



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

Full Based

**User Manual
Parenteral Nutrition Order**

Version	: 7th Edition
Document ID	: FB_U.MANUAL_OM PN



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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 sub-module and its key features and functionalities. The primary objective is to help guide user through the process of completing PhIS application process.

User will understand the following activities in detail:

- Nutritional Assessment
- Parenteral Nutritional Order

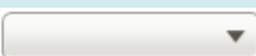
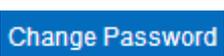
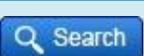
1.3 Organised Sections

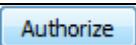
These are the sections within this document:

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

2.0 Application Standard Features

2.1 PhIS Legend

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

Parenteral Nutrition Order Module Legend			
 Clear	Clear Prescription Information	 Refresh Prescription	Display Prescription
 Authorize	Authorisation Approval	 Nutritional Assessment	Nutritional Assessment
 Endorse	Endorsement Order	 Calorie Calculator	Calculate Patient's Calorie

Note

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

3.0 Parenteral Nutrition Order

Overview

Parenteral nutrition (PN) is a vital therapeutic modality for neonates, children and adults for a number of indications used in a variety of settings. Appropriate use of this complex therapy maximizes clinical benefit while minimizing the potential risk for adverse events. The Safe Practices for PN addressed the standardization of practices surrounding PN to improve care and to limit medication errors.

User Group

This module is intended for doctor, specialist and pharmacist (subject to the user assigned by the facility)

Functional Diagram

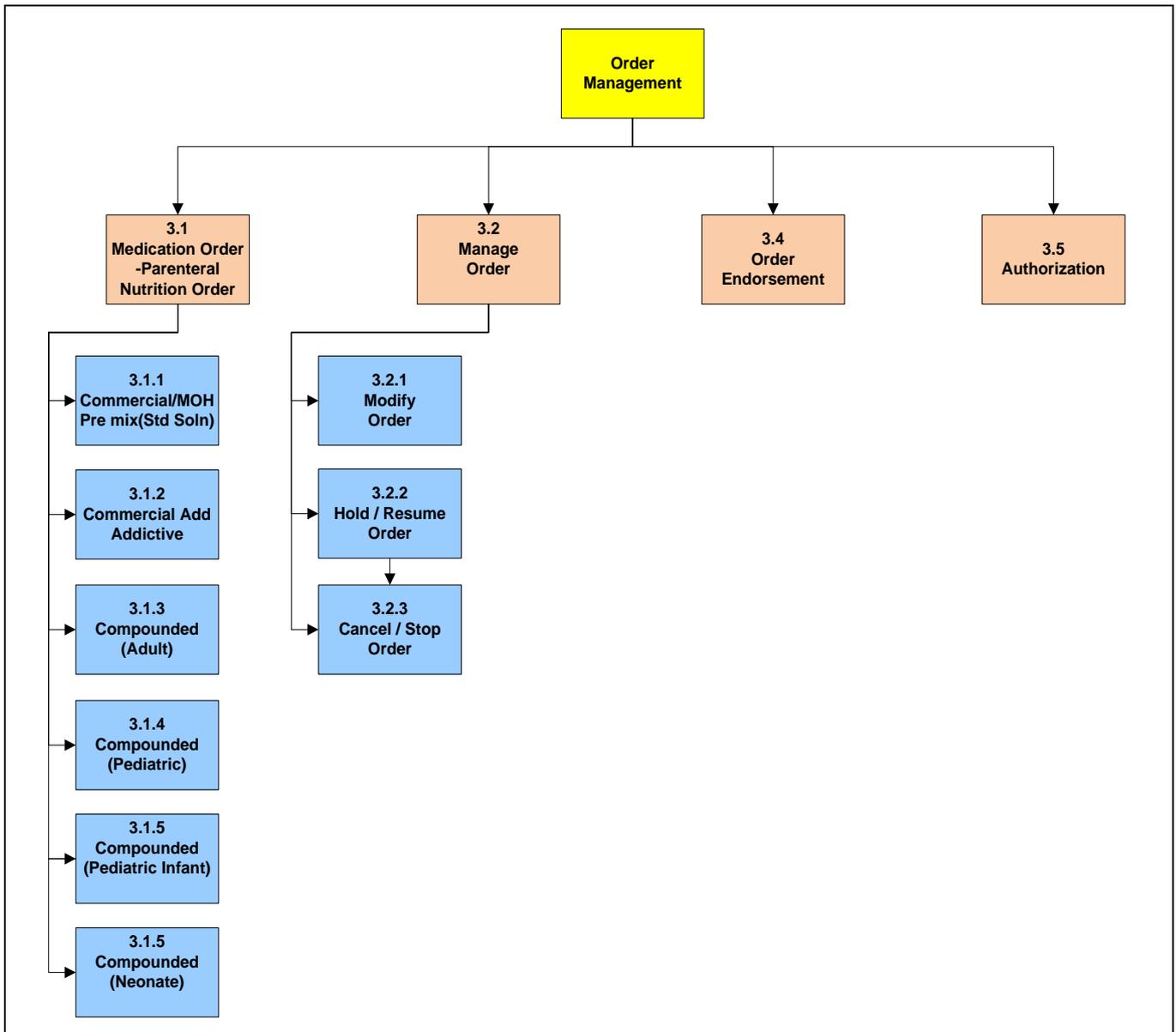


Figure 3.0-1



Functional Description

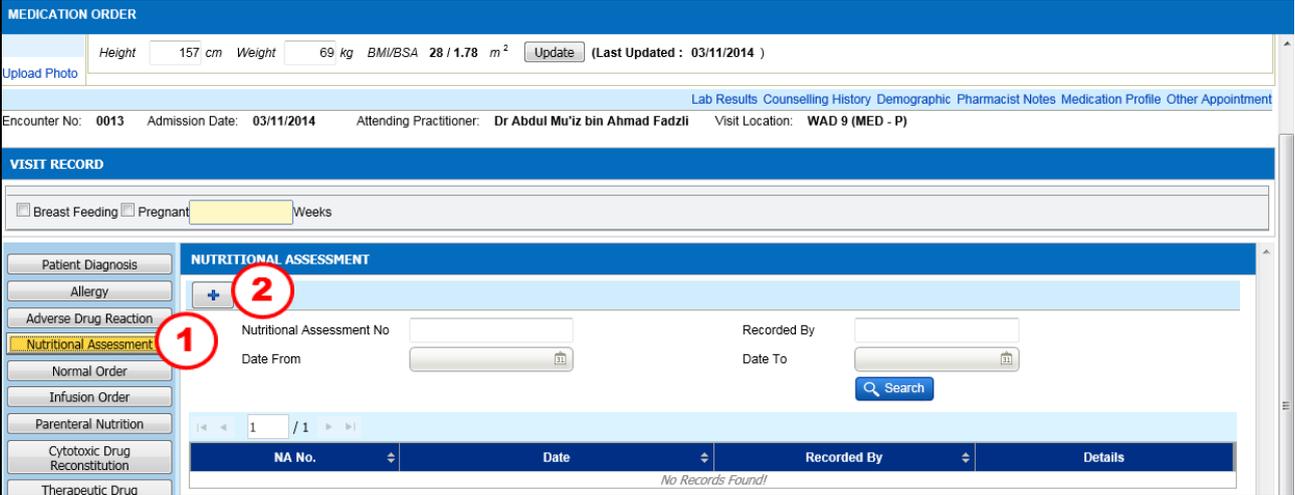
Parenteral Nutrition Order comprises of four (4) main functions:

- **Medication Order – Parenteral Nutrition Order**
To prescribe Parenteral Nutrition order
- **Manage Order**
To monitor patient's prescription by modifying order, stop order and tapering up/down.
- **Order Endorsement**
To endorse the intervention made by a Pharmacist
- **Authorization**
To approve list A/ A*/ A/KK drug that requires authorization

3.1 Parenteral Nutrition Order

3.1.1 Nutritional Assessment

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



The screenshot displays the 'MEDICATION ORDER' interface. At the top, patient information is shown: Height 157 cm, Weight 69 kg, BMI/BSA 28 / 1.78 m², and an 'Update' button. Below this is a 'VISIT RECORD' section with checkboxes for 'Breast Feeding' and 'Pregnant' (with a 'Weeks' field). The 'NUTRITIONAL ASSESSMENT' section is active, featuring a sidebar menu where 'Nutritional Assessment' is highlighted (marked with a red circle '1'). The main area contains a '+' button (marked with a red circle '2'), input fields for 'Nutritional Assessment No.', 'Date From', 'Date To', and 'Recorded By', and a 'Search' button. A table below shows a single record with columns 'NA No.', 'Date', 'Recorded By', and 'Details', and a 'No Records Found!' message.

Figure 3.1.1-1 PN Order

STEP 1

Click on the **Nutritional Assessment** button to do nutritional assessment for new patient or existing patient's

STEP 2

Click on the **+** button to do nutritional assessment for new patient

Note

Nutritional Assessment screen will be displayed as per Figure 3.1.1-2.

NUTRITIONAL ASSESSMENT			
NUTRITIONAL RISK SCREENING			
Initial Screening			
1. Is BMI < 20.5 ?	<input type="radio"/> Yes <input type="radio"/> No		
2. Has the patient lost weight within the last 3 months ?	<input type="radio"/> Yes <input type="radio"/> No		
3. Has the patient had a reduced dietary intake in the last week ?	<input type="radio"/> Yes <input type="radio"/> No		
4. Is the patient severely ill ? (e.g. in intensive therapy)	<input type="radio"/> Yes <input type="radio"/> 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	Absent:	Normal nutritional status
Mild:	Wt loss > 5% in 3 mths or Food intake below 50-75% of normal requirement in preceding week	Mild:	Hip fracture* Chronic patients, in particular with acute complications: cirrhosis*, COPD*, Chronic hemodialysis, diabetes, oncology
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	Moderate:	Major abdominal surgery* Stroke* Severe pneumonia, hematologic malignancy
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	Severe:	Head injury* Bone marrow transplantation* Intensive care patients
Total Score : <input type="text"/>			
If Age \geq 70 years, total score above is inclusive +1 Score \geq 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.			
SGA HISTORY (Subjective Global Assessment of Nutritional Status HISTORY)		PHYSICAL EXAMINATION	
1. Weight change		Specify for each sign: 0=normal 1=light 2=moderate 3=serious	
Overall in past 6 months:	<input type="text"/> kg % loss: <input type="text"/>	<input type="text"/> Loss of subcutaneous fat (triceps, chest)	
Change in past 2 weeks:	<input type="text"/>	<input type="text"/> Loss of muscle mass (quadriceps, femoris, deltoids, loss of bulk and tone detectable by palpation)	
2. Dietary intake change: <input type="radio"/> Yes <input type="radio"/> No		<input type="text"/> Ankle edema	
3. Gastrointestinal symptoms(persisted>2 weeks)		<input type="text"/> Sacral edema	
<input type="checkbox"/> Nausea	<input type="checkbox"/> Loss of Appetite	<input type="text"/> Ascites	
<input type="checkbox"/> Vomiting	<input type="checkbox"/> Diarrhea	SGA score <input type="text"/>	
4. Functional Capacity <input type="radio"/> No Dysfunction <input type="radio"/> Dysfunction		Score Description: A - Well nourished B - Malnourished C - Severe malnourished	

Figure 3.1.1-2 Nutritional Assessment

Note

Nutritional Risk Screening Section

Answer all question by selecting "Yes" or "No" for nutritional assessment.

Final Screening Section

- 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.

SGA - Subjective Global Assessment of Nutritional Status (HISTORY) Section

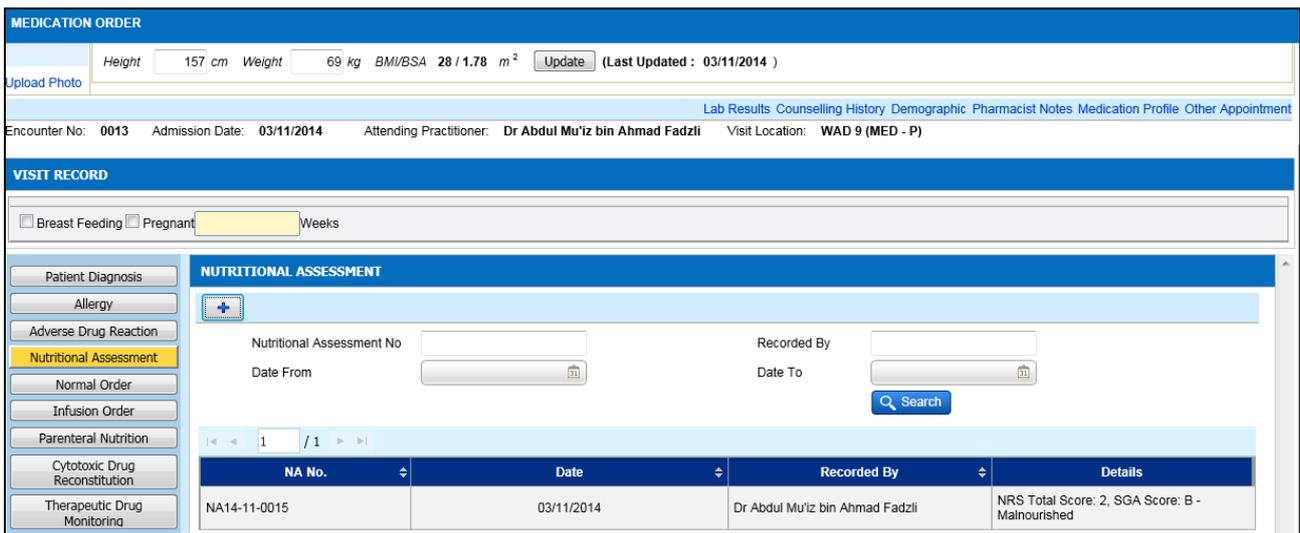
All field for this section have to be entered by user.

Physical Examination Section

This section have to be entered by user.

Note

- The  button to save record.
- The  button to close the screen.
- The Nutritional Assessment record will be displayed at Nutritional Assessment Listing Page as per Figure 3.1.1-3.



MEDICATION ORDER

Height: 157 cm Weight: 69 kg BMI/BSA: 28 / 1.78 m² (Last Updated : 03/11/2014)

Upload Photo

Lab Results Counselling History Demographic Pharmacist Notes Medication Profile Other Appointment

Encounter No: 0013 Admission Date: 03/11/2014 Attending Practitioner: Dr Abdul Mu'iz bin Ahmad Fadzli Visit Location: WAD 9 (MED - P)

VISIT RECORD

Breast Feeding Pregnant Weeks

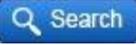
NUTRITIONAL ASSESSMENT

Nutritional Assessment No:
 Date From:
 Recorded By:
 Date To:

NA No.	Date	Recorded By	Details
NA14-11-0015	03/11/2014	Dr Abdul Mu'iz bin Ahmad Fadzli	NRS Total Score: 2, SGA Score: B - Malnourished

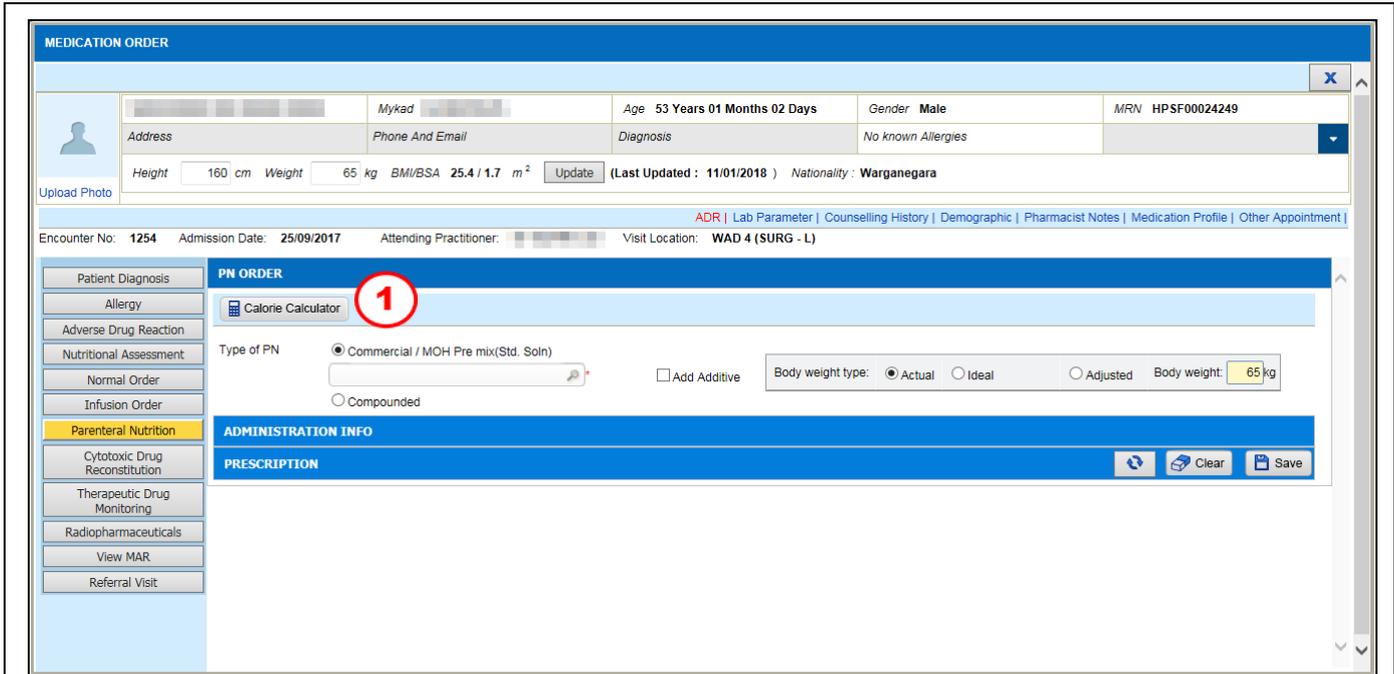
Figure 3.1.1-3 Nutritional Assessment Listing Page

Note

- To search for existing nutritional assessment record(s), you may search by criteria as follow:
 - Nutritional Assessment No
 - Date From
 - Date To
 - Recorded By
- The  button to search for nutritional assessment record(s).
- Nutritional assessment details will be displayed and user have to double click on the nutritional assessment record listing.

3.1.2 Calorie Calculator

Calorie calculator allow user to calculate patient's calorie requirement. This value will out as a guideline for user to order the required TPN order for patient.



The screenshot shows the 'MEDICATION ORDER' interface. At the top, there is a patient information section with fields for Mykad, Age (53 Years 01 Months 02 Days), Gender (Male), and MRN (HPSF00024249). Below this, there are fields for Address, Phone And Email, Diagnosis, and No known Allergies. A section for patient vitals shows Height (160 cm), Weight (65 kg), and BMI/BSA (25.4 / 1.7 m²). A red circle with the number '1' highlights the 'Calorie Calculator' button in the 'PN ORDER' section. Other sections include 'ADMINISTRATION INFO' and 'PRESCRIPTION'.

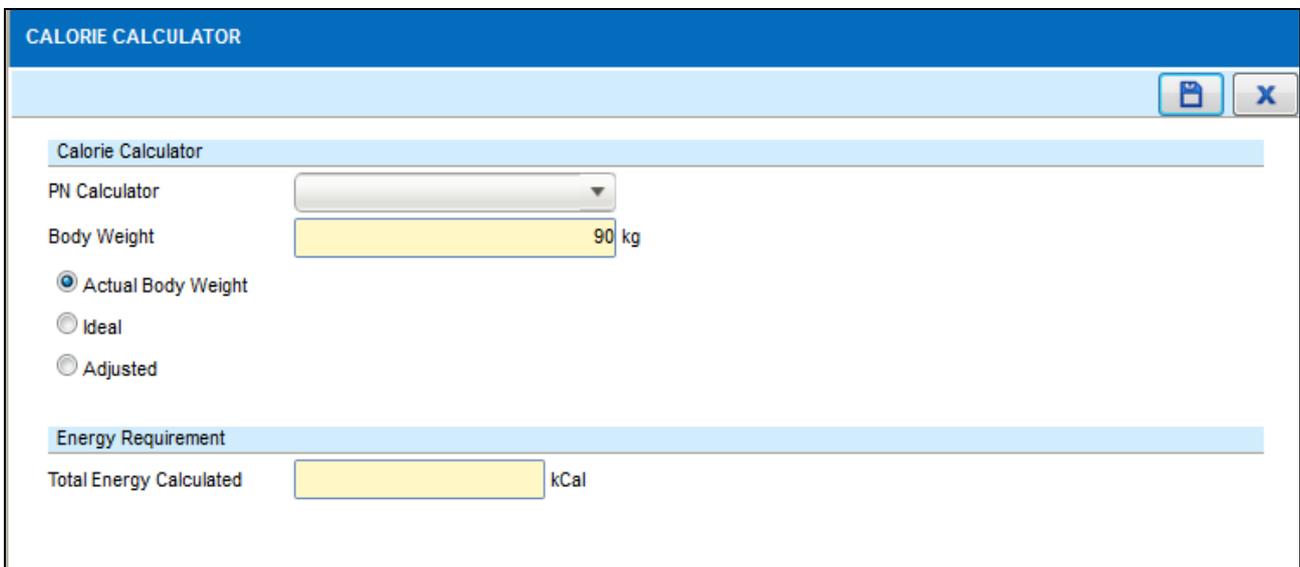
Figure 3.1.2-1 Calorie Calculator

STEP 1

Click on the  button to calculate patient calorie

Note

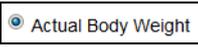
Calorie Calculator screen will be displayed as per Figure 3.1.2-2.



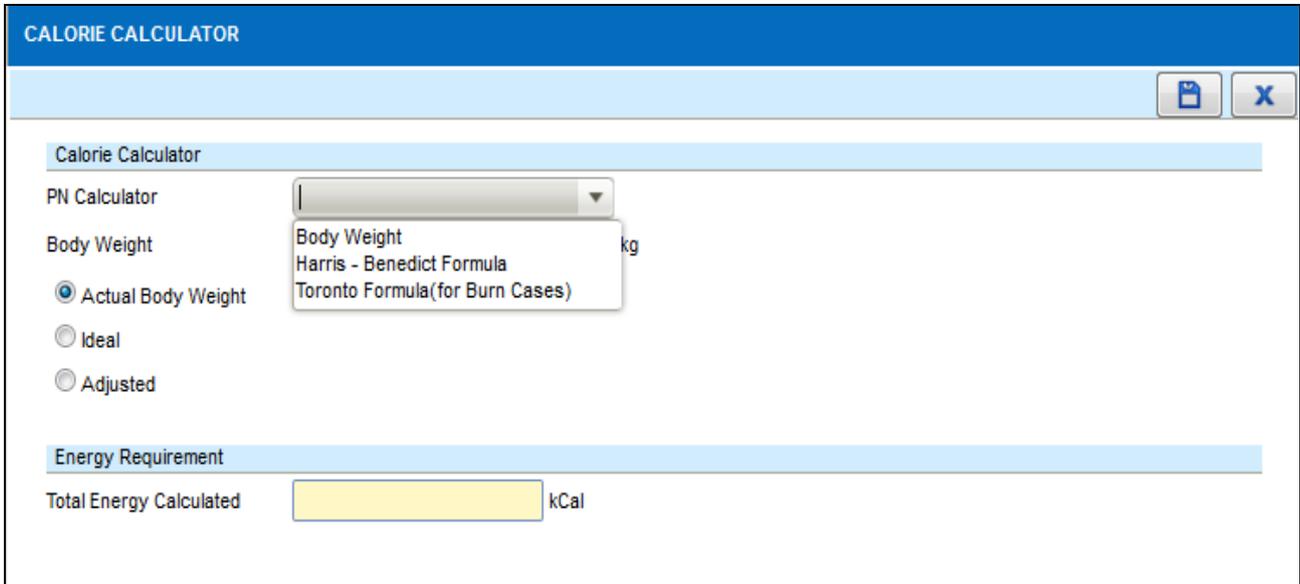
The screenshot shows the 'CALORIE CALCULATOR' screen. It has a title bar with a save icon and a close icon. Below the title bar, there is a section for 'Calorie Calculator' with a dropdown menu for 'PN Calculator'. The 'Body Weight' field is set to '90 kg'. There are three radio buttons for 'Actual Body Weight' (selected), 'Ideal', and 'Adjusted'. Below this, there is a section for 'Energy Requirement' with a field for 'Total Energy Calculated' and a unit 'kCal'.

Figure 3.1.2-2 Calorie Calculator

Note

- By default the **Body Weight** radio button will auto select the  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 base on the information from patient banner.



CALORIE CALCULATOR

Calorie Calculator

PN Calculator

Body Weight

Actual Body Weight

Ideal

Adjusted

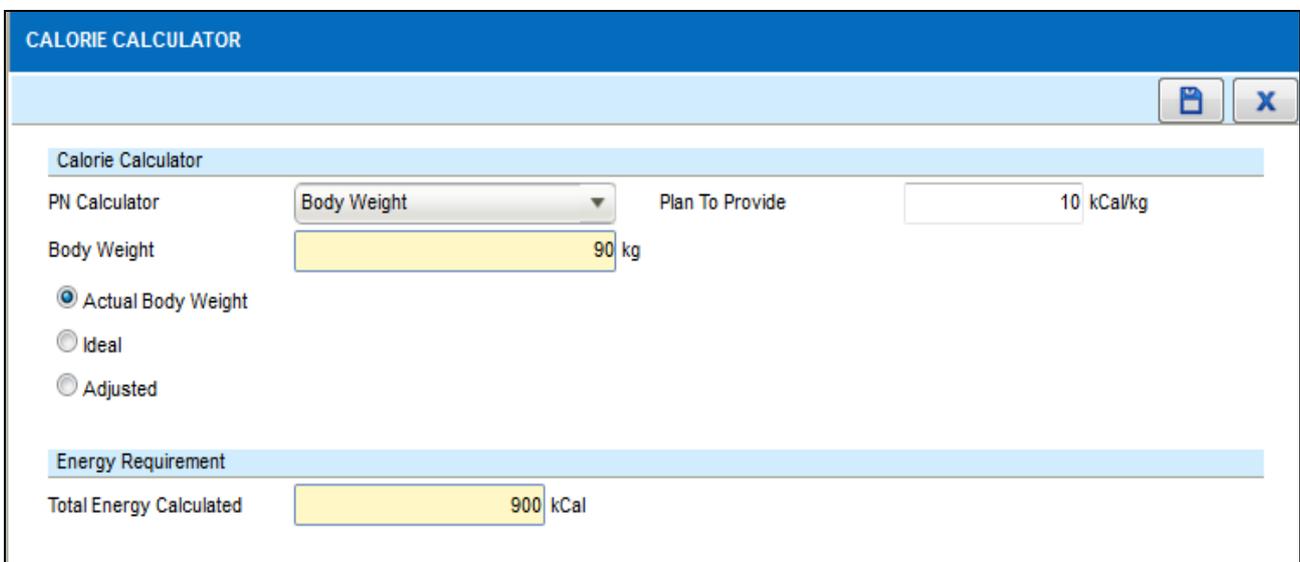
Energy Requirement

Total Energy Calculated

Figure 3.1.2-3 Calorie Calculator

Note

- There are three type of **PN Calculator**:
 - Body Weight
 - Harris-Benedict Formula
 - Toronto Formula(for Burn Cases)



CALORIE CALCULATOR

Calorie Calculator

PN Calculator

Body Weight

Plan To Provide

Body Weight

Actual Body Weight

Ideal

Adjusted

Energy Requirement

Total Energy Calculated

Figure 3.1.2-4 Calorie Calculator

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 automatically calculate and display as per Figure 3.1.2-4.
- The  button to save record.
- The  button to close the screen.

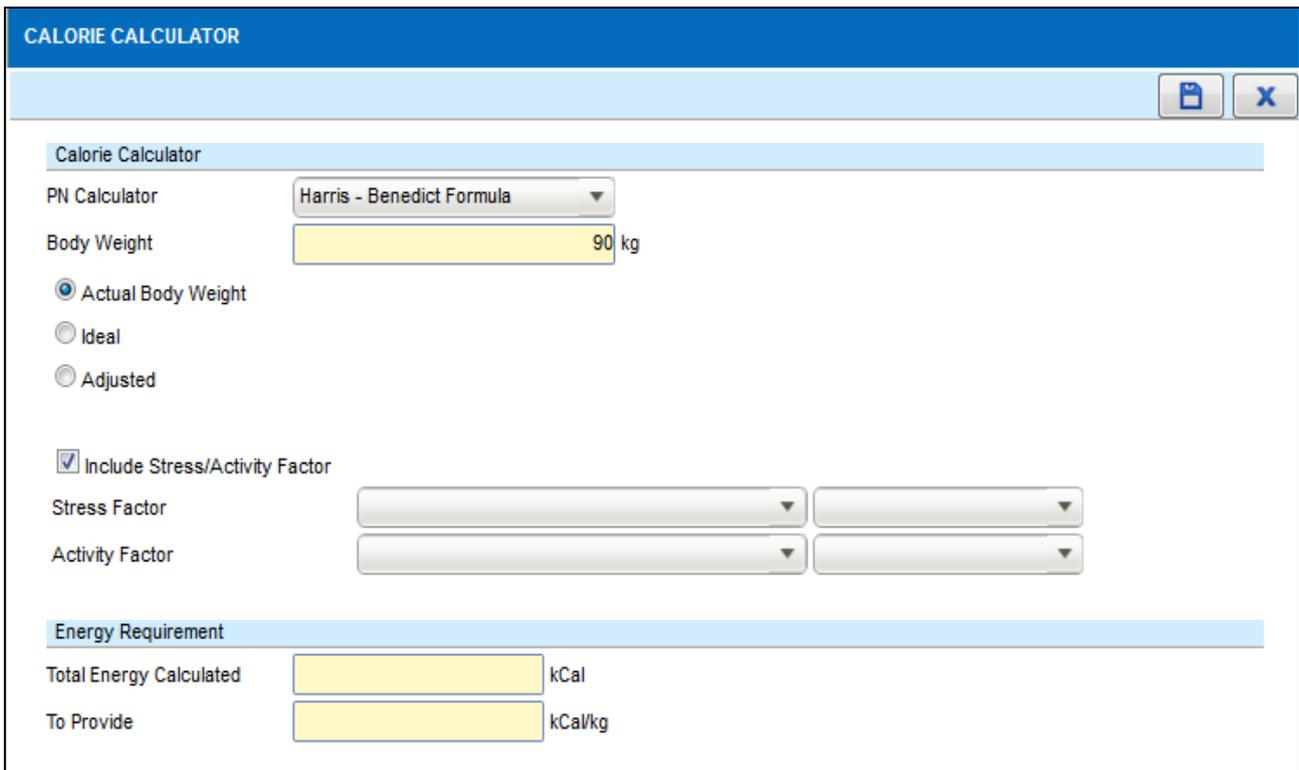


Figure 3.1.2-5 Calorie Calculator

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** will display after selected the **Include Stress/ Activity Factor** checkbox.

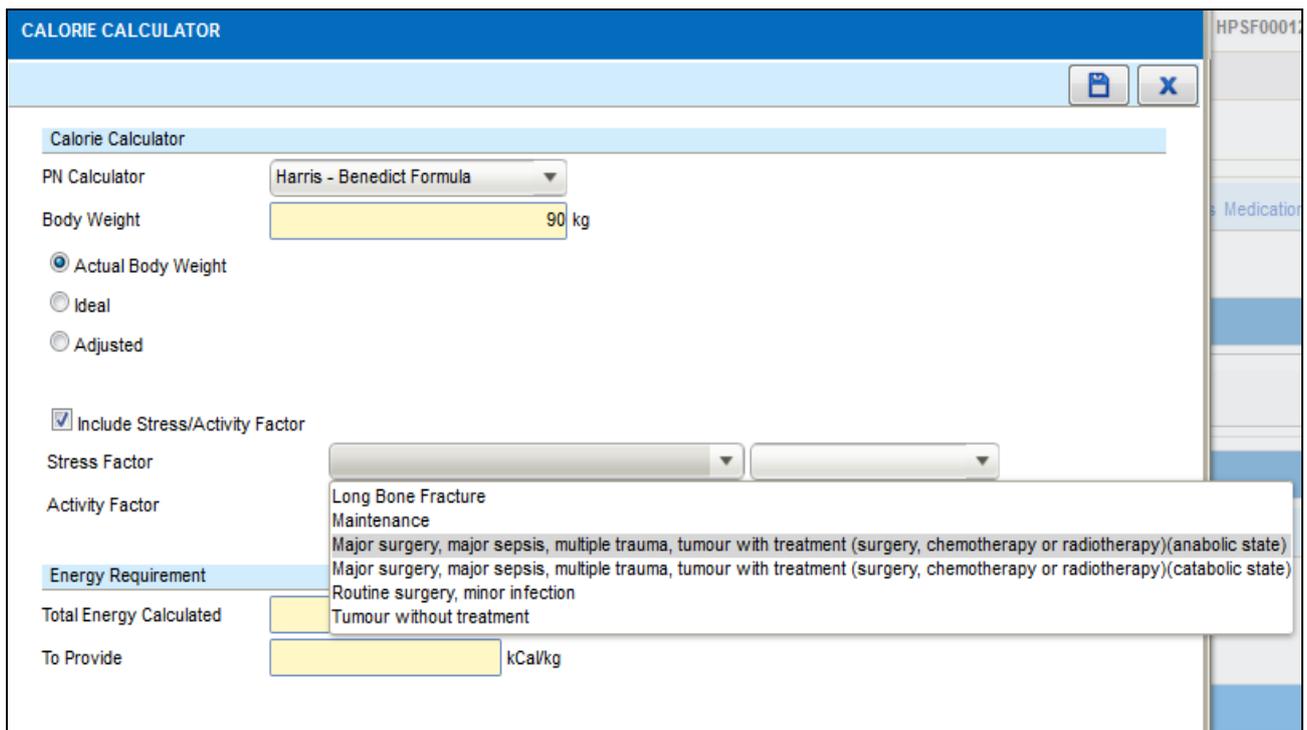


Figure 3.1.2-6 Calorie Calculator

Note

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

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

CALORIE CALCULATOR

Calorie Calculator

PN Calculator: Harris - Benedict Formula

Body Weight: 90 kg

Actual Body Weight
 Ideal
 Adjusted

Include Stress/Activity Factor

Stress Factor: Major surgery, major sepsis, multiple trauma, tum 1.7

Activity Factor: [] []

Energy Requirement

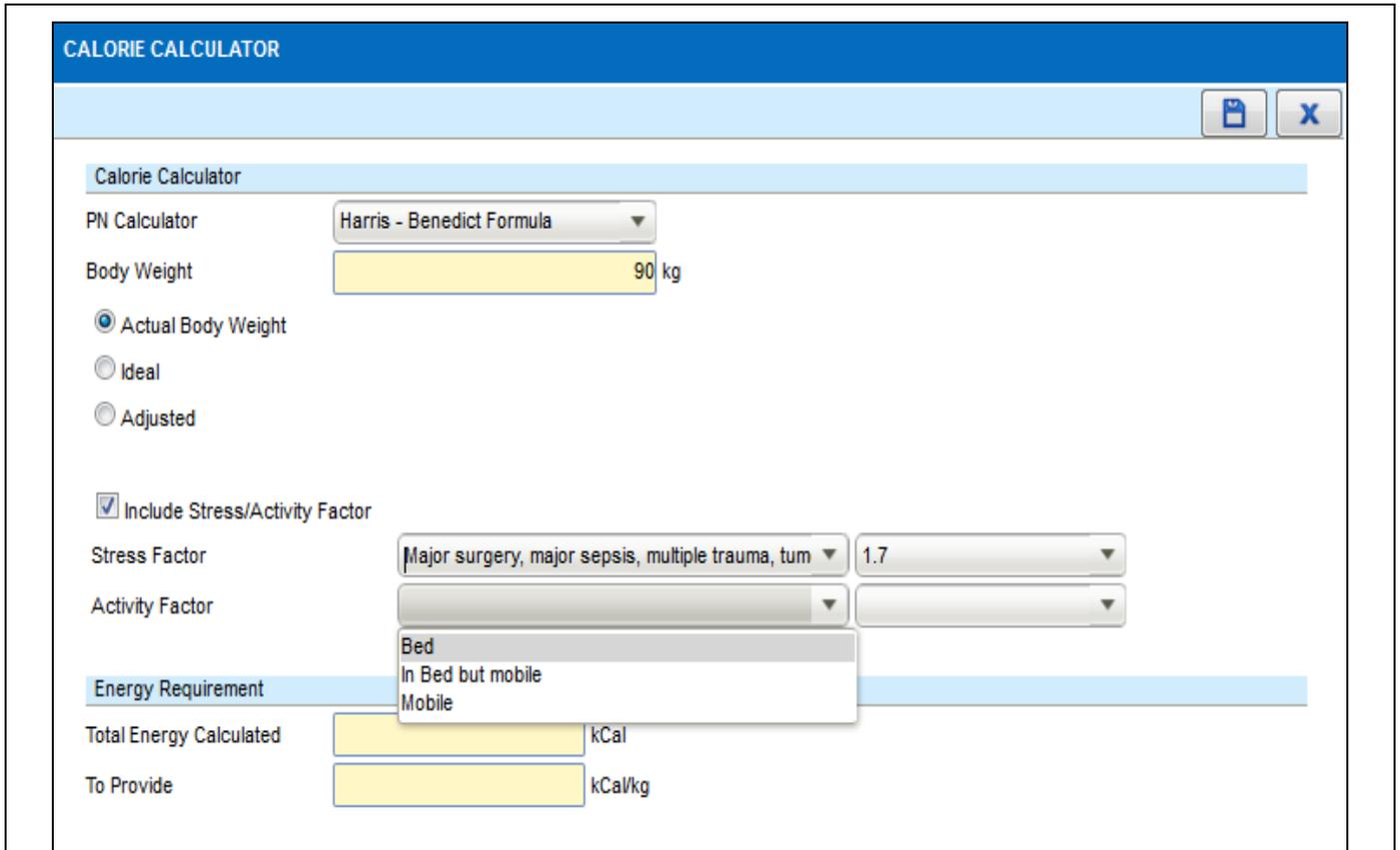
Total Energy Calculated: [] kCal

To Provide: [] kCal/kg

Figure 3.1.2-7 Calorie Calculator

Note

Value of the **Stress Factor** will automatically calculate by system.



CALORIE CALCULATOR

Calorie Calculator

PN Calculator: Harris - Benedict Formula

Body Weight: 90 kg

Actual Body Weight
 Ideal
 Adjusted

Include Stress/Activity Factor

Stress Factor: Major surgery, major sepsis, multiple trauma, tum | 1.7

Activity Factor: [Dropdown menu open showing: Bed, In Bed but mobile, Mobile]

Energy Requirement

Total Energy Calculated: [Empty] kCal

To Provide: [Empty] kCal/kg

Figure 3.1.2-8 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: 90 kg

Actual Body Weight
 Ideal
 Adjusted

Include Stress/Activity Factor

Stress Factor: Major surgery, major sepsis, multiple trauma, tum 1.7

Activity Factor: Bed 1.1

Energy Requirement

Total Energy Calculated: 2961.9 kCal

To Provide: 32.9 kCal/kg

Figure 3.1.2-9 Calorie Calculator

Note

- Value of the **Activity Factor** will automatically calculate by system.
- Amount of **Total Energy Calculated** and **To Provide** will automatically calculate after selected the **Activity Factor** as per Figure 3.1.2-9.
- The  button to save record.
- The  button to close the screen.

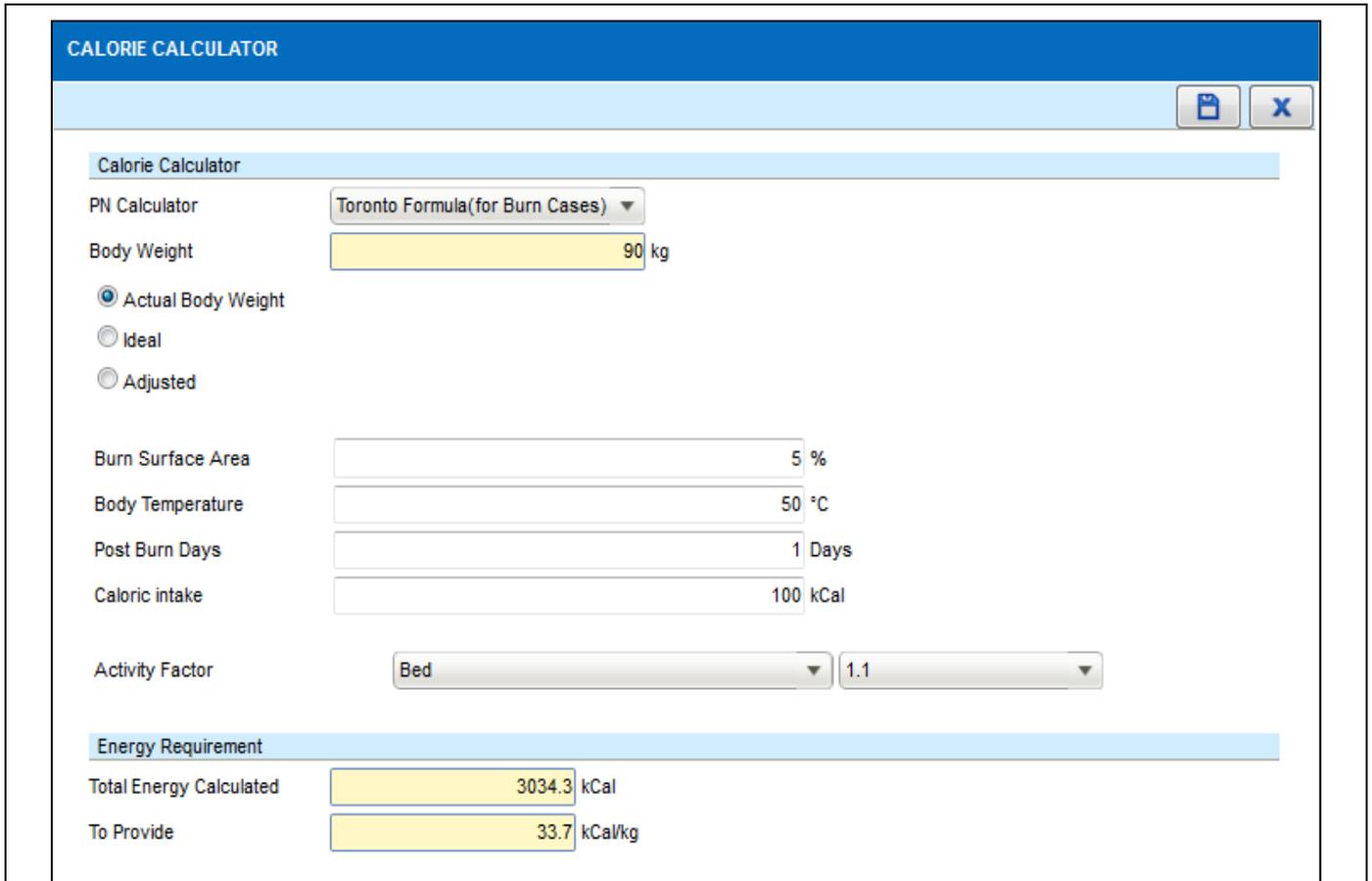


Figure 3.1.2-10 Calorie Calculator

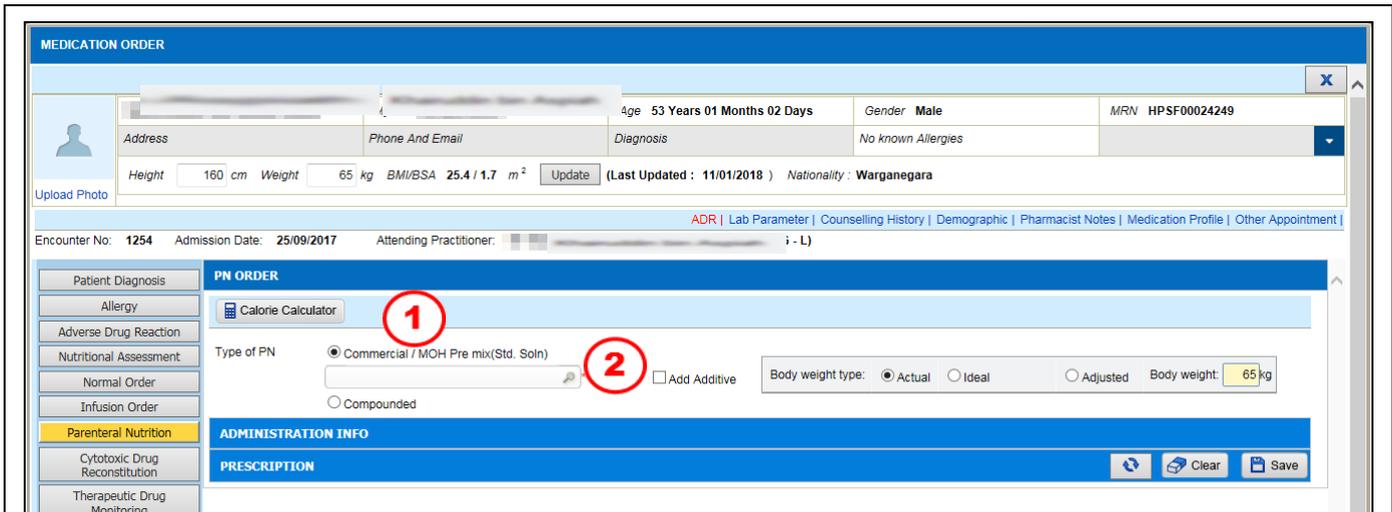
Note

PN Calculator : Toronto Formula

- Select **Toronto Formula (for Burn Cases)** from **PN Calculator** dropdown box.
- Enter all field 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 automatically calculate by system.
- **Total Energy Calculated** and **To Provide** will automatically calculate after selected the **Activity Factor** as per Figure 3.1.2-10.
- The  button to save record.
- The  button to close the screen.

3.1.3 Commercial/MOH Pre mix (Std. Soln)

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



The screenshot shows the 'MEDICATION ORDER' interface. At the top, patient information is displayed: Age 53 Years 01 Months 02 Days, Gender Male, MRN HPSF00024249. Below this, there are fields for Address, Phone And Email, Diagnosis, and No known Allergies. A section for physical attributes shows Height 160 cm, Weight 65 kg, BMI/BSA 25.4 / 1.7 m², and Nationality Warganegara. The 'PN ORDER' section is highlighted, showing a 'Calorie Calculator' button (1) and 'Type of PN' options: Commercial / MOH Pre mix(Std. Soln) (2), Add Additive, and Compounded. The 'Body weight type' is set to Actual, and the body weight is 65 kg. Below this are sections for 'ADMINISTRATION INFO' and 'PRESCRIPTION' with 'Clear' and 'Save' buttons.

Figure 3.1.3-1 PN Order

STEP 1

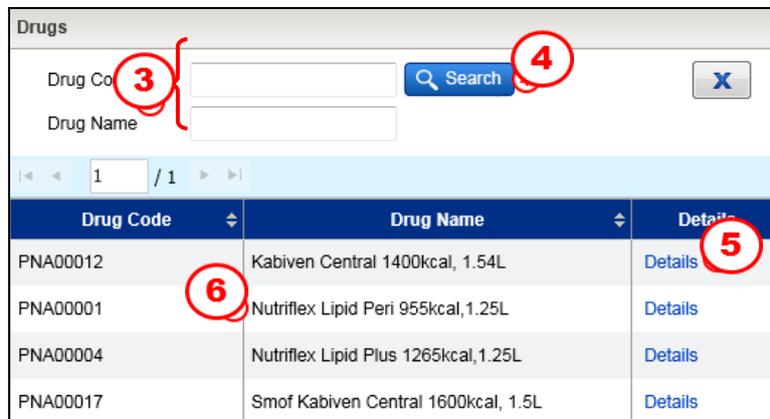
Select on the Commercial / MOH Pre mix(Std. Soln) radio button for **Type of PN**

STEP 2

Click on the  button to search for product

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**.



The screenshot shows a 'Drugs' search results window. It has input fields for 'Drug Co' (3) and 'Drug Name', a 'Search' button (4), and a close button (X). Below the search fields is a table with columns 'Drug Code', 'Drug Name', and 'Details'. The first row is highlighted, showing Drug Code PNA00012, Drug Name Kabiven Central 1400kcal, 1.54L, and a 'Details' link (5). A red circle (6) highlights the first row of the table.

Drug Code	Drug Name	Details
PNA00012	Kabiven Central 1400kcal, 1.54L	Details (5)
PNA00001	Nutriflex Lipid Peri 955kcal, 1.25L	Details
PNA00004	Nutriflex Lipid Plus 1265kcal, 1.25L	Details
PNA00017	Smof Kabiven Central 1600kcal, 1.5L	Details

Figure 3.1.3-2 PN Order

STEP 3

To search for existing product record(s), you may search by criteria as follow:

- a) Drug Code
- b) Drug Name

STEP 4

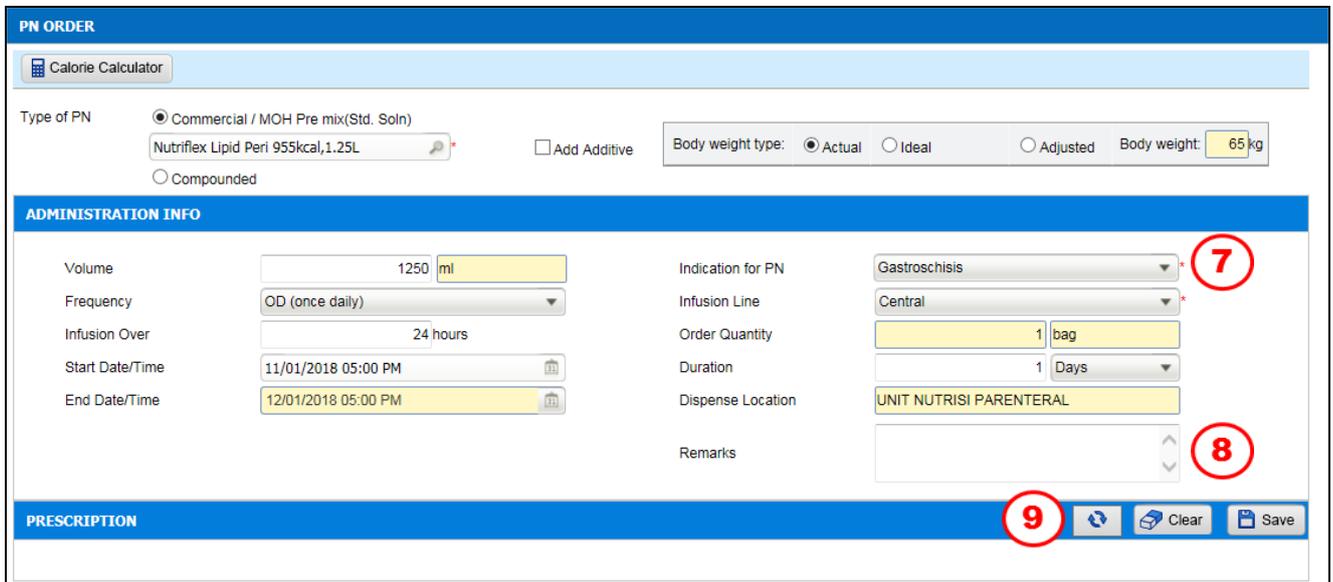
Click on the  button to search for the product

STEP 5

Click on the  button to view product ingredients and content

STEP 6

Select product that required for patient



The screenshot shows the 'PN ORDER' form. At the top, there is a 'Calorie Calculator' button. Below it, the 'Type of PN' section includes radio buttons for 'Commercial / MOH Pre mix(Std. Soln)' (selected) and 'Compounded', a dropdown menu for 'Nutriflex Lipid Peri 955kcal,1.25L', an 'Add Additive' checkbox, and 'Body weight type' radio buttons for 'Actual' (selected), 'Ideal', and 'Adjusted', with a 'Body weight' field set to '65 kg'. The 'ADMINISTRATION INFO' section contains fields for 'Volume' (1250 ml), 'Frequency' (OD (once daily)), 'Infusion Over' (24 hours), 'Start Date/Time' (11/01/2018 05:00 PM), 'End Date/Time' (12/01/2018 05:00 PM), 'Indication for PN' (Gastroschisis), 'Infusion Line' (Central), 'Order Quantity' (1 bag), 'Duration' (1 Days), and 'Dispense Location' (UNIT NUTRISI PARENTERAL). A 'Remarks' field is also present. At the bottom, the 'PRESCRIPTION' section has a '9' annotation next to a refresh button, and 'Clear' and 'Save' buttons.

Figure 3.1.3-3 PN Order

Note

- All information for **Volume, Frequency, Start Date/Time, End Date/Time, Order Quantity, Infusion Line, Duration, Infusion Over** and **Dispense Location** field will be automatically displayed and base on the information from PN Source Content and PN Constituents Reference Range.
- **Volume, Frequency, Infusion Line, Duration** and **Infusion Over** field still can be change by the user if applicable.
- **Start Date** and will be automatically default to current date but still can be change by the user if applicable.
- **End Date/Time** will display based on the **Start Date/Time** and **Infusion Over(hours)**.
- **Dispense Location** will be automatically default by system.
- User allowed to choose **Body weight type: Actual/Ideal/Adjusted**. Selected **Body weight type** will impact to 'kg' value in prescription.

STEP 7

Select Indication for PN from the dropdown box

STEP 8

Enter **Remarks** if applicable

STEP 9

Click on the  button to add prescription

Note

Prescription will be displayed as per Figure 3.1.3-4.

PN ORDER

Calorie Calculator

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

Nutriflex Lipid Peri 955kcal,1.25L Add Additive

Body weight type: Actual Ideal Adjusted Body weight: 65 kg

ADMINISTRATION INFO 10

PRESCRIPTION

Drug Name	Total Volume (ml)	Total calorie (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start Date/Time	End Date/Time
Nutriflex Lipid Peri 955kcal,1.25L	1250	955	24	1 bag	OD (once daily)	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM
Calorie Calculator				Infusion Line				
NA				Central				

Figure 3.1.3-4 PN Order

STEP 10

Click on the button to save prescription

Note

The button to clear all information of prescription order.

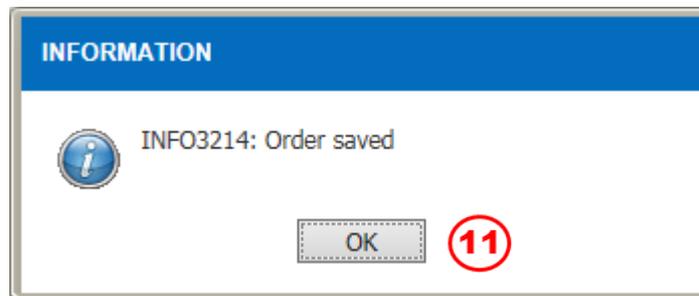


Figure 3.1.3-5 Information Alert

STEP 11

Click on the button to save order record

Note

After saving the record, button, button, button and button will be displayed as per Figure 3.1.3-6.

PN ORDER

Calorie Calculator

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

Nutriflex Lipid Peri 955kcal, 1.25L Add Additive

Body weight type: Actual Ideal Adjusted Body weight: 65 kg

ADMINISTRATION INFO 12

PRESCRIPTION

Drug Name	Total Volume (ml)	Total calorie (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start Date/Time	End Date/Time
Nutriflex Lipid Peri 955kcal, 1.25L	1250	955	24	1 bag	OD (once daily)	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM
Calorie Calculator			Infusion Line					
NA			Central					

Figure 3.1.3-6 Medication Order

STEP 12

Click on the button to confirm prescription

Note

- The button to delete prescription.
- The button to print prescription.
- The button to edit information after saved record.

CONFIRMATION

 CONF3219: Are you sure want to confirm the order?

13

Figure 3.1.3-7 Confirmation Alert

STEP 13

Click on the button to confirm record order

PN ORDER

Calorie Calculator

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

Nutriflex Lipid Peri 955kcal, 1.25L Add Additive

Body weight type: Actual Ideal Adjusted Body weight: 65 kg

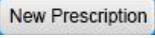
ADMINISTRATION INFO

PRESCRIPTION

Drug Name	Total Volume (ml)	Total calorie (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start Date/Time	End Date/Time
Nutriflex Lipid Peri 955kcal,1.25L	1250	955	24	1 bag	OD (once daily)	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM
Calorie Calculator				Infusion Line				
NA				Central				

Figure 3.1.3-8 PN Order

Note

- Click on the  button to view/print PN prescription as Figure 3.1.3-9
- Click on the  button to order a new prescription

Ministry Of Health, Malaysia
Hospital Pakar Sultanah Fatimah, Muar
PARENTERAL NUTRITION

Patient Name: SXXXXXXXXX XXX XXXXX XXXXX **Patient ID:** [REDACTED]

Age: 53 Years 01 Months 02 Days **MRN:** [REDACTED]

Gender: Male **Prescription :** 40001087881

Height / Weight / BSA: 160 cm/65 kg/1.73 m² **Order Date / Time :** 11/01/2018 12:19 PM

Room No / Bed: **Location:** WAD 4 (SURG - L)

Diagnosis: PREMED **Allergy:**

TPN Order: Nutriflex Lipid Peri 955kcal,1.25L **Order Quantity:** 1 bag

Start Date/Time: 11/01/2018 05:00 PM **End Date/Time:** 12/01/2018 05:00 PM

	Content / kg	Content / bag
Volume (ml)	19.23	1250
Calorie (kCal)	14.69	955
Protein (g)	0.62	40
Carbohydrate (g)	1.23	80
Lipid (g)	0.77	50
Sodium (mmol)	0.77	50
Potassium (mmol)	0.46	30
Calcium (mmol)	0.05	3
Magnesium (mmol)	0.05	3
Phosphate (mmol)	0.12	7.5
Fat Soluble Vitamin (ml)	NA	NA

Infusion Over: 24 hr **Infusion Rate:** 52.08 ml/hr

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

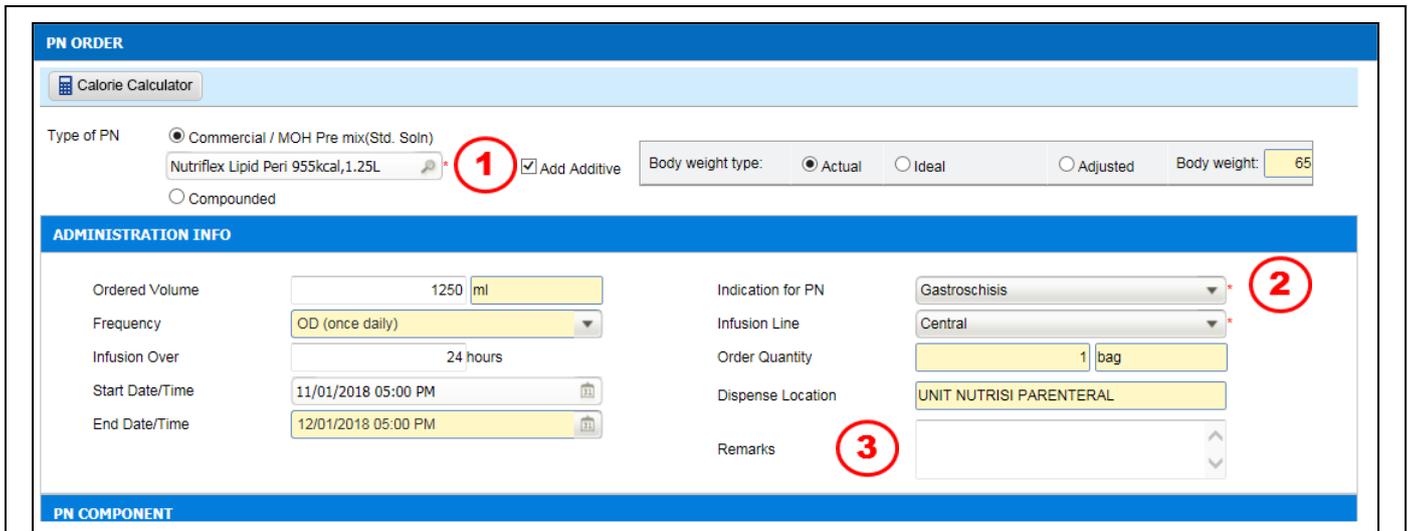
Designation: Pegawai Perubatan **Infusion Route:** Central

Department: Anaesthesia and Intensive Care **Remarks:**

Figure 3.1.3-9 PN Prescription

3.1.4 Commercial/MOH Pre mix (Std. Soln) Add Additive

Commercial / MOH Pre Mix (Std. Soln) allow user to order ready made product with additional PN component.



The screenshot shows the 'PN ORDER' form with the following details:

- PN ORDER** header with a 'Calorie Calculator' button.
- Type of PN:** Radio buttons for 'Commercial / MOH Pre mix(Std. Soln)' (selected), 'Compounded', and 'Additive' (checked, circled in red with '1').
- Product:** 'Nutriflex Lipid Peri 955kcal,1.25L'.
- Body weight type:** Radio buttons for 'Actual' (selected), 'Ideal', and 'Adjusted'. **Body weight:** '65'.
- ADMINISTRATION INFO** section:
 - Ordered Volume:** '1250 ml'.
 - Frequency:** 'OD (once daily)'.
 - Infusion Over:** '24 hours'.
 - Start Date/Time:** '11/01/2018 05:00 PM'.
 - End Date/Time:** '12/01/2018 05:00 PM'.
 - Indication for PN:** 'Gastrostchisis' (dropdown, circled in red with '2').
 - Infusion Line:** 'Central' (dropdown).
 - Order Quantity:** '1 bag'.
 - Dispense Location:** 'UNIT NUTRISI PARENTERAL'.
 - Remarks:** (text area, circled in red with '3').
- PN COMPONENT** section at the bottom.

Figure 3.1.4-1 PN Order

STEP 1

Select product and check on the **add additive** checkbox

Note

- All information for **Volume, Frequency, Start Date/Time, End Date/Time, Order Quantity, Infusion Line, Infusion Over and Dispense Location** field will be automatically displayed and base on the information from PN Source Content and PN Constituents Reference Range.
- **Volume, Frequency, Infusion Line and Infusion Order** field still can be change by the user if applicable.
- **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 display based on the **Start Date/Time** and **Infusion Over(hours)**.
- **Dispense Location** will be automatically default by system.
- User allowed to choose **Body weight type: Actual/Ideal/Adjusted**. Selected **Body weight type** will impact to '/kg' value in prescription.

STEP 2

Select Indication for PN from the dropdown box

STEP 3

Enter **Remarks** if applicable

PN ORDER

Type of PN Commercial / MOH Pre mix(Std. Soln)
 Nutriflex Lipid Peri 955kcal,1.25L Add Additive Body weight type: Actual Ideal Adjusted Body weight:
 Compounded

ADMINISTRATION INFO

PN COMPONENT

Electrolytes	Initial Content	Additional Requirement	Total Per Day
Sodium(Natrium),Na+	<input type="text" value="50"/> mmol	<input type="text"/> mmol	<input type="text" value="50"/> mmol
Potassium(Kalium),K+	<input type="text" value="30"/> mmol	<input type="text"/> mmol	<input type="text" value="30"/> mmol
Calcium,Ca2+	<input type="text" value="3"/> mmol	<input type="text" value="3"/> mmol	<input type="text" value="6"/> mmol
Magnesium,Mg+	<input type="text" value="3"/> mmol	<input type="text" value="3"/> mmol	<input type="text" value="6"/> mmol
Phosphate,(PO4)2-	<input type="text" value="7.5"/> mmol	<input type="text"/> mmol	<input type="text" value="7.5"/> mmol
Acetate(CH3COO)	<input type="text" value="40"/> mmol	<input type="text"/> mmol	<input type="text" value="40"/> mmol
Trace elements	<input type="text" value="0"/> ml	<input type="text"/> ml	<input type="text" value="0"/> ml
L-Glutamin	<input type="text" value="0"/> ml	<input type="text"/> ml	<input type="text" value="0"/> ml
Vitamin			
<input type="radio"/> Single Vitamin	<input type="radio"/> Multi Vitamin		

PRESCRIPTION

Figure 3.1.4-2 PN Order

STEP 4

Enter value of **Electrolytes**, **Trace elements** and **L-Glutamin** that require for patient per day

Note

- **Initial content:** List original bag content (based on selected commercial bag) and value as setup (by HQ/IWP) in Maintenance - PN Content screen. If user reduces the ordered volume, 'Initial Content' will always display value before volume is changed.
- **Additional Requirement:** User to key in additional value to add to original bag content.
- **Total per Day:** Sum of both 'Initial Content' and 'Additional Requirement' values.
- Select **Single Vitamin** radio button. **Water soluble** and **Fat soluble** field will automatically display as per Figure 3.1.4-3.
- Select **Multi Vitamin** radio button. **Vitamin(Water and Fat soluble)** field will automatically display as per Figure 3.1.4-4.

Single Vitamin Multi Vitamin

Water soluble	<input type="text" value="0"/> ml	<input type="text"/> ml	<input type="text" value="0"/> ml
Fat soluble	<input type="text" value="0"/> ml	<input type="text"/> ml	<input type="text" value="0"/> ml

Figure 3.1.4-3 PN Component

Vitamin

Single Vitamin Multi Vitamin

Vitamin(Water and Fat Soluble)	<input type="text" value="0"/> ml	<input type="text"/> ml	<input type="text" value="0"/> ml
--------------------------------	-----------------------------------	-------------------------	-----------------------------------

Figure 3.1.4-4 PN Component

STEP 5

Click on the  button to add prescription

Note

Prescription will display as per Figure 3.1.4-5.

PN ORDER

Calorie Calculator

Type of PN: Commercial / MOH Pre mix(Std. Soln)
 Nutriflex Lipid Peri 955kcal,1.25L  * Add Additive
 Compounded

Body weight type: Actual Ideal Adjusted Body weight: 65

ADMINISTRATION INFO 6

PN COMPONENT

PRESCRIPTION   

Drug Name	Total Volume (ml)	Total calorie (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date
Nutriflex Lipid Peri 955kcal,1.25L With Additive	1250	955	24	1 bag	OD (once daily)	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM
Phosphate (mmol)	N/A	N/A	6	6	N/A	N/A	N/A	N/A
Sodium (mmol)	N/A	N/A	6	6	N/A	N/A	N/A	N/A
Potassium (mmol)	N/A	N/A	6	6	N/A	N/A	N/A	N/A
Calcium (mmol)	N/A	N/A	6	6	N/A	N/A	N/A	N/A
Magnesium (mmol)	N/A	N/A	6	6	N/A	N/A	N/A	N/A
Acetate (mmol)	N/A	N/A	6	6	N/A	N/A	N/A	N/A
Trace Element (ml)	N/A	N/A	6	6	N/A	N/A	N/A	N/A
Fat Soluble Vit. (ml)	N/A	N/A	6	6	N/A	N/A	N/A	N/A
Water Soluble Vit. (ml)	N/A	N/A	6	6	N/A	N/A	N/A	N/A
Multi Vitamin (ml)	N/A	N/A	6	6	N/A	N/A	N/A	20
L-Glutamin. (ml)	N/A	N/A	6	6	N/A	N/A	N/A	N/A
Calorie Calculator			Infusion Line			Central		

Figure 3.1.4-5 PN Prescription

STEP 6

Click on the  button to save prescription

Note

The  button to clear all information of prescription order.

INFORMATION

 INFO3214: Order saved

 7

Figure 3.1.4-6 Information Alert

STEP 17

Click on the  button to save order record

Note

After saving the record,  button,  button,  button and  button will be displayed as per Figure 3.1.4-7.

PN ORDER

Calorie Calculator

Type of PN Commercial / MOH Pre mix(Std. Soln)
 Nutriflex Lipid Peri 955kcal,1.25L Add Additive Compounded

Body weight type: Actual Ideal Adjusted Body weight: 65

ADMINISTRATION INFO 8

PN COMPONENT

PRESCRIPTION

Drug Name	Total Volume (ml)	Total calorie (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date
Nutriflex Lipid Peri 955kcal,1.25L With Additive	1250	955	24	1 bag	OD (once daily)	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM
Phosphate (mmol)	N/A	N/A	N/A	6	6	N/A	N/A	N/A
Sodium (mmol)	N/A	N/A	N/A	6	6	N/A	N/A	N/A
Potassium (mmol)	N/A	N/A	N/A	6	6	N/A	N/A	N/A
Calcium (mmol)	N/A	N/A	N/A	6	6	N/A	N/A	N/A
Magnesium (mmol)	N/A	N/A	N/A	6	6	N/A	N/A	N/A
Acetate (mmol)	N/A	N/A	N/A	6	6	N/A	N/A	N/A
Trace Element (ml)	N/A	N/A	N/A	6	6	N/A	N/A	N/A
Fat Soluble Vit. (ml)	N/A	N/A	N/A	6	6	N/A	N/A	N/A
Water Soluble Vit. (ml)	N/A	N/A	N/A	6	6	N/A	N/A	N/A
Multi Vitamin (ml)	N/A	N/A	N/A	6	6	N/A	N/A	20
L-Glutamin. (ml)			Calorie Calculator			Infusion Line		
N/A			N/A			Central		

Figure 3.1.4-7 Prescription

STEP 8

Click on the button to confirm prescription

Note

- The button to delete prescription.
- The button to print prescription.
- The button to edit information after saved record.

CONFIRMATION

 CONF3219: Are you sure want to confirm the order?

9

Figure 3.1.4-8 Confirmation Alert

STEP 9

Click on the button to confirm record order

PN ORDER

Calorie Calculator

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

Nutriflex Lipid Peri 955kcal,1.25L * Add Additive

Body weight type: Actual Ideal Adjusted Body weight:

ADMINISTRATION INFO

PN COMPONENT

PRESCRIPTION

Drug Name	Total Volume (ml)	Total calorie (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date
Nutriflex Lipid Peri 955kcal,1.25L With Additive	1250	955		24 1 bag	OD (once daily)	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM

Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Acetate (mmol)	Trace Element (ml)	Fat Soluble Vit. (ml)	Water Soluble Vit. (ml)	Multi Vitamin (ml)
N/A	N/A	N/A	6	6	N/A	N/A	N/A	N/A	20

L-Glutamin. (ml)	Calorie Calculator	Infusion Line
N/A	NA	Central

Figure 3.1.4-9 PN Order

Note

- Click on the button to view/print PN prescription as Figure 3.1.4-10
- Click on the button to order a new prescription



Ministry Of Health, Malaysia
Hospital Pakar Sultanah Fatimah, Muar
PARENTERAL NUTRITION

Patient Name:	XXXXXXXXXX XXX XXXXX XXXXX	Patient ID:	██████████
Age:	53 Years 01 Months 02 Days	MRN:	██████████
Gender:	Male	Prescription :	40001087882
Height / Weight / BSA:	160 cm/65 kg/1.73 m ²	Order Date / Time :	11/01/2018 12:55 PM
Room No / Bed:		Location:	WAD 4 (SURG - L)
Diagnosis:	PREMED	Allergy:	

TPN Order:	Nutriflex Lipid Peri 955kcal, 1.25L With additive	Order Quantity:	1 bag
Start Date/Time:	11/01/2018 05:00 PM	End Date/Time:	12/01/2018 05:00 PM

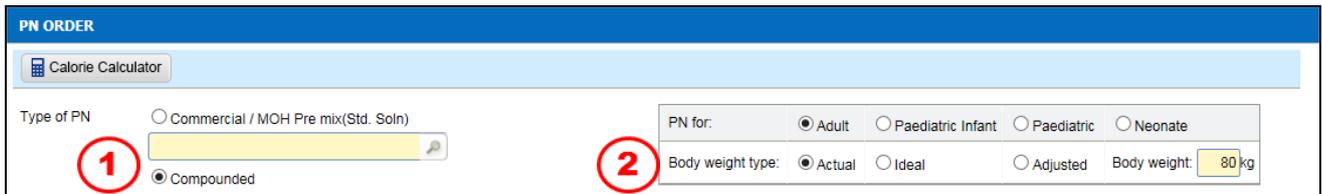
	Additional Requirement	Content/bag	Content/kg
Volume (ml)	NA	1250	19.23
Calorie (kCal)	NA	955	14.69
Protein (g)	NA	40	0.62
Carbohydrate (g)	NA	80	1.23
Lipid (g)	NA	50	0.77
Sodium (mmol)	NA	50	0.77
Potassium (mmol)	NA	30	0.46
Calcium (mmol)	3	6	0.09
Magnesium (mmol)	3	6	0.09
Phosphate (mmol)	NA	7.5	0.12
Chloride (mmol)	NA	48	0.74
Acetate (mmol)	NA	40	0.62
Trace Element (ml)	NA	NA	NA
Combine Vitamin (ml)	20	20	0.31
Water Soluble Vitamin (ml)	NA	NA	NA
Fat Soluble Vitamin (ml)	NA	NA	NA
Glutamin (ml)	NA	NA	NA

Infusion Over:	24 hr	Infusion Rate:	52.08 ml/hr
Prescriber:	██████████	Frequency:	OD (once daily)
Designation:	Pegawai Perubatan	Infusion Route:	Central
Department:	Anaesthesia and Intensive Care	Remarks:	

Figure 3.1.4-10 PN Prescription

3.1.5 Compounded for Adult

PN Compounded allow user to order PN ready made product with customized patient requirement.



The screenshot shows a web interface for 'PN ORDER'. At the top left is a 'Calorie Calculator' button. Below it, the 'Type of PN' section has two radio buttons: 'Commercial / MOH Pre mix(Std. Soln)' and 'Compounded'. A red circle with the number '1' is around the 'Compounded' radio button. To the right, the 'PN for:' section has four radio buttons: 'Adult', 'Paediatric Infant', 'Paediatric', and 'Neonate'. Below this, the 'Body weight type:' section has three radio buttons: 'Actual', 'Ideal', and 'Adjusted'. A red circle with the number '2' is around the 'Actual' radio button. To the right of these is a 'Body weight:' input field with '80 kg' entered.

Figure 3.1.5-1 PN Order

STEP 1

Select on **Type of PN** as Compounded

Note

PN for: will be automatically based on the patient PN Reference;

- Adult : age from 13 years to 150 years
- Paediatric : age from 3 years to 12 years
- Paediatric-infant : 31 days to 2 years
- Neonate : from 1 day to 30 days

STEP 2

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 be change base on selected **Body Weight Type**.

PN COMPONENT				
Use Fluid Calculator	<input checked="" type="checkbox"/>			
Total volume required	38.75 ml/kg		3100 ml	
Total oral feeding	0 ml/kg			
TPN Volume	38.75 ml/kg		3100 ml	
Energy required	48 kcal/kg		3840 kcal	
Macronutrient		Recommended range(per kg)		Energy(per day)
Carbohydrate	3 g/kg	3.00 - 5.00 g/kg	240 g	960 kcal
Lipid	1 g/kg	0.50 - 2.00 g/kg	80 g	720 kcal
Protein	2 g/kg	0.50 - 2.00 g/kg	160 g	640 kcal
L-Glutamin	2.5 ml/kg	1.50 - 2.50 ml/kg	200 ml	160 kcal
Carbohydrate:Lipid (kcal)	57 : 43	Nitrogen Content	26 g	NPC:NRatio
				70 : 1
			Total	2480 kcal
Electrolytes				
Sodium (Natrium),Na+	1 mmol/kg	1.00 - 2.00 mmol/kg	80 mmol	
Potassium (Kalium),K+	1 mmol/kg	0.70 - 1.50 mmol/kg	80 mmol	
Calcium,Ca2+	0.1 mmol/kg	0.10 - 0.15 mmol/kg	8 mmol	
Magnesium,Mg+	0.1 mmol/kg	0.05 - 0.15 mmol/kg	8 mmol	
Phosphate,(PO4)2-	0.6 mmol/kg	0.50 - 0.70 mmol/kg	48 mmol	
Chloride,Cl+		1.30 - 2.00 mmol/kg	0 mmol	
Acetate(CH3COO)		0.00 - 0.00 mmol/kg	0 mmol	
Trace elements		0.00 - 10.00 ml		
Vitamin				
<input checked="" type="radio"/> Single Vitamin		<input type="radio"/> Combine Vitamin		
Water soluble	0.09 ml/kg	0.00 - 10.00 ml	7 ml	
Fat soluble	0.06 ml/kg	0.00 - 10.00 ml	5 ml	

Figure 3.1.5-2 PN Component

STEP 3

Select **Use Fluid Calculator** check box

Note

By selecting **Use Fluid Calculator** check box, system will be auto calculate **Total volume required per day** based on the **Body Weight Type**

STEP 4

Enter value for **Total volume required per day**

STEP 5

Enter value for **Total Oral Feeding per day**

Note

TPN Volume will be automatically calculated by system.

STEP 6

Enter value of the **Macronutrient** that applicable for the PN Component.

Note

- All entered value must between the **Recommended Range (per kg)**.
- 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 **By Weight** will automatically calculate and display after enter the **Trace elements Per day** value.

STEP 7

Enter value of the **Electrolytes** that applicable for the PN Component

Note

- All entered value must between the **Recommended Range (per kg)**.
- **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 be automatically calculated and displayed after enter the **Trace elements Per day** value.

<input checked="" type="radio"/> Single Vitamin	<input type="radio"/> Multi Vitamin			
Water soluble	<input type="text" value="0 ml"/>	<input type="text" value="ml"/>	<input type="text" value="0 ml"/>	
Fat soluble	<input type="text" value="0 ml"/>	<input type="text" value="ml"/>	<input type="text" value="0 ml"/>	

Figure 3.1.5-3 PN Component

Vitamin				
<input type="radio"/> Single Vitamin	<input checked="" type="radio"/> Multi Vitamin			
Vitamin(Water and Fat Soluble)	<input type="text" value="0 ml"/>	<input type="text" value="ml"/>	<input type="text" value="0 ml"/>	

Figure 3.1.5-4 PN Component

Note

- Select either **Single Vitamin** or **Multivitamin** radio button.
- Vitamin have 2 types vitamin:
 - Single Vitamin
 - Multi Vitamin
- If user select **Single Vitamin** radio button; **Water soluble** and **Fat soluble** field will automatically display by system as per Figure 3.1.5-3.
- If user select **Multi Vitamin** radio button; **Vitamin(Water and Fat Soluble)** field will automatically display by system as per Figure 3.1.5-4.

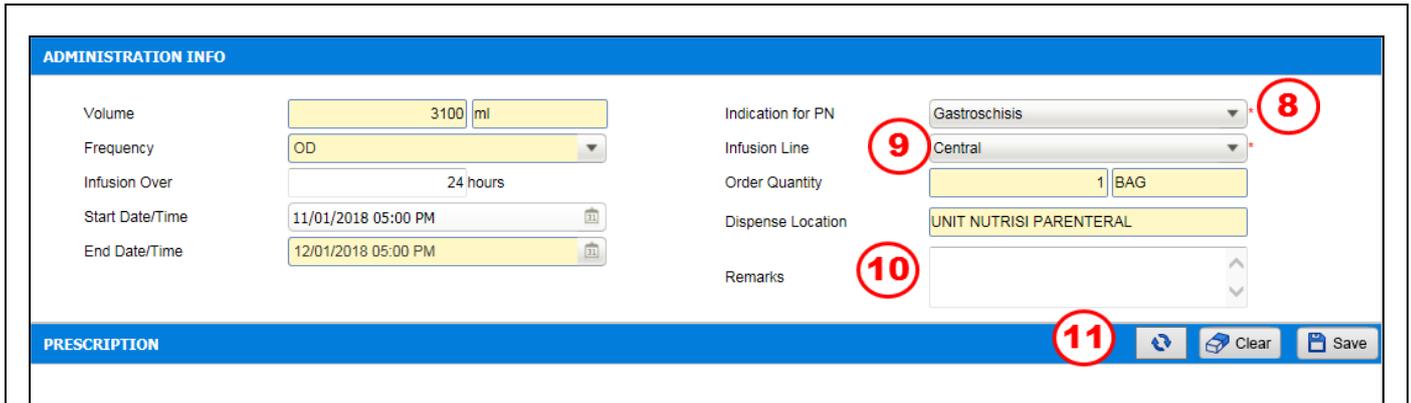


Figure 3.1.5-5 Administration Info

STEP 8

Enter **Indication for PN** by select from drop down box

STEP 9

Enter **Infusion Line** by select from drop down box

Note

- **Infusion Over** will be automatically default to 24 hours but user is allow to change at this field.
- **Volume, Frequency, Order Quantity** and **Duration** will be automatically displayed by system and user is not allow to edit this field.
- **Start Date/Time** will be automatically default to current date but still can be change by the user if applicable.
- **End Date/Time** will display based on the **Start Date/Time** and **Infusion Over(hours)**.
- **Dispense Location** will be automatically default by system.
- User allowed to choose **Body weight type: Actual/Ideal/Adjusted**. Selected **Body weight type** will impact to '/kg' value in prescription.

STEP 10

Enter **Remarks** if applicable

STEP 11

Click on the  button to add prescription

Note

Prescription will display as per Figure 3.1.5-6

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: 80 kg

PN COMPONENT

ADMINISTRATION INFO

PRESCRIPTION Clear Save

Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date	
PN Compounded Adult	38.75 (3100)	31 (2480)	24	1 BAG	OD	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM	
Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin ml per kg (ml)
0.6 (48)	1 (80)	1 (80)	0.1 (8)	0.1 (8)	NA	NA	0.06 (5)	0.09 (7)	NA
Protein g per kg (g)	Carbohydrate g per kg (g)	Carbohydrate %	Lipid g per kg (g)	L-Glutamin ml per kg (ml)	Calorie Calculator	Infusion Line			
2 (160)	3 (240)	NA	1 (80)	2.5 (200)	NA	Central			

Figure 3.1.5-6 PN Prescription

STEP 12

Click on the button to save prescription

INFORMATION

INFO3214: Order saved

13

Figure 3.1.5-7 Information Alert Message

STEP 13

Click on the button to save order record

Note

After saving the record, button, button, button and button will be displayed as per Figure 3.1.5-8.

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: 80 kg

PN COMPONENT

ADMINISTRATION INFO 14

PRESCRIPTION Confirm Order Delete Prescription Modify

Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date	
PN Compounded Adult	38.75 (3100)	31 (2480)	24	1 BAG	OD	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM	
Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin ml per kg (ml)
0.6 (48)	1 (80)	1 (80)	0.1 (8)	0.1 (8)	NA	NA	0.06 (5)	0.09 (7)	NA
Protein g per kg (g)	Carbohydrate g per kg (g)	Carbohydrate %	Lipid g per kg (g)	L-Glutamin ml per kg (ml)	Calorie Calculator	Infusion Line			
2 (160)	3 (240)	NA	1 (80)	2.5 (200)	NA	Central			

Figure 3.1.5-8 PN Prescription

STEP 14

Click on the Confirm Order button to confirm prescription

Note

- The Delete button to delete prescription.
- The Prescription button to print prescription.
- The Modify button to edit information after saved record

CONFIRMATION

?
CONF3219: Are you sure want to confirm the order?
15

Cancel
Yes
No

Figure 3.1.5-9 Confirmation Alert Message

STEP 15

Click on the Yes button to confirm record order

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: kg

PN COMPONENT

ADMINISTRATION INFO

PRESCRIPTION

New Prescription
Prescription

Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date	
PN Compounded Adult	38.75 (3100)	31 (2480)	24	1 BAG	OD	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM	
Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin ml per kg (ml)
0.6 (48)	1 (80)	1 (80)	0.1 (8)	0.1 (8)	NA	NA	0.06 (5)	0.09 (7)	NA
Protein g per kg (g)	Carbohydrate g per kg (g)	Carbohydrate %	Lipid g per kg (g)	L-Glutamin ml per kg (ml)	Calorie Calculator	Infusion Line			
2 (160)	3 (240)	NA	1 (80)	2.5 (200)	NA	Central			

Figure 3.1.5-10 PN Order

Note

- Click on the Prescription button to view/print PN prescription as Figure 3.1.5-11
- Click on the New Prescription button to order a new prescription

**Ministry Of Health, Malaysia
Hospital Pakar Sultanah Fatimah, Muar
PARENTERAL NUTRITION**

Patient Name: MXXXXXXXX XXXXX XXX XXXXXX **Patient ID:** [REDACTED]
Age: 24 Years 09 Months 14 Days **MRN:** [REDACTED]
Gender: Male **Prescription :** W2L0001087884
Height / Weight / 169 cm/80 kg/1.97 m² **Order Date / Time** 11/01/2018 02:33 PM
Room No / Bed: **Location:** WAD 2 L (MED/SURG/ORTO)
Diagnosis: rheumatic fever **Allergy:**

TPN Order: PN Compounded Adult **Order** 1 bag
Start 11/01/2018 05:00 PM **End** 12/01/2018 05:00 PM

	Content / kg	Content / bag
Volume (ml)	38.75	3100
Calorie (kCal)	48	3840
Protein (g)	2	160
Carbohydrate (g)	3	240
Lipid (g)	1	80
Sodium (mmol)	1	80
Potassium (mmol)	1	80
Calcium (mmol)	0.1	8
Magnesium (mmol)	0.1	8
Phosphate (mmol)	0.6	48
Chloride (mmol)	NA	NA
Acetate (mmol)	NA	NA
Trace Element (ml)	NA	NA
Combine Vitamin (ml)	NA	NA
Water Soluble Vitamin (ml)	0.09	7
Fat Soluble Vitamin (ml)	0.06	5
L-Glutamin (ml)	2.5	200

Infusion Over: 24 hr **Frequency:** OD
Prescriber: [REDACTED] **Infusion Route:** Central
Designation: Pegawai Perubatan **Remarks:**
Department: General Medicine

Figure 3.1.5-11 PN Order Prescription

3.1.6 Compounded for Pediatric

PN Compounded allow user to order PN drug with certain information for patient between 3 years old to 12 years old.



The screenshot shows the 'PN ORDER' form. At the top left is a 'Calorie Calculator' button. Below it, the 'Type of PN' section has two radio buttons: 'Commercial / MOH Pre mix(Std. Soln)' and 'Compounded'. A red circle with the number '1' is around the 'Compounded' radio button. To the right, the 'PN for:' section has four radio buttons: 'Adult', 'Paediatric Infant', 'Paediatric', and 'Neonate'. A red circle with the number '2' is around the 'Paediatric' radio button. Below this, the 'Body weight type:' section has three radio buttons: 'Actual', 'Ideal', and 'Adjusted'. The 'Actual' radio button is selected. To the right of these is a 'Body weight:' field with the value '80 kg'.

Figure 3.1.6-1 PN Order

STEP 1

Select on **Type of PN** as Compounded

Note

PN for: will be automatically based on the patient PN Reference;

- Adult : age from 13 years to 150 years
- Paediatric : age from 3 years to 12 years
- Paediatric-infant : 31 days to 2 years
- Neonate : from 1 day to 30 days

STEP 2

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 be change base on selected **Body Weight Type**.

PN COMPONENT				
Use Fluid Calculator	<input checked="" type="checkbox"/>			
Total volume required	<input type="text" value="80 ml/kg"/>		<input type="text" value="2000 ml"/>	
Total oral feeding	<input type="text" value="0 ml/kg"/>		<input type="text" value="ml"/>	
TPN Volume	<input type="text" value="80 ml/kg"/>		<input type="text" value="2000 ml"/>	
Energy required	<input type="text" value="48 kcal/kg"/>		<input type="text" value="3840 kcal"/>	
Macronutrient		Recommended range(per kg)		Energy(per day)
Carbohydrate	<input type="text" value="3 g/kg"/>	<input type="text" value="3.00 - 5.00 g/kg"/>	<input type="text" value="240 g"/>	<input type="text" value="960 kcal"/>
Lipid	<input type="text" value="1 g/kg"/>	<input type="text" value="0.50 - 2.00 g/kg"/>	<input type="text" value="80 g"/>	<input type="text" value="720 kcal"/>
Protein	<input type="text" value="2 g/kg"/>	<input type="text" value="0.50 - 2.00 g/kg"/>	<input type="text" value="160 g"/>	<input type="text" value="640 kcal"/>
L-Glutamin	<input type="text" value="2.5 ml/kg"/>	<input type="text" value="1.50 - 2.50 ml/kg"/>	<input type="text" value="200 ml"/>	<input type="text" value="160 kcal"/>
Carbohydrate:Lipid (kcal)	<input type="text" value="57 : 43"/>	Nitrogen Content	<input type="text" value="26 g"/>	NPC:NRatio
			<input type="text" value="70 : 1"/>	Total
				<input type="text" value="2480 kcal"/>
Electrolytes				
Sodium (Natrium), Na+	<input type="text" value="1 mmol/kg"/>	<input type="text" value="1.00 - 2.00 mmol/kg"/>	<input type="text" value="80 mmol"/>	
Potassium (Kalium), K+	<input type="text" value="1 mmol/kg"/>	<input type="text" value="0.70 - 1.50 mmol/kg"/>	<input type="text" value="80 mmol"/>	
Calcium, Ca2+	<input type="text" value="0.1 mmol/kg"/>	<input type="text" value="0.10 - 0.15 mmol/kg"/>	<input type="text" value="8 mmol"/>	
Magnesium, Mg+	<input type="text" value="0.1 mmol/kg"/>	<input type="text" value="0.05 - 0.15 mmol/kg"/>	<input type="text" value="8 mmol"/>	
Phosphate, (PO4)2-	<input type="text" value="0.6 mmol/kg"/>	<input type="text" value="0.50 - 0.70 mmol/kg"/>	<input type="text" value="48 mmol"/>	
Chloride, Cl+	<input type="text" value="mmol/kg"/>	<input type="text" value="1.30 - 2.00 mmol/kg"/>	<input type="text" value="0 mmol"/>	
Acetate(CH3COO)	<input type="text" value="mmol/kg"/>	<input type="text" value="0.00 - 0.00 mmol/kg"/>	<input type="text" value="0 mmol"/>	
Trace elements	<input type="text" value="ml/kg"/>	<input type="text" value="0.00 - 10.00 ml"/>	<input type="text" value="ml"/>	
Vitamin				
<input checked="" type="radio"/> Single Vitamin		<input type="radio"/> Combine Vitamin		
Water soluble	<input type="text" value="0.09 ml/kg"/>	<input type="text" value="0.00 - 10.00 ml"/>	<input type="text" value="7 ml"/>	
Fat soluble	<input type="text" value="0.06 ml/kg"/>	<input type="text" value="0.00 - 10.00 ml"/>	<input type="text" value="5 ml"/>	

Figure 3.1.6-2 PN Component

STEP 3

Select **Use Fluid Calculator** check box

Note

By selecting **Use Fluid Calculator** check box, system will be auto calculate **Total volume required per day** based on the **Body Weight Type**

STEP 4

Enter value for **Total volume required by weight**

STEP 5

Enter value for **Total Oral Feeding per day**

Note

TPN Volume will be automatically calculated by system.

STEP 6

Enter value of the **Macronutrient** that applicable for the PN Component.

Note

- All entered value must between the **Recommended Range (per kg)**.
- 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 **By Weight** will automatically calculate and display after enter the **Trace elements Per day** value.

STEP 7

Enter value of the **Electrolytes** that applicable for the PN Component

Note

- All entered value must between the **Recommended Range (per kg)**.
- **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 be automatically calculated and displayed after enter the **Trace elements Per day** value.

<input checked="" type="radio"/> Single Vitamin	<input type="radio"/> Multi Vitamin			
Water soluble	<input type="text" value="0 ml"/>	<input type="text" value="ml"/>	<input type="text" value="0 ml"/>	
Fat soluble	<input type="text" value="0 ml"/>	<input type="text" value="ml"/>	<input type="text" value="0 ml"/>	

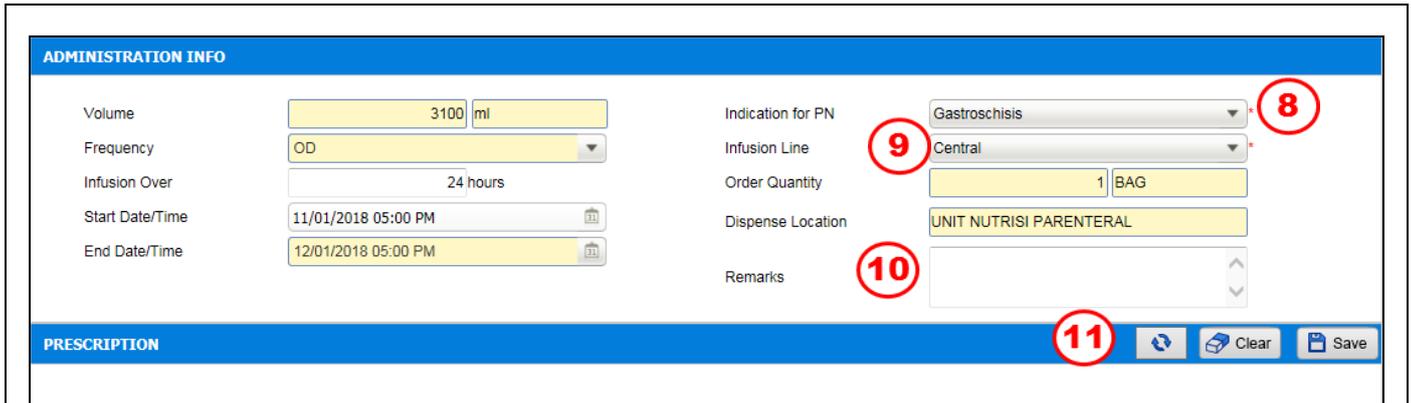
Figure 3.1.6-3 PN Component

Vitamin			
<input type="radio"/> Single Vitamin	<input checked="" type="radio"/> Multi Vitamin		
Vitamin(Water and Fat Soluble)	<input type="text" value="0 ml"/>	<input type="text" value="ml"/>	<input type="text" value="0 ml"/>

Figure 3.1.6-4 PN Component

Note

- Select either **Single Vitamin** or **Multivitamin** radio button.
- Vitamin have 2 types vitamin:
 - Single Vitamin
 - Multi Vitamin
- If user select **Single Vitamin** radio button; **Water soluble** and **Fat soluble** field will automatically display by system as per Figure 3.1.6-3.
- If user select **Multi Vitamin** radio button; **Vitamin(Water and Fat Soluble)** field will automatically display by system as per Figure 3.1.6-4.



ADMINISTRATION INFO	
Volume	3100 ml
Frequency	OD
Infusion Over	24 hours
Start Date/Time	11/01/2018 05:00 PM
End Date/Time	12/01/2018 05:00 PM
Indication for PN	Gastroschisis
Infusion Line	Central
Order Quantity	1 BAG
Dispense Location	UNIT NUTRISI PARENTERAL
Remarks	

PRESCRIPTION [Refresh] [Clear] [Save]

Figure 3.1.6-5 Administration Info

STEP 8

Enter **Indication for PN** by select from drop down box

STEP 9

Enter **Infusion Line** by select from drop down box

Note

- **Infusion Over** will be automatically default to 24 hours but user is allow to change at this field.
- **Volume, Frequency and Order Quantity** will be automatically displayed by system and user is not allow to edit this field.
- **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 based on the **Start Date/Time** and **Infusion Over(hours)**..
- **Dispense Location** will be automatically default by system.

STEP 10

Enter **Remarks** if applicable

STEP 11

Click on the  button to add prescription

Note

Prescription will display as per Figure 3.1.6-6

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: 80 kg

PN COMPONENT

ADMINISTRATION INFO

PRESCRIPTION Clear Save

Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date	
PN Compounded Adult	38.75 (3100)	31 (2480)	24	1 BAG	OD	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM	
Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin ml per kg (ml)
0.6 (48)	1 (80)	1 (80)	0.1 (8)	0.1 (8)	NA	NA	0.06 (5)	0.09 (7)	NA
Protein g per kg (g)	Carbohydrate g per kg (g)	Carbohydrate %	Lipid g per kg (g)	L-Glutamin ml per kg (ml)	Calorie Calculator	Infusion Line			
2 (160)	3 (240)	NA	1 (80)	2.5 (200)	NA	Central			

Figure 3.1.6-6 PN Prescription

STEP 12

Click on the button to save prescription

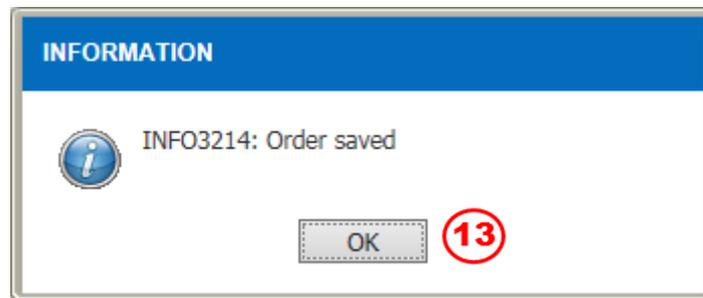


Figure 3.1.6-7 Information Alert Message

STEP 13

Click on the button to save order record

Note

After saving the record, button, button, button and button will be displayed as per Figure 3.1.6-8.

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: 80 kg

PN COMPONENT

ADMINISTRATION INFO

PRESCRIPTION

Confirm Order Delete Prescription Modify

Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date	
PN Compounded Adult	38.75 (3100)	31 (2480)	24	1 BAG	OD	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM	
Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin ml per kg (ml)
0.6 (48)	1 (80)	1 (80)	0.1 (8)	0.1 (8)	NA	NA	0.06 (5)	0.09 (7)	NA
Protein g per kg (g)	Carbohydrate g per kg (g)	Carbohydrate %	Lipid g per kg (g)	L-Glutamin ml per kg (ml)	Calorie Calculator	Infusion Line			
2 (160)	3 (240)	NA	1 (80)	2.5 (200)	NA	Central			

Figure 3.1.6-8 PN Prescription

STEP 14

Click on the Confirm Order button to confirm prescription

Note

- The Delete button to delete prescription.
- The Prescription button to print prescription.
- The Modify button to edit information after saved record

CONFIRMATION



CONF3219: Are you sure want to confirm the order?

Cancel Yes No

Figure 3.1.6-9 Confirmation Alert Message

STEP 15

Click on the Yes button to confirm record order

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: kg

PN COMPONENT

ADMINISTRATION INFO

PRESCRIPTION

New Prescription
Prescription

Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date	
PN Compounded Adult	38.75 (3100)	31 (2480)	24	1 BAG	OD	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM	
Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin ml per kg (ml)
0.6 (48)	1 (80)	1 (80)	0.1 (8)	0.1 (8)	NA	NA	0.06 (5)	0.09 (7)	NA
Protein g per kg (g)	Carbohydrate g per kg (g)	Carbohydrate %	Lipid g per kg (g)	L-Glutamin ml per kg (ml)	Calorie Calculator	Infusion Line			
2 (160)	3 (240)	NA	1 (80)	2.5 (200)	NA	Central			

Figure 3.1.6-10 PN Order

Note

- Click on the Prescription button to view/print PN prescription as Figure 3.1.6-11
- Click on the New Prescription button to order a new prescription

**Ministry Of Health, Malaysia
Hospital Pakar Sultanah Fatimah, Muar
PARENTERAL NUTRITION**

Patient Name: [REDACTED] **Patient ID:** [REDACTED]
Age: [REDACTED] **MRN:** HPSF00190582
Gender: Male **Prescription :** W2L0001087884
Height / Weight / 169 cm/80 kg/1.97 m² **Order Date / Time** 11/01/2018 02:33 PM
Room No / Bed: [REDACTED] **Location:** [REDACTED]
Diagnosis: rheumatic fever **Allergy:** [REDACTED]

TPN Order: PN Compounded : **Order** 1 bag
Start 11/01/2018 05:00 PM **End** 12/01/2018 05:00 PM

		Content / kg	Content / bag
Volume	(ml)	38.75	3100
Calorie	(kCal)	48	3840
Protein	(g)	2	160
Carbohydrate	(g)	3	240
Lipid	(g)	1	80
Sodium	(mmol)	1	80
Potassium	(mmol)	1	80
Calcium	(mmol)	0.1	8
Magnesium	(mmol)	0.1	8
Phosphate	(mmol)	0.6	48
Chloride	(mmol)	NA	NA
Acetate	(mmol)	NA	NA
Trace Element	(ml)	NA	NA
Combine Vitamin	(ml)	NA	NA
Water Soluble Vitamin	(ml)	0.09	7
Fat Soluble Vitamin	(ml)	0.06	5
L-Glutamin	(ml)	2.5	200

Infusion Over: 24 hr **Frequency:** OD
Prescriber: [REDACTED] **Infusion Route:** Central
Designation: Pegawai Perubatan **Remarks:**
Department: General Medicine

Figure 3.1.6-11 PN Order Prescription

3.1.7 Compounded for Pediatric Infant

PN Compounded allow user to order PN drug with certain information for patient between 31 days old to 2 years old.



The screenshot shows the 'PN ORDER' interface. At the top, there is a 'Calorie Calculator' button. Below it, the 'Type of PN' section has two radio buttons: 'Commercial / MOH Pre mix(Std. Soln)' and 'Compounded'. The 'Compounded' option is selected and circled in red with the number '1'. To the right, the 'PN for:' section has four radio buttons: 'Adult', 'Paediatric Infant', 'Paediatric', and 'Neonate'. The 'Paediatric Infant' option is selected and circled in red with the number '2'. Below these, the 'Body weight type:' section has three radio buttons: 'Actual', 'Ideal', and 'Adjusted'. The 'Actual' option is selected. To the right of these is a 'Body weight:' field with the value '80 kg'.

Figure 3.1.7-1 PN Order

STEP 1

Select on **Type of PN** as Compounded

Note

PN for: will be automatically based on the patient PN Reference;

- Adult : age from 13 years to 150 years
- Paediatric : age from 3 years to 12 years
- Paediatric-infant : 31 days to 2 years
- Neonate : from 1 day to 30 days

STEP 2

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 be change base on selected **Body Weight Type**.

PN COMPONENT				
Use Fluid Calculator	<input checked="" type="checkbox"/>			
Total volume required	<input type="text" value="80"/>	ml/kg	<input type="text" value="2000"/>	ml
Total oral feeding	<input type="text" value="0"/>	ml/kg	<input type="text" value=""/>	ml
TPN Volume	<input type="text" value="80"/>	ml/kg	<input type="text" value="2000"/>	ml
Energy required	<input type="text" value="48"/>	kcal/kg	<input type="text" value="3840"/>	kcal
Macronutrient				
Carbohydrate	<input type="text" value="3"/>	g/kg	<input type="text" value="240"/>	g
Lipid	<input type="text" value="1"/>	g/kg	<input type="text" value="80"/>	g
Protein	<input type="text" value="2"/>	g/kg	<input type="text" value="160"/>	g
L-Glutamin	<input type="text" value="2.5"/>	ml/kg	<input type="text" value="200"/>	ml
Carbohydrate:Lipid (kcal)	<input type="text" value="57 : 43"/>	Nitrogen Content	<input type="text" value="26"/>	g
		NPC:NRatio	<input type="text" value="70 : 1"/>	
		Total	<input type="text" value="2480"/>	kcal
Electrolytes				
Sodium (Natrium), Na+	<input type="text" value="1"/>	mmol/kg	<input type="text" value="80"/>	mmol
Potassium (Kalium), K+	<input type="text" value="1"/>	mmol/kg	<input type="text" value="80"/>	mmol
Calcium, Ca2+	<input type="text" value="0.1"/>	mmol/kg	<input type="text" value="8"/>	mmol
Magnesium, Mg+	<input type="text" value="0.1"/>	mmol/kg	<input type="text" value="8"/>	mmol
Phosphate, (PO4)2-	<input type="text" value="0.6"/>	mmol/kg	<input type="text" value="48"/>	mmol
Chloride, Cl+	<input type="text" value=""/>	mmol/kg	<input type="text" value="0"/>	mmol
Acetate(CH3COO)	<input type="text" value=""/>	mmol/kg	<input type="text" value="0"/>	mmol
Trace elements	<input type="text" value=""/>	ml/kg	<input type="text" value="0.00 - 10.00"/>	ml
Vitamin				
<input checked="" type="radio"/> Single Vitamin	<input type="radio"/> Combine Vitamin			
Water soluble	<input type="text" value="0.09"/>	ml/kg	<input type="text" value="0.00 - 10.00"/>	ml
Fat soluble	<input type="text" value="0.06"/>	ml/kg	<input type="text" value="0.00 - 10.00"/>	ml

Figure 3.1.7-2 PN Component

STEP 3

Select **Use Fluid Calculator** check box

Note

By selecting **Use Fluid Calculator** check box, system will be auto calculate **Total volume required per day** based on the **Body Weight Type**

STEP 4

Enter value for **Total volume required by weight**

STEP 5

Enter value for **Total Oral Feeding per day**

Note

TPN Volume will be automatically calculated by system.

STEP 6

Enter value of the **Macronutrient** that applicable for the PN Component.

Note

- All entered value must between the **Recommended Range (per kg)**.
- 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 **By Weight** will automatically calculate and display after enter the **Trace elements Per day** value.

STEP 7

Enter value of the **Electrolytes** that applicable for the PN Component

Note

- All entered value must between the **Recommended Range (per kg)**.
- **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 be automatically calculated and displayed after enter the **Trace elements Per day** value.

<input checked="" type="radio"/> Single Vitamin	<input type="radio"/> Multi Vitamin			
Water soluble	<input type="text" value="0 ml"/>	<input type="text" value="ml"/>	<input type="text" value="0 ml"/>	
Fat soluble	<input type="text" value="0 ml"/>	<input type="text" value="ml"/>	<input type="text" value="0 ml"/>	

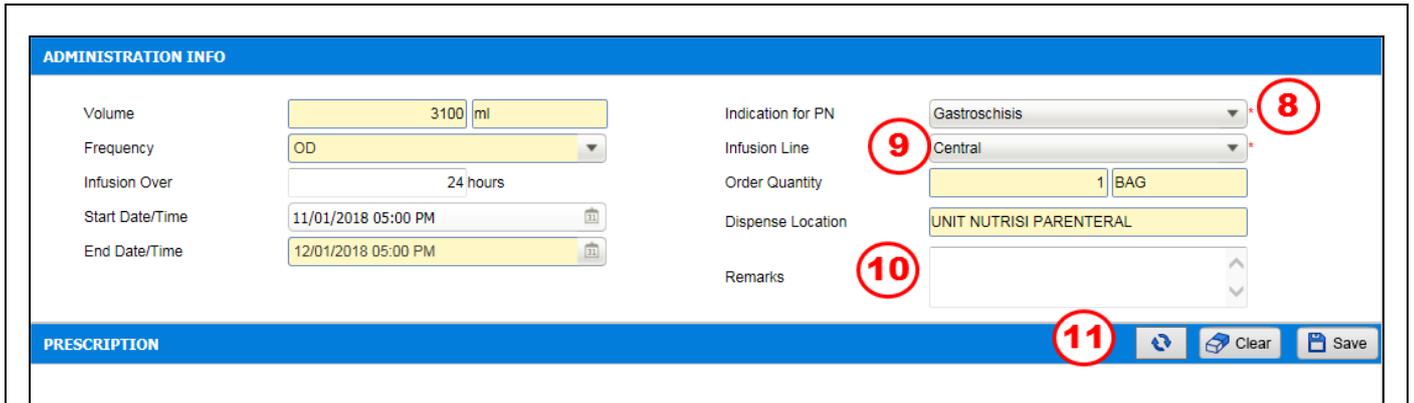
Figure 3.1.7-3 PN Component

Vitamin			
<input type="radio"/> Single Vitamin	<input checked="" type="radio"/> Multi Vitamin		
Vitamin(Water and Fat Soluble)	<input type="text" value="0 ml"/>	<input type="text" value="ml"/>	<input type="text" value="0 ml"/>

Figure 3.1.7-4 PN Component

Note

- Select either **Single Vitamin** or **Multivitamin** radio button.
- Vitamin have 2 types vitamin:
 - Single Vitamin
 - Multi Vitamin
- If user select **Single Vitamin** radio button; **Water soluble** and **Fat soluble** field will automatically display by system as per Figure 3.1.7-3.
- If user select **Multi Vitamin** radio button; **Vitamin(Water and Fat Soluble)** field will automatically display by system as per Figure 3.1.7-4.



ADMINISTRATION INFO	
Volume	3100 ml
Frequency	OD
Infusion Over	24 hours
Start Date/Time	11/01/2018 05:00 PM
End Date/Time	12/01/2018 05:00 PM
Indication for PN	Gastroschisis
Infusion Line	Central
Order Quantity	1 BAG
Dispense Location	UNIT NUTRISI PARENTERAL
Remarks	

PRESCRIPTION [Refresh] [Clear] [Save]

Figure 3.1.7-5 Administration Info

STEP 8

Enter **Indication for PN** by select from drop down box

STEP 9

Enter **Infusion Line** by select from drop down box

Note

- **Infusion Over** will be automatically default to 24 hours but user is allow to change at this field.
- **Volume, Frequency and Order Quantity** will be automatically displayed by system and user is not allow to edit this field.
- **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 based on the **Start Date/Time** and **Infusion Over(hours)**.
- **Dispense Location** will be automatically default by system.

STEP 10

Enter **Remarks** if applicable

STEP 11

Click on the  button to add prescription

Note

Prescription will display as per Figure 3.1.7-6

PN COMPONENT									
ADMINISTRATION INFO									
PRESCRIPTION [Refresh] [Clear] [Save]									
Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date	
PN Compounded Adult	38.75 (3100)	31 (2480)		24 1 BAG	OD	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM	12
Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin per kg (ml)
0.6 (48)	1 (80)	1 (80)	0.1 (8)	0.1 (8)	NA	NA	0.06 (5)	0.09 (7)	NA
Protein g per kg (g)	Carbohydrate g per kg (g)	Carbohydrate %	Lipid g per kg (g)	L-Glutamin ml per kg (ml)	Calorie Calculator	Infusion Line			
2 (160)	3 (240)	NA	1 (80)	2.5 (200)	NA	Central			

Figure 3.1.7-6 PN Prescription

STEP 12

Click on the button to save prescription

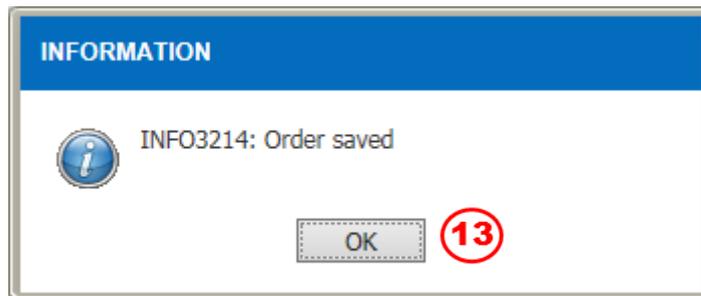


Figure 3.1.7-7 Information Alert Message

STEP 13

Click on the button to save order record

Note

After saving the record, button, button, button and button will be displayed as per Figure 3.1.7-8.

PN COMPONENT									
ADMINISTRATION INFO									
PRESCRIPTION [Refresh] [Confirm Order] [Delete] [Prescription] [Modify]									
Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date	
PN Compounded Adult	38.75 (3100)	31 (2480)		24 1 BAG	OD	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM	14
Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin ml per kg (ml)
0.6 (48)	1 (80)	1 (80)	0.1 (8)	0.1 (8)	NA	NA	0.06 (5)	0.09 (7)	NA
Protein g per kg (g)	Carbohydrate g per kg (g)	Carbohydrate %	Lipid g per kg (g)	L-Glutamin ml per kg (ml)	Calorie Calculator	Infusion Line			
2 (160)	3 (240)	NA	1 (80)	2.5 (200)	NA	Central			

Figure 3.1.7-8 PN Prescription

STEP 14

Click on the button to confirm prescription

Note

- The button to delete prescription.
- The button to print prescription.

- The  button to edit information after saved record

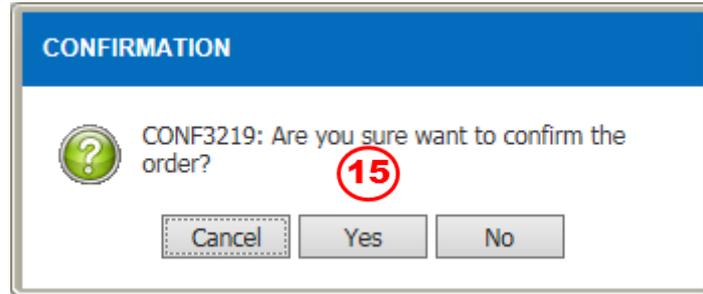
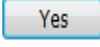


Figure 3.1.7-9 Confirmation Alert Message

STEP 15

Click on the  button to confirm record order

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: 80 kg

PN COMPONENT

ADMINISTRATION INFO

PRESCRIPTION  

Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date											
PN Compounded Adult	38.75 (3100)	31 (2480)	24	1 BAG	OD	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM											
Phosphate mmol per kg (mmol)	0.6 (48)	Sodium mmol per kg (mmol)	1 (80)	Potassium mmol per kg (mmol)	1 (80)	Calcium mmol per kg (mmol)	0.1 (8)	Magnesium mmol per kg (mmol)	0.1 (8)	Acetate mmol per kg (mmol)	NA	Trace Element ml per kg (ml)	NA	Fat Soluble Vit. ml per kg (ml)	0.06 (5)	Water Soluble Vit. ml per kg (ml)	0.09 (7)	Multi Vitamin ml per kg (ml)	NA
Protein g per kg (g)	2 (160)	Carbohydrate g per kg (g)	3 (240)	Carbohydrate %	NA	Lipid g per kg (g)	1 (80)	L-Glutamin ml per kg (ml)	2.5 (200)	Calorie Calculator	NA	Infusion Line	Central						

Figure 3.1.7-10 PN Order

Note

- Click on the  button to view/print PN prescription as Figure 3.1.7-11
- Click on the  button to order a new prescription

Ministry Of Health, Malaysia
Hospital Pakar Sultanah Fatimah, Muar
PARENTERAL NUTRITION

Patient Name: [REDACTED] Patient ID: [REDACTED]

Age: [REDACTED] MRN: HPSF00190582

Gender: Male Prescription : W2L0001087884

Height / Weight / : 169 cm/80 kg/1.97 m² Order Date / Time 11/01/2018 02:33 PM

Room No / Bed: [REDACTED] Location: [REDACTED]

Diagnosis: rheumatic fever Allergy: [REDACTED]

TPN Order: PN Compounded : [REDACTED] Order 1 bag

Start 11/01/2018 05:00 PM End 12/01/2018 05:00 PM

	Content / kg	Content / bag
Volume (ml)	38.75	3100
Calorie (kCal)	48	3840
Protein (g)	2	160
Carbohydrate (g)	3	240
Lipid (g)	1	80
Sodium (mmol)	1	80
Potassium (mmol)	1	80
Calcium (mmol)	0.1	8
Magnesium (mmol)	0.1	8
Phosphate (mmol)	0.6	48
Chloride (mmol)	NA	NA
Acetate (mmol)	NA	NA
Trace Element (ml)	NA	NA
Combine Vitamin (ml)	NA	NA
Water Soluble Vitamin (ml)	0.09	7
Fat Soluble Vitamin (ml)	0.06	5
L-Glutamin (ml)	2.5	200

Infusion Over: 24 hr Frequency: OD

Prescriber: [REDACTED] Infusion Route: Central

Designation: Pegawai Perubatan Remarks:

Department: General Medicine

Figure 3.1.7-11 PN Order Prescription

3.1.8 Compounded for Neonate

Compounded (Neonate) allow user to add ingredients under PN component based on patient nutrition level for patient 1 day old to 30 days old.



PN ORDER

Calorie Calculator

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

PN for: Adult Paediatric Infant Paediatric **Neonate**

Birth weight: 3 kg Current weight: 2.8 kg

Figure 3.1.8-1 PN Order

STEP 1

Select on **Type of PN** as Compounded

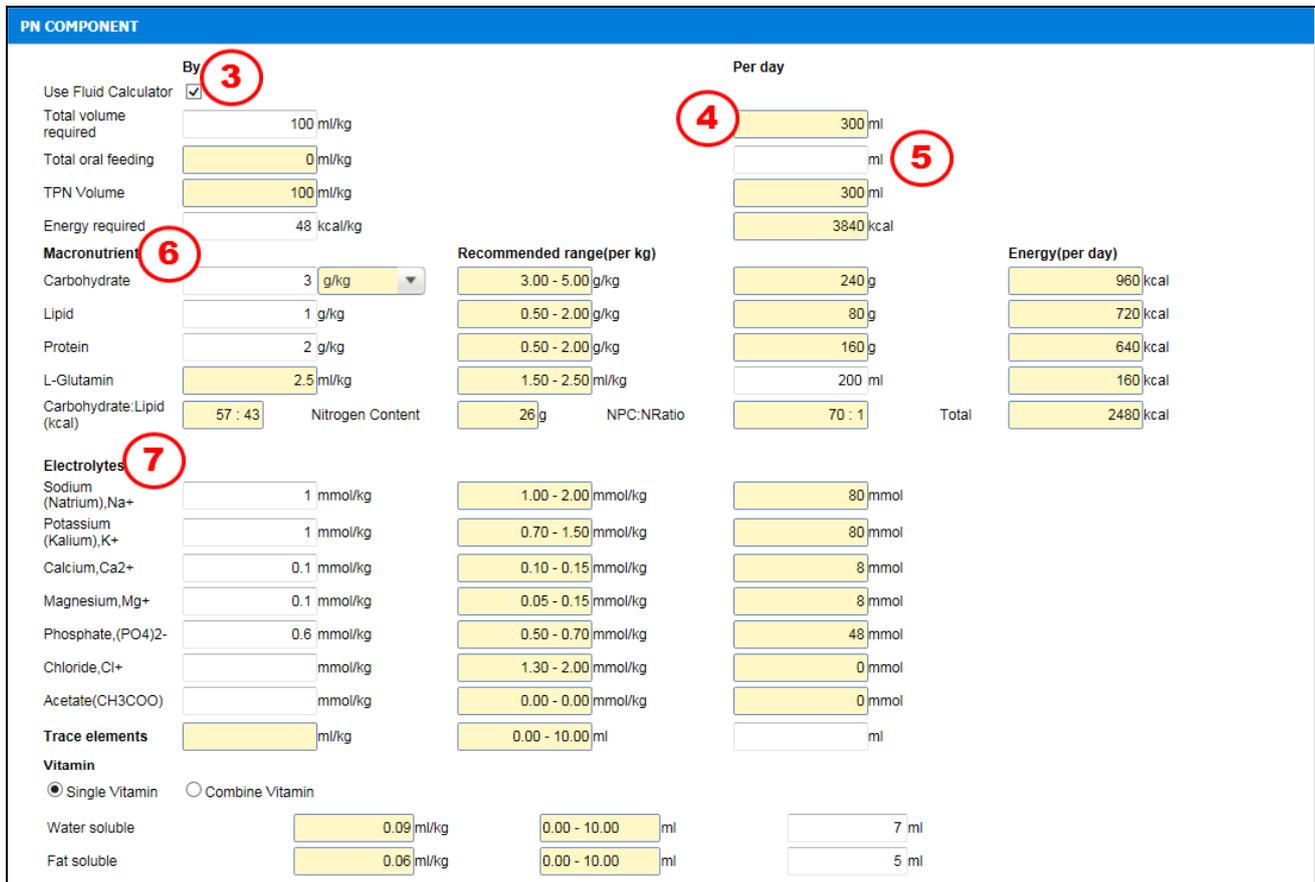
Note

PN for: will be automatically based on the patient PN Reference;

- Adult : age from 13 years to 150 years
- Paediatric : age from 3 years to 12 years
- Paediatric-infant : 31 days to 2 years
- Neonate : from 1 day to 30 days

STEP 2

Enter value for **Birth weight** and **Current weight**



PN COMPONENT

Use Fluid Calculator: **3**

Total volume required: 100 ml/kg **4** 300 ml **5**

Total oral feeding: 0 ml/kg

TPN Volume: 100 ml/kg

Energy required: 48 kcal/kg 3840 kcal

Macronutrient 6	Recommended range(per kg)	Per day	Energy(per day)
Carbohydrate: 3 g/kg	3.00 - 5.00 g/kg	240 g	960 kcal
Lipid: 1 g/kg	0.50 - 2.00 g/kg	80 g	720 kcal
Protein: 2 g/kg	0.50 - 2.00 g/kg	160 g	640 kcal
L-Glutamin: 2.5 ml/kg	1.50 - 2.50 ml/kg	200 ml	160 kcal
Carbohydrate:Lipid (kcal): 57 : 43 Nitrogen Content: 26 g NPC:NRatio: 70 : 1			Total: 2480 kcal

Electrolytes **7**

Electrolyte	Recommended range(per kg)	Per day
Sodium (Natrium),Na+	1.00 - 2.00 mmol/kg	80 mmol
Potassium (Kalium),K+	0.70 - 1.50 mmol/kg	80 mmol
Calcium,Ca2+	0.10 - 0.15 mmol/kg	8 mmol
Magnesium,Mg+	0.05 - 0.15 mmol/kg	8 mmol
Phosphate,(PO4)2-	0.50 - 0.70 mmol/kg	48 mmol
Chloride,Cl+	1.30 - 2.00 mmol/kg	0 mmol
Acetate(CH3COO)	0.00 - 0.00 mmol/kg	0 mmol
Trace elements	0.00 - 10.00 ml	ml

Vitamin

Single Vitamin Combine Vitamin

Water soluble: 0.09 ml/kg 0.00 - 10.00 ml 7 ml

Fat soluble: 0.06 ml/kg 0.00 - 10.00 ml 5 ml

Figure 3.1.8-2 PN Component

STEP 3

Select **Use Fluid Calculator** check box

Note

By selecting **Use Fluid Calculator** check box, system will be auto calculate **Total volume required per day** based on the **Body Weight Type**

STEP 4

Enter value for **Total volume required by weight**

STEP 5

Enter value for **Total Oral Feeding per day**

Note

TPN Volume will be automatically calculated by system.

STEP 6

Enter value of the **Macronutrient** that applicable for the PN Component.

Note

- All entered value must between the **Recommended Range (per kg)**.
- 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 **By Weight** will automatically calculate and display after enter the **Trace elements Per day** value.

STEP 7

Enter value of the **Electrolytes** that applicable for the PN Component

Note

- All entered value must between the **Recommended Range (per kg)**.
- **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 be automatically calculated and displayed after enter the **Trace elements Per day** value.

<input checked="" type="radio"/> Single Vitamin	<input type="radio"/> Multi Vitamin			
Water soluble	<input type="text" value="0"/> ml	<input type="text" value=""/> ml	<input type="text" value="0"/> ml	
Fat soluble	<input type="text" value="0"/> ml	<input type="text" value=""/> ml	<input type="text" value="0"/> ml	

Figure 3.1.8-3 PN Component

Vitamin				
<input type="radio"/> Single Vitamin	<input checked="" type="radio"/> Multi Vitamin			
Vitamin(Water and Fat Soluble)	<input type="text" value="0"/> ml	<input type="text" value=""/> ml	<input type="text" value="0"/> ml	

Figure 3.1.8-4 PN Component

Note

- Select either **Single Vitamin** or **Multivitamin** radio button.
- Vitamin have 2 types vitamin:
 - Single Vitamin
 - Multi Vitamin
- If user select **Single Vitamin** radio button; **Water soluble** and **Fat soluble** field will automatically display by system as per Figure 3.1.8-3.
- If user select **Multi Vitamin** radio button; **Vitamin(Water and Fat Soluble)** field will automatically display by system as per Figure 3.1.8-4.

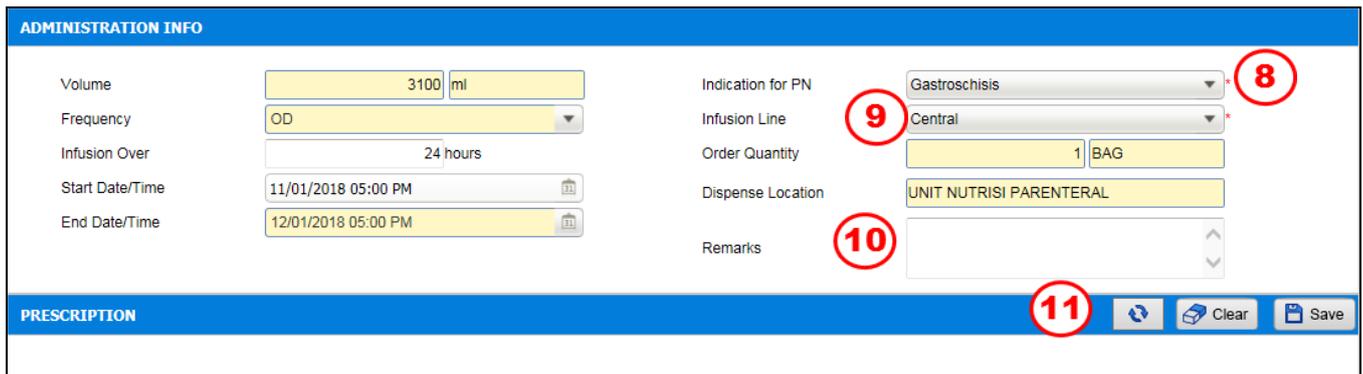


Figure 3.1.8-5 Administration Info

STEP 8

Enter **Indication for PN** by select from drop down box

STEP 9

Enter **Infusion Line** by select from drop down box

Note

- **Infusion Over** will be automatically default to 24 hours but user is allow to change at this field.
- **Volume, Frequency and Order Quantity** will be automatically displayed by system and user is not allow to edit this field.
- **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 display based on the **Start Date/Time** and **Infusion Over(hours)**.
- **Dispense Location** will be automatically default by system.

STEP 10

Enter **Remarks** if applicable

STEP 11

Click on the  button to add prescription

Note

Prescription will display as per Figure 3.1.8-6

PN COMPONENT									
ADMINISTRATION INFO									
PRESCRIPTION									
Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date	
PN Compounded Adult	38.75 (3100)	31 (2480)	24	1 BAG	OD	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM	
Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin per kg (ml)
0.6 (48)	1 (80)	1 (80)	0.1 (8)	0.1 (8)	NA	NA	0.06 (5)	0.09 (7)	NA
Protein g per kg (g)	Carbohydrate g per kg (g)	Carbohydrate %	Lipid g per kg (g)	L-Glutamin ml per kg (ml)	Calorie Calculator	Infusion Line			
2 (160)	3 (240)	NA	1 (80)	2.5 (200)	NA	Central			

Figure 3.1.8-6 PN Prescription

STEP 12

Click on the button to save prescription

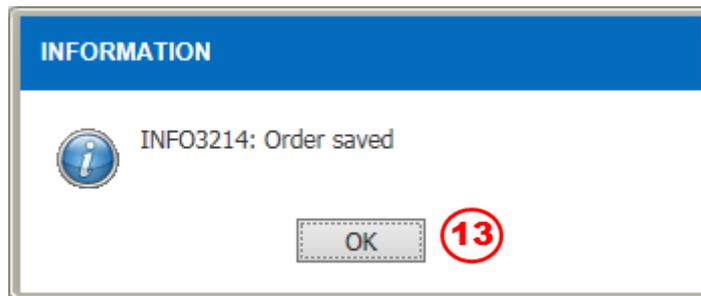


Figure 3.1.8-7 Information Alert Message

STEP 13

Click on the button to save order record

Note

After saving the record, button, button, button and button will be displayed as per Figure 3.1.8-8.

PN COMPONENT									
ADMINISTRATION INFO									
PRESCRIPTION									
Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date	
PN Compounded Adult	38.75 (3100)	31 (2480)	24	1 BAG	OD	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM	
Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin ml per kg (ml)
0.6 (48)	1 (80)	1 (80)	0.1 (8)	0.1 (8)	NA	NA	0.06 (5)	0.09 (7)	NA
Protein g per kg (g)	Carbohydrate g per kg (g)	Carbohydrate %	Lipid g per kg (g)	L-Glutamin ml per kg (ml)	Calorie Calculator	Infusion Line			
2 (160)	3 (240)	NA	1 (80)	2.5 (200)	NA	Central			

Figure 3.1.8-8 PN Prescription

STEP 14

Click on the button to confirm prescription

Note

- The button to delete prescription.
- The button to print prescription.

- The  button to edit information after saved record

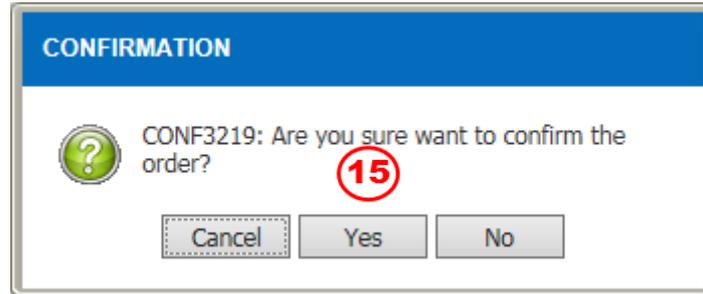
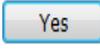


Figure 3.1.8-9 Confirmation Alert Message

STEP 15

Click on the  button to confirm record order

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: 80 kg

PN COMPONENT

ADMINISTRATION INFO

PRESCRIPTION  

Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Quantity	Freq	Duration	Start date	End date	
PN Compounded Adult	38.75 (3100)	31 (2480)	24	1 BAG	OD	1 Days	11/01/2018 05:00 PM	12/01/2018 05:00 PM	
Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin ml per kg (ml)
0.6 (48)	1 (80)	1 (80)	0.1 (8)	0.1 (8)	NA	NA	0.06 (5)	0.09 (7)	NA
Protein g per kg (g)	Carbohydrate g per kg (g)	Carbohydrate %	Lipid g per kg (g)	L-Glutamin ml per kg (ml)	Calorie Calculator	Infusion Line			
2 (160)	3 (240)	NA	1 (80)	2.5 (200)	NA	Central			

Figure 3.1.8-10 PN Order

Note

- Click on the  button to view/print PN prescription as Figure 3.1.8 -11
- Click on the  button to order a new prescription

Ministry Of Health, Malaysia
Hospital Pakar Sultanah Fatimah, Muar
PARENTERAL NUTRITION

Patient Name: [REDACTED] Patient ID: [REDACTED]

Age: [REDACTED] MRN: HPSF00190582

Gender: Male Prescription : W2L0001087884

Height / Weight / : 169 cm/80 kg/1.97 m² Order Date / Time 11/01/2018 02:33 PM

Room No / Bed: [REDACTED] Location: [REDACTED]

Diagnosis: rheumatic fever Allergy: [REDACTED]

TPN Order: PN Compounded : [REDACTED] Order 1 bag

Start 11/01/2018 05:00 PM End 12/01/2018 05:00 PM

	Content / kg	Content / bag
Volume (ml)	38.75	3100
Calorie (kCal)	48	3840
Protein (g)	2	160
Carbohydrate (g)	3	240
Lipid (g)	1	80
Sodium (mmol)	1	80
Potassium (mmol)	1	80
Calcium (mmol)	0.1	8
Magnesium (mmol)	0.1	8
Phosphate (mmol)	0.6	48
Chloride (mmol)	NA	NA
Acetate (mmol)	NA	NA
Trace Element (ml)	NA	NA
Combine Vitamin (ml)	NA	NA
Water Soluble Vitamin (ml)	0.09	7
Fat Soluble Vitamin (ml)	0.06	5
L-Glutamin (ml)	2.5	200

Infusion Over: 24 hr Frequency: OD

Prescriber: [REDACTED] Infusion Route: Central

Designation: Pegawai Perubatan Remarks:

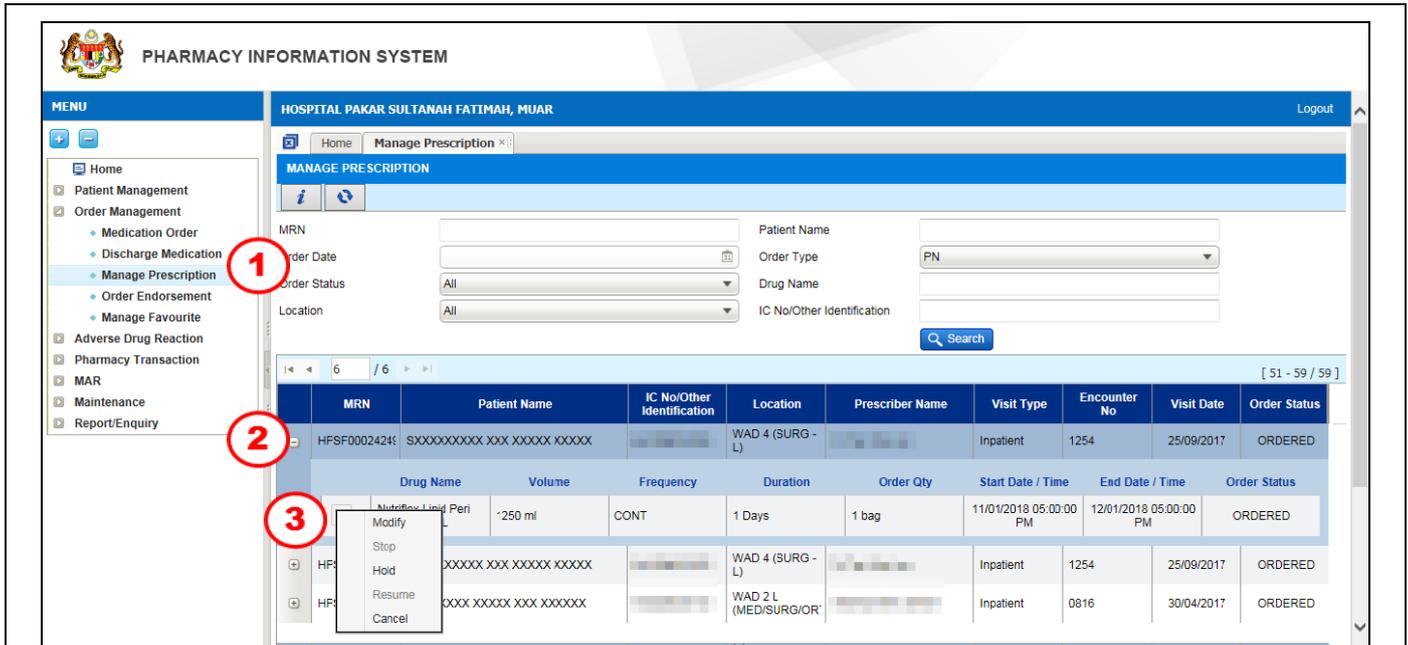
Department: General Medicine

Figure 3.1.8-11 PN Order Prescription

3.2 Manage Prescription

3.2.1 Modify Order

Modify Order screen allow user to modify prescription or drugs details before verify the order.



PHARMACY INFORMATION SYSTEM

HOSPITAL PAKAR SULTANAH FATIMAH, MUAR

Home | Manage Prescription

MANAGE PRESCRIPTION

MRN: Patient Name:
 Order Date: Order Type:
 Order Status: Drug Name:
 Location: IC No/Other Identification:

MRN	Patient Name	IC No/Other Identification	Location	Prescriber Name	Visit Type	Encounter No	Visit Date	Order Status																
HFSF0002424	SXXXXXXXXX XXX XXXXX XXXXX		WAD 4 (SURG - L)		Inpatient	1254	25/09/2017	ORDERED																
<table border="1"> <thead> <tr> <th>Drug Name</th> <th>Volume</th> <th>Frequency</th> <th>Duration</th> <th>Order Qty</th> <th>Start Date / Time</th> <th>End Date / Time</th> <th>Order Status</th> </tr> </thead> <tbody> <tr> <td>Nutriflow-Liq Peri</td> <td>1250 ml</td> <td>CONT</td> <td>1 Days</td> <td>1 bag</td> <td>11/01/2018 05:00:00 PM</td> <td>12/01/2018 05:00:00 PM</td> <td>ORDERED</td> </tr> </tbody> </table>									Drug Name	Volume	Frequency	Duration	Order Qty	Start Date / Time	End Date / Time	Order Status	Nutriflow-Liq Peri	1250 ml	CONT	1 Days	1 bag	11/01/2018 05:00:00 PM	12/01/2018 05:00:00 PM	ORDERED
Drug Name	Volume	Frequency	Duration	Order Qty	Start Date / Time	End Date / Time	Order Status																	
Nutriflow-Liq Peri	1250 ml	CONT	1 Days	1 bag	11/01/2018 05:00:00 PM	12/01/2018 05:00:00 PM	ORDERED																	
HFS	XXXXXXXX XXX XXXXX XXXXX		WAD 4 (SURG - L)		Inpatient	1254	25/09/2017	ORDERED																
HFS	XXXX XXXXX XXX XXXXX		WAD 2 L (MED/SURG/OR)		Inpatient	0816	30/04/2017	ORDERED																

Figure 3.2.1-1 Manage Order

STEP 1

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

Note

- Various search criteria is provided as below:
 - MRN
 - Patient Name
 - Order Date
 - Order Type
 - Order Status
 - Drug name
 - Location
 - IC No/Other Identification
- Order Type choose as PN

STEP 2

Click on the  expand button to display order details as per Figure 3.2.1-1

STEP 3

Right click mouse on the  button and select **Modify** as per Figure 3.2.1-1

Note

- PN Manage Prescription screen will be displayed as per Figure 3.2.1-2.

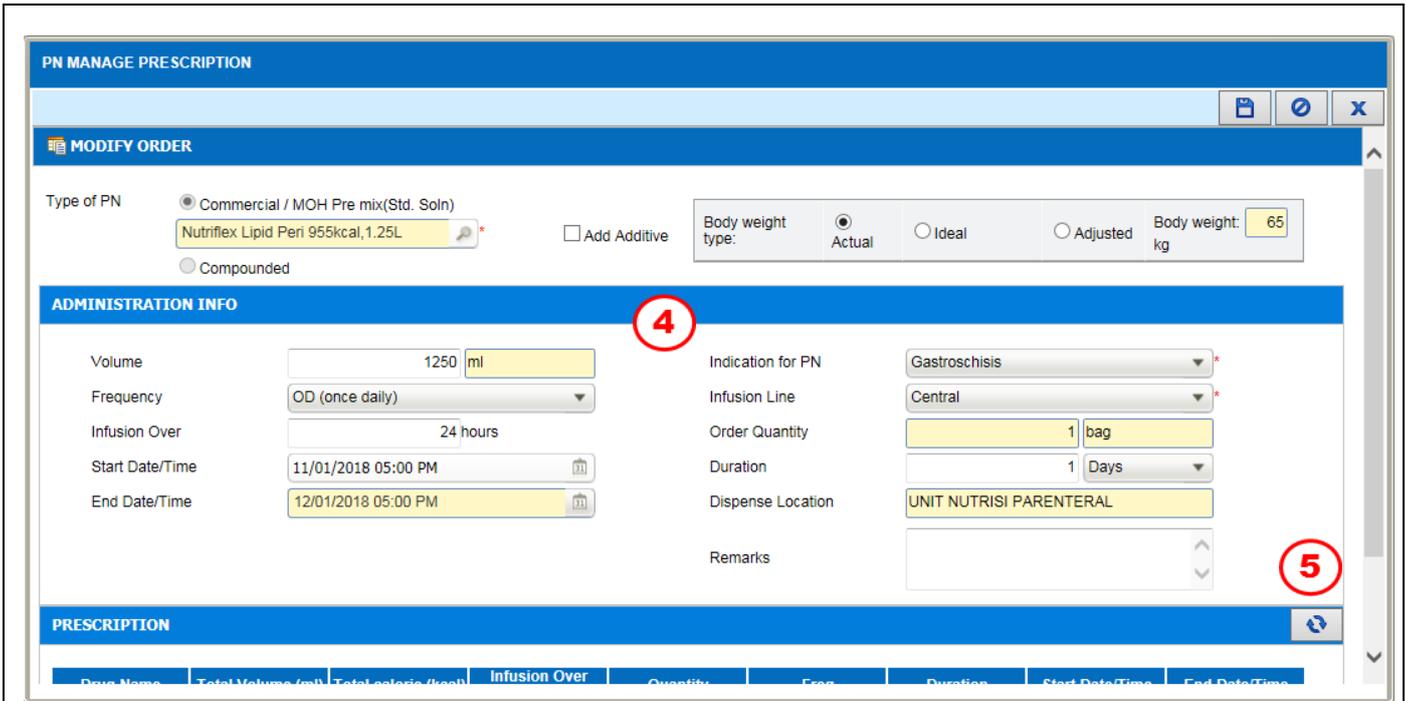


Figure 3.2.1-2 Drug Details

STEP 4

Edit the necessary information

STEP 5

Click on the  button to update the edited information into the prescription

STEP 6

Click on the  button to save the record and confirmation alert will displayed as Figure 3.2.1-3

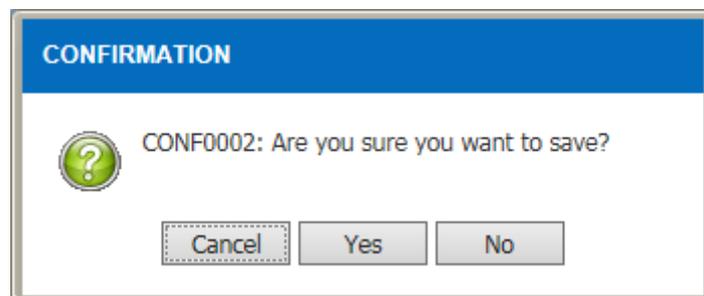
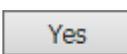


Figure 3.2.1-3 Confirmation Alert

Note

Click on the  button to save the record

3.2.2 Hold and Resume Order

Hold and Resume order screen allow user to hold order before verify order and to hold and suspicious prescription. Also to resume back the hold order. User need to enter reason to hold order in remarks.

Hold Order

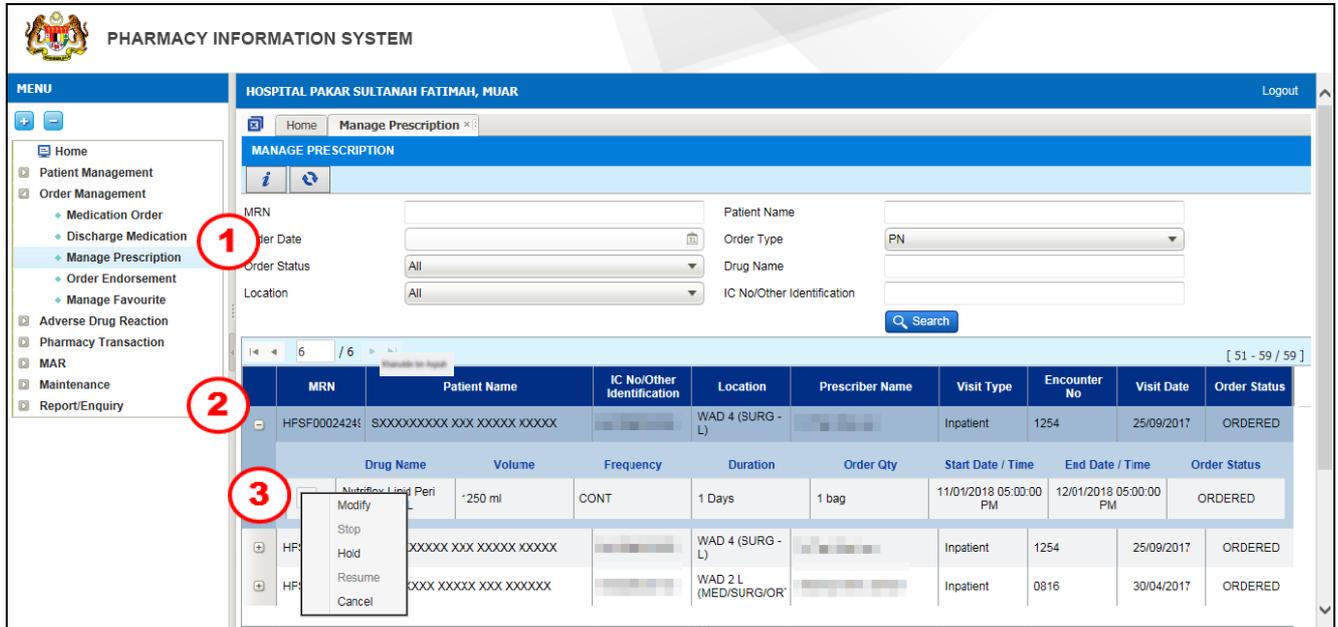


Figure 3.2.2-1 Hold Order

STEP 1

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

Note

- Various search criteria is provided as below:
 - a) MRN
 - b) Patient Name
 - c) Order Date
 - d) Order Type
 - e) Order Status
 - f) Drug name
 - g) Location
 - h) IC No/Other Identification
- Order Type choose as PN

STEP 2

Click on the  expand button to display order details as per Figure 3.2.2-1

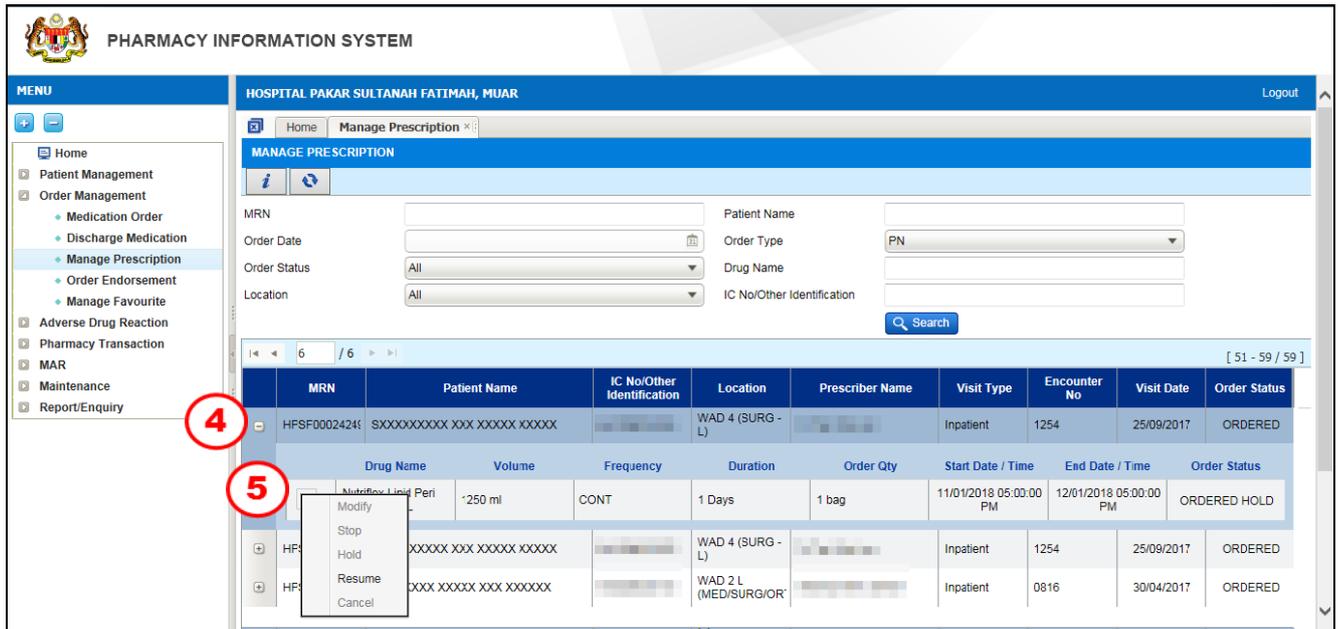
STEP 3

Right click mouse on the  button and select **Hold** as per Figure 3.2.2-1

Note

- System will hold order from dispensing and changed **Order Status** to Ordered Hold.

Resume Order



PHARMACY INFORMATION SYSTEM

HOSPITAL PAKAR SULTANAH FATIMAH, MUAR

Home Manage Prescription

MANAGE PRESCRIPTION

MRN: Patient Name:
 Order Date: Order Type:
 Order Status: Drug Name:
 Location: IC No/Other Identification:

Search

MRN	Patient Name	IC No/Other Identification	Location	Prescriber Name	Visit Type	Encounter No	Visit Date	Order Status
HFSF00024246	SXXXXXXXX XXX XXXXX XXXXX		WAD 4 (SURG - L)		Inpatient	1254	25/09/2017	ORDERED

Drug Name	Volume	Frequency	Duration	Order Qty	Start Date / Time	End Date / Time	Order Status
Nutrition Link Peri	250 ml	CONT	1 Days	1 bag	11/01/2018 05:00:00 PM	12/01/2018 05:00:00 PM	ORDERED HOLD

Context Menu: Modify, Stop, Hold, Resume, Cancel

Figure 3.2.2-2 Resume Order

STEP 4

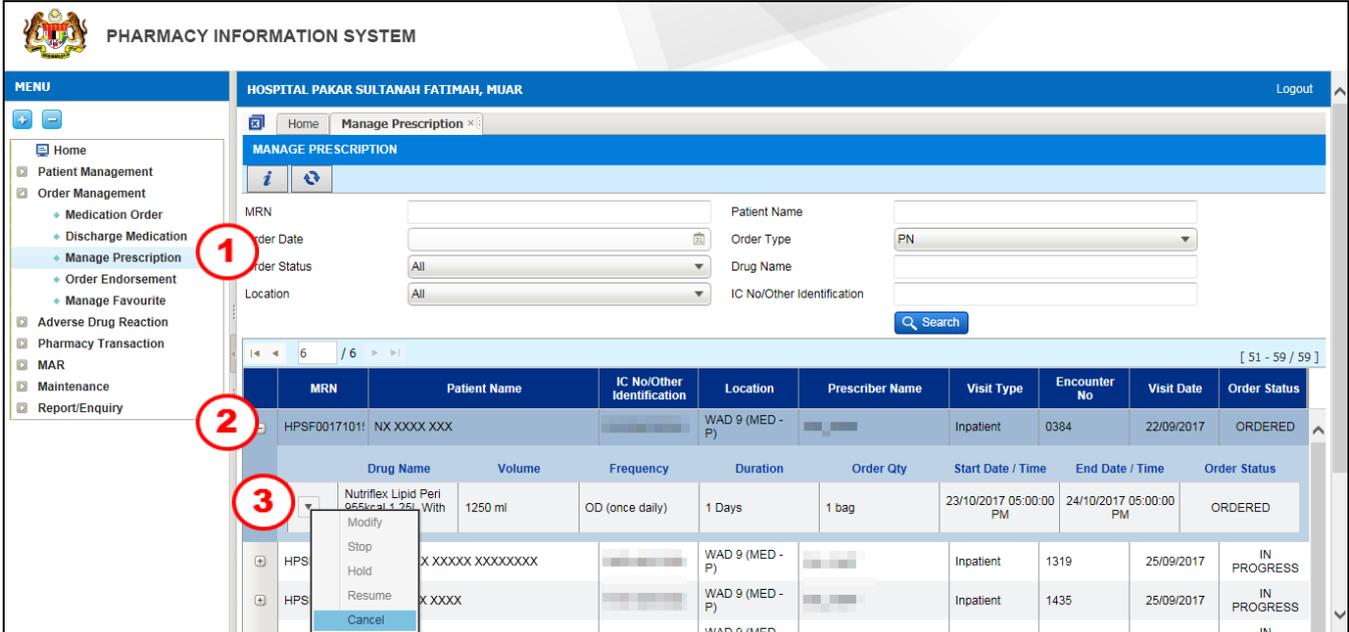
Click on the  expand button to display order details as per Figure 3.2.2-2

STEP 5

Right click mouse on the  button and select **Resume** as per Figure 3.2.2-2

3.2.3 Cancel / Stop Order

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



PHARMACY INFORMATION SYSTEM

HOSPITAL PAKAR SULTANAH FATIMAH, MUAR

Home Manage Prescription x

MANAGE PRESCRIPTION

MRN: Patient Name:
 Order Date: Order Type:
 Order Status: Drug Name:
 Location: IC No/Other Identification:

MRN	Patient Name	IC No/Other Identification	Location	Prescriber Name	Visit Type	Encounter No	Visit Date	Order Status																
HPSF0017101!	NX XXXX XXX		WAD 9 (MED - P)		Inpatient	0384	22/09/2017	ORDERED																
<table border="1"> <thead> <tr> <th>Drug Name</th> <th>Volume</th> <th>Frequency</th> <th>Duration</th> <th>Order Qty</th> <th>Start Date / Time</th> <th>End Date / Time</th> <th>Order Status</th> </tr> </thead> <tbody> <tr> <td>Nutriflex Lipid Peri 95kcal 1.25L With</td> <td>1250 ml</td> <td>OD (once daily)</td> <td>1 Days</td> <td>1 bag</td> <td>23/10/2017 05:00:00 PM</td> <td>24/10/2017 05:00:00 PM</td> <td>ORDERED</td> </tr> </tbody> </table>									Drug Name	Volume	Frequency	Duration	Order Qty	Start Date / Time	End Date / Time	Order Status	Nutriflex Lipid Peri 95kcal 1.25L With	1250 ml	OD (once daily)	1 Days	1 bag	23/10/2017 05:00:00 PM	24/10/2017 05:00:00 PM	ORDERED
Drug Name	Volume	Frequency	Duration	Order Qty	Start Date / Time	End Date / Time	Order Status																	
Nutriflex Lipid Peri 95kcal 1.25L With	1250 ml	OD (once daily)	1 Days	1 bag	23/10/2017 05:00:00 PM	24/10/2017 05:00:00 PM	ORDERED																	
HPS	X XXXXX XXXXXXXX		WAD 9 (MED - P)		Inpatient	1319	25/09/2017	IN PROGRESS																
HPS	X XXXXX		WAD 9 (MED - P)		Inpatient	1435	25/09/2017	IN PROGRESS																

Figure 3.2.3-1 Manage Prescription

STEP 1

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

Note

- Various search criteria is provided as below:
 - a) MRN
 - b) Patient Name
 - c) Order Date
 - d) Order Type
 - e) Order Status
 - f) Drug name
 - g) Location
 - h) IC No/Other Identification

- Order Type choose as PN

STEP 2

Click on the  expand button to display order details

STEP 3

Right click mouse on the  button and select **Cancel** and system will displayed cancel reason window as Figure 3.2.3-2

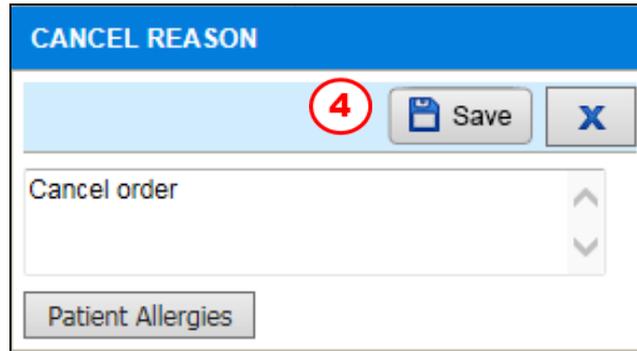


Figure 3.2.3-2 Cancel Reason

STEP 4

Enter cancel reason and click on the  Save button

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 3.2.3-2.
- Select **Stop** function to stop order that has dispensed to patient

3.3 Order Endorsement

Order Endorsement screen allow user to endorse the prescription.

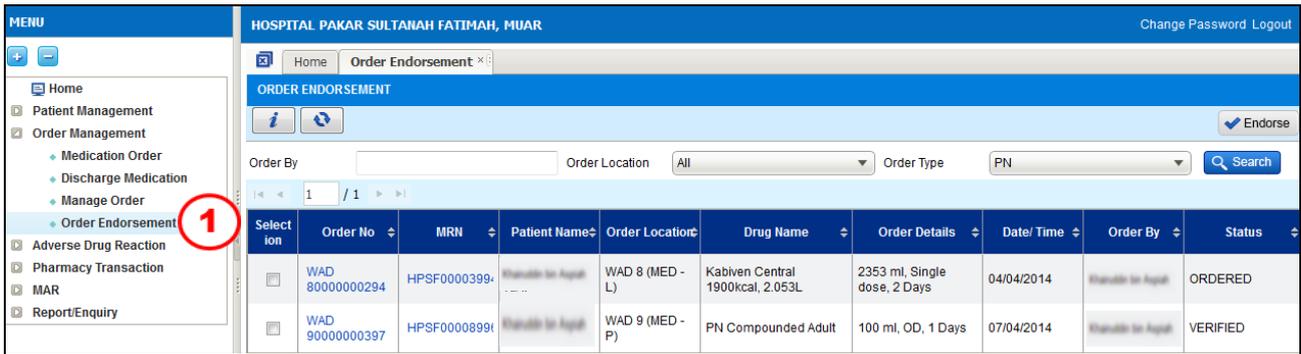


Figure 3.3-1 Medication Order Endorsement

STEP 1

Click on 'Order Management' menu and click on 'Order Endorsement' sub-menu

Note

Various search criteria is provided as below:

- a) Order By
- b) Order Location
- c) Order Type

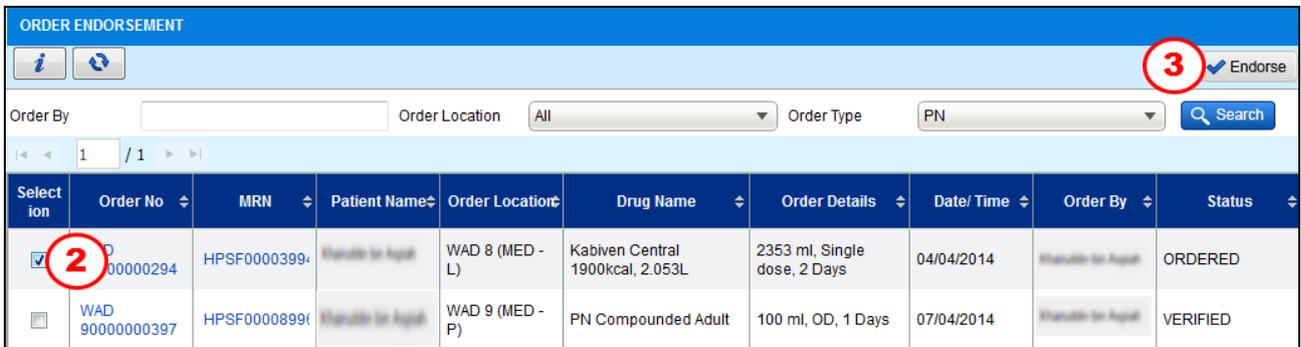


Figure 3.3-2 Medication Order Endorsement

STEP 2

Click the selection checkbox as per Figure 3.3-2

STEP 3

Click on the Endorse button to confirm endorsement order

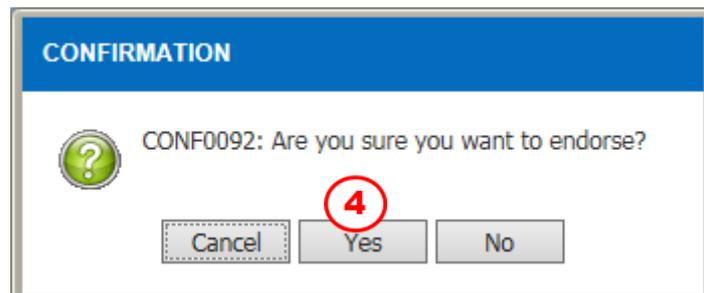


Figure 3.3-3 Confirmation Alert

STEP 4

Click on the button to endorse the order

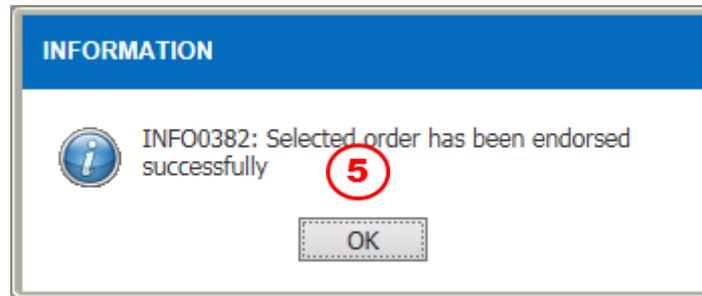


Figure 3.3-4 Information Alert

STEP 5

Click on the button to successfully endorsed the order

4.0 Acronyms

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

5.0 Links to Clinical Modules

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