium(Natrium),Na+ mmol Calcium,Ca2+ mmol Phosphate,(PO4)2- mmol

Potassium(Kalium),K+ mmol Magnesium,Mg+ mmol

Drug selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolarity (mOsmol)	Content						
						Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Chloride (mmol)
<input type="text" value="0"/>	0		0	0	0	2	0	0	0	0	0	0
Sodium Glycerophosphate 20ml Injection	0		0	0	0	0	1	0	0	0	0	0
Sodium Chloride 20% Inj	0		0	0	0	0	0	25	0	0	0	0
Potassium Chloride 1g/10ml Injection	0		0	0	0	0	0	0	2	0	0	0
Calcium Gluconate 10% Injection	0		0	0	0	0	0	0	0	1	0	0
Magnesium Sulphate 50% Injection (49.3%/5mL)	0		0	0	0	0	0	0	0	0	1	0
Trace Element - Paediatric (Peditrace) 10mL Inj	1		0	0	0	Trace Elements						
<input type="text" value="0"/>	0		0	0	0	Combine Vitamin (Water & Fat Soluble)						
Vitamin B and C (Solvit N) in 10 ml WF1	1		0	0	0	Water Soluble Vitamins						
Vitamin A, D, E, K (Vitalipid N Infant) 10ml Inj	1		0	0	0	Fat Soluble Vitamins						
<input type="text" value="1"/>	1		0	0	0	L-Glutamin						
Total Preparation	0			0	0	0	0	0	0	0	0	0
					0	0	0	0	0	0	0	0

Figure 4.4-13 Prepare Worksheet

Note

- Click and Select the drug from drop down and **Macronutrient**, **Vitamin** field and **Electrolytes** field display the quantity to be added into the bag.
- Click on the button to calculate PN content value.
- **Volume (ml)**, **Order Quantity**, **Calorie (kcal)**, **Osmolrity(mOsmol)**, **Content** and **Total Preparation** will be automatically calculated and displayed by system as per Figure 4.4-14.
- **Calorie(kcal)** will be added together with the additives amount

PREPARE WORKSHEET

Intervention Auto Allocation

10

DETAIL

Macronutrient	Vitamin	Trace elements
Glucose <input type="text"/> g	Vitamin Solution <input type="text"/> 0 ml	<input type="text"/> 1 ml
Lipid <input type="text"/> g	Water soluble <input type="text"/> 1 ml	Acetate <input type="text"/> 2 mmol
Protein <input type="text"/> g	Fat soluble <input type="text"/> 1 ml	L-Glutamin <input type="text"/> 1 ml
Electrolytes	Calcium, Ca2+	Phosphate, (PO4)2-
Sodium(Natrium), Na+ <input type="text"/> 25 mmol	<input type="text"/> 1 mmol	<input type="text"/> 1 mmol
Potassium(Kalium), K+ <input type="text"/> 2 mmol	Magnesium, Mg+ <input type="text"/> 1 mmol	

Drug selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolrity (mOsmol)	Content						
						Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Chloride (mmol)
Sodium Acetate 2mmol/ml Injection	1	1 amp	0	0	4	2	0	2	0	0	0	0
Sodium Glycerophosphate 20ml Injection	1	1 amp	0	0	2.57	0	1	2	0	0	0	0
Sodium Chloride 20% Inj	6.14	1 amp	0	0	36.84	0	0	21	0	0	0	21
Potassium Chloride 1g/10ml Injection	1.49	1 amp	0	0	4.03	0	0	0	2	0	0	2
Calcium Gluconate 10% Injection	4.42	1 amp	0	0	2.92	0	0	0	0	1	0	0
Magnesium Sulphate 50% Injection (49.3%/5mL)	0.5	1 amp	0	0	2.3	0	0	0	0	0	1	0
Trace Element - Paediatric (Peditrace) 10mL Inj	1	1 amp	0	0	0.04	Trace Elements						
	0			0	0	Combine Vitamin (Water & Fat Soluble)						
Vitamin B and C (Soluvit N) in 10 ml WFI	1	1 vial	0	0	0.49	Water Soluble Vitamins						
Vitamin A, D, E, K (Vitalipid N Infant) 10ml Inj	1	1 amp	0	0	0.3	Fat Soluble Vitamins						
N(2)-L-alanyl-L-glutamine 20% (Dipeptivan) 100ml	1	1 bott	0	0.8	0.92	L-Glutamin						
Total Preparation	18.56			0.8	2931.57 mOsmol/L	2	1	25	2	1	1	23
					Content/L	107.76	53.88	1346.98	107.76	53.88	53.88	1239.22

Figure 4.4-14 Prepare Worksheet

STEP 10

Click on the button and confirmation pop up will appear as in figure 4.4-15

CONFIRMATION

CONF0002: Are you sure you want to save?

Figure 4.4-15 Confirmation Alert Message

Note

- Click on the button to save record and record will be update as shown in Figure 4.4-16



PREPARE WORKSHEET

Intervention Auto Allocation

DETAIL

Macronutrient
 Glucose g
 Lipid g
 Protein g

Vitamin
 Vitamin Solution ml
 Water soluble ml
 Fat soluble ml

Trace elements ml
 Acetate mmol
 L-Glutamin ml

Electrolytes
 Sodium(Natrium),Na+ 25 mmol
 Potassium(Kalium),K+ 2 mmol
 Calcium,Ca2+ 1 mmol
 Magnesium,Mg+ 1 mmol
 Phosphate,(PO4)2- 1 mmol

Drug selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolarity (mOsmol)	Content						
						Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Chloride (mmol)
Sodium Acetate 2mmol/ml Injection	1	1 amp	1 amp	0	4	2	0	2	0	0	0	0
Sodium Glycerophosphate 20ml Injection	1	1 amp	1 amp	0	2.57	0	1	2	0	0	0	0
Sodium Chloride 20% Inj	6.14	1 amp	1 amp	0	36.84	0	0	21	0	0	0	21
Potassium Chloride 1g/10ml Injection	1.49	1 amp	1 amp	0	4.03	0	0	0	2	0	0	2
Calcium Gluconate 10% Injection	4.42	1 amp	1 amp	0	2.92	0	0	0	0	1	0	0
Magnesium Sulphate 50% Injection (49.3%/5mL)	0.5	1 amp	1 amp	0	2.3	0	0	0	0	0	1	0
Trace Element - Paediatric (Peditrace) 10mL Inj	1	1 amp	1 amp	0	0.04	Trace Elements						
	0			0	0	Combine Vitamin (Water & Fat Soluble)						
Vitamin B and C (Soluvit N) in 10 ml WFI	1	1 vial	1 vial	0	0.49	Water Soluble Vitamins						
Vitamin A, D, E, K (Vitalipid N Infant) 10ml Inj	1	1 amp	1 amp	0	0.3	Fat Soluble Vitamins						
N(2)-L-alanyl-L-glutamine 20% (Dipeptivan) 100ml	1	1 bott	1 bott	0.8	0.92	L-Glutamin						
Total Preparation	18.56			0.8	2931.57 mOsmol/L	2	1	25	2	1	1	23
					Content/L	107.76	53.88	1346.98	107.76	53.88	53.88	1239.22

Figure 4.4-16 Prepare Worksheet

- Click on button to close window and PN preparation screen will be display as shown in Figure 4.4-17

PN PREPARATION

Prescription

Patient Information:
 Name: FIRDAUS BIN RAHMAN, Mykad: , Age: 58 Years 01 Months 20 Days, Gender: Male, MRN: HKL00357868
 Address: , Phone And Email: , Diagnosis: , Allergy: Need To Be Assessed, Vital Sign:

Height: 170 cm, Weight: 80 kg, BMI/BSA: 27.7 / 1.94 m², Update (Last Updated: 21/02/2023), Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment

Encounter No: 0001, Actual Visit Date: 21/02/2023, Visit Location: Klinik Pakar Perubatan SCACC, Room No/Bed No: , Rx No: PC0001371622, Order By: , Ordered By:

Original Prescription Serial No: RX14900

PHARMACY ORDER
 Prepared Date/Time: 21/02/2023 03:30 PM

PRESCRIPTION
 PROCEED TO DISPENSING

1 / 1

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
Nutriflex Lipid Peri 1910kcal, 2.5L with Additive	2500 ml	1 bag	Details	1 bag	1 bag	Details	Remarks	0 bag	VERIFIED

Figure 4.4-17 PN Preparation

STEP 11

Click on the button to generate worksheet as per Figure 4.4-18

Note

Edit Label

- Select the Select for print radio button to print label.
- User is allowed to edit **Infusion Over**, **Date Prepared** and **Shelf Life** field.
- **Expiry Date** will be automatically displayed after enter the **Shelf Life** field.
- **Drug Name**, **Total Volume**, **Infusion Rate** and **Batch No** will be automatically displayed by system.

HOSPITAL KUALA LUMPUR		
Nutriflex Lipid Peri 1910kcal, 2.5L with Additive		
NAME : FIRDAUS BIN RAHMAN		
ID NO : <input type="text"/>		
AGE : 58 Years 01 Months 20 Days		
MRN : HKL00357868	WARD/BED NO: Klinik Pakar Perubatan SCACC	
Product Volume	2518.56	ml/bag
Ordered Volume	2518.56	ml/bag
Content	/ kg	/ bag
Protein (g)	1	80
Dextrose (g)	2	160
Lipid (g)	1.25	100
Sodium (mmol)	1.56	125
Potassium (mmol)	0.78	62
Calcium (mmol)	0.09	7
Magnesium (mmol)	0.09	7
Phosphate (mmol)	0.2	16
Chloride (mmol)	1.49	119
Acetate (mmol)	1.02	82
Trace Element (ml)	0.01	1
Vitamins (ml)	0.03	2
Calories (kcal)	23.88	1910.8
Osmolarity (mOsm/l)	10.69	855.41
L-Glutamin (g)	0	0.2
Admin Date/Time :		
Infusion Rate	104.94 mL/Hrs	
Infusion Over	24 Hrs	
Prepared Date	21/02/2023 3:30 PM	
Worksheet ID :	Expiry Date :	Price : RM
A001-210223	22/02/2023	
Do not use if any visible solid particles, growth or precipitation appears.		
Store in refrigerator (2-8 °C). Protect from light (Once open use within 24 Hours) Ensure PN Solution is at room temperature before infusion.		
TO BE INFUSED : CENTRAL LINE		

Figure 4.4-20 PN Label

PN PREPARATION

Prescription X

FIRDAUS BIN RAHMAN Mykad XXXXXXXXXX Age 58 Years 01 Months 20 Days Gender Male MRN HKL00357868

Address Phone And Email Diagnosis Allergy: Need To Be Assessed Vital Sign

Upload Photo Height 170 cm Weight 80 kg BMI/BSA 27.7 / 1.94 m² Update (Last Updated : 21/02/2023) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment |

Encounter No: 0001 Actual Visit Date: 21/02/2023 Visit Location: Klinik Pakar Perubatan SCACC Room No/Bed No: Rx No: PC0001371622 Order By: Ordered By:

Original Prescription Serial No: RX14900

PHARMACY ORDER

Prepared Date/Time 21/02/2023 03:30 PM

PRESCRIPTION PROCEED TO DISPENSING Prepare Worksheet Label Outsource

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
Nutriflex Lipid Peri 1910kcal, 2.5L with Additive	2500 ml	1 bag	Details	1 bag	1 bag	Details	Remarks	0 bag	VERIFIED

Figure 4.4-21 PN Preparation

STEP 13

Click on the  button to prepare PN order

Note

Proceed to Dispensing function will allow user to go next stage screen for each patient record.

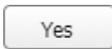
CONFIRMATION

INFO0577: Please make sure already print worksheet and label before proceed to dispensing stage. Do you want to proceed with the preparation?

Cancel Yes No

Figure 4.4-22 PN Confirmation Alert Message

STEP 14

Click on the  button to confirm prepare order

PN DISPENSING

Prescription X

FIRDAUS BIN RAHMAN Mykad Age 58 Years 01 Months 20 Days Gender Male MRN HKL00357868

Address Phone And Email Diagnosis Allergy: Need To Be Assessed Vital Sign

Upload Photo Height cm Weight kg BMI/BSA 27.7 / 1.94 m² Update (Last Updated : 21/02/2023) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counseling History | Other Appointment

Encounter No: 0001 Actual Visit Date: 21/02/2023 Visit Location: Klinik Pakar Perubatan SCACC Room No/Bed No: Rx No: PC0001371622 Ordered By:

Original Prescription Serial No: RX14900

PHARMACY ORDER

Dispensed To: FIRDAUS BIN RAHMAN * Dispensed Date and Time: 21/02/2023 04:13:04 PM * Remarks:

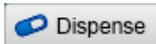
Dispensed At: Pharmacy Counter * Collected By:

PRESCRIPTION Release/Discard Worksheet Label Dispense

Drug	Volume	Order Qty	Order Details	Prepared Qty	Prev Disp	Balance Qty	Remarks	Status	Complete
Nutriflex Lipid Peri 1910kcal, 2.5L with Additive	2500 ml	1 bag	Details	1 bag	0 bag	1 bag	Remarks	PREPARED	<input type="checkbox"/>

Figure 4.4-23 PN Dispensing

STEP 15

Click on the  button and alert message will be displayed as per Figure 4.4-24

CONFIRMATION

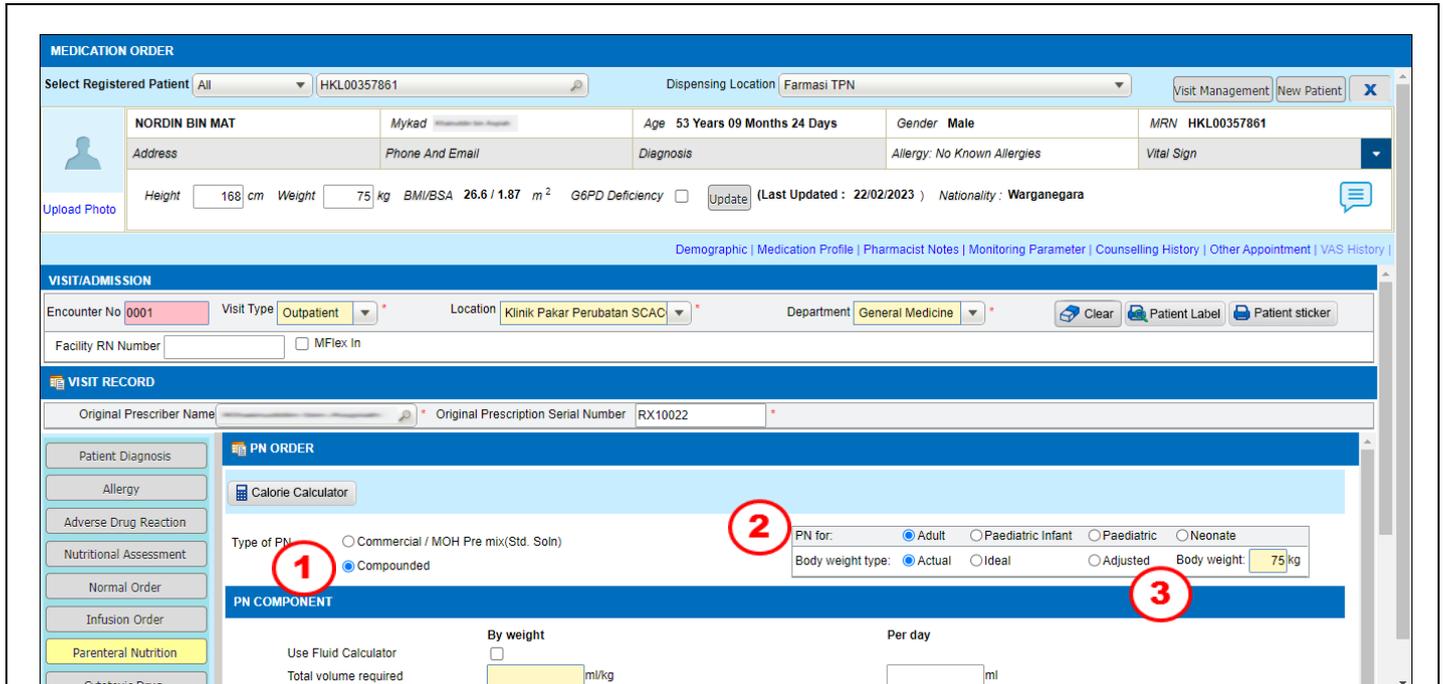
CONF0064: Do you want to dispense now?

Figure 4.4-27 Confirmation Alert message

Note

- Click on the button to dispense order.
- User can **Hold/Resume** Order.
- User can **Release/Discard** order at Dispensing activity.
- When release batch, drug and PN bag quantity will be returned back to inventory. When discard batch, drug and PN bag quantity will be deducted from inventory.
- Once drug already released or discarded, drug will be displayed back in Preparation screen for re-allocation of new batch qty.

4.5 Compounded (Adult)



The screenshot shows the 'MEDICATION ORDER' form. The patient information section includes: NORDIN BIN MAT, Mykad, Age 53 Years 09 Months 24 Days, Gender Male, MRN HKL00357861. The 'VISIT/ADMISSION' section shows: Encounter No 0001, Visit Type Outpatient, Location Klinik Pakar Perubatan SCAC, Department General Medicine. The 'PN ORDER' section is highlighted and contains three red circles with numbers 1, 2, and 3. Circle 1 points to the 'Type of PN' radio button for 'Compounded'. Circle 2 points to the 'PN for:' radio button for 'Adult'. Circle 3 points to the 'Body weight type:' radio button for 'Actual'. The 'PN COMPONENT' section shows: Use Fluid Calculator, Total volume required, By weight, Per day.

Figure 4.5-1 Medication Order

PN Compounded allow user to order compounded PN with customized nutrition based on patient requirement.

STEP 1

Select on **Compounded** radio button for 'Type of PN'

STEP 2

Select on **Adult** radio button for 'PN For'

STEP 3

Select on the 'Body weight' type radio button to use for calculation either as:

- Actual
- Ideal
- Adjusted

Note

By default Body weight type show the **Actual** body weight of the patient. **Value** for **Body Weight (kg)** will change base on selected **Body Weight type**.

PN COMPONENT				
	By weight	Recommended range(per kg)	Per day	
Use Fluid Calculator	<input type="checkbox"/>			
Total volume required	<input type="text"/> ml/kg		<input type="text"/> ml	
Total oral feeding	<input type="text"/> ml/kg		<input type="text"/> ml	
TPN Volume	<input type="text"/> ml/kg		<input type="text"/> ml	
Energy required	<input type="text"/> kcal/kg		<input type="text"/> kcal	
Macronutrient				
Carbohydrate	<input type="text"/> g/kg	3.00 - 5.00 g/kg	<input type="text"/> g	<input type="text"/> kcal
Lipid	<input type="text"/> g/kg	0.50 - 2.00 g/kg	<input type="text"/> g	<input type="text"/> kcal
Protein	<input type="text"/> g/kg	0.50 - 2.00 g/kg	<input type="text"/> g	<input type="text"/> kcal
L-Glutamin	<input type="text"/> ml/kg	1.50 - 2.50 ml/kg	<input type="text"/> ml	<input type="text"/> kcal
Carbohydrate:Lipid(kcal) Content	<input type="text"/> : <input type="text"/>	Nitrogen <input type="text"/> g	NPC:NRatio <input type="text"/>	Total <input type="text"/> kcal
Electrolytes				
Sodium(Natrium), Na ⁺	<input type="text"/> mmol/kg	1.00 - 2.00 mmol/kg	<input type="text"/> mmol	
Potassium(Kalium), K ⁺	<input type="text"/> mmol/kg	0.70 - 1.50 mmol/kg	<input type="text"/> mmol	
Calcium, Ca ²⁺	<input type="text"/> mmol/kg	0.10 - 0.15 mmol/kg	<input type="text"/> mmol	
Magnesium, Mg ²⁺	<input type="text"/> mmol/kg	0.05 - 0.15 mmol/kg	<input type="text"/> mmol	
Phosphate, PO ₄ ³⁻	<input type="text"/> mmol/kg	0.50 - 0.70 mmol/kg	<input type="text"/> mmol	
Chloride, Cl ⁻	<input type="text"/> mmol/kg	1.30 - 2.00 mmol/kg	<input type="text"/> mmol	
Acetate, CH ₃ COO ⁻	<input type="text"/> mmol/kg	0.00 - 0.00 mmol/kg	<input type="text"/> mmol	
Trace elements	<input type="text"/> ml/kg	0.00 - 10.00 ml	<input type="text"/> ml	
Vitamin				
<input type="radio"/> Single Vitamin				
<input type="radio"/> Combine Vitamin				

Figure 4.5-2 PN Component

Note

PN Component

- Once 'Use Fluid Calculator' checkbox is selected, system will auto calculate the 'Total Volume required' based on the body weight.
- User can enter 'Total Oral feeding' volume per day (if any) and system will auto calculate the 'Total oral feeding' per kg and 'TPN Volume'.
- TPN Volume on 'By Weight' (in ml/kg) will be auto calculate and TPN Volume on 'Per Day' (in ml) field editible.
- TPN Volume which is edited value (in ml) will impact to the final bag volume required which is same value will be displayed.
- If changing the value 'Total volume required' or 'Total Oral Feeding', edited 'TPN Volume' value will recalculate back based on existing calculation
- Enter value for **Energy required By Weight (kcal/kg)**.
- Value **Per day** will automatically calculate and display after enter the **Energy required By Weight (kcal/kg)**.

Macronutrient

- Enter value of the **Macronutrient** that applicable for the **PN Component**.
- All entered value must between the **Recommended Range (per kg)**. System still allow if not between recommended range.
- All value **Per day** and **Energy(per day)** will automatically calculate and display.
- L-Gutamin** is an optional function. Value of **By weight** and **Energy(per day)** will automatically display.
- Value of Carbohydrate:Lipid(kcal) Content, Nitrogen and NPC:Ratio** will automatically calculate and display.

Electrolytes

- Enter value of the **Electrolytes** that applicable for the **PN Component**.
- All entered value must between the **Recommended Range (per kg)**. System still allow if not between recommended range
- Chloride ,Cl⁻** and **Acetate (CH₃COO)** is optional function.
- All value **Per day** will automatically calculate and display.
- Enter value of the **Trace elements Per day**.
- Value **By Weight** will automatically calculate and display after enter the **Trace elements Per day** value.

Vitamin

Single Vitamin Combine Vitamin

Water soluble ml/kg ml ml

Fat soluble ml/kg ml ml

Figure 4.5-3 Single Vitamin

Vitamin

Single Vitamin Combine Vitamin

Water and Fat Soluble ml/kg ml ml

Figure 4.5-4 Combine Vitamin

Note

- Select either **Single Vitamin** or **Combine Vitamin** radio button.
- Vitamin have 2 types vitamin:
 - **Single Vitamin**
 - **Combine Vitamin**
- If user select **Single Vitamin** radio button; **Water soluble** and **Fat soluble** field will automatically display by system as per Figure 4.5-3.
- If user select **Combine Vitamin** radio button; **Vitamin (Water and Fat Soluble)** field will automatically display by system as per Figure 4.5-4.

MEDICATION ORDER

Select Registered Patient: All | HKL00357861 | Dispensing Location: Farmasi TPN | Visit Management | New Patient

NORDIN BIN MAT | Mykad: [redacted] | Age: 53 Years 09 Months 24 Days | Gender: Male | MRN: HKL00357861

Address: [redacted] | Phone And Email: [redacted] | Diagnosis: [redacted] | Allergy: No Known Allergies | Vital Sign: [redacted]

Height: 168 cm | Weight: 75 kg | BMI/BSA: 26.6 / 1.87 m² | G6PD Deficiency: | Update (Last Updated: 22/02/2023) | Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment | VAS History

VISIT/ADMISSION

Encounter No: 0001 | Visit Type: Outpatient | Location: Klinik Pakar Perubatan SCAC | Department: General Medicine

Facility RN Number: [redacted] | MFlex In:

VISIT RECORD

Original Prescriber Name: [redacted] | Original Prescription Serial Number: RX10022

PN ORDER

Calorie Calculator

Type of PN: Commercial / MOH Pre mix(Std. Soln) Compounded

PN for: Adult Paediatric Infant Paediatric Neonate

Body weight type: Actual Ideal Adjusted Body weight: 75 kg

PN COMPONENT

ADMINISTRATION INFO

Volume: 3000 ml Indication for PN: Intractable vomiting

Frequency: OD Infusion Line: Central

Infusion Over: 24 hours Order Quantity: 1 BAG

Start Date/Time: 22/02/2023 05:00 PM Dispense Location: Farmasi TPN

End Date/Time: 23/02/2023 05:00 PM Remarks: [redacted]

PRESCRIPTION

Clear | Draft | Confirm

Drug	Volume	Order Qty	Order Details	Remarks	Status
No Records Found!					

Figure 4.5-6 Medication Order

STEP 4

Click on the  button to confirm record order and alert message will be appeared as per Figure 4.5-7

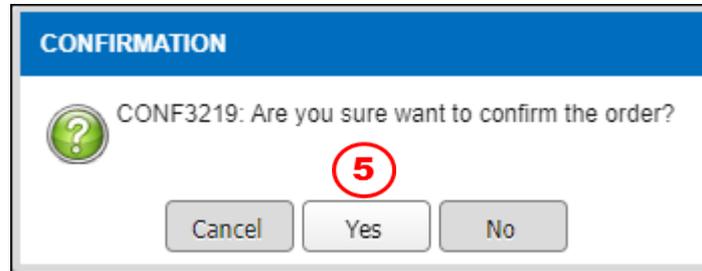


Figure 4.5-7 Information Alert Message

STEP 5

Click on the  button to confirm ordered saved and to verify PN Order screen will be appeared as per Figure 4.5-7

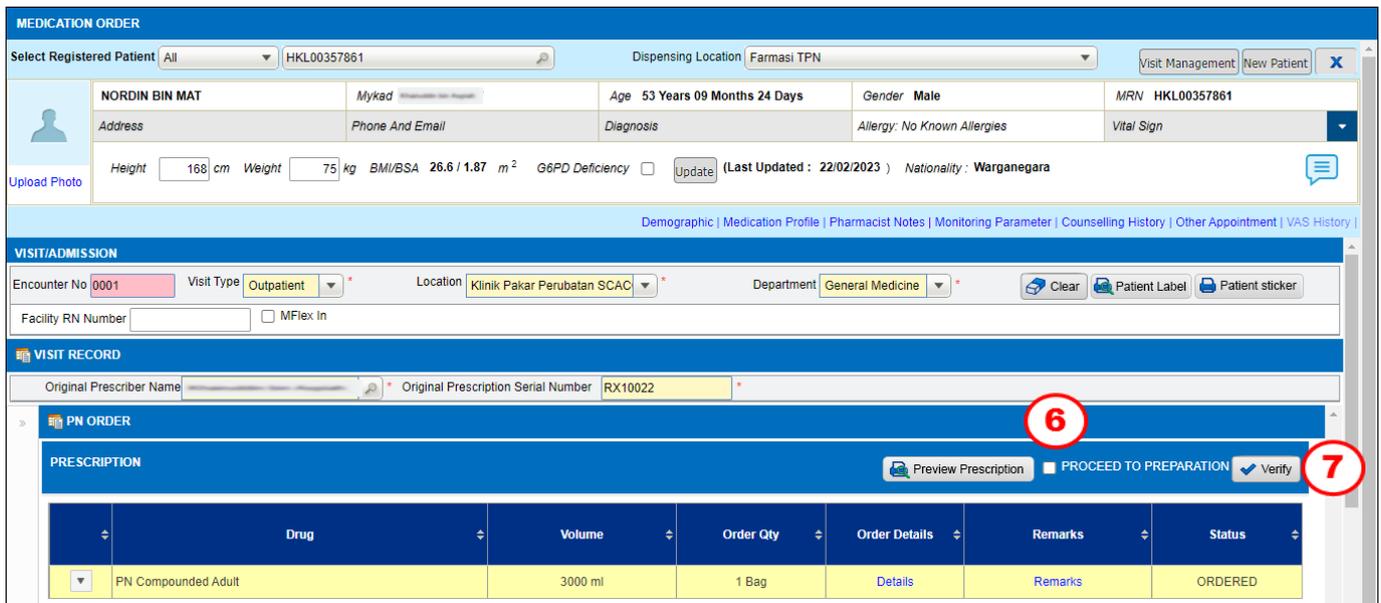


Figure 4.5-8 PN Verification

STEP 6

Check the  checkbox

Note

 button function will allow user to go to directly open preparation screen for each patient record.

STEP 7

Click on the  button to verify the order and alert message will be displayed as per Figure 4.5-9

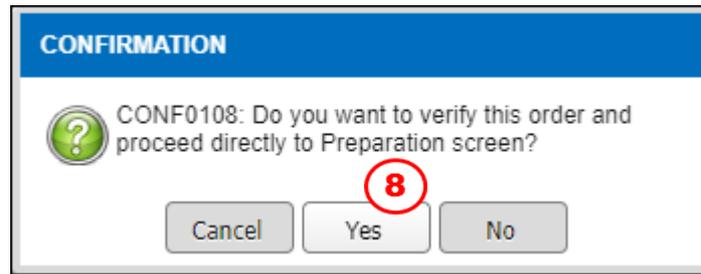
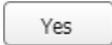
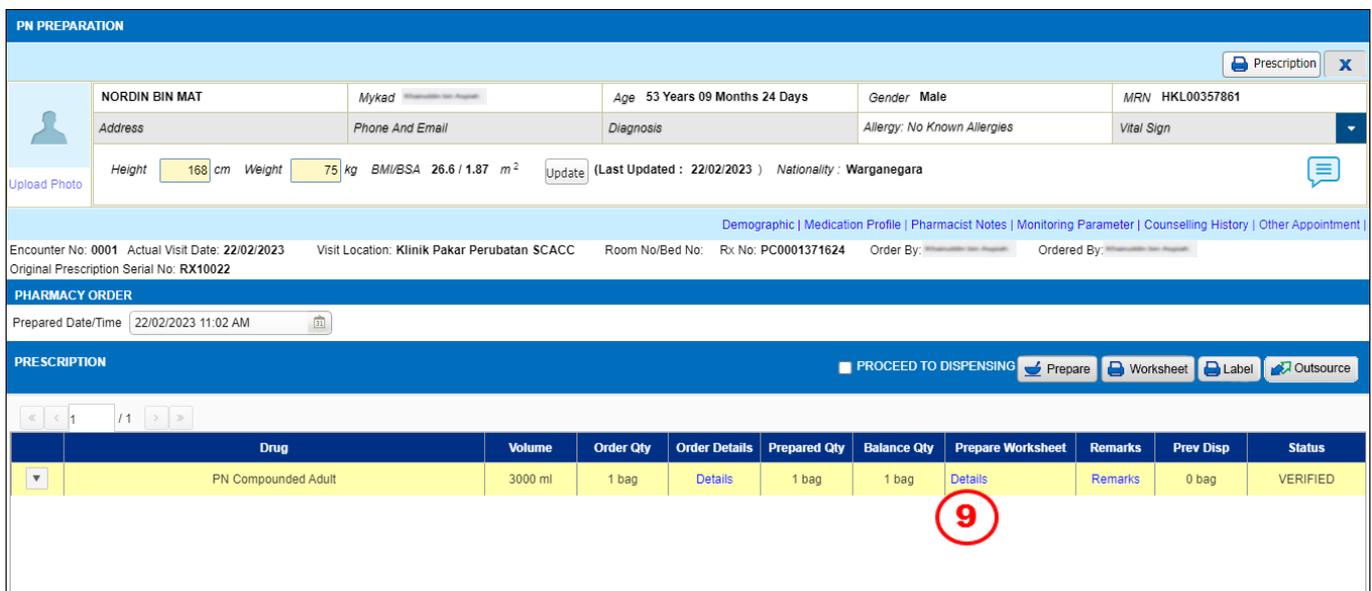


Figure 4.5-9 Information Alert Message

STEP 8

Click on the  button to confirm the verification



PN PREPARATION

Prescription X

NORDIN BIN MAT Mykad: [Redacted] Age: 53 Years 09 Months 24 Days Gender: Male MRN: HKL00357861

Address: [Redacted] Phone And Email: [Redacted] Diagnosis: [Redacted] Allergy: No Known Allergies Vital Sign: [Redacted]

Height: 168 cm Weight: 75 kg BMI/BSA: 26.6 / 1.87 m² Update (Last Updated: 22/02/2023) Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment

Encounter No: 0001 Actual Visit Date: 22/02/2023 Visit Location: Klinik Pakar Perubatan SCACC Room No/Bed No: Rx No: PC0001371624 Order By: [Redacted] Ordered By: [Redacted]

Original Prescription Serial No: RX10022

PHARMACY ORDER

Prepared Date/Time: 22/02/2023 11:02 AM

PRESCRIPTION PROCEED TO DISPENSING    

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
PN Compounded Adult	3000 ml	1 bag	Details	1 bag	1 bag	Details	Remarks	0 bag	VERIFIED

Figure 4.5-10 PN Preparation

STEP 9

Click on the **Prepare Worksheet**  button to prepare worksheet as per Figure 4.5-10

PREPARE WORKSHEET

Intervention Auto Allocation 📄 ✕

DETAIL

TPN volume ml Energy required kcal Product category 3 in 1 2 in 1

Macronutrient

Glucose g Vitamin Solution ml Trace elements ml

Lipid g Water soluble ml Acetate mmol

Protein g Fat soluble ml L-Glutamin ml

Electrolytes

Sodium(Natrium),Na+ mmol Calcium,Ca2+ mmol Phosphate,(PO4)2- mmol

Potassium(Kalium),K+ mmol Magnesium,Mg+ mmol

Drug selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolarity (mOsmol)	Content										
						Lipid (g)	Glucose (g)	Protein (g)	Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Chloride (mmol)	
Fat emulsion, SMOFlipid 20% 500ml IV Soln	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dextrose 50% IV soln 500ml	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Amino acid 6.53% (Vaminolact) 500ml IV Soln	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sodium Glycerophosphate 20ml Injection	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sodium Chloride 20% Inj	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Potassium Chloride 1g/10ml Injection	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Calcium Gluconate 10% Injection	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Magnesium Sulphate 50% Injection (49.3%/5mL)	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trace Element - Paediatric (Peditrace) 10mL Inj	0		0	0	0	Trace Elements										
Vitamin B and C (Soluvit N) in 10 ml WFI	0		0	0	0	Combine Vitamin (Water & Fat Soluble)										
Vitamin A, D, E, K (Vitalipid N Infant) 10ml Inj	0		0	0	0	Water Soluble Vitamins										
Sterile Water for Injection 500mL	0		0	0	0	L-Glutamin										
Sterile Water for Injection 500mL	0		0	0	0	Water For Injection										
Total Preparation	<input type="text" value="0"/>			<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>
					Content/L	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>

	NPC:N Ratio	<input type="text" value=""/>
TOTAL content of Calcium and Phosphate	Calcium + Phosphate=	<input type="text" value="0"/> mmol/100ml
TOTAL content of Magnesium and Calcium	Calcium + Magnesium=	<input type="text" value="0"/> mmol/100ml

Figure 4.5-11 Prepare Worksheet

Note

- Click and Select the drug from drop down option and **Macronutrient, Vitamin** field and **Electrolytes** field display the quantity to be added into the bag.
- Click on the button to calculate PN content value.
- **Volume (ml), Order Quantity, Calorie (kcal), Osmolarity(mOsmol), Content and Total Preparation** will be automatically calculated and displayed by system.



PN PREPARATION

Prescription [X]

NORDIN BIN MAT Mykad [Redacted] Age 53 Years 09 Months 24 Days Gender Male MRN HKL00357861

Address [Redacted] Phone And Email [Redacted] Diagnosis [Redacted] Allergy: No Known Allergies Vital Sign [Redacted]

Height 168 cm Weight 75 kg BMI/BSA 26.6 / 1.87 m² Update (Last Updated : 22/02/2023) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counseling History | Other Appointment

Encounter No: 0001 Actual Visit Date: 22/02/2023 Visit Location: Klinik Pakar Perubatan SCACC Room No/Bed No: Rx No: PC0001371624 Order By: [Redacted] Ordered By: [Redacted]

Original Prescription Serial No: RX10022

PHARMACY ORDER

Prepared Date/Time 22/02/2023 11:02 AM

PRESCRIPTION PROCEED TO DISPENSING

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
PN Compounded Adult	3000 ml	1 bag	Details	1 bag	1 bag	Details	Remarks	0 bag	VERIFIED

Figure 4.5-13 PN Preparation

STEP 10

Click on the button to print Worksheet

ADULT PARENTERAL NUTRITION WORKSHEET
MINISTRY OF HEALTH
HOSPITAL KUALA LUMPUR

Patient Name : NORDIN BIN MAT Worksheet : A001-220223
MRN : HKL00357861 Prepared Date/Time : 22/02/2023 11:02 AM
Ward/Bed No : Klinik Pakar Perubatan SCACC Prescription # : PC0001371624
Age : 53 Years 09 Months 24 Days
Gender : Male
Body Weight : 75 kg

DRUG NAME	VOLUME (ml)	QUANTITY	BATCH NO	COMPONENT DETAIL (PER DAY)
Sterile Water for Injection 500mL	3000	6 bottle	P250B328	NA
TPN Volume Bag	3000	1 Bag		

Worksheet Generated By : [Redacted] Date : 22/02/2023
Worksheet and Label Checked By : [Redacted] Supervised By : [Redacted]
Bag Prepared By : [Redacted]
Final Product Checked By : [Redacted]

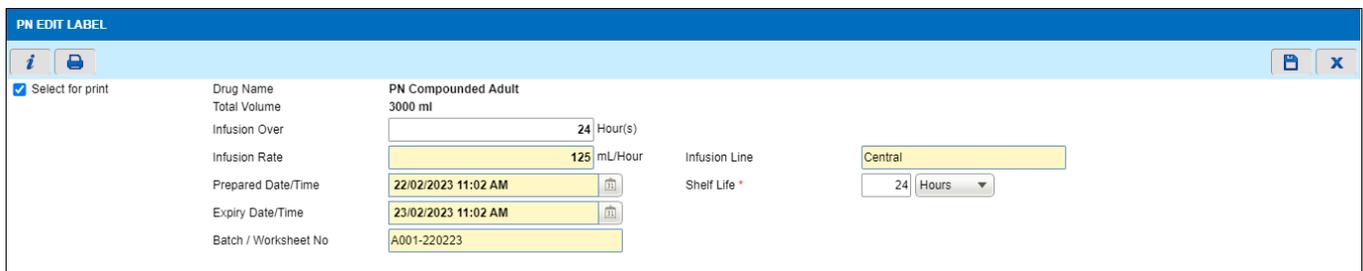
Figure 4.5-14 Sample PN Worksheet

Note

Sample of PN Worksheet as per Figure 4.5-14.

Edit Label

- Click on the  button to edit label and **PN Edit Label** window will display as per Figure 4.5-15.
- Select the **Select for print** radio button to print label.
- User is allowed to edit **Infusion Over**, **Date Prepared** and **Shelf Life** field.
- **Expiry Date** will be automatically displayed after enter the **Shelf Life** field.
- **Drug Name**, **Total Volume**, **Infusion Rate** and **Batch No** will be automatically displayed by system.



The screenshot shows a software window titled "PN EDIT LABEL". It contains a "Select for print" checkbox which is checked. The main area is divided into two columns. The left column contains the following fields: "Drug Name" (PN Compounded Adult), "Total Volume" (3000 ml), "Infusion Over" (24 Hour(s)), "Infusion Rate" (125 mL/Hour), "Prepared Date/Time" (22/02/2023 11:02 AM), "Expiry Date/Time" (23/02/2023 11:02 AM), and "Batch / Worksheet No" (A001-220223). The right column contains "Infusion Line" (Central) and "Shelf Life" (24 Hours). There are also icons for help, print, save, and close in the top right corner.

Figure 4.5-15 PN Edit Label

HOSPITAL KUALA LUMPUR		
PARENTERAL NUTRITION (Adult)		
NAME : NORDIN BIN MAT		
ID NO : <input type="text"/>		
AGE : 53 Years 09 Months 24 Days		
MRN : HKL00357861	WARD/BED NO: Klinik Pakar Perubatan SCACC	
Total Volume <u>3000</u> ml/bag		
Content	/ kg	/ bag
Protein (g)	0	0
Dextrose (g)	0	0
Lipid (g)	0	0
Sodium (mmol)	0	0
Potassium (mmol)	0	0
Calcium (mmol)	0	0
Magnesium (mmol)	0	0
Phosphate (mmol)	0	0
Chloride (mmol)	0	0
Acetate (mmol)	0	0
Trace Element (ml)	0	0
Vitamins (ml)	0	0
Calories (kcal)	0	0
Osmolarity (mOsm/l)	0	0
L-Glutamin (g)	0	0
Admin Date/Time :		
Infusion Rate	125 mL/Hrs	
Infusion Over	24 Hrs	
Prepared Date	22/02/2023 11:02 AM	
Worksheet ID :	Expiry Date :	Price : RM
A001-220223	23/02/2023	
Do not use if any visible solid particles, growth or precipitation appears.		
Store in refrigerator (2-8 °C). Protect from light (Once open use within 24 Hours) Ensure PN Solution is at room temperature before infusion.		
TO BE INFUSED : CENTRAL LINE		

Figure 4.5-16 Sample PN Label

PN PREPARATION

Prescription

NORDIN BIN MAT Mykad: [Redacted] Age: 53 Years 09 Months 24 Days Gender: Male MRN: HKL00357861

Address: [Redacted] Phone And Email: [Redacted] Diagnosis: [Redacted] Allergy: No Known Allergies Vital Sign: [Redacted]

Height: 168 cm Weight: 75 kg BMI/BSA: 26.6 / 1.87 m² Update (Last Updated: 22/02/2023) Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counseling History | Other Appointment

Encounter No: 0001 Actual Visit Date: 22/02/2023 Visit Location: Klinik Pakar Perubatan SCACC Room No/Bed No: [Redacted] Rx No: PC0001371624 Order By: [Redacted] Ordered By: [Redacted]

Original Prescription Serial No: RX10022

PHARMACY ORDER

Prepared Date/Time: 22/02/2023 11:02 AM

PRESCRIPTION PROCEED TO DISPENSING

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
PN Compounded Adult	3000 ml	1 bag	Details	1 bag	1 bag	Details	Remarks	0 bag	VERIFIED

Figure 4.5-17 PN Preparation

STEP 11

Click on the button to prepare PN order

CONFIRMATION

INFO0577: Please make sure already print worksheet and label before proceed to dispensing stage. Do you want to proceed with the preparation?

Figure 4.5-18 Confirmation Alert Message

STEP 12

Click on the button to confirm prepare order

PN DISPENSING

Prescription X

NORDIN BIN MAT Mykad XXXXXXXXXX Age 53 Years 09 Months 24 Days Gender Male MRN HKL00357861

Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Upload Photo Height 168 cm Weight 75 kg BMI/BSA 26.6 / 1.87 m² Update (Last Updated : 22/02/2023) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counseling History | Other Appointment |

Encounter No: 0001 Actual Visit Date: 22/02/2023 Visit Location: Klinik Pakar Perubatan SCACC Room No/Bed No: Rx No: PC0001371624 Ordered By: XXXXXXXXXX

Original Prescription Serial No: RX10022

PHARMACY ORDER

Dispensed To: NORDIN BIN MAT * Dispensed Date and Time: 22/02/2023 03:15:23 PM * Remarks

Dispensed At: Pharmacy Counter * Collected By:

PRESCRIPTION Release/Discard Worksheet Label Dispense

Drug	Volume	Order Qty	Order Details	Prepared Qty	Prev Disp	Balance Qty	Remarks	Status	Complete
PN Compounded Adult	3000 ML	1 Bag	Details	1 Bag	0 Bag	1 Bag	Remarks	PREPARED	<input type="checkbox"/>

Figure 4.5-19 PN Dispensing

STEP 13

Click on the  button and alert message will be displayed as per Figure 4.5-20

CONFIRMATION

CONF0064: Do you want to dispense now?

14

Cancel Yes No

Figure 4.5-20 Confirmation Alert Message

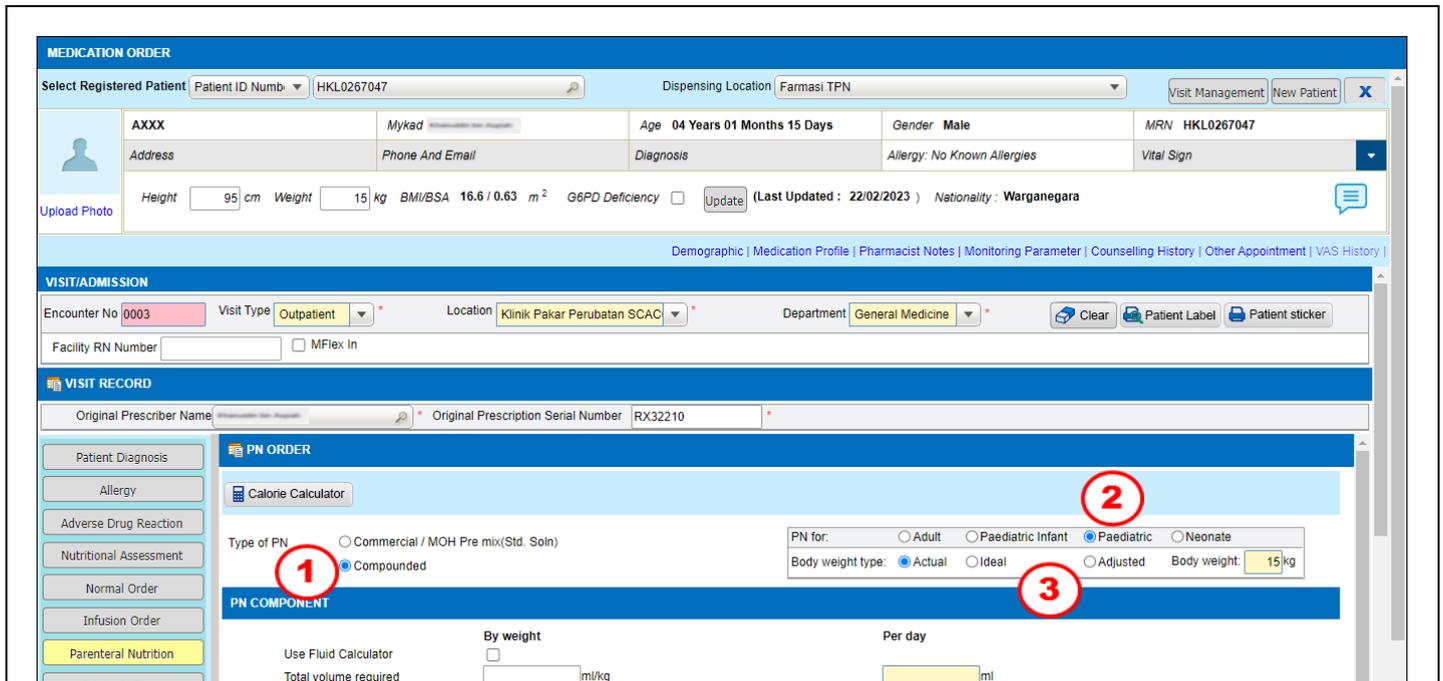
STEP 14

Click on the  button to confirm prepare order

Note

- User can **Hold/Resume** Order and **Release/Discard** order at dispensing activity.
- When release batch, drug and PN bag quantity will be returned back to inventory. When discard batch, drug and PN bag quantity will be deducted from inventory.
- Once drug already released or discarded, drug will be displayed back in Preparation screen for re-allocation of new batch qty.

4.6 Compounded (Paediatric)



MEDICATION ORDER

Select Registered Patient: Patient ID Numb: HKL0267047 | Dispensing Location: Farmasi TPN | Visit Management | New Patient

XXXX | Mykad: | Age: 04 Years 01 Months 15 Days | Gender: Male | MRN: HKL0267047

Address: | Phone And Email: | Diagnosis: | Allergy: No Known Allergies | Vital Sign: [vital sign icon]

Height: 95 cm | Weight: 15 kg | BMI/BSA: 16.6 / 0.63 m² | G6PD Deficiency: | Update (Last Updated: 22/02/2023) | Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment | VAS History

VISIT/ADMISSION

Encounter No: 0003 | Visit Type: Outpatient | Location: Klinik Pakar Perubatan SCAC | Department: General Medicine | Clear | Patient Label | Patient sticker

Facility RN Number: | MFlex In:

VISIT RECORD

Original Prescriber Name: | Original Prescription Serial Number: RX32210

PN ORDER

Calorie Calculator

Type of PN: Commercial / MOH Pre mix(Std. Soln) | Compounded

PN for: Adult | Paediatric Infant | Paediatric | Neonate

Body weight type: Actual | Ideal | Adjusted | Body weight: 15 kg

PN COMPONENT

Use Fluid Calculator: | Total volume required: [] ml/kg | Per day: [] ml

Figure 4.6-1 Medication Order

PN Compounded (Paediatric) allow user to order Parenteral Nutrition for patient between 3 years old to 12 years old.

STEP 1

Select on Compounded radio button for 'Type of PN'

STEP 2

Select on Paediatric radio button for 'PN for'

STEP 3

Select on the 'Body weight type' radio button to use for calculation either as:

- Actual
- Ideal
- Adjusted

PN COMPONENT				
	By weight	Recommended range(per kg)	Per day	
Use Fluid Calculator	<input type="checkbox"/>			
Total volume required	<input type="text"/>		<input type="text"/>	ml
Total oral feeding	<input type="text"/>		<input type="text"/>	ml
TPN Volume	<input type="text"/>		<input type="text"/>	ml
Energy required	<input type="text"/>		<input type="text"/>	kcal
Macronutrient				
Carbohydrate	<input type="text"/>	3.00 - 10.50 g/kg	<input type="text"/>	g
Lipid	<input type="text"/>	1.00 - 2.00 g/kg	<input type="text"/>	g
Protein	<input type="text"/>	1.00 - 3.00 g/kg	<input type="text"/>	g
L-Glutamin	<input type="text"/>	0.00 - 0.00 ml/kg	<input type="text"/>	ml
Carbohydrate:Lipid(kcal) Content	<input type="text"/>	Nitrogen Content	<input type="text"/>	NPC:NRatio
	0 : 0			Total
Electrolytes				
Sodium(Natrium), Na ⁺	<input type="text"/>	1.00 - 3.00 mmol/kg	<input type="text"/>	mmol
Potassium(Kalium), K ⁺	<input type="text"/>	1.00 - 3.00 mmol/kg	<input type="text"/>	mmol
Calcium, Ca ²⁺	<input type="text"/>	0.50 - 1.25 mmol/kg	<input type="text"/>	mmol
Magnesium, Mg ²⁺	<input type="text"/>	0.15 - 0.25 mmol/kg	<input type="text"/>	mmol
Phosphate, PO ₄ ³⁻	<input type="text"/>	0.50 - 1.00 mmol/kg	<input type="text"/>	mmol
Chloride, Cl ⁻	<input type="text"/>	2.00 - 5.00 mmol/kg	<input type="text"/>	mmol
Acetate, CH ₃ COO ⁻	<input type="text"/>	0.00 - 0.00 mmol/kg	<input type="text"/>	mmol
Trace elements	<input type="text"/>	0.00 - 15.00 ml	<input type="text"/>	ml
Vitamin				
<input type="radio"/> Single Vitamin				
<input type="radio"/> Combine Vitamin				

Figure 4.6-2 PN Component

Note

By default Body weight type show the **Actual** body weight of the patient. Value for **Body Weight (kg)** will be change base on selected **Body weight** type.

PN Component

- Enter value for **Total volume required per day (ml)**.
- TPN Volume on '**Per Day**' (in ml) will be auto calculate and TPN Volume on '**By Weight**' (in ml/kg) field edible.
- TPN Volume whis is edited value (in ml) will impact to the final bag volume required which is same value will be displayed.
- If changing the value '**Total volume required**' or '**Total Oral Feeding**', edited '**TPN Volume**' value will recalculate back based on existing calculation
- Enter value for **Energy required By Weight (kcal/kg)**.
- Value **Per day** will automatically calculate and display after enter the **Energy required By Weight (kcal/kg)**.

Macronutrient

- Enter value of the **Macronutrient** that applicable for the **PN Component** .
- All entered value must between the **Recommended Range (per kg)**. User can still proceed if value is not within the recommended range.
- All value **Per day** and **Energy(per day)** will automatically calculate and display.
- **L-Gutamin** is an optional function. Value of **By weight** and **Energy(per day)** will automatically display.
- **Value of Carbohydrate:Lipid(kcal) Content, Nitrogen** and **NPC:Ratio** will automatically calculate and display.
- **Value of Carbohydrate:Lipid(kcal) Content, Nitrogen** and **NPC:Ratio** will automatically calculate and display.

Electrolytes

- Enter value of the **Electrolytes** that applicable for the **PN Component**.
- All entered value must between the **Recommended Range (per kg)**. User can still proceed if value is not within the recommended range.
- **Chloride ,Cl⁺** and **Acetate (CH₃COO)** is optional function.
- All value **Per day** will automatically calculate and display.
- Enter value of the **Trace elements Per day**.
- Value **By Weight** will automatically calculate and display after enter the **Trace elements Per day** value.

Vitamin

Single Vitamin Combine Vitamin

Water soluble ml/kg ml ml

Fat soluble ml/kg ml ml

Figure 4.6-3 Single Vitamin

Vitamin

Single Vitamin Combine Vitamin

Water and Fat Soluble ml/kg ml ml

Figure 4.6-4 Combine Vitamin

Note

- Select either **Single Vitamin** or **Combine Vitamin** radio button.
- Vitamin have 2 types vitamin:
 - **Single Vitamin**
 - **Combine Vitamin**
- If user select **Single Vitamin** radio button; **Water soluble** and **Fat soluble** field will automatically display by system as per Figure 4.6-3.
- If user select **Combine Vitamin** radio button; **Vitamin(Water and Fat Soluble)** field will automatically display by system as per Figure 4.6-4.

MEDICATION ORDER

Select Registered Patient: Patient ID Num: HKL0267047 Dispensing Location: Farmasi TPN Visit Management New Patient

XXXX Mykad Age: 04 Years 01 Months 15 Days Gender: Male MRN: HKL0267047

Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Height: 95 cm Weight: 15 kg BMI/BSA: 16.6 / 0.63 m² G6PD Deficiency Update (Last Updated: 22/02/2023) Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment | VAS History

VISIT/ADMISSION

Encounter No: 0003 Visit Type: Outpatient Location: Klinik Pakar Perubatan SCAC Department: General Medicine

Facility RN Number MFlex In

VISIT RECORD

Original Prescriber Name Original Prescription Serial Number: RX32210

PN ORDER

Calorie Calculator

Type of PN: Commercial / MOH Pre mix(Std. Soln) Compounded PN for: Adult Paediatric Infant Paediatric Neonate

Body weight type: Actual Ideal Adjusted Body weight: 15 kg

PN COMPONENT

ADMINISTRATION INFO

Volume: ml Indication for PN:

Frequency: Infusion Line:

Infusion Over: hours Order Quantity: BAG

Start Date/Time: 22/02/2023 05:00 PM Dispense Location: Farmasi TPN

End Date/Time: 23/02/2023 05:00 PM Remarks:

PRESCRIPTION

Clear Draft Confirm

Drug	Volume	Order Qty	Order Details	Remarks	Status
No Records Found!					

Figure 4.6-5 Administration Info

Note

- **Volume** will be automatically displayed by system and user is not allow to change at this field.
- **Infusion Line** will be automatically default to **Central** but user is allow to change at this field and select type of **Infusion Line** from the dropdown box.
- **Frequency** field will be automatically displayed and user is not allow to change this field.
- Default value for:
 - **Frequency** : OD (daily)
 - **Order Qty** : 1 Bag
- **Start Date/Time** will be automatically default to current date but still can be change by the user if applicable.
- **End Date/Time** will be displayed according to duration product given.
- **Infusion Over** will be automatically default to 24 hours but user is allow to change at this field.
- Select **Indication for PN** from the dropdown box.
- **Dispense Location** will be automatically default by system.
- **Enter Remarks if applicable**

STEP 4

Click on the  button to confirm record order and alert message will be appeared as per Figure 4.6-7

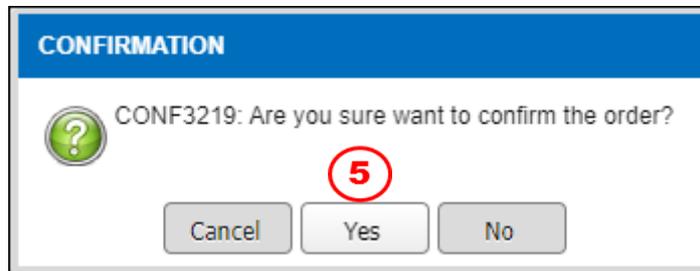
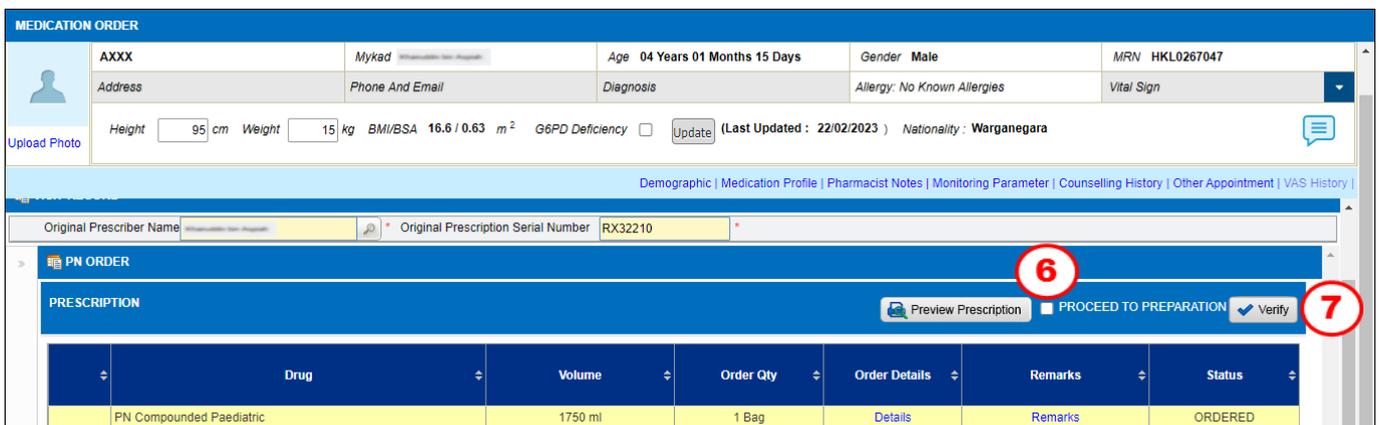


Figure 4.6-7 Prescription

STEP 5

Click on the  button to confirm order and to verify PN Order screen will be appeared as per Figure 4.6-8



Drug	Volume	Order Qty	Order Details	Remarks	Status
PN Compounded Paediatric	1750 ml	1 Bag	Details	Remarks	ORDERED

Figure 4.6-8 Medication Order : Verify

STEP 6

Check the **PROCEED TO PREPARATION** check box

Note

PROCEED TO PREPARATION function allows user to go to Preparation screen for each patient record.

STEP 7

Click on the **Verify** button to verify the order and alert message will be displayed as per Figure 4.6-9

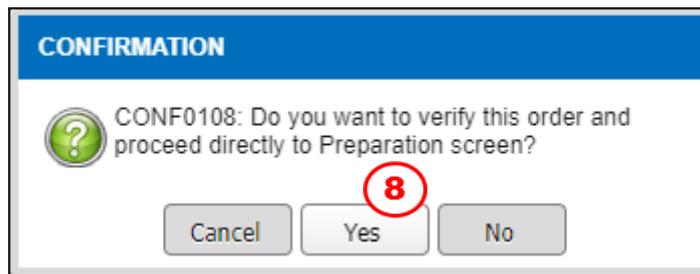
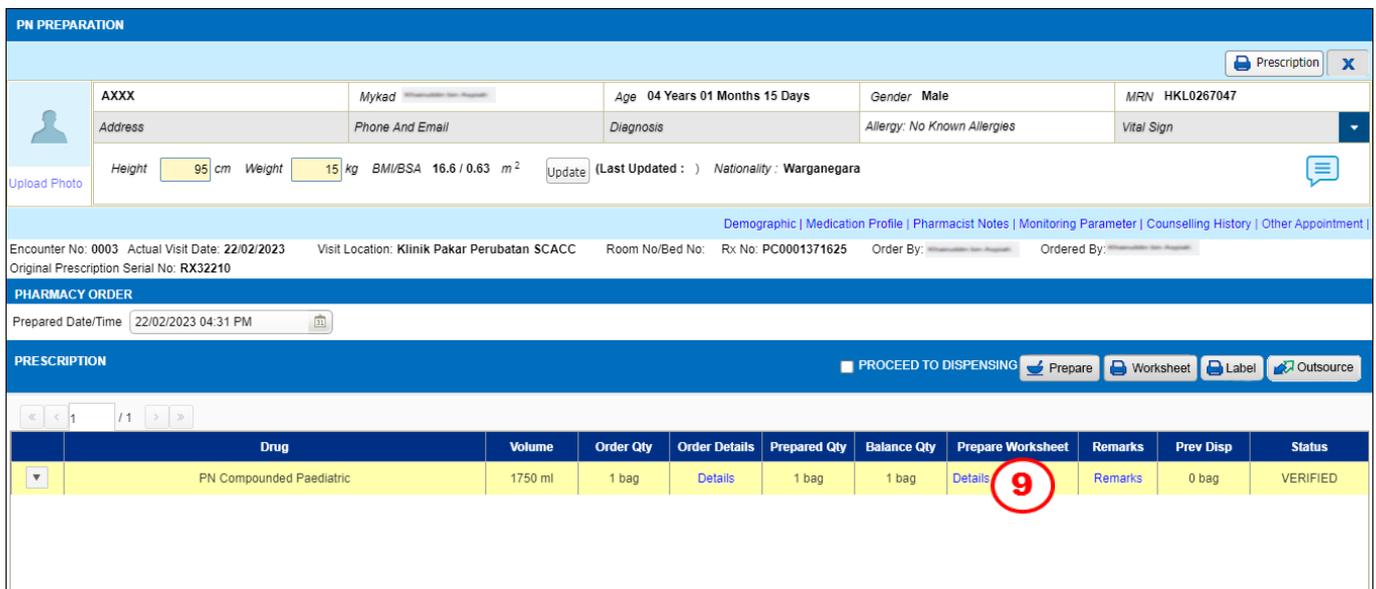


Figure 4.6-9 Confirmation Alert Message

STEP 8

Click on the **Yes** button to confirm the verification and proceed straight to preparation screen



The screenshot shows the 'PN PREPARATION' interface. At the top, there's a 'Prescription' button. Below that, patient information is displayed in a grid: Name (AXXX), Mykad, Age (04 Years 01 Months 15 Days), Gender (Male), MRN (HKL0267047), Address, Phone And Email, Diagnosis, Allergy (No Known Allergies), and Vital Sign. There are also fields for Height (95 cm), Weight (15 kg), BMI/BSA (16.6 / 0.63 m²), and Nationality (Warganegara). Below this is a 'PHARMACY ORDER' section with 'Prepared Date/Time' (22/02/2023 04:31 PM). The main section is 'PRESCRIPTION', which includes a 'PROCEED TO DISPENSING' checkbox and buttons for 'Prepare', 'Worksheet', 'Label', and 'Outsource'. A table below shows the prescription details:

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
PN Compounded Paediatric	1750 ml	1 bag	Details	1 bag	1 bag	Details	Remarks	0 bag	VERIFIED

The 'Details' link in the 'Prepare Worksheet' column is circled in red with the number '9' next to it.

Figure 4.6-10 PN Preparation

STEP 9

Click on the **Prepare Worksheet** [Details](#) button to prepare worksheet as per Figure 4.6-10

PREPARE WORKSHEET

15
16

Intervention
 Auto Allocation

DETAIL

TPN volume ml

Macronutrient

Glucose g

Lipid g

Protein g

Electrolytes

Sodium(Natrium),Na+ mmol

Potassium(Kalium),K+ mmol

Lipid Syringe

Energy required kcal

Vitamin

Vitamin Solution ml

Water soluble ml

Fat soluble ml

Calcium,Ca2+ mmol

Magnesium,Mg+ mmol

Product category 10 3 in 1 2 in 1

Trace elements ml

Acetate mmol

Overage volume ml

Phosphate,(PO4)2- mmol

Drug selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolarity (mOsmol)	Lipid (g)	Content
Vitamin A, D, E, K (Vitalipid N Infant) 10ml I	<input type="text" value="0"/>		<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Fat Soluble Vitamin
Vitamin B and C (Soluvit N) in 10 ml WFI	<input type="text" value="0"/>		<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Water Soluble Vitamin
Fat emulsion, SMOFLipid 20% 500ml IV Sol	<input type="text" value="0"/>		<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Lipid
Total Preparation	<input type="text" value="0"/>		<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	

11
12

PN Bag (Without lipid)

Drug selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolarity (mOsmol)	Content									
						Glucose (g)	Protein (g)	Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Chloride (mmol)	
Dextrose 50% IV soln 500ml	<input type="text" value="0"/>		<input type="text" value="0"/>												
Amino acid 6.53% (Vaminolact) 500ml IV Soln	<input type="text" value="0"/>		<input type="text" value="0"/>												
Sodium Glycerophosphate 20ml Injection	<input type="text" value="0"/>		<input type="text" value="0"/>												
Sodium Chloride 20% Inj	<input type="text" value="0"/>		<input type="text" value="0"/>												
Potassium Chloride 1g/10ml Injection	<input type="text" value="0"/>		<input type="text" value="0"/>												
Calcium Gluconate 10% Injection	<input type="text" value="0"/>		<input type="text" value="0"/>												
Magnesium Sulphate 50% Injection (49.3%/5mL)	<input type="text" value="0"/>		<input type="text" value="0"/>												
Trace Element - Paediatric (Peditrace) 10mL Inj	<input type="text" value="0"/>		<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Trace Elements									
Sterile Water for Injection 500mL	<input type="text" value="0"/>		<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Water For Injection									
Total Preparation	<input type="text" value="0"/>		<input type="text" value="0"/>												

13
14

	NPC:N Ratio	<input type="text" value="0"/>
TOTAL content of Calcium and Phosphate	Calcium + Phosphate=	<input type="text" value="0"/> mmol/100ml
TOTAL content of Magnesium and Calcium	Calcium + Magnesium=	<input type="text" value="0"/> mmol/100ml

Figure 4.6-11 Prepare Worksheet

STEP 10

Select on the 3 in 1 2 in 1 radio button for product category

Note

Section A:

Macronutrient, Vitamin and Electrolytes will be automatically displayed by system based on prescription order.

Section B:

Lipid Syringe table

- Volume (ml), Order Quantity, Calorie (kcal), Osmolarity(mOsmol), Lipid and Total Preparation will be automatically calculated and displayed by system.
- Lipid Overage function provided.

STEP 11

Select the product for lipid preparation

STEP 12

Click on the button to calculate PN content value

Note

All column in Section B will be updated.

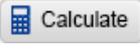
PN Bag (Without Lipid) table

Volume (ml), Order Quantity, Content and **Total Preparation** will be automatically calculated and displayed by system. **Overage** bag function provided.

STEP 13

Select the product for PN bag preparation

STEP 14

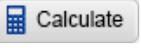
Click on the  button to calculate PN content value

Note

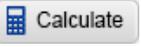
Volume Calorie and **Osmolarity** will be calculated.

Section C:

Overage Volume

- Enter the excess amount for PN bag preparation.
Eg:
Ordered volume for PN bag = 5200ml.
Pharmacy to prepare = 5200ml.
Overage volume PN bag = 20ml.
- Click on the  button on PN Bag table

Lipid Overage Volume

- Enter excess amount for Lipid Syringe preparation.
- Click on the  button on Lipid Syringe table.

STEP 15

Check on the  checkbox

STEP 16

Click on the  button to save record

Note

- Alert message will be display as shown in Figure 4.6-12 click on  button to proceed

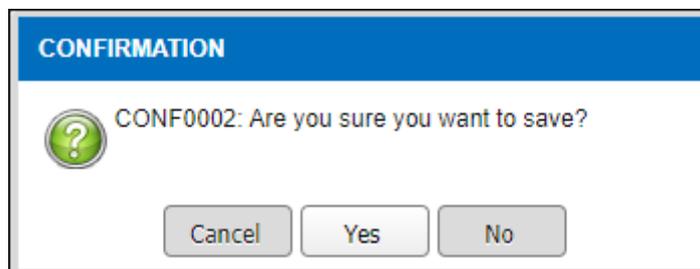


Figure 4.6-12 Confirmation Alert Message

- **Allocated Quantity** will be automatically calculated and displayed by system after click on the save button
- Click on  button to close window and PN preparation screen will be display as shown in Figure 4.6-13

PN PREPARATION

Prescription ✕

	XXXX	Mykad XXXXXXXXXX	Age 04 Years 01 Months 15 Days	Gender Male	MRN HKL0267047
	Address	Phone And Email	Diagnosis	Allergy: No Known Allergies	Vital Sign ▼

Upload Photo Height cm Weight kg BMI/BSA 16.6 / 0.63 m² Update (Last Updated :) Nationality : Warganegara 💬

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counseling History | Other Appointment

Encounter No: 0003 Actual Visit Date: 22/02/2023 Visit Location: Klinik Pakar Perubatan SCACC Room No/Bed No: Rx No: PC0001371625 Order By: XXXXXXXXXX Ordered By: XXXXXXXXXX
 Original Prescription Serial No: RX32210

PHARMACY ORDER

Prepared Date/Time 17

PRESCRIPTION

 PROCEED TO DISPENSING Prepare Worksheet Label Outsource

	Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
▼	PN Compounded Paediatric	1750 ml	1 bag	Details	1 bag	1 bag	Details	Remarks	0 bag	VERIFIED

Figure 4.6-13 PN Preparation

STEP 17

Click on the  Prepare button to prepare PN order

CONFIRMATION

?

INFO0577: Please make sure already print worksheet and label before proceed to dispensing stage. Do you want to proceed with the preparation?

Cancel
Yes
No

18

Figure 4.6-14 Confirmation Alert Message

STEP 18

Click on the Yes button to confirm prepare order

Note

Proceed to Dispensing function will allow user to go next stage screen for each patient record.

PN DISPENSING

Prescription X

AXXX Mykad Age 04 Years 01 Months 15 Days Gender Male MRN HKL0267047
 Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Upload Photo Height cm Weight kg BMI/BSA 16.6 / 0.63 m² Update (Last Updated :) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment

Encounter No: 0003 Actual Visit Date: 22/02/2023 Visit Location: Klinik Pakar Perubatan SCACC Room No/Bed No: Rx No: PC0001371625 Ordered By:

Original Prescription Serial No: RX32210

PHARMACY ORDER

Dispensed To: AXXX * Dispensed Date and Time: 22/02/2023 05:01:05 PM * Remarks:
 Dispensed At: Pharmacy Counter * Collected By:

PRESCRIPTION Release/Discard Worksheet Label Dispense

Drug	Volume	Order Qty	Order Details	Prepared Qty	Prev Disp	Balance Qty	Remarks	Status	Complete
PN Compounded Paediatric	1750 ML	1 Bag	Details	1 Bag	0 Bag	1 Bag	Remarks	PREPARED	<input type="checkbox"/>

Figure 4.6-15 PN Dispensing

STEP 19

Click on the  button and alert message will be displayed as per Figure 4.6-19

CONFIRMATION

CONF0064: Do you want to dispense now?

Figure 4.6-16 Confirmation Alert Message

STEP 20

Click on the button to confirm prepare order

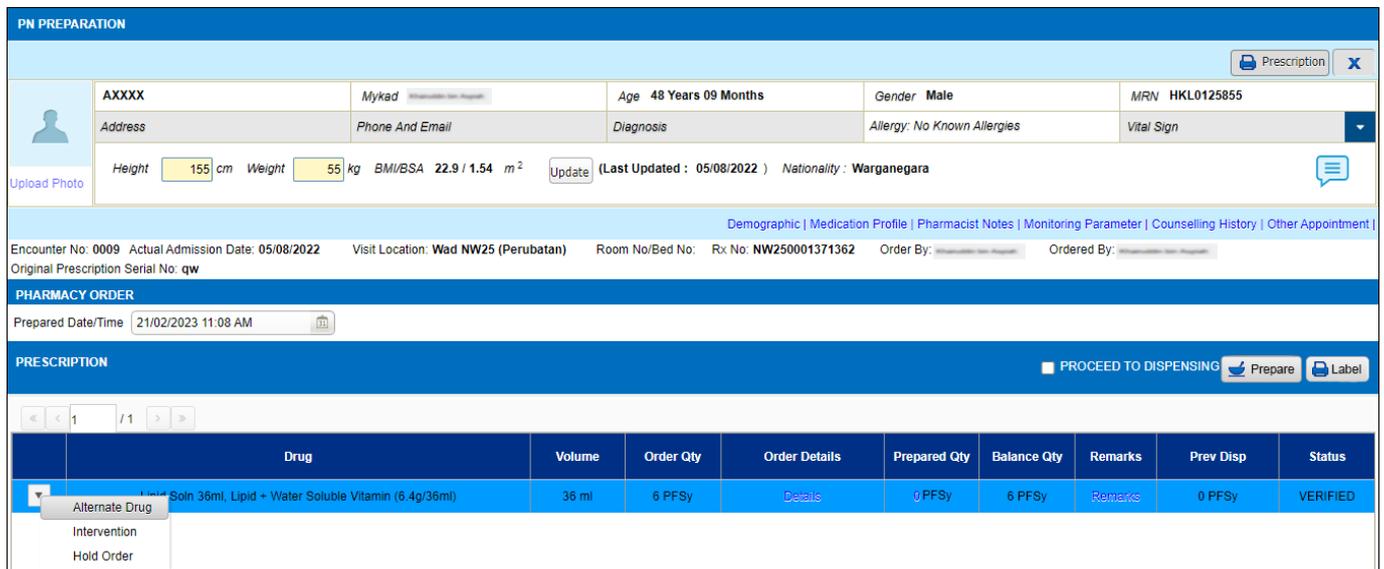
Note

- User only can do **Hold/Resume** Order at dispensing activity.
- When release batch, drug and PN bag quantity will be returned back to inventory. When discard batch, drug and PN bag quantity will be deducted from inventory.
- Once drug already released or discarded, drug will be displayed back in Preparation screen for re-allocation of new batch qty.
- PN Compounded (Paediatric Infant) allow user to order Parenteral Nutrition for patient between 31 days old to 2 years old.
- PN Compounded (Neonate) allow user to order Parenteral Nutrition for patient between 1 day old to 30 days old.
- If PN order is for paediatric, paediatric infant or neonate, product category will default to 2 in 1.

Pediatric Infant or Neonate

Please repeat section 4.6 from **STEP 1** until **STEP 20** for medication order, verify, preparation and dispensing process.

4.7 Alternate Drug



PN PREPARATION

Prescription X

XXXX Mykad Mykad Age 48 Years 09 Months Gender Male MRN HKL0125855

Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Upload Photo Height 155 cm Weight 55 kg BMI/BSA 22.9 / 1.54 m² Update (Last Updated : 05/08/2022) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counseling History | Other Appointment |

Encounter No: 0009 Actual Admission Date: 05/08/2022 Visit Location: Wad NW25 (Perubatan) Room No/Bed No: Rx No: NW250001371362 Order By: Ordered By:

PHARMACY ORDER

Prepared Date/Time 21/02/2023 11:08 AM

PRESCRIPTION PROCEED TO DISPENSING

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Remarks	Prev Disp	Status
Lipid Soln 36ml, Lipid + Water Soluble Vitamin (6.4g/36ml)	36 ml	6 PFSy	Details	0 PFSy	6 PFSy	Remarks	0 PFSy	VERIFIED

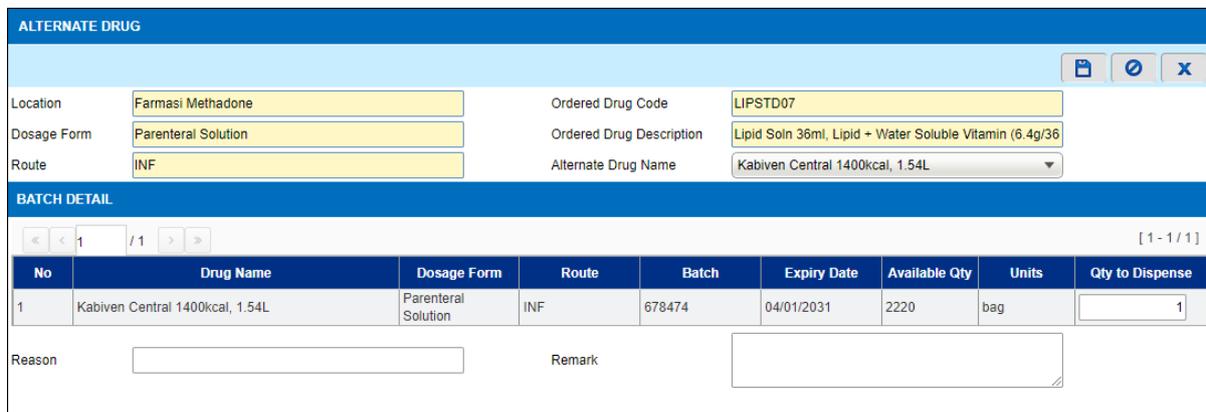
Alternate Drug
Intervention
Hold Order

Figure 4.7-1 PN Preparation

Note

Alternate Drug:

- Click on the  button to select **Alternate Drug** as per Figure 4.7-1.
- **Alternate Drug** function only can be used in Commercial preparation stage of the drug.
- Select the **Alternate Drug Name** from dropdown box as per Figure 4.7-2.
- List of drug are from unit catalog list.
- Enter **Qty to Dispense** field as per Figure 4.7-2.
- Enter **Reason** field if applicable as per Figure 4.7-2.
- Enter **Remark** field if applicable as per Figure 4.7-2.
- Click on the  button to save record and alert message will be appeared as per Figure 4.7-3.



ALTERNATE DRUG

Location Farmasi Methadone Ordered Drug Code LIPSTD07

Dosage Form Parenteral Solution Ordered Drug Description Lipid Soln 36ml, Lipid + Water Soluble Vitamin (6.4g/36)

Route INF Alternate Drug Name Kabiven Central 1400kcal, 1.54L

BATCH DETAIL

No	Drug Name	Dosage Form	Route	Batch	Expiry Date	Available Qty	Units	Qty to Dispense
1	Kabiven Central 1400kcal, 1.54L	Parenteral Solution	INF	678474	04/01/2031	2220	bag	1

Reason Remark

Figure 4.7-2 Alternate Drug

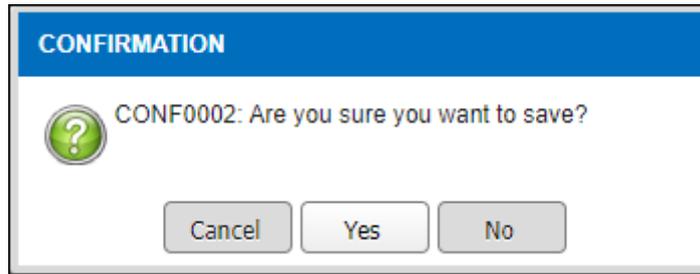
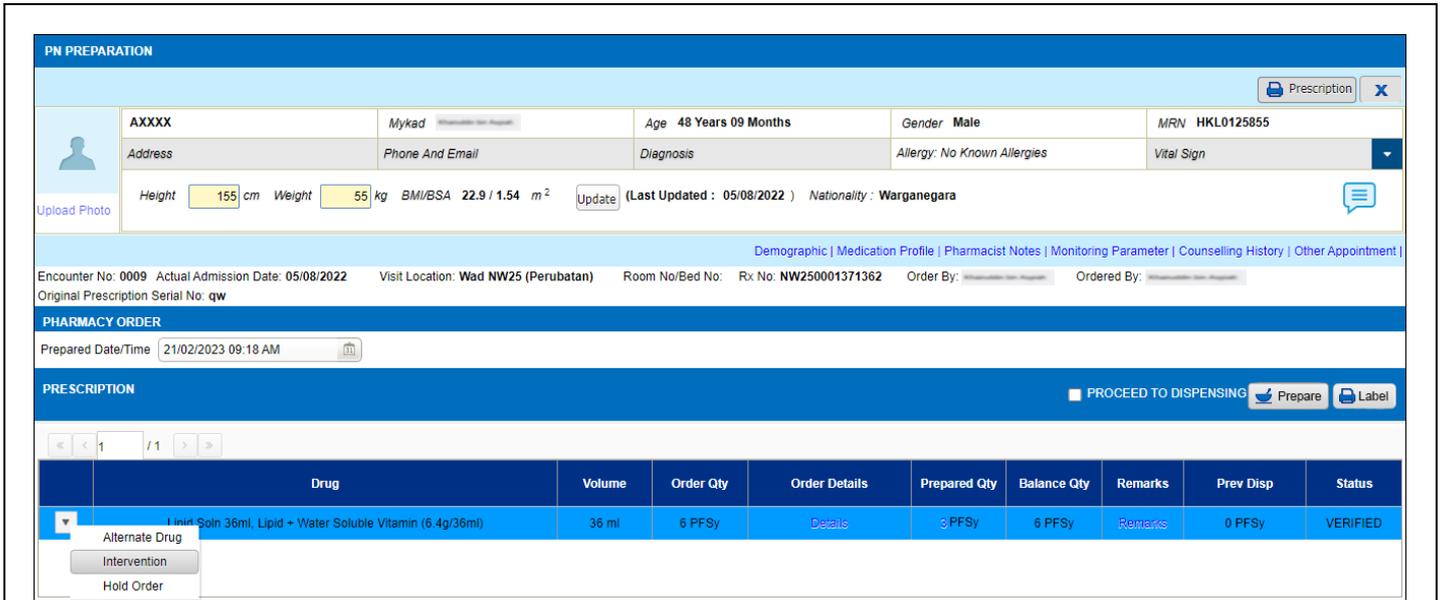


Figure 4.7-3 Confirmation Alert Message

Note

Click on the  button to confirm save record.

4.8 Intervention



PN PREPARATION

Prescription X

XXXX Mykad [Redacted] Age 48 Years 09 Months Gender Male MRN HKL0125855
 Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Upload Photo Height 155 cm Weight 55 kg BMI/BSA 22.9 / 1.54 m² Update (Last Updated : 05/08/2022) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment |

Encounter No: 0009 Actual Admission Date: 05/08/2022 Visit Location: Wad NW25 (Perubatan) Room No/Bed No: Rx No: NW250001371362 Order By: Ordered By:

PHARMACY ORDER

Prepared Date/Time 21/02/2023 09:18 AM

PRESCRIPTION PROCEED TO DISPENSING

< 1 / 1 >

	Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Remarks	Prev Disp	Status
	Liquid Soln 36ml, Lipid + Water Soluble Vitamin (6.4g/36ml)	36 ml	6 PFSy	Details	0 PFSy	6 PFSy	Remarks	0 PFSy	VERIFIED

Alternate Drug
Intervention
Hold Order

Figure 4.8-1 PN Preparation

Note

Intervention:

- Click on the  button to select **Intervention** as per Figure 4.8-1 to modify drug details as per Figure 4.8-2.
- PN Intervention Order screen include three sections:
 - Intervention Reason
 - Modify Order
 - Administration Info
- During Verification stage screen, system only displayed Intervention reason section but on Preparation screen displayed both Intervention Reason & Modify Order. Where user able to record intervention reason in verify stage while user bale to update reason and modify the order in preparation stage.

PN INTERVENTION ORDER

History Confirm Refresh Close

INTERVENTION REASON

[1 - 15 / 24]

	Intervention Reason	Remarks	Intervention Accepted	Intervention Not Accepted
<input type="checkbox"/>	Authenticity		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Contraindication		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Drug Administration Error		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Drug Interaction		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Drug Not In Formulary		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/>	Inappropriate Dose		<input type="radio"/>	<input type="radio"/>

MODIFY ORDER

Type of PN: Commercial / MOH Pre mix(Std. Soln) Compounded

Add Additive
 Body weight type: Actual Ideal Adjusted
Body weight: 55 kg

ADMINISTRATION INFO

Volume: 36 ml	Indication for PN: Enterocutaneous fistulae *
Frequency: OD (once daily)	Infusion Line: Central *
Infusion Over: 24 hours	Order Quantity: 6 prefilled syringe/pen
Start Date/Time: 05/08/2022 05:00 PM	Duration: 6 Days

Figure 4.8-2 PN Preparation Intervention

Note

- Check on the **Intervention Reason** checkbox as appropriate and enter **Remarks** field if applicable.
- Select **Intervention Accepted** radio button or **Intervention Not Accepted** radio button.
- **Administration Information** section user is allowed to modify **Volume, Frequency, Duration and Infusion Over** field.
- Intervention for **PN Compounded** order type, user is allowed to modify **PN Component** as per Figure 4.8-3

PN COMPONENT

Use Fluid Calculator

Total volume required ml/kg ml

Total oral feeding ml/kg ml

TPN Volume ml/kg ml

Energy required kcal/kg kcal

Macronutrient

Carbohydrate g/kg g/kg g kcal

Lipid g/kg g/kg g kcal

Protein g/kg g/kg g kcal

L-Glutamin ml/kg ml/kg ml kcal

Carbohydrate:Lipid(kcal) Nitrogen Content g NPC:NRatio Total kcal

Electrolytes

Sodium(Natrium), Na⁺ mmol/kg mmol/kg mmol

Potassium(Kalium), K⁺ mmol/kg mmol/kg mmol

Calcium, Ca²⁺ mmol/kg mmol/kg mmol

Magnesium, Mg²⁺ mmol/kg mmol/kg mmol

Phosphate, PO₄³⁻ mmol/kg mmol/kg mmol

Chloride, Cl⁻ mmol/kg mmol/kg mmol

Acetate, CH₃COO⁻ mmol/kg mmol/kg mmol

Trace elements ml/kg ml ml

Vitamin

Single Vitamin Combine Vitamin

Water and Fat Soluble ml/kg ml ml

Figure 4.8-3 PN Component Intervention

- Click on the button to update back prescription details.

PN INTERVENTION ORDER

History Confirm Refresh X

INTERVENTION REASON

2 / 2 [16 - 24 / 24]

Intervention Reason	Remarks	Intervention Accepted	Intervention Not Accepted
<input type="checkbox"/> Incomplete Rx - Frequency		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Incomplete Rx - Patient Data		<input type="radio"/>	<input type="radio"/>
<input checked="" type="checkbox"/> Others	Change volume	<input checked="" type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Polypharmacy		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> Suggest to Monitor Vital Signs/Lab Result		<input type="radio"/>	<input type="radio"/>
<input type="checkbox"/> TDM		<input type="radio"/>	<input type="radio"/>

MODIFY ORDER

Type of PN Commercial / MOH Pre mix(Std. Soln) Add Additive Compounded

Lipid Soln 36ml, Lipid + Water Soluble Vitamin * Body weight type: Actual Ideal Adjusted Body weight: kg

ADMINISTRATION INFO

Volume ml Indication for PN *

Frequency Infusion Line *

Infusion Over hours Order Quantity prefilled syringe/pen

Start Date/Time Duration Days

Figure 4.8-4 PN Intervention Order

Note

- Click on the  button to save record as per Figure 4.8-4 and alert message will be displayed as per Figure 4.8-5.

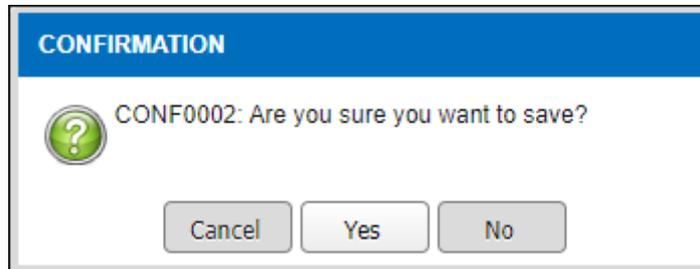
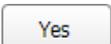


Figure 4.8-5 Confirmation Alert Message

- Click on the  button to save record.
- Click on the  button to view history of Intervention reason history listing as per Figure 4.8-6.
- Click on the  button to close Intervention Reason History Listing screen.



The screenshot shows a table titled "INTERVENTION REASON HISTORY LISTING". The table has four columns: "Date/Time", "Intervention Reason", "Remarks", and "Updated By". The first row of data shows "21/02/2023 10:13 AM", "Others", "Change volume", and a user name. There are navigation arrows and a page indicator "1 / 1" above the table. A close button (X) is in the top right corner.

Date/Time	Intervention Reason	Remarks	Updated By
21/02/2023 10:13 AM	Others	Change volume	[User Name]

Figure 4.8-6 Intervention Reason History

4.9 Hold/Resume PN Order

PN PREPARATION

Prescription X

	AXXXX	Mykad [Redacted]	Age 48 Years 08 Months 30 Days	Gender Male	MRN HKL0125855
	Address	Phone And Email	Diagnosis	Allergy: No Known Allergies	Vital Sign ▼

Upload Photo Height cm Weight kg BMI/BSA 22.9 / 1.54 m² Update (Last Updated : 05/08/2022) Nationality : Warganegara

[Demographic](#) | [Medication Profile](#) | [Pharmacist Notes](#) | [Monitoring Parameter](#) | [Counselling History](#) | [Other Appointment](#)

Encounter No: 0009 Actual Admission Date: 05/08/2022 Visit Location: Wad NW25 (Perubatan) Room No/Bed No: Rx No: NW250001371362 Order By: [Redacted] Ordered By: [Redacted]

PHARMACY ORDER

Prepared Date/Time 🗑

PRESCRIPTION

PROCEED TO DISPENSING Prepare Label

1 / 1

	Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Remarks	Prev Disp	Status
▼	Solin 36ml, Lipid + Water Soluble Vitamin (6-4g/36ml)	36 ml	6 PFSy	Details	3 PFSy	6 PFSy	Remarks	0 PFSy	VERIFIED

Alternate Drug
 Intervention
 Hold Order

Figure 4.9-1 PN Preparation

Note

Hold/Resume PN Order:

- Click on the  button to select **Hold Order** and **Hold Order** screen will be appeared as per Figure 4.9-1.
- Select the **Hold Reason** from dropdown box:
 - Authenticity
 - Contraindication
 - Drug Interaction
 - Inappropriate Dose
 - Inappropriate Drug
 - Inappropriate Duration
 - Inappropriate Frequency
 - Incompatibility
 - Intervention
 - Others
 - Patient Refused
 - Polypharmacy
 - Suggest to Monitor Vital Signs/Lab Result
 - Wrong Patient
- **Other Reason** field will enable if user select hold reason as **Others**.



Figure 4.9-2 Hold Order – Pharmacist Remarks

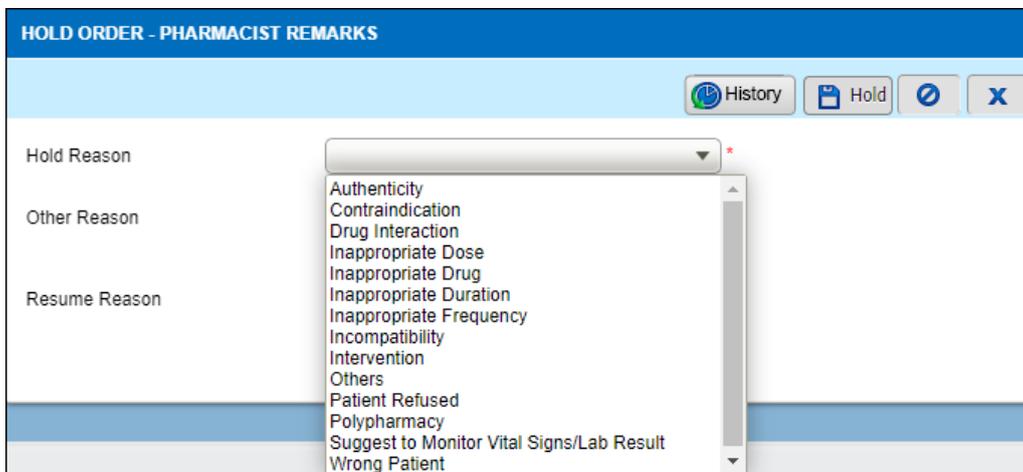


Figure 4.9-3 Hold Order – Pharmacist Remarks

Note

- Click on the  button to hold order.
- Once click on hold order alert message will be shown in Figure 4.9-4

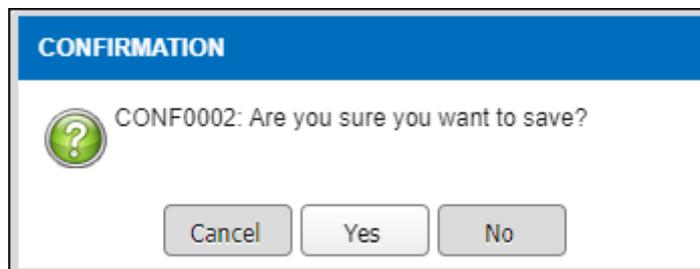
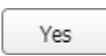


Figure 4.9-4 Confirmation Alert Message

- Click on the  button to confirm save record.
- The order status will appear as **Verified Hold**.

PN PREPARATION

Prescription X

 <small>Upload Photo</small>	AXXXX <small>Address</small>	Mykad <small>Personal Identification Number</small> <small>Phone And Email</small>	Age 48 Years 08 Months 30 Days <small>Diagnosis</small>	Gender Male <small>Allergy: No Known Allergies</small>	MRN HKL0125855 <small>Vital Sign</small>
--	---------------------------------	---	--	---	---

Height 155 cm Weight 55 kg BMI/BSA 22.9 / 1.54 m² Update (Last Updated : 05/08/2022) Nationality : Warganegara

[Demographic](#) | [Medication Profile](#) | [Pharmacist Notes](#) | [Monitoring Parameter](#) | [Counseling History](#) | [Other Appointment](#)

Encounter No: 0009 Actual Admission Date: 05/08/2022 Visit Location: Wad NW25 (Perubatan) Room No/Bed No: Rx No: NW250001371362 Order By: Pharmacist Ordered By: Pharmacist
Original Prescription Serial No: qw

PHARMACY ORDER

Prepared Date/Time 20/02/2023 04:09 PM 🏠

PRESCRIPTION
 PROCEED TO DISPENSING Prepare Label

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Remarks	Prev Disp	Status
<div style="border: 1px solid gray; padding: 2px;"> ▼ 1 unit Soln 36ml, Lipid + Water Soluble Vitamin (6.4g/36ml) Alternate Drug Intervention Resume Order </div>	36 ml	6 PFSy	Details	0 PFSy	6 PFSy	Remarks	0 PFSy	VERIFIED HOLD

Figure 4.9-5 PN Preparation

Note

- Click on the ▼ button to select 'Resume Order' as per Figure 4.9-5.

HOLD ORDER - PHARMACIST REMARKS

History ▶ Resume 🔄 X

Hold Reason	Drug Interaction
Other Reason	
Resume Reason	

Figure 4.9-6 Hold Order-Pharmacist Remarks

- Click on the ▶ Resume button to resume hold order and alert message will be displayed as per Figure 4.9-7.
- Click on the X button to close window

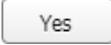
CONFIRMATION

?
CONF0001: Data have been modified. Save Changes?

Cancel
Yes
No

Figure 4.9-7 Confirmation Alert Message

Note

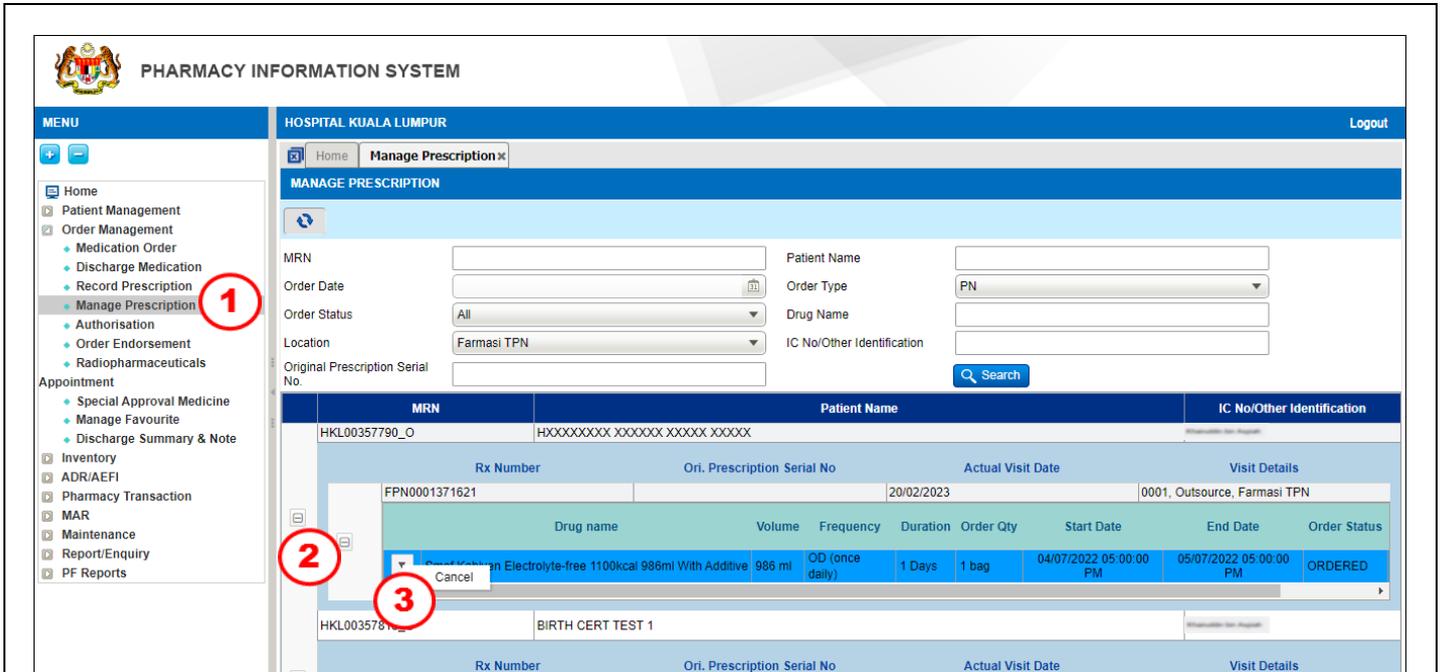
- Click on the  button to confirm save record.
- Click on the  button as per Figure 4.9-6 to view history of hold order reason history listing 4.9-8.
- Click on the  button to close Hold Order Reason History listing screen.

HOLD ORDER REASON HISTORY LISTING					
					
 / 1 [1 - 1 / 1]					
Date/Time	Screen	Hold Reason	Remarks	Resume Remarks	Updated By
20/02/2023 04:30 PM	Preparation	Drug Interaction			

Figure 4.9-8 Hold Order Reason History Listing

5.0 Manage Prescription

5.1 Cancel/Stop Order



PHARMACY INFORMATION SYSTEM

HOSPITAL KUALA LUMPUR

Home Manage Prescription x Logout

MANAGE PRESCRIPTION

MRN: Patient Name:

Order Date: Order Type:

Order Status: Drug Name:

Location: IC No/Other Identification:

Original Prescription Serial No:

MRN	Patient Name	IC No/Other Identification
HKL00357790_O	HXXXXXXXXX XXXXXXX XXXXXX XXXXXX	

Rx Number	Ori. Prescription Serial No	Actual Visit Date	Visit Details
FPN0001371621		20/02/2023	0001, Outsource, Farmasi TPN

Drug name	Volume	Frequency	Duration	Order Qty	Start Date	End Date	Order Status
Cancel	986 ml	OD (once daily)	1 Days	1 bag	04/07/2022 05:00:00 PM	05/07/2022 05:00:00 PM	ORDERED

HKL0035781... BIRTH CERT TEST 1

Figure 5.1-1 Manage Prescription - Stop/Cancel Order

Cancel and Stop Order screen allow user to cancel and stop prescription which is wrongly prescribe or need to stop the medication

STEP 1

Click on 'Order Management' menu and click on 'Manage Prescription' sub-menu

Note

- Prescriber have the options to filter order type by click the drop down box :-
 - PN
- By default list of patient will be displayed according to prescriber location access.
- Various search criteria is provided as below:
 - MRN
 - Patient Name
 - Order Date
 - Order Type
 - Order Status
 - Drug name
 - Location
 - IC No/Other Identification
 - Original Prescription Serial No

STEP 2

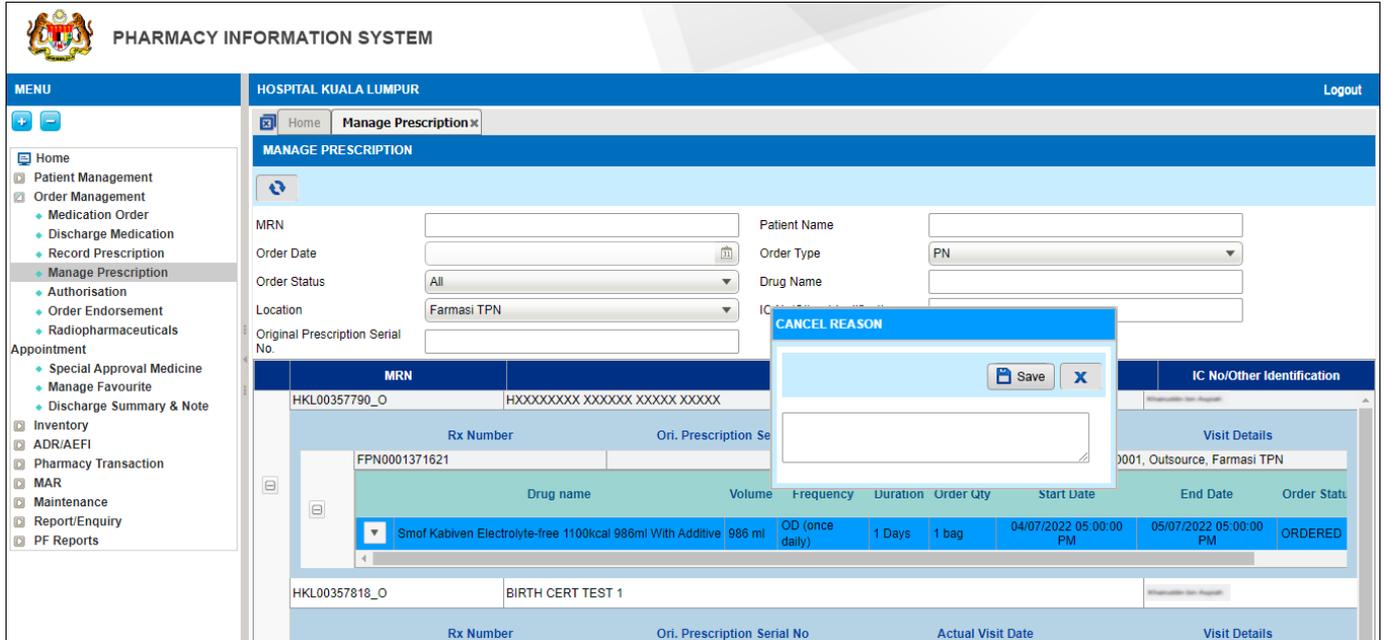
Click on the  expand button to display order details as per Figure 5.1-1

STEP 3

Right click mouse on the  button and select 'Cancel' as per Figure 5.1-1

Note

- Select 'Cancel' function to cancel order that have not yet been dispensed to patient and system will display 'Cancel Reason' screen as per Figure 5.1-2.
- Enter reason for cancel order and click on the  button to save record.
- Select 'Stop' function to stop order that has dispensed to patient as per Figure 5.1-1.



The screenshot displays the 'PHARMACY INFORMATION SYSTEM' interface for 'HOSPITAL KUALA LUMPUR'. The main window is titled 'MANAGE PRESCRIPTION' and contains several input fields for prescription management, including MRN, Order Date, Order Status, Location, Patient Name, Order Type (set to 'PN'), and Drug Name. A 'CANCEL REASON' dialog box is open in the foreground, featuring a text input field and 'Save' and 'X' buttons. Below the input fields, a table lists prescription details:

MRN	Rx Number	Ori. Prescription Serial No.	Drug name	Volume	Frequency	Duration	Order Qty	Start Date	End Date	Order Status
HKL00357790_O	FPN0001371621	HXXXXXXXXX XXXXXXX XXXXX XXXXX	Smof Kabiven Electrolyte-free 1100kcal 986ml With Additive	986 ml	OD (once daily)	1 Days	1 bag	04/07/2022 05:00:00 PM	05/07/2022 05:00:00 PM	ORDERED

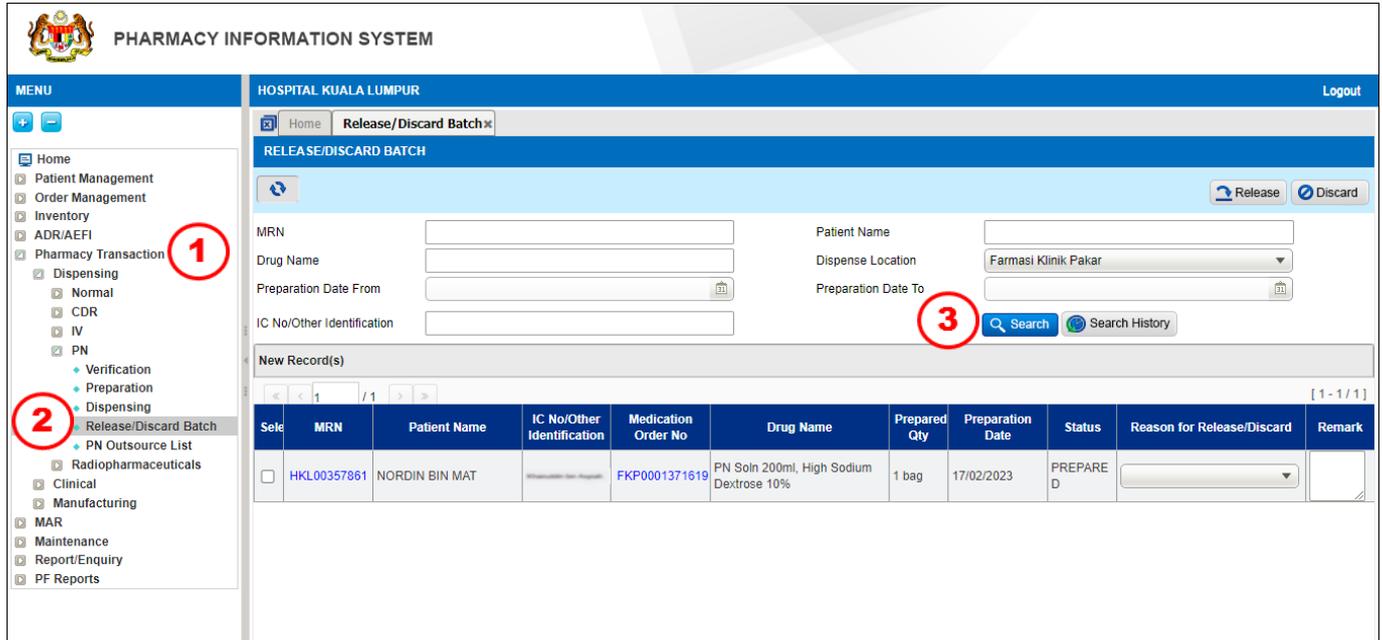
Below the table, another entry is visible: MRN HKL00357818_O, BIRTH CERT TEST 1.

Figure 5.1-2 Cancel Reason

6.0 Release/Discard Batch

Note

- Release function is to release and update back stock into inventory.
- Discard function is to discard stock from inventory even not doing dispensing.



PHARMACY INFORMATION SYSTEM

HOSPITAL KUALA LUMPUR Logout

Home | Release/Discard Batch

RELEASE/DISCARD BATCH

Release Discard

MRN: Patient Name:

Drug Name: Dispense Location:

Preparation Date From: Preparation Date To:

IC No/Other Identification: Search Search History

New Record(s)

Select	MRN	Patient Name	IC No/Other Identification	Medication Order No	Drug Name	Prepared Qty	Preparation Date	Status	Reason for Release/Discard	Remark
<input type="checkbox"/>	HKL00357861	NORDIN BIN MAT		FKP0001371619	PN Soln 200ml, High Sodium Dextrose 10%	1 bag	17/02/2023	PREPARE D		

Figure 6.0-1 Release/Discard Batch Listing Page

STEP 1`

Click on 'Pharmacy Transaction' menu follow by 'Dispensing' sub menu and select 'PN'

STEP 2

Click on 'Release/Discard Batch' function

Note

Search patient record based: -

No	Field	Description	Remark
a	MRN	Patient Medical Record Number	Search option: • Type the MRN either full or partial: <i>Example: HPSF00001234 or "1234"</i>
b	Patient Name	Patient Name	Allow to search by full name or partial
c	Drug Name	Drug Name	Allow to search by full name or partial drug name
d	Dispense Location	Dispensing location. (It will list down all active location)	Able to filter and search patient name by dispensing location
e	Preparation Date From	Preparation Date From	Able to filter and search patient by preparation date from
f	Preparation Date To	Preparation Date To	Able to filter and search patient by preparation date to
g	IC No/Other Identification	IC Number/Other Identification	Able to filter and search patient name by IC number or other identification

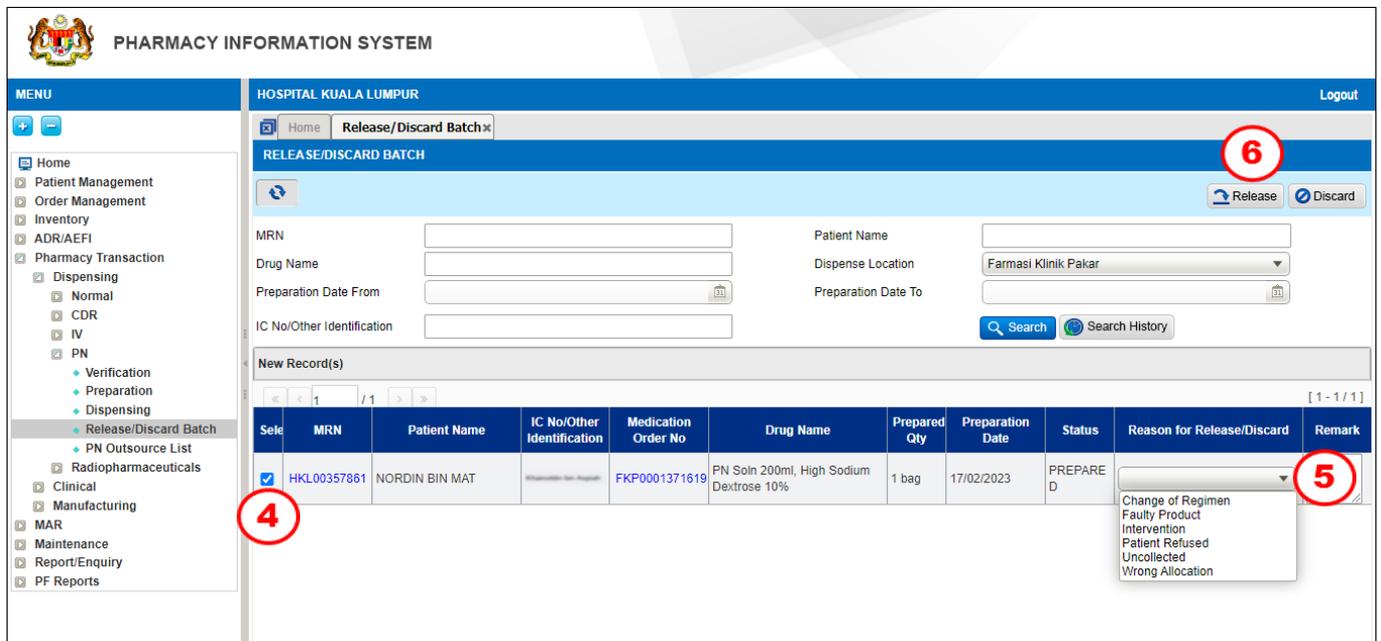
Table 6.0-1 Patient Record Search

STEP 3

Click on the  button to search patient

Note

- Search result of patient record list will be displayed:
 - MRN
 - Patient Name
 - IC No/Other Identification
 - Medication Order No
 - Drug Name
 - Prepared Qty
 - Preparation Date
 - Status
 - Reason for Release/Discard
 - Remark



PHARMACY INFORMATION SYSTEM

HOSPITAL KUALA LUMPUR

Home | Release/Discard Batch

RELEASE/DISCARD BATCH

MRN: Patient Name:

Drug Name: Dispense Location: Farmasi Klinik Pakar

Preparation Date From: Preparation Date To:

IC No/Other Identification:

Search Search History

New Record(s)

Select	MRN	Patient Name	IC No/Other Identification	Medication Order No	Drug Name	Prepared Qty	Preparation Date	Status	Reason for Release/Discard	Remark
<input checked="" type="checkbox"/>	HKL00357861	NORDIN BIN MAT		FKP0001371619	PN Soln 200ml, High Sodium Dextrose 10%	1 bag	17/02/2023	PREPARE D	Change of Regimen Faulty Product Intervention Patient Refused Uncollected Wrong Allocation	

Figure 6.0-2 Release/Discard Batch

STEP 4

Select and check the checkbox to select order at the **Select** column

STEP 5

Select the **Reason for Release and Discard** from dropdown box:

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

STEP 6

Click on the  button to release batch and inventory stock will be updated

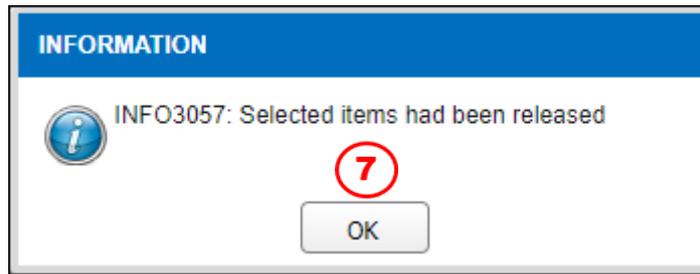
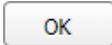
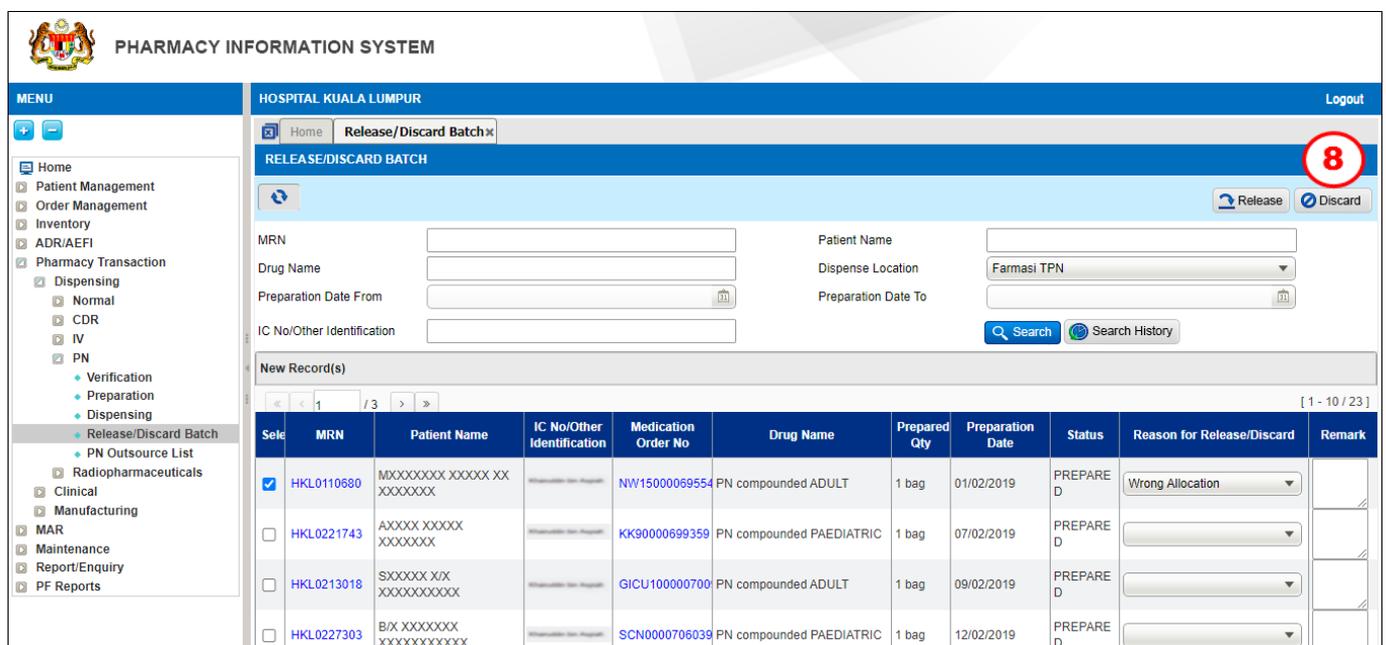


Figure 6.0-3 Alert Message

STEP 7

Click on the  button to release order batch



PHARMACY INFORMATION SYSTEM
HOSPITAL KUALA LUMPUR

Home | Release/Discard Batch | Logout

RELEASE/DISCARD BATCH

Release Discard

MRN: Patient Name:
 Drug Name: Dispense Location: Farmasi TPN
 Preparation Date From: Preparation Date To:
 IC No/Other Identification:

Search Search History

New Record(s) [1 - 10 / 23]

Select	MRN	Patient Name	IC No/Other Identification	Medication Order No	Drug Name	Prepared Qty	Preparation Date	Status	Reason for Release/Discard	Remark
<input checked="" type="checkbox"/>	HKL0110680	MXXXXXXXX XXXXX XX XXXXXXXX		NW15000069554	PN compounded ADULT	1 bag	01/02/2019	PREPARED	Wrong Allocation	
<input type="checkbox"/>	HKL0221743	AXXXX XXXXX XXXXXXXX		KK90000699359	PN compounded PAEDIATRIC	1 bag	07/02/2019	PREPARED		
<input type="checkbox"/>	HKL0213018	SXXXXX XIX XXXXXXXXXXXX		GICU100000700	PN compounded ADULT	1 bag	09/02/2019	PREPARED		
<input type="checkbox"/>	HKL0227303	B/X XXXXXXX XXXXXXXXXXXX		SCN0000706039	PN compounded PAEDIATRIC	1 bag	12/02/2019	PREPARED		

Figure 6.0-4 Release / Discard Batch

STEP 8

Click on the  button to discard batch and inventory stock will be updated

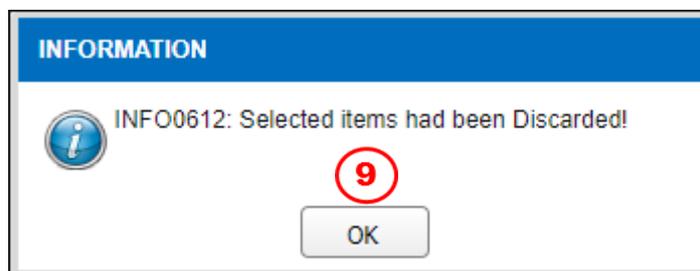
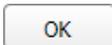
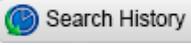


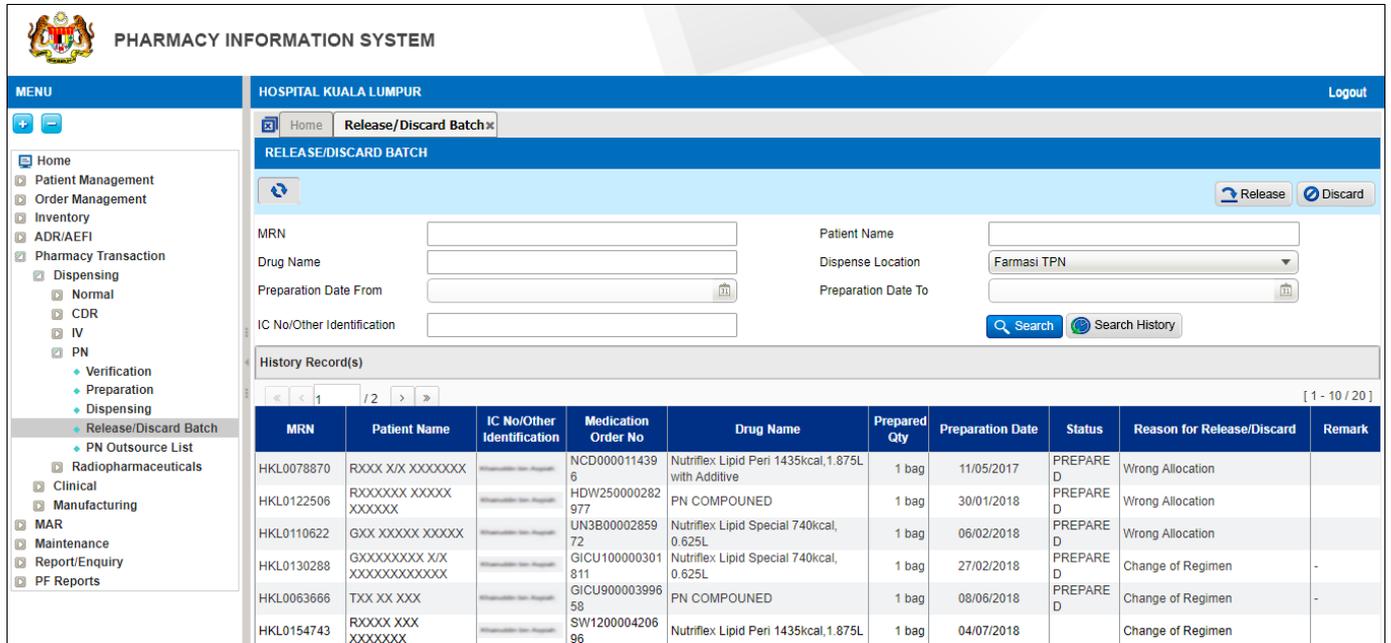
Figure 6.0-5 Information Alert Message

STEP 9

Click on the  button to discard batch

Note

Click on the  button to view release/discard history as Figure 6.0-6



PHARMACY INFORMATION SYSTEM

HOSPITAL KUALA LUMPUR Logout

Home | Release/Discard Batch

RELEASE/DISCARD BATCH

MRN: Patient Name:

Drug Name: Dispense Location:

Preparation Date From: Preparation Date To:

IC No/Other Identification:

History Record(s) [1 - 10 / 20]

MRN	Patient Name	IC No/Other Identification	Medication Order No	Drug Name	Prepared Qty	Preparation Date	Status	Reason for Release/Discard	Remark
HKL0078870	RXXX XX XXXXXXX		NCD000011439 6	Nutriflex Lipid Peri 1435kcal,1.875L with Additive	1 bag	11/05/2017	PREPARED	Wrong Allocation	
HKL0122506	RXXXXX XXXXX XXXXXX		HDW250000282 977	PN COMPOUNDED	1 bag	30/01/2018	PREPARED	Wrong Allocation	
HKL0110622	GXX XXXXX XXXXX		UN3B00002859 72	Nutriflex Lipid Special 740kcal, 0.625L	1 bag	06/02/2018	PREPARED	Wrong Allocation	
HKL0130288	GXXXXXXXX XX XXXXXXXXXXXX		GICU100000301 811	Nutriflex Lipid Special 740kcal, 0.625L	1 bag	27/02/2018	PREPARED	Change of Regimen	-
HKL0063666	TXX XX XXX		GICU900003996 58	PN COMPOUNDED	1 bag	08/06/2018	PREPARED	Change of Regimen	-
HKL0154743	RXXXX XXX XXXXXX		SW1200004206 96	Nutriflex Lipid Peri 1435kcal,1.875L	1 bag	04/07/2018		Change of Regimen	

Figure 6.0-6 Release/Discard Batch

7.0 Outsource

Outsource allow user to send preparation request to another facility through PhIS

7.1 Sending Outsource

PHARMACY INFORMATION SYSTEM

HOSPITAL KUALA LUMPUR

Home Preparation x

PN - PREPARATION

Dispense Location: Farmasi Klinik Pakar

Patient Name:

Order Status: All

Patient MRN:

Administration Date From:

Administration Date To:

IC No/Other Identification:

Advanced Search

Search

Patient MRN	Patient Name	IC No/Other Identification	Type of PN	Start Date Time	Order Date Time	Order Location	Outsource Status
HKL0265265	XXXXXXXX XXXX	XXXXXXXXXXXXXXXXXXXX	Commercial	08/08/2022 05:00 PM	10/08/2022 04:05 PM	Wad SW19 (Perubatan)	
HKL0347456	AXXXX XXXXXXXX XXXXX	XXXXXXXXXXXXXXXXXXXX	Commercial with Additive	07/07/2022 05:00 PM	19/07/2022 10:21 AM	Klinik Pakar Perubatan - Rheumatologi	
HKL0348663	JXXXXXX XXXX XXXXXXX	XXXXXXXXXXXXXXXXXXXX	Commercial with Additive	05/07/2022 05:00 PM	05/07/2022 03:12 PM	Klinik Nuklear	Outsource Request
HKL0351701	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	Compounded	05/07/2022 05:00 PM	05/07/2022 02:15 PM	Farmasi Pesakit Dalam	Outsource Request
HKL00357736	TEST PN PATIENT 02	XXXXXXXXXXXXXXXXXXXX	Commercial with Additive	28/06/2022 05:00 PM	28/06/2022 03:04 PM	Farmasi Klinik Pakar	Outsource Request
HKL00357735	TEST PN PATIENT 01	XXXXXXXXXXXXXXXXXXXX	Commercial with Additive	28/06/2022 05:00 PM	28/06/2022 03:00 PM	Farmasi Klinik Pakar	Received Result

Figure 7.1-1 Preparation Listing Page

STEP 1

Click on 'Pharmacy Transaction' menu follow by 'Dispensing' and click on 'PN' then 'Preparation' sub-menu

Note

- Various search criteria is provided as below:
 - Dispense Location
 - Patient Name
 - Order Status
 - Patient MRN
 - Administration Date From
 - Administration Date To
 - IC No/Other Identification
- Click on the [Advanced Search](#) hyperlink for advance search.

STEP 2

Click on the button and system will display related order

STEP 3

Double click on the selected patient record and system will display PN Dispensing screen as per Figure 7.1-2



PN PREPARATION

Prescription X

B/O XXY Mykad Age 05 Months 16 Days Gender Female MRN HKL00357826
 Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Height 30 cm Weight 1 kg BMI/BSA 11.1 / 0.09 m² Update (Last Updated : 03/10/2022) Nationality : Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counseling History | Other Appointment |

Encounter No: 0002 Actual Admission Date: 08/09/2022 Visit Location: Special Care Nursery (Neonatal ICU) Room No/Bed No: Rx No: SCN0001371471 Order By: Ordered By:

Original Prescription Serial No: 1234

PHARMACY ORDER

Prepared Date/Time 17/02/2023 12:27 PM

PRESCRIPTION PROCEED TO DISPENSING Prepare Worksheet Label Outsource

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
PN Compounded Neonate	50 ml	1 bag	Details	1 bag	1 bag	Details	Remarks	0 bag	VERIFIED

Figure 7.1-2 PN Preparation

STEP 4

Click on the  button to prepare outsource product

OUTSOURCE DETAILS

Cancel Outsource Send Outsource Request X

B/O XXY Mykad Age 05 Months 16 Days Gender Female MRN HKL00357826
 Address Phone And Email Diagnosis Allergy: No Known Allergies Vital Sign

Height 30 cm Weight 1 kg BMI/BSA 11.1 / 0.09 m² Update (Last Updated : 03/10/2022) Nationality : Warganegara

PHARMACY ORDER

Outsource No Sending Status
 Referred From HOSPITAL KUALA LUMPUR Referred To Hospital Ampang
 Contact Person / Office Contact Person / Office
 Contact no / Ext No 01121045211 Contact no / Ext No
 Request Date/Time 17/02/2023 12:32 PM Tentative Receipt Date
 Remarks

Rx No	Rx Date	Drug Name	Order Detail	Order Qty	Remarks
SCN0001371471	08/09/2022 09:32:06 AM	PN Compounded Neonate	Details	1	Remarks

Figure 7.1-3 Outsource Details

STEP 5

Enter **Contact Person/office, Contact No/Ext/No., Request Date/Time** and **Remarks**

STEP 6

Enter **Referred To** by click on the search button

Note

Enter **Contact Person/office, Contact No/Ext/No.** and **Tentative Receipt Date.**

OUTSOURCE DETAILS 7

	B/O XXY	Mykad	Age 05 Months 16 Days	Gender Female	MRN HKL00357826
	Address	Phone And Email	Diagnosis	Allergy: No Known Allergies	Vital Sign
<input type="button" value="Upload Photo"/>	Height 30 cm	Weight 1 kg	BMI/BSA 11.1 / 0.09 m ²	<input type="button" value="Update"/> (Last Updated : 03/10/2022) Nationality : Warganegara	

PHARMACY ORDER

Outsource No	Sending Status
Referred From HOSPITAL KUALA LUMPUR	Referred To Hospital Ampang
Contact Person / Office	Contact Person / Office
Contact no / Ext No 01121045211	Contact no / Ext No 0192112877
Request Date/Time 17/02/2023 12:32 PM	Tentative Receipt Date 21/02/2023
Remarks	

Rx No	Rx Date	Drug Name	Order Detail	Order Qty	Remarks
SCN0001371471	08/09/2022 09:32:06 AM	PN Compounded Neonate	Details	1	Remarks

Figure 7.1-4 Outsource Details

STEP 7

Click on the button to send outsource request

CONFIRMATION

CONF0110: Are you sure you want to send Outsource Request?

8

Figure 7.1-5 Send Request Alert Message

STEP 8

Click on the button to send outsource request

INFORMATION

INFO0306: Outsource Request has been submitted successfully.

Figure 7.1-6 Information Alert Message

Note

Once outsource request successfully submitted information alert message will be appear click on button to proceed



OUTSOURCE DETAILS

[Cancel Outsource](#)

	B/O XXY	<i>Mykad</i> <input type="text"/>	Age 05 Months 16 Days	Gender Female	MRN HKL00357826
Upload Photo	Address	<i>Phone And Email</i>	Diagnosis	Allergy: No Known Allergies	Vital Sign
	Height <input type="text" value="30"/> cm	Weight <input type="text" value="1"/> kg	BMI/BSA 11.1 / 0.09 m ² <input type="button" value="Update"/> (Last Updated : 03/10/2022)	Nationality: Warganegara	

PHARMACY ORDER

Outsource No	<input type="text" value="PN-11-14010002170223-114"/>	Sending Status	<input type="text" value="Successful"/>
Referred From	<input type="text" value="HOSPITAL KUALA LUMPUR"/>	Referred To	<input type="text" value="Hospital Ampang"/>
Contact Person / Office	<input type="text" value=""/> *	Contact Person / Office	<input type="text" value=""/> *
Contact no / Ext No	<input type="text" value="01121045211"/> *	Contact no / Ext No	<input type="text" value="0192112877"/> *
Request Date/Time	<input type="text" value="17/02/2023 12:32 PM"/>	Tentative Receipt Date	<input type="text" value="21/02/2023"/>
Remarks	<input type="text"/>		

<< 1 / 1 >>

Rx No	Rx Date	Drug Name	Order Detail	Order Qty	Remarks
SCN0001371471	08/09/2022 09:32:06 AM	PN Compounded Neonate	Details	1	Remarks

Figure 7.1-7 Outsource Details

STEP 9

Click on the button to close outsource screen as per Figure 7.1-7



7.2 Receive Outsource

PHARMACY INFORMATION SYSTEM

HOSPITAL KUALA LUMPUR Logout

Home

TASK LIST

Transaction Type: All

Transaction Type | Transaction No. | Item Group | Date/Time | Task Status | From Unit/Department | From User

No Records Found!

NOTIFICATION

Notification Type | Notification No. | Title | Date | From Facility/Unit | Attachment

No Records Found!

External Notification

Online Issue Request Received:	0
Online External CDR Request Received:	16
Online External CDR Result Received:	14
Online External PN Request Received:	52
Online External PN Result Received:	1
External Radio Order Request Received:	0
External Radio Order Result Received:	0
External TDM Request Received:	17
External TDM Result Received:	0
Online Contract Request Received:	32
Online Return Inter Facility Received:	0

Figure 7.2-1 External Notification

STEP 1

Click on the Online External PN Request Received button and Outsource Listing window will be display as Figure 7.2-1

OUTSOURCE LISTING

[31 - 40 / 52]

Outsource No	Patient Name	Gender	From(Hospital/Clinic)	Request Date/Time	Tentative Receipt Date	Register
PN-11-08080019220722-061	HXXXXXXXXX XXXXXX XXXXX XXXXX MXXX XXXXX X XXXXXXXXXX MXXX XXXXX X XXXXXXXXXX	Female	Hospital Seri Manjung	22/07/2022 6:25 PM		Register
PN-11-08080019230722-068	XXXXXXXXXX MXXX XXXXX X XXXXXXXXXX MXXX XXXXX X XXXXXXXXXX	Male	Hospital Seri Manjung	23/07/2022 11:42 PM		Cancel
PN-11-08080019230722-065	XXXXXXXXXX MXXX XXXXX X XXXXXXXXXX	Male	Hospital Seri Manjung	23/07/2022 11:35 PM		Cancel
PN-11-08080019230722-064	PN PATIENT	Male	Hospital Seri Manjung	23/07/2022 11:28 PM		Cancel
PN-11-08080019230722-066	MXXX XXXXX X XXXXXXXXXX A XXXXX XXXXXX XXXXXXXXXXXXXXXXXX MXXX XXXXX X XXXXXXXXXX	Male	Hospital Seri Manjung	23/07/2022 11:35 PM		Cancel
PN-11-08080019110822-081	XXXXXXXXXX XXXXXXXXXXXXXXXXXX MXXX XXXXX X XXXXXXXXXX	Female	Hospital Seri Manjung	11/08/2022 2:20 PM		Cancel
PN-11-08080019230722-067	XXXXXXXXXX MXXX XXXXX X XXXXXXXXXX	Male	Hospital Seri Manjung	23/07/2022 11:42 PM		Register
PN-11-08080019230722-063	PN PATIENT	Male	Hospital Seri Manjung	23/07/2022 11:28 PM		Register

Figure 7.2-2 Outsource Listing

Note

Click on the Outsource No hyperlink to view Outsource Details as Figure 7.2-3



OUTSOURCE DETAILS

	XXXXXXXXXX XXXXXXXX XXXXXXXX XXXXXXXX	Mykad <input type="text"/>	Age 32 Years 09 Months 16 Days	Gender Female	MRN HKL00357790_O
	Address <input type="text"/>	Phone And Email <input type="text"/>	Diagnosis <input type="text"/>	Allergy: Need To Be Assessed	Vital Sign <input type="text"/>
Upload Photo	Height <input type="text"/> cm Weight <input type="text"/> kg BMI/BSA 0/0 m ² (Last Updated :) Nationality : Warganegara				

PHARMACY ORDER

Outsource No <input type="text" value="PN-11-08080019220722-061"/>	Sending Status <input type="text"/>
Referred From <input type="text" value="Hospital Seri Manjung"/>	Referred To <input type="text" value="Hospital Kuala Lumpur"/>
Contact Person / Office <input type="text"/>	Contact Person / Office <input type="text"/>
Contact no / Ext No <input type="text" value="056881333"/>	Contact no / Ext No <input type="text"/>
Request Date/Time <input type="text" value="22/07/2022 6:25 PM"/>	Tentative Receipt Date <input type="text"/>
Remarks <input type="text"/>	

Rx No	Rx Date	Drug Name	Order Detail	Order Qty	Remarks
W30001120297	04/07/2022 12:00:00 AM	Smof Kabiven Electrolyte-free 1100kcal 986ml With Additive	Details	1	Remarks

Figure 7.2-3 Outsource Details

Note

User is allowed to cancel the transaction by click on the button

OUTSOURCE LISTING

[31 - 40 / 52]

Outsource No	Patient Name	Gender	From(Hospital/Clinic)	Request Date/Time	Tentative Receipt Date	Register
PN-11-08080019220722-061	XXXXXXXXXX XXXXXXXX XXXXXX XXXXXXXX	Female	Hospital Seri Manjung	22/07/2022 6:25 PM		Register 2
PN-11-08080019230722-068	XXXXX XXXXXXX X XXXXXXXXXXXX	Male	Hospital Seri Manjung	23/07/2022 11:42 PM		Cancel
PN-11-08080019230722-067	XXXXX XXXXXXX X XXXXXXXXXXXX	Male	Hospital Seri Manjung	23/07/2022 11:42 PM		Register
PN-11-08080019230722-063	PN PATIENT	Male	Hospital Seri Manjung	23/07/2022 11:28 PM		Register

Figure 7.2-4 Outsource Listing

STEP 2

Click on the Register hyperlink to register outsource patient and Ward Management window will be display as Figure 7.2-5

Figure 7.2-5 Ward Management

STEP 3

Select **Department/discipline** and **Location** from dropdown menu

STEP 4

Click on the  button to save the registered outsource patient

Note

- After save alert message will be shown as Figure 7.2-6

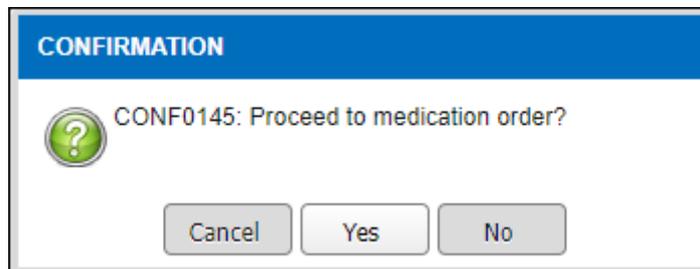


Figure 7.2-6 Alert Message

- Click on  button to proceed to medication order and screen medication screen will be shown in Figure 7.2-7



Figure 7.2-7 Medication Oder

STEP 5

Click on the **Parenteral Nutrition** tab button

Note

Once click on the tab, Parenteral Nutrition medication screen will be display as shown in Figure 7.2-8

Figure 7.2-8 Medication Order

STEP 6

Click on the button and Outsource Listing screen will be display as Figure 7.2-9

Outsource No	Patient Name	Gender	From(Hospital/Clinic)	Request Date	Tentative Receipt Date	Register
PN-11-08080019220722-061	HXXXXXXXX XXX XXXXXX XXXXX	Female	Hospital Seri Manjung	22/07/2022 6:25 PM		Registered

Figure 7.2-9 Outsource Listing

STEP 7

Double click on the list

Note

- Once clicked the list alert message will be shown in Figure 7.2-10

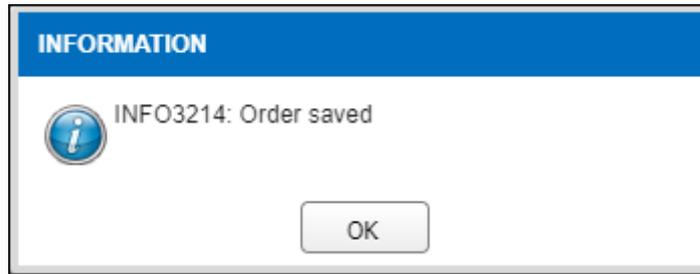


Figure 7.2-10 Alert Message

- Click on  button to proceed and PN Order will be updated as shown in Figure 7.2-11

MEDICATION ORDER

Select Registered Patient: All | HKL00357790_O | Dispensing Location: Farmasi TPN | Visit Management | New Patient

XXXXXXXXX XXXXXXX XXXXX XXXXX | Mykad | Age: 32 Years 09 Months 16 Days | Gender: Female | MRN: HKL00357790_O

Address | Phone And Email | Diagnosis | Allergy: No Known Allergies | Vital Sign

Height: 156 cm | Weight: 65 kg | BMI/BSA: 26.7 / 1.68 m² | G6PD Deficiency: | Update (Last Updated:) | Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment | VAS History

VISIT/ADMISSION

Encounter No: 0001 | Visit Type: Outsource | Location: Farmasi TPN | Department: General Medicine | Clear | Patient Label | Patient sticker

Facility RN Number | Bed No | Breast Feeding | Pregnant | Week | MFlex In

PARTIAL SUPPLY

VISIT RECORD

Original Prescriber Name | Original Prescription Serial No | Outsource Patient MRN: HSM0207264

PN ORDER

Calorie Calculator | Outsource Form | Online Outsource

Type of PN: Commercial / MOH Pre mix(Std. Soln) | Add Additive | Ward Stock | Body weight type: Actual | Ideal | Adjusted | Body weight: 65 kg

Smof Kabiven Electrolyte-free 1100kcal 98 | Compounded

ADMINISTRATION INFO

Volume: 986 ml | Indication for PN: Congenital diaphragmatic hernia

Frequency: OD (once daily) | Infusion Line: Central

Infusion Over: 24 hours | Order Quantity: 1 bag

Start Date/Time: 04/07/2022 05:00 PM | Duration: 1 Days

End Date/Time: 05/07/2022 05:00 PM | Dispense Location: Farmasi TPN

Remarks

PN COMPONENT

Electrolytes	Initial Content	Additional Requirement	Total Per Day
Sodium(Natrium), Na ⁺	0 mmol	34 mmol	34 mmol
Potassium(Kalium), K ⁺	0 mmol	44 mmol	44 mmol
Calcium, Ca ²⁺	0 mmol	mmol	0 mmol
Magnesium, Mg ²⁺	0 mmol	mmol	0 mmol
Phosphate, PO ₄ ³⁻	2.8 mmol	mmol	2.8 mmol
Acetate, CH ₃ COO ⁻	73 mmol	mmol	73 mmol
Trace elements	0 ml	ml	0 ml
L-Glutamin	0 ml	ml	0 ml
Vitamin			
<input type="radio"/> Single Vitamin			
<input type="radio"/> Combine Vitamin			

PRESCRIPTION

Drug	Volume	Order Qty	Order Details	Remarks	Status
Smof Kabiven Electrolyte-free 1100kcal 986ml with Additive	986 ml	1 bag	Details	Remarks	DRAFT

Figure 7.2-11 Medication Order

STEP 8

Click on the  button to confirm the order

MEDICATION ORDER

Select Registered Patient: All | HKL00357790_O | Dispensing Location: Farmasi TPN | Visit Management | New Patient

HXXXXXXXXX XXXXXXX XXXXXX XXXXXX	Mykad	Age 32 Years 09 Months 16 Days	Gender Female	MRN HKL00357790_O
Address	Phone And Email	Diagnosis	Allergy: No Known Allergies	Vital Sign

Height 156 cm | Weight 65 kg | BMI/BSA 26.7 / 1.68 m² | G6PD Deficiency | Update (Last Updated:) | Nationality: Warganegara

Demographic | Medication Profile | Pharmacist Notes | Monitoring Parameter | Counselling History | Other Appointment | VAS History |

VISIT/ADMISSION

Encounter No 0001 | Visit Type Outsource | Location Farmasi TPN | Department General Medicine

Facility RN Number | Bed No | Breast Feeding | Pregnant | Week | MFlex In

PARTIAL SUPPLY

VISIT RECORD

Original Prescriber Name | Original Prescription Serial No | Outsource Patient MRN HSM0207264

PN ORDER

PRESCRIPTION

Preview Prescription | PROCEED TO PREPARATION | Verify

Drug	Volume	Order Qty	Order Details	Remarks	Status
Smof Kabiven Electrolyte-free 1100kcal 986ml with Additive	986 ml	1 bag	Details	Remarks	ORDERED

Figure7.2-12 Medication Order

Note

- User can proceed with dispensing process (Verification, Prepare and Dispense)
- To proceed with CDR Dispensing process, please refer
 1. Section [4.0 Parental Nutrition \(PN\) Order, Verify and Prepare](#)
 2. Section [5.0 PN Dispensing](#)

8.0 Acronyms

Abbreviation	Definition
PhIS	Pharmacy Information System
CPS	Clinical Pharmacy System
MOH	Ministry Of Health
HQ	Headquarters
PN	Parenteral Nutrition

9.0 Links to Clinical Modules

No	Module	PDF Links	No	Module	PDF Links
1	<i>Inpatient</i>	Click Here	12	<i>CDR Dispensing</i>	Click Here
2	<i>CDR Order</i>	Click Here	13	<i>Methadone Dispensing</i>	Click Here
3	<i>TDM Order</i>	Click Here	14	<i>PN Dispensing</i>	Click Here
4	<i>PN Order</i>	Click Here	15	<i>Order Management</i>	Click Here
5	<i>IV Order</i>	Click Here	16	<i>Patient Management</i>	Click Here
6	<i>Prepacking</i>	Click Here	17	<i>Radiopharmaceuticals</i>	Click Here
7	<i>Galenical</i>	Click Here	18	<i>Outpatient</i>	Click Here
8	<i>MTAC</i>	Click Here	19	<i>Special Drug Request</i>	Click Here
9	<i>ADR & DAC</i>	Click Here	20	<i>MAR</i>	Click Here
10	<i>Medication Counselling</i>	Click Here	21	<i>DICE</i>	Click Here
11	<i>Ward Pharmacy</i>	Click Here	22		