



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

---

**Full Based**

**User Manual  
Parenteral Nutrition Order**

<b>Version</b>	<b>: 8<sup>th</sup> EDITION</b>
<b>Document ID</b>	<b>: FB_U.MANUAL_OM PN</b>



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*Reference ID : FB\_U.MANUAL\_OM PN-8<sup>th</sup> EDITION*

*Application reference: PhIS & CPS v1.8.1*



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## 1.0 Introduction

### 1.1 Overview of PhIS

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

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

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

### 1.2 Purpose and Objectives

This user manual outlines the Parenteral Nutrition 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

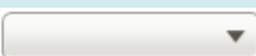
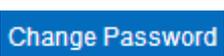
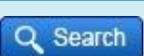
### 1.3 Organised Sections

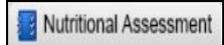
These are the sections within this document:

- 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

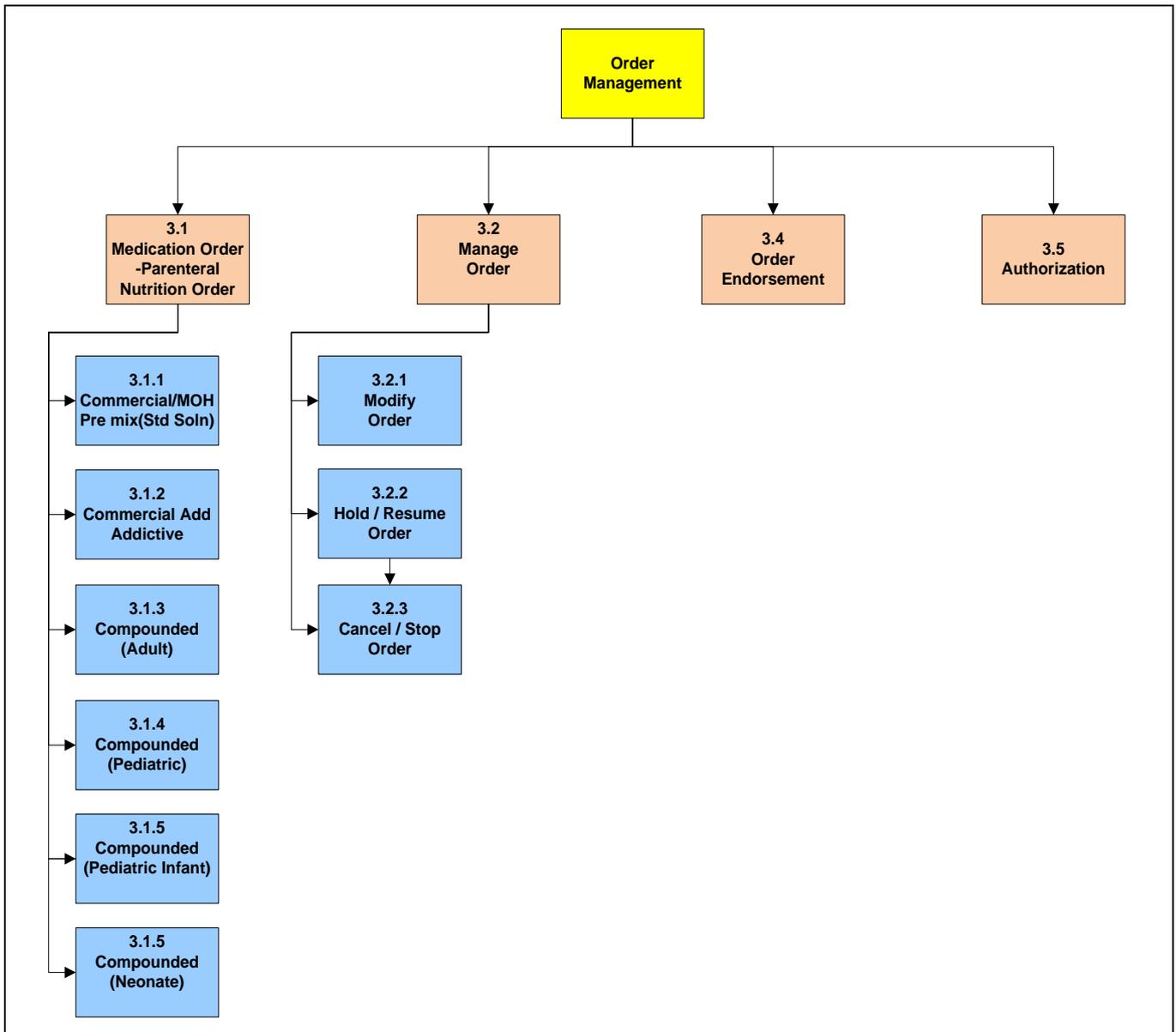


Figure 3.0-1



## Functional Description

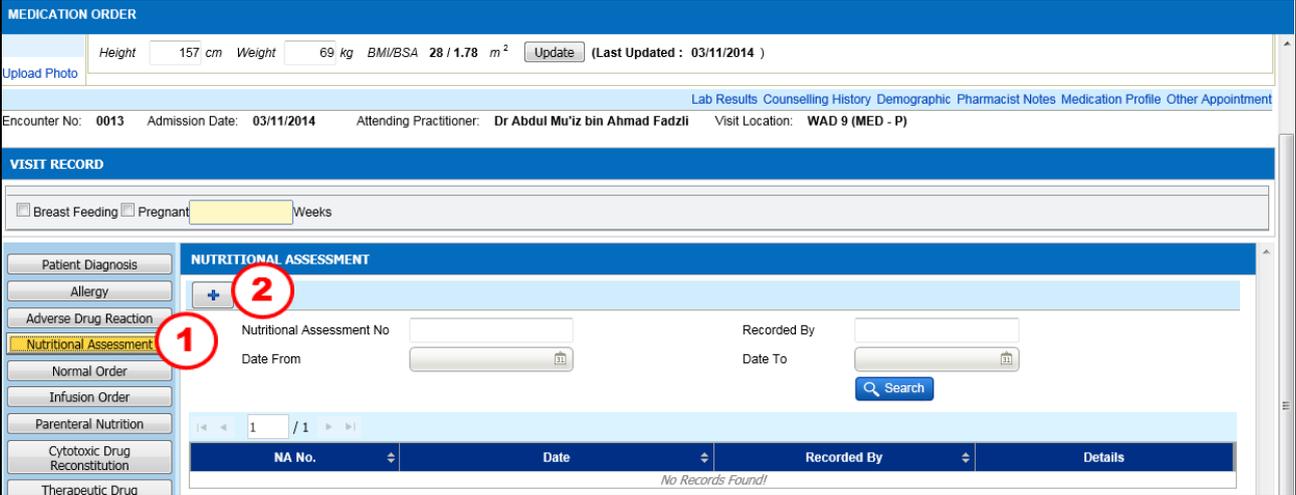
Parenteral Nutrition Order comprises of four (4) main functions:

- **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 m<sup>2</sup>, and an 'Update' button. Below this is a 'VISIT RECORD' section with checkboxes for 'Breast Feeding' and 'Pregnant' (with a dropdown for 'Weeks'). The 'NUTRITIONAL ASSESSMENT' section is highlighted in blue. On the left sidebar, the 'Nutritional Assessment' button is marked with a red circle '1'. In the main form area, a '+' button is marked with a red circle '2'. The form includes fields for 'Nutritional Assessment No.', 'Date From', 'Recorded By', and 'Date To', along with a 'Search' button. A table below the form shows columns for 'NA No.', 'Date', 'Recorded By', and 'Details', with a message 'No Records Found!' below it.

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 ?  
 Yes  No
2. Has the patient lost weight within the last 3 months ?  
 Yes  No
3. Has the patient had a reduced dietary intake in the last week ?  
 Yes  No
4. Is the patient severely ill ? (e.g. in intensive therapy)  
 Yes  No

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

**Final Screening**

<b>Impaired nutritional status</b> Score Note: Absent: Mild: Moderate: Severe:	<b>Severity of disease</b> Score Note: Absent: Mild: Moderate: Severe:
Normal nutritional status Wt loss > 5% in 3 mths or Food intake below 50-75% of normal requirement in preceding week. 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.	Normal nutritional status Hip fracture* Chronic patients, in particular with acute complications: cirrhosis* COPD* Chronic hemodialysis, diabetes, oncology Major abdominal surgery* Stroke* Severe pneumonia, hematologic malignancy Head injury* Bone marrow transplantation* Intensive care patients (APACHE410)

Total Score: [ ]

If Age is > 70 years, total score above is inclusive -1  
Score > 3, the patient is nutritionally at-risk and a nutritional care plan is initiated  
Score < 3, weekly re-screening 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 - Subjective Global Assessment of Nutritional Status (HISTORY)**

1. Weight change  
Overall in past 6 months: [ ] kg % loss: [ ]  
Change in past 2 weeks: [ ]
2. Dietary intake change:  Yes  No
3. Gastrointestinal symptoms (persisted > 2 weeks)  
 Nausea  
 Vomiting  
 Loss of Appetite  
 Diarrhea
4. Functional Capacity:  No Dysfunction  Dysfunction

**Physical Examination**

Specify for each sign:  
0=normal 1=slight 2=moderate 3=serious

Loss of subcutaneous fat (triceps, chest)  
 Loss of muscle mass (quadriceps, femors, deltoids, loss of bulk and tone detectable by palpation)  
 Ankle edema  
 Sacral edema  
 Ascites

SGA score: [ ]

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.

**MEDICATION ORDER**

Height  Weight  BMI/BSA   (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

1 / 1

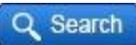
NA No.	Date	Recorded By	Details
NA14-11-0015	03/11/2014	Dr Abdul Mu'iz bin Ahmad Fadzli	NRS Total Score: 2, SGA Score: B - Malnourished

**Figure 3.1.1-3 Nutritional Assessment Listing Page**

**Physical Examination Section**

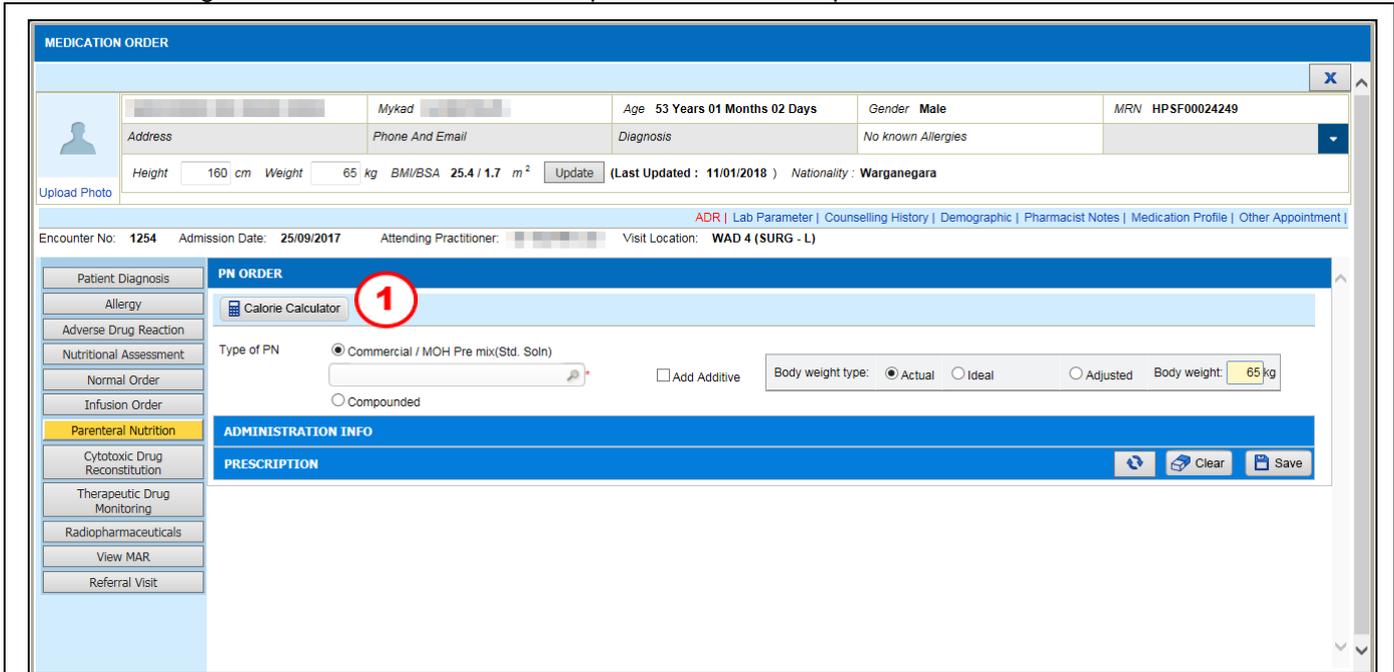
*This section have to be entered by user.*

**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.
- To search for existing nutritional assessment record(s), you may search by criteria as follow:
  - a) Nutritional Assessment No
  - b) Date From
  - c) Date To
  - d) 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 Height (160 cm), Weight (65 kg), and BMI/BSA (25.4 / 1.7 m<sup>2</sup>) is also present. A navigation bar includes links for ADR, Lab Parameter, Counselling History, Demographic, Pharmacist Notes, Medication Profile, and Other Appointment. The main content area is titled 'PN ORDER' and contains a 'Calorie Calculator' button, which is circled in red with the number '1'. Below the button, there are options for 'Type of PN' (Commercial / MOH Pre mix(Std. Soln) or Compounded), 'Add Additive', and 'Body weight type' (Actual, Ideal, Adjusted) with a 'Body weight' field set to 65 kg. At the bottom, there are 'ADMINISTRATION INFO' and 'PRESCRIPTION' sections with 'Clear' and 'Save' buttons.

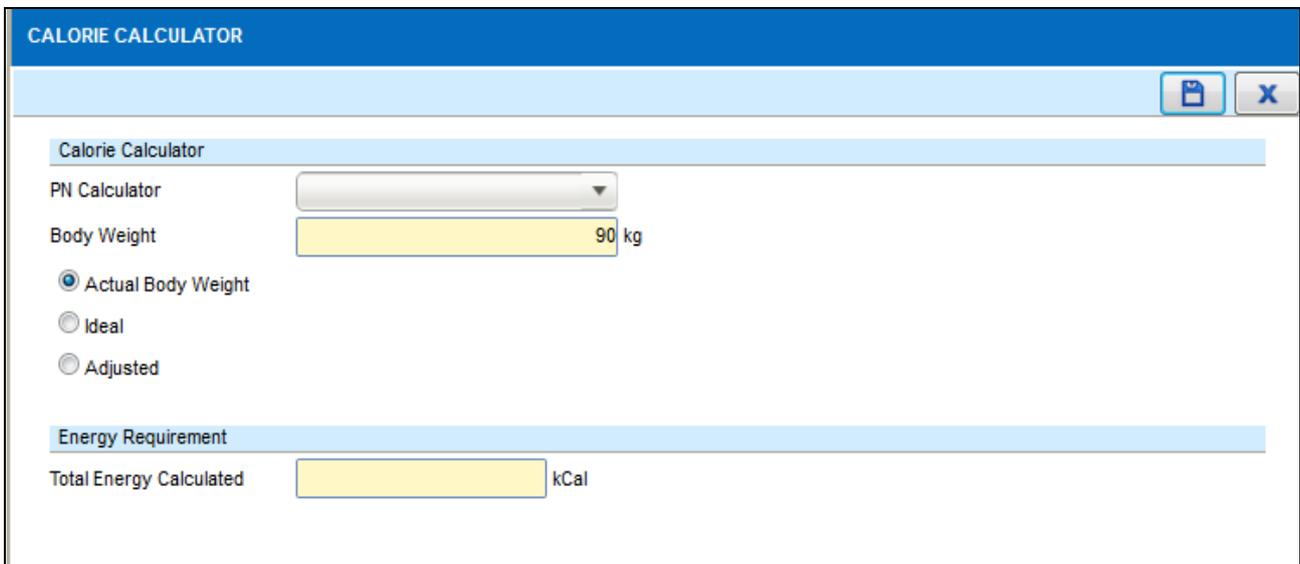
Figure 3.1.2-1 Calorie Calculator

#### STEP 1

Click on the  **Calorie Calculator** button to calculate patient calorie

#### Note

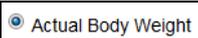
Calorie Calculator screen will be displayed as per Figure 3.1.2-2.



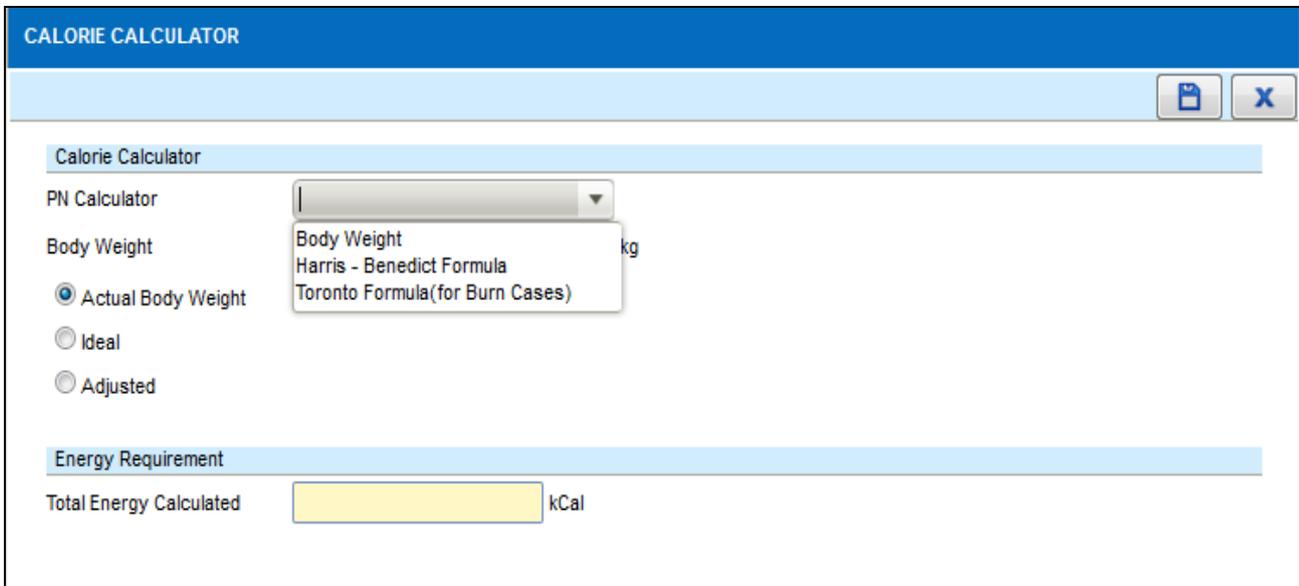
The screenshot shows the 'CALORIE CALCULATOR' window. It has a title bar with a save icon and a close button. The main content area has a 'Calorie Calculator' header. Below it, there is a 'PN Calculator' dropdown menu. The 'Body Weight' field is set to 90 kg. There are three radio buttons: 'Actual Body Weight' (selected), 'Ideal', and 'Adjusted'. Below this, there is an 'Energy Requirement' section with a 'Total Energy Calculated' field set to 0 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.

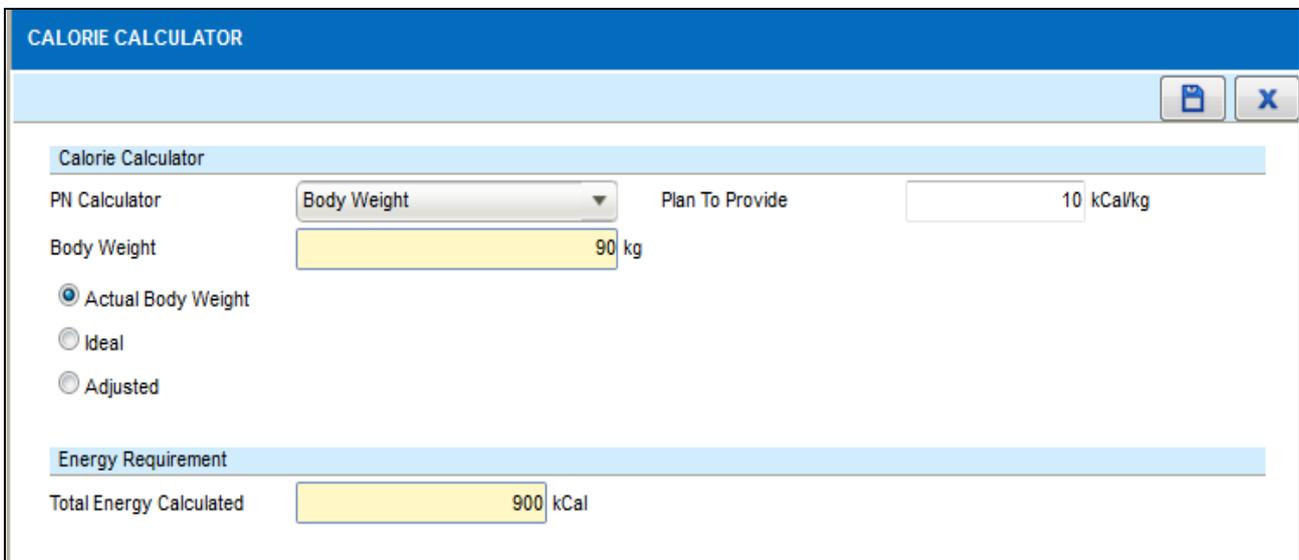


The screenshot shows a window titled "CALORIE CALCULATOR". Inside, there is a section for "Calorie Calculator" with a dropdown menu for "PN Calculator" that is open, showing options: "Body Weight", "Harris - Benedict Formula", and "Toronto Formula(for Burn Cases)". Below this, there are three radio buttons for "Body Weight": "Actual Body Weight" (selected), "Ideal", and "Adjusted". At the bottom, there is a field for "Total Energy Calculated" which is currently empty, followed by the unit "kCal".

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)
  -



The screenshot shows the same "CALORIE CALCULATOR" window. The "PN Calculator" dropdown is now set to "Body Weight". To its right, there is a field labeled "Plan To Provide" with the value "10 kCal/kg". Below this, the "Body Weight" field now contains the value "90 kg". The "Actual Body Weight" radio button remains selected. At the bottom, the "Total Energy Calculated" field now displays the value "900 kCal".

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.

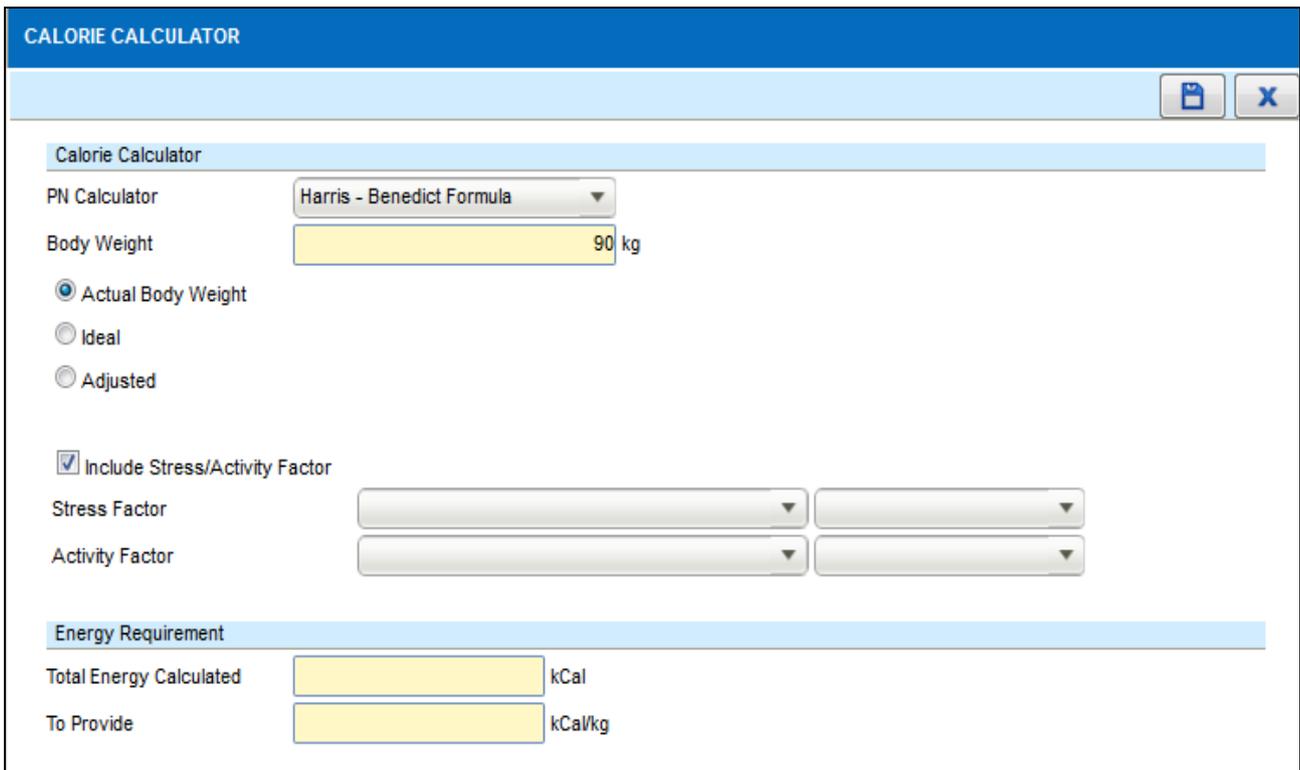


Figure 3.1.2-5 Calorie Calculator

**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.

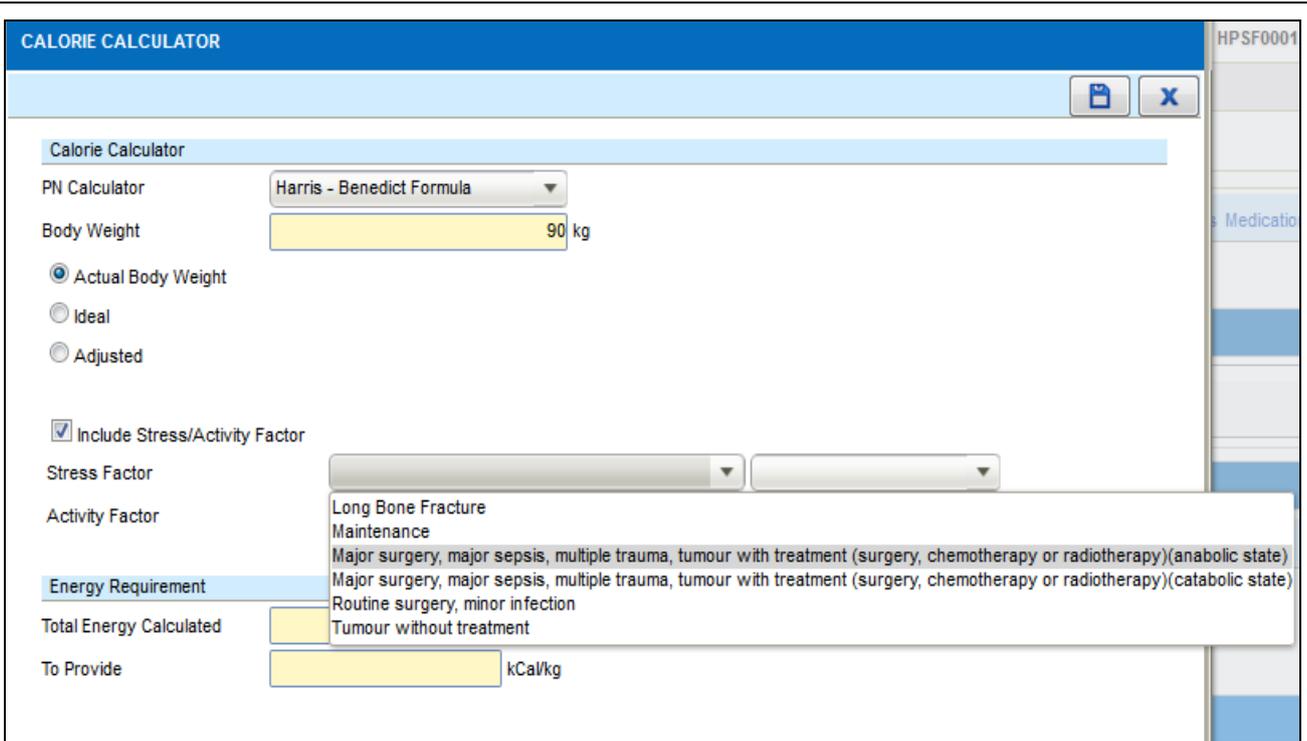
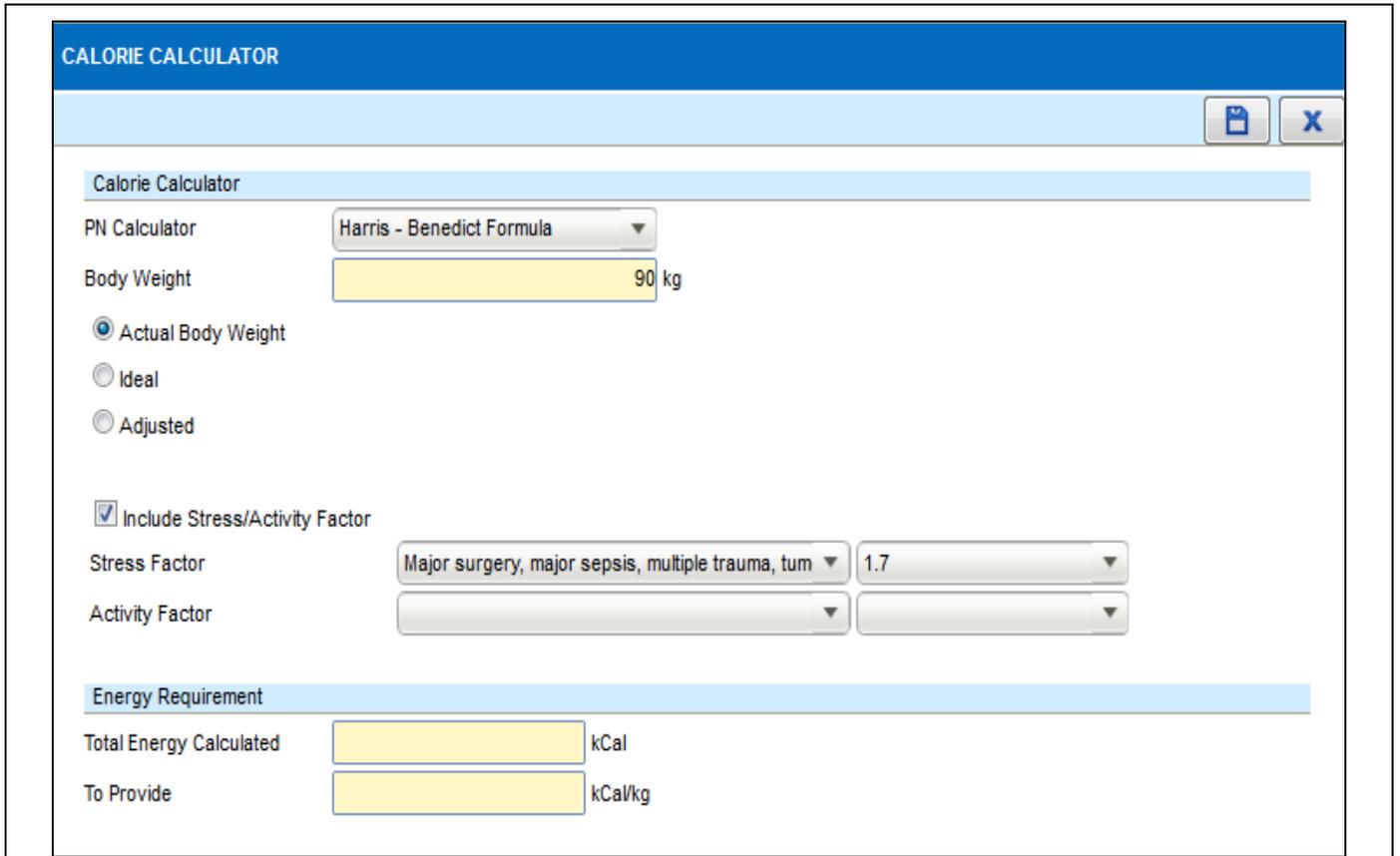


Figure 3.1.2-6 Calorie Calculator

**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).
- Routine surgery, minor infection.
- Tumour without treatment.

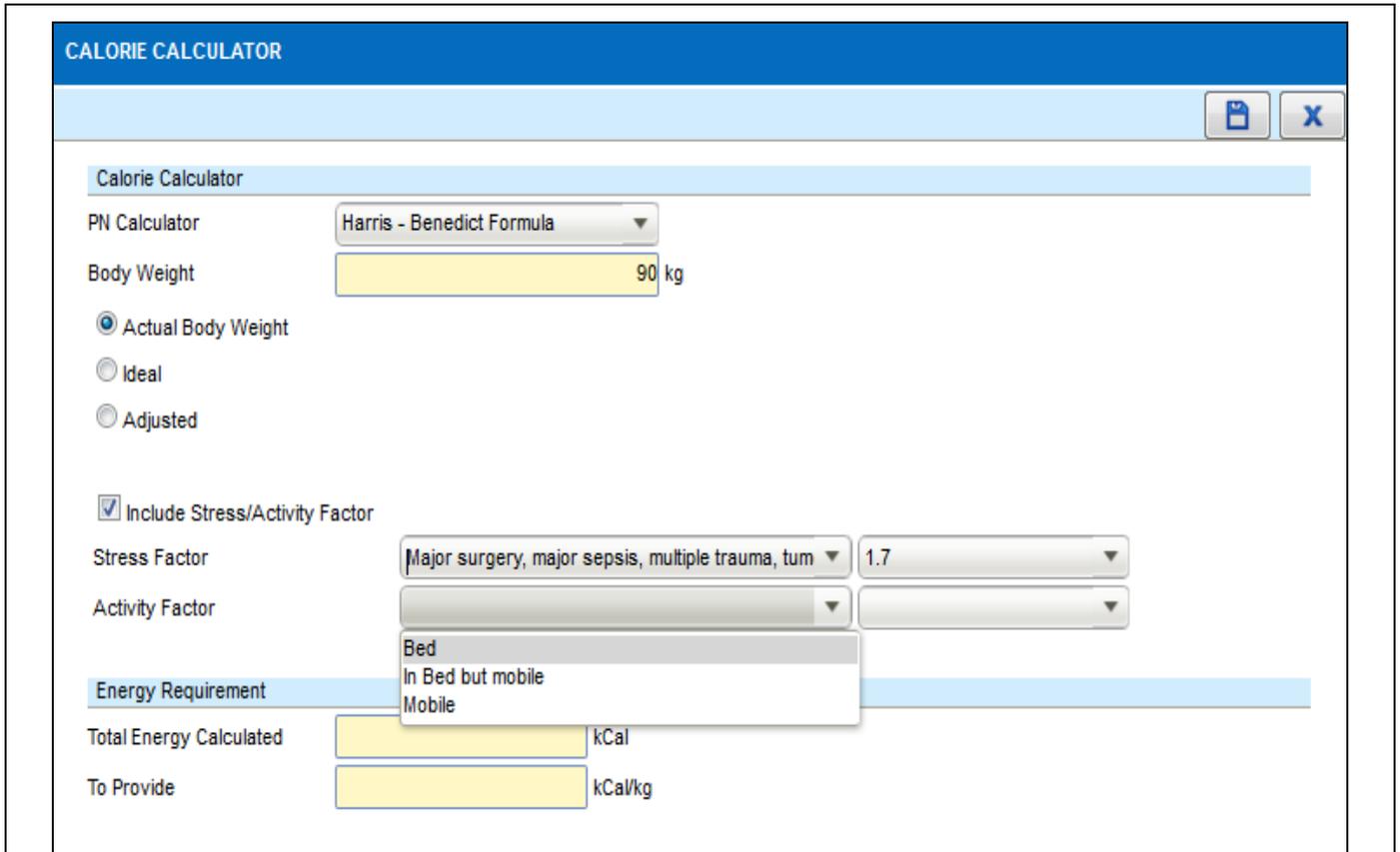


The screenshot shows a web-based 'CALORIE CALCULATOR' interface. At the top, there is a blue header with the title 'CALORIE CALCULATOR' and window control buttons (save and close). Below the header, the form is organized into sections. The first section, 'Calorie Calculator', contains a dropdown menu for 'PN Calculator' set to 'Harris - Benedict Formula'. The 'Body Weight' field is a text input containing '90 kg'. There are three radio button options: 'Actual Body Weight' (selected), 'Ideal', and 'Adjusted'. A checked checkbox labeled 'Include Stress/Activity Factor' is present. Below this, there are two rows of dropdown menus: 'Stress Factor' (set to 'Major surgery, major sepsis, multiple trauma, tum') and 'Activity Factor' (set to '1.7'). The second section, 'Energy Requirement', features two text input fields: 'Total Energy Calculated' (empty) and 'To Provide' (empty), both followed by their respective units 'kCal' and '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: [ ] kCal

To Provide: [ ] 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

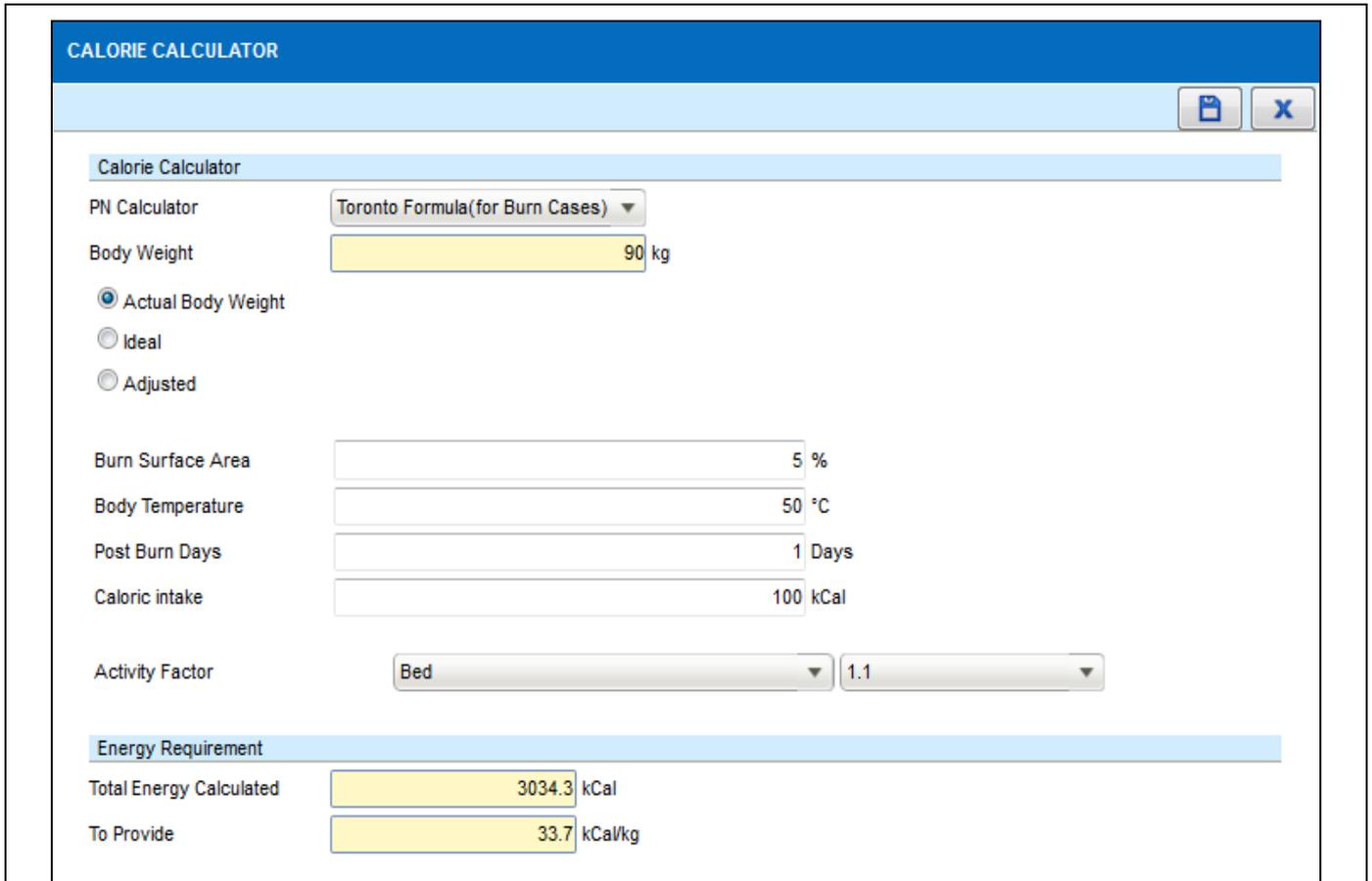
Total Energy Calculated: 2961.9 kCal

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.



**CALORIE CALCULATOR**

Calorie Calculator

PN Calculator: Toronto Formula (for Burn Cases)

Body Weight: 90 kg

Actual Body Weight  
 Ideal  
 Adjusted

Burn Surface Area: 5 %  
Body Temperature: 50 °C  
Post Burn Days: 1 Days  
Caloric intake: 100 kCal

Activity Factor: Bed (1.1)

**Energy Requirement**

Total Energy Calculated: 3034.3 kCal  
To Provide: 33.7 kCal/kg

Figure 3.1.2-10 Calorie Calculator

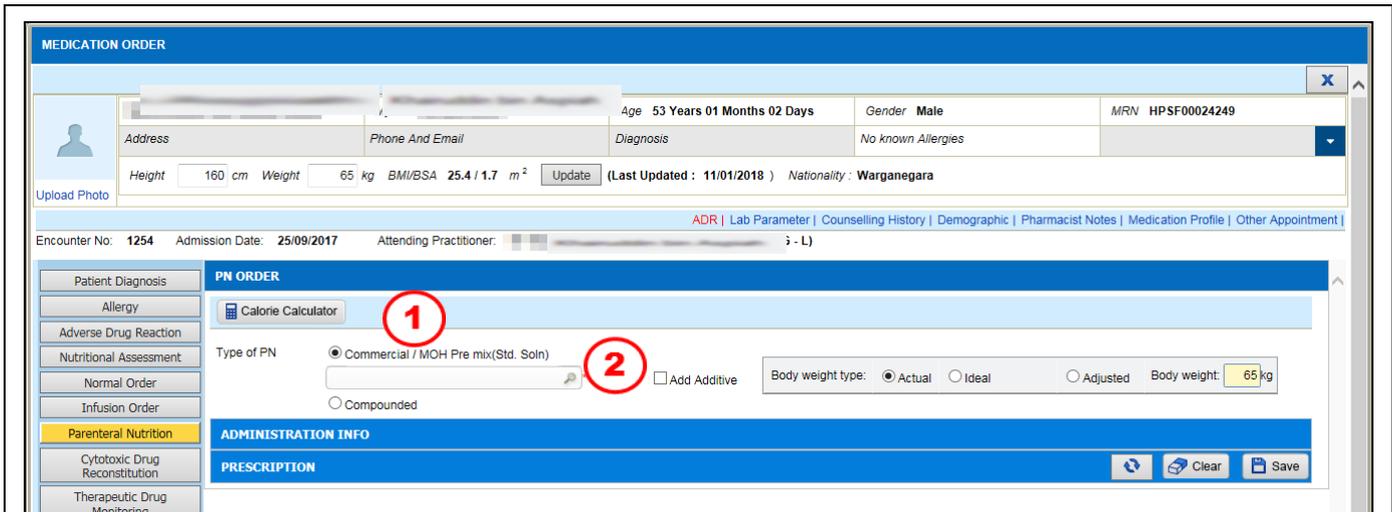
**Note**

**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 'Height' field is set to 160 cm, 'Weight' to 65 kg, and 'BMI/BSA' to 25.4 / 1.7 m<sup>2</sup>. The 'Update' button shows the last update on 11/01/2018. The 'Nationality' is Warganegara. A navigation bar includes links for ADR, Lab Parameter, Counseling History, Demographic, Pharmacist Notes, Medication Profile, and Other Appointment. The main form area is divided into sections: 'PN ORDER' with a 'Calorie Calculator' button (1), 'Type of PN' with a radio button for 'Commercial / MOH Pre mix(Std. Soln)' (2), 'Add Additive' checkbox, and 'Body weight type' options (Actual, Ideal, Adjusted) with a 'Body weight' field set to 65 kg. Below this is 'ADMINISTRATION INFO' and 'PRESCRIPTION' sections. A 'Save' button is visible at the bottom right.

Figure 3.1.3-1 PN Order

#### STEP 1

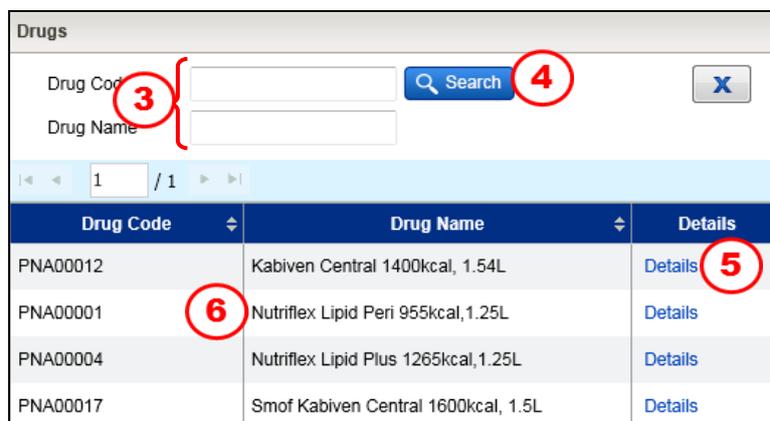
Select on the  Commercial / MOH Pre mix(Std. Soln) radio button for *Type of PN*

#### STEP 2

Click on the  button to search for product

#### Note

User allowed to choose **Body weight type: Actual/Ideal/Adjusted**



The screenshot shows a 'Drugs' search results window. At the top, there are input fields for 'Drug Code' (3) and 'Drug Name', a 'Search' button (4), and a close button (X). Below the input fields is a pagination indicator showing '1 / 1'. The main content is a table with three columns: 'Drug Code', 'Drug Name', and 'Details'. The table contains four rows of data. The 'Details' column for the first row is circled in red (5). The 'Drug Code' for the second row is circled in red (6).

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:

- Drug Code
- Drug Name

#### STEP 4

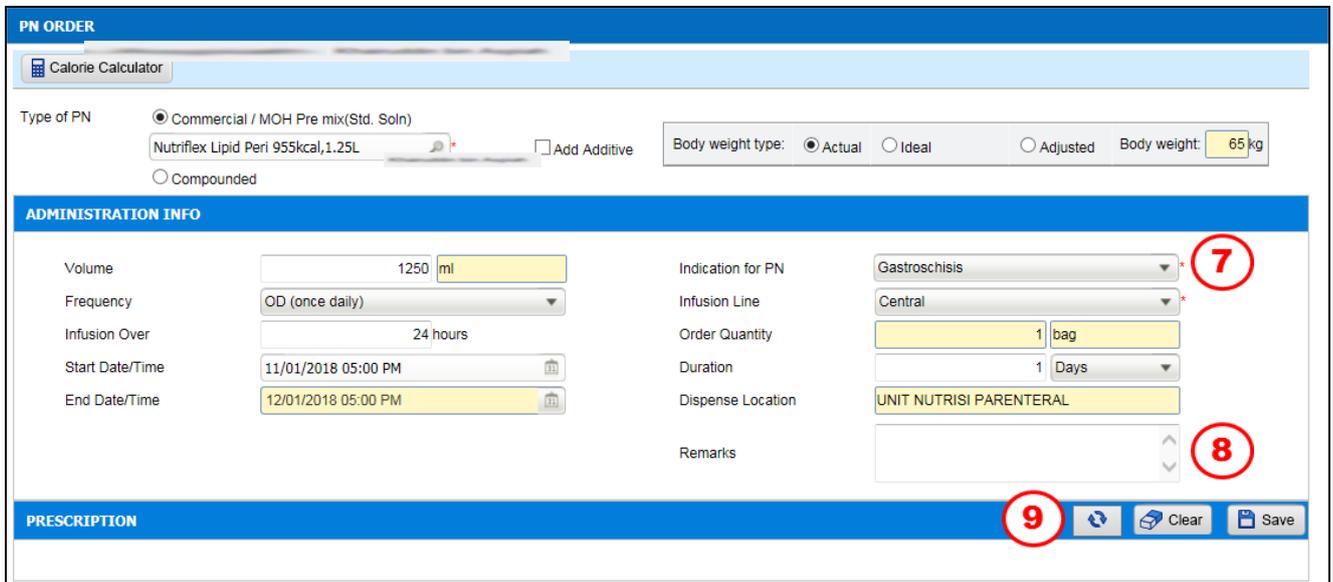
Click on the  button to search for the product

#### 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 product dropdown is set to 'Nutriflex Lipid Peri 955kcal,1.25L'. There is an 'Add Additive' checkbox and a 'Body weight type' section with radio buttons for 'Actual' (selected), 'Ideal', and 'Adjusted'. The 'Body weight' field is set to '65 kg'. The 'ADMINISTRATION INFO' section contains several fields: 'Volume' (1250 ml), 'Frequency' (OD (once daily)), 'Infusion Over' (24 hours), 'Start Date/Time' (11/01/2018 05:00 PM), and 'End Date/Time' (12/01/2018 05:00 PM). On the right side, there are dropdowns for 'Indication for PN' (Gastroschisis, circled 7), 'Infusion Line' (Central), 'Order Quantity' (1 bag), 'Duration' (1 Days), and 'Dispense Location' (UNIT NUTRISI PARENTERAL). A 'Remarks' text area is circled 8. At the bottom, the 'PRESCRIPTION' section has a 'Save' button circled 9, along with '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** will display according to duration product given.
- **Dispense Location** will be automatically default by system.

#### STEP 7

Select Indication for PN from the dropdown box

#### STEP 8

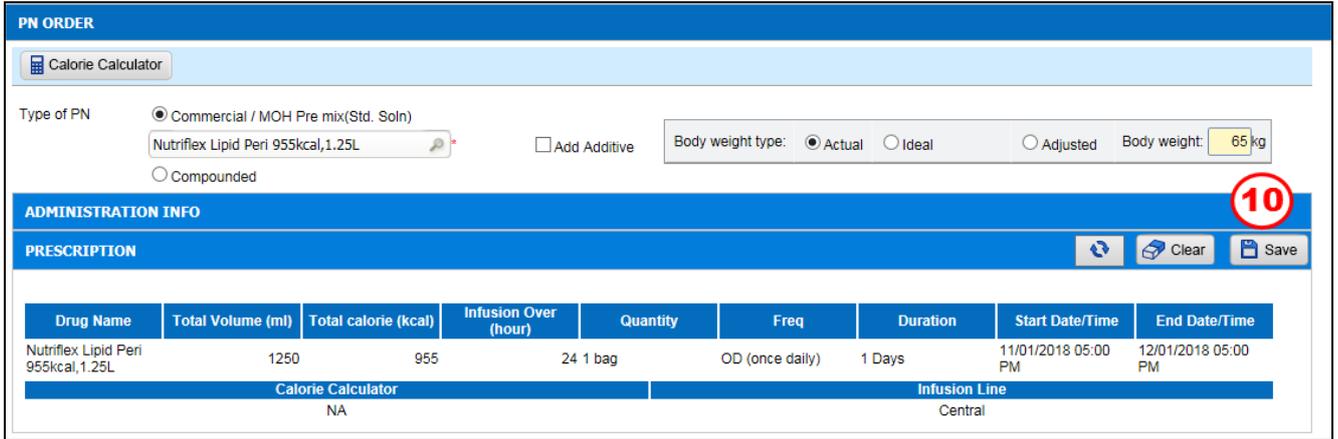
Enter **Remarks** if applicable

#### 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.

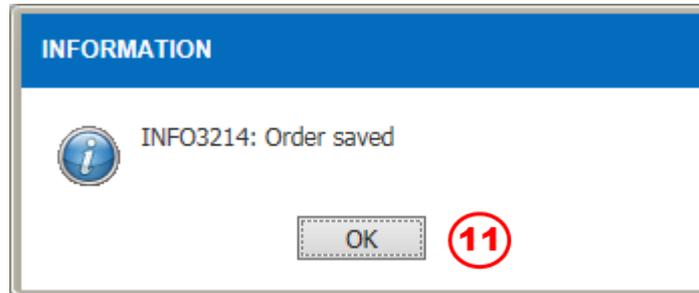


Figure 3.1.3-5 Information Alert

**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**

↻ New Prescription 🖨️ 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 🖨️ Prescription button to view/print PN prescription as Figure 3.1.3-9
- Click on the New Prescription 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:** 641209015255

**Age:** 53 Years 01 Months 02 Days      **MRN:** HPSF00024249

**Gender:** Male      **Prescription :** 40001087881

**Height / Weight / BSA:** 160 cm/65 kg/1.73 m<sup>2</sup>      **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:** Dr Tay Wei Lun      **Frequency:** OD (once daily)

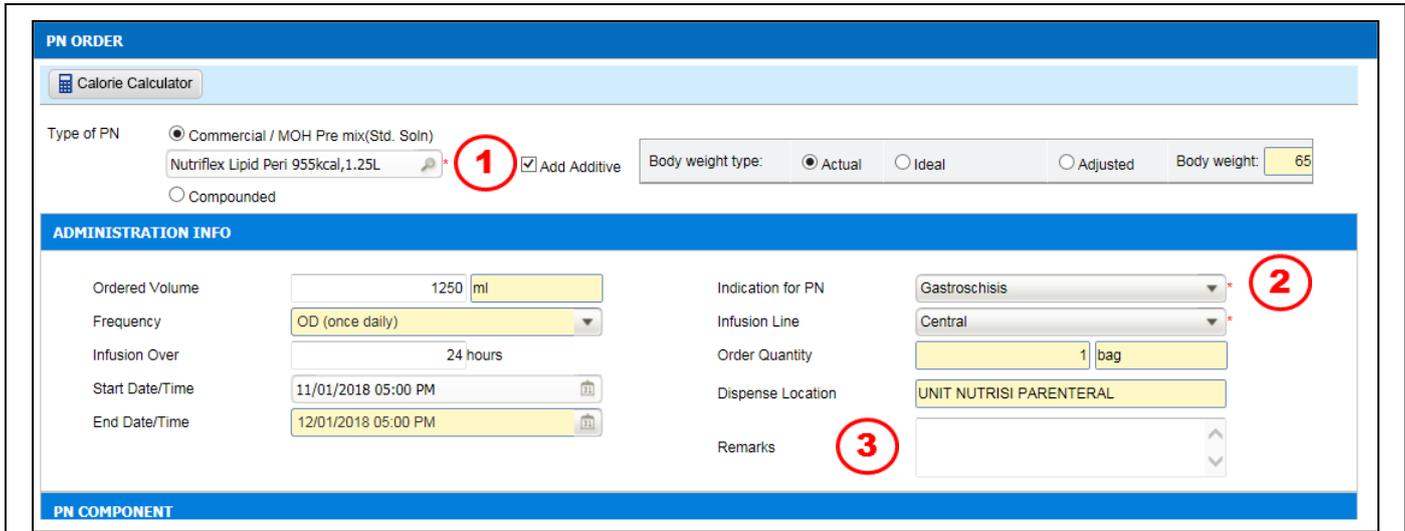
**Designation:** Pegawai Perubatan      **Infusion Route:** Central

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

Figure 3.1.3-9 PN Prescription

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

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



The screenshot shows the 'PN ORDER' form. At the top, there is a 'Calorie Calculator' button. Below it, the 'Type of PN' section has radio buttons for 'Commercial / MOH Pre mix(Std. Soln)', 'Compounded', and 'Add Additive' (which is checked). A dropdown menu shows 'Nutriflex Lipid Peri 955kcal,1.25L'. To the right, 'Body weight type' has radio buttons for 'Actual', 'Ideal', and 'Adjusted', with 'Actual' selected. A 'Body weight' field contains the value '65'. The 'ADMINISTRATION INFO' section contains several fields: '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' (Gastrochisis), 'Infusion Line' (Central), 'Order Quantity' (1 bag), 'Dispense Location' (UNIT NUTRISI PARENTERAL), and 'Remarks'. Red circles 1, 2, and 3 highlight the 'Add Additive' checkbox, the 'Indication for PN' dropdown, and the 'Remarks' field respectively.

Figure 3.1.4-1 PN Order

#### STEP 1

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

#### Note

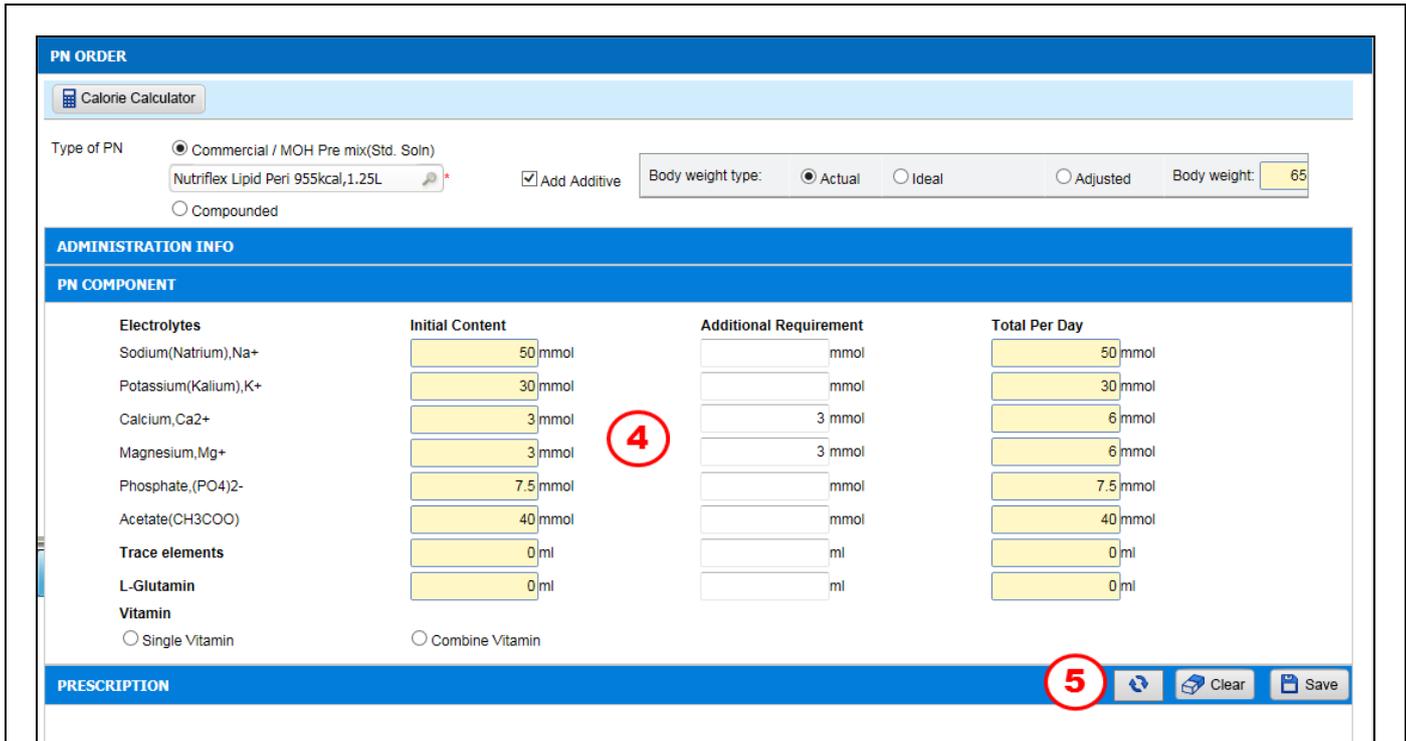
- All information for **Volume, Frequency, Start Date/Time, End Date/Time, Order Quantity, Infusion Line, Duration, Infusion Over** and **Dispense Location** field will be automatically displayed and base on the information from PN Source Content and PN Constituents Reference Range.
- **Volume, Frequency, Infusion Line, Duration** and **Infusion 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 according to duration product given.
- **Dispense Location** will be automatically default by system.
- User allowed to choose **Body weight type: Actual/Ideal/Adjusted**

#### STEP 2

Select Indication for PN from the dropdown box

#### STEP 3

Enter **Remarks** if applicable



**PN ORDER**

Calorie Calculator

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: 65  
 Compounded

**ADMINISTRATION INFO**

**PN COMPONENT**

Electrolytes	Initial Content	Additional Requirement	Total Per Day
Sodium(Natrium),Na+	50 mmol	mmol	50 mmol
Potassium(Kalium),K+	30 mmol	mmol	30 mmol
Calcium,Ca2+	3 mmol	3 mmol	6 mmol
Magnesium,Mg+	3 mmol	3 mmol	6 mmol
Phosphate,(PO4)2-	7.5 mmol	mmol	7.5 mmol
Acetate(CH3COO)	40 mmol	mmol	40 mmol
Trace elements	0 ml	ml	0 ml
L-Glutamin	0 ml	ml	0 ml

Vitamin  Single Vitamin  Combine Vitamin

**PRESCRIPTION** 5

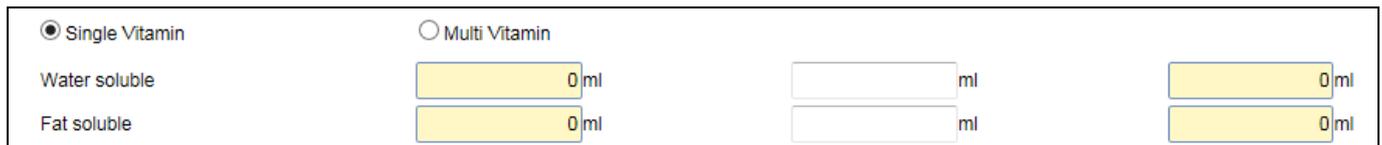
Figure 3.1.4-2 PN Order

**STEP 4**

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

**Note**

- User need to enter total electrolytes required for patient per day.
- All value must be more than per bag ordering.
- All value in all **Per Bag (Per Ordering)** field will automatically default by system.
- Select  **Single Vitamin** radio button. **Water soluble** and **Fat soluble** field will automatically display as per Figure 3.1.4-3.
- Select  **Combine Vitamin** radio button. **Water and Fat soluble** field will automatically display as per Figure 3.1.4-4.
- All value in all **Per Bag (Per Ordering)** field will automatically default by system.



Single Vitamin  Multi Vitamin

Water soluble  ml  ml  ml

Fat soluble  ml  ml  ml

Figure 3.1.4-3 PN Component



Single Vitamin  Combine Vitamin

Water and Fat Soluble  ml  ml  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**

**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	Sodium (mmol)	N/A	Potassium (mmol)	N/A	Calcium (mmol)	6	Magnesium (mmol)	6	Acetate (mmol)	N/A	Trace Element (ml)	N/A	Fat Soluble Vit. (ml)	N/A	Water Soluble Vit. (ml)	N/A	Combine Vitamin (ml)	20
L-Glutamin. (ml)		N/A		Calorie Calculator		NA		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)  
 Compounded

Nutriflex Lipid Peri 955kcal,1.25L  Add Additive

Body weight type:  Actual  Ideal  Adjusted Body weight:

**ADMINISTRATION INFO**

**PN COMPONENT**

**PRESCRIPTION**

Confirm Order Delete Prescription Modify

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)	Combine 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		N/A			Central				

Figure 3.1.4-7 Prescription

**STEP 8**

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 3.1.4-8 Confirmation Alert

**STEP 9**

Click on the Yes 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)	Combine 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:** SXXXXXXXXX XXX XXXXX XXXXX      **Patient ID:** 641209015255

**Age:** 53 Years 01 Months 02 Days      **MRN:** HPSF00024249

**Gender:** Male      **Prescription :** 40001087882

**Height / Weight / BSA:** 160 cm/65 kg/1.73 m<sup>2</sup>      **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:** Dr Tay Wei Lun      **Frequency:** OD (once daily)

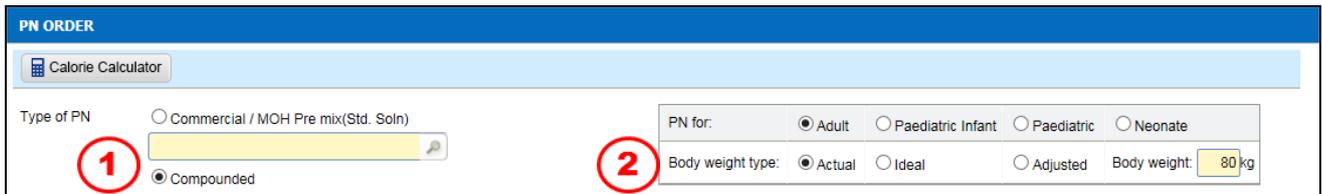
**Designation:** Pegawai Perubatan      **Infusion Route:** Central

**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 the 'PN ORDER' interface. 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'. 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 'Adult' option is selected and circled in red with the number '2'. Below this, 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:' input field containing '80 kg'.

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	
<b>Macronutrient</b>		<b>Recommended range(per kg)</b>		<b>Energy(per day)</b>
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
<b>Electrolytes</b>				
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	
<b>Trace elements</b>		0.00 - 10.00 ml		
<b>Vitamin</b>				
<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<sup>-</sup>** and **Acetate (CH<sub>3</sub>COO)** 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"/>	ml
Fat soluble	<input type="text" value="0"/>	ml	<input type="text"/>	ml

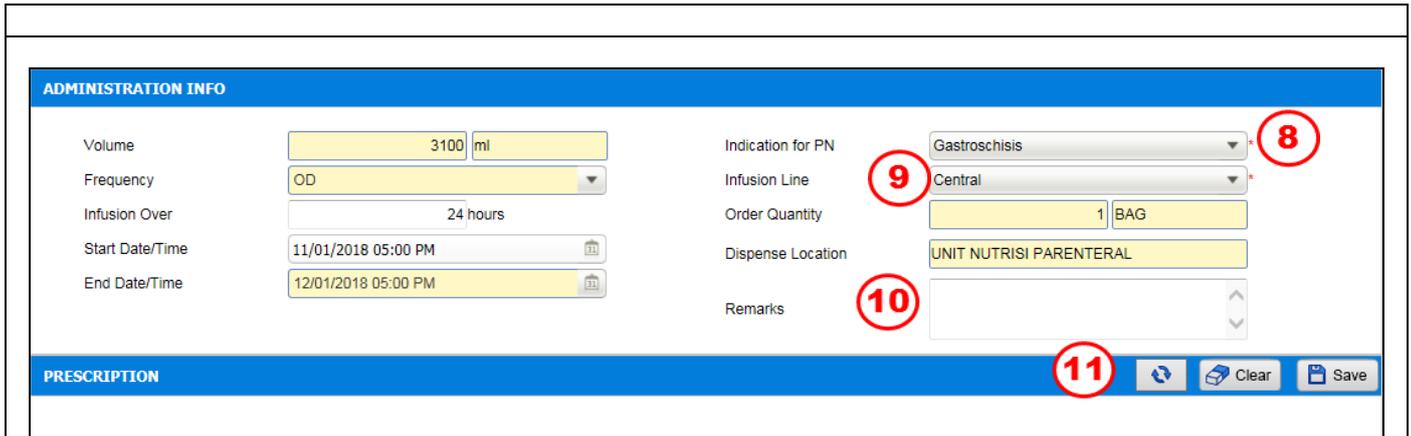
Figure 3.1.5-3 PN Component

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

Figure 3.1.5-4 PN Component

#### Note

- Select either **Single Vitamin** or **Combine Vitamin** 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 **Combine Vitamin** radio button; **Water and Fat Soluble** field will automatically display by system as per Figure 3.1.5-4.



**ADMINISTRATION INFO**

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

**PRESCRIPTION**

Buttons: Refresh, Clear, Save

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 be displayed according to duration product given.
- **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 3.1.5-6

**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)	Combine 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

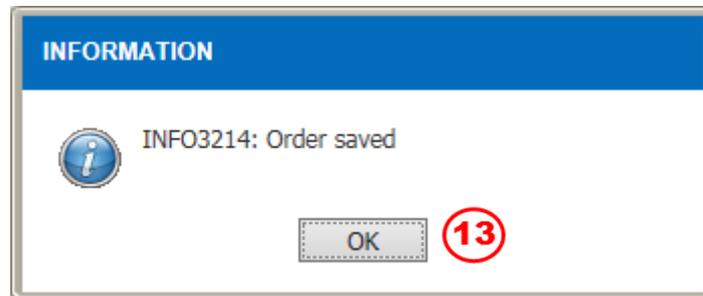


Figure 3.1.5-7 Information Alert Message

**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:  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)	Combine 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?

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)	Combine 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**

<b>Patient Name:</b>	MXXXXXXXX XXXX XXX XXXXXX	<b>Patient ID:</b>	930328045183
<b>Age:</b>	24 Years 09 Months 14 Days	<b>MRN:</b>	HPSF00190582
<b>Gender:</b>	Male	<b>Prescription :</b>	W2L0001087884
<b>Height / Weight /</b>	169 cm/80 kg/1.97 m <sup>2</sup>	<b>Order Date / Time</b>	11/01/2018 02:33 PM
<b>Room No / Bed:</b>		<b>Location:</b>	WAD 2 L (MED/SURG/ORTO)
<b>Diagnosis:</b>	rheumatic fever	<b>Allergy:</b>	

<b>TPN Order:</b>	PN Compounded Adult	<b>Order</b>	1 bag
<b>Start</b>	11/01/2018 05:00 PM	<b>End</b>	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

<b>Infusion Over:</b>	24 hr	<b>Frequency:</b>	OD
<b>Prescriber:</b>	Masnizar Bin Jamian	<b>Infusion Route:</b>	Central
<b>Designation:</b>	Pegawai Perubatan	<b>Remarks:</b>	
<b>Department:</b>	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' 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 with a red '1'. To the right, the 'PN for:' section has four radio buttons: 'Adult', 'Paediatric Infant', 'Paediatric', and 'Neonate'. The 'Paediatric' option is selected and circled with a red '2'. Below this, the 'Body weight type:' section has three radio buttons: 'Actual', 'Ideal', and 'Adjusted'. The 'Actual' option is selected. To the right of these radio buttons is a 'Body weight:' field with a value of '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	80 ml/kg		2000 ml	
Total oral feeding	0 ml/kg			
TPN Volume	80 ml/kg		2000 ml	
Energy required	48 kcal/kg		3840 kcal	
<b>Macronutrient</b>		<b>Recommended range(per kg)</b>		<b>Energy(per day)</b>
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
<b>Electrolytes</b>				
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	
<b>Trace elements</b>		0.00 - 10.00 ml		
<b>Vitamin</b>				
<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 3.1.6-2 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

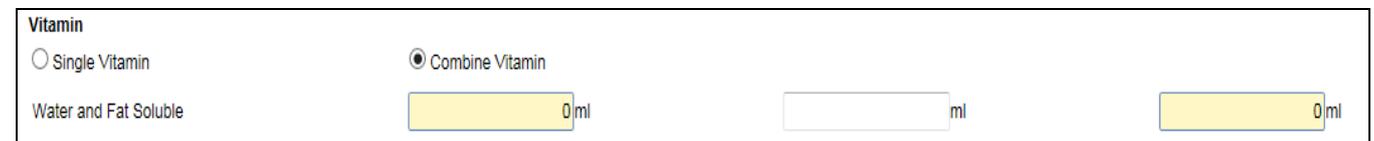
#### Note

- All entered value must between the **Recommended Range (per kg)**.
- **Chloride ,Cl<sup>-</sup>** and **Acetate (CH<sub>3</sub>COO)** 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.



The screenshot shows a form for selecting a vitamin type. At the top, there are two radio buttons: "Single Vitamin" (which is selected) and "Multi Vitamin". Below this, there are two rows of input fields. The first row is labeled "Water soluble" and has three input boxes, each with "0 ml" displayed. The second row is labeled "Fat soluble" and also has three input boxes, each with "0 ml" displayed.

Figure 3.1.6-3 PN Component

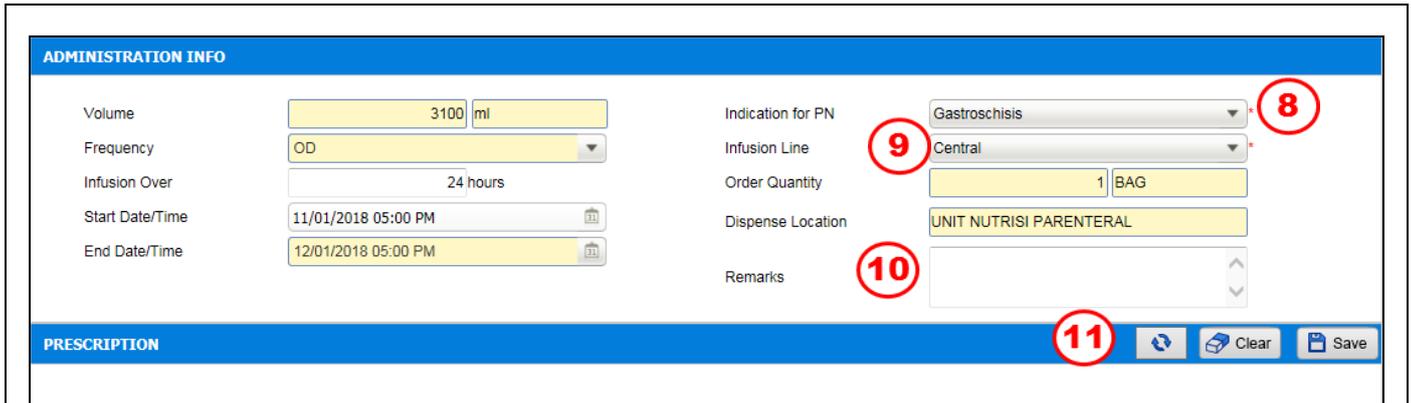


The screenshot shows a form for selecting a vitamin type. At the top, there are two radio buttons: "Single Vitamin" and "Combine Vitamin" (which is selected). Below this, there is one row of input fields labeled "Water and Fat Soluble" with three input boxes, each with "0 ml" displayed.

Figure 3.1.6-4 PN Component

#### Note

- Select either **Single Vitamin** or **Combine Vitamin** 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 **Combine Vitamin** radio button; **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, 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 be displayed according to duration product given.
- **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)	Combine 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

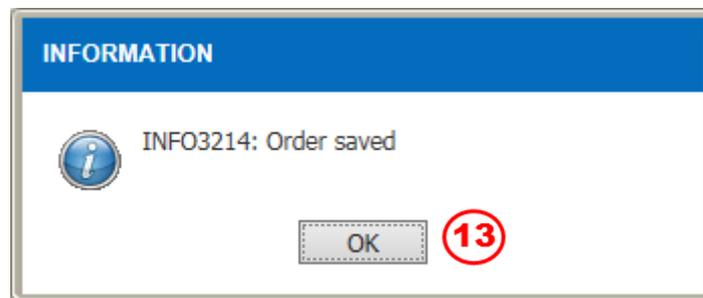


Figure 3.1.6-7 Information Alert Message

**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:  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)	Combine 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)	Combine 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: 930328045183  
 Age: [REDACTED] MRN: HPSF00190582  
 Gender: Male Prescription : W2L0001087884  
 Height / Weight / : 169 cm/80 kg/1.97 m<sup>2</sup> Order Date / Time 11/01/2018 02:33 PM  
 Room No / Bed: [REDACTED] Location: [REDACTED]  
 Diagnosis: rheumatic fever Allergy:

---

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'. 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 Infant' radio button. Below these, there is a 'Body weight type:' section with three radio buttons: 'Actual', 'Ideal', and 'Adjusted'. The 'Actual' radio button is selected. To the right of this section 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	80 ml/kg		2000 ml	
Total oral feeding	0 ml/kg			
TPN Volume	80 ml/kg		2000 ml	
Energy required	48 kcal/kg		3840 kcal	
<b>Macronutrient</b>		<b>Recommended range(per kg)</b>		<b>Energy(per day)</b>
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
<b>Electrolytes</b>				
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	
<b>Trace elements</b>		0.00 - 10.00 ml		
<b>Vitamin</b>				
<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 3.1.7-2 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

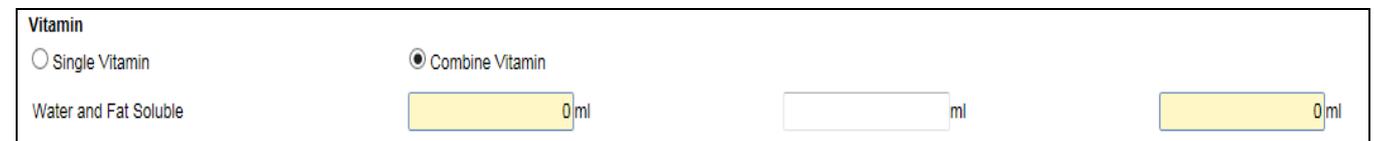
#### Note

- All entered value must between the **Recommended Range (per kg)**.
- **Chloride ,Cl<sup>-</sup>** and **Acetate (CH<sub>3</sub>COO)** 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.



The screenshot shows a form for selecting a PN component. At the top, there are two radio buttons: "Single Vitamin" (which is selected) and "Multi Vitamin". Below this, there are two rows of input fields. The first row is labeled "Water soluble" and has three input boxes, each with "0 ml" displayed. The second row is labeled "Fat soluble" and also has three input boxes, each with "0 ml" displayed.

Figure 3.1.7-3 PN Component

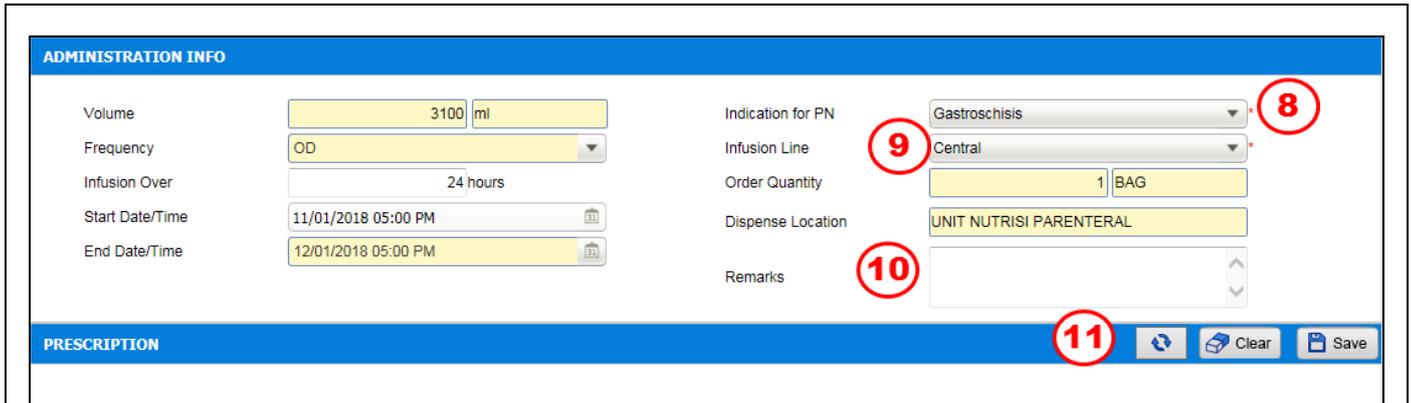


The screenshot shows a form for selecting a PN component. At the top, there are two radio buttons: "Single Vitamin" and "Combine Vitamin" (which is selected). Below this, there is one row of input fields labeled "Water and Fat Soluble" with three input boxes, each with "0 ml" displayed.

Figure 3.1.7-4 PN Component

#### Note

- Select either **Single Vitamin** or **Combine Vitamin** 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 **Combine Vitamin** radio button; **Water and Fat Soluble** field will automatically display by system as per Figure 3.1.7-4.



**ADMINISTRATION INFO**

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

**PRESCRIPTION**

Buttons: 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, 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 be displayed according to duration product given.
- **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									
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)	Combine 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 3.1.7-6 PN Prescription

STEP 12

Click on the button to save prescription

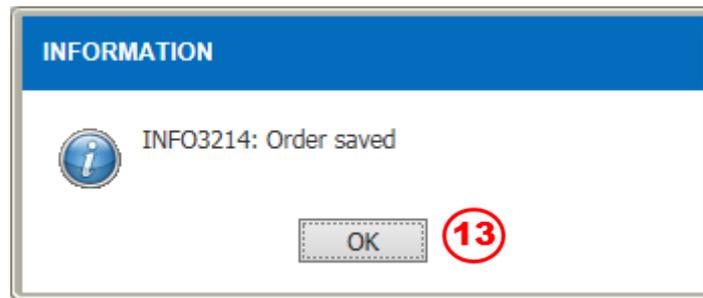


Figure 3.1.7-7 Information Alert Message

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									
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)	Combine 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

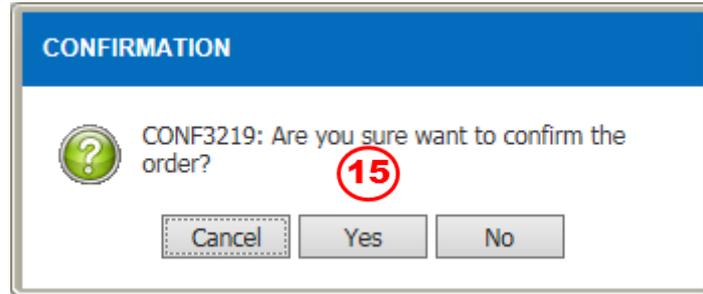
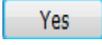
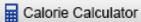


Figure 3.1.7-9 Confirmation Alert Message

**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:  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)	Combine 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 3.1.7-10 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: 930328045183  
 Age: [REDACTED] MRN: HPSF00190582  
 Gender: Male Prescription : W2L0001087884  
 Height / Weight / : 169 cm/80 kg/1.97 m<sup>2</sup> Order Date / Time 11/01/2018 02:33 PM  
 Room No / Bed: Location: [REDACTED]  
 Diagnosis: rheumatic fever Allergy:

---

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 3.1.7-11 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.



Figure 3.1.8-1 PN Order

#### STEP 1

Select on **Type of PN** as Compounded

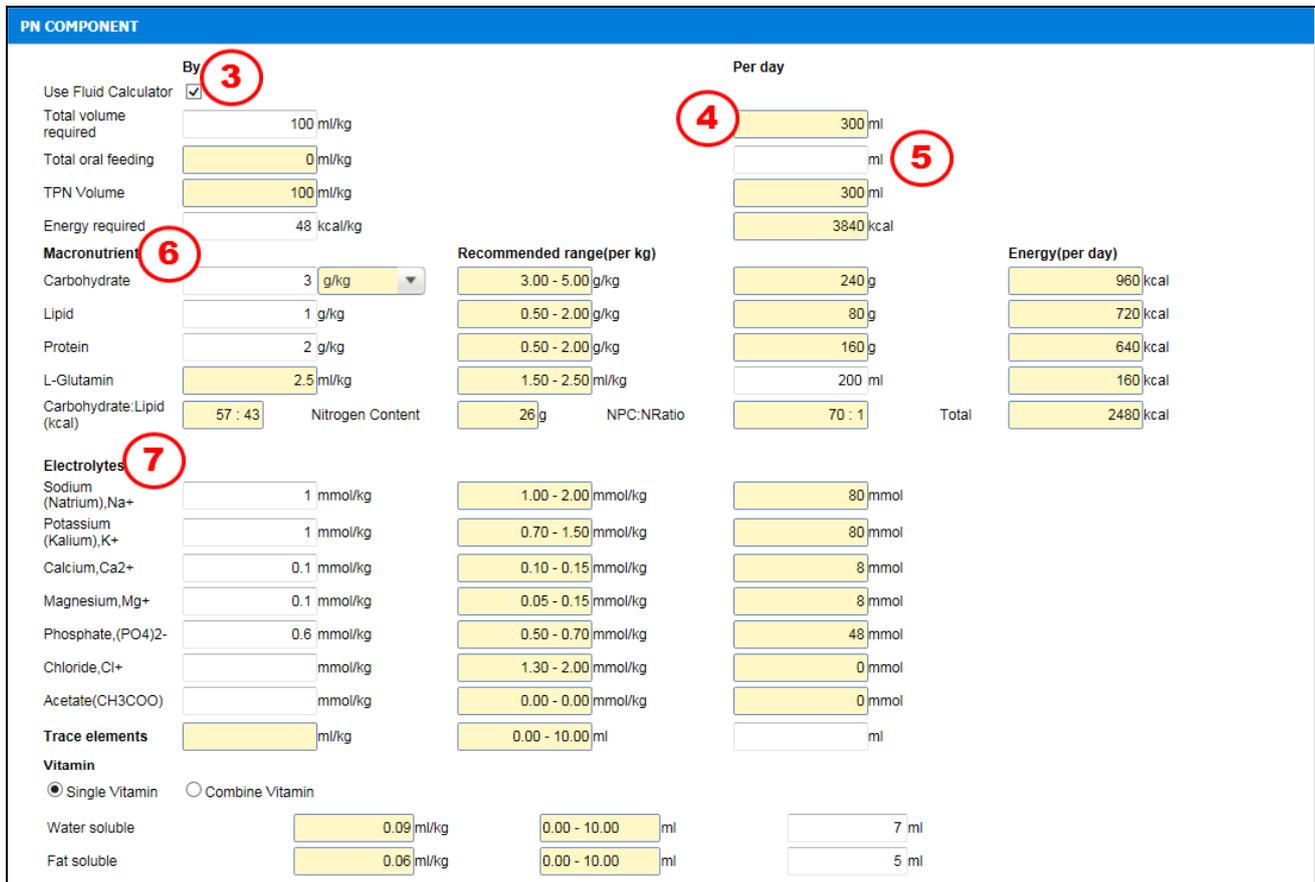
#### Note

**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**



By	Per day	Energy(per day)
Total volume required: 100 ml/kg	300 ml	
Total oral feeding: 0 ml/kg		
TPN Volume: 100 ml/kg	300 ml	
Energy required: 48 kcal/kg	3840 kcal	
<b>Macronutrient</b>	<b>Recommended range(per kg)</b>	<b>Energy(per day)</b>
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
<b>Electrolytes</b>		<b>Total</b>
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+: mmol/kg	1.30 - 2.00 mmol/kg	0 mmol
Acetate(CH3COO): mmol/kg	0.00 - 0.00 mmol/kg	0 mmol
<b>Trace elements</b>	0.00 - 10.00 ml	
<b>Vitamin</b>		
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"/> Combine 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 **Combine Vitamin** 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 **Combine Vitamin** radio button; **Water and Fat Soluble** field will automatically display by system as per Figure 3.1.8-4.

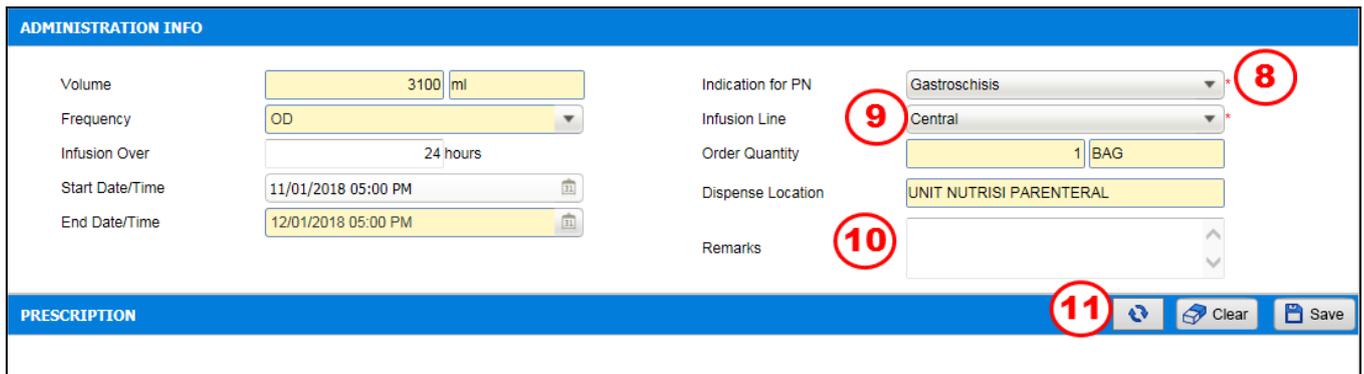


Figure 3.1.8-5 Administration Info

**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, 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 be displayed according to duration product given.
- **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)	Combine 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 3.1.8-6 PN Prescription

STEP 12

Click on the button to save prescription

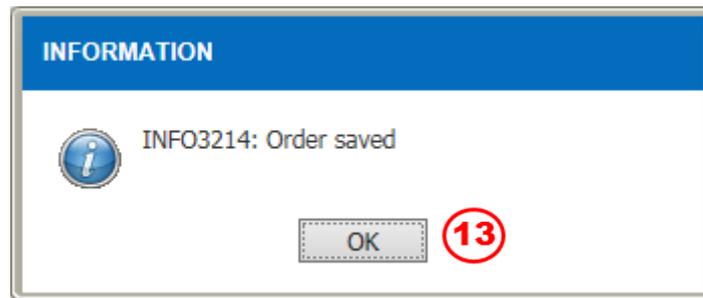


Figure 3.1.8-7 Information Alert Message

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)	Combine 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

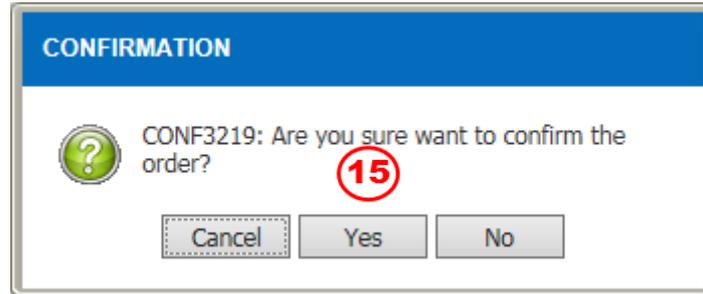
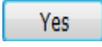


Figure 3.1.8-9 Confirmation Alert Message

**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)	Combine 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:** 930328045183

**Age:** [REDACTED] **MRN:** HPSF00190582

**Gender:** Male **Prescription :** W2L0001087884

**Height / Weight /** 169 cm/80 kg/1.97 m<sup>2</sup> **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:**

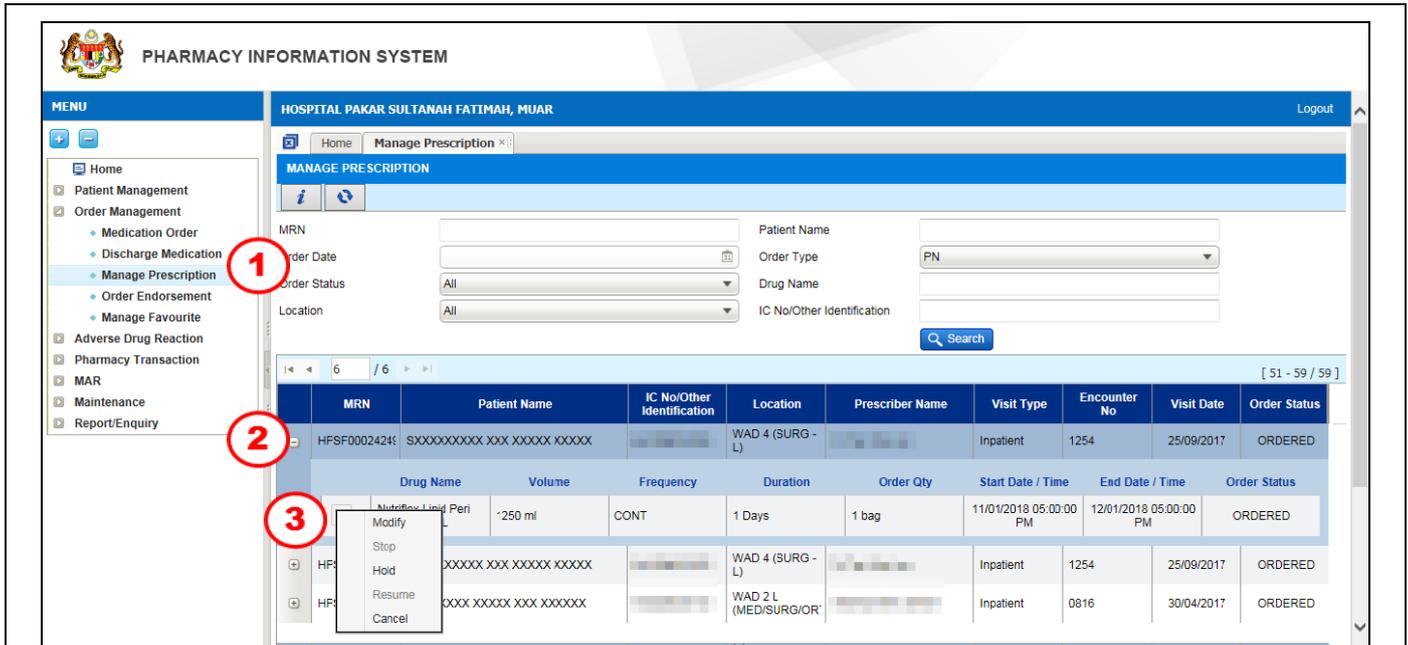
**Department:** General Medicine

**Figure 3.1.8-11 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 \* | Logout

**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	SXXXXXXXX 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-Lipid 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-Lipid 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-Lipid 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 XXXXXX		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
- 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.

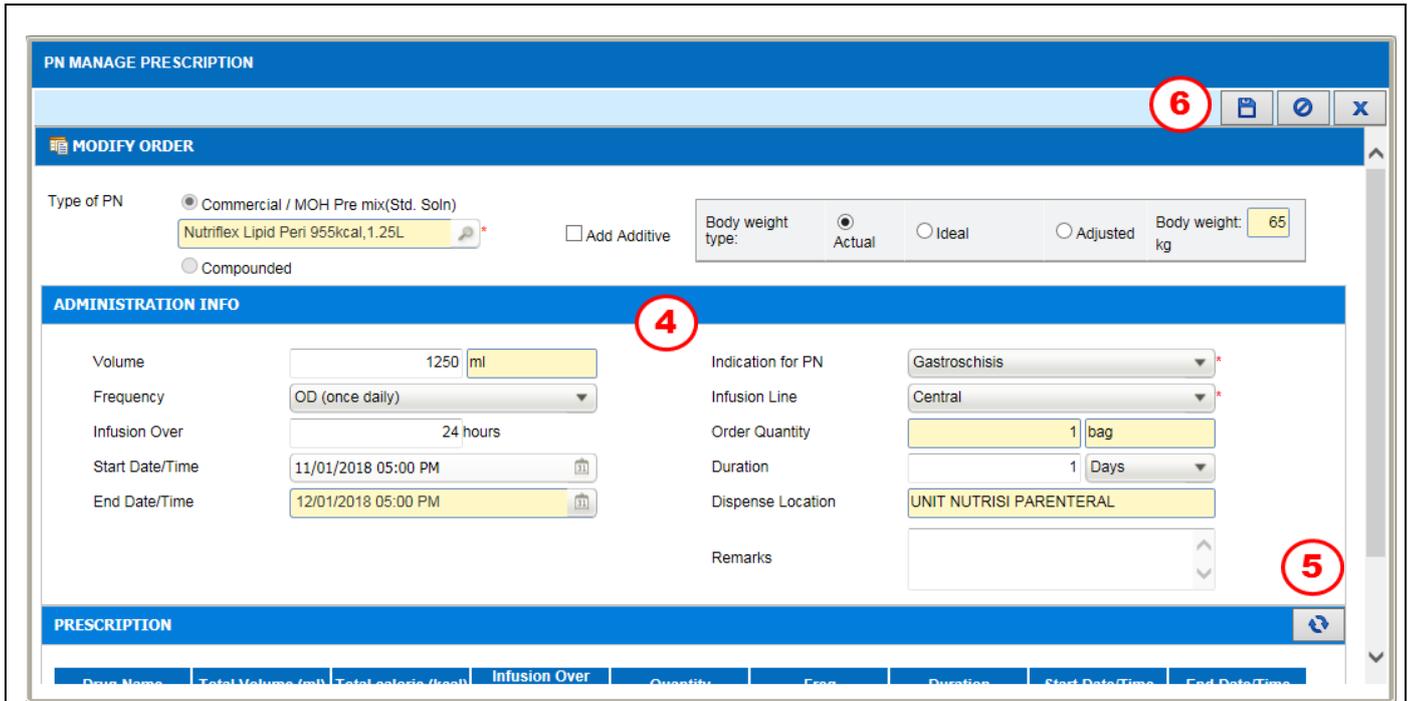


Figure 3.2.1-2 Drug Details

**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

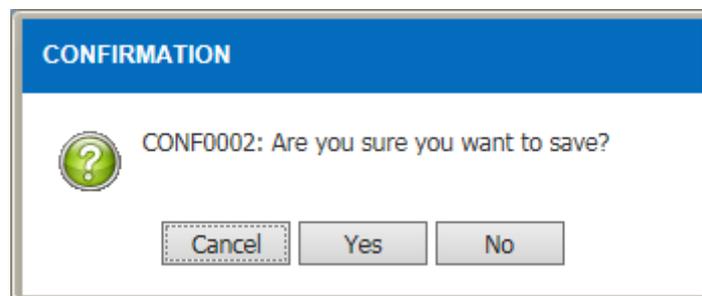
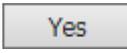


Figure 3.2.1-3 Confirmation Alert

**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

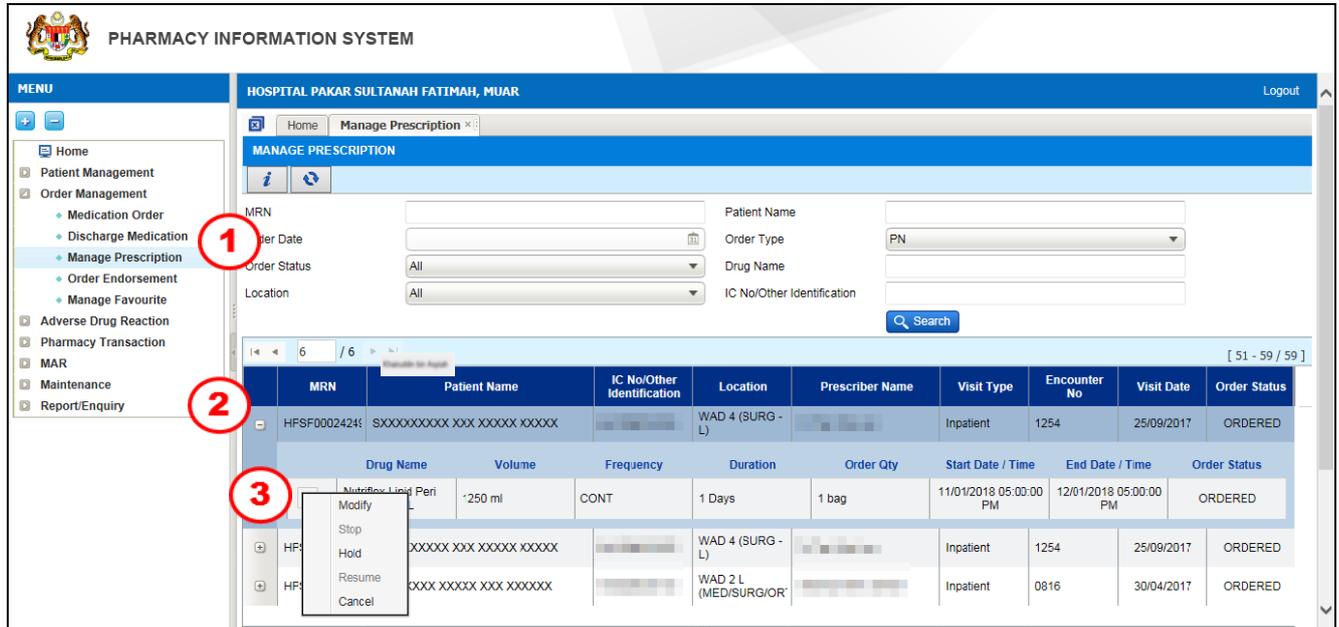


Figure 3.2.2-1 Hold Order

#### STEP 1

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

#### Note

- Various search criteria is provided as below:
  - h) MRN
  - i) Patient Name
  - j) Order Date
  - k) Order Type
  - l) Order Status
  - m) Drug name
  - n) Location
- 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.



### 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.

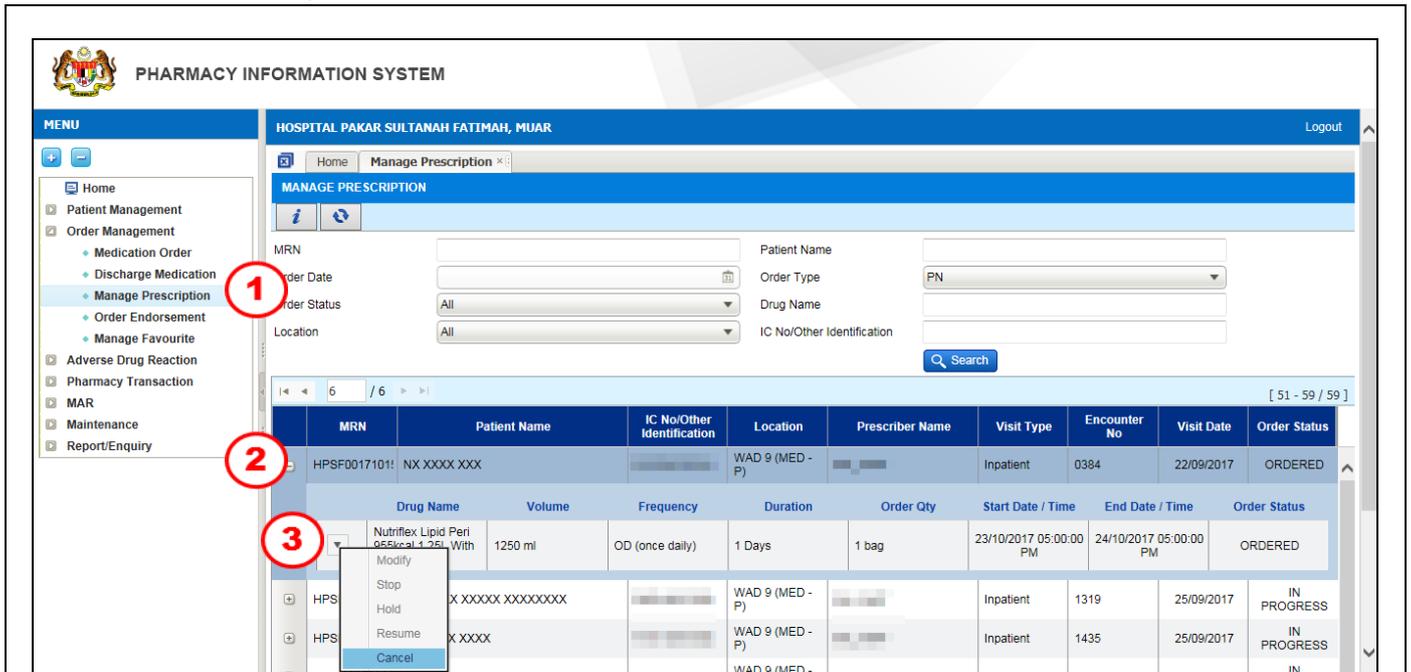


Figure 3.2.3-1 Manage Prescription

#### STEP 1

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

#### Note

- Various search criteria is provided as below:
  - o) MRN
  - p) Patient Name
  - q) Order Date
  - r) Order Type
  - s) Order Status
  - t) Drug name
  - u) Location
- 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

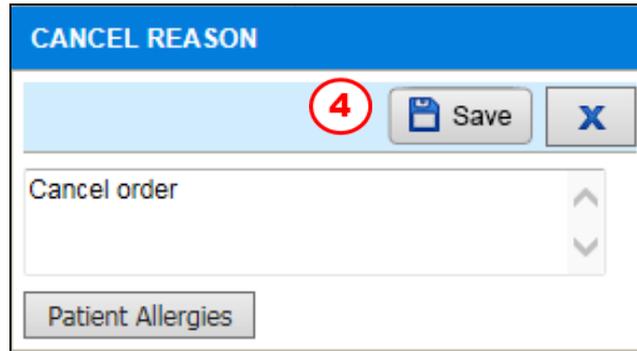


Figure 3.2.3-2 Cancel Reason

**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.

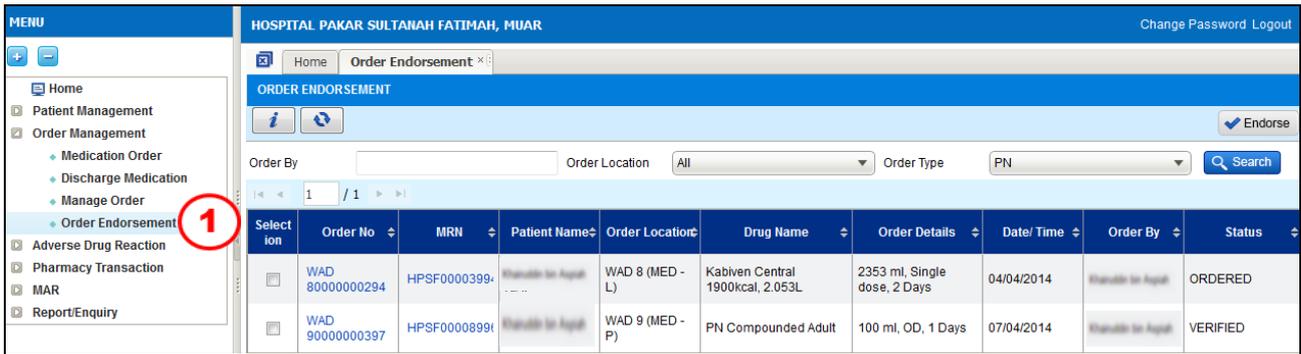


Figure 3.3-1 Medication Order Endorsement

#### 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

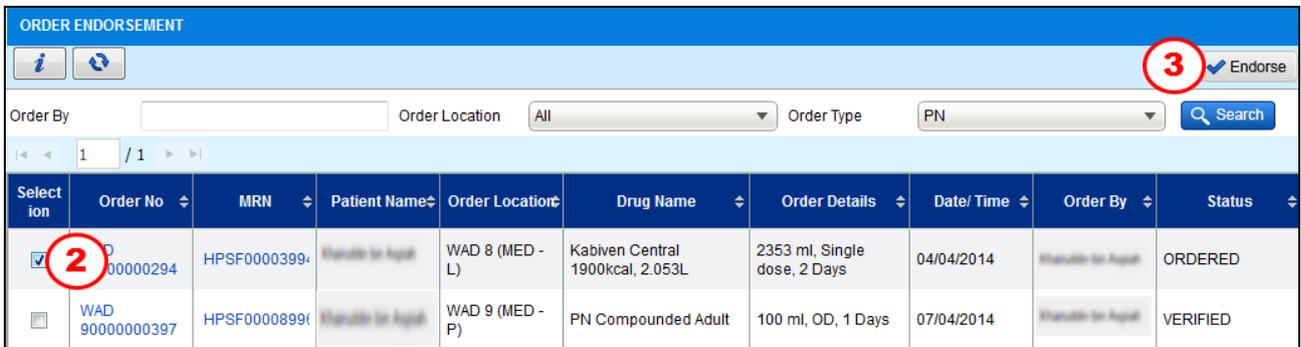


Figure 3.3-2 Medication Order Endorsement

#### STEP 2

Click the  selection checkbox as per Figure 3.3-2

#### STEP 3

Click on the  Endorse button to confirm endorsement order

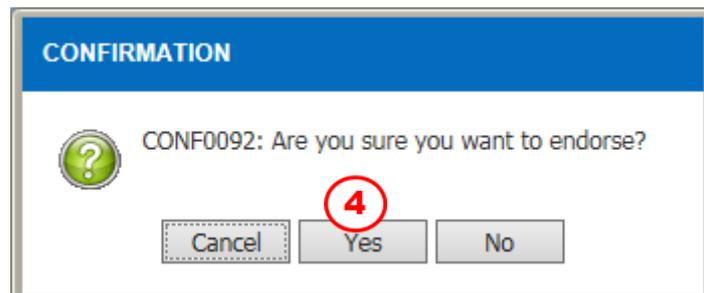
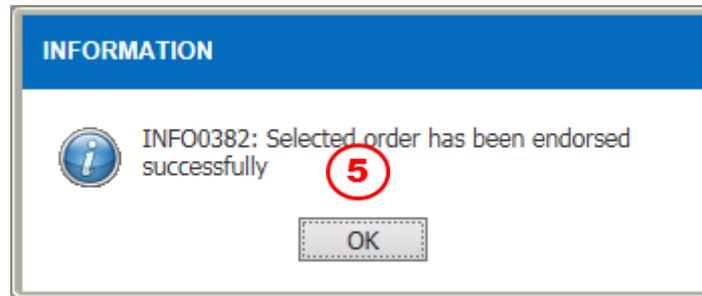


Figure 3.3-3 Confirmation Alert

**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	<a href="#">Click Here</a>	12	CDR Dispensing	<a href="#">Click Here</a>
2	CDR Order	<a href="#">Click Here</a>	13	Methadone Dispensing	<a href="#">Click Here</a>
3	TDM Order	<a href="#">Click Here</a>	14	PN Dispensing	<a href="#">Click Here</a>
4	PN Order	<a href="#">Click Here</a>	15	Order Management	<a href="#">Click Here</a>
5	IV Order	<a href="#">Click Here</a>	16	Patient Management	<a href="#">Click Here</a>
6	Prepacking	<a href="#">Click Here</a>	17	Radiopharma	<a href="#">Click Here</a>
7	Galenical	<a href="#">Click Here</a>	18	Outpatient	<a href="#">Click Here</a>
8	MTAC	<a href="#">Click Here</a>	19	Special Drug Request	<a href="#">Click Here</a>
9	ADR & DAC	<a href="#">Click Here</a>	20	MAR	<a href="#">Click Here</a>
10	Medication Counselling	<a href="#">Click Here</a>	21	DICE	<a href="#">Click Here</a>
11	Ward Pharmacy	<a href="#">Click Here</a>	22		