



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

Full Based User Manual Parenteral Nutrition (PN) Dispensing

Version	: 7th Edition
Document ID	: FB_U. MANUAL_PN_DISPENSING



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Application reference: PhIS & CPS v1.7.1



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1.0 Introduction

1.1 Overview of Phis

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

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

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

1.2 Purpose and Objectives

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

User will understand the following activities in details:

- Parenteral Nutritional Verification
- Parenteral Nutritional Preparation
- Parenteral Nutritional Dispensing
- Hold / Resume Order
- Release / Discard Batch
- Outsource

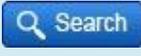
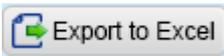
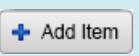
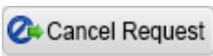
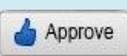
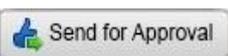
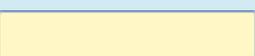
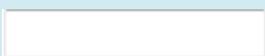
1.3 Organised Sections

These are the sections within this document:

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

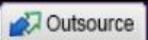
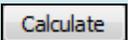
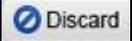
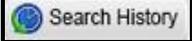
2.0 Application Standard Features

2.1 PhIS Legend

Standard Legend			
	Login to PhIS		Logout from PhIS
	Change Login Password		Reset Login Screen
	Expand Menu		Collapse Menu
	Display Home Tab		Expand Module
	Collapse Module		Close All Open Tabs
	Refresh Screen		Search Record
	Add/Create New Record		Show Help
	Print		Mandatory Field
	Calendar Icon		Search Icon
	Close Window		Radio Button
	Checkbox		Edit Record
	Cancel		Delete Record
	Save		Export and Open Report in Excel Format
	Add Item to the list		Delete Item from the list
	Request for Approval		Cancel the Request
	Approve Transaction		Reject Transaction
	Send for Approval		Dropdown Box
	Automatically Display/Retrieve Box		Empty Text Box



Parenteral Nutrition Dispensing Module Legend

 Verify	Verification Prescription	 Prepare	Preparation Prescription
 Dispense	Dispensing	 Label	Edit and Print Label
 Outsource	Outsource Product	 Calculate	Calculate
 Worksheet	Generate Worksheet	 Release	Release Batch
 Discard	Discard Batch	 Search History	Search History

Note

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

3.0 Parenteral Nutrition (PN) Dispensing

Overview

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

User Group

This module is intended for Authorized Pharmacist (subject to user assigned by the facility)

Functional Diagram

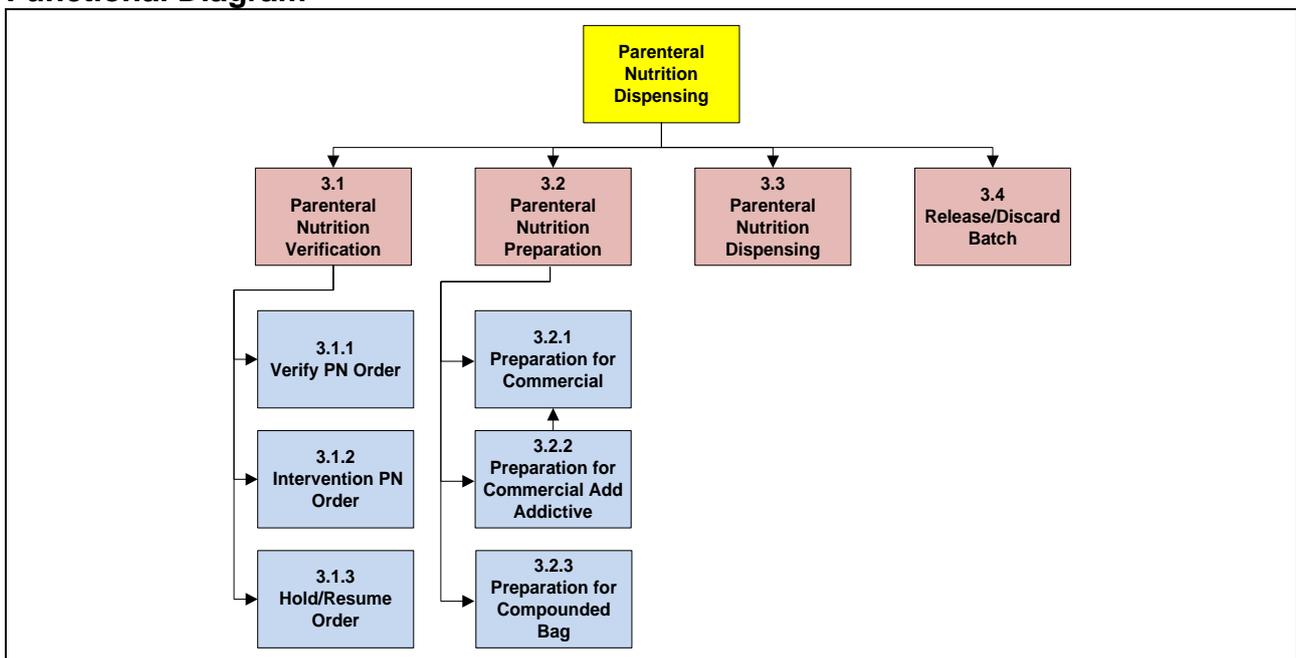


Figure 3.0-1

Functional Description

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

- **Verification**

Verification is for pharmacist to verify the prescriptions received from order management. This process is mandatory for all prescriptions receive – before the user can proceed with dispensing preparation

- **Preparation**

The prescription and the drug preparation are made in the system that may integrate with inventory system. Access system data directly with no need to send files or manual drug labeling.

- **Dispensing**

The prescription and the dispensing report are made in the system that may integrate with inventory system.

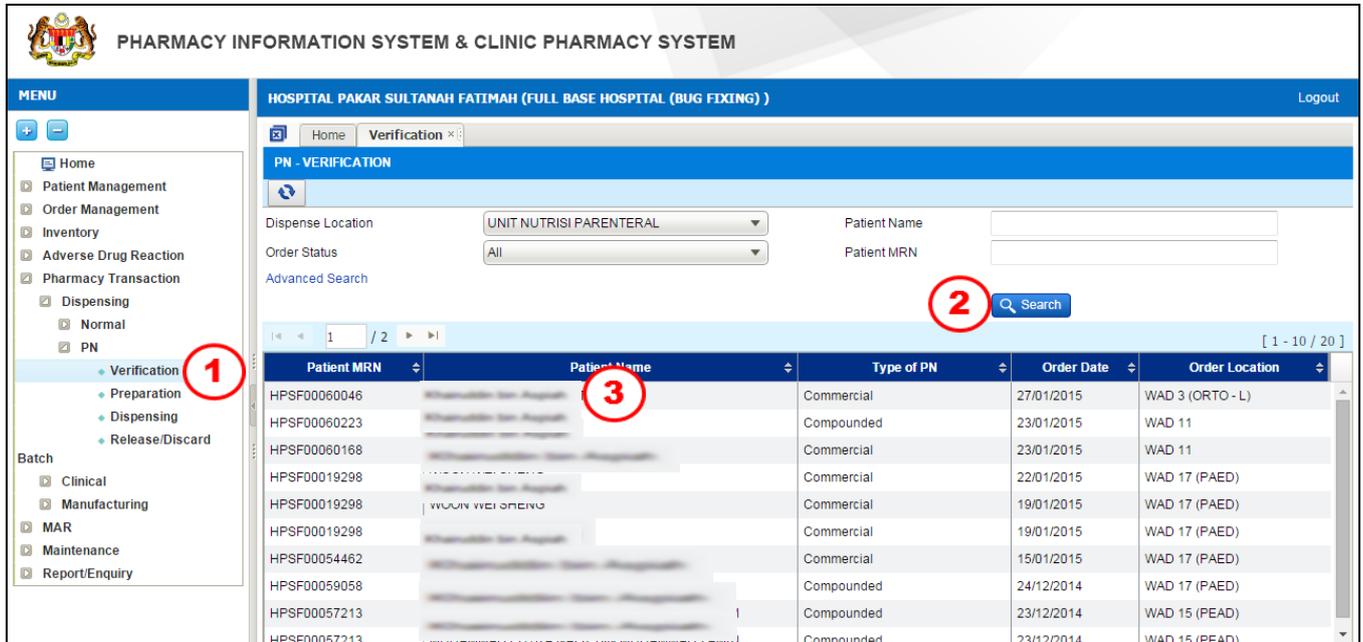
- **Release/Discard Batch**

Allow the user to release/discard the drug reserved for the patient back into inventory. User need to release this drug in order for it to be available in the drug inventory list.

3.1 Parenteral Nutrition (PN) Verification

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

3.1.1 Verify Parenteral Nutrition (PN) Order



PHARMACY INFORMATION SYSTEM & CLINIC PHARMACY SYSTEM

HOSPITAL PAKAR SULTANAH FATIMAH (FULL BASE HOSPITAL (BUG FIXING)) Logout

Home Verification x

PN - VERIFICATION

Dispense Location: UNIT NUTRISI PARENTERAL Patient Name:

Order Status: All Patient MRN:

Advanced Search 2

[1 - 10 / 20]

Patient MRN	Patient Name	Type of PN	Order Date	Order Location
HPSF00060046	3 [Redacted]	Commercial	27/01/2015	WAD 3 (ORTO - L)
HPSF00060223	[Redacted]	Compounded	23/01/2015	WAD 11
HPSF00060168	[Redacted]	Commercial	23/01/2015	WAD 11
HPSF00019298	[Redacted]	Commercial	22/01/2015	WAD 17 (PAED)
HPSF00019298	[Redacted]	Commercial	19/01/2015	WAD 17 (PAED)
HPSF00019298	[Redacted]	Commercial	19/01/2015	WAD 17 (PAED)
HPSF00054462	[Redacted]	Commercial	15/01/2015	WAD 17 (PAED)
HPSF00059058	[Redacted]	Compounded	24/12/2014	WAD 17 (PAED)
HPSF00057213	[Redacted]	Compounded	23/12/2014	WAD 15 (PEAD)
HPSF00057213	[Redacted]	Compounded	23/12/2014	WAD 15 (PEAD)

Figure 3.1.1-1 PN Verification Listing Page

STEP 1

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

Note

- Various search criteria is provided as below:
 - Dispense Location
 - Patient Name
 - Order Status
 - Patient MRN
- Click on the Advanced Search hyperlink for advance search.

STEP 2

Click on the Search button and system will display related order



Note

Search patient record based: -

Basic Search			
No	Field	Description	Remark
a	Dispense Location	Dispensing location. (It will list down all active location)	Able to filter and search patient name by dispensing location
b	Order Status	Search by: All New Orders Outsourced Orders	Able to filter and search patient name by order status
c	Patient Name	Patient Name	Allow to search by full name or partial
d	Patient MRN	Patient Medical Record Number	Search option: Type the MRN either full or partial: <i>Example: HPSF00001234 or "1234"</i>
Advance Search			
a	Order Location Type	Search by: - All - Clinic - Day Care - ER - Nursing Unit - Pharmacy	Able to filter and search patient name by order location type
b	Order Location	Current visit Location	Able to filter and search patient name by visit location
c	Order Date From	Order confirmed date	Allow to search by start date of order created
d	Order Date To	Order confirmed date	Allow to search by selected duration of order created

Table 3.1.1-1

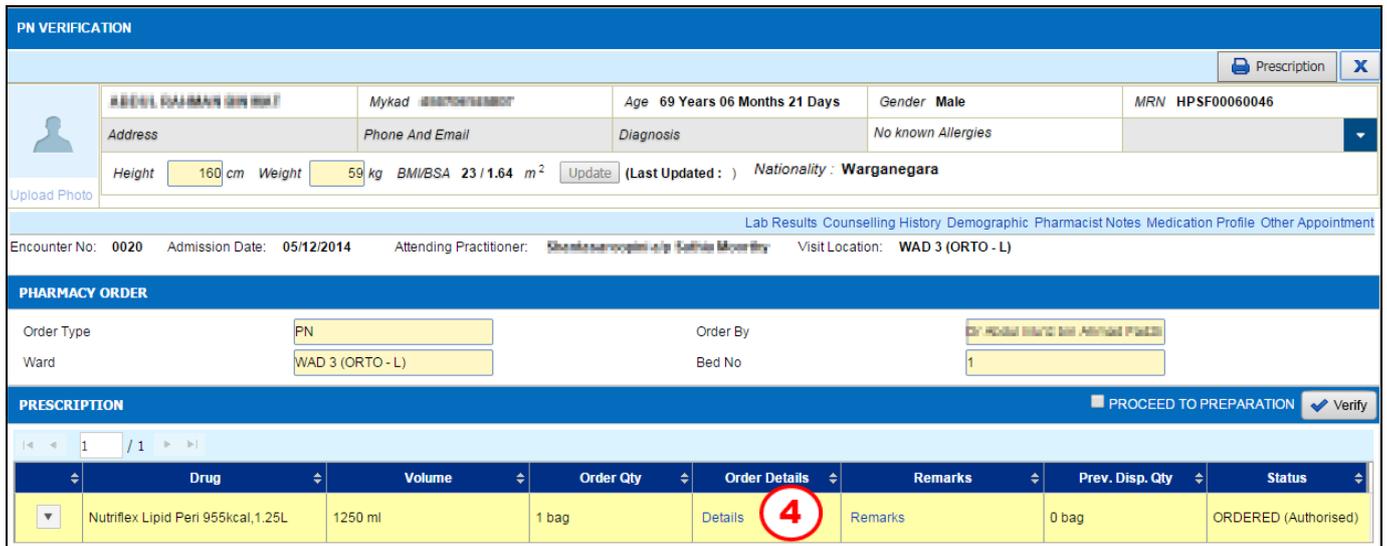
STEP 3

Double click on the record and PN Verification screen will be displayed as Figure 3.1.1-2

Note

Search result of patient record list will be displayed:

- Patient MRN
- Patient Name
- Type of PN
- Order Date
- Order Location



PN VERIFICATION

Prescription [X]

Mykad: [REDACTED] Age: 69 Years 06 Months 21 Days Gender: Male MRN: HPSF00060046

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

Height: 160 cm Weight: 59 kg BMI/BSA: 23 / 1.64 m² Update (Last Updated:) Nationality: Warganegara

Lab Results Counselling History Demographic Pharmacist Notes Medication Profile Other Appointment

Encounter No: 0020 Admission Date: 05/12/2014 Attending Practitioner: [REDACTED] Visit Location: WAD 3 (ORTO - L)

PHARMACY ORDER

Order Type: PN Order By: [REDACTED]

Ward: WAD 3 (ORTO - L) Bed No: 1

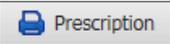
PRESCRIPTION [PROCEED TO PREPARATION] [Verify]

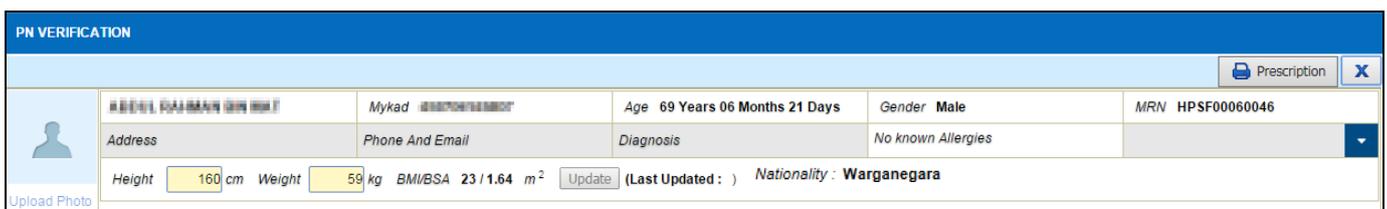
Drug	Volume	Order Qty	Order Details	Remarks	Prev. Disp. Qty	Status
Nutriflex Lipid Peri 955kcal,1.25L	1250 ml	1 bag	Details 4	Remarks	0 bag	ORDERED (Authorised)

Figure 3.1.1-2 PN Verification

Note

Patient's Banner

- Patient's Banner display patient's profile as per Figure 3.1.1-3
- User only can view patient's height and weight.
- System will automatically calculate the BMI/BSA in m².
- Click on the  button to view/print PN Prescription.



PN VERIFICATION

Prescription [X]

Mykad: [REDACTED] Age: 69 Years 06 Months 21 Days Gender: Male MRN: HPSF00060046

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

Height: 160 cm Weight: 59 kg BMI/BSA: 23 / 1.64 m² Update (Last Updated:) Nationality: Warganegara

Figure 3.1.1-3 Patient's Banner

Pharmacy Order

Information of **Order Type**, **Order by**, **Ward** and **Bed No** will be displayed by the system as per Figure 3.1.1-4.



PHARMACY ORDER

Order Type: PN Order By: [REDACTED]

Ward: WAD 3 (ORTO - L) Bed No: 1

Figure 3.1.1-4 Pharmacy Order

STEP 4

Click on the  hyperlink to view the order details as per Figure 3.1.1-5

PN ORDER DETAILS																																																																																																			
<div style="display: flex; justify-content: space-between;"> OXXXX XXX XXXXXX Mykad Age 58 Years 11 Months 26 Days Gender Male MRN HPSF00028523 </div>																																																																																																			
<div style="display: flex; justify-content: space-between;"> Address Phone And Email Diagnosis No known Allergies </div>																																																																																																			
Height 168 cm Weight 67 kg BMI/BSA 23.7 / 1.78 m ² (Last Updated: 13/10/2016) Nationality: Warganegara																																																																																																			
<table border="1"> <thead> <tr> <th>Drug Name</th> <th>Total Volume ml per kg (ml)</th> <th>Total calorie kcal per kg (kcal)</th> <th>Infusion Over (hour)</th> <th>Infusion Rate (ml/hour)</th> <th>Quantity</th> <th>Freq</th> <th>Duration</th> <th>Start Date / Time</th> <th>End Date / Time</th> </tr> </thead> <tbody> <tr> <td>PN Compounded Adult</td> <td>29.85 (2000)</td> <td>30.19 (2023)</td> <td>24</td> <td>83.33 ml/hour</td> <td>1 BAG</td> <td>OD</td> <td>1 Days</td> <td>13/10/2016 05:00 PM</td> <td>14/10/2016 05:00 PM</td> </tr> <tr> <td>PN Compounded Adult</td> <td>29.85 (2000)</td> <td>30.19 (2023)</td> <td>24</td> <td>83.33 ml/hour</td> <td>1 BAG</td> <td>OD</td> <td>1 Days</td> <td>13/10/2016 05:00 PM</td> <td>14/10/2016 05:00 PM</td> </tr> <tr> <th>Phosphate mmol per kg (mmol)</th> <th>Sodium mmol per kg (mmol)</th> <th>Potassium mmol per kg (mmol)</th> <th>Calcium mmol per kg (mmol)</th> <th>Magnesium mmol per kg (mmol)</th> <th>Acetate mmol per kg (mmol)</th> <th>Trace Element ml per kg (ml)</th> <th>Fat Soluble Vit. ml per kg (ml)</th> <th>Water Soluble Vit. ml per kg (ml)</th> <th>Multi Vitamin ml per kg (ml)</th> </tr> <tr> <td>0.6 (40.2)</td> <td>1 (67)</td> <td>1 (67)</td> <td>0.1 (6.7)</td> <td>0.05 (3.35)</td> <td>NA</td> <td>NA</td> <td>0.15 (10)</td> <td>0.15 (10)</td> <td>NA</td> </tr> <tr> <td>0.6 (40.2)</td> <td>1 (67)</td> <td>1 (67)</td> <td>0.1 (6.7)</td> <td>0.05 (3.35)</td> <td>NA</td> <td>0.15 (10)</td> <td>0.15 (10)</td> <td>0.15 (10)</td> <td>NA</td> </tr> <tr> <th>L-Glutamin ml per kg (ml)</th> <th>Protein g per kg (g)</th> <th>Carbohydrate g per kg (g)</th> <th>Lipid g per kg (g)</th> <th colspan="2">Calorie Calculator</th> <th colspan="4">Infusion Line</th> </tr> <tr> <td>1.49 (100)</td> <td>2 (134)</td> <td>3 (201)</td> <td>1 (67)</td> <td colspan="2">NA</td> <td colspan="4">Central</td> </tr> <tr> <td>1.49 (100)</td> <td>2 (134)</td> <td>3 (201)</td> <td>1 (67)</td> <td colspan="2">NA</td> <td colspan="4">Central</td> </tr> </tbody> </table>										Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Infusion Rate (ml/hour)	Quantity	Freq	Duration	Start Date / Time	End Date / Time	PN Compounded Adult	29.85 (2000)	30.19 (2023)	24	83.33 ml/hour	1 BAG	OD	1 Days	13/10/2016 05:00 PM	14/10/2016 05:00 PM	PN Compounded Adult	29.85 (2000)	30.19 (2023)	24	83.33 ml/hour	1 BAG	OD	1 Days	13/10/2016 05:00 PM	14/10/2016 05:00 PM	Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin ml per kg (ml)	0.6 (40.2)	1 (67)	1 (67)	0.1 (6.7)	0.05 (3.35)	NA	NA	0.15 (10)	0.15 (10)	NA	0.6 (40.2)	1 (67)	1 (67)	0.1 (6.7)	0.05 (3.35)	NA	0.15 (10)	0.15 (10)	0.15 (10)	NA	L-Glutamin ml per kg (ml)	Protein g per kg (g)	Carbohydrate g per kg (g)	Lipid g per kg (g)	Calorie Calculator		Infusion Line				1.49 (100)	2 (134)	3 (201)	1 (67)	NA		Central				1.49 (100)	2 (134)	3 (201)	1 (67)	NA		Central			
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Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin ml per kg (ml)																																																																																										
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0.6 (40.2)	1 (67)	1 (67)	0.1 (6.7)	0.05 (3.35)	NA	0.15 (10)	0.15 (10)	0.15 (10)	NA																																																																																										
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1.49 (100)	2 (134)	3 (201)	1 (67)	NA		Central																																																																																													
1.49 (100)	2 (134)	3 (201)	1 (67)	NA		Central																																																																																													

Figure 3.1.1-5 PN Order Details

STEP 5

Click on the  button to verify PN order as per Figure 3.1.1-6

PN VERIFICATION																							
<div style="display: flex; justify-content: space-between;"> Mykad Age 69 Years 06 Months 21 Days Gender Male MRN HPSF00060046 </div>																							
<div style="display: flex; justify-content: space-between;"> Address Phone And Email Diagnosis No known Allergies </div>																							
Height 160 cm Weight 59 kg BMI/BSA 23 / 1.64 m ² Update (Last Updated:) Nationality: Warganegara																							
<div style="display: flex; justify-content: space-between;"> Encounter No: 0020 Admission Date: 05/12/2014 Attending Practitioner: Visit Location: WAD 3 (ORTO - L) </div>																							
PHARMACY ORDER																							
Order Type	PN			Order By																			
Ward	WAD 3 (ORTO - L)			Bed No	1																		
PRESCRIPTION																							
<input type="checkbox"/> PROCEED TO PREPARATION <input checked="" type="checkbox"/> Verify																							
<table border="1"> <thead> <tr> <th>Drug</th> <th>Volume</th> <th>Order Qty</th> <th>Order Details</th> <th>Remarks</th> <th>Prev. Disp. Qty</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>Nutriflex Lipid Peri 955kcal,1,25L</td> <td>1250 ml</td> <td>1 bag</td> <td>Details</td> <td>Remarks</td> <td>0 bag</td> <td>ORDERED (Authorised)</td> </tr> </tbody> </table>										Drug	Volume	Order Qty	Order Details	Remarks	Prev. Disp. Qty	Status	Nutriflex Lipid Peri 955kcal,1,25L	1250 ml	1 bag	Details	Remarks	0 bag	ORDERED (Authorised)
Drug	Volume	Order Qty	Order Details	Remarks	Prev. Disp. Qty	Status																	
Nutriflex Lipid Peri 955kcal,1,25L	1250 ml	1 bag	Details	Remarks	0 bag	ORDERED (Authorised)																	

Figure 3.1.1-6 PN Verification

Note

- User allowed to perform **Intervention** and **Hold/Resume Order** at verification stage.
- Upon verifying order status will be changed to **Verified**.
- Proceed to Next Stage function will allows user to advance to the next screen for each patient record.



3.1.2 Intervention Parenteral Nutrition (PN) Order

PN VERIFICATION

Prescription X

Age 69 Years 06 Months 21 Days Gender Male MRN HPSF00060046

Address Phone And Email Diagnosis No known Allergies

Height 160 cm Weight 59 kg BMI/BSA 23 / 1.64 m² Update (Last Updated :) Nationality : Warganegara

Upload Photo

Lab Results Counselling History Demographic Pharmacist Notes Medication Profile Other Appointment

Encounter No: 0020 Admission Date: 05/12/2014 Attending Practitioner: Visit Location: WAD 3 (ORTO - L)

PHARMACY ORDER

Order Type PN Order By

Ward WAD 3 (ORTO - L) Bed No 1

PRESCRIPTION PROCEED TO PREPARATION Verify

Drug	Volume	Order Qty	Order Details	Remarks	Prev. Disp. Qty	Status	
Intervention Hold Order	955kcal,1.25L	1250 ml	1 bag	Details	Remarks	0 bag	ORDERED (Authorised)

Figure 3.1.2-1 PN Verification

Note

To proceed with Intervention PN Order, repeat **Step 1 to 4** from section 3.1.1 Verify PN Order.

STEP 1

Right click on the button and select **Intervention** function and Intervention screen will be displayed as Figure 3.1.2-2

PN INTERVENTION ORDER
2

PHARMACY REMARKS
History Confirm

1 / 1
[1 - 12 / 12]

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

MODIFY ORDER

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

Drug Name:

ADMINISTRATION INFO

Volume: <input type="text" value="1250"/> millilitre	Indication for PN: <input type="text" value="Gastrointestinal fistula"/>
Frequency: <input type="text" value="OD (once daily)"/>	Infusion Line: <input type="text" value="Central"/>
Start Date/Time: <input type="text" value="27/01/2015 05:00 PM"/>	Duration: <input type="text" value="1"/> Days
End Date/Time: <input type="text" value="28/01/2015 05:00 PM"/>	Infusion Over: <input type="text" value="24 hours"/>
Order Quantity: <input type="text" value="1"/> bag	Dispense Location: <input type="text" value="UNIT NUTRISI PARENTERAL"/>
Remarks: <input type="text"/>	

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	27/01/2015 05:00 PM	28/01/2015 05:00 PM

Calorie Calculator
NA

Infusion Line
Central

Figure 3.1.2-2 PN Intervention Order

Note

- PN Intervention Order screen include four sections:
 - a) Pharmacy Remarks
 - b) Modify Order
 - c) Administration Information
 - d) Prescription
- Click on History button to view Intervention Reason History Listing screen.
- Check on the appropriate **Intervention Reason** checkbox and enter **Remarks** field if applicable.
- Select **Intervention Status Accepted** radio button or **Intervention Status Not Accepted** radio button.

STEP 2

Click on the button to save record as per Figure 3.1.2-2

PN INTERVENTION ORDER

History Confirm Refresh Close

PHARMACY REMARKS

[1 - 12 / 12]

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

MODIFY ORDER

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

Nutriflex Lipid Peri 955kcal,1.25L

ADMINISTRATION INFO

Volume: 1250 millilitre	Indication for PN: Gastrointestinal fistula
Frequency: OD (once daily)	Infusion Line: Central
Start Date/Time: 27/01/2015 05:00 PM	Duration: 1 Days
End Date/Time: 28/01/2015 05:00 PM	Infusion Over: 24 hours
Order Quantity: 1 bag	Dispense Location: UNIT NUTRISI PARENTERAL
Remarks:	

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	27/01/2015 05:00 PM	28/01/2015 05:00 PM

Calorie Calculator NA	Infusion Line Central
--------------------------	--------------------------

Figure 3.1.2-3 PN Intervention Order

Note

- **Modify Order, Administration Information and Prescription** section will display as per Figure 3.1.2-3.
- Field that can be edited in Administration Information as below:
 - Volume
 - Frequency
 - Start Date/Time
 - Infusion Line
 - Duration
 - Infusion Over
- Click on the button to update back prescription details.

3.1.3 Hold/Resume Parenteral Nutrition (PN) Order

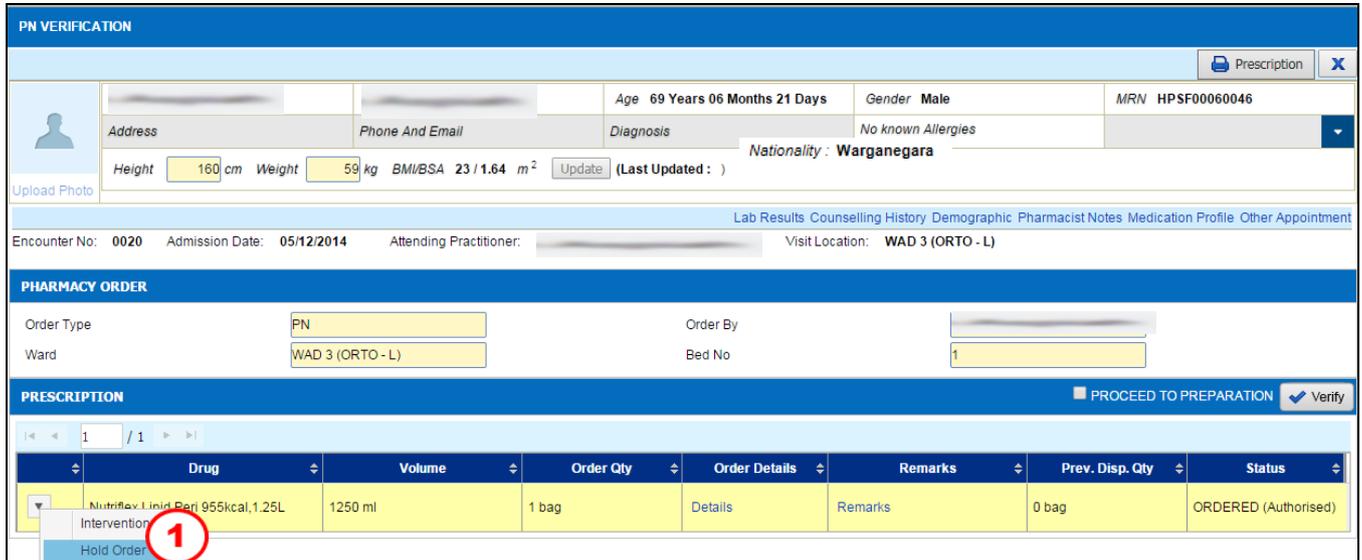


Figure 3.1.3-1 PN Verification Screen

Note

To proceed with Hold/Resume PN Order, repeat **Step 1 to 4** from section 3.1.1 Verify PN Order.

Hold Order

STEP 1

Right click on the  button and select **Hold Order** function and screen will be displayed as Figure 3.1.3-2

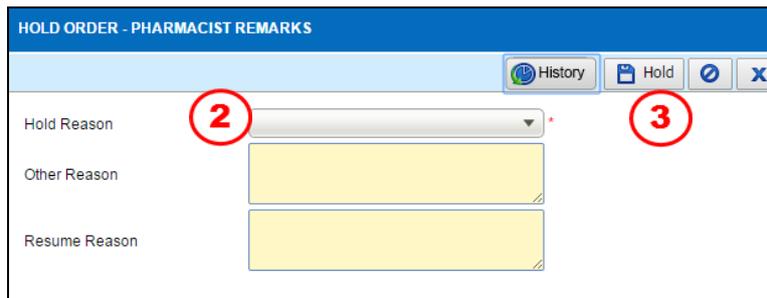


Figure 3.1.3-2 Hold Order – Pharmacist Remarks

STEP 2

Select the **Hold Reason** from dropdown box:

- Authenticity
- Contraindication
- Drug Interaction
- Inappropriate Dose
- Inappropriate Duration
- Inappropriate Frequency
- Incompatibility

- Intervention
- Others
- Polypharmacy
- Suggest to Monitor Vital Signs/Lab Result
- Wrong Patient

Note

Other Reason field will activate if user select hold reason as Others.

STEP 3

Click on the  button to hold order and alert message will display as Figure 3.1.3-3

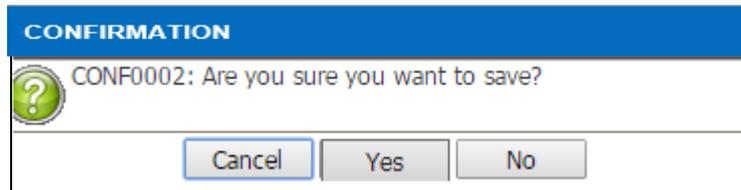
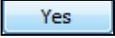


Figure 3.1.3-3 Confirmation Alert Message

Note

- Click on the  button to confirm the hold record as per Figure 3.1.3-3.
- **Status** will change to "Ordered Hold" as per Figure 3.1.3-4.

PN VERIFICATION Prescription X

Mykad: [REDACTED] Age: 69 Years 06 Months 21 Days Gender: Male MRN: HPSF0060046

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

Height: 160 cm Weight: 59 kg BMI/BSA: 23 / 1.64 m² Update (Last Updated:) Nationality: Warganegara

Upload Photo

Lab Results Counselling History Demographic Pharmacist Notes Medication Profile Other Appointment

Encounter No: 0020 Admission Date: 05/12/2014 Attending Practitioner: [REDACTED] Visit Location: WAD 3 (ORTO - L)

PHARMACY ORDER

Order Type: PN Order By: [REDACTED]

Ward: WAD 3 (ORTO - L) Bed No: 1

PRESCRIPTION PROCEED TO PREPARATION Verify

1 / 1

Drug	Volume	Order Qty	Order Details	Remarks	Prev. Disp. Qty	Status
Nutriflex Liquid 0.55kcal, 1.25L Intervention	1250 ml	1 bag	Details	Remarks	0 bag	ORDERED HOLD (Authorised)

Resume Order **4**

Figure 3.1.3-4 PN Verification

Resume Order

STEP 4

Right click on the  button and select **Resume Order** function and screen will be displayed as Figure 3.1.3-5

HOLD ORDER - PHARMACIST REMARKS **6** **7**

History Resume  X

Hold Reason: Inappropriate Drug *

Other Reason: [REDACTED]

Resume Reason: done **5**

Figure 3.1.3-5 Hold Order – Pharmacist Remarks

Note

To proceed with Resume PN Order, repeat **Step 2 to 3** from section **3.1.3 Hold/Resume PN Order**.

STEP 5

Enter reason at **Resume Reason** field

STEP 6

Click on the  button to resume hold order

STEP 7

Click on the  button to close window and alert message will be displayed as per Figure 3.1.3.6

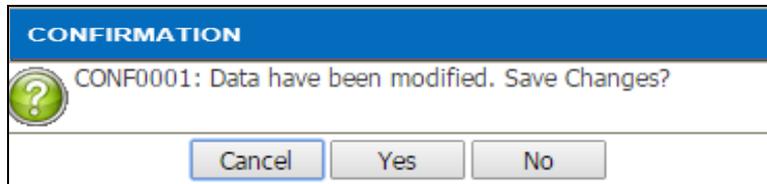


Figure 3.1.3-6 Confirmation Alert Message

Note

- Click on the  button to confirm save record.
- **Status** will change to "Ordered".

History

Note

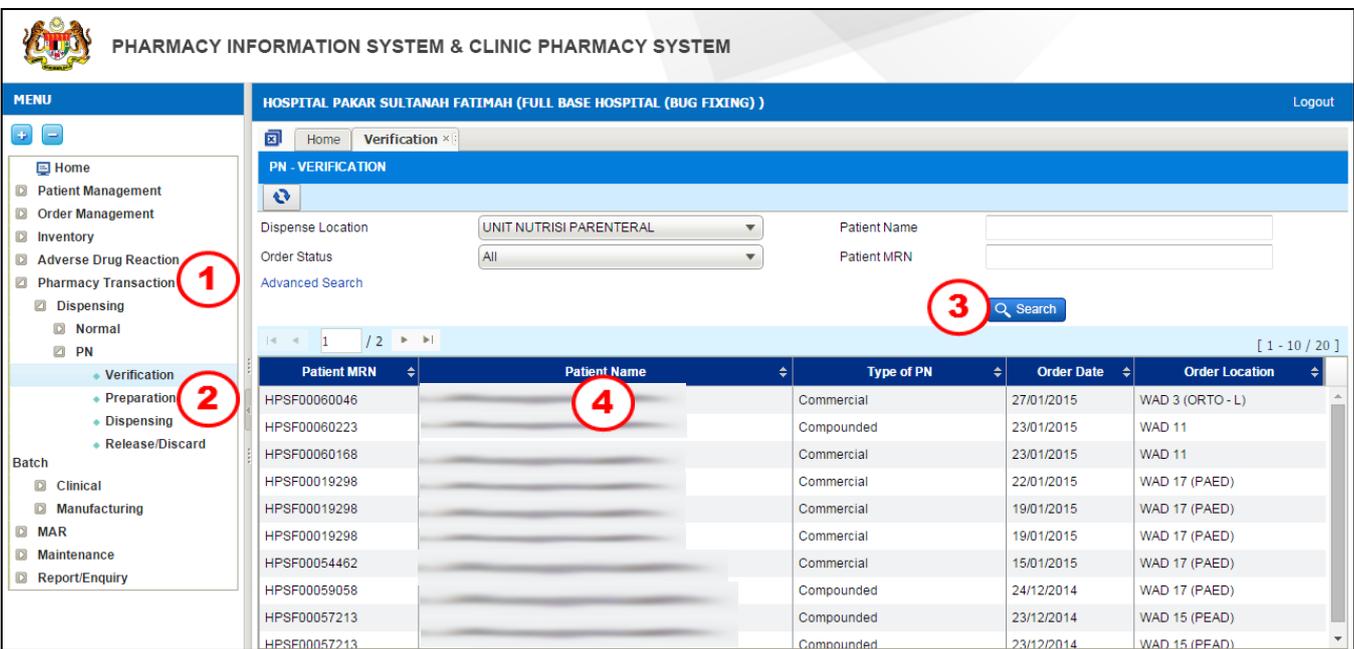
- Click on the  button to view history of hold order reason history listing as per Figure 3.1.3-7.
- Click on the  button to close Hold Order Reason History listing screen.

HOLD ORDER REASON HISTORY LISTING					
Date/Time	Screen	Hold Reason	Remarks	Resume Remarks	Updated By
27/01/2015 12:09 PM	Verification	Inappropriate Drug		done	

Figure 3.1.3-7 Hold Order – Pharmacist Remarks

3.2 Parenteral Nutrition (PN) Preparation

3.2.1 Preparation for Commercial



PHARMACY INFORMATION SYSTEM & CLINIC PHARMACY SYSTEM

HOSPITAL PAKAR SULTANAH FATIMAH (FULL BASE HOSPITAL (BUG FIXING))

Logout

Home Verification x

PN - VERIFICATION

Dispense Location: UNIT NUTRISI PARENTERAL Patient Name:

Order Status: All Patient MRN:

Advanced Search

[1 - 10 / 20]

Patient MRN	Patient Name	Type of PN	Order Date	Order Location
HPSF00060046		Commercial	27/01/2015	WAD 3 (ORTO - L)
HPSF00060223		Compounded	23/01/2015	WAD 11
HPSF00060168		Commercial	23/01/2015	WAD 11
HPSF00019298		Commercial	22/01/2015	WAD 17 (PAED)
HPSF00019298		Commercial	19/01/2015	WAD 17 (PAED)
HPSF00019298		Commercial	19/01/2015	WAD 17 (PAED)
HPSF00054462		Commercial	15/01/2015	WAD 17 (PAED)
HPSF00059058		Compounded	24/12/2014	WAD 17 (PAED)
HPSF00057213		Compounded	23/12/2014	WAD 15 (PEAD)
HPSF00057213		Compounded	23/12/2014	WAD 15 (PEAD)

Figure 3.2.1-1 PN Preparation Listing Page

STEP 1

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

STEP 2

Click on 'Preparation' function

Note

Search patient record based: -

Basic Search			
No	Field	Description	Remark
a	Dispense Location	Dispensing location. (It will list down all active location)	Able to filter and search patient name by dispensing location
b	Order Status	Search by: All Verified Verified Hold Partial Supply Orders	Able to filter and search patient name by order status
c	Patient Name	Patient Name	Allow to search by full name or partial
d	Patient MRN	Patient Medical Record Number	Search option: Type the MRN either full or partial: <i>Example: HPSF00001234 or "1234"</i>
e	Administration Date From	Administration confirmed date	Allow to search by start date of verification order
f	Administration Date To	Administration confirmed date	Allow to search by selected duration of verification order
Advance Search			
a	Order location Type	Current Visit Location Type	Search by: - All - Clinic - Day Care - ER - Nursing Unit - Pharmacy
b	Order Location	Current visit Location	Able to filter and search patient name by visit location
c	Order Date From	Order confirmed date	Allow to search by start date of order created
d	Order Date To	Order confirmed date	Allow to search by selected duration of order created

Table 3.2.1-1: Search Criteria

STEP 3

Click on the  button to search patient

Note

Search result of patient record list will be displayed:

- Patient MRN
- Patient Name
- Type of PN
- Order Date
- Order Location



STEP 4

Double click on record and PN Preparation screen will be displayed as Figure 3.2.1-2

PN PREPARATION

Prescription [X]

Mykad: [Redacted] Age: 69 Years 06 Months 21 Days Gender: Male MRN: HPSF00060046

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

Height: 160 cm Weight: 59 kg BMI/BSA: 23 / 1.64 m² (Last Updated:) Nationality: Warganegara

Lab Results Counselling History Demographic Pharmacist Notes Medication Profile Other Appointment

Encounter No: 0020 Admission Date: 05/12/2014 Attending Practitioner: [Redacted] Visit Location: WAD 3 (ORTO - L) Rx No: PEDC0000071746

PHARMACY ORDER

Prepared Date/Time: 27/01/2015 12:19 PM

PRESCRIPTION [PROCEED TO DISPENSING] [Prepare] [Label]

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Remarks	Prev Disp	Status
Nutriflex Lipid Peri 955kcal,1.25L	1250 ml	1 bag	Details	0 bag	1 bag	Remarks	0 bag	VERIFIED (Authorised)

Figure 3.2.1-2 PN Preparation

Note

Order Details

- Click on the [Details](#) hyperlink to view order details as per Figure 3.2.1-3.

PN ORDER DETAILS

Mykad: [Redacted] Age: 69 Years 06 Months 21 Days Gender: Male MRN: HPSF00060046

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

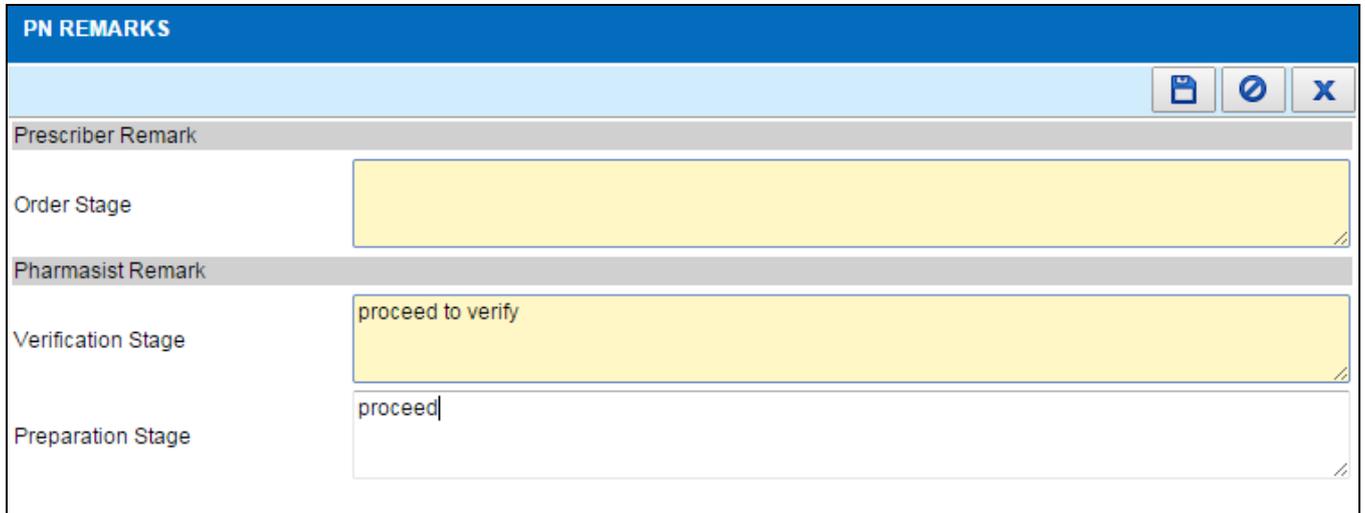
Height: 160 cm Weight: 59 kg BMI/BSA: 23 / 1.64 m² (Last Updated:) Nationality: Warganegara

Drug Name	Total Volume (ml)	Total calorie (kcal)	Infusion Over (hour)	Infusion Rate (ml/hour)	Quantity	Freq	Duration	Start Date / Time	End Date / Time
Nutriflex Lipid Peri 955kcal,1.25L	1250	955	24	52.08 ml/hour	1 bag	OD (once daily)	1 Days	27/01/2015 05:00 PM	28/01/2015 05:00 PM
Calorie Calculator					Infusion Line				
NA					Central				

Figure 3.2.1-3 PN Order Details

Note

Remarks



The screenshot shows a window titled "PN REMARKS" with a blue header bar. Below the header are three buttons: a save icon (floppy disk), a cancel icon (circle with slash), and a close icon (X). The window is divided into two main sections: "Prescriber Remark" and "Pharmacist Remark". Under "Prescriber Remark", there is a label "Order Stage" followed by a large yellow text area. Under "Pharmacist Remark", there are two labels: "Verification Stage" with a yellow text area containing the text "proceed to verify", and "Preparation Stage" with a white text area containing the text "proceed".

Figure 3.2.1-4 PN Remarks

- Click on the [Remarks](#) hyperlink to display PN Remark as per Figure 3.2.1-4.
 - a) Prescriber Remark
 - **Order Stage** to be retrieved upon ordering.
 - b) Pharmacist Remark
 - **Verification Stage** to be retrieved during verification.
 - **Preparation Stage** to be retrieved during preparation.
- The  button to save record.
- The  button to close PN Remarks screen.
- The  button to cancel remark record.

PN PREPARATION

Prescription [X]

Mykad: [Redacted] Age: 69 Years 06 Months 21 Days Gender: Male MRN: HPSF00060046

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

Height: 160 cm Weight: 59 kg BMI/BSA: 23 / 1.64 m² Update (Last Updated:) Nationality: Warganegara

Upload Photo

Lab Results Counselling History Demographic Pharmacist Notes Medication Profile Other Appointment

Encounter No: 0020 Admission Date: 05/12/2014 Attending Practitioner: [Redacted] Visit Location: WAD 3 (ORTO - L) Rx No: PEDC0000071746

PHARMACY ORDER

Prepared Date/Time: 27/01/2015 12:19 PM

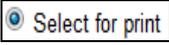
PRESCRIPTION [PROCEED TO DISPENSING] [Prepare] [Label]

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Remarks	Prev Disp	Status
Nutriflex Lipid Peri 955kcal,1.25L	1250 ml	1 bag	Details	0 bag	1 bag	Remarks	0 bag	VERIFIED (Authorised)

Figure 3.2.1-5 PN Preparation

Note

Edit Label

- Click on the  button to edit label and PN Edit Label window will display as per Figure 3.2.1-6.
- Select the  radio button to print label.
- User allows to edit **Infusion Over**, **Date Prepared** and **Shelf Life** field.
- Expiry Date** field will automatically display after filling the **Shelf Life** field.
- Drug Name**, **Total Volume**, **Infusion Rate** and **Batch No** field will be displayed automatically by system.
- The  button to print label as per Figure 3.2.1-7.
- The  button to close PN Edit Label window.
- The  button to cancel print label.

PN EDIT LABEL

[Info] [Print] [Close]

Select for print

Drug Name: Nutriflex Lipid Peri 955kcal,1.25L

Total Volume: 1250 ml

Infusion Over: 24 Hour(s)

Infusion Rate: 52.08 mL/Hour

Prepared Date/Time: 27/01/2015 12:19 PM Shelf Life*: 2 Hours

Expiry Date/Time: 27/01/2015 2:19 PM

Batch/Worksheet No: DMHPSF14

Figure 3.2.1-6 PN Edit Label



HOSPITAL PAKAR SULTANAH FATIMAH, MUAR		
PARENTERAL NUTRITION (Adult)		
NAME : ██████████		
AGE : 56 Years 10 Months 04 Days		
MRN : HPSF00191617	WARD/BED NO: WAD 9 (MED - P)	
Total Volume <u>3260</u> ml/bag		
Content	/ kg	/ bag
Protein (g)	2	176
Dextrose (g)	3	264
Lipid (g)	0	0
Sodium (mmol)	1	88
Potassium (mmol)	0	0
Calcium (mmol)	0	0
Magnesium (mmol)	0	0
Phosphate (mmol)	0	0
Chloride (mmol)	1	87.99
Acetate (mmol)	0	0
Trace (mL)	0	0
Vitamins (mL)	0	0
Calories (kcal)	20	1760
Osmolarity (mOs)	10.53	926.91
L-Glutamin (ml)	0	0
Date and Time of Administration :		
Infusion Rate	<u>135.83</u> ml/Hrs	
Worksheet ID A011-280917	Expiry Date 29/09/2017 9:35 AM	Price : RM
Do not use if any visible solid particles, growth or precipitation appears		
Store in refrigerator (2-8 °C). Protect from light (Once open use within 24 Hours) Ensure PN Solution is at room temperature before infusion		
TO BE INFUSED : CENTRAL LINE		

Figure 3.2.1-7 Sample Label

PN PREPARATION

	Mykad: [REDACTED]	Age: 69 Years 06 Months 21 Days	Gender: Male	MRN: HPSF00060046
Address: [REDACTED]	Phone And Email: [REDACTED]	Diagnosis: [REDACTED]	No known Allergies	
Height: 160 cm	Weight: 59 kg	BMI/BSA: 23 / 1.64 m ²	Update (Last Updated:) Nationality: Warganegara	

Upload Photo

Lab Results Counselling History Demographic Pharmacist Notes Medication Profile Other Appointment

Encounter No: 0020 Admission Date: 05/12/2014 Attending Practitioner: [REDACTED] Visit Location: WAD 3 (ORTO - L) Rx No: PEDC0000071746

PHARMACY ORDER

Prepared Date/Time: 27/01/2015 12:19 PM 5

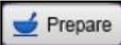
PRESCRIPTION

PROCEED TO DISPENSING

	Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Remarks	Prev Disp	Status
▼	Nutriflex Lipid Peri 955kcal,1.25L	1250 ml	1 bag	Details	0 bag	1 bag	▶ Remarks	0 bag	VERIFIED (Authorised)

Figure 3.2.1-8 PN Preparation

STEP 5

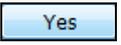
Click on the  button to prepare PN order and alert message will be displayed as per Figure 3.2.1-9

CONFIRMATION

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

Figure 3.2.1-9 Prepare Order Alert Message

STEP 6

Click on the  button to confirm prepare order

Note

Proceed to Next Stage function will allow user advance to the next screen for each patient record.

3.2.1.1 Alternate Drug

Note

- Preparation for Commercial screen allows user to dispense different drug from existing ordered drug with conditionation, alternate drug should contains same active ingredient and same administration route.
- To proceed with Alternate Drug PN Order, repeat **Step 1 to 4** from section [3.2.1 Preparation for Commercial](#).
- All these field will be displayed automatically by system as below:
 - Location
 - Ordered Drug Code
 - Dosage Form
 - Ordered Drug Description

ALTERNATE DRUG 5

Location:

Dosage Form:

Route:

Ordered Drug Code:

Ordered Drug Description:

Alternate Drug Name: 1

BATCH DETAIL

1 / 1

No	Drug Name	Dosage Form	Route	Batch	Expiry Date	Available Qty	Units	Qty to Dispense
1	Smof Kabiven Central 1600kcal, 1.5L	Parenteral Solution	INF	DMHPSF14	07/04/2015	79	bag	2 1

Reason: 3

Remark: 4

Figure 3.2.1.1-1 Alternate Drug

STEP 1

Select the **Alternate Drug Name** from dropdown box, example:

- Kabiven Periferal 1400kcal, 2.0L
- Kabiven Periferal 1000kcal, 1.5L
- PN Paed Soln 2 (72kcal, Dext 14%)
- PN Paed Soln 3 (48kcal, Dext 10%)
- Smof Kabiven Central 800kcal, 1.2L
- Kabiven Central 1900kcal, 2.0L
- Smof Kabiven Central 1100kcal, 1.0L
- Nutriflex Lipid Peri 1910kcal, 2.5L
- Nutriflex Lipid Peri 1435kcal, 1.875L
- Kabiven Central 900kcal, 1.0L
- Smof Kabiven Central 1600kcal, 1.5L
- PN Paed Soln 1 (72kcal, Dext 14%, K nil)

STEP 2

Enter **Allocate Qty** field as per Figure 3.2.1.1-1

STEP 3

Enter **Reason** field if applicable

STEP 4

Enter **Remark** field if applicable

STEP 5

Click on the  button to confirm save record and alert message will be displayed as per Figure 3.2.1.1-2

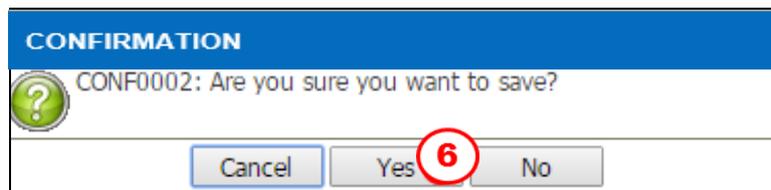


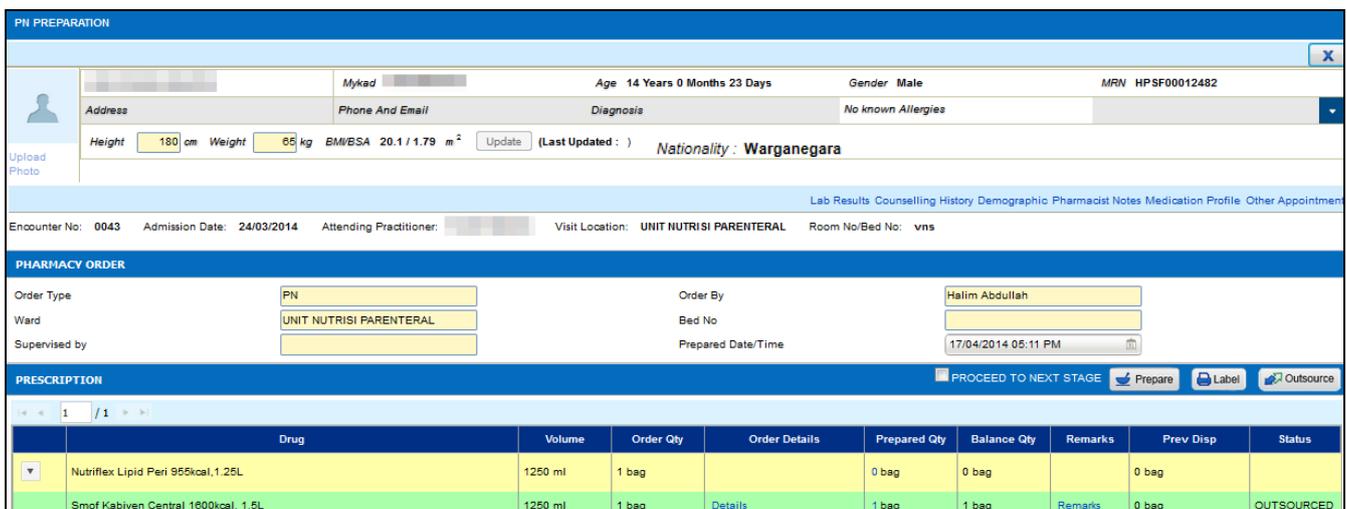
Figure 3.2.1.1-2 Confirmation Alert Message

STEP 6

Click on the  button to confirm save record

Note

- System will display the alternate drug in green row as per Figure 3.2.1.1-3.
- Intervention and Hold/Resume Order still can be done in preparation stage.
- Steps of Intervention can be referred at 3.1.1 sections.
- Steps of Hold/Resume Order can be referred at 3.1.2 sections.



PHARMACY ORDER

Order Type: PN | Order By: Halim Abdullah
 Ward: UNIT NUTRISI PARENTERAL | Bed No:
 Supervised by: | Prepared Date/Time: 17/04/2014 05:11 PM

PRESCRIPTION

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Remarks	Prev Disp	Status
Nutriflex Lipid Peni 955kcal, 1.25L	1250 ml	1 bag		0 bag	0 bag		0 bag	
Smof Kabiven Central 1800kcal, 1.5L	1250 ml	1 bag	Details	1 bag	1 bag	Remarks	0 bag	OUTSOURCED

Figure 3.2.1.1-3 PN Preparation



3.2.2 Preparation for Commercial Add Additive

Note

- Preparation (commercial add additive) allows user to add additional component in existing commercial bag.
- To proceed with Preparation for Commercial Add Additive, repeat **Step 1 to 4** from section **3.2.1 Preparation for Commercial**.

Figure 3.2.2-1 PN Preparation

Note

Order Details

- Click on the [Details](#) hyperlink to view order details as per Figure 3.2.2-2.

Drug Name	Total Volume (ml)	Total calorie (kcal)	Infusion Over (hour)	Infusion Rate (ml/hour)	Quantity	Freq	Duration	Start Date / Time	End Date / Time
Nutriflex Lipid Peri 955kcal, 1.25L	NA	955	24	NA ml/hour	NA bag	OD (once daily)	3 Days	10/12/2014 05:00 PM	13/12/2014 05:00 PM
Nutriflex Lipid Peri 955kcal, 1.25L With Additive	1250	955	24	52.08 ml/hour	1 bag	OD (once daily)	1 Days	10/12/2014 05:00 PM	11/12/2014 05:00 PM
Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Acetate (mmol)	Trace Element (ml)	Fat Soluble Vit. (ml)	Water Soluble Vit. (ml)	Multi Vitamin (ml)
NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NA	NA	40	NA	NA	NA	NA	NA	NA	NA
L-Glutamin (ml)			Calorie Calculator				Infusion Line		
NA							Central		
NA							Central		

Figure 3.2.2-2 PN Order Details

Remarks

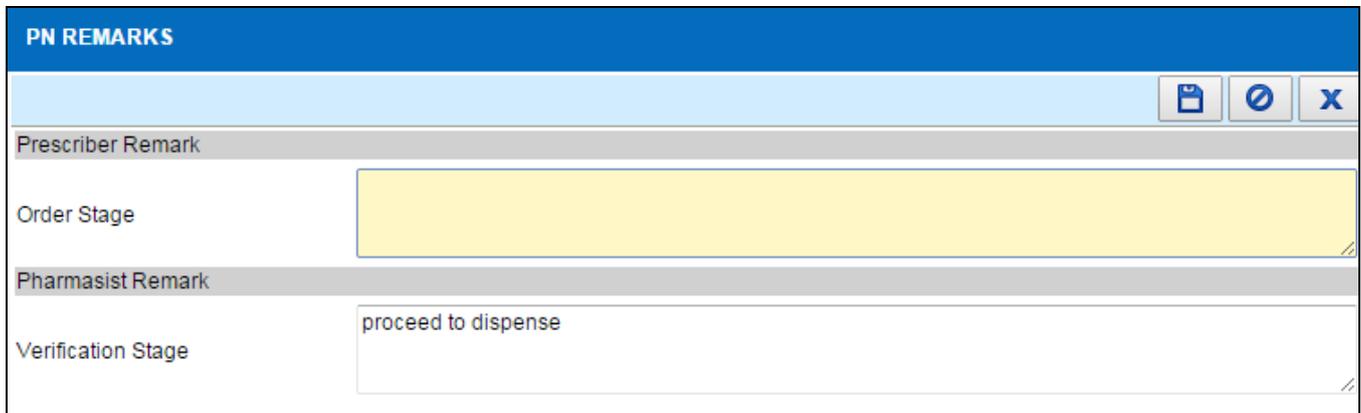


Figure 3.2.2-3 PN Order Details

- Click on the Remarks hyperlink to display PN Remark as per Figure 3.2.2-3.
 - a) Prescriber Remark
 - **Order Stage** to be retrieved upon ordering..
 - b) Pharmacist Remark
 - **Verification Stage** to be retrieved during verification.
 - **Preparation Stage** to be retrieve during preparation.
- The  button to save record alert message will be displayed as per Figure 3.2.2-3.

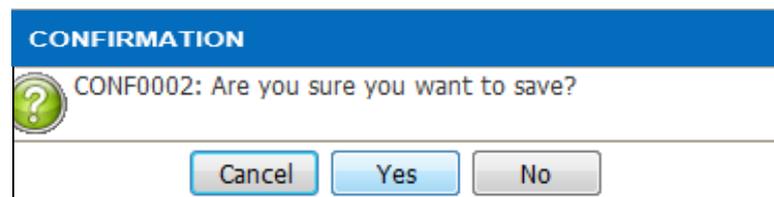


Figure 3.2.2-4 Confirmation Alert Message

- The Yes button to confirm save.
- The x button to close PN Remarks screen.
- The ⊗ button to cancel remark record.



PN PREPARATION

Prescription X

Mykad [redacted] Age 24 Years 0 Months 24 Days Gender Male MRN HPSF00012481

Address [redacted] Phone And Email [redacted] Diagnosis [redacted] No known Allergies

Height 185 cm Weight 65 kg BMI/BSA 19 / 1.81 m² Update (Last Updated : 26/03/2014) Nationality : Warganegara

Lab Results Counselling History Demographic Pharmacist Notes Medication Profile Other Appointment

Encounter No: 0042 Admission Date: 24/03/2014 Attending Practitioner: [redacted] Visit Location: UNIT NUTRISI PARENTERAL Room No/Bed No:

PHARMACY ORDER

Order Type PN Order By [redacted]

Ward UNIT NUTRISI PARENTERAL Bed No [redacted]

Supervised by [redacted] Prepared Date/Time 17/04/2014 03:18 PM

PRESCRIPTION PROCEED TO NEXT STAGE Prepare Worksheet Label Outsource

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
Nutriflex Lipid Peri 955kcal,1.25L with Additive	1250 ml	1 bag	Details	0 bag 1	bag	Details	Remarks	0 bag	VERIFIED

Figure 3.2.2-5 PN Preparation

STEP 1

Click on the **0 bag** link to allocate quantity and Item Batch Details screen will display as per Figure 3.2.2-6

ITEM BATCH DETAILS

Drug Code PNA00001 Default SKU bag

Drug Name Nutriflex Lipid Peri 955kcal,1.25L

BATCH DETAIL

Batch No.	Expiry Date	Available Qty	Balance Qty	Allocated Qty
DMHPSF14	31/03/2015	9990	1	0 2

Total Location Quantity 9990 Total Allocated Quantity 1

Figure 3.2.2-6 Item Batch Details

STEP 2

Enter **Allocated Qty** field

STEP 3

Click on the  button to save record

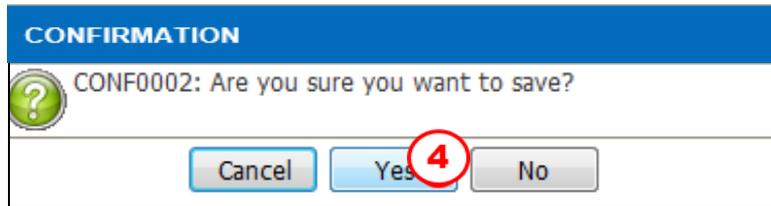
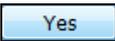


Figure 3.2.2-7 Confirmation Alert Message

STEP 4

Click on the  button to confirm save

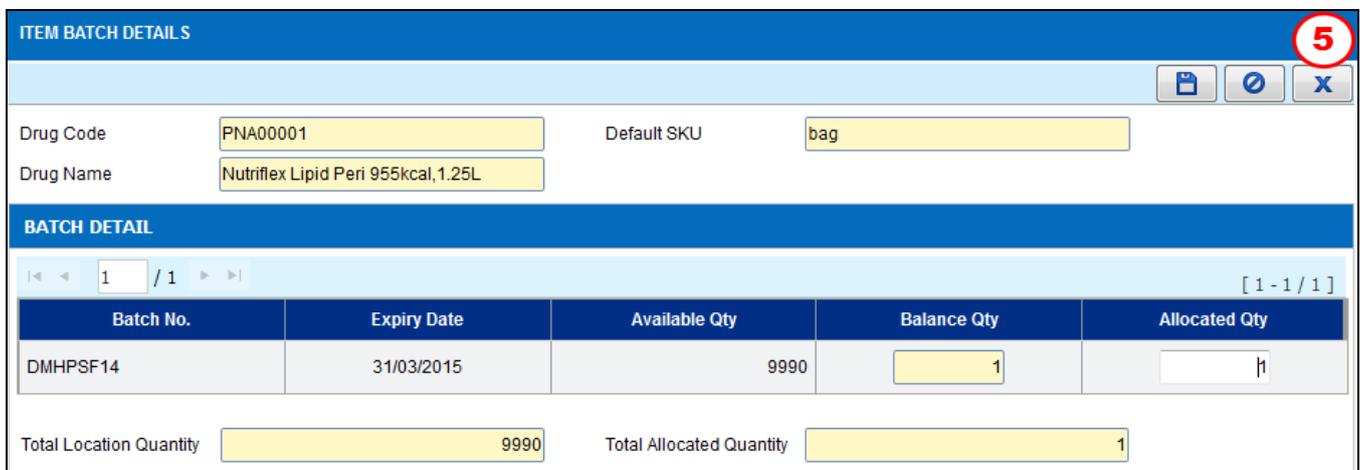


Figure 3.2.2-8 Item Batch Details

STEP 5

Click on the  button to close Item Batch Details window

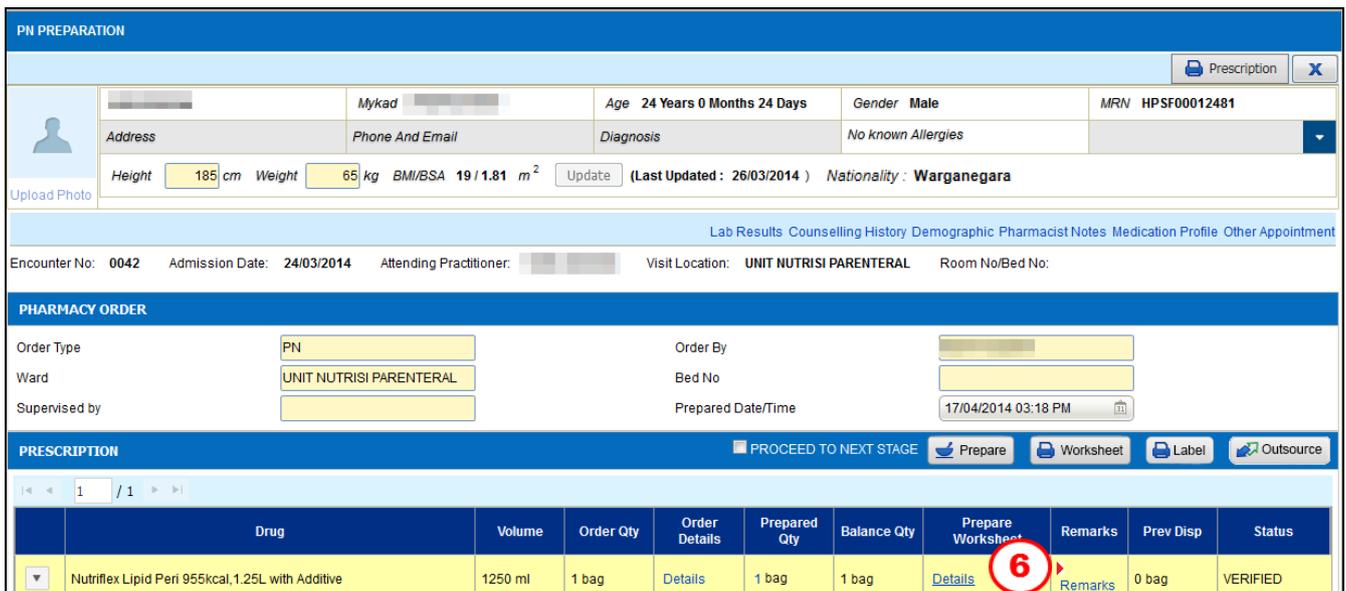


Figure 3.2.2-9 PN Preparation

STEP 6

Click on the **Details** button to prepare worksheet as per Figure 3.2.2-9

Note

- **Macronutrient, Vitamin and Electrolytes** field will automatically display by system.

DETAIL

TPN volume: ml

Macronutrient

Glucose: g

Lipid: g

Protein: g

Electrolytes

Sodium(Natrium),Na+: mmol

Potassium(Kalium),K+: mmol

Energy required: kcal

Vitamin

Vitamin Solution: ml

Water soluble: ml

Fat soluble: ml

Calcium,Ca2+: mmol

Magnesium,Mg+: mmol

Product category: 3 in 1 2 in 1

Trace elements: ml

Acetate: mmol

L-Glutamin: ml

Phosphate,(PO4)2-: mmol

Item selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolarity (mOsmol)	Content										
						Lipid (g)	Glucose (g)	Protein (g)	Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Chloride (mmol)	
Fat emulsion, Lipofundin MCT/LCT 20% 250ml IV s	0		0	0	0	67	0	0	0	0	0	0	0	0	0	0
Dextrose 50% IV soln 500ml	0		0	0	0	0	201	0	0	0	0	0	0	0	0	0
Amino acid 15% (Aminoplasmal) 500ml IV Soln	0		0	0	0	0	0	134	0	0	0	0	0	0	0	0
Potassium Dihydrogen Phosphate Injection	0		0	0	0	0	0	0	0	40.2	0	0	0	0	0	0
Sodium Chloride 3% 500mL, IV soln	0		0	0	0	0	0	0	0	0	67	0	0	0	0	0
Potassium Chloride 1g/10ml Inj	0		0	0	0	0	0	0	0	0	0	67	0	0	0	0
Calcium Gluconate 10% Inj	0		0	0	0	0	0	0	0	0	0	0	6.7	0	0	0
Magnesium Sulphate 50% Inj (49.3%/5mL)	0		0	0	0	0	0	0	0	0	0	0	0	3.35	0	0
Trace Element-Adult (Addamel N) 10mL Inj	10		0	0	0	Trace Elements										
Vitamin B and C (Soluvit N) 10 ml Inj	10		0	0	0	Vitamin Solutions										
Vitamin A, D, E, K (Vitalipid N Adult) 10ml Inj	10		0	0	0	Water Soluble Vitamins										
Amino acid 20% (Dipeptivan) 100ml IV Soln	100		0	0	0	Fat Soluble Vitamins										
Sterile Water for Inj 500mL	0		0	0	0	L-Glutamin										
						Water For Injection										
Total Preparation	0			0	0	0	0	0	0	0	0	0	0	0	0	0

Figure 3.2.2-10 Prepare Worksheet

STEP 7

Click on the item dropdown to select the item before allocate

Note

- Able to set default drug in Maintenance - Pharmacy - PN Source Content screen.
- Drug listed should exists in dispense location unit catalogue.

STEP 8

Click on the **Calculate** button to calculate the item volume and order quantity as per Figure 3.2.2-11



PREPARE WORKSHEET

Intervention Auto Allocation

DETAIL

TPN volume: 2000 ml Energy required: 2023 kcal Product category: 3 in 1 2 in 1

Macronutrient
 Glucose: 201 g Vitamin Solution: ml
 Lipid: 67 g Water soluble: 10 ml Acetate: 0 mmol
 Protein: 134 g Fat soluble: 10 ml L-Glutamin: 100 ml

Electrolytes
 Sodium(Natrium),Na+: 67 mmol Calcium,Ca2+: 6.7 mmol Phosphate,(PO4)2-: 40.2 mmol
 Potassium(Kalium),K+: 67 mmol Magnesium,Mg+: 3.35 mmol

Item selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolarity (mOsmol)	Content										
						Lipid (g)	Glucose (g)	Protein (g)	Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Chloride (mmol)	
Fat emulsion, Lipofundin MCT/LCT 20% 250ml IV S	335	2 bott	0	603	127.3	67	0	0	0	0	0	0	0	0	0	0
Dextrose 50% IV soln 500ml	402	1 bott	0	804	1014.25	0	201	0	0	0	0	0	0	0	0	0
Amino acid 15% (Aminoplasmal) 500ml IV Soln	893.33	2 bott	0	536	1152.4	0	0	134	0	0	0	0	0	0	0	0
Potassium Dihydrogen Phosphate Injection	40.2	5 amp	0	0	64.04	0	0	0	0	40.2	0	40.2	0	0	0	0
Sodium Chloride 3% 500mL IV soln	131.37	1 bott	0	0	135.31	0	0	0	0	0	67	0	0	0	0	67
Potassium Chloride 1g/10ml Inj	20	2 amp	0	0	54.06	0	0	0	0	0	0	26.8	0	0	0	26.8
Calcium Gluconate 10% Inj	30.45	4 amp	0	0	20.37	0	0	0	0	0	0	0	6.7	0	0	0
Magnesium Sulphate 50% Inj (49.3%/5mL)	1.68	1 amp	0	0	6.72	0	0	0	0	0	0	0	0	3.35	0	0
Trace Element-Adult (Addamel N) 10mL Inj	10	1 amp	0	0	31	Trace Elements										
Vitamin B and C (Soluvit N) 10 ml Inj	10	1 vial	0	0	4.9	Vitamin Solutions										
Vitamin A, D, E, K (Vitalipid N Adult) 10ml Inj	10	1 amp	0	0	3	Water Soluble Vitamins										
Amino acid 20% (Dipeptivan) 100ml IV Soln	100	1 bott	0	80	92.1	Fat Soluble Vitamins										
Sterile Water for Inj 500mL	15.96	1 bott	0	0	0	L-Glutamin										
						Water For Injection										
Total Preparation	2000			2023	1352.72 mOsmol/l	67	201	134	0	40.2	67	67	6.7	3.35	93.8	

Figure 3.2.2-11 Prepare Worksheet

STEP 9

Click on the button to save record and the system will display as per Figure 3.2.2-12

Note

- Once user click on the **Intervention** button, system will reset the allocated qty to '0', user able to do intervention and re-calculate the worksheet and do allocation again

DETAIL

TPN volume: 2000 ml Energy required: 2023 kcal

Macronutrient
 Glucose: 201 g Vitamin Solution: ml
 Lipid: 67 g Water soluble: 10 ml Acetate: 0 mmol
 Protein: 134 g Fat soluble: 10 ml L-Glutamin: 100 ml

Electrolytes
 Sodium(Natrium),Na+: 67 mmol Calcium,Ca2+: 6.7 mmol Phosphate,(PO4)2-: 40.2 mmol
 Potassium(Kalium),K+: 67 mmol Magnesium,Mg+: 3.35 mmol

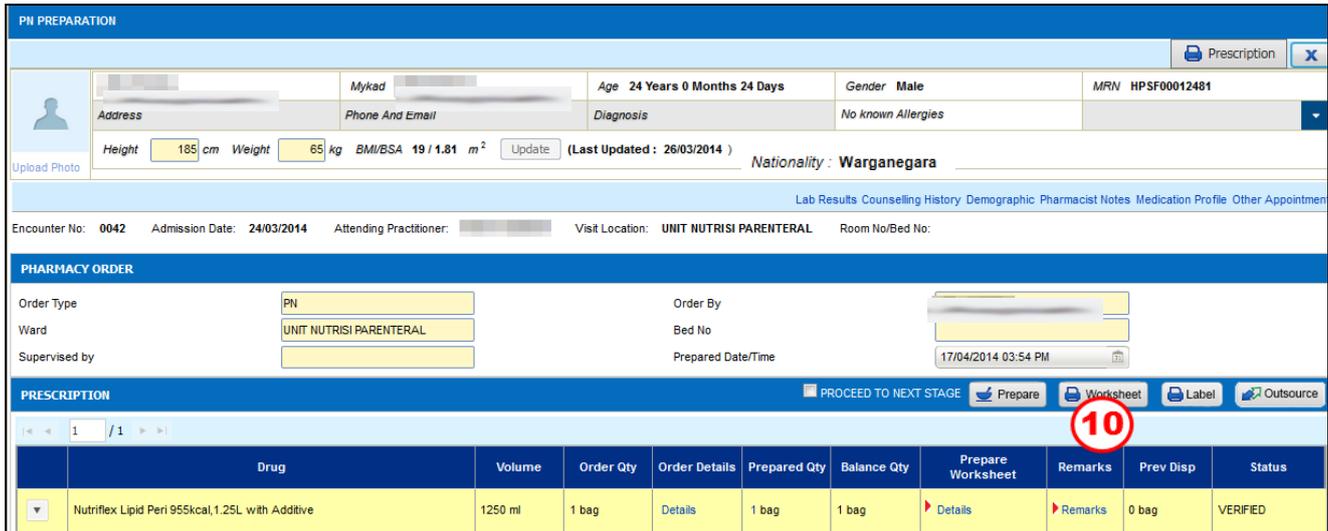
Item selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolarity (mOsmol)	Content										
						Lipid (g)	Glucose (g)	Protein (g)	Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Chloride (mmol)	
Fat emulsion, Lipofundin MCT/LCT 20% 250ml IV S	335	2 bott	2 bott	603	127.3	67	0	0	0	0	0	0	0	0	0	0
Dextrose 50% IV soln 500ml	402	1 bott	1 bott	804	1014.25	0	201	0	0	0	0	0	0	0	0	0
Amino acid 15% (Aminoplasmal) 500ml IV Soln	893.33	2 bott	2 bott	536	1152.4	0	0	134	0	0	0	0	0	0	0	0
Potassium Dihydrogen Phosphate Injection	40.2	5 amp	5 amp	0	64.04	0	0	0	0	40.2	0	40.2	0	0	0	0
Sodium Chloride 3% 500mL IV soln	131.37	1 bott	1 bott	0	135.31	0	0	0	0	0	67	0	0	0	0	67
Potassium Chloride 1g/10ml Inj	20	2 amp	2 amp	0	54.06	0	0	0	0	0	0	26.8	0	0	0	26.8
Calcium Gluconate 10% Inj	30.45	4 amp	4 amp	0	20.37	0	0	0	0	0	0	0	6.7	0	0	0
Magnesium Sulphate 50% Inj (49.3%/5mL)	1.68	1 amp	1 amp	0	6.72	0	0	0	0	0	0	0	0	3.35	0	0
Trace Element-Adult (Addamel N) 10mL Inj	10	1 amp	1 amp	0	31	Trace Elements										
Vitamin B and C (Soluvit N) 10 ml Inj	10	1 vial	1 vial	0	4.9	Vitamin Solutions										
Vitamin A, D, E, K (Vitalipid N Adult) 10ml Inj	10	1 amp	1 amp	0	3	Water Soluble Vitamins										
Amino acid 20% (Dipeptivan) 100ml IV Soln	100	1 bott	1 bott	80	92.1	Fat Soluble Vitamins										
Sterile Water for Inj 500mL	15.96	1 bott	1 bott	0	0	L-Glutamin										
						Water For Injection										
Total Preparation	2000			2023	1352.72 mOsmol/l	67	201	134	0	40.2	67	67	6.7	3.35	93.8	

Figure 3.2.2-12 Prepare Worksheet

Note

- **Calorie (kcal), Osmolarity(mOsmol), Content and Total Preparation** will be calculated and displayed automatically by system as per Figure 3.2.2-12.

Untick the **Auto Allocation** to allocate manually.



PH PREPARATION

Prescription

Mykad: [Redacted] Age: 24 Years 0 Months 24 Days Gender: Male MRN: HPSF00012481

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

Height: 185 cm Weight: 65 kg BMI/BSA: 19 / 1.81 m² Update (Last Updated: 26/03/2014) Nationality: Warganegara

Encounter No: 0042 Admission Date: 24/03/2014 Attending Practitioner: [Redacted] Visit Location: UNIT NUTRISI PARENTERAL Room No/Bed No:

PHARMACY ORDER

Order Type: PN Order By: [Redacted]

Ward: UNIT NUTRISI PARENTERAL Bed No: [Redacted]

Supervised by: [Redacted] Prepared Date/Time: 17/04/2014 03:54 PM

PRESCRIPTION PROCCEED TO NEXT STAGE Prepare Worksheet Label Outsource

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
Nutriflex Lipid Peri 955kcal, 1.25L with Additive	1250 ml	1 bag	Details	1 bag	1 bag	Details	Remarks	0 bag	VERIFIED

Figure 3.2.2-13 Prepare Preparation

STEP 10

Click on the button to print the worksheet

Note

- *Worksheet will display as per Figure 3.2.2-14.*
- **Allocated Quantity** column will be calculated and displayed automatically by system after click on the save button as per Figure 3.2.2-12.



NEONATE PARENTERAL NUTRITION WORKSHEET
MINISTRY OF HEALTH
Hospital Pakar Sultanah Fatimah

Patient Name : [REDACTED] Worksheet : P006-241214
MRN : HPSF00060075 Prepared Date/Time : 24/12/2014 05:34 PM
Ward/Bed No : WAD 3 (ORTO - L) Prescription # : PEDC0000070906
Age : 09 Days
Gender : Female
Body Weight : 3.5 kg

DRUG NAME	VOLUME (ml)	QUANTITY	BATCH NO	COMPONENT DETAIL (PER DAY)
Amino acid 13.4% (Glamin) 500ml IV Soln	26.12	1 bottle	DMHPSF14	3.5 g
Sterile Water for Inj 500mL	3445.13	7 bottle	DUMMY	NA
Total Volume	3471.25	1 Bag		

DRUG NAME	VOLUME (ml)	QUANTITY	BATCH NO	COMPONENT DETAIL (PER DAY)
Fat emulsion, SMOFlipid 20% 100ml IV Soln	8.75	1 bottle	03	1.75 g
Total Volume	8.75	1 Syringe		

Worksheet Generated By : [REDACTED] Date : 24/12/2014
Worksheet and Label Checked By : Supervised By :
Bag Prepared By :
Final Product Checked By :

Figure 3.2.2-14 Sample of PN Worksheet

Note

Sample of PN Worksheet as per Figure 3.2.2-13.

PH PREPARATION Prescription

[REDACTED] Mykad [REDACTED] Age 24 Years 0 Months 24 Days Gender Male MRN HPSF00012481

Address [REDACTED] Phone And Email [REDACTED] Diagnosis [REDACTED] No known Allergies

Upload Photo Height 185 cm Weight 65 kg BMI/BSA 19 / 1.81 m² Update (Last Updated : 26/03/2014) Nationality : Warganegara

Lab Results Counseling History Demographic Pharmacist Notes Medication Profile Other Appointment

Encounter No: 0042 Admission Date: 24/03/2014 Attending Practitioner: [REDACTED] Visit Location: UNIT NUTRISI PARENTERAL Room No/Bed No:

PHARMACY ORDER

Order Type: PN Order By: [REDACTED]
Ward: UNIT NUTRISI PARENTERAL Bed No: [REDACTED]
Supervised by: [REDACTED] Prepared Date/Time: 17/04/2014 03:54 PM

PRESCRIPTION PROCEED TO NEXT STAGE

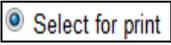
1 / 1

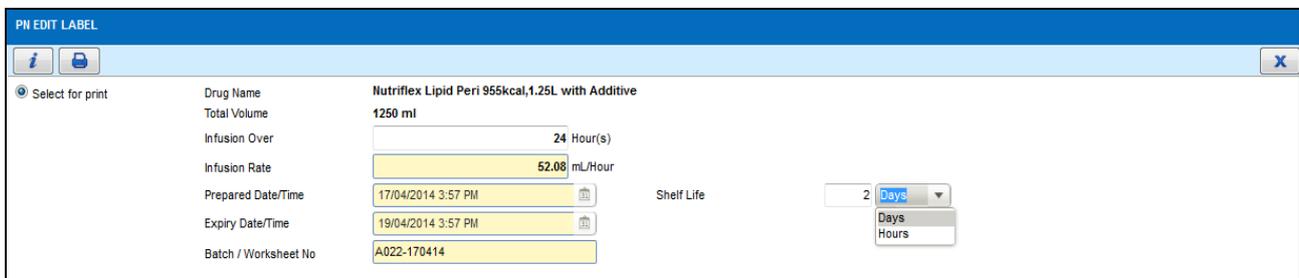
Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
Nutriflex Lipid Peri 955kcal, 1.25L with Additive	1250 ml	1 bag	Details	1 bag	1 bag	<input type="button" value="Details"/>	<input type="button" value="Remarks"/>	0 bag	VERIFIED

Figure 3.2.2-15 PN Preparation

Note

Edit Label

- Click on the  button to edit label as per Figure 3.2.2. 15 and PN Edit Label window will display as per Figure 3.2.2-16.
- Select the  radio button to print label.
- User allowed to edit **Infusion Over**, **Date Prepared** and **Shelf Life** field.
- **Expiry Date** field will automatically display after filling the **Shelf Life** field.
- **Drug Name**, **Total Volume**, **Infusion Rate** and **Batch No** field will be displayed automatically by system.
- The  button to print label.
- The  button to close PN Edit Label window.



Field	Value
Drug Name	Nutriflex Lipid Peri 955kcal,1.25L with Additive
Total Volume	1250 ml
Infusion Over	24 Hour(s)
Infusion Rate	52.08 mL/Hour
Prepared Date/Time	17/04/2014 3:57 PM
Expiry Date/Time	19/04/2014 3:57 PM
Batch / Worksheet No	A022-170414
Shelf Life	2 Days

Figure 3.2.2-16 PN Edit Label

Note

- PN Label will display as per figure 3.2.2-17.
- Additional content will be bolded description and value.

HOSPITAL PAKAR SULTANAH FATIMAH, MUAR		
PARENTERAL NUTRITION (Adult)		
NAME : ██████████		
AGE : 56 Years 10 Months 04 Days		
MRN : HPSF00191617	WARD/BED NO: WAD 9 (MED - P)	
Total Volume 3260 ml/bag		
Content	/ kg	/ bag
Protein (g)	2	176
Dextrose (g)	3	264
Lipid (g)	0	0
Sodium (mmol)	1	88
Potassium (mmol)	0	0
Calcium (mmol)	0	0
Magnesium (mmol)	0	0
Phosphate (mmol)	0	0
Chloride (mmol)	1	87.99
Acetate (mmol)	0	0
Trace (mL)	0	0
Vitamins (mL)	0	0
Calories (kcal)	20	1760
Osmolarity (mOs)	10.53	926.91
L-Glutamin (ml)	0	0
Date and Time of Administration :		
Infusion Rate	135.83 ml/Hrs	
Worksheet ID A011-280917	Expiry Date 29/09/2017 9:35 AM	Price : RM
Do not use if any visible solid particles, growth or precipitation appears		
Store in refrigerator (2-8 °C). Protect from light (Once open use within 24 Hours) Ensure PN Solution is at room temperature before infusion		
TO BE INFUSED : CENTRAL LINE		

Figure 3.2.2-17 Sample of PN Label

PN PREPARATION

Prescription [X]

Mykad: [Redacted] Age: 24 Years 0 Months 24 Days Gender: Male MRN: HPSF00012481

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

Height: 185 cm Weight: 65 kg BMI/BSA: 19 / 1.81 m² Update (Last Updated: 26/03/2014) Nationality: Warganegara

Lab Results Counseling History Demographic Pharmacist Notes Medication Profile Other Appointment

Encounter No: 0042 Admission Date: 24/03/2014 Attending Practitioner: [Redacted] Visit Location: UNIT NUTRISI PARENTERAL Room No/Bed No:

PHARMACY ORDER

Order Type: PN Order By: [Redacted]

Ward: UNIT NUTRISI PARENTERAL Bed No: [Redacted]

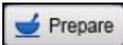
Supervised by: [Redacted] Prepared Date/Time: 17/04/2014 03:59 PM

PRESCRIPTION [PROCEED TO NEXT STAGE] [Prepare] [Worksheet] [Label] [Outsource]

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
Nutriflex Lipid Peri 955kcal, 1.25L with Additive	1250 ml	1 bag	Details	1 bag	1 bag	Details	Remarks	0 bag	VERIFIED

Figure 3.2.2-18 PN Preparation

STEP 11

Click on the  button to prepare PN order and alert message will be displayed as per Figure 3.2.2-19

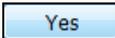
CONFIRMATION

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

Cancel Yes No

Figure 3.2.2-19 Preparation Confirmation Alert Message

STEP 12

Click on the  button to confirm prepare order

Note

Proceed to Next Stage function will allow user to advance to the next stage screen for each patient record.



3.2.3 Preparation for Compounded Bag

3.2.3.1 Preparation Compounded 3 in 1 Bag

Note

- Preparation (compounded) will allow user to prepare compounded bag. Worksheet and label can be printed after completing final calculation in preparation.
- Preparation for compounded have two product category as 3 in 1 bag and 2 in 1 bag.
- To proceed with Preparation for Compounded, repeat **Step 1 to 4** from section **3.2.1 Preparation for Commercial**.

Order Details



- Click on the [Details](#) hyperlink (Order Details column) to view order details as per Figure 3.2.3.1-2.

PN PREPARATION

Prescription

Address: Mother IC: Age: 01 Years 01 Months 24 Days Gender: Male MRN: HTM00025458

Phone And Email: Diagnosis: No known Allergies

Height: 48 cm Weight: 1.8 kg BMI/BSA: 7.8 / 0.15 m² (Last Updated: 05/09/2015) Nationality: Warganegara

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

Encounter No: 0136 Admission Date: 28/08/2015 Attending Practitioner: DR Visit Location: WAD 2 Rx No: NICU0000029878

PHARMACY ORDER

Prepared Date/Time: 21/10/2016 02:24 AM

PRESCRIPTION PROCEED TO DISPENSING

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
PN Compounded Neonate	252 ml	1 bag	Details	1 bag	1 bag	Details	Remarks	0 bag	VERIFIED

Figure 3.2.3.1-1 PN Preparation

PN ORDER DETAILS

Address: OXXXX XXX XXXXXX Mykad: Age: 58 Years 11 Months 26 Days Gender: Male MRN: HPSF00028523

Phone And Email: Diagnosis: No known Allergies

Height: 168 cm Weight: 67 kg BMI/BSA: 23.7 / 1.78 m² (Last Updated: 13/10/2016) Nationality: Warganegara

Drug Name	Total Volume ml per kg (ml)	Total calorie kkal per kg (kcal)	Infusion Over (hour)	Infusion Rate (ml/hour)	Quantity	Freq	Duration	Start Date / Time	End Date / Time
PN Compounded Adult	29.85 (2000)	30.19 (2023)	24	83.33 ml/hour	1 BAG	OD	1 Days	13/10/2016 05:00 PM	14/10/2016 05:00 PM
PN Compounded Adult	29.85 (2000)	30.19 (2023)	24	83.33 ml/hour	1 BAG	OD	1 Days	13/10/2016 05:00 PM	14/10/2016 05:00 PM
Phosphate mmol per kg (mmol)	Sodium mmol per kg (mmol)	Potassium mmol per kg (mmol)	Calcium mmol per kg (mmol)	Magnesium mmol per kg (mmol)	Acetate mmol per kg (mmol)	Trace Element ml per kg (ml)	Fat Soluble Vit. ml per kg (ml)	Water Soluble Vit. ml per kg (ml)	Multi Vitamin ml per kg (ml)
0.6 (40.2)	1 (67)	1 (67)	0.1 (6.7)	0.05 (3.35)	NA	NA	0.15 (10)	0.15 (10)	NA
0.6 (40.2)	1 (67)	1 (67)	0.1 (6.7)	0.05 (3.35)	NA	0.15 (10)	0.15 (10)	0.15 (10)	NA
L-Glutamin ml per kg (ml)	Protein g per kg (g)	Carbohydrate g per kg (g)	Lipid g per kg (g)	Calorie Calculator	Infusion Line				
1.49 (100)	2 (134)	3 (201)	1 (67)	NA	Central				
1.49 (100)	2 (134)	3 (201)	1 (67)	NA	Central				

Figure 3.2.3.1-2 PN Order Details

STEP 1



Click on the [Details](#) hyperlink (Prepare Worksheet column) to prepare worksheet as per Figure 3.2.3.1-3

DETAIL

TPN volume ml

Macronutrient

Glucose g

Lipid g

Protein g

Electrolytes

Sodium(Natrium),Na+ mmol

Potassium(Kalium),K+ mmol

Energy required kcal

Vitamin

Vitamin Solution ml

Water soluble ml

Fat soluble ml

Calcium,Ca2+ mmol

Magnesium,Mg+ mmol

Product category 2 3 in 1 2 in 1

Trace elements ml

Acetate mmol

L-Glutamin ml

Phosphate,(PO4)2- mmol

Item selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolality (mOsmol/l)	Content										
						Lipid (g)	Glucose (g)	Protein (g)	Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Chloride (mmol)	
Fat emulsion, Lipofundin MCT/LCT 20% 250ml IV s	0		0	0	0	67	0	0	0	0	0	0	0	0	0	0
Dextrose 50% IV soln 500ml	0		0	0	0	0	201	0	0	0	0	0	0	0	0	0
Amino acid 15% (Aminoplasmat) 500ml IV Soln	0		0	0	0	0	0	134	0	0	0	0	0	0	0	0
Potassium Dihydrogen Phosphate Injection	0		0	0	0	0	0	0	0	40.2	0	0	0	0	0	0
Sodium Chloride 3% 500mL IV soln	0		0	0	0	0	0	0	0	0	67	0	0	0	0	0
Potassium Chloride 1g/10ml Inj	0		0	0	0	0	0	0	0	0	0	67	0	0	0	0
Calcium Gluconate 10% Inj	0		0	0	0	0	0	0	0	0	0	0	6.7	0	0	0
Magnesium Sulphate 50% Inj (49.3%/5mL)	0		0	0	0	0	0	0	0	0	0	0	0	3.35	0	0
Trace Element-Adult (Addamel N) 10mL Inj	10		0	0	0	Trace Elements										
Vitamin B and C (Solvit N) 10 ml Inj	10		0	0	0	Vitamin Solutions										
Vitamin A, D, E, K (Vitalipid N Adult) 10ml Inj	10		0	0	0	Water Soluble Vitamins										
Amino acid 20% (Dipeptivan) 100ml IV Soln	100		0	0	0	Fat Soluble Vitamins										
Sterile Water for Inj 500mL	0		0	0	0	L-Glutamin										
						Water For Injection										
Total Preparation	0			0	0	0	0	0	0	0	0	0	0	0	0	0

4

Figure 3.2.3.1-3 Prepare Worksheet

STEP 2

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

Note

- Value at top section will be displayed based on value to be prepared by pharmacist based on formula.
- **Macronutrient, Vitamin and Electrolytes** field will be displayed automatically by system.
- **Item selected, Volume (ml) and Content** column will be displayed automatically by system.

STEP 3

Select the item from the drop down box

STEP 4

Click on the button to calculate PN content value

Note

Volume (ml), Order Quantity, Calorie (kcal), Osmolrity (mOsmol), Content and Total Preparation will be automatically calculated and displayed by system as per figure 3.2.3.1-4.

PREPARE WORKSHEET

Intervention Auto Allocation

DETAIL

TPN volume: 2000 ml Energy required: 2023 kcal Product category: 3 in 1 2 in 1

Macronutrient

Glucose: 201 g Vitamin: Vitamin Solution ml

Lipid: 67 g Water soluble: 10 ml

Protein: 134 g Fat soluble: 10 ml

Electrolytes

Sodium(Natrium),Na+: 67 mmol Calcium,Ca2+: 6.7 mmol

Potassium(Kalium),K+: 67 mmol Magnesium,Mg+: 3.35 mmol Phosphate,(PO4)2-: 40.2 mmol

Item selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolarity (mOsmol)	Content										
						Lipid (g)	Glucose (g)	Protein (g)	Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Chloride (mmol)	
Fat emulsion, Lipofundin MCT/LCT 20% 250ml IV S	335	2 bott	0	603	127.3	67	0	0	0	0	0	0	0	0	0	0
Dextrose 50% IV soln 500ml	402	1 bott	0	804	1014.25	0	201	0	0	0	0	0	0	0	0	0
Amino acid 15% (Aminoplasmal) 500ml IV Soln	893.33	2 bott	0	536	1152.4	0	0	134	0	0	0	0	0	0	0	0
Potassium Dihydrogen Phosphate Injection	40.2	5 amp	0	0	64.04	0	0	0	0	40.2	0	40.2	0	0	0	0
Sodium Chloride 3% 500mL IV soln	131.37	1 bott	0	0	135.31	0	0	0	0	0	67	0	0	0	0	67
Potassium Chloride 1g/10ml Inj	20	2 amp	0	0	54.06	0	0	0	0	0	0	26.8	0	0	0	26.8
Calcium Gluconate 10% Inj	30.45	4 amp	0	0	20.37	0	0	0	0	0	0	0	6.7	0	0	0
Magnesium Sulphate 50% Inj (49.3%/5mL)	1.68	1 amp	0	0	6.72	0	0	0	0	0	0	0	0	3.35	0	0
Trace Element-Adult (Addamel N) 10mL Inj	10	1 amp	0	0	31	Trace Elements										
	0	0	0	0	0	Vitamin Solutions										
Vitamin B and C (Soluvit N) 10 ml Inj	10	1 vial	0	0	4.9	Water Soluble Vitamins										
Vitamin A, D, E, K (Vitalipid N Adult) 10ml Inj	10	1 amp	0	0	3	Fat Soluble Vitamins										
Amino acid 20% (Dipeptivan) 100ml IV Soln	100	1 bott	0	80	92.1	L-Glutamin										
Sterile Water for Inj 500mL	15.96	1 bott	0	0	0	Water For Injection										
Total Preparation	2000			2023	1352.72 mOsmol/l	67	201	134	0	40.2	67	67	6.7	3.35	93.8	

Figure 3.2.3.1-4 Prepare Worksheet

STEP 5

Click on the button to save record and alert message will be displayed as per Figure 3.2.3.1-5

Note

- Once user click on the button, system will reset the allocated qty to '0', user able to do intervention and re-calculate the worksheet and do allocation again

CONFIRMATION

CONF0002: Are you sure you want to save?

Cancel **Yes** No

Figure 3.2.3.1-5 Confirmation Alert Message

STEP 6

Click on the button to save record and alert message will be displayed as per Figure 3.2.3.1-6

INFORMATION

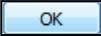
INFO3255: Allocation has been done.

OK

Figure 3.2.3.1-6 Information Alert Message



STEP 7

Click on the  button to confirm and the system will allocate automatically as per Figure 3.2.3.1-7

DETAIL

TPN volume: 2000 ml Energy required: 2023 kcal 7

Macronutrient

Glucose: 201 g Vitamin Solution: ml Trace elements: 10 ml

Lipid: 67 g Water soluble: 10 ml Acetate: 0 mmol

Protein: 134 g Fat soluble: 10 ml L-Glutamin: 100 ml

Electrolytes

Sodium(Natrium),Na+: 67 mmol Calcium,Ca2+: 6.7 mmol Phosphate,(PO4)2-: 40.2 mmol

Potassium(Kalium),K+: 67 mmol Magnesium,Mg+: 3.35 mmol

Item selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolarity (mOsmol)	Content											
						Lipid (g)	Glucose (g)	Protein (g)	Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Chloride (mmol)		
Fat emulsion, Lipofundin MCT/LCT 20% 250ml IV s	335	2 bott	2 bott	603	127.3	67	0	0	0	0	0	0	0	0	0	0	0
Dextrose 50% IV soln 500ml	402	1 bott	1 bott	804	1014.25	0	201	0	0	0	0	0	0	0	0	0	0
Amino acid 15% (Aminoplasmal) 500ml IV Soln	893.33	2 bott	2 bott	536	1152.4	0	0	134	0	0	0	0	0	0	0	0	0
Potassium Dihydrogen Phosphate Injection	40.2	5 amp	5 amp	0	64.04	0	0	0	0	40.2	0	40.2	0	0	0	0	0
Sodium Chloride 3% 500mL IV soln	131.37	1 bott	1 bott	0	135.31	0	0	0	0	0	67	0	0	0	0	0	67
Potassium Chloride 1g/10ml Inj	20	2 amp	2 amp	0	54.06	0	0	0	0	0	0	26.8	0	0	0	0	26.8
Calcium Gluconate 10% Inj	30.45	4 amp	4 amp	0	20.37	0	0	0	0	0	0	0	6.7	0	0	0	0
Magnesium Sulphate 50% Inj (49.3%/5mL)	1.68	1 amp	1 amp	0	6.72	0	0	0	0	0	0	0	0	3.35	0	0	0
Trace Element-Adult (Addamel N) 10mL Inj	10	1 amp	1 amp	0	31	Trace Elements											
Vitamin B and C (Soluvit N) 10 ml Inj	10	1 vial	1 vial	0	4.9	Water Soluble Vitamins											
Vitamin A, D, E, K (Vitalipid N Adult) 10ml Inj	10	1 amp	1 amp	0	3	Fat Soluble Vitamins											
Amino acid 20% (Dipeptivan) 100ml IV Soln	100	1 bott	1 bott	80	92.1	L-Glutamin											
Sterile Water for Inj 500mL	15.96	1 bott	1 bott	0	0	Water For Injection											
Total Preparation	2000			2023	1352.72 mOsmol/l	67	201	134	0	40.2	67	67	6.7	3.35	93.8		

Figure 3.2.3.1-7 Information Alert Message

PN PREPARATION

Prescription

MyKid: [Redacted] Age: 2 Years 7 Months 3 Days Gender: Male MRN: HPSF0000805

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

Upload Photo Height: 170 cm Weight: 85 kg BMI/BSA: 29.4 / 2.04 m² Update (Last Updated: 18/04/2014) Nationality: Warganegara

Lab Results Counseling History Demographic Pharmacist Notes Medication Profile Other Appointment

Encounter No: 0004 Admission Date: 18/04/2014 Attending Practitioner: Pn. Akmal Rashid Visit Location: WAD 3 (ORTO - L) Room No/Bed No:

PHARMACY ORDER

Order Type: PN Order By: [Redacted]

Ward: WAD 3 (ORTO - L) Bed No: [Redacted]

Supervised by: [Redacted] Prepared Date/Time: 18/04/2014 05:11 PM

PRESCRIPTION 8

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
PN Compunded Adult	1000 ml	1 Bag	Details	1 Bag	1 Bag	Details	Remarks	0 Bag	VERIFIED

Figure 3.2.3.1-8 PN Preparation

STEP 8

Click on the  button to print worksheet as per Figure 3.2.3.1-9

Note

- Proceed to Next Stage function will allow user advance to next stage screen for each patient record.
- Untick on the **Auto Allocation** checkbox to allocate manually.

PN PREPARATION

Prescription [X]

MyKid [Redacted] Age 2 Years 7 Months 3 Days Gender Male MRN HPSF00000805

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

Height 170 cm Weight 85 kg BMI/BSA 29.4 / 2.04 m² Update (Last Updated : 18/04/2014) Nationality : Warganegara

Lab Results Counselling History Demographic Pharmacist Notes Medication Profile Other Appointment

Encounter No: 0004 Admission Date: 18/04/2014 Attending Practitioner: [Redacted] Location: WAD 3 (ORTO - L) Room No/Bed No:

PHARMACY ORDER

Order Type: PN Order By: [Redacted]
Ward: WAD 3 (ORTO - L) Bed No: [Redacted]
Supervised by: [Redacted] Prepared Date/Time: 18/04/2014 05:11 PM

PRESCRIPTION [PROCEED TO NEXT STAGE] [Prepare] [Worksheet] [Label] [Outsource]

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
PN Compounded Adult	1000 ml	1 Bag	Details	1 Bag	1 Bag	Details	Remarks	0 Bag	VERIFIED

Figure 3.2.3.1-10 PN Preparation

Note

Edit Label

- Click on the  button to edit label and PN Edit Label window will display as per Figure 3.2.3.1-11.
- Select the Select for print radio button to print label.
- User allows to edit **Infusion Over**, **Date Prepared** and **Shelf Life** field.
- Expiry Date** field will automatically display after filling the **Shelf Life** field.
- Drug Name**, **Total Volume**, **Infusion Rate** and **Batch/Worksheet No** field will be displayed automatically by system.
- The  button to print label as per Figure 3.2.3.1-12.
- The  button to close PN Edit Label window.

PN EDIT LABEL

Select for print

Drug Name: PN Compounded Adult

Total Volume: 1000 ml

Infusion Over: 24 Hour(s)

Infusion Rate: 41.67 mL/Hour

Prepared Date/Time: 18/04/2014 5:11 PM Shelf Life: 2 Days

Expiry Date/Time: 20/04/2014 5:11 PM

Batch / Worksheet No: A024-180414

Figure 3.2.3.1-11 PN Edit Label

HOSPITAL PAKAR SULTANAH FATIMAH, MUAR		
PARENTERAL NUTRITION (Adult)		
NAME : ██████████		
AGE : 56 Years 10 Months 04 Days		
MRN : HPSF00191617	WARD/BED NO: WAD 9 (MED - P)	
Total Volume <u>3260</u> ml/bag		
Content	/ kg	/ bag
Protein (g)	2	176
Dextrose (g)	3	264
Lipid (g)	0	0
Sodium (mmol)	1	88
Potassium (mmol)	0	0
Calcium (mmol)	0	0
Magnesium (mmol)	0	0
Phosphate (mmol)	0	0
Chloride (mmol)	1	87.99
Acetate (mmol)	0	0
Trace (mL)	0	0
Vitamins (mL)	0	0
Calories (kcal)	20	1760
Osmolarity (mOs)	10.53	926.91
L-Glutamin (ml)	0	0
Date and Time of Administration :		
Infusion Rate	<u>135.83</u> ml/Hrs	
Worksheet ID A011-280917	Expiry Date 29/09/2017 9:35 AM	Price : RM
Do not use if any visible solid particles, growth or precipitation appears		
Store in refrigerator (2-8 °C). Protect from light (Once open use within 24 Hours) Ensure PN Solution is at room temperature before infusion		
TO BE INFUSED : CENTRAL LINE		

Figure 3.2.3.1-12 Sample of PN Label

PN PREPARATION

Prescription X

MyKid: [Redacted] Age: 2 Years 7 Months 3 Days Gender: Male MRN: HPSF00000805

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

Height: 170 cm Weight: 85 kg BMI/BSA: 29.4 / 2.04 m² Update (Last Updated: 18/04/2014) Nationality: Warganegara

Lab Results Counselling History Demographic Pharmacist Notes Medication Profile Other Appointment

Encounter No: 0004 Admission Date: 18/04/2014 Attending Practitioner: [Redacted] Location: WAD 3 (ORTO - L) Room No/Bed No:

PHARMACY ORDER

Order Type: PN Order By: [Redacted]

Ward: WAD 3 (ORTO - L) Bed No: [Redacted]

Supervised by: [Redacted] Prepared Date/Time: 18/04/2014 05:11 PM

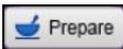
PRESCRIPTION PROCEED TO NEXT STAGE Prepare Worksheet Label Outsource

1 / 1

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
PN Compounded Adult	1000 ml	1 Bag	Details	1 Bag	1 Bag	Details	Remarks	0 Bag	VERIFIED

Figure 3.2.3.1-13 Sample of PN Label

STEP 9

Click on the  button to prepare PN order

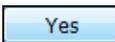
CONFIRMATION

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

Cancel Yes No

Figure 3.2.3.1-14 Preparation Confirmation Alert Message

STEP 10

Click on the  button to confirm prepare order



3.2.3.2 Preparation Compounded 2 in 1 Bag

Note

- If PN order is for pediatrics, pediatric infant or neonate, product category will default to 2 in 1.
- To proceed with Preparation for Compounded, repeat **Step 1** to **4** from section **3.2.1 Preparation for Commercial**.

Order Details



- Click on the [Details](#) hyperlink to view order details as per Figure 3.2.3.2-2.

PN PREPARATION

Prescription [X]

Mother IC: [Redacted] Age: 01 Years 01 Months 24 Days Gender: Male MRN: HTM00025458

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

Height: 48 cm Weight: 1.8 kg BMI/BSA: 7.8 / 0.15 m² Update (Last Updated: 05/09/2015) Nationality: Warganegara

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

Encounter No: 0136 Admission Date: 28/08/2015 Attending Practitioner: DR RABIATUL ADAWIYAH BT MOHD GHAZALI Visit Location: WAD 2 Rx No: NICU0000029878

PHARMACY ORDER

Prepared Date/Time: 21/10/2016 02:24 AM

PRESCRIPTION [PROCEED TO DISPENSING] [Prepare] [Worksheet] [Label] [Outsource]

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Preparation	Unit	Remarks	Prev Disp	Status
PN Compounded Neonate	252 ml	1 bag	Details	1 bag	1 bag	1	bag	Remarks	0 bag	VERIFIED

Figure 3.2.3.2-1 PN Preparation

STEP 1



Click on the [Details](#) hyperlink to prepare worksheet as per Figure 3.2.3.2-3

PN ORDER DETAILS

Mother IC: [Redacted] Age: 09 Days Gender: Female MRN: HPSF00060075

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

Height: 35 cm Weight: 3.5 kg BMI/BSA: 28.6 / 0.21 m² (Last Updated: 22/12/2014)

Drug Name	Total Volume ml per kg (ml)	Total calorie kcal per kg (kcal)	Infusion Over (hour)	Infusion Rate (ml/hour)	Quantity	Freq	Duration	Start Date / Time	End Date / Time
PN Compounded Neonate	994.29 (3480)	52 (182)	24	NA	1 BAG	OD	1 Days	24/12/2014 05:00 PM	25/12/2014 05:00 PM
Phosphate mmol per kg (mmol)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium mmol per kg (mmol)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Potassium mmol per kg (mmol)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Calcium mmol per kg (mmol)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Magnesium mmol per kg (mmol)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetate mmol per kg (mmol)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trace Element ml per kg (ml)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fat Soluble Vit. ml per kg (ml)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Soluble Vit. ml per kg (ml)	NA	NA	NA	NA	NA	NA	NA	NA	NA
Multi Vitamin ml per kg (ml)	NA	NA	NA	NA	NA	NA	NA	NA	NA
L-Glutamin ml per kg (ml)	4 (14)	Protein g per kg (g)	NA	Carbohydrate g per kg (g)	4 (14)	Lipid g per kg (g)	NA	Calorie Calculator	Infusion Line
NA	4 (14)	NA	NA	4 (14)	NA	NA	NA	Central	NA

Figure 3.2.3.2-2 PN Order Details

PREPARE WORKSHEET

Intervention Auto Allocation

DETAIL

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

Macronutrient

Glucose g Vitamin Solution ml Trace elements ml

Lipid g Water soluble ml Acetate mmol

Protein g Fat soluble ml Overage volume ml

Electrolytes

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

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

Lipid Syringe

Item selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolarity (mOsmol)	Lipid (g)	
Vitamin A, D, E, K (Vitalipid N Infant) 10ml li	1.25	1 amp	0	1.12	0.38	0.12	Fat Soluble Vitamin
Vitamin B and C (Soluvit N) 10 ml Inj	1.25	1 vial	0	2.25	0.61	0.25	Water Soluble Vitamin
Fat emulsion, SMOFlipid 20% 100ml IV Soli	10.63	1 bott	0	19.12	4.04	2.12	Lipid
Total Preparation	13.13		NA	22.5	383.09 mOsmol/l	2.5	

Calculate

Figure 3.2.3.2-3 Prepare Worksheet

STEP 2

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

Note

- Value at top section will be display based on value to be prepared by pharmacist based on formula.
- **Macronutrient, Vitamin and Electrolytes** field will automatically be displayed by system.

STEP 3

Select the item from the drop down box

Note

Lipid Syringe

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

STEP 4

Click on the button to calculate PN content value

Note

PN Bag (Without Lipid)

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

PN Bag (Without lipid)														
Item selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolrity (mOsmol)	Content								
						Glucose (g)	Protein (g)	Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Chloride (mmol)
Dextrose 50% IV soln 500ml	22.37	1 bott	0	44.75	56.44	11.19	0	0	0	0	0	0	0	0
Amino acid 6.53% (Vaminolact) 100ml IV Soln	38.28	1 bott	0	10	19.52	0	2.5	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sodium Glycerophosphate 20ml Injection	1.25	1 amp	0	0	3.45	0	0	0	1.25	2.5	0	0	0	0
Sodium Chloride 20% Inj	0.37	1 amp	0	0	2.52	0	0	0	0	1.25	0	0	0	1.26
Potassium Chloride 1g/10ml Inj	1.87	1 amp	0	0	5.05	0	0	0	0	0	2.5	0	0	2.51
Calcium Gluconate 10% Inj	5.68	1 amp	0	0	3.8	0	0	0	0	0	0	1.25	0	0
Magnesium Sulphate 50% Inj (49.3%/5mL)	0.13	1 amp	0	0	0.52	0	0	0	0	0	0	0	0.25	0
Trace Element - Paediatric (Peditrace) 10mL Inj	1.25	1 amp	0	0	0.05	Trace Elements								
Sterile Water for Inj 500mL	40.67	1 bott	0	0	0	Water For Injection								
Total Preparation	111.87			54.75	816.57 mOsmol/l	11.19	2.5	0	1.25	3.75	2.5	1.25	0.25	3.77

Calculate

NPC:N Ratio		67 : 1
TOTAL content of Calcium and Phosphate	Calcium + Phosphate=	2.23 mmol/100ml
TOTAL content of Magnesium and Calcium	Calcium + Magnesium=	1.34 mmol/100ml

Figure 3.2.3.2-4 Prepare Worksheet

STEP 5

Select the item from the drop down box

STEP 6

Click on the **Calculate** button to calculate PN content value

PREPARE WORKSHEET													
DETAIL													
TPN volume	2820 ml	Energy required	1650 kcal	Product category	3 in 1 2 in 1								
Macronutrient		Vitamin		Trace elements									
Glucose	198 g	Vitamin Solution		Acetate	0 mmol								
Lipid	66 g	Water soluble		L-Glutamin									
Protein	66 g	Fat soluble		Phosphate (PO4)2-	0 mmol								
Electrolytes		Calcium, Ca2+	0 mmol										
Sodium (Natrium), Na+	66 mmol	Magnesium, Mg+	0 mmol										
Potassium (Kalium), K+	0 mmol												

Item selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolrity (mOsmol)	Content								
						Lipid (g)	Glucose (g)	Protein (g)	Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)
	0		0	0	0	66	0	0	0	0	0	0	0	0
Dextrose 50% IV soln 500ml	0		0	0	0	0	198	0	0	0	0	0	0	0
Amino acid 6.53% (Vaminolact) 100ml IV Soln	0		0	0	0	0	0	66	0	0	0	0	0	0
	0		0	0	0	0	0	0	0	0	0	0	0	0
Potassium Dihydrogen Phosphate Injection	0		0	0	0	0	0	0	0	0	0	0	0	0
Sodium Chloride 20% Inj	0		0	0	0	0	0	0	0	66	0	0	0	0
Potassium Chloride 1g/10ml Injection	0		0	0	0	0	0	0	0	0	0	0	0	0
Calcium Gluconate 10% Injection	0		0	0	0	0	0	0	0	0	0	0	0	0
Magnesium Sulphate 50% Injection (49.3%/5mL)	0		0	0	0	0	0	0	0	0	0	0	0	0
Trace Element - Paediatric (Peditrace) 10mL Inj	0		0	0	0	Trace Elements								

Figure 3.2.3.2-5 Prepare Worksheet

STEP 7

Click on button to save record

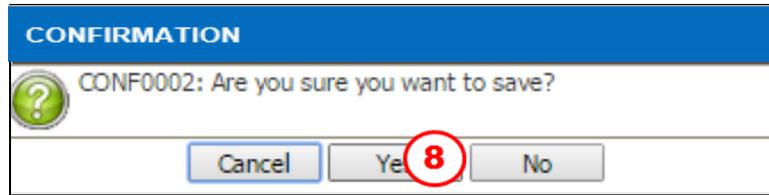


Figure 3.2.3.2-6 Confirmation Alert Message

STEP 8

Click on the button to confirm save record

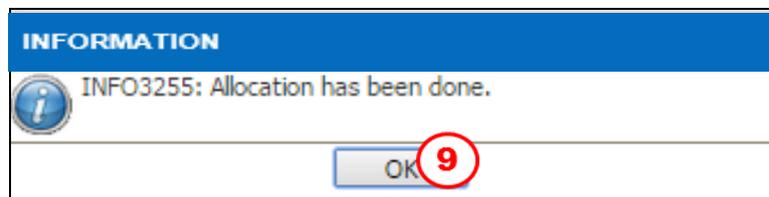


Figure 3.2.3.2-7 Information Alert Message

STEP 9

Click on the button and the system will allocate automatically as per Figure 3.2.3.2-7

Lipid Syringe

Item selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolarity (mOsmol)	Lipid (g)	
Vitamin A, D, E, K (Vitalipid N Infant) 10ml Ii	1.25	1 amp	1 amp	1.12	0.38	0.12	Fat Soluble Vitamin
Vitamin B and C (Soluivit N) 10 ml Inj	1.25	1 vial	1 vial	2.25	0.61	0.25	Water Soluble Vitamin
Fat emulsion, SMOFlipid 20% 100ml IV Soln	10.63	1 bott	1 bott	19.12	4.04	2.12	Lipid
Total Preparation	13.13		NA	22.5	383.09 mOsmol/l	2.5	

Calculate

PN Bag (Without lipid)

Item selected	Volume (ml)	Order Quantity	Allocated Quantity	Calorie (kcal)	Osmolarity (mOsmol)	Content									
						Glucose (g)	Protein (g)	Acetate (mmol)	Phosphate (mmol)	Sodium (mmol)	Potassium (mmol)	Calcium (mmol)	Magnesium (mmol)	Chloride (mmol)	
Dextrose 50% IV soln 500ml	22.37	1 bott	1 bott	44.75	56.44	11.19	0	0	0	0	0	0	0	0	0
Amino acid 6.53% (Vaminolact) 100ml IV Soln	38.28	1 bott	1 bott	10	19.52	0	2.5	0	0	0	0	0	0	0	0
	0		0	0	0	0	0	0	0	0	0	0	0	0	0
Sodium Glycerophosphate 20ml Injection	1.25	1 amp	1 amp	0	3.45	0	0	0	1.25	2.5	0	0	0	0	0
Sodium Chloride 20% Inj	0.37	1 amp	1 amp	0	2.52	0	0	0	0	1.25	0	0	0	0	1.26
Potassium Chloride 1g/10ml Inj	1.87	1 amp	1 amp	0	5.05	0	0	0	0	0	2.5	0	0	0	2.51
Calcium Gluconate 10% Inj	5.68	1 amp	1 amp	0	3.8	0	0	0	0	0	0	1.25	0	0	0
Magnesium Sulphate 50% Inj (49.3%/5mL)	0.13	1 amp	1 amp	0	0.52	0	0	0	0	0	0	0	0	0.25	0
Trace Element - Paediatric (Peditrace) 10mL Inj	1.25	1 amp	1 amp	0	0.05	Trace Elements									
Sterile Water for Inj 500mL	40.67	1 bott	1 bott	0	0	Water For Injection									
Total Preparation	111.87			54.75	816.57 mOsmol/l	11.19	2.5	0	1.25	3.75	2.5	1.25	0.25	3.77	

Calculate

Figure 3.2.3.2-8 Prepare Worksheet



PN PREPARATION Prescription X

Mother IC	Age 09 Days	Gender Female	MRN HPSF00060075
Address	Phone And Email	Diagnosis	No known Allergies
Height 35 cm	Weight 3.5 kg	BMI/BSA 28.6 / 0.21 m ²	Nationality : Warganegara

Encounter No: 0004 Admission Date: 22/12/2014 Attending Practitioner: Shantasaroopini a/p Sathia Moorthy Visit Location: WAD 3 (ORTO - L)

PHARMACY ORDER

Prepared Date/Time: 24/12/2014 05:34 PM 10

PRESCRIPTION PROCEED TO DISPENSING Prepare Worksheet Label Outsource

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
PN Compounded Neonate	3480 ml	1 Bag	Details	1 Bag	1 Bag	Details	Remarks	0 Bag	VERIFIED

Figure 3.2.3.2-9 PN Preparation

STEP 9

Click on the  button to print the worksheet as per Figure 3.2.3.2-9



NEONATE PARENTERAL NUTRITION WORKSHEET
MINISTRY OF HEALTH
Hospital Full Based

Patient Name : BABY 2016
MRN : HPSF00097491
Ward/Bed No : WAD 7 (MED - L)
Age : 04 Months 10 Days
Gender : Female
Body Weight : 1.25 kg

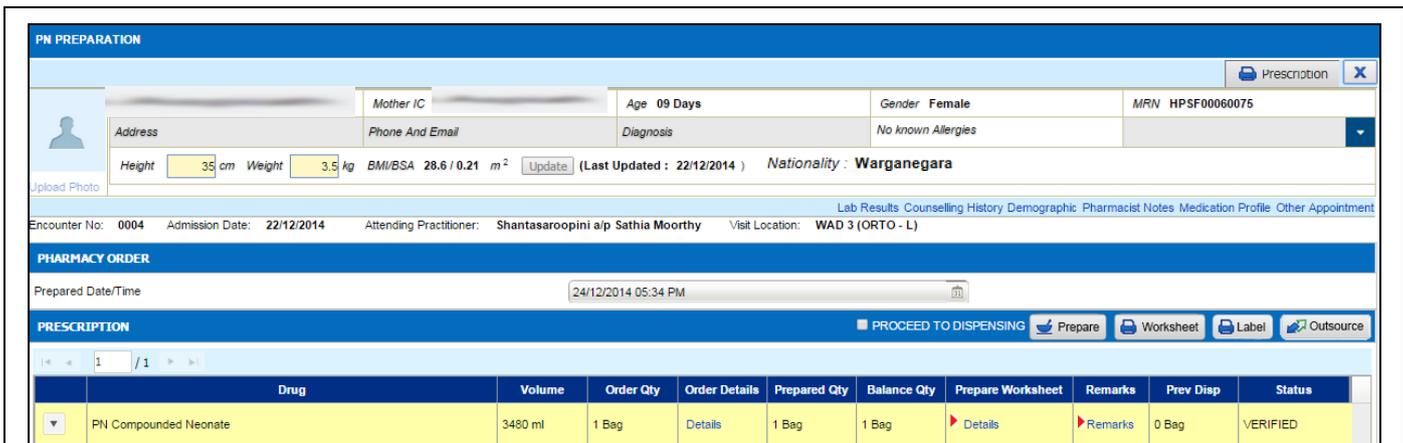
Worksheet : P334-290916
Prepared Date/Time : 13/10/2016 03:21 PM
Prescription # : 70000191333

DRUG NAME	VOLUME (ml)	QUANTITY	BATCH NO	COMPONENT DETAIL (PER DAY)
Amino acid 6.53% (Vaminolact) 100ml IV Soln	38.28	1 bottle	BG654	2.5 g
Dextrose 50% IV soln 500ml	22.37	1 bottle	P1252129	11.19 g
Sterile Water for Inj 500mL	40.67	1 bottle	DMHPSF14	NA
Sodium Chloride 20% Inj	0.37	1 ampoule	hpsf1	3.75 mmol
Sodium Glycerophosphate 20ml Injection	1.25	1 ampoule	MBH67	1.25 mmol
Magnesium Sulphate 50% Inj (49.3%/5mL)	0.13	1 ampoule	335074	0.25 mmol
Potassium Chloride 1g/10ml Inj	1.87	1 ampoule	14014	2.5 mmol
Calcium Gluconate 10% Inj	5.68	1 ampoule	502065	1.25 mmol
Trace Element - Paediatric (Peditrace) 10mL Inj	1.25	1 ampoule	12G1L01	1.25 ml
Total Volume	111.87	1 Bag		

DRUG NAME	VOLUME (ml)	QUANTITY	BATCH NO	COMPONENT DETAIL (PER DAY)
Fat emulsion, SMOFlipid 20% 100ml IV Soln	10.63	1 bottle	SE444	2.13 g
Vitamin A, D, E, K (Vitalipid N Infant) 10ml Inj	1.25	1 ampoule	AS32	1.25 ml
Vitamin B and C (Soluvit N) 10 ml Inj	1.25	1 vial	80HD522	1.25 ml
Total Volume	13.13	1 Syringe		

Worksheet Generated By : PharmacistTPN Date : 13/10/2016
Worksheet and Label Checked By : Supervised By :
Bag Prepared By :
Final Product Checked By :

Figure 3.2.3.2-10 Sample of Worksheet



PN PREPARATION

Prescription [X]

Address: [Redacted] Mother IC: [Redacted] Age: 09 Days Gender: Female MRN: HPSF00060075

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

Height: 35 cm Weight: 3.5 kg BMI/BSA: 28.6 / 0.21 m² (Last Updated: 22/12/2014) Nationality: Warganegara

Encounter No: 0004 Admission Date: 22/12/2014 Attending Practitioner: Shantasaroopini a/p Sathia Moorthy Visit Location: WAD 3 (ORTO - L)

PHARMACY ORDER

Prepared Date/Time: 24/12/2014 05:34 PM

PRESCRIPTION [PROCEED TO DISPENSING] [Prepare] [Worksheet] [Label] [Outsource]

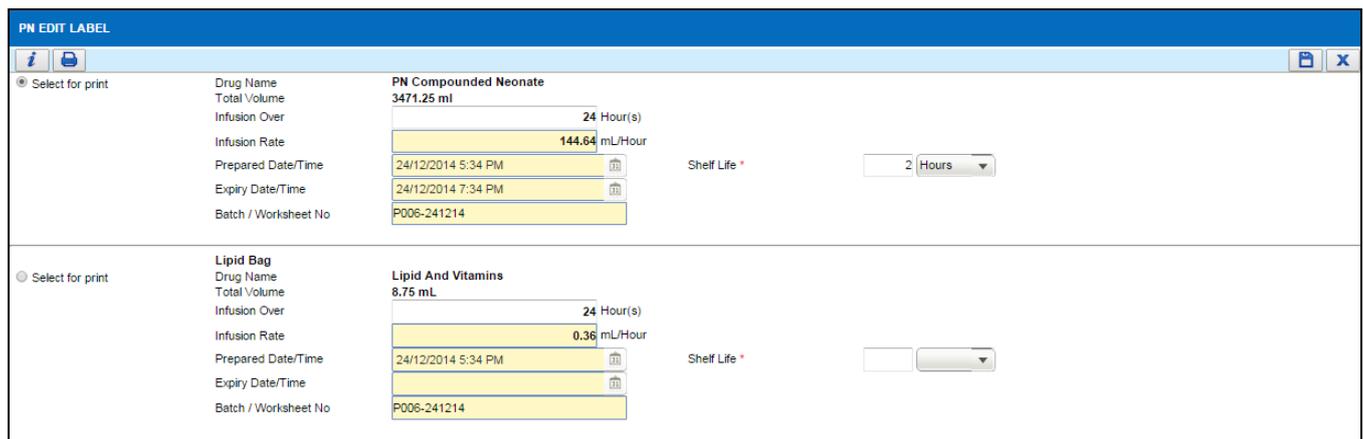
Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
PN Compounded Neonate	3480 ml	1 Bag	Details	1 Bag	1 Bag	Details	Remarks	0 Bag	VERIFIED

Figure 3.2.3.2-11 PN Preparation

Note

Edit Label

Click on the  button to edit label and PN Edit Label window will display as per Figure 3.2.3.2-11.



PN EDIT LABEL

Select for print [Print] [X]

Drug Name: PN Compounded Neonate
Total Volume: 3471.25 ml
Infusion Over: 24 Hour(s)
Infusion Rate: 144.64 mL/Hour
Prepared Date/Time: 24/12/2014 5:34 PM
Expiry Date/Time: 24/12/2014 7:34 PM
Batch / Worksheet No: P006-241214
Shelf Life: 2 Hours

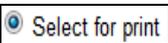
Select for print [Print] [X]

Lipid Bag
Drug Name: Lipid And Vitamins
Total Volume: 8.75 mL
Infusion Over: 24 Hour(s)
Infusion Rate: 0.36 mL/Hour
Prepared Date/Time: 24/12/2014 5:34 PM
Expiry Date/Time: [Redacted]
Batch / Worksheet No: P006-241214
Shelf Life: [Redacted]

Figure 3.2.3.2-12 PN Edit Label

Note

PN Compounded Pediatric

- Select the  radio button to print label.
- User allows to edit **Infusion Over**, **Date Prepared** and **Shelf Life** field.
- **Expiry Date** field will automatically display after the **Shelf Life** field is filled.
- **Drug Name**, **Total Volume**, **Infusion Rate** and **Batch No** field will be displayed automatically by the system.
- The  button to print label.
- The  button to close PN Edit Label window.
- The  button to cancel print label.

HOSPITAL PAKAR SULTANAH FATIMAH, MUAR		
PARENTERAL NUTRITION (Adult)		
NAME : ██████████		
AGE : 56 Years 10 Months 04 Days		
MRN : HPSF00191617	WARD/BED NO: WAD 9 (MED - P)	
Total Volume 3260 ml/bag		
Content	/ kg	/ bag
Protein (g)	2	176
Dextrose (g)	3	264
Lipid (g)	0	0
Sodium (mmol)	1	88
Potassium (mmol)	0	0
Calcium (mmol)	0	0
Magnesium (mmol)	0	0
Phosphate (mmol)	0	0
Chloride (mmol)	1	87.99
Acetate (mmol)	0	0
Trace (mL)	0	0
Vitamins (mL)	0	0
Calories (kcal)	20	1760
Osmolarity (mOs)	10.53	926.91
L-Glutamin (ml)	0	0
Date and Time of Administration :		
Infusion Rate	135.83 ml/Hrs	
Worksheet ID A011-280917	Expiry Date 29/09/2017 9:35 AM	Price : RM
Do not use if any visible solid particles, growth or precipitation appears		
Store in refrigerator (2-8 °C). Protect from light (Once open use within 24 Hours) Ensure PN Solution is at room temperature before infusion		
TO BE INFUSED : CENTRAL LINE		

Figure 3.2.3.2-13 Sample PN Label

PN EDIT LABEL

Select for print

Drug Name PN Compounded Neonate

Total Volume 3471.25 ml

Infusion Over 24 Hour(s)

Infusion Rate 144.64 mL/Hour

Prepared Date/Time 24/12/2014 5:34 PM 

Expiry Date/Time 24/12/2014 7:34 PM 

Batch / Worksheet No P006-241214

Shelf Life * 2 Hours 

Select for print

Lipid Bag

Drug Name Lipid And Vitamins

Total Volume 8.75 mL

Infusion Over 24 Hour(s)

Infusion Rate 0.36 mL/Hour

Prepared Date/Time 24/12/2014 5:34 PM 

Expiry Date/Time 26/12/2014 5:34 PM 

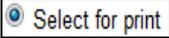
Batch / Worksheet No P006-241214

Shelf Life * 2 Days 

Figure 3.2.3.2-14 PN Edit Label

Note

Lipid Bag

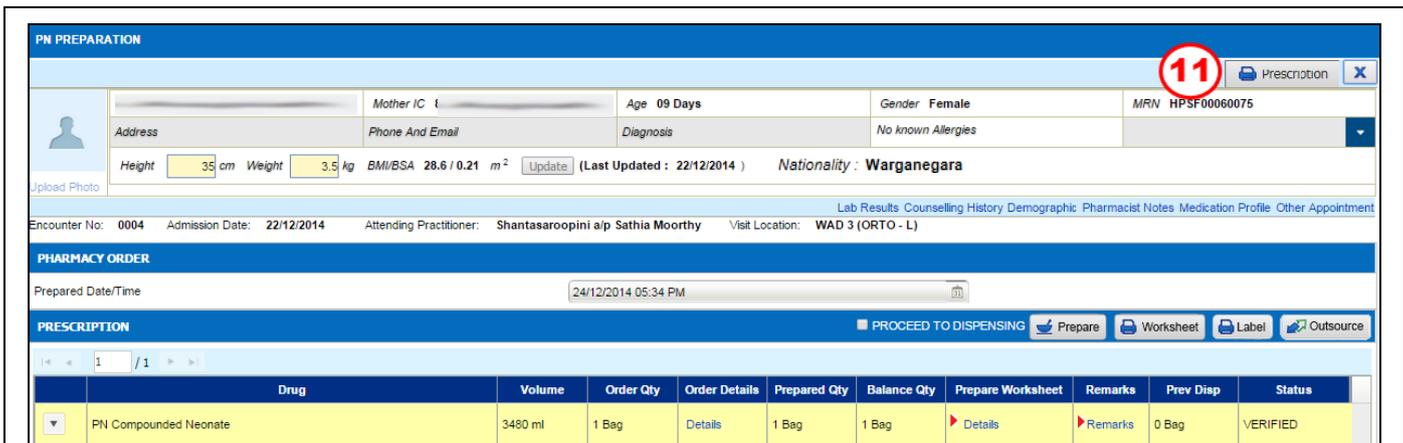
- Select the  radio button to print label.
- User allows to edit **Infusion Over**, **Date Prepared** and **Shelf Life** field.
- **Expiry Date** field will automatically display after filling the **Shelf Life** field.
- **Drug Name**, **Total Volume**, **Infusion Rate** and **Batch No** field will be displayed automatically by system.
- The  button to print label.
- The  button to close PN Edit Label window.
- The  button to cancel print label.

HOSPITAL FULL BASED			
NAME	BABY 2016		
MRN	HPSF00097491		
WARD	WAD 7 (MED - L)		
LIPID	10.63 mL	Infusion rate	0.55 ml/hr
VITALIPID	1.25 mL	Worksheet ID	P334-290916
SOLUVIT	1.25 mL	Exp date	14/10/2016 3:21 PM
Total Vol	13.13 mL	Date Prepared	13/10/2016 3:21 PM
Calories	22.5 kcal	Price(RM)	
(Keep refrigerated)			
HOSPITAL FULL BASED			
NAME	BABY 2016		
MRN	HPSF00097491		
WARD	WAD 7 (MED - L)		
LIPID	10.63 mL	Infusion rate	0.55 ml/hr
VITALIPID	1.25 mL	Worksheet ID	P334-290916
SOLUVIT	1.25 mL	Exp date	14/10/2016 3:21 PM
Total Vol	13.13 mL	Date Prepared	13/10/2016 3:21 PM
Calories	22.5 kcal	Price(RM)	
(Keep refrigerated)			
HOSPITAL FULL BASED			
NAME	BABY 2016		
MRN	HPSF00097491		
WARD	WAD 7 (MED - L)		
LIPID	10.63 mL	Infusion rate	0.55 ml/hr
VITALIPID	1.25 mL	Worksheet ID	P334-290916
SOLUVIT	1.25 mL	Exp date	14/10/2016 3:21 PM
Total Vol	13.13 mL	Date Prepared	13/10/2016 3:21 PM
Calories	22.5 kcal	Price(RM)	
(Keep refrigerated)			

Figure 3.2.3.2-15 Sample of PN Label

Note

It will print 3 set of label in one page.



PN PREPARATION

11 Prescription X

Mother IC: [Redacted] Age: 09 Days Gender: Female MRN: HPSF00060075

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

Height: 35 cm Weight: 3.5 kg BMI/BSA: 28.6 / 0.21 m² Update (Last Updated: 22/12/2014) Nationality: Warganegara

Encounter No: 0004 Admission Date: 22/12/2014 Attending Practitioner: Shantasaroopini a/p Sathia Moorthy Visit Location: WAD 3 (ORTO - L)

PHARMACY ORDER

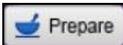
Prepared Date/Time: 24/12/2014 05:34 PM

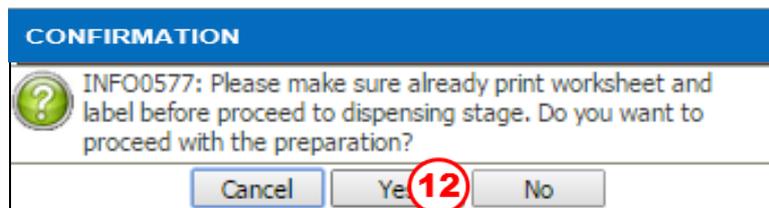
PRESCRIPTION PROCEED TO DISPENSING Prepare Worksheet Label Outsource

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
PN Compounded Neonate	3480 ml	1 Bag	Details	1 Bag	1 Bag	Details	Remarks	0 Bag	VERIFIED

Figure 3.2.3.2-16 PN Preparation

STEP 11

Click on the  button to prepare PN order



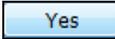
CONFIRMATION

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

Cancel Yes 12 No

Figure 3.2.3.2-17 Preparation Confirmation Alert Message

STEP 12

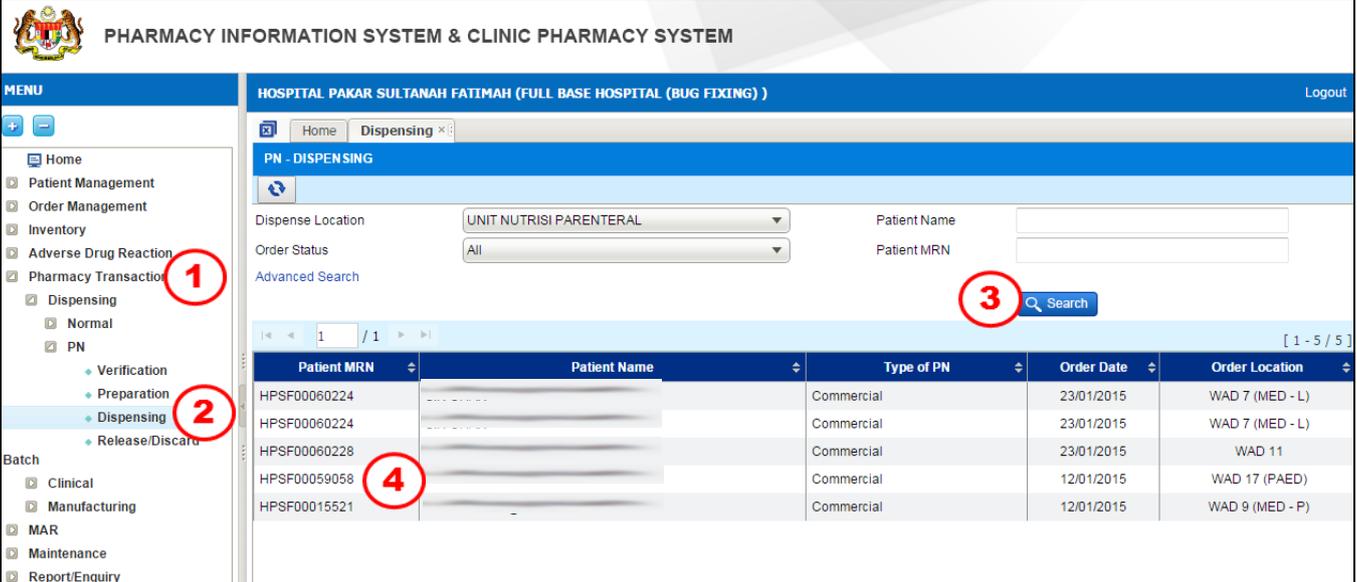
Click on the  button to confirm prepare order

Note

Proceed to Next Stage function will allow user to go next screen for each patient record.

3.3 Parenteral Nutrition (PN) Dispensing

Dispensing screen allows user to dispense all prepared bag.



PHARMACY INFORMATION SYSTEM & CLINIC PHARMACY SYSTEM

HOSPITAL PAKAR SULTANAH FATIMAH (FULL BASE HOSPITAL (BUG FIXING)) Logout

Home Dispensing

PN - DISPENSING

Dispense Location: UNIT NUTRISI PARENTERAL Patient Name:

Order Status: All Patient MRN:

Advanced Search Search

Patient MRN	Patient Name	Type of PN	Order Date	Order Location
HPSF00060224		Commercial	23/01/2015	WAD 7 (MED - L)
HPSF00060224		Commercial	23/01/2015	WAD 7 (MED - L)
HPSF00060228		Commercial	23/01/2015	WAD 11
HPSF00059058		Commercial	12/01/2015	WAD 17 (PAED)
HPSF00015521		Commercial	12/01/2015	WAD 9 (MED - P)

Figure 3.3-1 PN Dispensing Listing Page

STEP 1

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

STEP 2

Click on 'Dispensing' menu

STEP 3

Click on Search button  to search patient

Note

Search result of patient record list will be displayed:

- Patient MRN
- Patient Name
- Type of PN
- Order Date
- Order Location

STEP 4

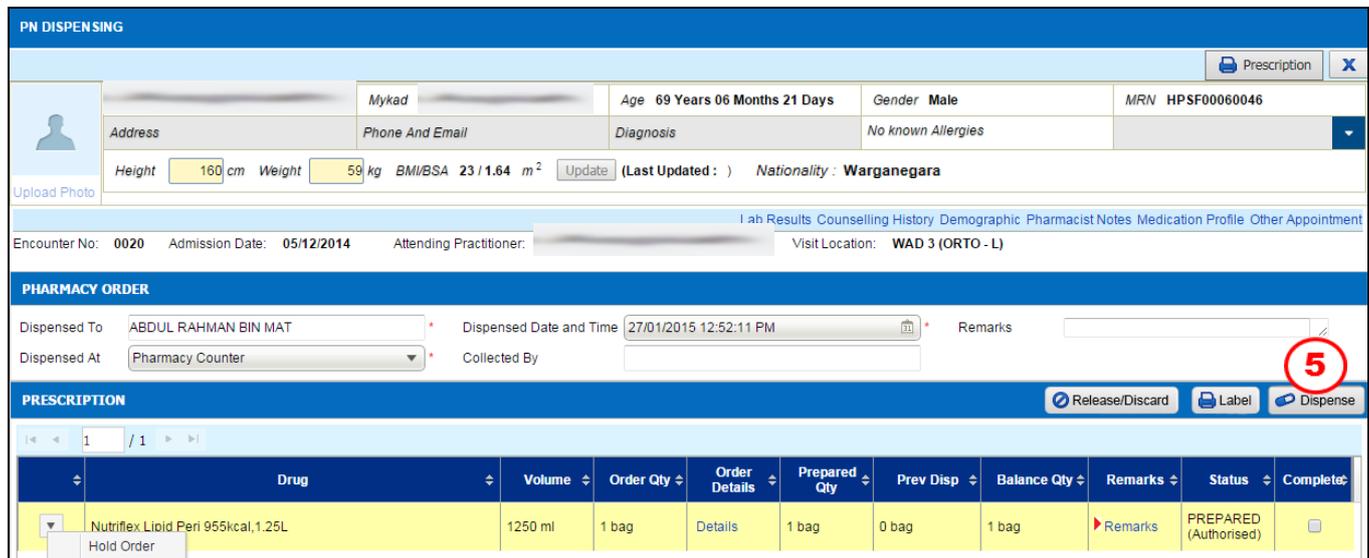
Double click on record and PN Dispensing screen will be displayed as Figure 3.3-2

Note

Search patient record based: -

Basic Search			
No	Field	Description	Remark
a	Dispense Location	Dispensing location. (It will list down all active location)	Able to filter and search patient name by dispensing location
b	Order Status	Search by: - All - Prepared - Prepared hold	Able to filter and search patient name by order status
c	Patient Name	Patient Name	Allow to search by full name or partial
d	Patient MRN	Patient Medical Record Number	Search option: Type the MRN either full or partial: <i>Example: HPSF00001234 or "1234"</i>
Advance Search			
a	Order Location Type	Search by: All Clinic Day Care ER Nursing Unit Pharmacy	Able to filter and search patient name by order location type
b	Order Location	Current visit Location	Able to filter and search patient name by visit location
c	Order Date From	Order confirmed date	Allow to search by start date of order created
d	Order Date To	Order confirmed date	Allow to search by selected duration of order created

Table 3.3-1: Search Criteria



The screenshot displays the 'PN DISPENSING' interface. At the top, there are navigation buttons for 'Prescription' and a close button. Below this, patient information is shown, including Mykad, Age (69 Years 06 Months 21 Days), Gender (Male), and MRN (HPSF00060046). There are also fields for Address, Phone And Email, Diagnosis, and No known Allergies. A 'Height' field is set to 160 cm and 'Weight' to 59 kg. Below the patient info, there are links for 'Lab Results', 'Counselling History', 'Demographic', 'Pharmacist Notes', 'Medication Profile', and 'Other Appointment'. The 'Encounter No' is 0020, 'Admission Date' is 05/12/2014, and 'Attending Practitioner' is listed. The 'Visit Location' is WAD 3 (ORTO - L).

The 'PHARMACY ORDER' section shows 'Dispensed To' as ABDUL RAHMAN BIN MAT, 'Dispensed Date and Time' as 27/01/2015 12:52:11 PM, and 'Dispensed At' as Pharmacy Counter. A red circle with the number '5' highlights the 'Dispensed At' dropdown menu.

The 'PRESCRIPTION' section has buttons for 'Release/Discard', 'Label', and 'Dispense'. Below this is a table with columns: Drug, Volume, Order Qty, Order Details, Prepared Qty, Prev Disp, Balance Qty, Remarks, Status, and Complete. The first row shows 'Nutriflex Lipid Peri 955kcal, 1.25L' with a volume of 1250 ml, 1 bag, and a status of 'PREPARED (Authorised)'. A 'Hold Order' button is visible next to the drug name.

Figure 3.3-2 PN Dispensing

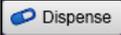
Note

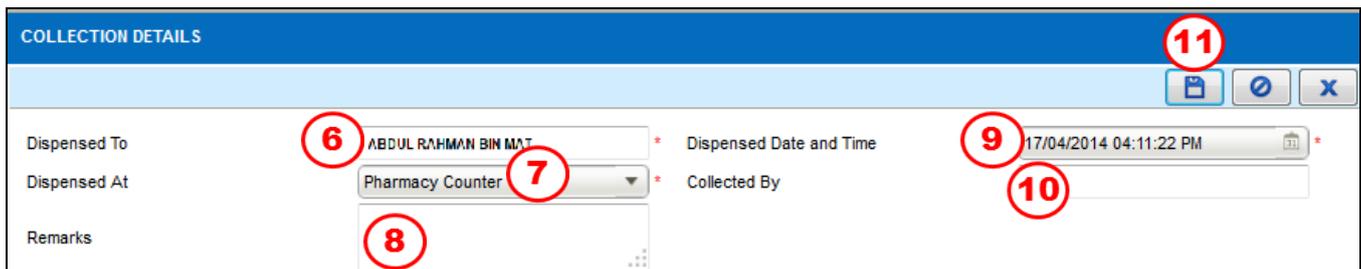
- Click on the  button to select **Hold Order** as per Figure 3.3-2.
- User only can do **Hold/Resume Order** at Dispensing screen.



- Check at  checkbox to force close order by Pharmacist.

STEP 5

Click on the  button and Collection Details will display as per Figure 3.3-3



The screenshot shows a window titled 'COLLECTION DETAILS' with a blue header bar. The window contains several input fields and buttons. Red circles with numbers 6 through 11 highlight specific elements: 6 points to the 'Dispensed To' text box containing 'ABDUL RAHMAN BIN MAT'; 7 points to the 'Dispensed At' dropdown menu showing 'Pharmacy Counter'; 8 points to the 'Remarks' text area; 9 points to the 'Dispensed Date and Time' text box containing '17/04/2014 04:11:22 PM'; 10 points to the 'Collected By' text box; and 11 points to the window title bar.

Figure 3.3-3 Collections Details

STEP 6

Enter **Dispensed To**

Note

- **Dispensed To, Dispensed Date and Time and Dispensed At** fields are automatically defaulted by system but user can still amend the field if applicable.
- All this three fields are mandatory.

STEP 7

Select **Dispensed At**

STEP 8

Select **Remarks**

STEP 9

Select **Dispensed Date and Time**

STEP 10

Enter **Collected By**

STEP 11

Click on the  button and alert message will be displayed as per Figure 3.3-4

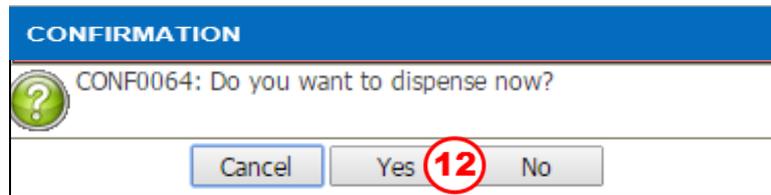


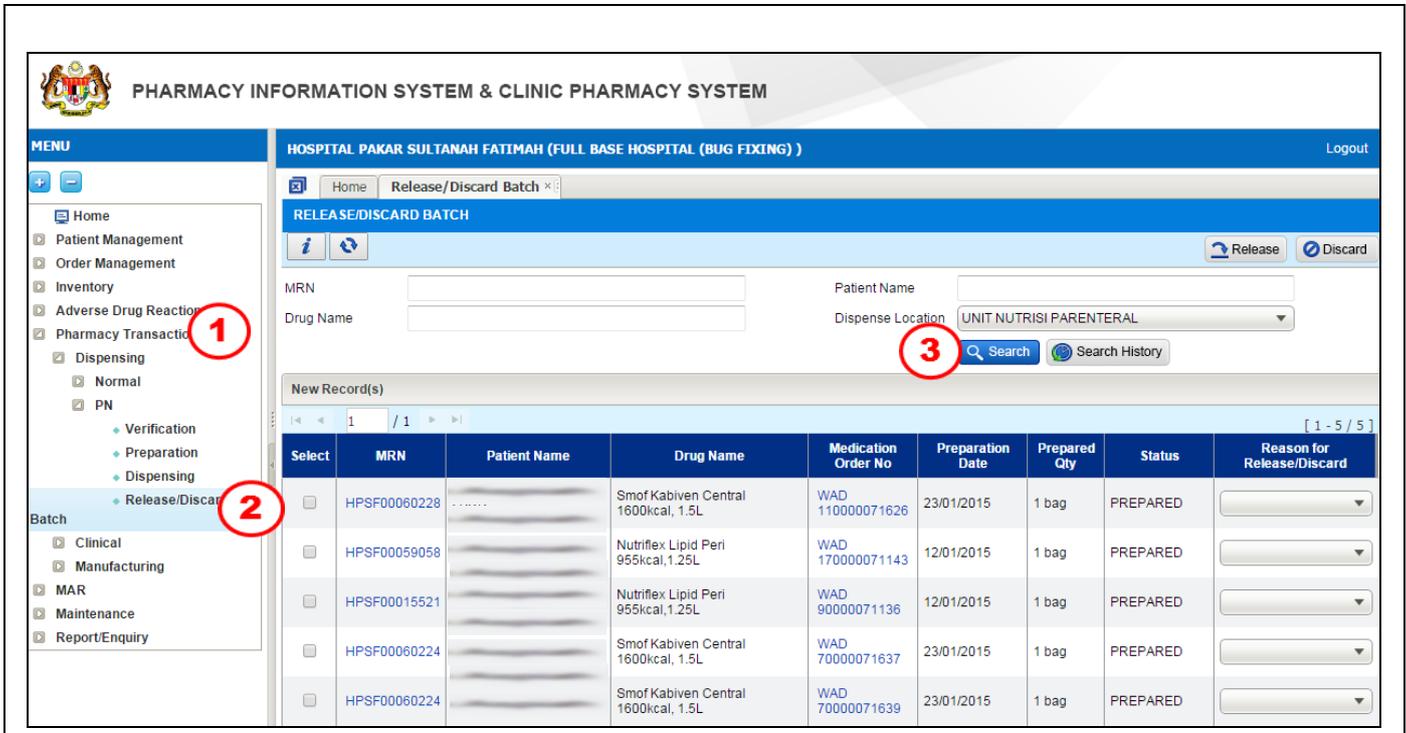
Figure 3.3-4 Confirmation Alert Message

STEP 12

Click on the  button to dispense order

3.4 Release/Discard Batch

Release function is to release and update back stock into inventory. Discard function is to discard stock from inventory even without dispensing.



PHARMACY INFORMATION SYSTEM & CLINIC PHARMACY SYSTEM

HOSPITAL PAKAR SULTANAH FATIMAH (FULL BASE HOSPITAL (BUG FIXING))

RELEASE/DISCARD BATCH

MRN: Patient Name:
 Drug Name: Dispense Location: UNIT NUTRISI PARENTERAL

Select	MRN	Patient Name	Drug Name	Medication Order No	Preparation Date	Prepared Qty	Status	Reason for Release/Discard
<input type="checkbox"/>	HPSF00060228	.....	Smof Kabiven Central 1600kcal, 1.5L	WAD 110000071626	23/01/2015	1 bag	PREPARED	<input type="text"/>
<input type="checkbox"/>	HPSF00059058	.....	Nutriflex Lipid Peri 955kcal, 1.25L	WAD 170000071143	12/01/2015	1 bag	PREPARED	<input type="text"/>
<input type="checkbox"/>	HPSF00015521	.....	Nutriflex Lipid Peri 955kcal, 1.25L	WAD 90000071136	12/01/2015	1 bag	PREPARED	<input type="text"/>
<input type="checkbox"/>	HPSF00060224	.....	Smof Kabiven Central 1600kcal, 1.5L	WAD 70000071637	23/01/2015	1 bag	PREPARED	<input type="text"/>
<input type="checkbox"/>	HPSF00060224	.....	Smof Kabiven Central 1600kcal, 1.5L	WAD 70000071639	23/01/2015	1 bag	PREPARED	<input type="text"/>

Figure 3.4-1 Release/Discard Batch Listing Page

STEP 1`

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

STEP 2

Click on 'Release/Discard Batch' function

Note

Search patient record based: -

No	Field	Description	Remark
a	MRN	Patient Medical Record Number	Search option: • Type the MRN either full or partial: Example: HPSF00001234 or "1234"
b	Patient Name	Patient Name	Allow to search by full name or partial
c	Drug Name	Drug Name	Allow to search by full name or partial drug name
d	Dispense Location	Dispensing location. (It will list down all active location)	Able to filter and search patient name by dispensing location

Table 3.4-1 : Patient Record Search

STEP 3

Click on the  button to search patient

Note

Search result of patient record list will be displayed:

- MRN
- Patient Name
- Drug Name
- Medication Order No
- Preparation Date
- Prepared Quantity
- Status
- Reason for Discard

HOSPITAL PAKAR SULTANAH FATIMAH (FULL BASE HOSPITAL (BUG FIXING)) Logout

Home Release/Discard Batch ×

RELEASE/DISCARD BATCH 6

i ↺ ↻ Release Discard

MRN Patient Name

Drug Name Dispense Location

Search Search History

New Record(s)

1 / 1 [1 - 5 / 5]

Select	MRN	Patient Name	Drug Name	Medication Order No	Preparation Date	Prepared Qty	Status	Reason for Release/Discard
<input checked="" type="checkbox"/> 4	HPSF00060228	[REDACTED]	Smof Kabiven Central 1600kcal, 1.5L	WAD 110000071626	23/01/2015	1 bag	PREPARED	5 Change of Regimen Faulty Product Intervention Patient Refused Uncollected Wrong Allocation
<input type="checkbox"/>	HPSF00059058	[REDACTED]	Nutriflex Lipid Peri 955kcal,1.25L	WAD 170000071143	12/01/2015	1 bag	PREPARED	
<input type="checkbox"/>	HPSF00015521	[REDACTED]	Nutriflex Lipid Peri 955kcal,1.25L	WAD 90000071136	12/01/2015	1 bag	PREPARED	
<input type="checkbox"/>	HPSF00060224	[REDACTED]	Smof Kabiven Central 1600kcal, 1.5L	WAD 70000071637	23/01/2015	1 bag	PREPARED	
<input type="checkbox"/>	HPSF00060224	[REDACTED]	Smof Kabiven Central 1600kcal, 1.5L	WAD 70000071639	23/01/2015	1 bag	PREPARED	

Figure 3.4-2 Release/Discard Batch

STEP 4

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

STEP 5

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

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

STEP 6

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

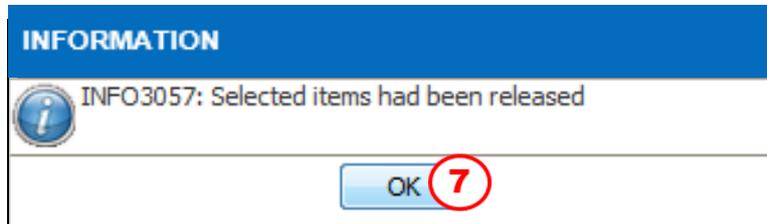


Figure 3.4-3 Information Alert Message

STEP 7

Click on the  button to release order batch

HOSPITAL PAKAR SULTANAH FATIMAH (FULL BASE HOSPITAL (BUG FIXING)) Logout

Home Release/Discard Batch ×

RELEASE/DISCARD BATCH   **8**

MRN Patient Name 

Drug Name Dispense Location  

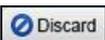
New Record(s)

1 / 1 [1 - 5 / 5]

Select	MRN	Patient Name	Drug Name	Medication Order No	Preparation Date	Prepared Qty	Status	Reason for Release/Discard
<input checked="" type="checkbox"/>	HPSF00060228	[REDACTED]	Smof Kabiven Central 1600kcal, 1.5L	WAD 110000071626	23/01/2015	1 bag	PREPARED	Uncollected
<input type="checkbox"/>	HPSF00059058	[REDACTED]	Nutriflex Lipid Peri 955kcal, 1.25L	WAD 170000071143	12/01/2015	1 bag	PREPARED	
<input type="checkbox"/>	HPSF00015521	[REDACTED]	Nutriflex Lipid Peri 955kcal, 1.25L	WAD 90000071136	12/01/2015	1 bag	PREPARED	
<input type="checkbox"/>	HPSF00060224	[REDACTED]	Smof Kabiven Central 1600kcal, 1.5L	WAD 70000071637	23/01/2015	1 bag	PREPARED	
<input type="checkbox"/>	HPSF00060224	[REDACTED]	Smof Kabiven Central 1600kcal, 1.5L	WAD 70000071639	23/01/2015	1 bag	PREPARED	

Figure 3.4-4 Release / Discard Batch

STEP 8

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

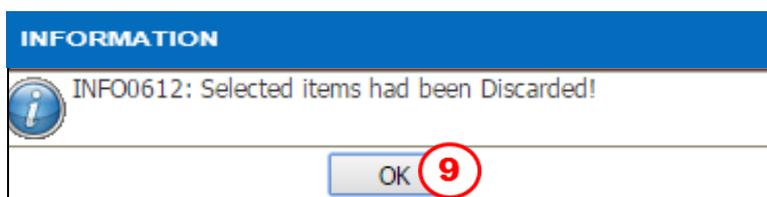
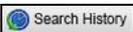


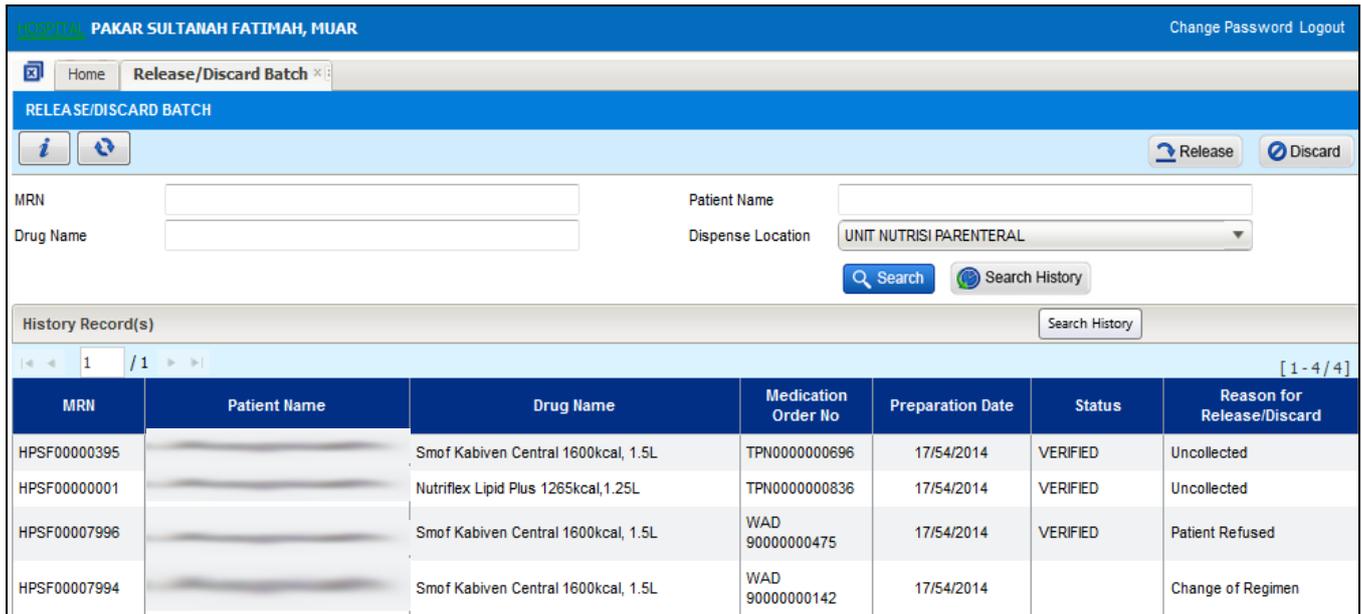
Figure 3.4-5 Information Alert Message

STEP 9

Click on the  button to discard batch

Note

Click on the  button to view release/discard history as Figure 3.4-6.

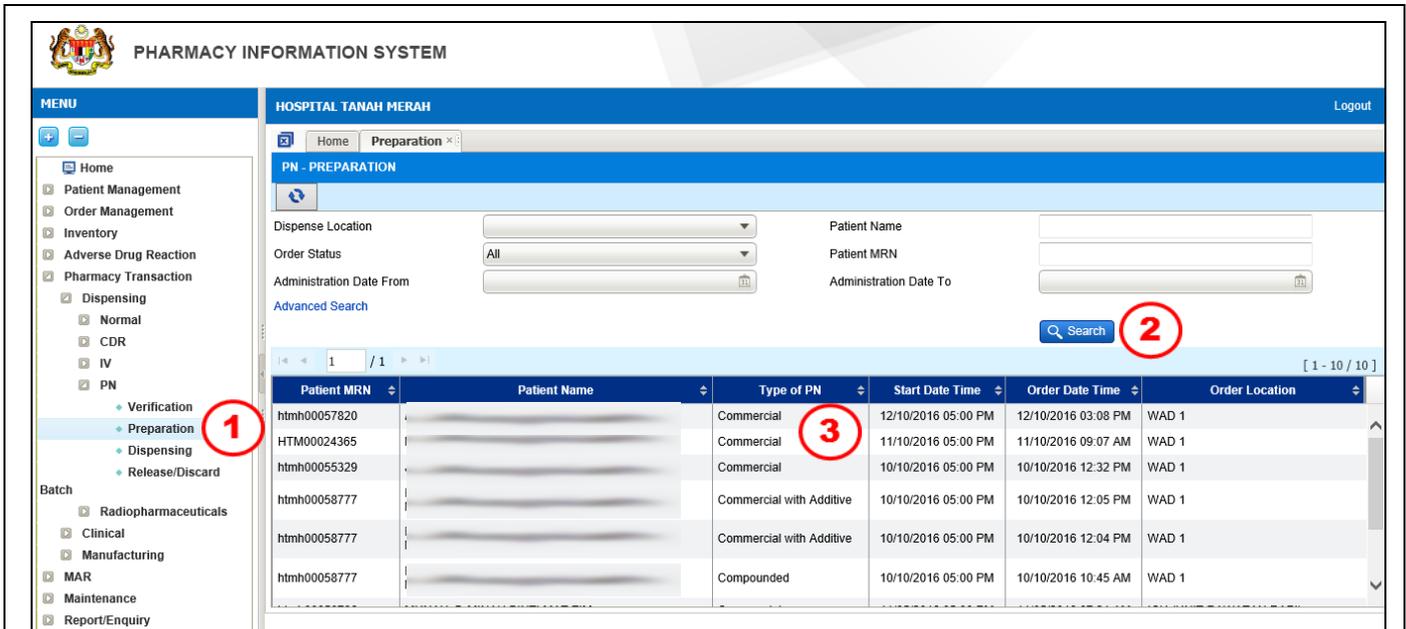


MRN	Patient Name	Drug Name	Medication Order No	Preparation Date	Status	Reason for Release/Discard
HPSF00000395		Smof Kabiven Central 1600kcal, 1.5L	TPN0000000696	17/54/2014	VERIFIED	Uncollected
HPSF00000001		Nutriflex Lipid Plus 1265kcal, 1.25L	TPN0000000836	17/54/2014	VERIFIED	Uncollected
HPSF00007996		Smof Kabiven Central 1600kcal, 1.5L	WAD 90000000475	17/54/2014	VERIFIED	Patient Refused
HPSF00007994		Smof Kabiven Central 1600kcal, 1.5L	WAD 90000000142	17/54/2014		Change of Regimen

Figure 3.4-6 Release/Discard Batch

3.5 Outsource

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



PHARMACY INFORMATION SYSTEM

HOSPITAL TANAH MERAH Logout

Home Preparation

PN - PREPARATION

Dispense Location: Patient Name:

Order Status: Patient MRN:

Administration Date From: Administration Date To:

[Advanced Search](#) **2**

Patient MRN	Patient Name	Type of PN	Start Date Time	Order Date Time	Order Location
htmh00057820		Commercial 3	12/10/2016 05:00 PM	12/10/2016 03:08 PM	WAD 1
HTM00024365		Commercial	11/10/2016 05:00 PM	11/10/2016 09:07 AM	WAD 1
htmh00055329		Commercial	10/10/2016 05:00 PM	10/10/2016 12:32 PM	WAD 1
htmh00058777		Commercial with Additive	10/10/2016 05:00 PM	10/10/2016 12:05 PM	WAD 1
htmh00058777		Commercial with Additive	10/10/2016 05:00 PM	10/10/2016 12:04 PM	WAD 1
htmh00058777		Compounded	10/10/2016 05:00 PM	10/10/2016 10:45 AM	WAD 1

Figure 3.5-1 PN Preparation Listing Page

STEP 1

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

Note

- Various search criteria is provided as below:
 - Dispense Location
 - Patient Name
 - Order Status
 - Patient MRN
- Click on the [Advanced Search](#) hyperlink for advance search.

STEP 2

Click on the button and system will display related order

STEP 3

Double click on the selected patient record and system will display PN Dispensing screen as per Figure 3.5-2



PN PREPARATION

Encounter No: 0136 Admission Date: 28/08/2015 Attending Practitioner: DR RABIATUL ADAWIYAH BT MOHD GHAZALI Visit Location: WAD 2 Rx No: NICU000029878

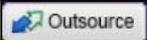
PHARMACY ORDER
Prepared Date/Time: 21/10/2016 04:10 AM

PRESCRIPTION PROCEED TO DISPENSING

Drug	Volume	Order Qty	Order Details	Prepared Qty	Balance Qty	Prepare Worksheet	Remarks	Prev Disp	Status
PN Compounded Neonate	252 ml	1 bag	Details	1 bag	1 bag	Details	Remarks	0 bag	VERIFIED

Figure 3.5-2 PN Preparation

STEP 4

Click on the  button to prepare outsource product

OUTSOURCE DETAILS

Send Outsource Request

Mykad: [redacted] Age: 14 Years 0 Months 23 Days Gender: Male MRN: HPSF00012482

Height: 180 cm Weight: 65 kg BMI/BSA: 20.1 / 1.79 m² Nationality: Warganegara

PHARMACY ORDER

Outsource No: [redacted]

Referred From: Hospital Pakar Sultanah Fatimah, Muar Referred To: KK Greentown

Contact Person / Office: Halim Abdullah Contact Person / Office: Mohd Zubir

Contact no / Ext No: 0173692581 Contact no / Ext No: 055622114

Request Date/Time: 17/04/2014 4:31 PM Tentative Receipt Date: 17/04/2014

Remarks: [redacted]

Rx No	Rx Date	Drug Name	Order Detail	Order Qty	Remarks
TPN0000000943	17/04/2014 12:05:34 PM	Nutriflex Lipid Peri 955kcal, 1.25L	Details	1	Remarks

Figure 3.5-3 Outsource Details

STEP 5

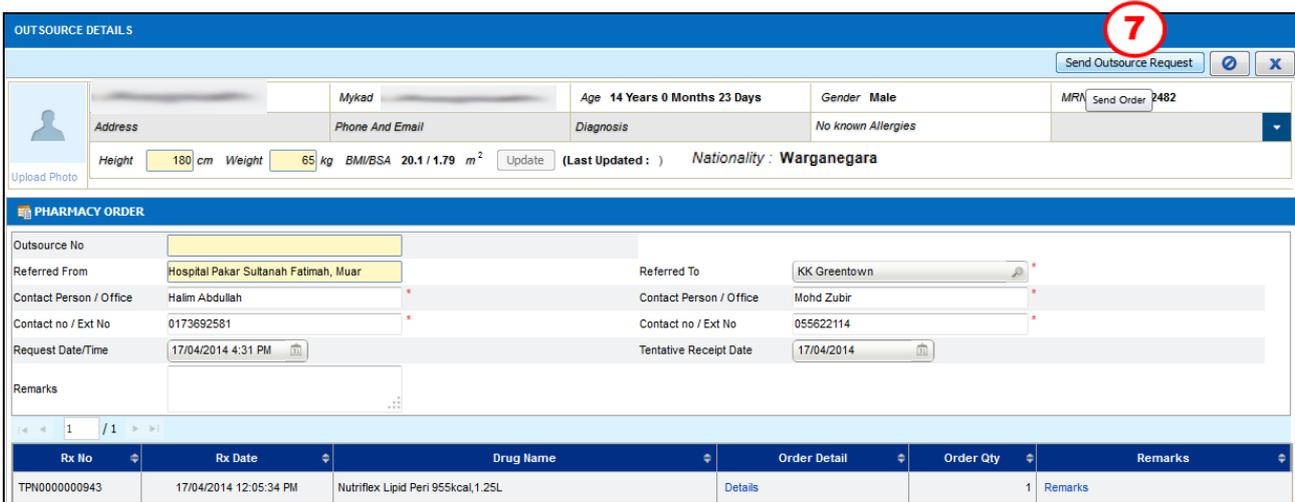
Enter **Contact Person/office, Contact No/Ext/No., Request Date/Time** and **Remarks**

STEP 6

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

Note

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



OUTSOURCE DETAILS 7

Send Outsource Request

Mykad: [Redacted] Age: 14 Years 0 Months 23 Days Gender: Male MRN: Send Order 2482

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

Height: 180 cm Weight: 65 kg BMI/BSA: 20.1 / 1.79 m² (Last Updated:) Nationality: Warganegara

PHARMACY ORDER

Outsource No: [Redacted]

Referred From: Hospital Pakar Sultanah Fatimah, Muar Referred To: KK Greentown

Contact Person / Office: Halim Abdullah Contact Person / Office: Mohd Zubir

Contact no / Ext No: 0173692581 Contact no / Ext No: 055622114

Request Date/Time: 17/04/2014 4:31 PM Tentative Receipt Date: 17/04/2014

Rx No	Rx Date	Drug Name	Order Detail	Order Qty	Remarks
TPN0000000943	17/04/2014 12:05:34 PM	Nutriflex Lipid Peri 955kcal,1.25L	Details	1	Remarks

Figure 3.5-4 Outsource Details

STEP 7

Click on the button to send outsource request



CONFIRMATION

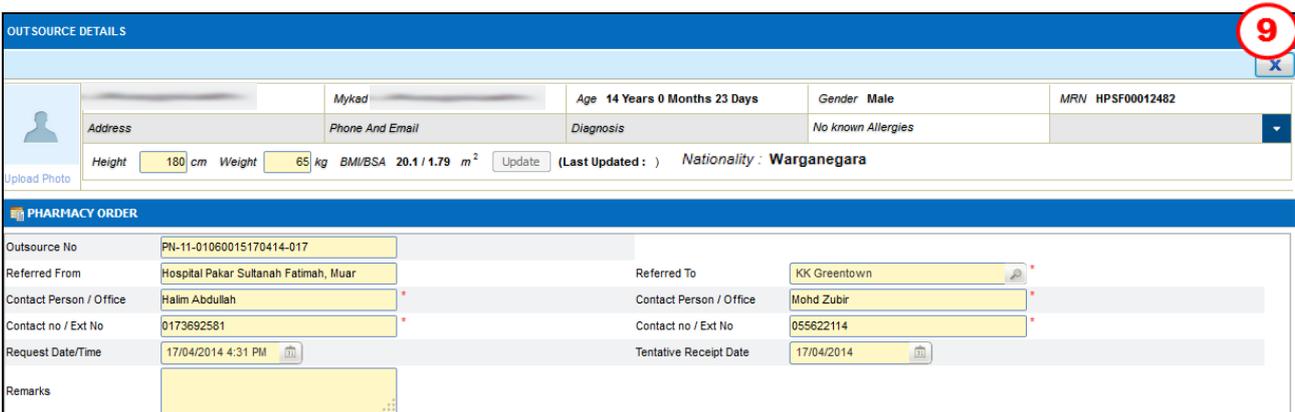
CONF0110: Are you sure you want to send Outsource Request?

8

Figure 3.5-5 Send Request Alert Message

STEP 8

Click on the button to send outsource request



OUTSOURCE DETAILS 9

Send Outsource Request

Mykad: [Redacted] Age: 14 Years 0 Months 23 Days Gender: Male MRN: HPSF00012482

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

Height: 180 cm Weight: 65 kg BMI/BSA: 20.1 / 1.79 m² (Last Updated:) Nationality: Warganegara

PHARMACY ORDER

Outsource No: PN-11-01060015170414-017

Referred From: Hospital Pakar Sultanah Fatimah, Muar Referred To: KK Greentown

Contact Person / Office: Halim Abdullah Contact Person / Office: Mohd Zubir

Contact no / Ext No: 0173692581 Contact no / Ext No: 055622114

Request Date/Time: 17/04/2014 4:31 PM Tentative Receipt Date: 17/04/2014

Figure 3.5-6 Outsource Details

STEP 9

Click on the button to close outsource screen as per Figure 3.5-6

4.0 Acronyms

Abbreviation	Definition
MOH	Ministry Of Health
PhIS	Pharmacy Information System
CPS	Clinical Pharmacy System
MRN	Medical Record Number
IV	Intravenous
HQ	Headquarters
INJ	Injection
QTY	Quantity
LAB	Laboratory

5.0 Links to Clinical Modules

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