POLICY AND STANDARD OPERATING PROCEDURE FOR PHARMACY INFORMATION SYSTEM IMPLEMENTATION IN HOSPITAL AND CLINIC

VERSION 2.0

PHARMACY DIVISION
MINISTRY OF HEALTH

TABLE OF CONTENTS

PURPOSE OF THIS DOCUMENT

This document explains the policies and operational procedures to assist the implementation of Pharmacy Information System (PhIS) at the hospitals and Clinic Pharmacy System (CPS) at the clinics, nationwide. The standardisation of operational procedures ensures the production of comprehensive, timely, reliable, and good quality of the Pharmacy Information System; converting data into meaningful information, and using such information for decision making, planning, and monitoring of pharmaceutical consumption in the government sector.

2.0 OBJECTIVES OF THIS DOCUMENT

The main objectives of this document are:

2.1 To strengthen monitoring and evaluation as well as the use of information in policy and programme planning through the regulation and standardisation of the collection, collation and dissemination of data.

2.2 To clarify the main roles and responsibilities for each system user to ensure data completeness, data quality, data use and ownership at all levels of the health system. .

2.3 To provide standard procedures on the management and use of the Pharmacy Information System.

N.B : Policies and procedures mentioned in this document serves as an addendum to all the existing policy in Ministry of Health.

3.0 KEY POLICY PROVISIONS

3.1 OWNE RSHIP AND MANAGEMEN T OF PHARMACY INFOR M ATION SYSTEM

3.1.1 Overall ownership of the Pharmacy Information System resides within the Director-General of Health, Ministry of Health Malaysia.

3.1.2 Overall ownership of Pharmacy Information System in each state and facility resides within the State Health Director, State Deputy Director of Health (Pharmacy and Management), Hospital Director and District Health Officer (In Charge) respectively.

3.1.3 Senior Director of Pharmaceutical Services and Secretary of Information Technology Department shall be responsible for the development, implementation and maintenance of Pharmacy Information System.

3.1.4 A national implementation team with representatives from every state shall be established to manage and monitor the implementation of the system. At Headquarters level, the project is governed by Project Implementation Technical Committee and Project Steering Committee.

3.2 DATA SECURITY

3.2.1 There shall be no disclosure of any information to any parties without the patient's consent. Electronic and printed patient's medication profiles and related information are confidential.

3.2.2 To ensure that the confidentiality of patient information is maintained, Pharmacy Information System's user access right shall comply with User Access Control Policy (UACP), defined by Ministry of Health.

3.2.2 User Access Control Model outlined in this document shall allow the authorised user to perform his/her task and prevent access by unauthorised personnel.

3.3 DATA MANAGEMENT AND ANALYSIS

3.3.1 Pharmacy Information System data elements definitions shall be specified and formatted according to National Health Data Dictionary (NHDD).

3.3.2 Pharmacy Information System Master Catalogue shall be maintained by Pharmaceutical Services Division (PSD), Ministry of Health (MOH).

3.3.3 Facility shall maintain its own catalogue based on the master catalogue pre-defined at Headquarters. Users at Facility shall request for new items to be registered in the Master Catalogue and activate the list in the Facility Catalogue.

4.0 GENERAL POLICY

4.1 All procedures shall conform to the relevant Ministry of Health (MOH) policies and guidelines.

4.2 Itemised costing of medication supplied shall be provided on drug label and price is determined centrally based on national policy.

4.3 Total cost of each prescription shall be made available for itemised billing.

4.4 Quota for procurement of specific drug shall be determined and approved by local Drug Therapeutic Committee.

4.5 Records shall remain active for seven (7) years in the system and be archived thereafter.

5.0 STANDARD OPERATING PROCEDURES

SECTION 1: REGISTRATION OF PATIENTS

1.0 OBJECTIVE

This procedure is applicable for the registration of patients at all entry point in the facility (clinic, admission counter, emergency department, and pharmacy department for SPUB and external orders).

2.0 OPERATIONAL POLICY

2.1 All patients must be registered with a unique Medical Registration Number (MRN) before medication orders are raised and drugs prescribed must be specific for the registered patient only.

2.2 If the facility has an identified registration module (CD/TPC-OHCIS) in place, Pharmacy Information System (PhIS & CPS) shall interface with the main system and uses the main system's registration module.

2.3 Patient shall be identified by at least two of the following data: Patient's name, MyKad or Identification Card (IC) and Medical Registration Number (MRN).

2.4 Patient shall be required to produce guarantee letter upon registration. Online guarantee letter shall be accepted subject to MOH policy.

2.5 Patients referred from external facilities for Medication Therapy Adherence Clinic (MTAC), medication counselling or Sistem Pembekalan Ubat Bersepadu (SPUB) shall be registered at pharmacy counter.

2.6 Walk-in Patients

2.6.1 Walk-in patients (non referral) within MOH facilities where the prescription had been partially supplied by the original facility shall be allowed to obtain their balance prescription refilled or supplied at the new facility. Prescription information shall be entered into the system at point of patient arrival by authorised pharmacy personnel. Copy of the original prescription shall be retained at the receiving facility.

2.6.2 Walk-in patients from non-MOH facility shall be referred to the relevant clinics in the facility for consultation.

2.7 *Sistem Pembekalan Ubat Bersepadu* (SPUB)

2.7.1 Orders for SPUB from PhIS & CPS enabled facility shall be done via the system and conform to the relevant MOH guidelines.

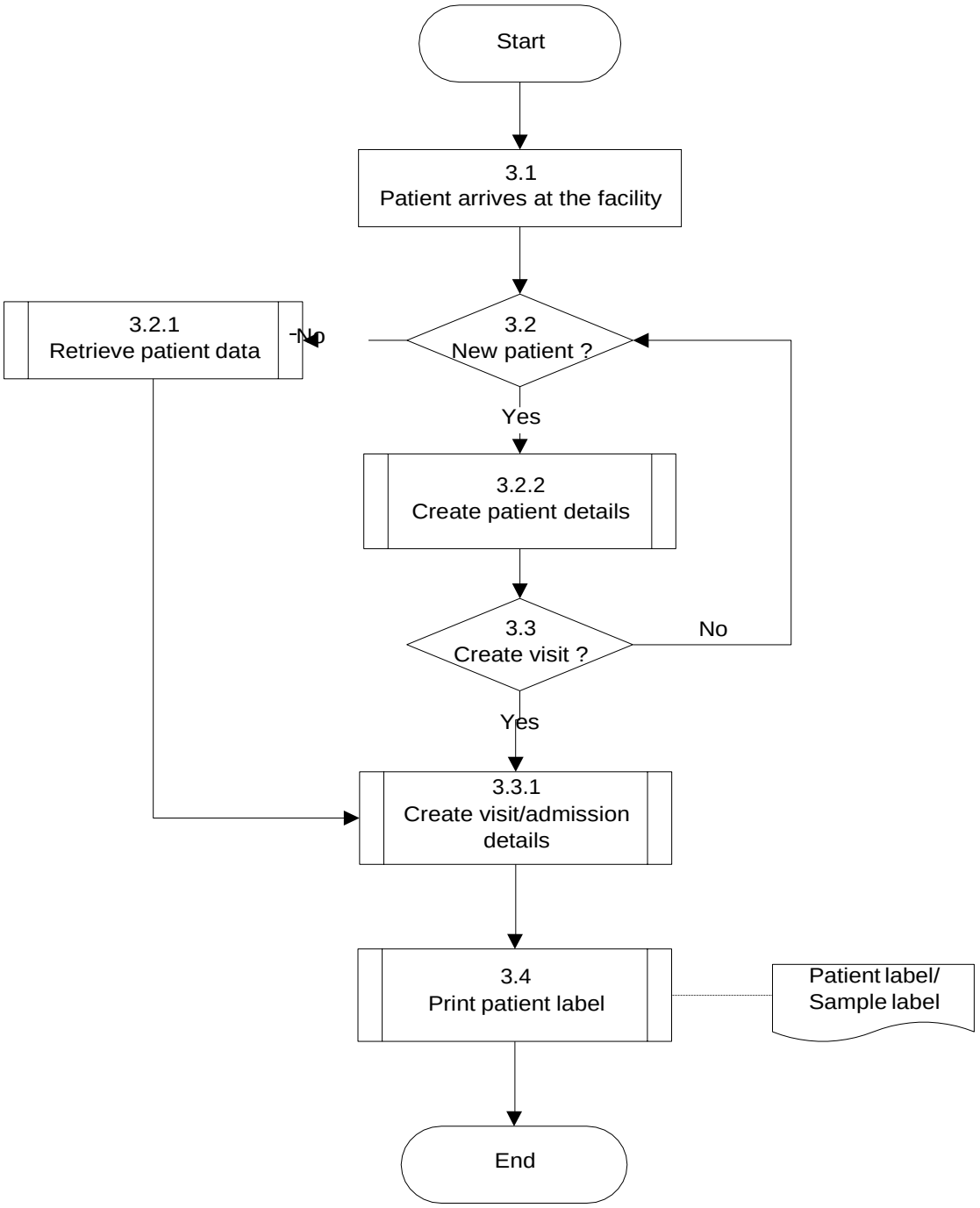
2.7.2 All SPUB prescription from non-PhIS facility shall be registered and the prescription information shall be entered into the system at point of patient arrival by an authorised pharmacy personnel. Copy of original prescription shall be retained in the facility.

2.8 Patient shall be admitted, referred to the respective discipline when necessary, transferred to another unit/ward and discharged from the ward by authorised personnel.

3.0 PROCEDURE AND PROCESS WORKFLOW

No	Procedure Name : Registration of Patients	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Patient arrives at the facility		
3.2	Determine if he/she is returning patient or new with no medical registration number (MRN) at facility.	Administration clerk	• Identification card • Patient Identification label
3.2.1	If the patient is already registered in the system, patient's information details can be retrieved.	Administration clerk	
3.2.2	If the patient is new to the facility, the patient is registered into the system to create a new MRN number and patient information	Administration clerk	
3.3	Determine if visit or admission for patient need to be created	Administration clerk	
3.3.1	If Yes, patient is assigned to a ward for admission or clinic for an appointment. If No, registration process ends.	Administration clerk	
3.4	Patient information is printed and given to the patient.	Administration clerk	• Patient label • Sample label • Registration book

Process Workflow : Registration of Patients



SECTION 2: ORDER MANAGEMENT

1.0 OBJECTIVE

This procedure is applicable for normal medication order, chemotherapy drug order, IV Admixture Order and pharmacy service order such as Therapeutic Drug Monitoring, Parenteral Nutrition or Medication Counselling for registered patients by health care providers in the facility.

2.0 OPERATIONAL POLICY

2.1 This policy applies for both online or offline medication ordering and prescription dispensing functionalities at Inpatient and Outpatient departments.

2.2 System shall allow authorised personnel to have access to information such as drug interaction, possible allergies, adverse effect, overdose, and drug duplication. Detail information on the specific drug shall be provided by the system through drug database interface.

2.3 All medication orders shall be prescribed by authorised personnel only and comply with prescribing guidelines defined in the MOH drug formulary (drug category, discipline / specialty).

2.4 Category A/KK, A and A* medications shall be initiated by specialist in accordance to MOH policy.

2.5 In the absence of specialist, prescriber shall contact the specialist for the medication authorisation. Authorised pharmacist shall be allowed to release the prescription upon confirmation from the specialist. The specialist shall monitor his/her task list and endorse all the prescription in a specified time determined by the local policy. Duration for supply for those prescription shall be determined by the local policy.

2.6 The medication order of a particular medication is considered valid for the duration prescribed from the date of prescribing. Drug shall be prescribed based on days/ weeks/ months whereby one (1) month is equivalent to thirty (30) days. Total duration of supply shall be determined by the local policy

2.7 The Medication Order shall consist of the following data elements:

2.7.1 Patient data (name, age, sex, weight, height, MRN)
2.7.2 Diagnosis / problems
2.7.3 Generic name of drug
2.7.4 Dosage
2.7.5 Frequency
2.7.6 Duration
2.7.7 Route of administration
2.7.8 Allergy status
2.7.9 Name, designation and location of prescriber
2.7.10 Date and time of medication order
2.7.11 Special instructions to patient (if any)

2.8 Diagnosis field is mandatory before the medication order can be confirmed.

2.9 All medication orders shall conform to the drug indication listed in Malaysia Drug Formulary, MOH. If the drug indication is not listed, the prescriber shall request for approval from the Director General of Health.

2.10 Patient's allergy status is mandatory and shall be determined by the prescriber at every encounter at the facility and every time a new medication order is generated.

2.11 All medication orders placed after dispensing office hour or public holiday or weekend shall be routed to a specific dispense location defined by the facility and to be processed by authorised personnel.

2.12 Any amendment by prescriber to existing prescription require cancellation of the previous prescription.

2.13 Pharmacy service order

2.13.1 Pharmacy services such as parenteral nutrition, medication counselling, clinical pharmacokinetic service shall be ordered through the system by authorised personnel.

2.13.2 General parenteral nutrition order shall be made by doctors and the nutrition requirement shall be tailored based on patients' requirement by the pharmacist.

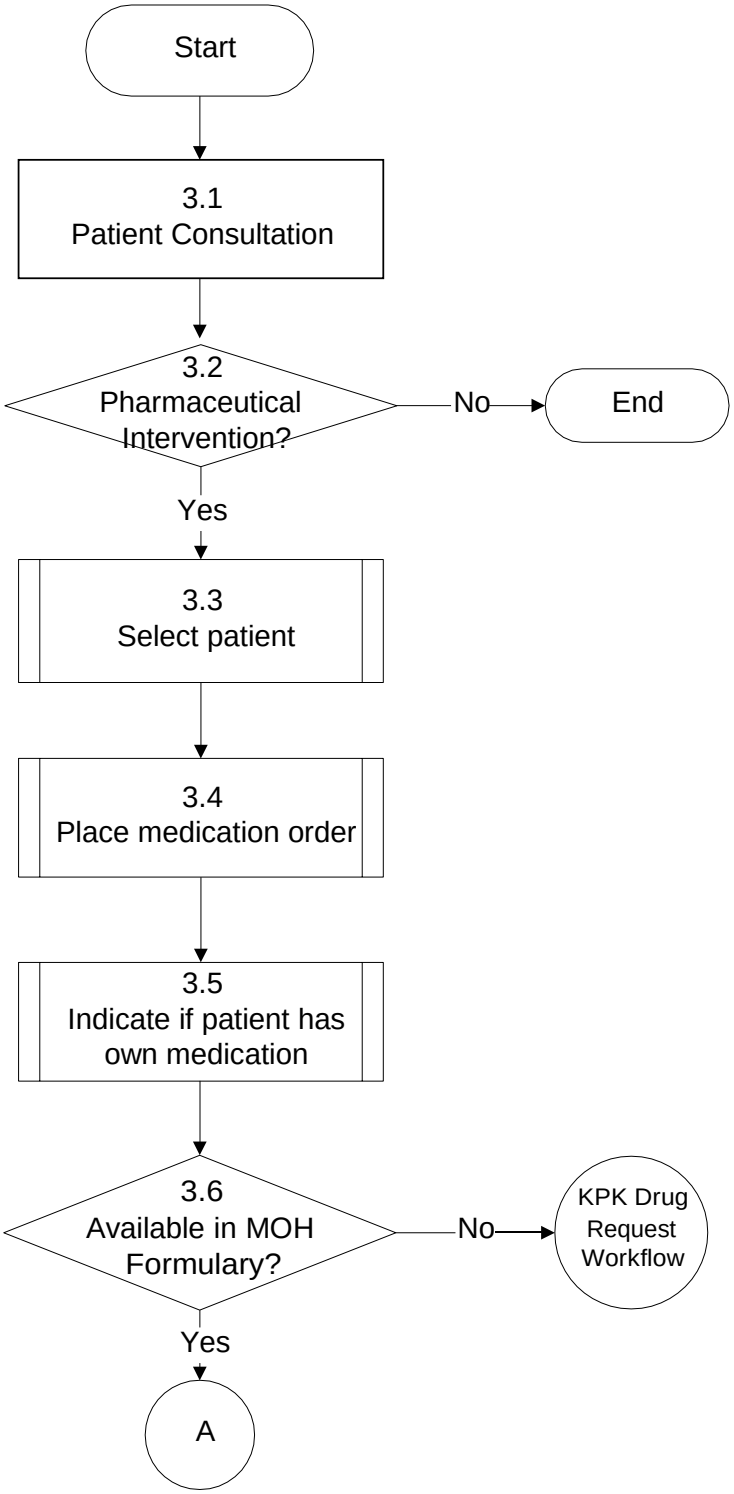
3.0 PROCEDURE AND PROCESS WORKFLOW

Procedure I: Medication and Pharmacy Service Order

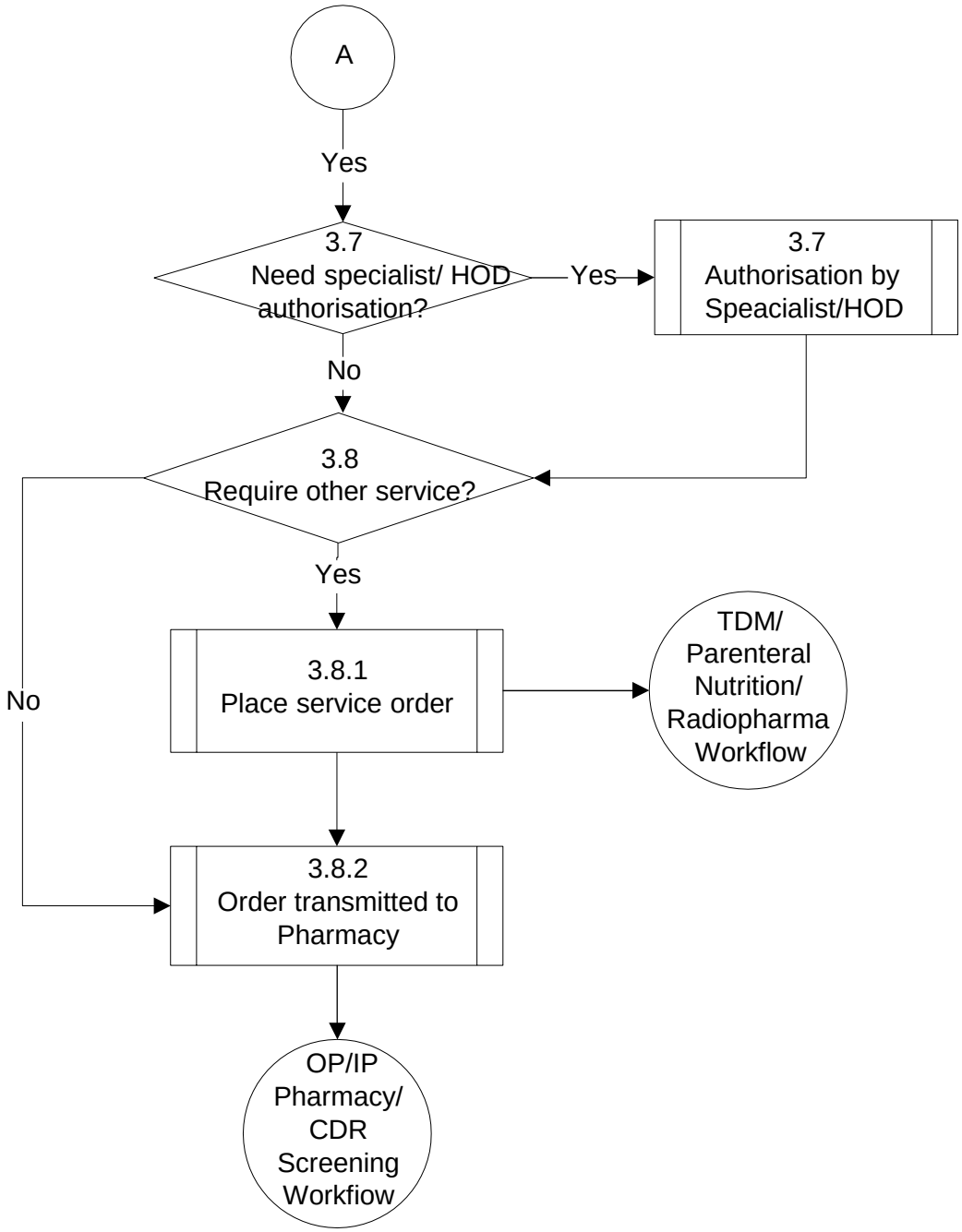
No	Procedure Name : Medication and Pharmacy Service Order	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Perform patient consultation	Prescriber	• Bed Head Ticket, Patient Treatment Card/Book
3.2	Determine if there is a need for pharmaceutical intervention. If there is no pharmaceutical intervention needed, the process ends. If Yes, proceed to step 3.3		

No	Procedure Name : Medication and Pharmacy Service Order	Responsibility	Remarks/ Data/ Document/ etc.
3.3	Select patient from the list allocated to the location or to the department.	Prescriber	
3.4	Perform medication order in system for : i) Normal drugs (injection, tablet, topical application) ; ii) Cytotoxic Drug ; iii) Intravenous Infusion	Prescriber	
3.5	Indicate if patient is using own medication	Prescriber	
3.6	Determine if the medication is available in MOH Drug Formulary. If medicine required is not available in MOH Drug Formulary, the prescriber shall request for Director General of Health's Approval before prescribing it for patient.	Prescriber	• MOH Drug Formulary
3.7	Determine if order requires specialist/ HOD authorisation. 3.7.1 If yes, specialist/ HOD shall authorize initiation of medication of Category A*/A/A/KK. Pharmacy Department can view the order and determine the supply based on local policy. If no, proceed to 3.8.	Prescriber Specialist HOD	
3.8	Prescriber shall decide if patient requires other pharmacy services such as medication counselling, Therapeutic Drug Monitoring Service or need to be referred to Medication Therapy Adherence Clinic. 3.8.1 If yes, place the relevant order 3.8.2 If no, confirm the medication and the order shall be transmitted to pharmacy for dispensing. .	Prescriber	

Process Workflow : Medication and Pharmacy Service Order



Process Workflow : Medication and Pharmacy Service Order

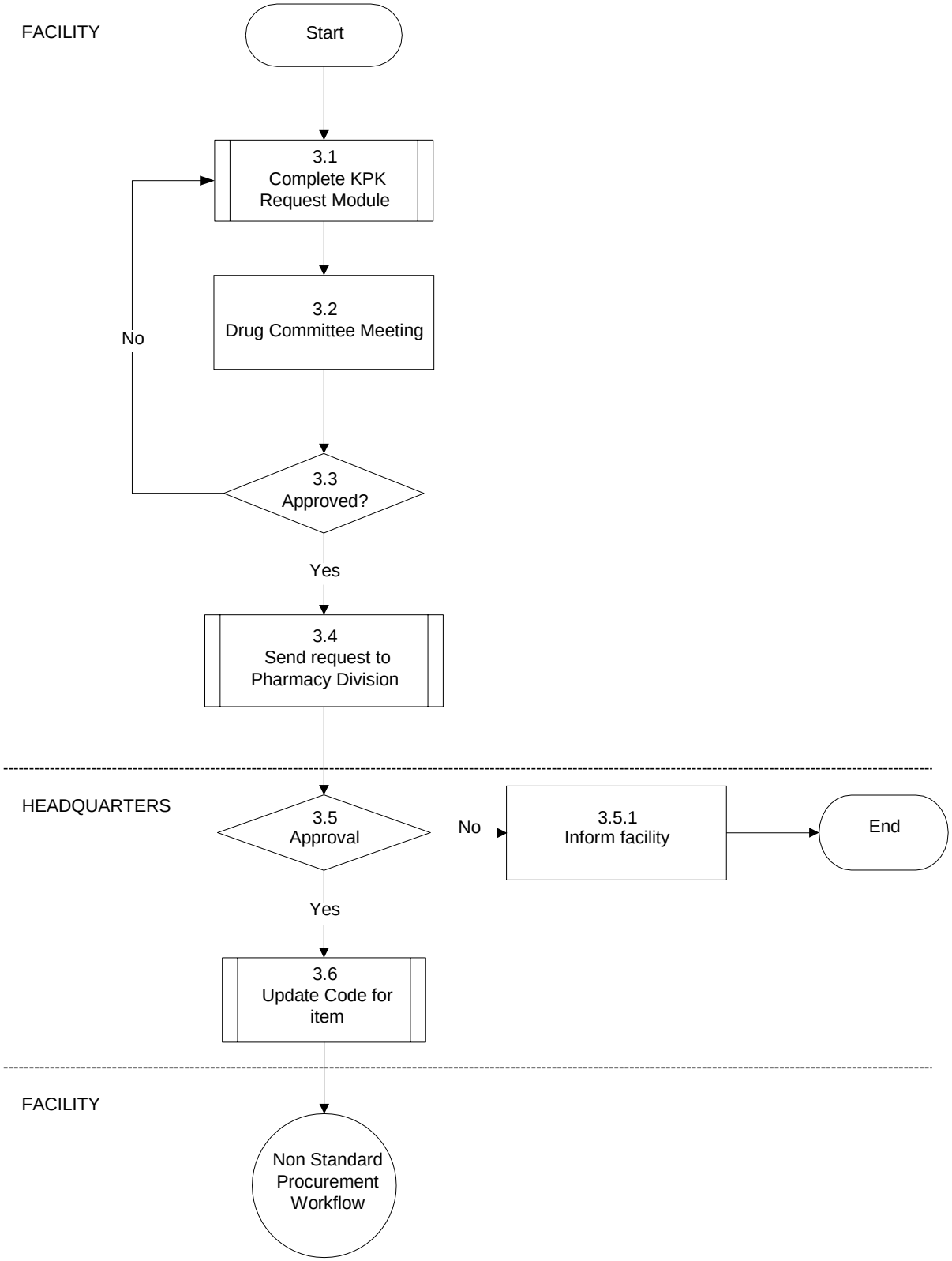


Procedure II : Order of Special Drug Request

- This procedure is applicable for drugs not listed in Ministry of Health Drug Formulary

No	Procedure Name : Order of Special Drug Request	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Complete KPK form and module	Specialist/ Authorised Prescriber / pharmacist	• Request form • Quotation
3.2	Check drug availability in facility drug formulary If yes proceed to step 3.4	Pharmacist	
3.3	Submit request in the Drug Committee Meeting (DCM) at facility.	Pharmacist	
3.4	Determine if request is approved. If yes proceed to step 3.5. If no, inform the requestor	Pharmacist	
3.5	Complete the request and send to Pharmacy Division, MOH for approval.	Pharmacist	
3.6	Determine if request is approved. If yes, proceed to step 3.7 If no, inform the requestor at facility.	Pharmacist	• Request approved by Director General of Health.
3.7	Update code for the approved item. Facility shall proceed with the procurement process.	Pharmacist (Headquarter) Pharmacist	

Process Workflow : Order of Special Request Drug



SECTION 3: MEDICATION SUPPLY AT PHARMACY

1.0 OBJECTIVE

This procedure is applicable in the management of prescription supply at both outpatient and inpatient pharmacy. Right medication shall be delivered to the right patient with the right medicine, the right dose, the right quantity and at the right time.

Procedures involved are:

- Acknowledgement of patient
- Screening of prescription
- Dispensing of medication

2.0 OPERATIONAL POLICY

2.1 Screening of prescription

2.1.1 All prescribed medications shall be screened for appropriateness and verified by the pharmacist before dispensing. In situations where there is no pharmacist, the pharmacy assistant shall be given the authority.

2.1.2 Role assignment shall be dependent on the local policy in relation to the supervisory task that needs to be performed by specific staff.

2.1.3 All queried prescription shall be put on hold until verified by prescriber. All interventions shall be documented in the system.

2.1.4 Modification in terms of dosage, frequency or duration shall be done by pharmacist after consultation with prescriber. Endorsement of the modification shall be made by prescriber before subsequent dispensing process.

2.2 Dispensing of medication

2.2.1 All filled medication shall be counterchecked prior to dispensing and intervention shall be recorded.

2.2.2 Drugs dispensed must be appropriately labelled with the following information:
- 2.2.2.1 Name of patient
- 2.2.2.2 Medical Record Number (MRN)
- 2.2.2.3 Generic name of drug
- 2.2.2.4 Dosage
- 2.2.2.5 Frequency
- 2.2.2.6 Quantity supplied & cost of quantity dispensed

2.2.2.7 Cautionary information
2.2.2.8 Dispensing date
2.2.2.9 Hospital/Clinic name and contact number
2.2.2.10 The phrase 'Ubat Terkawal' - only for scheduled poison
2.2.2.11 Identification Card (IC) Number
2.2.2.12 Start date & End date of medication supply

2.2.3 All medicines dispensed shall be supplied on monthly basis or whichever is appropriate according to local policy. For partial supply, Balance Medication Sheet (BMS) or original prescription shall be given to patients.

2.3 All psychotropic drugs shall be dispensed by pharmacist or authorized personnel. Validation and issuance of Psychotropic or Dangerous Drugs shall be in accordance to Poisons (Psychotropic Substance) 1989 and Dangerous Drugs Act 1952 respectively.

2.4 Medication Collection

2.4.1 A proxy shall be allowed to collect medication on behalf of the patient under special circumstances with a valid document.

2.4.2 Any uncollected medication shall remain active in the system and facility shall release the stock when necessary (subject to local policy).

2.5 Re-dispensing of prescription shall be allowed should the prescription be valid except for psychotropic drug.

2.6 In-Patient Medication Supply

2.6.1 Duration of prescription for inpatient order shall not exceed a period of one week or subject to local policy.

2.6.2 Prescriber shall record medications brought by patient during the stay in the ward/unit. Decision to utilize those medications shall be under the discretion of prescribers and subject to local policy.

2.6.3 Medication serving time shall be defined by local policy. Any new order (including change in dosage, frequency and duration) shall be attended at subsequent supply time.

2.6.4 All medication order shall be done in the system and pharmacist shall be informed verbally for all urgent supplies.

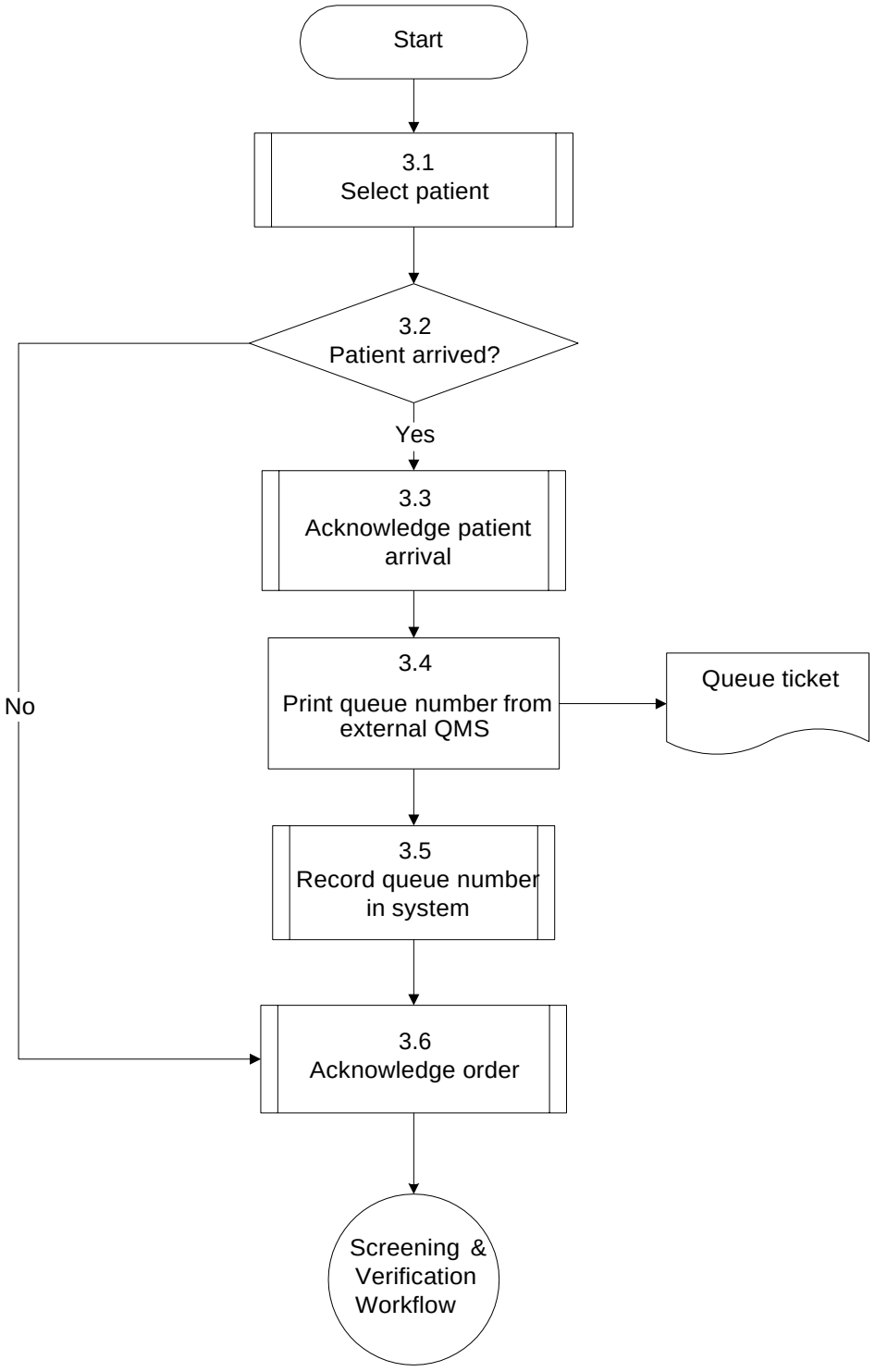
2.6.5 All medication issued shall be acknowledged by an authorised personnel

3.0 PROCEDURE AND PROCESS WORKFLOW

Procedure I: Acknowledgement of Patient

No.	Procedure Name : Acknowledgement of Patient	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Select patient from the acknowledgement listing page.	Pharmacist/ Pharmacist Assistant	
3.2	Determine patient's arrival at pharmacy counter. If patient arrived, proceed to step 3.3. If patient not arrived, proceed to step 3.4.	Pharmacist/ Pharmacist Assistant	
3.3	Acknowledge patient's arrival at pharmacy counter. Patient arrival can be acknowledged at any stage of work process: Screening & Verification/ Preparation/ Dispensing.	Pharmacist/ Pharmacist Assistant	Patient's Identification Label/Card
3.4	Print the queue number from external Queue Management System (QMS) for facility that already has existing QMS when the patient arrives. (If applicable)	Pharmacist/ Pharmacist Assistant	Queue number Waiting time report
3.5	Record the queue number into the system.		
3.6	Acknowledge the medication order. Acknowledgement of medication order can be done with or without patient arrival at the pharmacy counter.	Pharmacist/ Pharmacist Assistant	Medication order

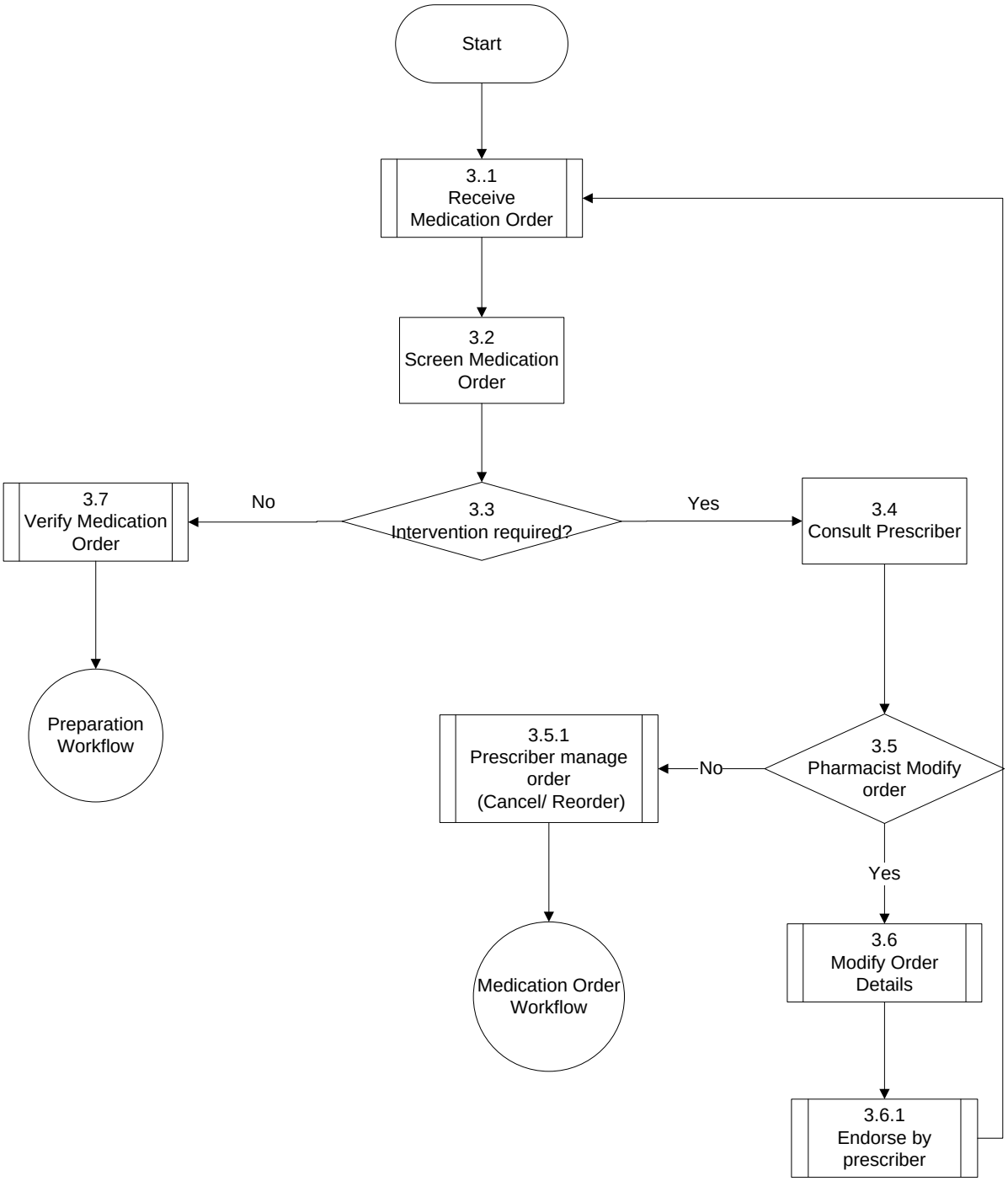
Process Workflow : Acknowledgement of Patient



Procedure II: Screening and Verification of Prescription

No	Procedure Name : Screening and Verification of Prescription	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive medication order	Pharmacist/ Pharmacist Aassistant	
3.2	Screen the medication order for the selected patient.	Pharmacist/ Pharmacist Assistant	• Medication order
3.3	Determine whether intervention is required. If yes, proceed to step 3.4. If no, proceed to step 3.7.	Pharmacist/ Pharmacist Assistant	
3.4	Consult the prescriber to clarify on the intervention.	Pharmacist/ Pharmacist Assistant	•
3.5	Determine if the pharmacist is allowed to modify/amend the medication order after consulting the prescriber. If yes, proceed to step 3.6. If no, inform the prescriber to cancel the current order and create new medication order.	Pharmacist/ Pharmacist Assistant	• Intervention report • Enquiry form
3.6	Pharmacist modifies the medication order accordingly after verbal consent from by prescriber. 3.6.1 Contact the prescriber for endorsement.	Pharmacist	
3.7	Verify the medication order	Pharmacist/ Pharmacist Assistant	

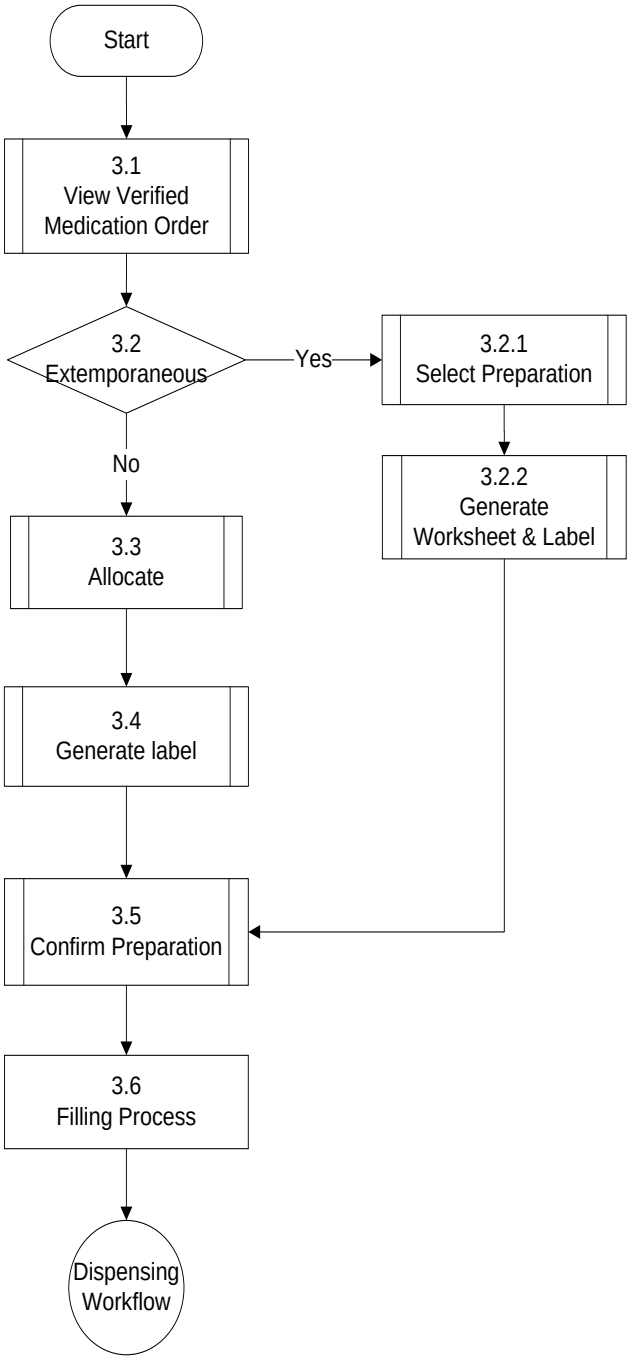
Process Workflow : Screening and Verification of Prescription



Procedure III: Preparation of Prescription

No	Procedure Name : Preparation of Prescription	Responsibility	Remarks/ Data/ Document/ etc.
3.1	View verified medication order	Pharmacist/ Pharmacist Assistant	
3.2	Determine if the medication order has extemporaneous preparation. If yes, proceed to step 3.2.1 If no, proceed to step 3.3 3.2.1 Select the preparation 3.2.2 Generate worksheet and label	Pharmacist/ Pharmacist Assistant	• Extemporaneous Worksheet • Label
3.3	Allocate the quantity of medication to be supplied.	Pharmacist/ Pharmacist Assistant	
3.4	Generate label for the medications	Pharmacist/ Pharmacist Assistant	• Label
3.5	Confirm the preparation activity	Pharmacist/ Pharmacist Assistant	
3.6	Fill the medication based on the medication labels or prescription or balance medication sheet and proceed to dispensing workflow.	Pharmacist/ Pharmacist Assistant	• Medication label • Prescription • Balance Medication Sheet

Process Workflow : Preparation of Prescription

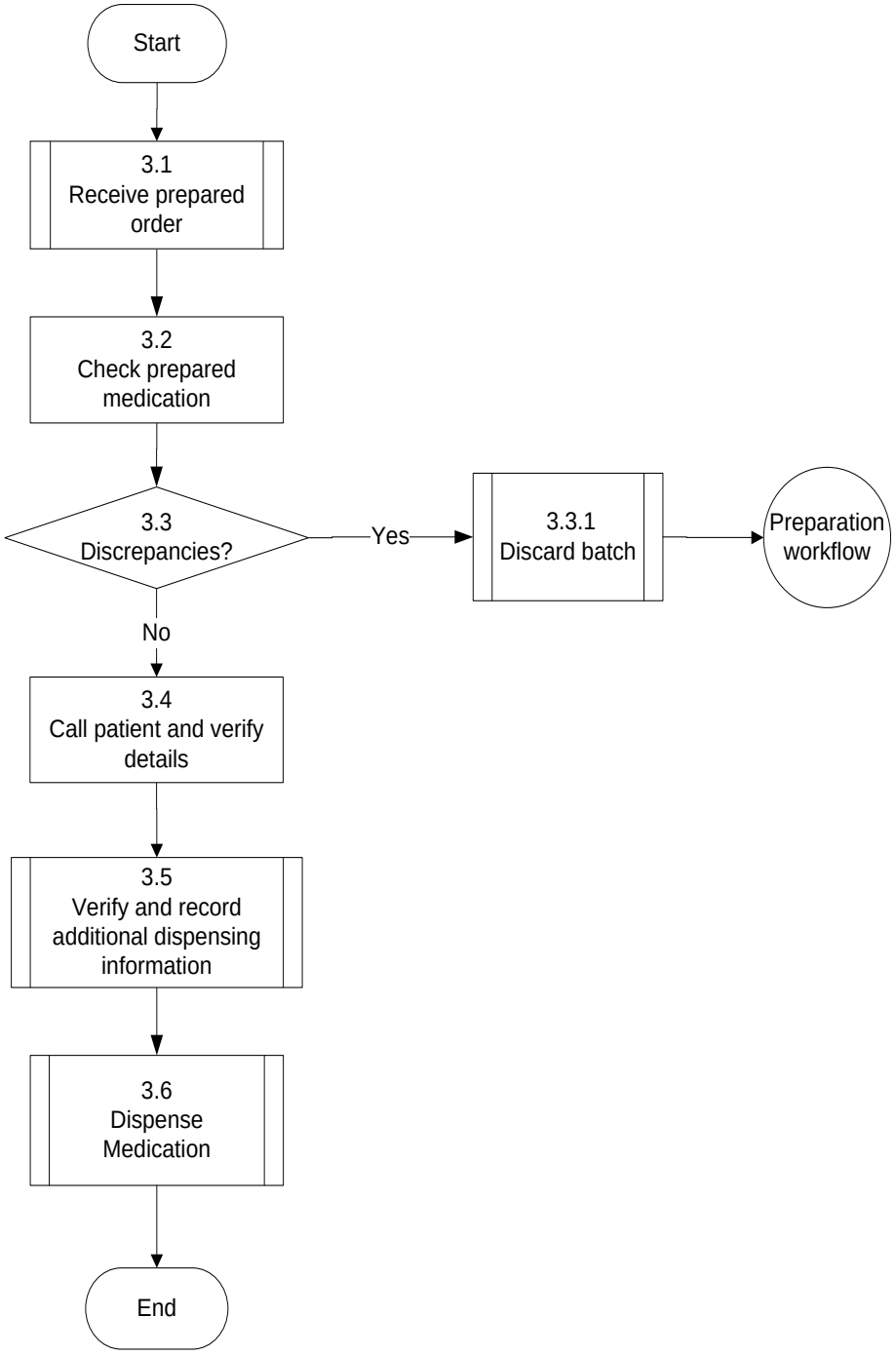


Procedure IV: Dispensing of Medicines to Patient

- This procedure is applicable at the out-patient setting, discharged patient (including bed side dispensing).

No	Procedure Name : Dispensing of Medicines to Patient	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive prepared order	Pharmacist/ Pharmacist Assistant	
3.2	Check the prepared medications against medication order/ prescription.	Pharmacist/ Pharmacist Assistant	• Medication order • Online report (ME) • Online report (QAP 1A & 1B)
3.3	Check if there is any discrepancies between medication order and the medication prepared. 3.3.1 If yes, discard the batch and send the medication back to filling counter to make correction. If no, proceed to step 3.4	Pharmacist/ Pharmacist Assistant	
3.4	Call the patient. Verify the patient details.	Pharmacist/ Pharmacist Assistant	• Online report (KPI waiting time)
3.5	Verify and record additional dispensing information	Pharmacist/ Pharmacist Assistant	
3.6	Dispense the medication to the patient.	Pharmacist/ Pharmacist Assistant	• Balance medication sheet • VAS appointment card • Prescription

Process Workflow : Dispensing of Medicines to Patient



Procedure V : Generate & Dispense Fill List

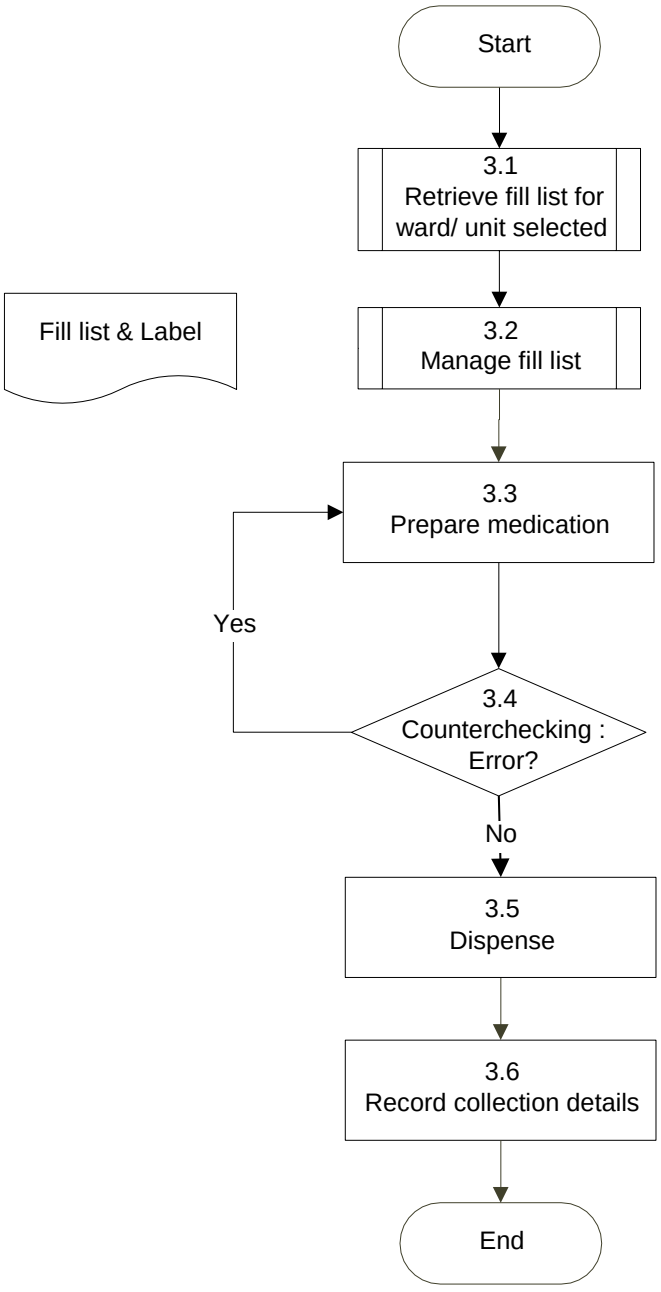
- Fill list for multiple prescription shall be generated at the in-patients for unit of use or unit of dose supply.

- The maximum period for supply of any medication shall not exceed a period of one week. Further supply shall be made after review.

- Duration of supply of unauthorised prescription shall be determined by the local policy.

No	Procedure Name : Generate & Dispense Fill List	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Retrieve fill list for selected ward for selected duration of supply.	Pharmacist/ Pharmacist Assistant	
3.2	Manage the fill list. Print the fill list and medication label (in necessary)	Pharmacist/ Pharmacist Assistant	
3.3	Determine the duration of supply for the medication order. Prepare the medication (Unit of Use: UoU or Unit Dose: UD).	Pharmacist/ Pharmacist Assistant	• Balance medication sheet • Medication order / prescription
3.4	Countercheck the filled medications for any errors. (check also patient location & patient details) If there is an error, go back to 3.3. If no error, proceed to step 3.5.	Pharmacist/ Pharmacist Assistant	
3.5	Dispense the filled medications.	Pharmacist/ Pharmacist Assistant	
3.6	Countercheck physical medication with patient list and collects the filled medications from the pharmacy. Record the receiving details and the process ends here.	Nurse/ Medical Assistant	

Process Workflow : Generate & Dispense Fill List

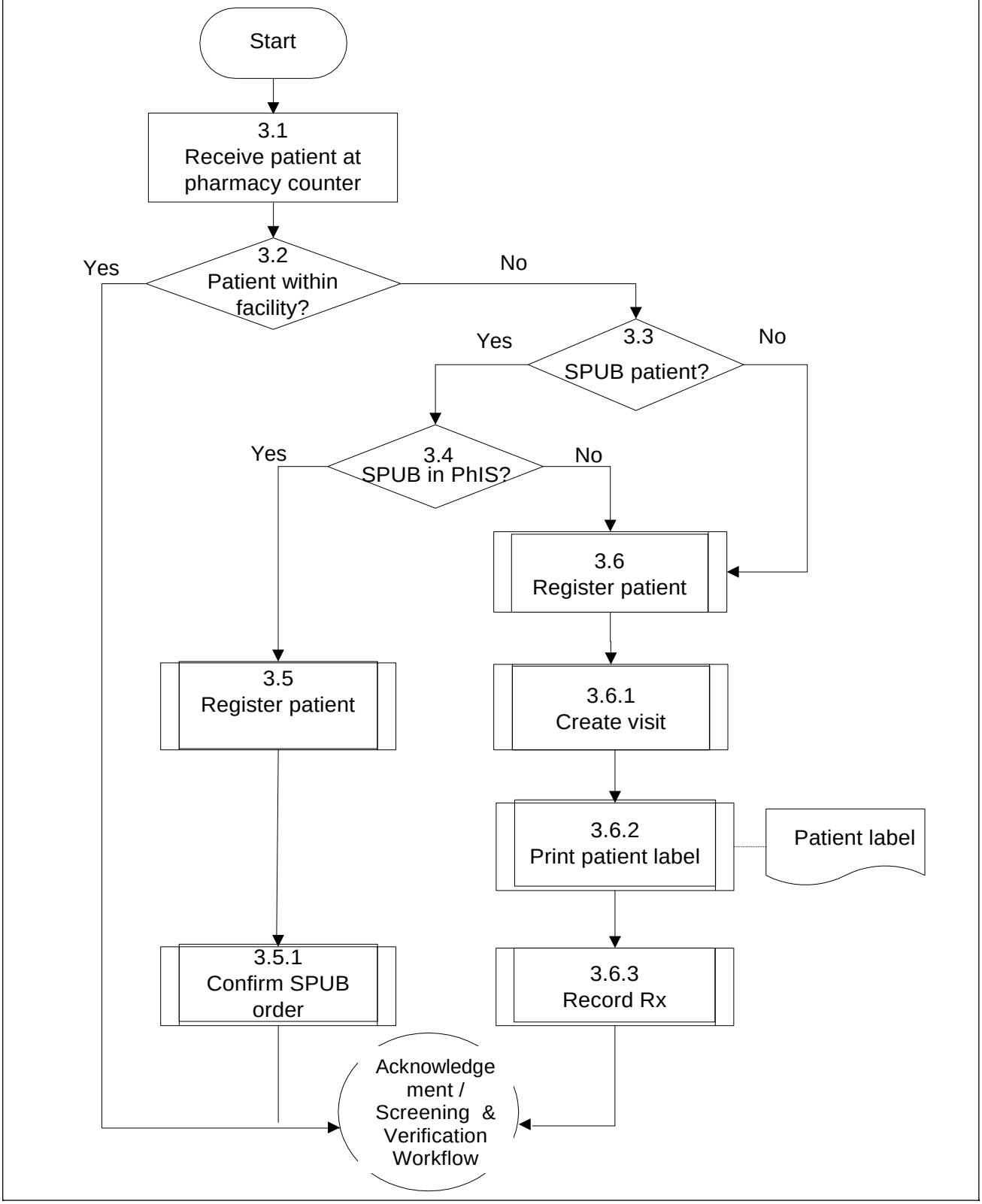


Procedure VI : Sistem Pendispensan Ubat Bersepadu (SPUB)

No	Procedure Name : Sistem Pendispensan Ubat Bersepadu (SPUB)	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive patient at the counter.	Pharmacist/ Pharmacist Assistant	
3.2	Determine whether patient brings prescription from the same facility or external facility. If prescription is from same facility, proceed to acknowledgement workflow. If prescription is from external facility, proceed to step 3.3.	Pharmacist/ Pharmacist Assistant	• Patient ID Label • New case: Patient ID • Refill: Balance Medication Sheet • Other MOH Health Care Facilities: SPUB R1 Form or patient's prescription
3.3	Determine if the patient is a SPUB patient. If yes, proceed to step 3.4. If no, patient is considered walk in, proceed to step 3.6.	Pharmacist/ Pharmacist Assistant	▪ Identification Card ▪ Valid prescription (from MOH facility only and within the duration of supply) ▪ SPUB R1 Form
3.4	Check if SPUB R1 form available in the system at the main menu If yes, proceed to step 3.5 If no, proceed to step 3.6	Pharmacist/ Pharmacist Assistant	• Online SPUB R1 Form
3.5	Register SPUB patient from SPUB Notification list. SPUB visit auto created and SPUB online order auto retrieved as draft at normal order screen. 3.5.1 Confirm the SPUB medication order and proceed to Acknowledgement/ Screening & Verification workflow.	Pharmacist/ Pharmacist Assistant	• SPUB R1 Form

No	Procedure Name : Sistem Pendispensan Ubat Bersepadu (SPUB)	Responsibility	Remarks/ Data/ Document/ etc.
3.6	Register the patient in the system at the Pharmacy counter for walk-in patients and offline SPUB cases. All necessary details are entered into the system and patient is given a unique MRN number. 3.6.1 Create visit for the patient as Walk- in/ SPUB. 3.6.2 Print patient's identification label. 3.6.3 Key-in (Record) the manual prescription details into the system before proceeding to Acknowledgement/ Screening & Verification workflow.	Pharmacist/ Pharmacist Assistant	• Identification Card • Patient Identification Label • Valid prescription/ BMS (from MOH facility only and within the duration of supply) • SPUB R1 Form

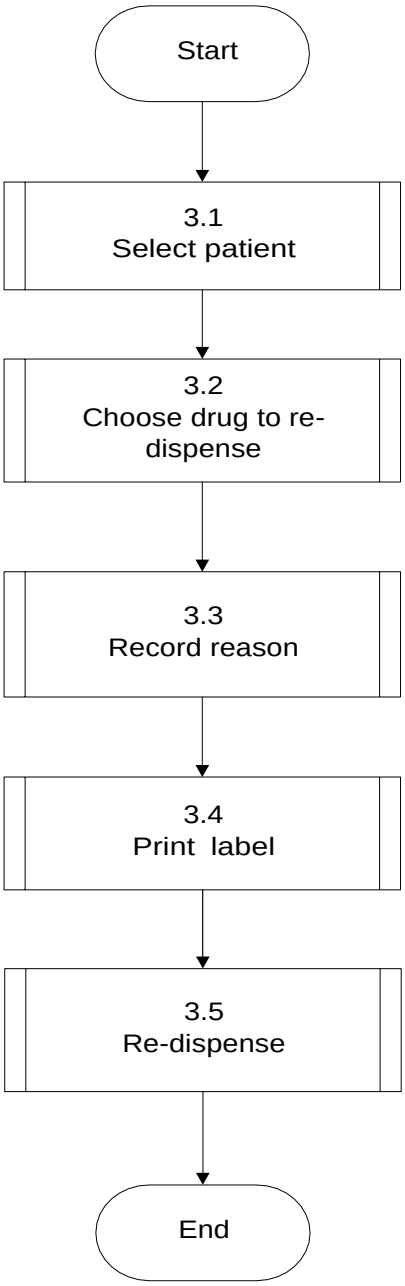
Process Workflow : Sistem Pendispensan Ubat Bersepadu (SPUB)



Procedure VII : Re-dispensing of a prescription

No	Procedure Name : Re-dispensing of a prescription	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Select patient from listing page.	Pharmacist/ Pharmacist Assistant	
3.2	Choose the drug that need to be re-dispensed.	Pharmacist/ Pharmacist Assistant	Balance medication sheet/ Prescription if available
3.3	Record the reason	Pharmacist/ Pharmacist Assistant	
3.4	Print the medication label	Pharmacist/ Pharmacist Assistant t	Medication Label
3.5	Re-dispense the medication to the patient and the process ends here.	Pharmacist/ Pharmacist Assistant	

Process Workflow : Re-dispensing of a prescription



SECTION 4: SUPPLY OF MEDICATION TO UNIT /WARD/COUNTER

1.0 OBJECTIVE

This procedure applies for the management of medication supply that is kept as stock at the wards or units.

2.0 POLICY

2.1 Unit catalogue (items and quantity of ward/unit/counter stock) shall be maintained and reviewed by both supplying unit and users from time to time.

2.2 Authorised personnel is responsible to check, update and maintained the stock level to ensure the stock are available at all time

2.3 Authorised personnel shall update the usage of ward/unit stock immediately or on routine basis defined at local level

2.4 Details of prescription have to be recorded to control the usage whenever the ward/unit stock is used. This recording is mandatory for controlled items defined at local level.

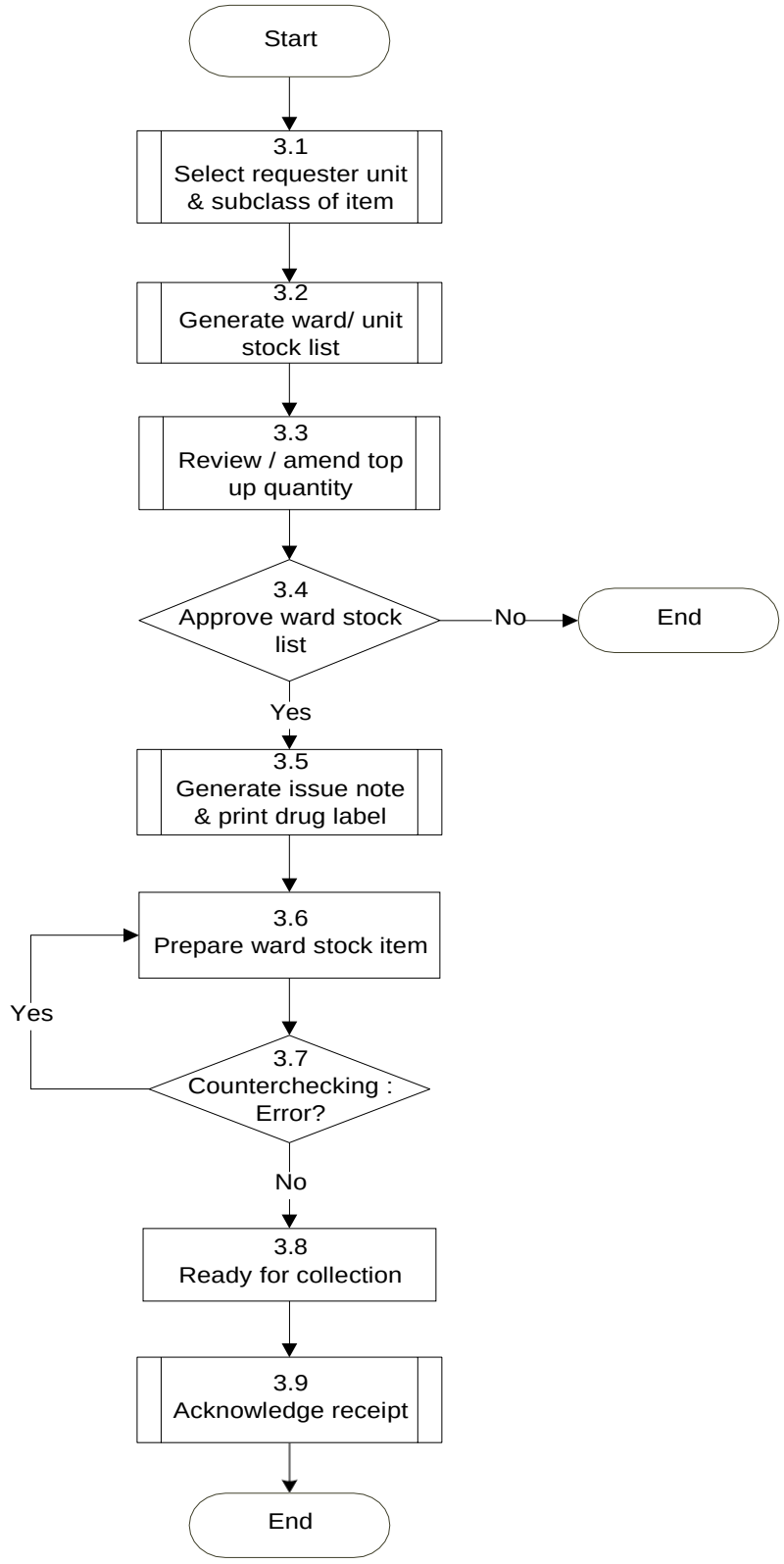
2.5 Checking and supply of unit/ward stock shall be scheduled based on local policy. Replenishing the unit/ward stock (drugs only) shall be done on 'top up' basis (no indent required) for drugs only.

3.0 PROCEDURE AND PROCESS WORKFLOW

No	Procedure Name : Supply of medication to unit/ward/counter (Stock Replenish)	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Record details of the item that needs to be supplied to the requesting unit.	Pharmacist/ Pharmacist Assistant	
3.2	Generate ward stock order for respective unit.	Pharmacist/ Pharmacist Assistant	Unit catalogue

No	Procedure Name : Supply of medication to unit/ ward/counter (Stock Replenish)	Responsibility	Remarks/ Data/ Document/ etc.
3.3	Review the top up quantity for medications requested by wards and amend the quantity if necessary.	Pharmacist/ Pharmacist Assistant	
3.4	Approve the ward stock list. If approved, proceed to step 3.5. If rejected, the process ends here.	Pharmacist/ Pharmacist Assistant	
3.5	Generate the issue note and print the medication label if necessary.	Pharmacist (Psychotropic) Pharmacist Assistant (Normal items)	Issue note Medication label
3.6	Prepare the medications according to the issue note and label all the medications accordingly.	Pharmacist (Psychotropic) Pharmacist Assistant (Normal items)	Issue note Medication label
3.7	Countercheck the prepared medication for any errors. If there is an error, go back to 3.6. If no, proceed to step 3.8. Discrepancy pertaining to wrongly filled medication orders shall be appropriately documented.	Pharmacist (Psychotropic) Pharmacist Assistant (Normal items)	Issue note
3.8	The medication prepared is ready for collection by authorised personnel from unit/ward.	Nurse / Medical Asisstant	
3.9	Stock received are counterchecked and acknowledged by the receiving personnel.	Nurse / Medical Asisstant	

Process Workflow : Supply of medication to unit/ ward/counter (Stock Replenish)



SECTION 5: WARD PHARMACY - MONITORING OF PHARMACOTHERAPY

1.0 OBJECTIVE

To provide the general process of pharmacotherapy monitoring in the ward to ensure continuing care for optimal medication management and increase patient adherence to medications

3 POLICY

2.1 Pharmacist performing clinical pharmacy function shall make entries into the pharmacist note as and when necessary during all relevant clinical pharmacy interventional activities.

2.2 Pharmacist shall document all medication monitoring activities in the system.

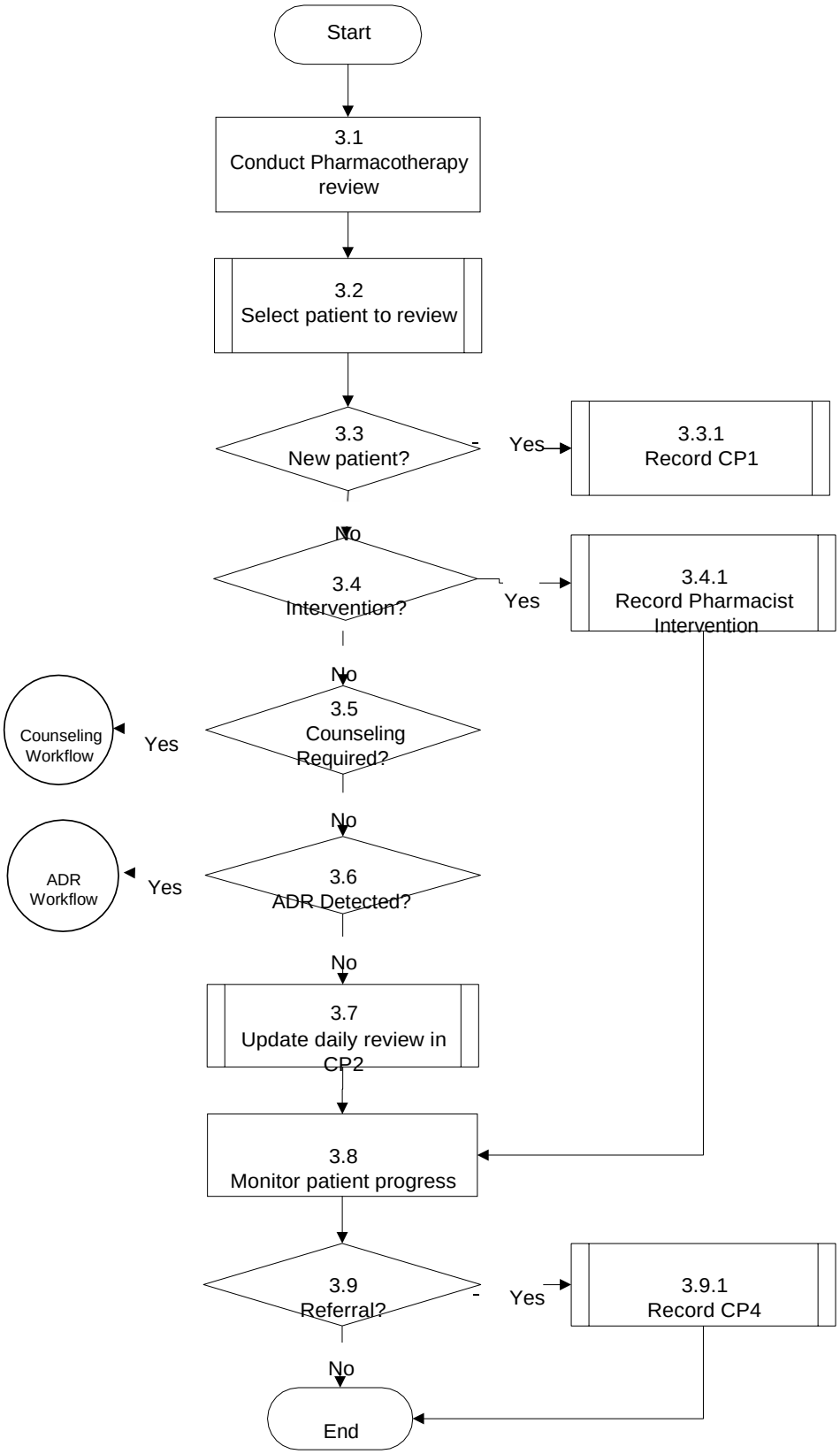
3.0 PROCEDURE AND PROCESS WORKFLOW

No	Procedure Name : Monitoring of Pharmacotherapy	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Select patient to review	Pharmacist	
3.2	Determine if the patient is new 3.2.1 If Yes, record medication history assessment (CP1) If No, proceed to step 3.4	Pharmacist	CP1
3.3	To carry out pharmacotherapy review 3.3.1 If yes, record CP2	Pharmacist	CP2 (Daily review Lab parameter Vital sign I/O chart C & S)

3.4	Determine if pharmacotherapy requires intervention. Communicate and inform the care provider regarding the discoveries of probable discrepancies that require intervention. Discuss with care providers and make appropriate recommendation. 3.4.1 If Yes, do the intervention and record findings in system If No, proceed to step 3.5	Pharmacist	Pharmaceutical care issue

No	Procedure Name : Monitoring of Pharmacotherapy	Responsibility	Remarks/ Data/ Document/ etc.
3.5	Determine if patient requires medication counselling. If yes, proceed to step Counselling Workflow If no, proceed to step 3.6	Pharmacist	Medication Counselling
3.6	Identify for any Adverse Drug Reaction detected during the treatment If yes, proceed to step ADR Workflow If no, proceed to step 3.7	Pharmacist	ADR Reporting
3.7	Determine if patient need to be referred to other facility for follow up. If yes, fill in CP4 3.7.1 If no, process ends here	Pharmacist	CP 4

Process Workflow : Monitoring of Pharmacotherapy



SECTION 6: MEDICATION ADMINISTR ATION FOR IN-PATIENTS

1.0 OBJECTIVE

This process is to ensure the right medications are administered to the right patient, with the right dose and at the right time.

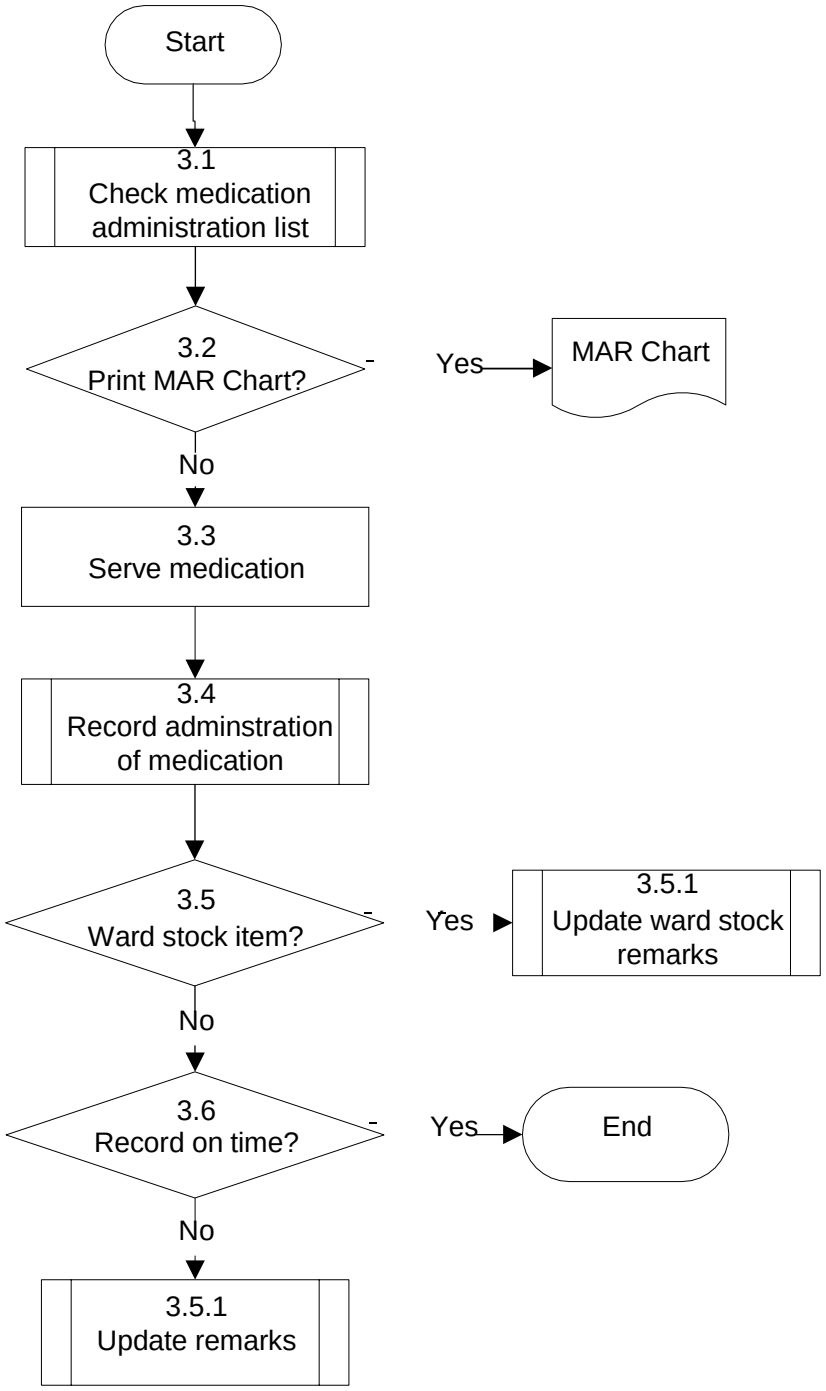
2.0 POLICY

2.1 Medication shall be administered only at the order from the facility registered prescriber.

3.0 PROCEDURE AND PROCESS WORKFLOW

No.	Procedure Name : Medication Administration For In Patient	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Check medication administration list for any changes to the prescription (dose change or stop or hold)	Staff nurse	Bed Head Ticket.
3.2	Print medication administration record chart if necessary	Staff nurse	MAR Chart
3.3	Serve medication to patient manually	Staff nurse	
3.4	Record administration of medication to patient. Recording can be done half an hour before and 1 hour post serving time Witness need to verify the process.	Staff nurse	
3.5	Determine if item is ward stock 3.5.1. If Yes, update ward stock remarks. Stock will be depleted accordingly If No, proceed to step 3.6	Staff nurse	
3.6	Reason for delayed charting shall be recorded if it is done outside the allowable buffer time.	Staff nurse	

Process Workflow : Medication Administration For In Patient



SECTION 7: MANAGEMENT OF CLINICAL PHARMACOKINETIC SERVICE

1.0 OBJECTIVE

This procedure is applicable to all Therapeutic Drug Monitoring (TDM) cases analysed by pharmacy department. The medications included in this procedure are:

- Aminoglycoside: Gentamicin & Amikacin
- Vancomycin
- Anticonvulsant: Valproic Acid, Carbamazepine, Phenytoin
- Phenobarbitone
- Theophylline
- Digoxin
- Paracetamol
- Others

2.0 POLICY

2.1 Authorised personnel shall be allowed to place, amend or cancel TDM order.

2.2 Pharmacist shall be allowed to verify all internal or external TDM orders, interpret the TDM result and provide recommendation accordingly.

2.3 Authorised personnel shall acknowledge the verified order or any amendment made.

2.4 Result for toxic cases shall be interpreted and recommendation for treatment given by the pharmacist before being made accessible to prescribers.

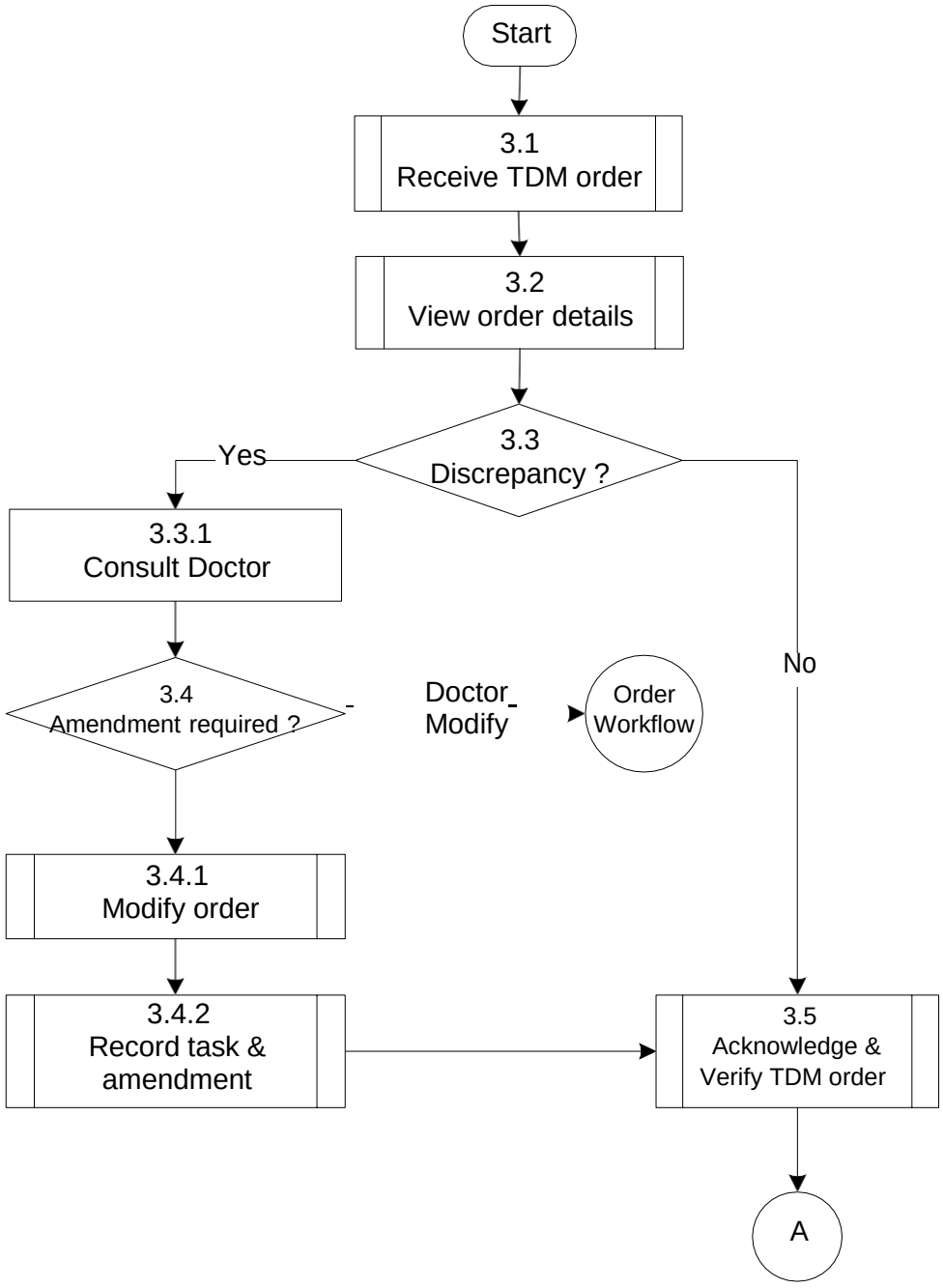
3.0 PROCESS WORKFLOW AND PROCEDURE

Procedure I : Screening and Verification of Order

No	Procedure Name : Screening and Verification of Order	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive TDM order	Pharmacist	
3.2	Create TDM order	Medical Officer	
3.3	View order details	Pharmacist	
3.4	Check for any discrepancies (time of order, type of drug to test and time of blood taking) If yes, proceed to step 3.3.1 to consult with prescriber Then proceed to step 3.4 If no proceed to step 3.5	Pharmacist	TDM Guideline / Protocol

No	Procedure Name : Screening and Verification of Order	Responsibility	Remarks/ Data/ Document/ etc.
3.5	Determine if amendment required. If pharmacist to do the amendment, proceed to step 3.4.1 to modify order 3.4.2 Record task and amendment. Then proceed to step 3.5 If prescriber need to do the amendment, proceed to step TDM Manage Order Workflow	Pharmacist	
3.6	Verify TDM order	Pharmacist	

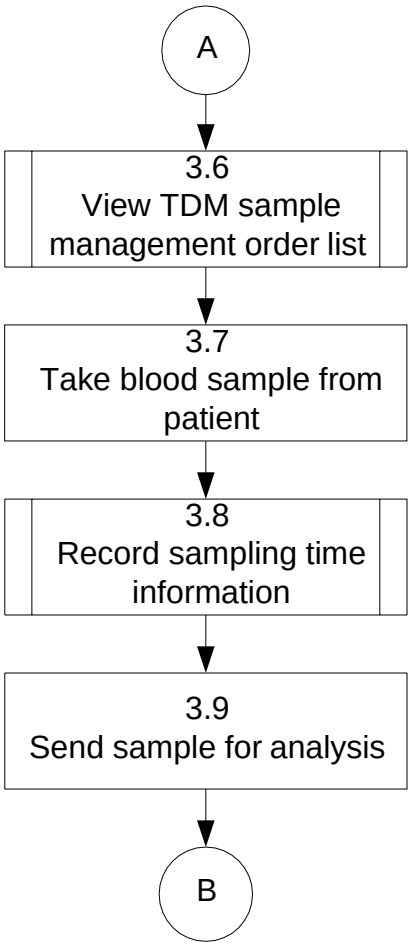
Process Workflow : Screening and Verification of Order



Procedure II : Sample Management

No	Procedure Name : Sample Management (Ward)	Responsibility	Remarks/ Data/ Document/ etc.
3.6	View TDM sample order management list	Nurse/ Authorised Personnel	
3.7	Take blood sample from patient	Nurse/ Authorised Personnel	
3.8	Record drug administration and sampling time information	Nurse/ Authorised Personnel	
3.9	Send sample to TDM Laboratory (Pathology or Pharmacy)	Nurse/ Authorised Personnel	

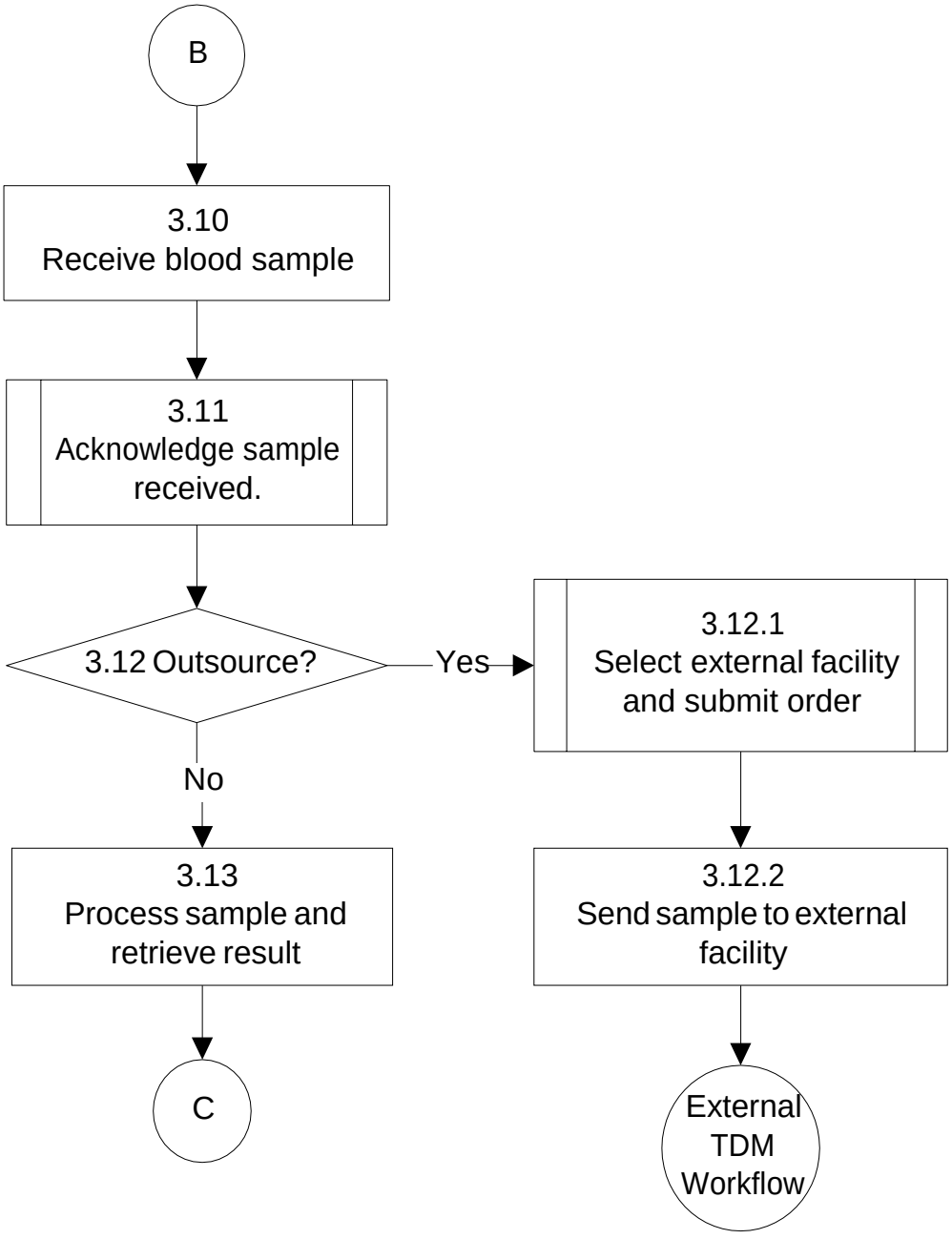
Process Workflow : Sample Management (Ward)



Procedure III : Sample Processing

No.	Procedure Name : Sample Processing	Responsibility	Remarks/ Data/ Document/ etc.
3.10	Receive blood sample	Pharmacist/ Pharmacist Assistant	
3.11	Acknowledge sample received	Pharmacist/ Pharmacist Assistant/	
3.12	Decide if sample to be outsourced If Yes, proceed to : step 3.12.1 - Select facility and submit order step 3.12.2 - Send sample to facility If No, proceed to step 3.13	Pharmacist/ Pharmacist Assistant/	
3.13	Process the sample and retrieve result	Pharmacist/ Pharmacist Assistant	

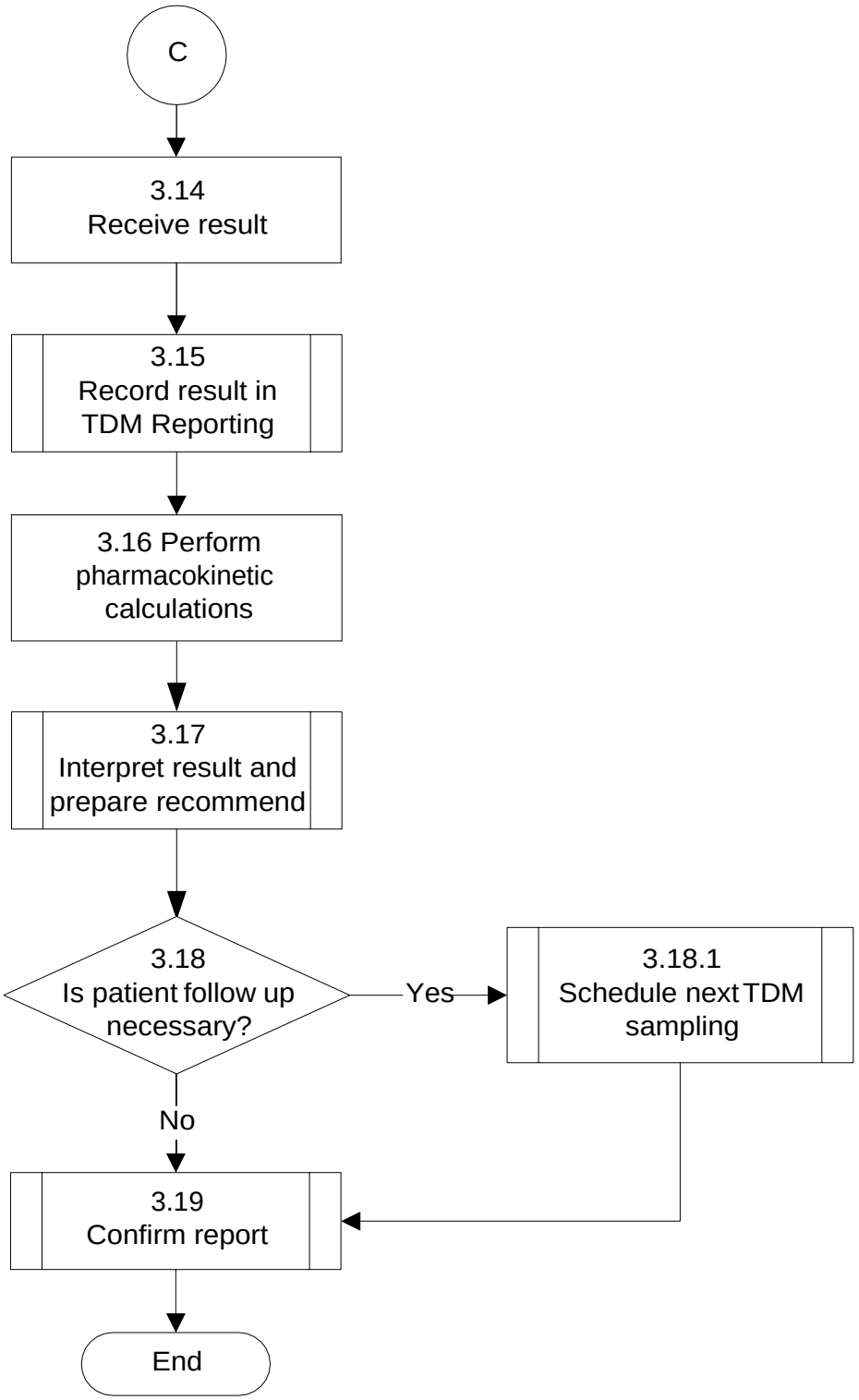
Process Workflow : Sample Processing



Procedure IV : Reporting of Result

No	Procedure Name : Reporting of Result	Responsibility	Remarks/ Data/ Document/ etc.
3.14	Receive /Read assay output (result)	Pharmacist	From TDM Analyser
3.15	Record result in TDM Reporting	Pharmacist	
3.16	Perform pharmacokinetic calculation (where applicable).	Pharmacist	
3.17	Interpret result and report recommendation	Pharmacist	
3.18	Determine if patient requires follow up testing. 3.18.1 Schedule the next sampling.	Pharmacist	
3.19	Confirm TDM report	Pharmacist	

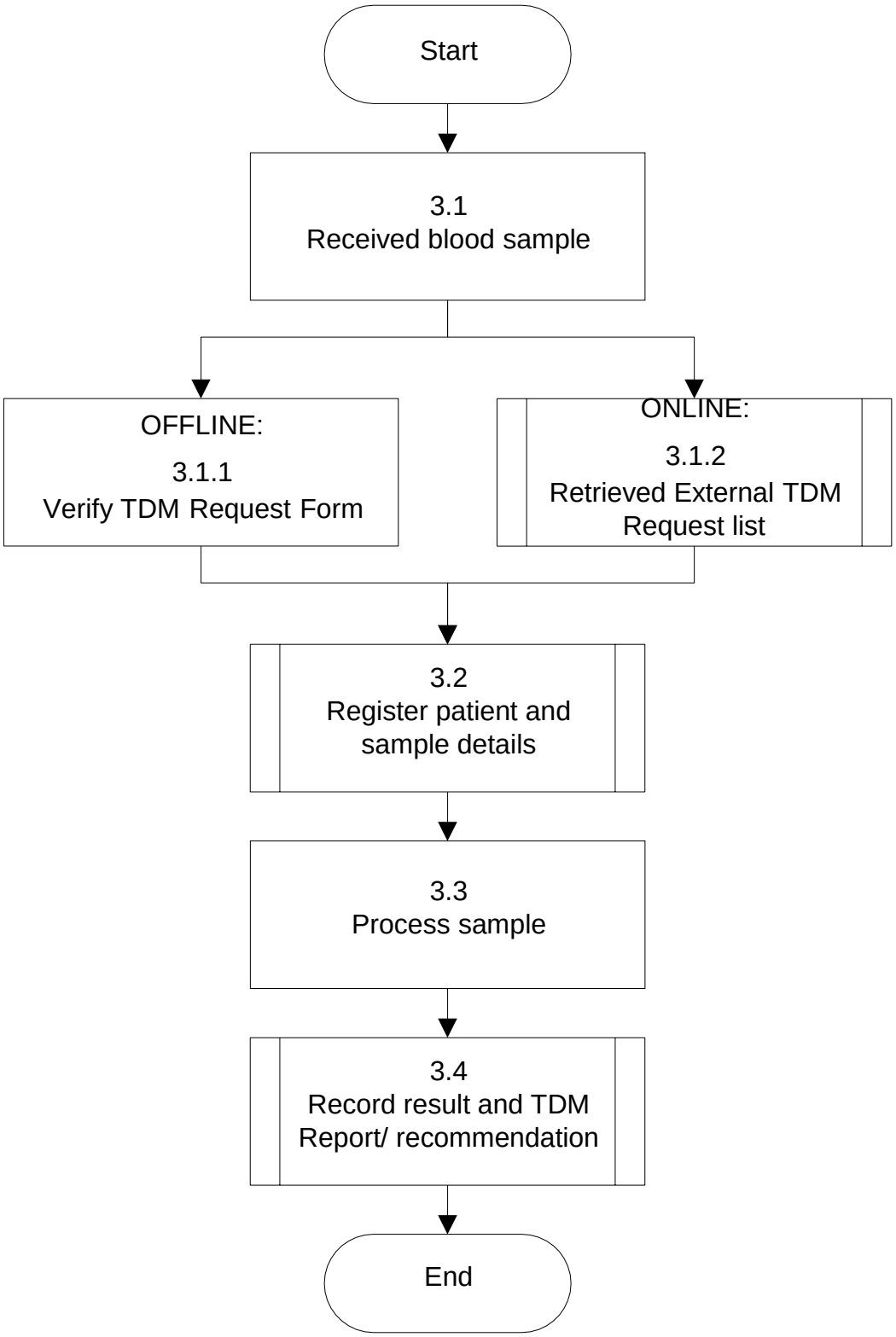
Process Workflow : Reporting of Result



Procedure V : Management of External TDM Order

No.	Procedure Name : TDM External Order	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive blood sample from external facility Offline: 3.1.1 Verify TDM request form and sample Online: 3.1.2 Retrieved external TDM request list and check with sample received	Pharmacist / Pharmacist Assistant	
3.2	Register patient and sample details	Pharmacist / Pharmacist Assistant	
3.3	Process sample	Pharmacist / Pharmacist Assistant	
3.4	Record result and comments	Pharmacist	

Process Workflow : TDM External Order



SECTION 8: MEDICATION COUNSELING

1.0 OBJECTIVE

This procedure is applicable for group or individual counselling conducted by the pharmacy staff at the Outpatient and Inpatient Pharmacy.

2.0 POLICY

2.1 Medication counselling shall be ordered by doctor or pharmacist.

2.2 Appointment for counselling follow up shall be determined by pharmacist.

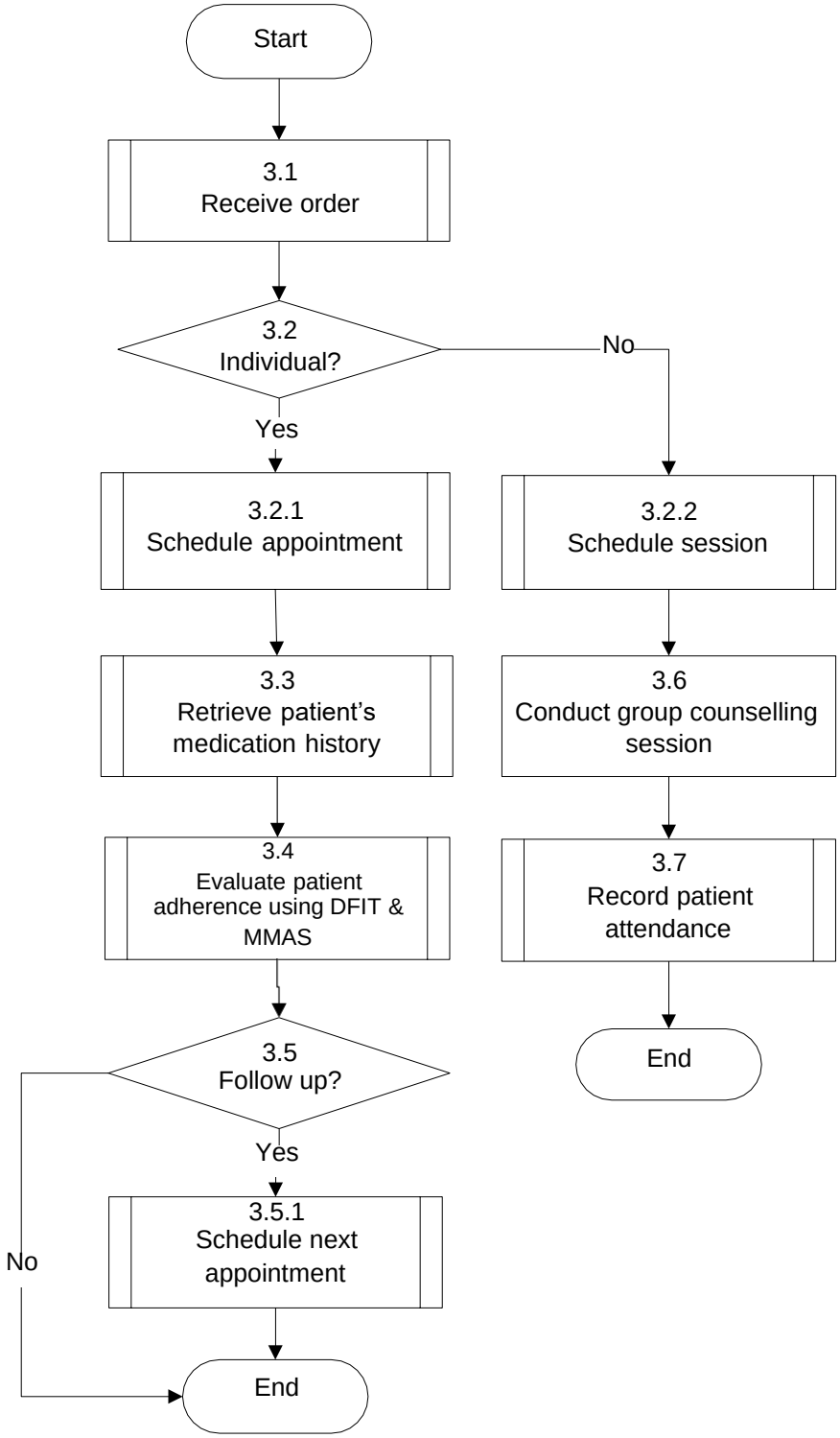
2.3 Pharmacist shall document the medication counselling records upon completion of the task.

2.4 Counselling materials such as drug leaflet and counselling guide shall be made available in the *Know Your Medicine Portal* by the headquarters

3.0 PROCEDURE AND PROCESS WORKFLOW

No.	Procedure Name : Medication Counselling	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive order	Pharmacist	
3.2	Determine if counselling is for individual. If yes, schedule an appointment (step 3.2.1) If no, schedule a session (step 3.2.2)	Pharmacist	
3.3	During individual counselling session, retrieve patient's record and medication history	Pharmacist	
3.4	Evaluate patient understanding on Drug, Frequency, Indication and Timing (DFIT) and adherence using the Morrisky Medication Adherence Scale (MMAS).	Pharmacist	
3.5	Determine if patient needs a follow up appointment. If yes, schedule next appointment date (3.5.1) If No, process ends here	Pharmacist	
3.6	Conduct group counselling session	Pharmacist	
3.7	Record group counselling patient attendance in system	Pharmacist	

Process Workflow : Medication Counselling



SECTION 9 : MANAGEMENT OF MEDICATION THERAPY A DHERENCE CLINIC (MTAC) SERVICES

1.0 OBJECTIVE

This procedure is to assist in the management of patient medicines in terms of quality, safety and effectiveness of patient care. It is applicable for order of new case of MTAC client, appointments and follow up for MTAC services in the facility.

2.0 POLICY

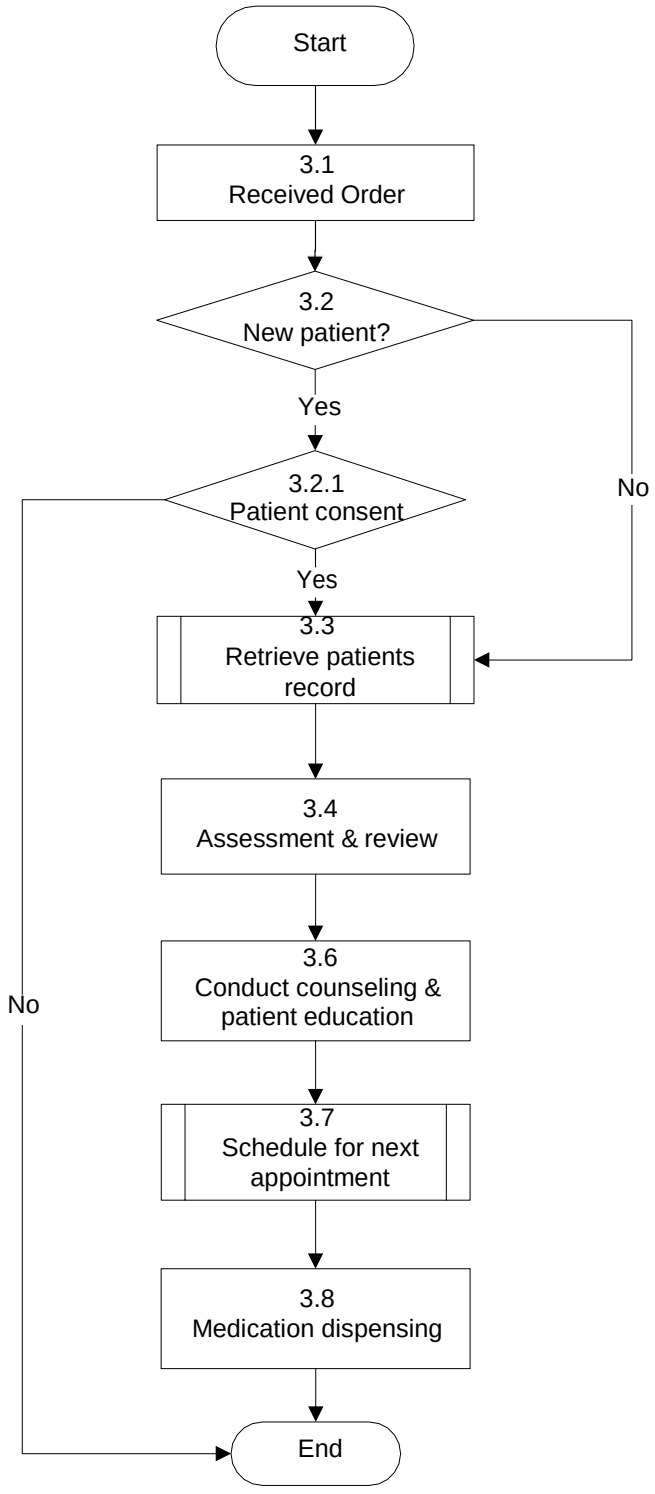
2.1 Pharmacist shall place medication order for selected MTAC services such as warfarin to continue the treatment and the order shall be endorsed by the prescriber.

2.2 Pharmacist shall document the MTAC records upon completion of task.

3.0 PROCEDURE AND PROCESS WORKFLOW

No.	Procedure Name : Management of MTAC Services	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive order	Pharmacist	
3.2	Determine if patient is new to the service. If yes, get patient consent prior to enrolment (step 3.2.1). If patient does not give consent, process ends here. If existing patient, proceed to step 3.3	Pharmacist	
3.3	Retrieve patients record and review patient medication profile	Pharmacist	Patient's record
3.4	Conduct drug knowledge assessment, compliance assessment and identify pharmaceutical care issues	Pharmacist	
3.5	Conduct counselling and patient education.	Pharmacist	
3.6	Schedule for next appointment.	Pharmacist	
3.7	Dispense medication to patient.	Pharmacist	

Process Workflow : Management of MTAC Services



SECTION 10: DRUG INFORMATION / CO NSUMER EDUCATION

1.0 OBJECTIVE

This procedure is applicable for management of enquiries received by the Pharmacy Department at Ministry of Health facility.

2.0 POLICY

2.1 Healthcare personal and public are able to send in their enquiries via all channel of communication.

2.2 The drug information portal shall be accessible to healthcare provider while the consumer education portal shall be accessible to general public.

2.3 All healthcare personnel shall be given access to place enquiries via the system and public enquiries shall be transcribed into the system by authorised personnel.

2.4 All information materials shall be uploaded by authorised personnel into the portal.

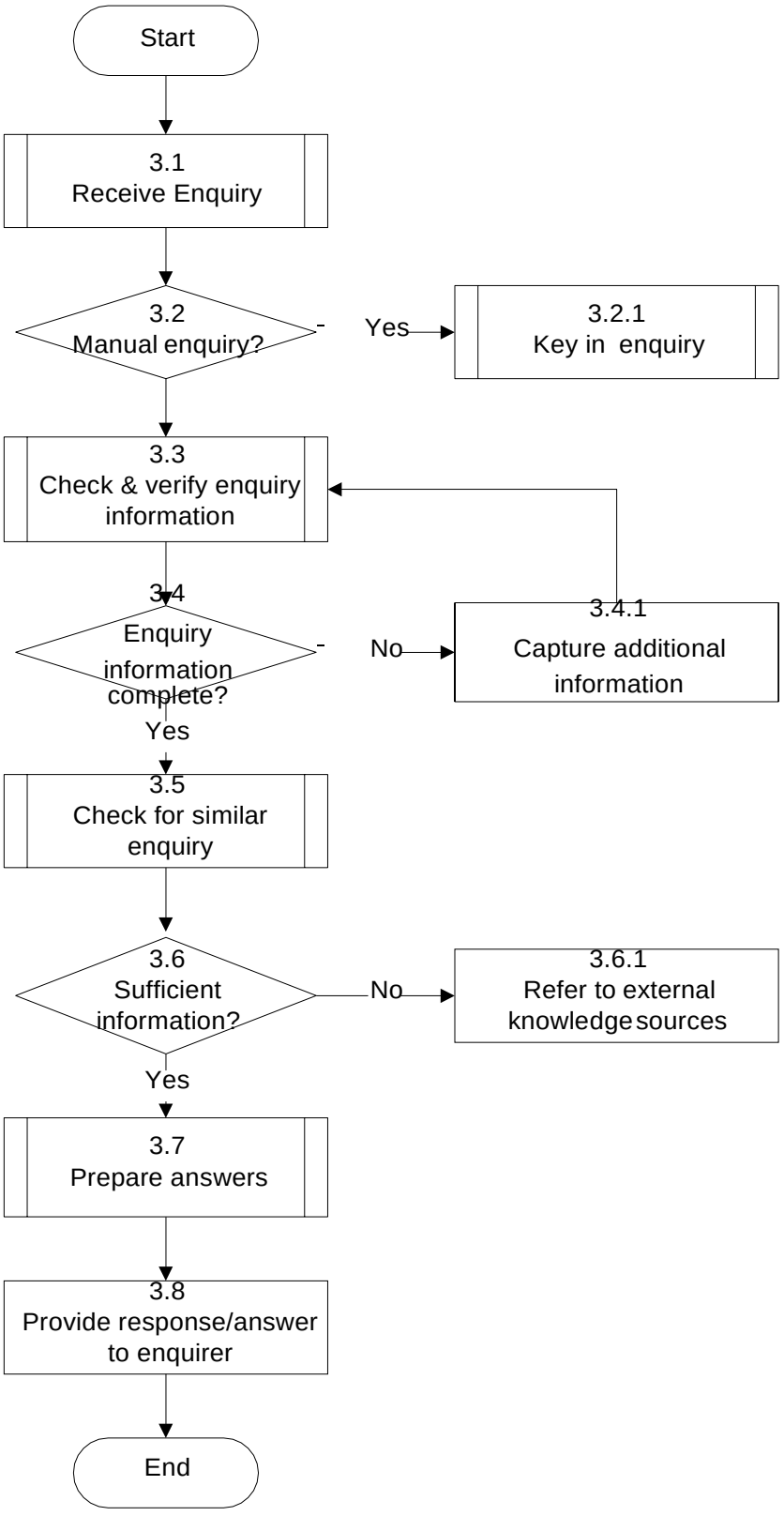
3.0 PROCEDURE AND PROCESS WORKFLOW

Procedure I. Management of enquiries

No.	Procedure Name : Management of enquiries	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive enquiry through : • Manual mode, such as verbal/walk-in/phone calls, or letter /email /fax /short messaging system, • Online (from internal facility)	Pharmacist	
3.2	If enquiry is through system, proceed to step 3.3 If it is a manual mode enquiry, key in the question (step 3.2.1)	Pharmacist	
3.3	Check and verify the information provided by the enquirer.	Pharmacist	
3.4	Determine if the information is complete. If not, ~~capture~~ obtain additional information from enquirer (step 3.4.1). If yes, proceed to step 3.5	Pharmacist	

No.	Procedure Name : Management of enquiries	Responsibility	Remarks/ Data/ Document/ etc.
3.5	Check for similar enquiry. If no similar enquiries, please refer to external knowledge sources (step 3.6.1).	Pharmacist	
3.6	Determine whether the information is sufficient. If its a yes, automated answer will be logged and response is deem final. If insufficient refer to external knowledge sources (step 3.6.1)	Pharmacist	Drug Knowledge System (MIMS,Microme dex, Lexicomp etc)
3.7	prepare answer accordingly.	Pharmacist	-
3.8	Pharmacist to verify enquiry.	Pharmacist	-
3.9	Provide response /answer to enquirer via suitable mode such as phone call, e-mail, letter, fax, SMS or direct verbal response.	Pharmacist	Data will only be captured in statistic after sending respons

Process Workflow : Management of enquiries



SECTION 11: MONITORING OF ADVERSE DRUG REACTIO N

1.0 OBJECTIVE

This procedure is applicable for reporting of all adverse drug reaction identified during patient treatment at Ministry of Health facility

2.0 POLICY

2.1 All healthcare providers shall report ADR cases. An authorised pharmacist shall investigate all ADR cases, verify and send the report to Medication Adverse Drug Reaction Committee (MADRAC).

2.2 All serious Adverse Events Following Immunization (AEFI) shall be reported within 24 hours.

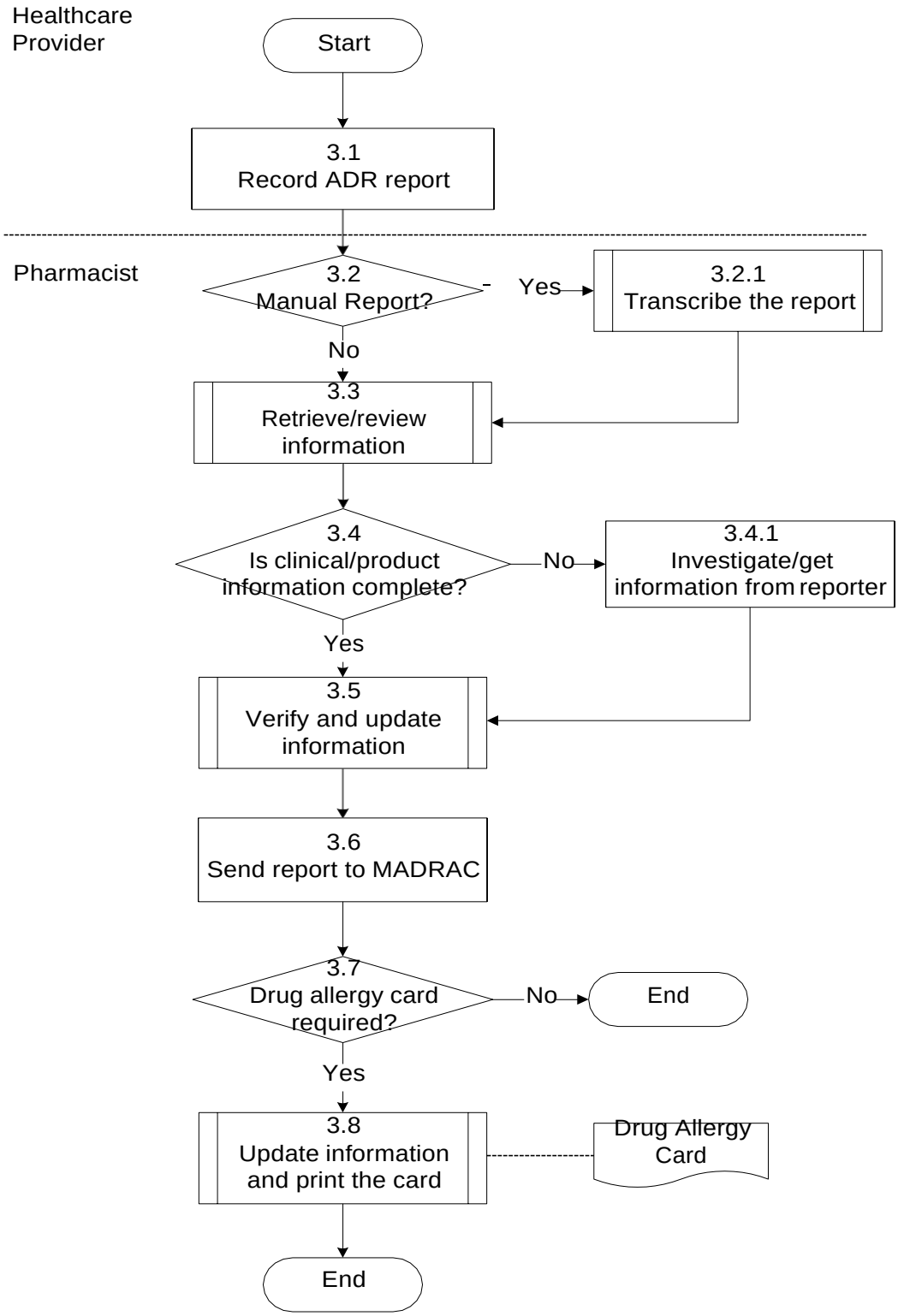
2.3 Prescriber shall record the patients' allergy status and Pharmacist shall issue the drug allergy card.

3.0 PROCEDURE AND PROCESS WORKFLOW

No.	Procedure : Monitoring of Adverse Drug Reaction	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Record Adverse Drug Reaction report	Healthcare Providers	
3.2	Determine the mode of reporting. If manual, transcribe the report (step 3.2.1) If reporting done via system, proceed to step 3.3	Pharmacist	
3.3	Retrieve or review the information	Pharmacist	
3.4	Determine if the clinical or product information is complete? If not complete, get more information from the reporter (step 3.4.1) If report is complete, proceed to step 3.5	Pharmacist	
3.5	Update information if necessary and verify the report	Pharmacist	

No.	Procedure : Monitoring of Adverse Drug Reaction	Responsibility	Remarks/ Data/ Document/ etc.
3.6	Confirm to save and send report to National Pharmacy Regulatory Agency (NPRA) manually	Pharmacist	
3.7	Determine if Drug Allergy Card (DAC) is required. If yes, proceed to step 3.8. If no, process ends here.	Pharmacist	
3.8	Update information in Drug Allergy Card (DAC) Request Sub-Module and print the card	Pharmacist	

Process Workflow : Monitoring of Adverse Drug Reaction



SECTION 12 : MANAGEMENT OF PARENTERAL NUTRITION (PN) SERVICE

1.0 OBJECTIVE

This process is applicable for preparation of Parenteral Nutrition products after receiving the order from prescriber. The PN products comprise of:

i. Commercially available products
ii. Commercially available product with additional components added by pharmacy
iii. Compounded parenteral nutrition preparations for neonates, paediatrics and adults.

2.0 POLICY

2.1 Pharmacist shall be allowed to generate, modify worksheets and labels of Parenteral Nutrition.

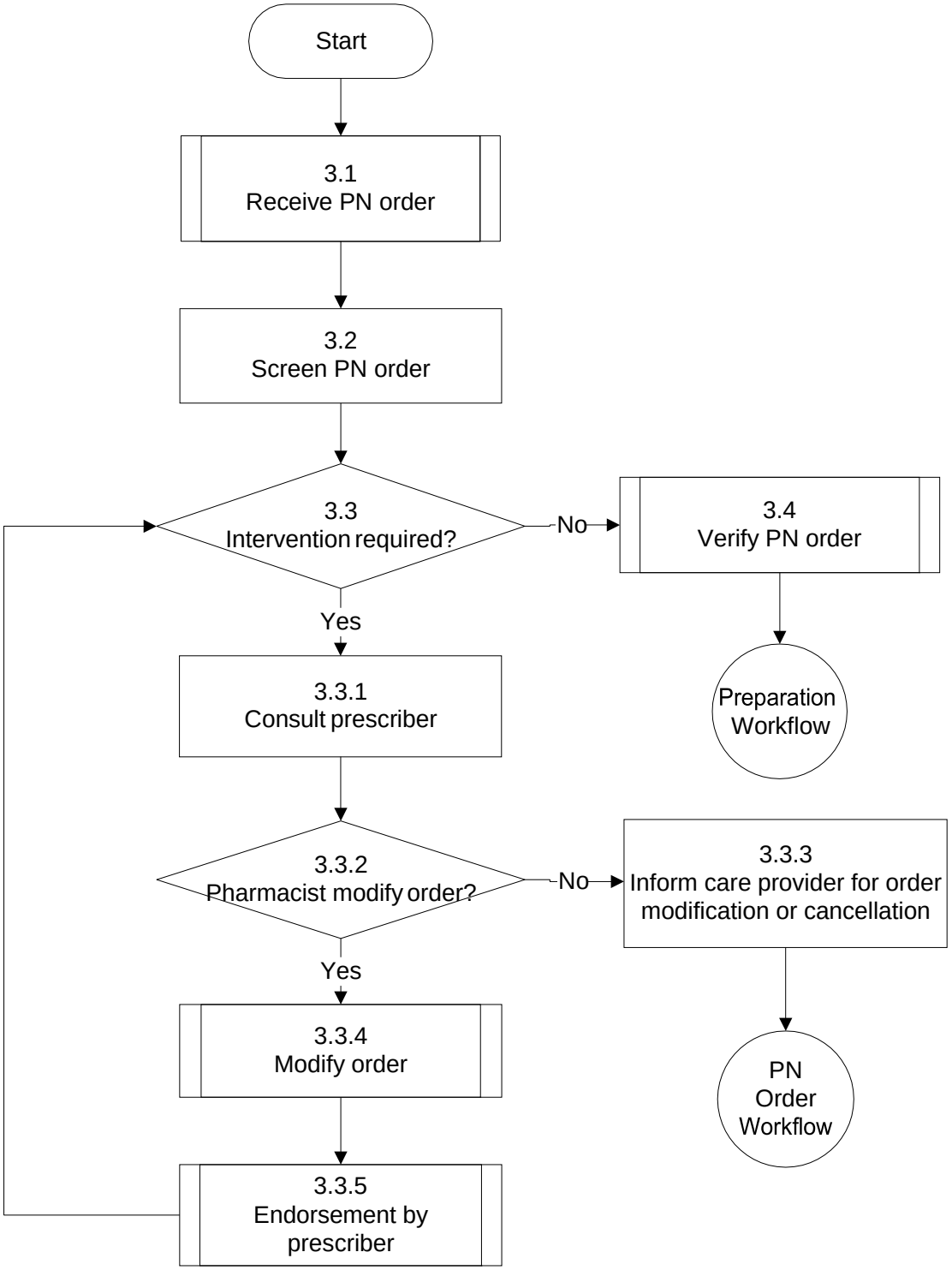
2.1 Work sheets of preparations shall be documented in the system and the hard copy shall be generated as per local policy.

3.0 PROCEDURE AND PROCESS WORKFLOW

Procedure I : Screening and Verification of Order

No	Procedure Name : Screening and Verification of Order	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive PN order	Pharmacist	
3.2	Screen PN order for any errors	Pharmacist	
3.3	Determine if the order needs intervention 3.3.1 If yes, consult prescriber for confirmation If no, proceed to 3.4, verify medication order. Determine if pharmacist can modify order 3.3.2. If no, inform prescriber to create new order, cancel or modify the order. 3.3.3. If yes pharmacist modifies the order 3.4.3. Prescriber will endorse the modified order	Pharmacist Prescriber	TPN Guidelines/ Protocol
3.4	Verify medication order	Pharmacist	

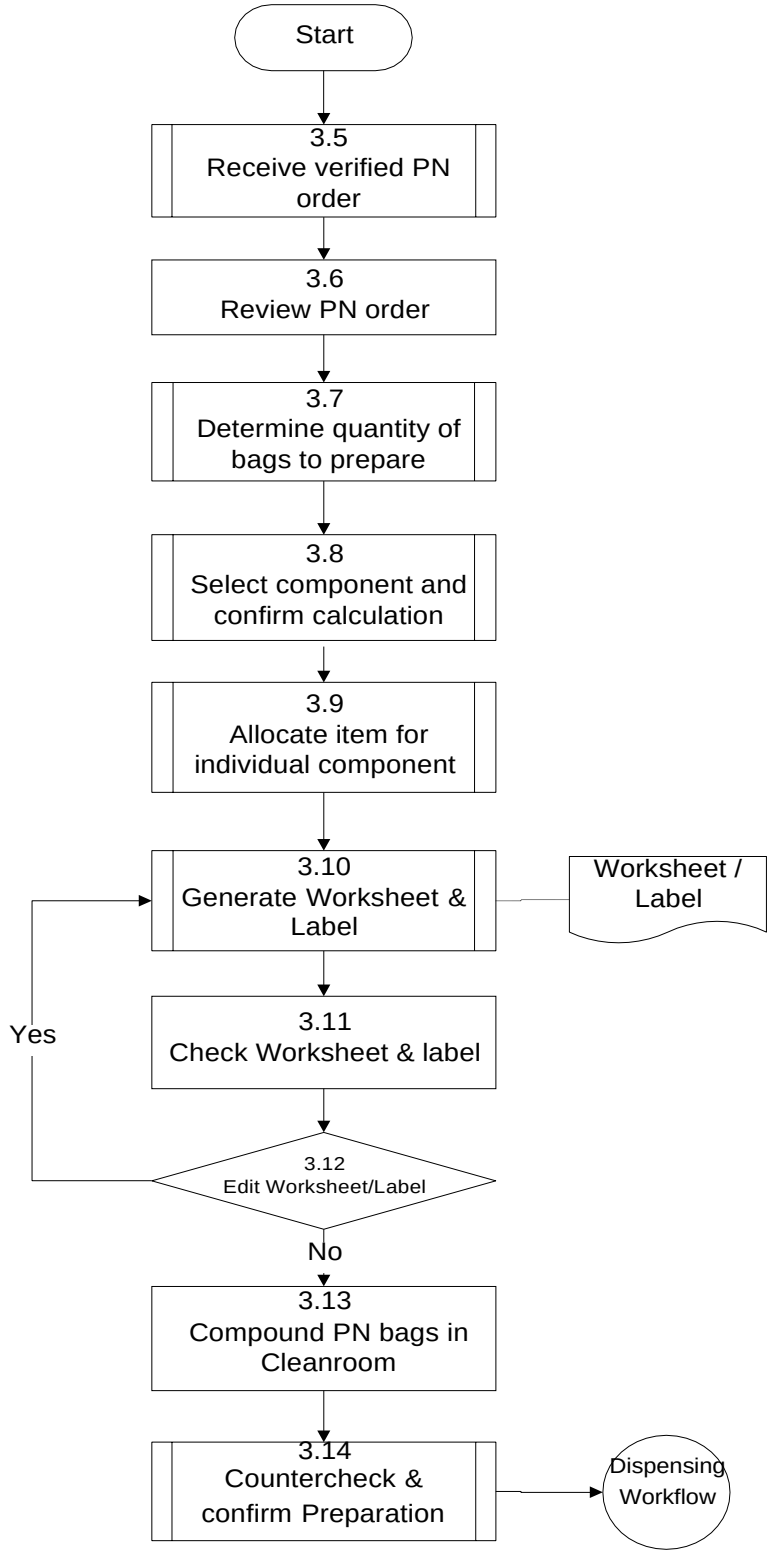
Process Workflow : Screening and Verification



Procedure II : Preparation of Parenteral Nutrition

No	Procedure Name : Preparation of Parenteral Nutrition	Responsibility	Remarks/ Data/ Document/ etc.
3.5	Received verified PN order	Pharmacist/	
3.6	Review PN Order	Pharmacist/	
3.7	Determine quantity of bag to produce.	Pharmacist/	
3.8	Select component and confirm calculation.	Pharmacist/	
3.9	Allocate item for individual component	Pharmacist/ Pharmacist Assistant	
3.10	Generate Worksheet & Label	Pharmacist/ Pharmacist Assistant	
3.11	Check worksheet and label.	Pharmacist/ Pharmacist Assistant	
3.12	Determine if there is a need to edit worksheet and label. If yes, go back to step 3.10. If no, proceed to step 3.13.	Pharmacist/ Pharmacist Assistant	
3.12	Compound preparation in PN Cleanroom.	Pharmacist/ Pharmacist Assistant	
3.13	Countercheck and confirm prepared product.	Pharmacist/ Pharmacist Assistant	

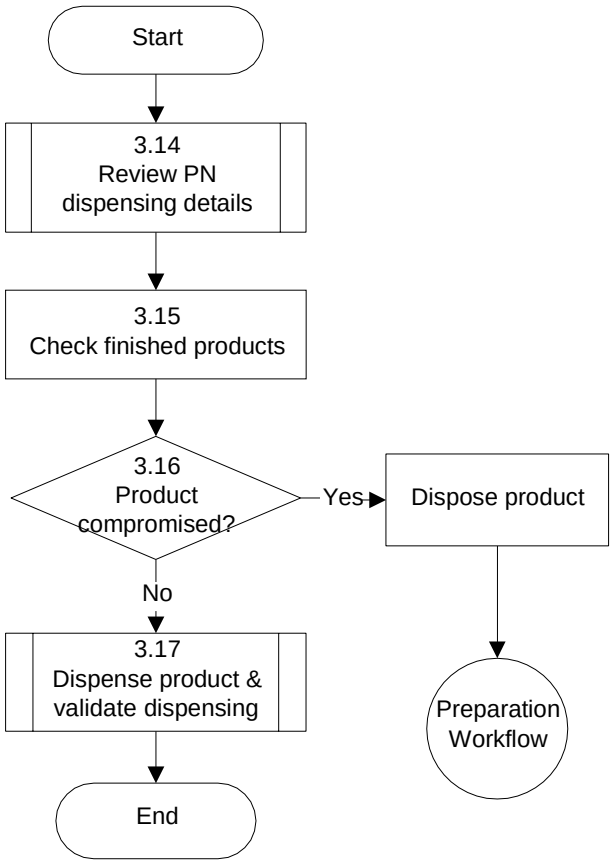
Process Workflow : Preparation of Parenteral Nutrition



Procedure III : Dispensing of Parenteral Nutrition

No.	Procedure Name : Dispensing of Parenteral Nutrition	Responsibility	Remarks/ Data/ Document/ etc.
3.14	Review PN dispensing details	Pharmacist/ Pharmacist Assistant	Formulations
3.15	Check finished products	Pharmacist/ Pharmacist Assistant	
3.16	If product is compromised, dispose product (refer to and repeat preparation process. Otherwise, proceed to step 3.17	Pharmacist/ Pharmacist Assistant	
3.17	Dispense product and validate dispensing.	Pharmacist/ Pharmacist Assistant	

Process Workflow : Dispensing of Parenteral Nutrition order



SECTION 13: MANAGEMENT OF CYTOTOXIC DRUG RECONSTITUTION SERVICE

1.0 OBJECTIVE

This procedure is applicable for managing the Cytotoxic Drugs Reconstitution (CDR) orders at the facility based on standardized regiment.

2.0 POLICY

2.1 Pharmacist shall be allowed to generate, modify worksheets and labels of Cytotoxic Drug preparation

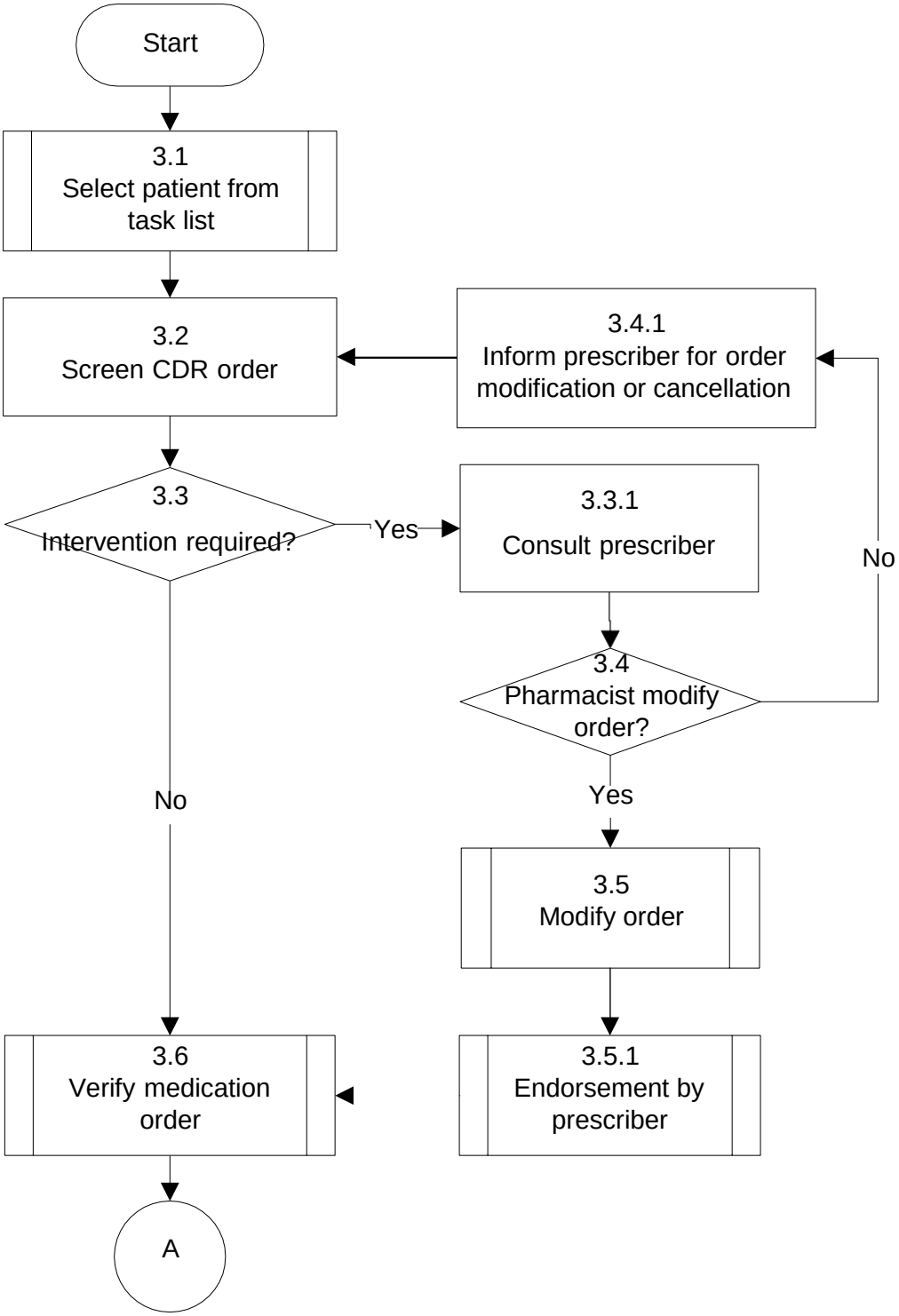
2.2 Work sheets of preparations shall be documented in the system and the hardcopy shall be generated as per local policy.

3.0 PROCEDURE AND PROCESS WORKFLOW

Procedure I : Screening and Verification of Order

No.	Procedure : Screening and Verification of Order	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive and check Cytotoxic Drug order list	Pharmacist	
3.2	Screen chemotherapy order	Pharmacist	CDR Guidelines Protocol
3.3	Determine if the order requires intervention 3.3.1 If yes, consult prescriber If no, proceed to verify medication order (step 3.6).	Pharmacist	
3.4	Determine if pharmacist can modify order. If yes proceed to step 3.5 3.4.1 If no, inform prescriber and place new an order.	Pharmacist	
3.5	Pharmacist modifies the order 3.5.1 Prescriber to endorse modified order.	Pharmacist	
3.6	Verify medication order	Pharmacist	

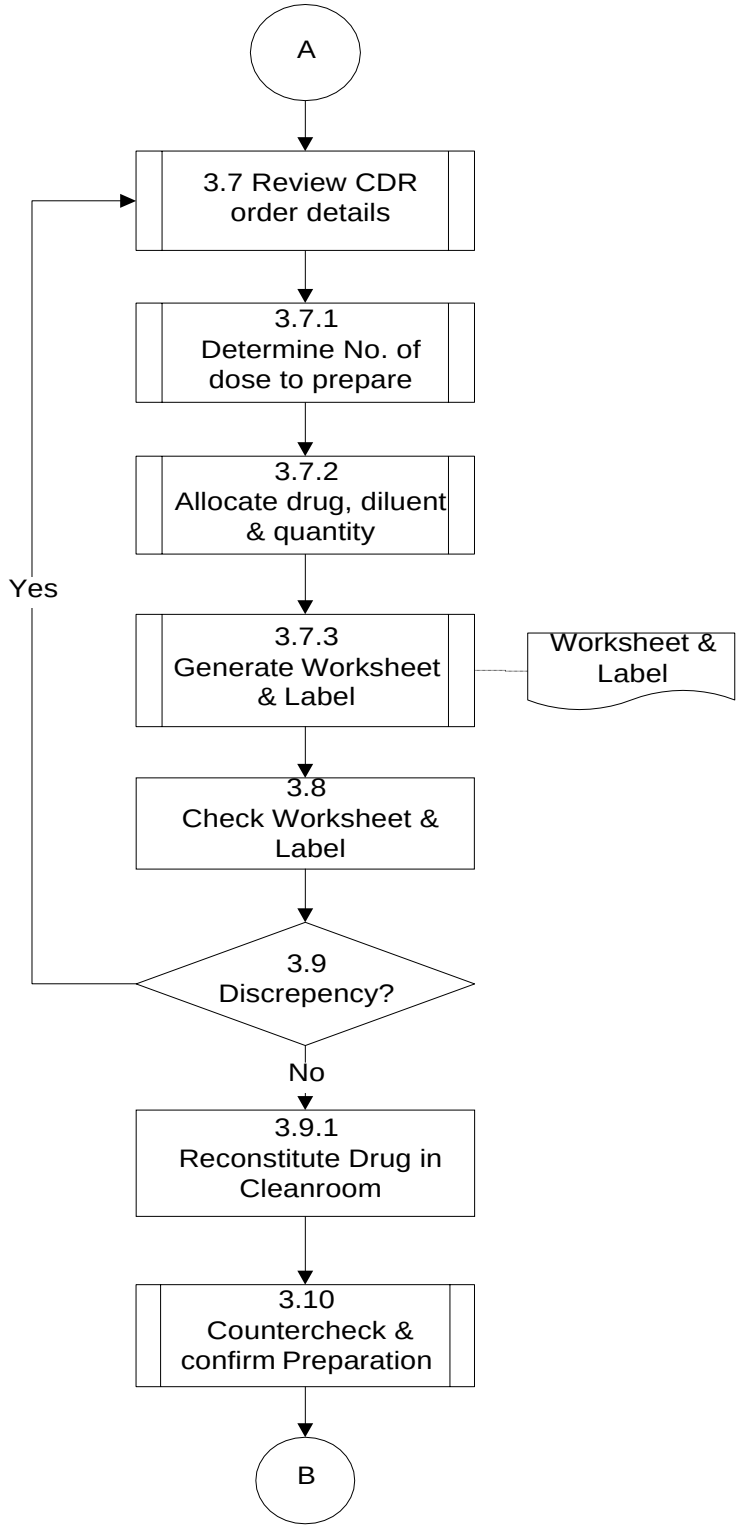
Process Workflow : Screening and Verification of Order



Procedure II : Preparation of Cytotoxic Drug

No.	Procedure : Preparation of Cytotoxic Drug	Responsibility	Remarks/ Data/ Document/ etc.
3.7	Review Cytotoxic Drug order details 3.7.1 Determine the number of doses to be prepared. 3.7.2 Allocate items for compounding. 3.7.3 Generate worksheet and label	Pharmacist/ Pharmacist Assistant	
3.8	Check worksheet and label.	Pharmacist/ Pharmacist Assistant	
3.9	Check for discrepancies. 3.9.1 If none, compound in a clean room. If yes, go back to step 3.7 to review order and modify.	Pharmacist/ Pharmacist Assistant	
3.10	Countercheck and confirm preparation.	Pharmacist/ Pharmacist Assistant	

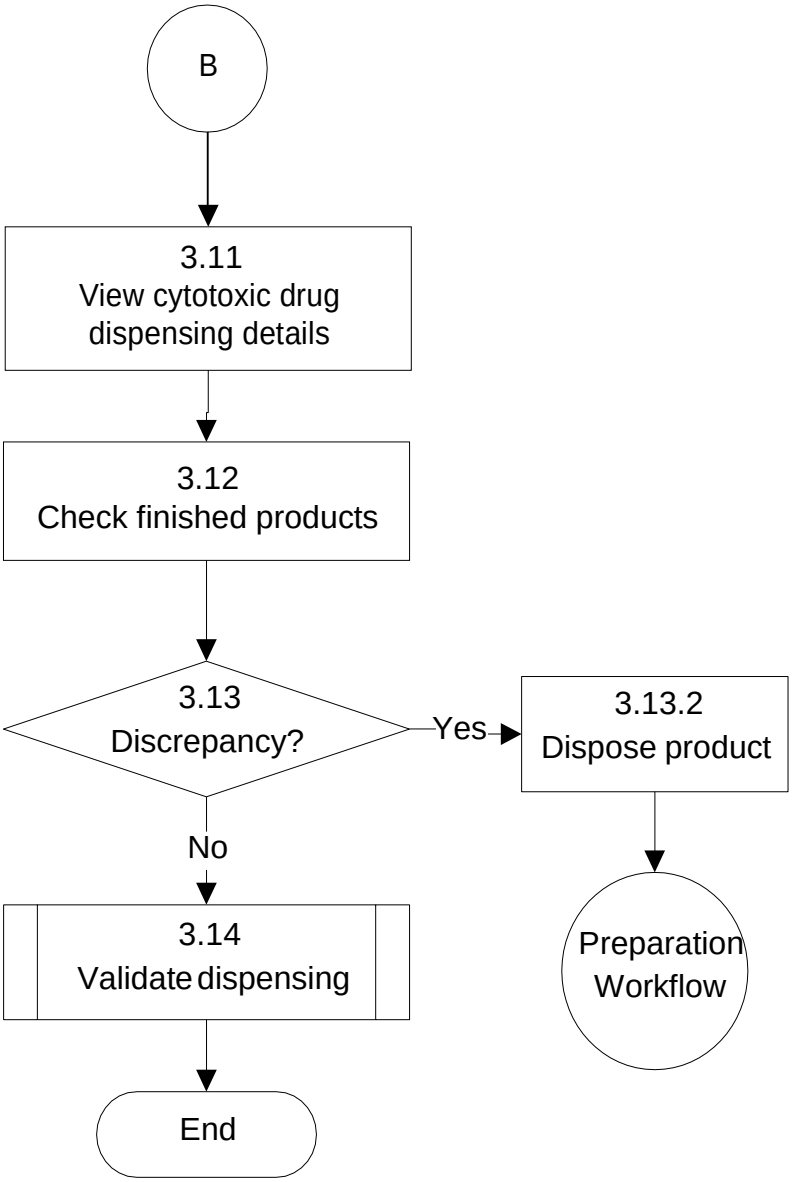
Process Workflow : Preparation of Cytotoxic Drug



Procedure III : Dispensing of Cytotoxic Drug

No.	Procedure Name : Dispensing of Cytotoxic Drug	Responsibility	Remarks/ Data/ Document/ etc.
3.11	Review cytotoxic drug dispensing details.	Pharmacist/ Pharmacist Assistant	Worksheet
3.12	Check finished products	Pharmacist/ Pharmacist Assistant	
3.13	Check for discrepancies 3.13.1 If yes, check product against worksheet and order. 3.13.2 Dispose product. Repeat preparation process. If none, proceed to step 3.14	Pharmacist/ Pharmacist Assistant	
3.14	Dispense product. Validate dispensing.	Pharmacist/ Pharmacist Assistant	

Process Workflow : Dispensing of Cytotoxic Drug



SECTION 14: MANAGEMENT OF IV ADMIXTURE SERVICE

1.0 OBJECTIVE

This procedure is applicable in the preparation of Intravenous Admixture products for specific patient by the sterile manufacturing unit in the pharmacy department.

2.0 POLICY

2.1 Pharmacist shall be allowed to generate, modify worksheets and labels of IV Admixture preparation

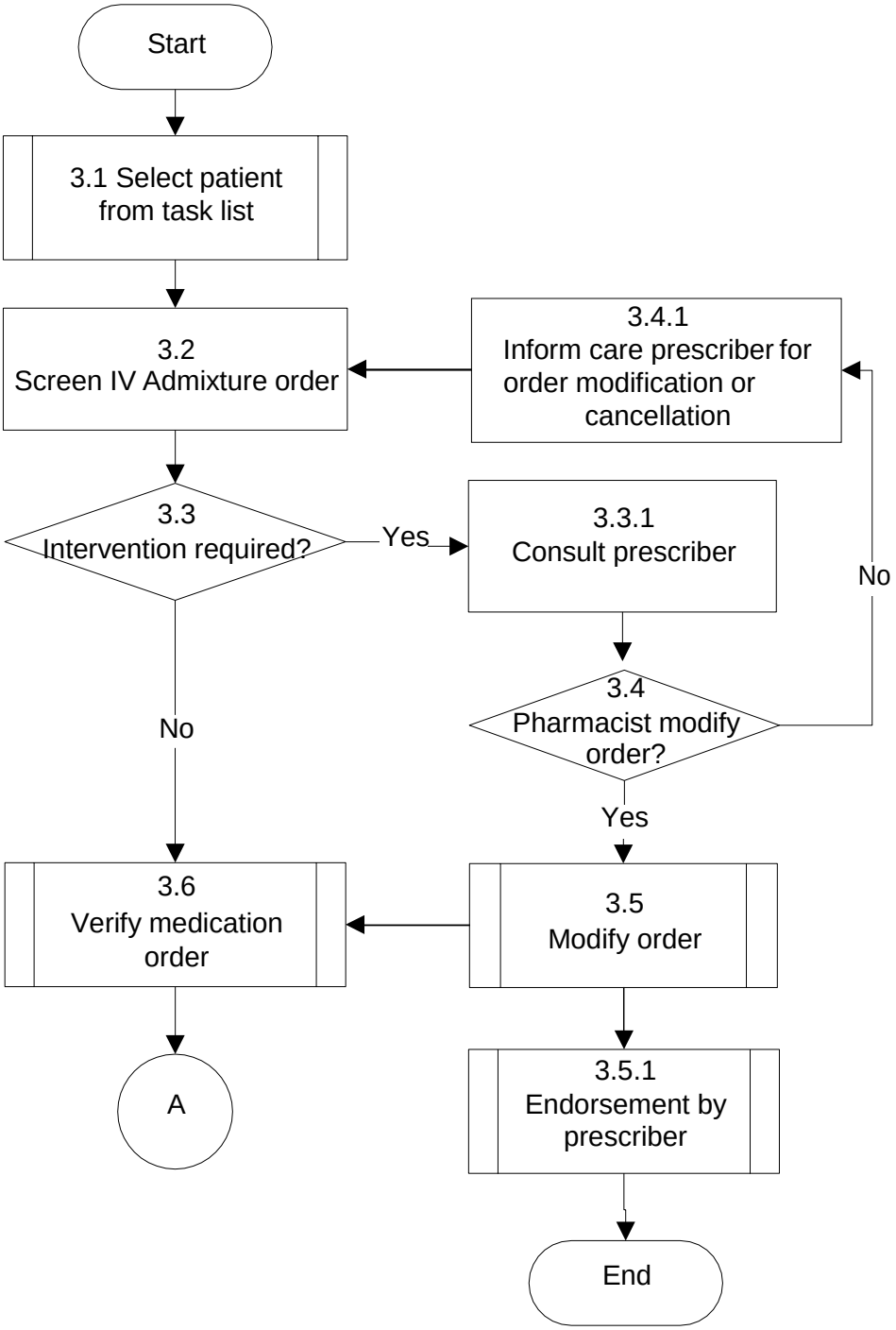
2.2 Work sheets of preparations shall be documented in the system and the hard copy shall be generated as per local policy.

3.0 PROCESS WORKFLOW AND PROCEDURE

Procedure I : Screening and Verification of Order

No.	Procedure Name : Screening and Verification of Order	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive IV Admixture order	Pharmacist	
3.2	Screen IV Admixture order details	Pharmacist	IV Admixture Guidelines
3.3	Determine if orders need intervention 3.3.1 If yes, consult prescriber If no, proceed to 3.6, verify medication order.	Pharmacist	
3.4	Determine if pharmacist can modify order 3.4.1 If no, inform prescriber to modify, cancel or place new order If yes, proceed to step 3.6	Pharmacist	
3.5	Pharmacist modifies order 3.5.1 Prescriber to endorse modified order.	Pharmacist	
3.6	Verify medication order	Pharmacist	

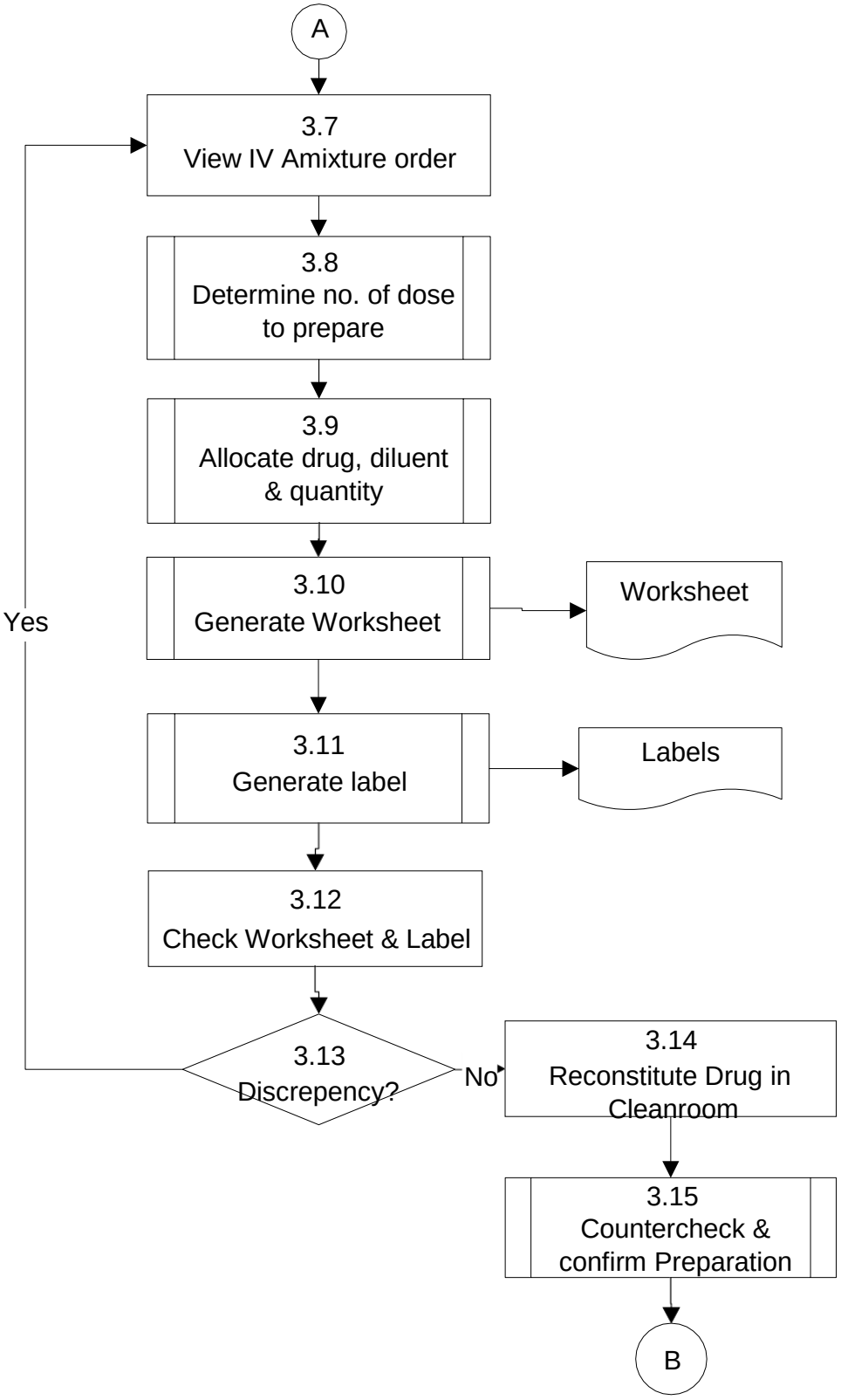
Process Workflow : Screening and Verification of Order



Procedure II : Preparation of IV Admixture

No.	Procedure Name : Preparation of IV Admixture	Responsibility	Remarks/ Data/ Document/ etc.
3.7	Review verified order	Pharmacist / Pharmacist Assistant	IV Admixture Guidelines
3.8	Determine the number of dose to prepare	Pharmacist / Pharmacist Assistant	
3.9	Allocate drug, diluent and quantity	Pharmacist / Pharmacist Assistant	
3.10	Generate work sheet	Pharmacist / Pharmacist Assistant	Work sheet
3.11	Generate label	Pharmacist / Pharmacist Assistant	Labels
3.12	Check work sheet and label	Pharmacist / Pharmacist Assistant	Worksheet Labels
3.13	Check for discrepancy If yes, go back to step 3.8 If no, proceed to step 3.14	Pharmacist / Pharmacist Assistant	
3.14	Reconstitute drug in clean room	Pharmacist / Pharmacist Assistant	
3.15	Countercheck and confirm preparation	Pharmacist / Pharmacist Assistant	

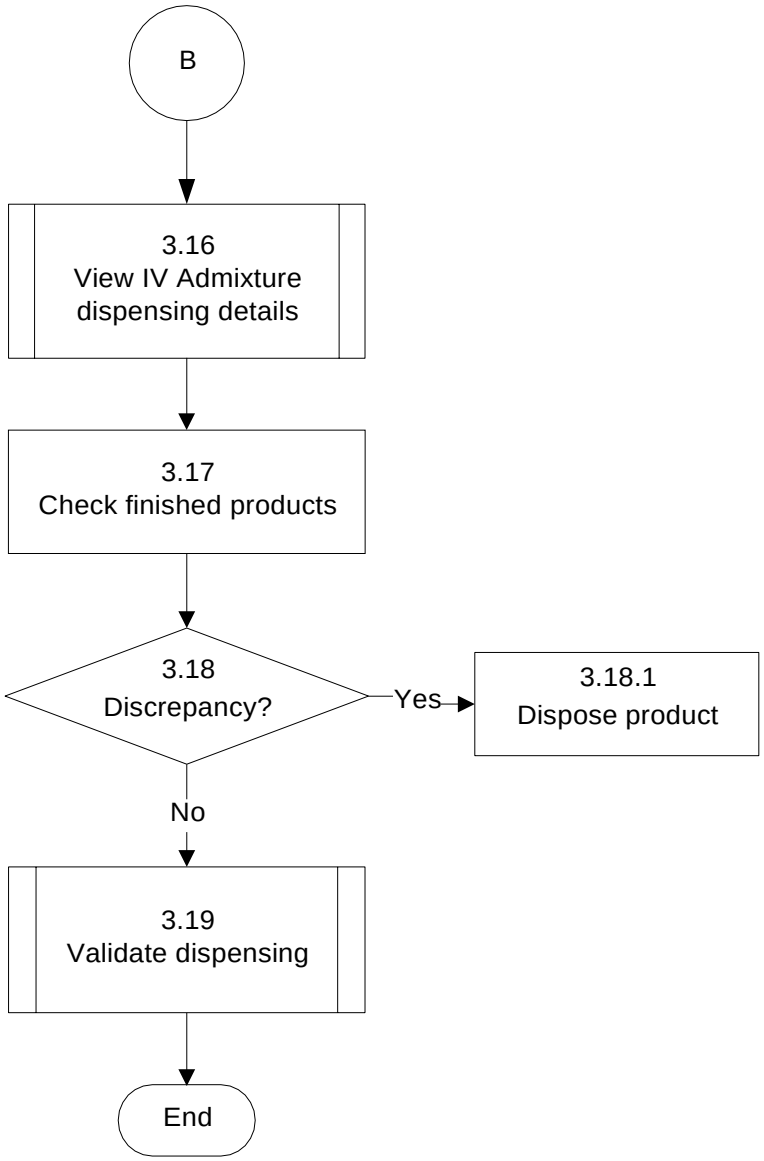
Process Workflow : Preparation of IV Admixture



Procedure III : Dispensing of IV Admixture

No.	Procedure Name : Dispensing of IV Admixture	Responsibility	Remarks/ Data/ Document/ etc.
3.16	View IV admixture dispensing details	Pharmacist / Pharmacist Assistant	
3.17	Check finish product	Pharmacist / Pharmacist Assistant	
3.18	Check for discrepancy 3.18.1 If yes, dispose product and proceed to step preparation workflow If No, proceed to step 3.19	Pharmacist / Pharmacist Assistant	
3.19	Validate dispensing	Pharmacist / Pharmacist Assistant	

Process Workflow : Dispensing of IV Admixture



SECTION 15: MANAGEMENT OF RADIOPHARMACEUTICAL SERVICE

1.0 OBJECTIVE

This process is applicable in the management of radiopharmaceuticals prepared by radiopharmacy unit in pharmacy department.

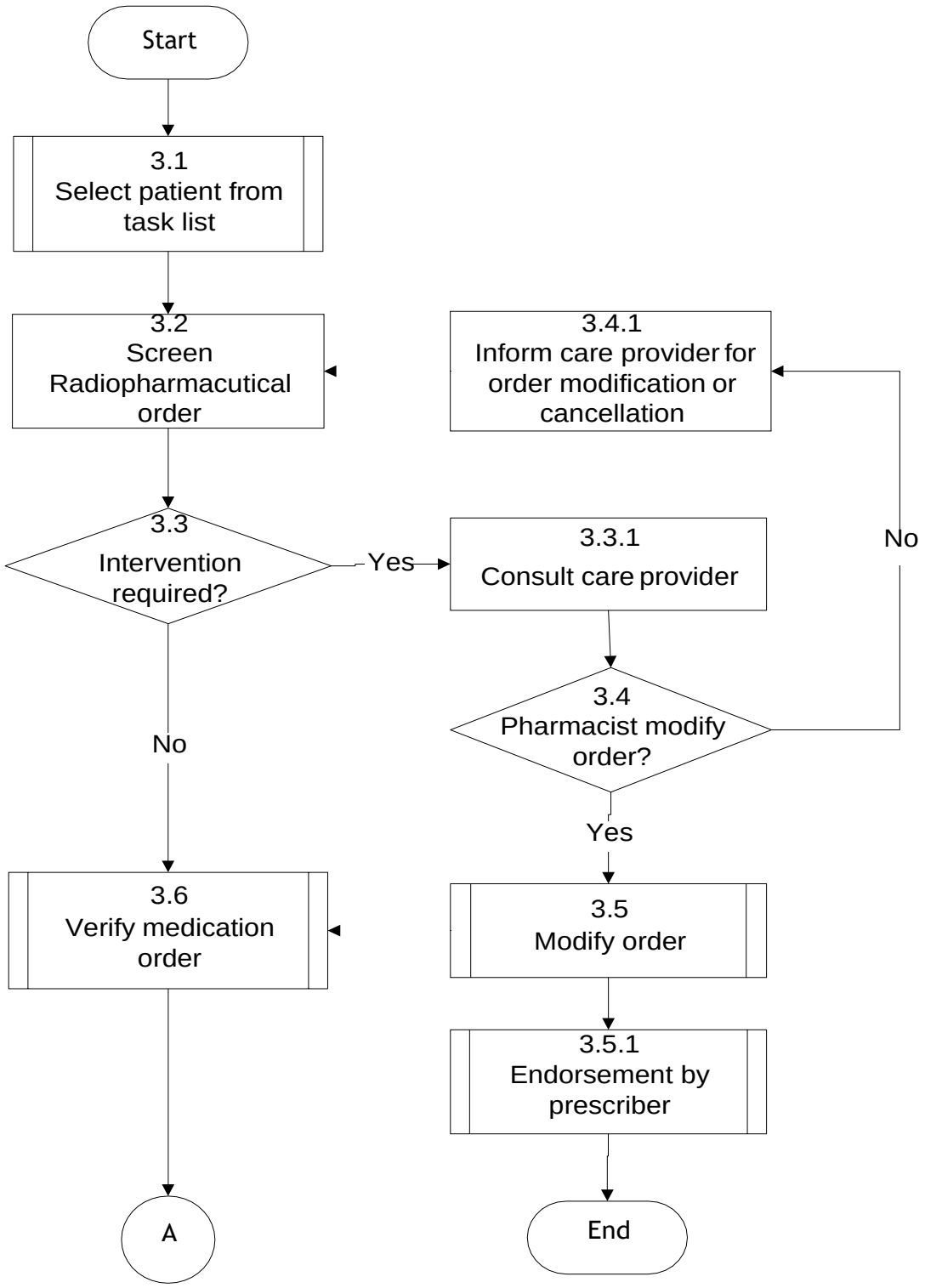
2.0 POLICY

3.0 PROCEDURE AND PROCESS WORKFLOW

Procedure I : Screening and Verification of Order

No.	Procedure Name : Screening and Verification of Order	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Select patient from task list	Pharmacist	
3.2	Screen radiopharmaceutical order for any errors	Pharmacist	Radio pharmacy Guidelines Protocol
3.3	Determine if the order requires intervention 3.4.1 If yes, consult prescriber 3.4.2 Record task and document findings	Pharmacist	
3.4	Determine if pharmacist can modify order 3.4.1 If no, inform prescriber to place new order. If yes proceed to step 3.5	Pharmacist	
3.5	Pharmacist modifies the order 3.5.1 Prescriber to endorse modified order.	Pharmacist	
3.6	Verify medication order	Pharmacist	

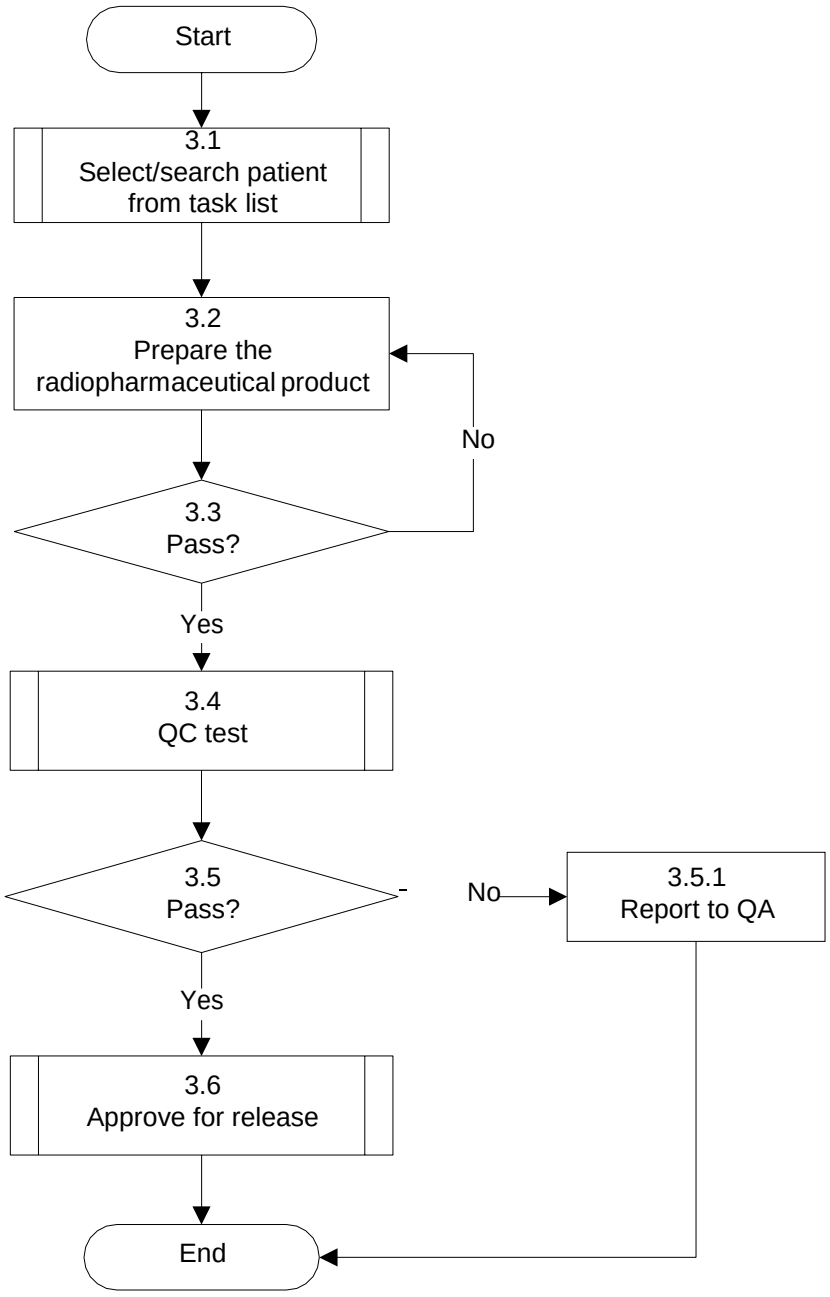
Process Workflow : Verification of Order



Procedure II : Preparation of Radiopharmaceutical

No.	Procedure : Preparation of Radiopharmaceutical	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Select and search patient from appointment list	Pharmacist	
3.2	Prepare /manufacture the radiopharmaceutical.	Pharmacist	BMR, SOP, worksheet
3.3	Determine if preparation/ manufacturing of radiopharmaceutical successful. If no, re-do the preparation If yes, proceed to step 3.4	Pharmacist	
3.4	Prepared radiopharmaceutical will be tested by QC.	Pharmacist	
3.5	Determine if the QC testing is successful. 3.5.1 If no, report to person in charge of Quality Assurance for investigation and the process ends here. If yes, proceed to step 3.6	Pharmacist	
3.6	Approve the released of the product	Pharmacist	

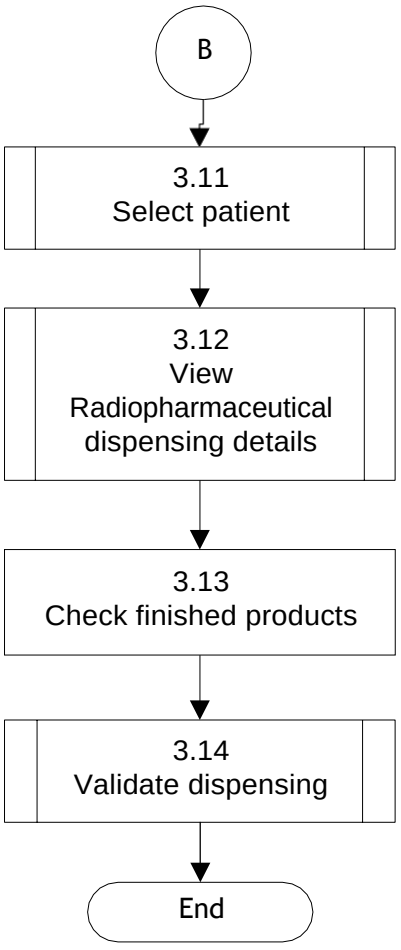
Process Workflow : Preparation of Radiopharmaceutical



Procedure III : Dispensing of Radiopharmaceutical

No.	Procedure Name : Dispensing of Radiopharmaceutical	Responsibility	Remarks/ Data/ Document/ etc.
3.11	Select patient.	Pharmacist	
3.12	View radiopharmaceutical dispensing details.	Pharmacist	
3.13	Check finished products.	Pharmacist	
3.14	Dispense product. Validate dispensing.	Pharmacist	

Process Workflow : Dispensing of Radiopharmaceutical



SECTION 16: MANAGEMENT OF GALENICAL PREPARATION

1.0 OBJECTIVE

This procedure provides the general process in the management of bulk preparations of galenical item at pharmacy department. The preparations include:

- Sterile products : Intravenous preparations, Standard Parenteral Nutrition (for Neonates), Eye/Ear Drops preparations
- Non-Sterile products : Internal preparations, External preparations

2.0 POLICY

2.1 Facility shall only prepare the approved formulation available in the system.

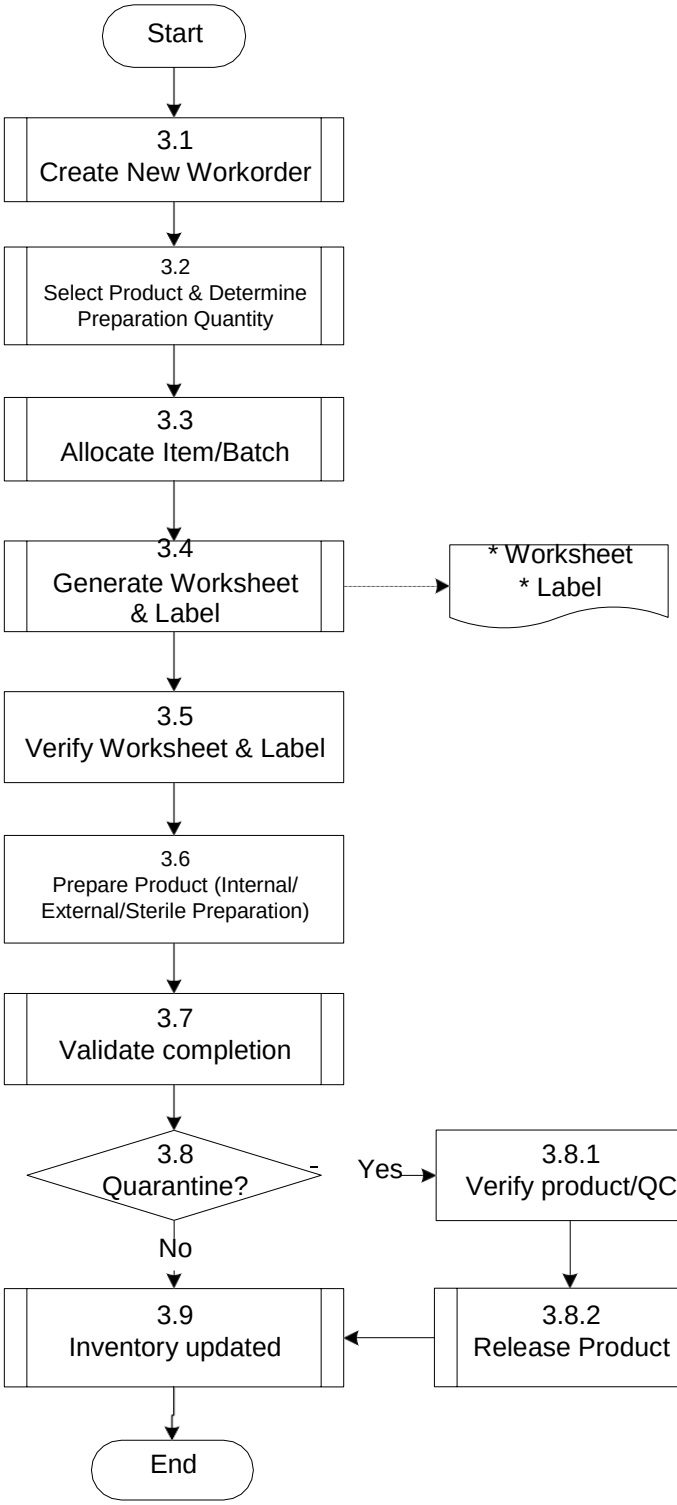
2.2 The preparation shall comply to the relevant guideline

3.0 PROCEDURE AND PROCESS WORKFLOW

No.	Procedure Name : Management of Galenical Preparation	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Create new work order	Pharmacist / Pharmacist Assistant	
3.2	Select product and determine preparation quantity	Pharmacist / Pharmacist Assistant	
3.3	Allocate item or batch number	Pharmacist / Pharmacist Assistant	
3.4	Generate work sheet and label	Pharmacist / Pharmacist Assistant	• Work sheet • Label
3.5	Verify worksheet and label	Pharmacist / Pharmacist Assistant	Worksheet Label
3.6	Prepare product (Internal / external / sterile preparation)	Pharmacist / Pharmacist Assistant	
3.7	Validate completion of preparation	Pharmacist / Pharmacist Assistant	

No.	Procedure Name : Management of Galenical Preparation	Responsibility	Remarks/ Data/ Document/ etc.
3.8	Determine if product need to be quarantine. 3.8.1 If yes, verify product for quality control testing. 3.8.2 Release product for use after quality control testing. If yes proceed to step 3.9	Pharmacist / Pharmacist Assistant	
3.9	Inventory will be updated once product is released.	Pharmacist / Pharmacist Assistant	

Process Workflow : Management of Galenical Preparation



SECTION 17: MANAGEMENT OF PRE-PACKING ACTIVITIES

1.0 OBJECTIVE

This procedure is applicable for the management of prepacking activities to ensure the quality and safety of the final packed item.

2.0 POLICY

2.1 Worksheet of pre-packed items shall be documented and maintained in hard and softcopy.

2.2 All prepared label shall be secured. Reconciliation of labels shall be recorded and discrepancies shall be in investigated and reported.

2.3 Preparation form different batches shall not be pre-packed together and production line clearance shall be practised.

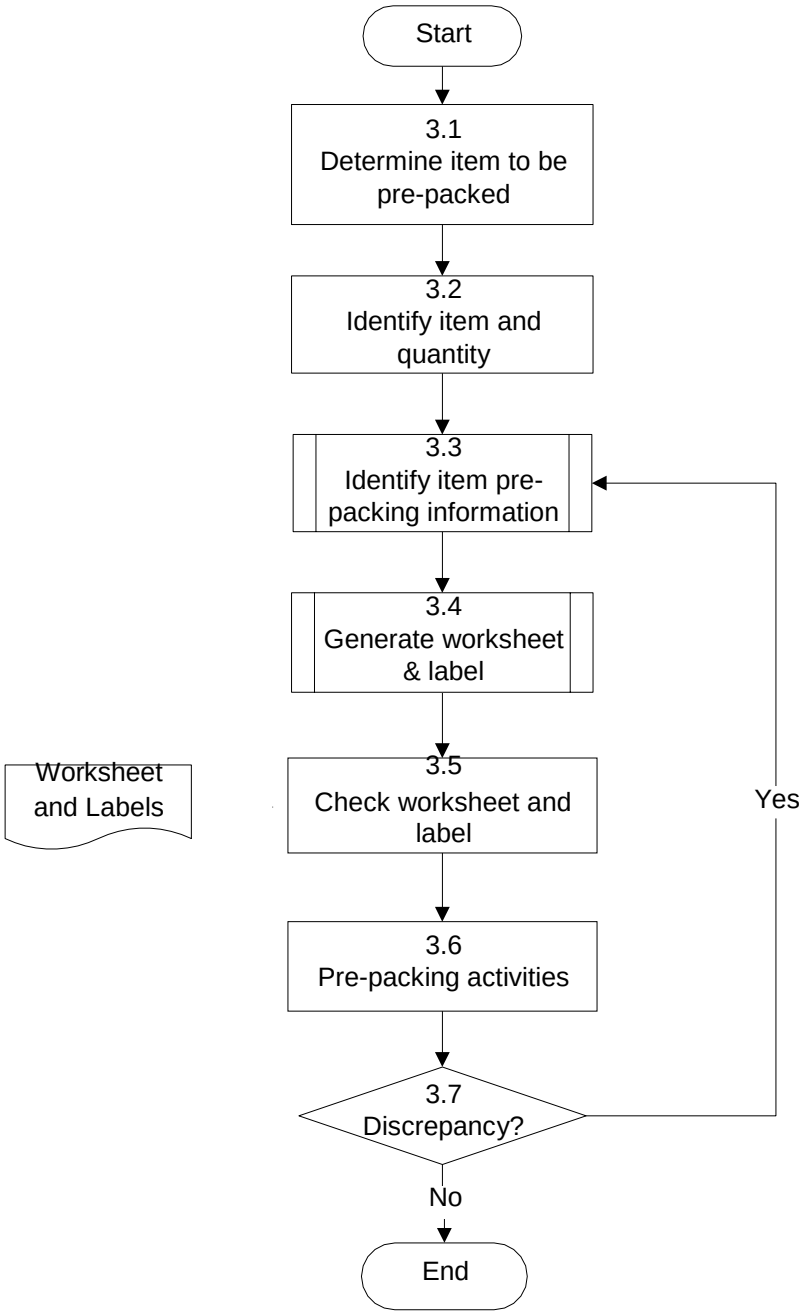
2.4 Distribution of finished products shall follow FEFO and FIFO basis

3.0 PROCEDURE AND PROCESS WORKFLOW

No	Procedure Name : Management of pre-packing activities	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Identify item and quantity of drug to be pre-packed	Assistant Pharmacist	
3.2	Record item pre-packing information • Determine item description • Allocate batch no. • Allocate Quantity to Pre-pack • Allocate Final Packaging Size • Calculate Pre-pack Quantity	Assistant Pharmacist	
3.3	Generate worksheet and labels	Assistant Pharmacist	
3.4	Check Worksheet and label	Pharmacist	
3.5	Conduct pre-packing activities	Assistant Pharmacist	

No	Procedure Name : Management of pre-packing activities	Responsibility	Remarks/ Data/ Document/ etc.
3.6	Check for discrepancies of finished pre-packed drug If yes, go back to step 3.3 If No, process ends here	Pharmacist / Assistant Pharmacist	

Process Workflow : Management of pre-packing activities



SECTION **18:** INVENTORY

SECTION 18.1: INVENTORY- BUDGET MANAGEMENT

1.0 OBJECTIVE

This procedure is applicable for recording and maintaining the vote for the budget managed by the Pharmacy Department.

2.0 POLICY

2.1 All warrant under *Objek Lanjut 27401 (Ubat dan Dadah), 27403 (Bekalan Reagen), 27404 (Bekalan Vaksin), 27499 (Bekalan Perubatan Kesihatan dan Pergigian) and 27503 (Bekalan XRay*) shall be managed by authorised personnel.

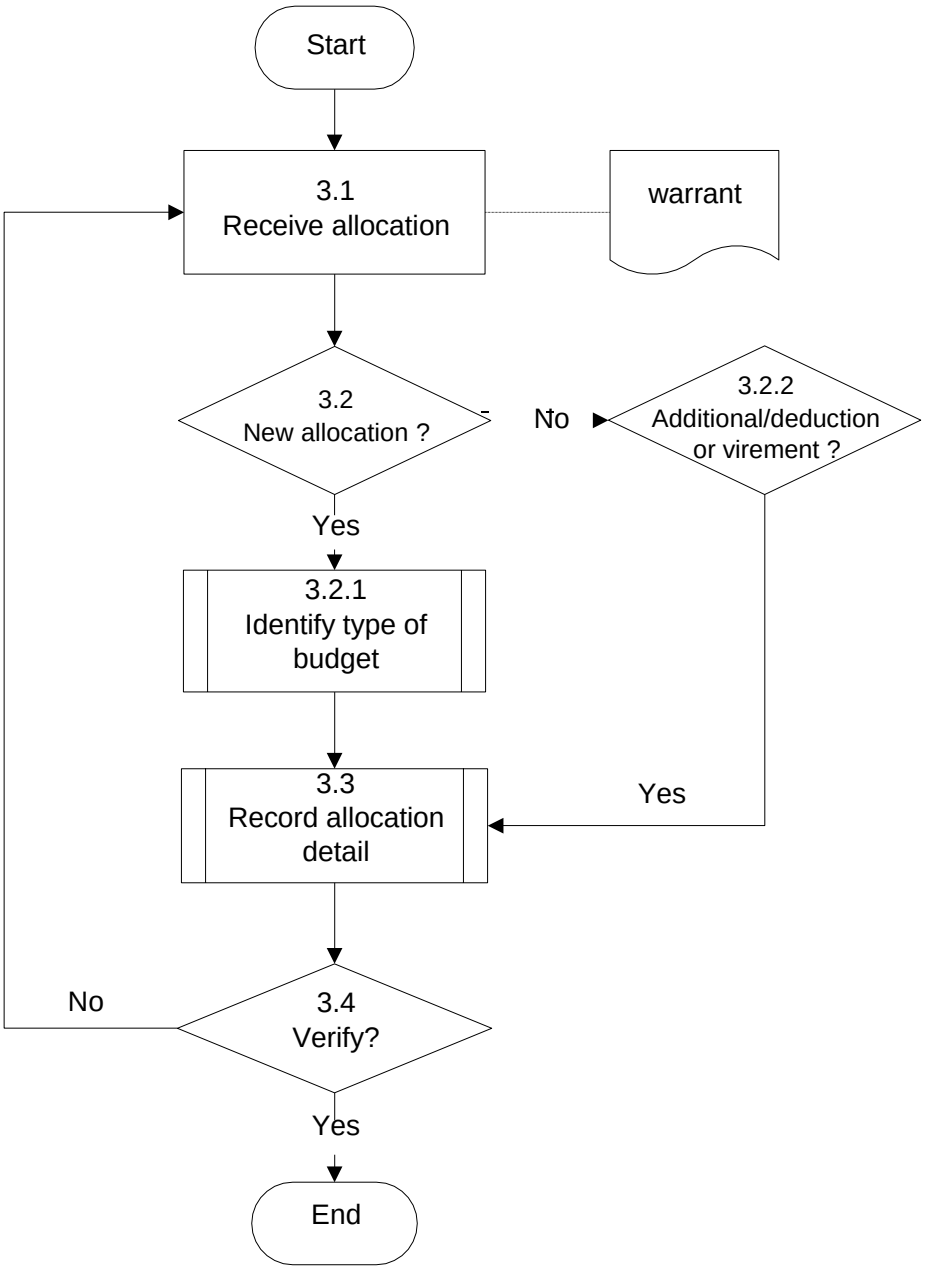
2.2 Sub warrant / virement interactivity shall be approved by Head of Unit.

3.0 PROCEDURE AND PROCESS WORKFLOW

No.	Procedure Name : Budget Management	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Pharmacy department receives the allocation from the relevant department (Administration / State Health Department)	Pharmacist / Clerk	Warrant
3.2	Determine type of new allocation and record accordingly such as : - *Dasar Baru* - Development - One Off - Operating 3.2.1 For new allocation, register warrant for the respective department / health clinic and the balance shall be updated with a new transaction. 3.2.2 If it is not new allocation, additional / Virement or deduction of allocation shall be done prior to a procurement activity (if necessary).	Pharmacist	• Allocation number/ amount • Warrant no/date • Budget type • Vote name/code/ description
3.3	File documents received and forward to the verifying officer.	Pharmacist	

No.	Procedure Name : Budget Management	Responsibility	Remarks/ Data/ Document/ etc.
3.4	Verify the registered budget entered into the system, If there are any changes required, do the amendment and end the process. If no, the process ends here.	Head Of Unit	Warrant

Process Workflow : Budget Management



SECTION 18.2 INVENTORY - PROCUREMENT

1.0 OBJECTIVE

To ensure the procurement process of standard and non-standard items complies with the relevant guidelines. This procedure is applicable for procurement planning of Concession, Central/Local Contract, Quotation and Direct Purchase item prior to the transaction in e-Perolehan system.

2.0 SCOPE

2.1 All procurement and supply for drugs and non-drugs shall be managed by the Pharmacy Department.

2.2 All drugs procured shall be approved by competent authority as stated in the Pharmacy Act / other relevant Act.

2.3 Standard and non-standard item catalogue shall be determined based on the local (facility) needs.

2.4 Procurement of standard item shall be planned through creating Recommended Purchase List (RPL). RPL requires the facility to set a buffer level of minimum and maximum stock level to be kept in the store. With RPL, system will recommend to purchase the item quantity according to the maximum stock level deduvt available stock

2.5 Non-standard items replenishment shall be made based on requisition by the requesting unit and quantity to purchase based on the estimated usage.

2.6 All procurement of drugs and non-drugs shall be based on the budget allocation. Any quota system shall be enforced subject to local policy manually.

2.7 Actual procurement process shall be conducted in e-Perolehan system.

2.8 Items received as Free of Charge (FOC) either from supplier or external facility shall not accounted in the budget but accounted as average price during issued

2.9 Contract purchase limit shall be set and control by Pharmacy Head Quarters

2.10 Procurement for Special Approval shall be made with attachment of Approval Letter in PhIS

2.11 Procurement and management of Continuous Ambulatory Peritoneal Dialysis (CAPD) items for home delivery shall be handle in PhIS according to the current guideline.

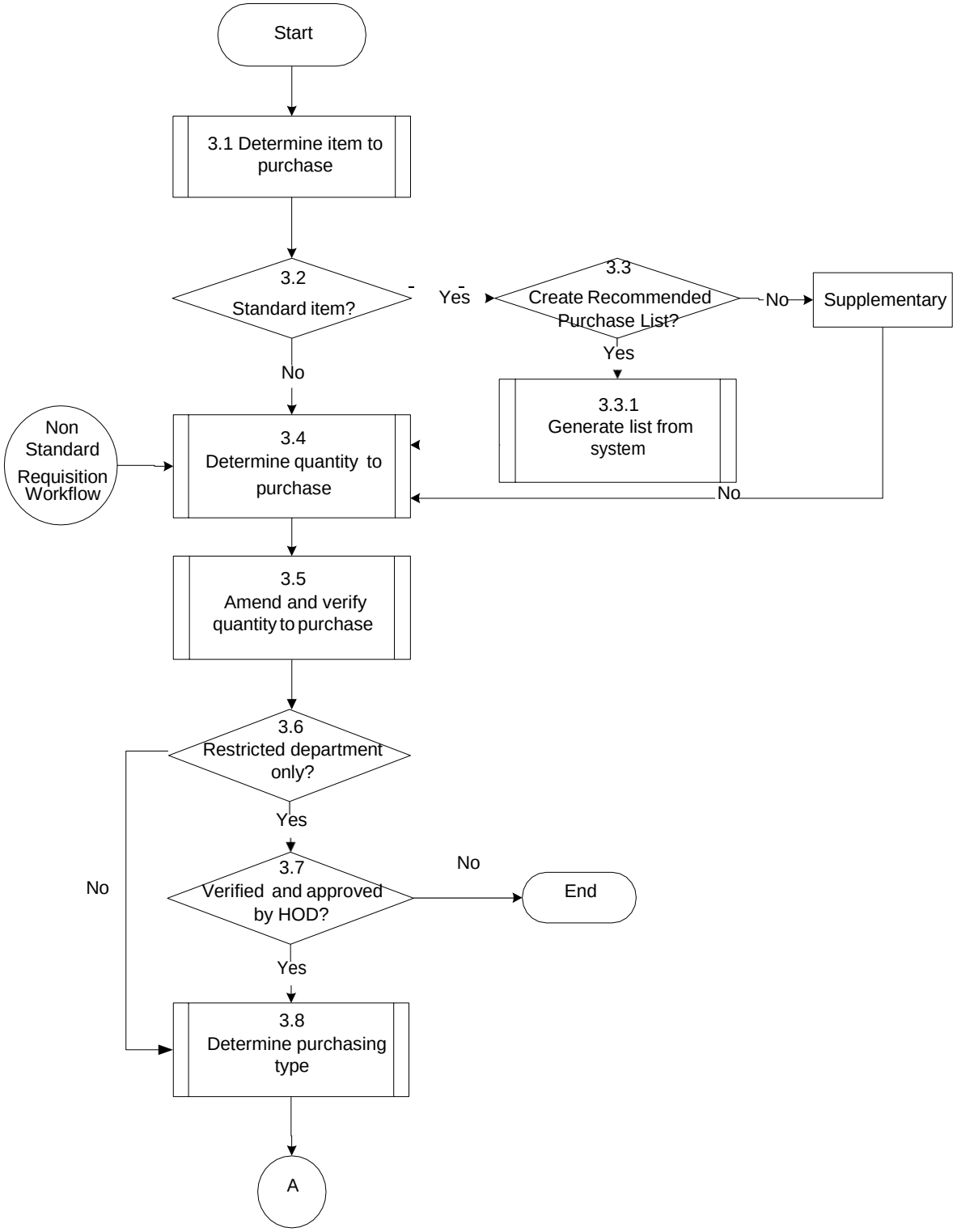
3.0 PROCEDURE AND PROCESS WORKFLOW

Procedure I : Procurement

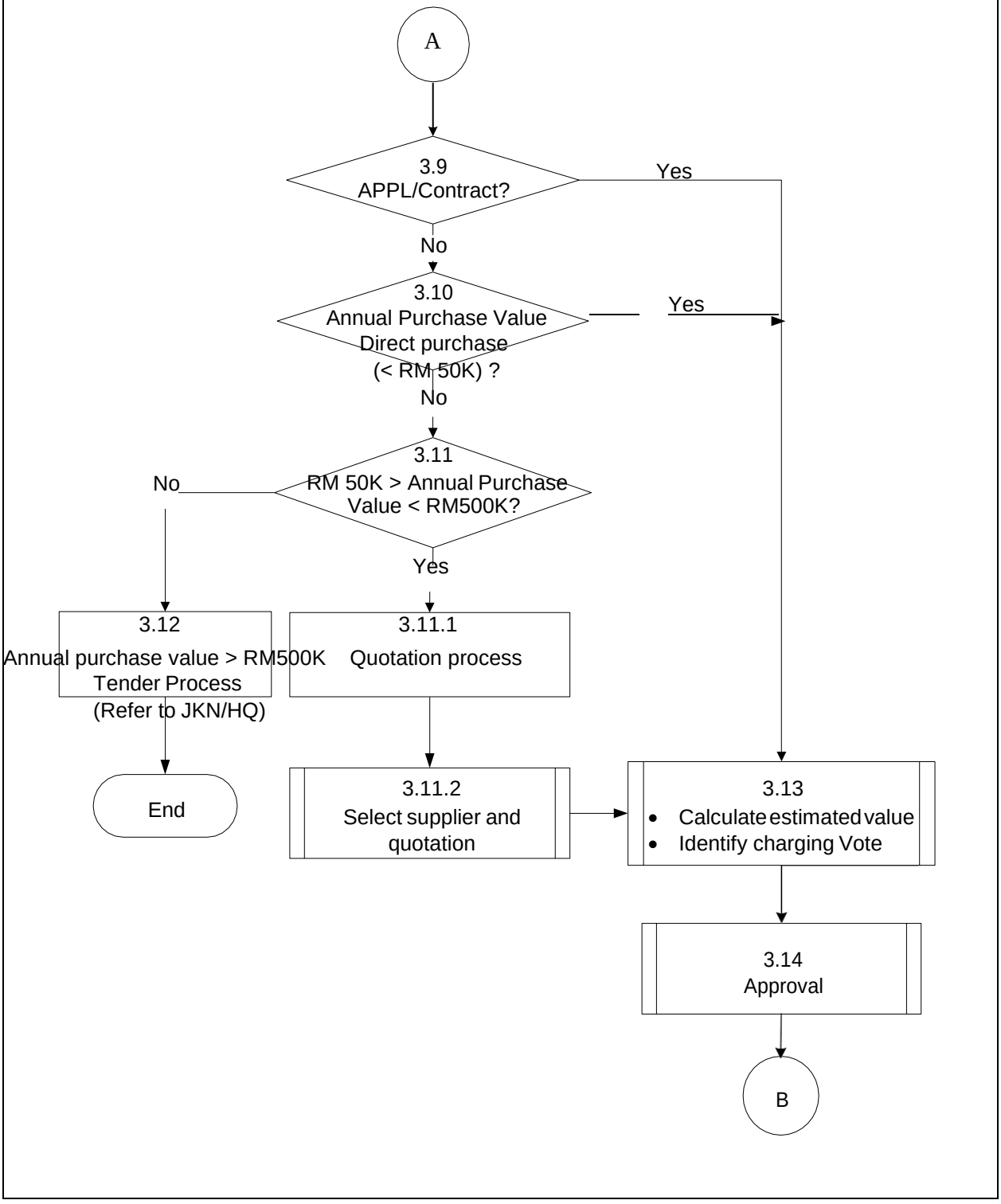
No.	Procedure Name : Procurement	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Determine type of item to purchase type of purchase order : APPL(without eP integration), APPL, LP & contract	Pharmacist/ Clerk	
3.2	If item is classified as standard in the facility, proceed to step 3.3 If item is not in standard list, proceed to step 3.4		
3.3	Decide if RPL needs to be created. If yes, proceed to step 3.3.1 – enter details and generate list accordingly (*) If no, proceed to step 3.4 * Note: For Health Clinic, this process will be done at the Health Clinic facility and sent to PKD for verification.	Pharmacist/ Clerk	RPL type Item Group RPL
3.4	Determine quantity to purchase	Pharmacist/ Clerk	
3.5	Amend and verify quantity to purchase. Note: For PKD /Health Clinic setting this process is done at the PKD by an authorised pharmacist	Head of unit	
3.6	Determine if item is restricted to a certain department only. If yes, Head of Unit need to verify and approve quantity to purchase. If no, verification and approval is required, proceed to step 3.8 to determine purchasing type	Pharmacist	
3.7	If the request is approved, proceed to step 3.8 3.7.1 If not approved, do the amendment (go back to step 3.5).	Head of Unit	
3.8	Determine the purchasing type manually based on item detail and value to purchase	Pharmacist/ Clerk	
3.9	Determine it is an Approved Product Purchase List (APPL) or Contract item under Ministry of Health; *To use APPL (without eP integration) under these condition: • Integration PhIS – eP breakdown • eP code mapping failure	Pharmacist/ Clerk	

No.	Procedure Name : Procurement	Responsibility	Remarks/ Data/ Document/ etc.
	Proceed to step 3.13 for charging activities. If no, proceed to step 3.10		
3.10	If item to purchase has an estimated annual purchase value of less than RM50,000, proceed to step 3.13 for charging activities. If no, proceed to step 3.11	Pharmacist/ Clerk	
3.11	Determine if items to purchase has an estimated annual purchase value within RM50,000.00 to RM500, 000.00 If yes, proceed to step 3.11.1 for Quotation process – to create Lampiran Q in PhIS (manual). If no, proceed to step 3.12 3.11.2 Once completed, select supplier and quotation. Then proceed to step 3.13 – *PhIS system is able to alert user on contract expiry.	Pharmacist/ Clerk	Purchase order report Quotation Lampiran Q
3.12	If the item has an annual purchase value of more than RM 500, 000.00, refer to State Health Department /HQ to propose for tender or quotation. If no, proceed to step 3.10	Pharmacist/ Clerk	
3.13	Calculate the amount to purchase and identify which budget to charged.	Pharmacist/ Clerk	
3.14	Send purchase order to Head of Department (Pharmacy) for approval.	Pharmacist/ Clerk	
3.15	Create purchase order in the system. *Use RPL function to list out proposed item to purchase.	Pharmacist/ Clerk	
3.16	Print purchase order report for documentation.	Pharmacist/ Clerk	Purchase order report
3.17	Verify draft of the Local Purchase Order (LPO). *To check vote code item of eP-PhIS Integration	Pharmacist/ Clerk	
3.18	Create the LPO number in the e-Perolehan system.	Pharmacist/ Clerk	Local purchase order
3.19	Enter LPO details in the system.	Pharmacist/ Clerk	

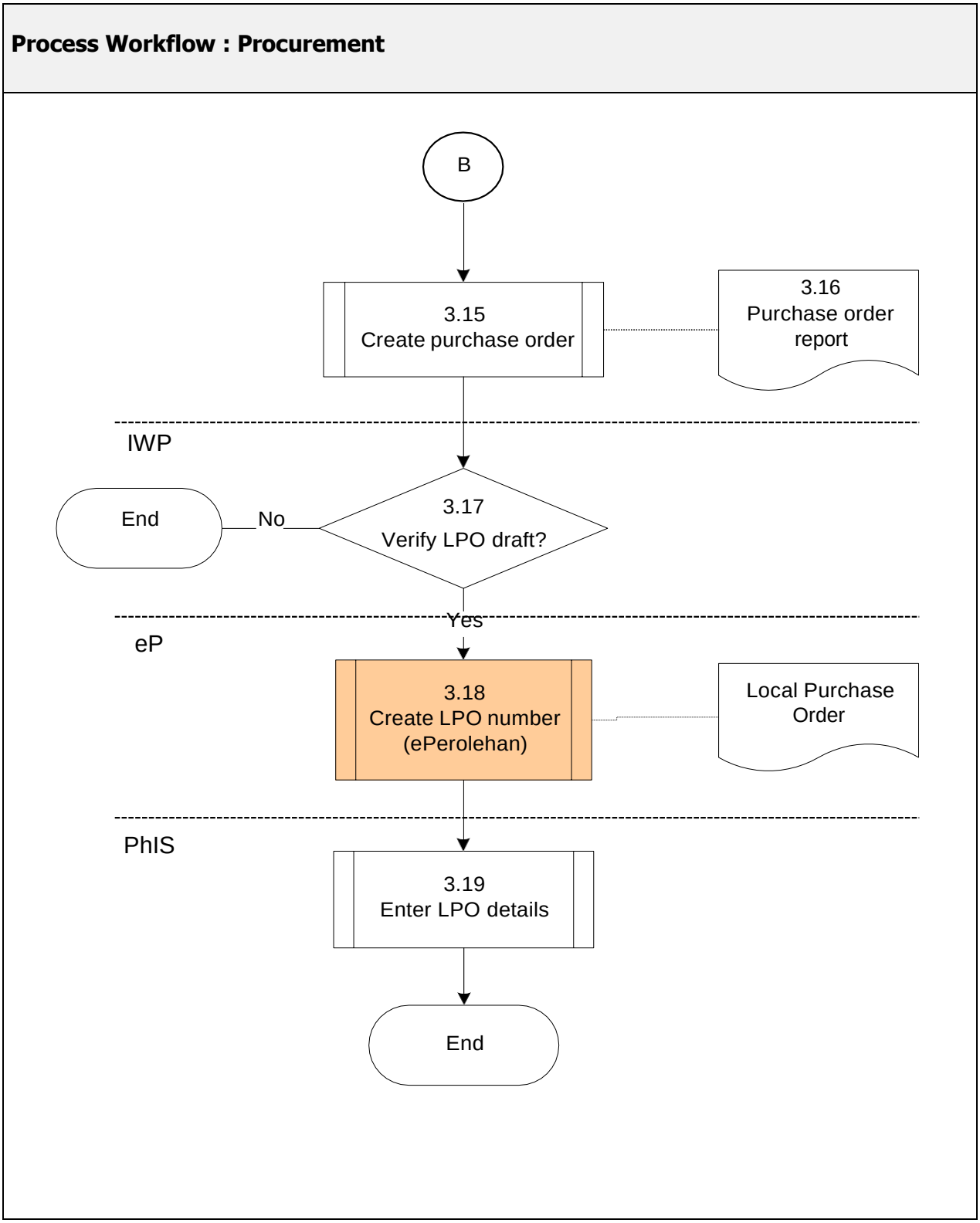
Process Workflow : Procurement



Process Workflow : Procurement



Process Workflow : Procurement



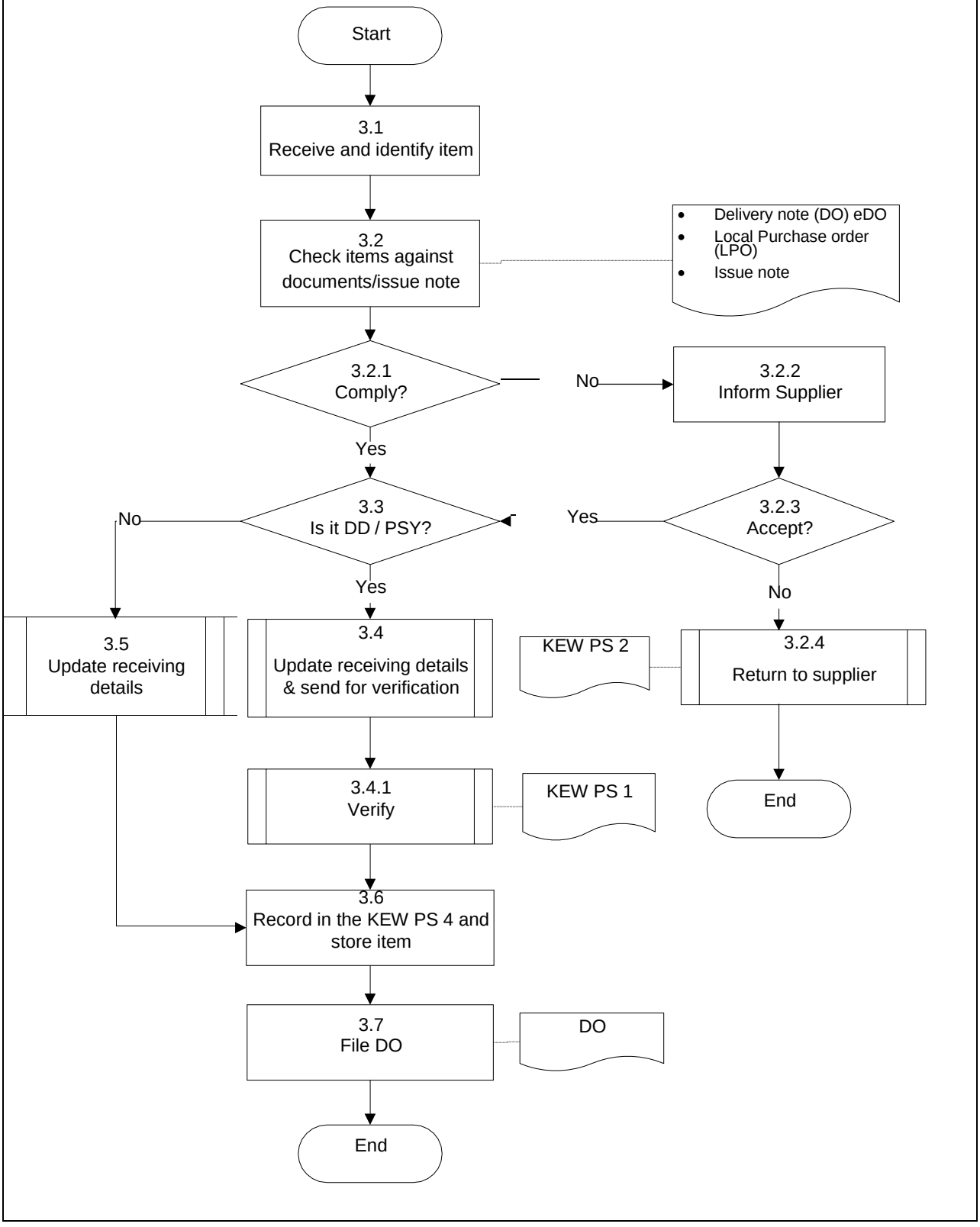
Procedure II : Receiving

- This process is applicable for the items received from the supplier

No.	Procedure Name : Receiving	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive and identify item - By LPO, Return item note from other facility ***notes:** If the items to receive are dangerous drug or psychotropic items the responsibility shall fall on the pharmacist only from this stage onwards.	Clerk	DO LPO Return note Issue note Cold Chain Monitor
3.2	Check items against Delivery Order for : - Item description, Condition of items, Quantity, Batch Number, Expiry Date If receipt of acknowledgement cannot be done immediately, stamp with "conditional acceptance". 3.2.1 Determine if the items does comply with the attached DO / LPO / Issue note the product will then be sent back to the supplier. If yes proceed to step 3.3 3.2.2 If does not comply, inform supplier. 3.2.3 Determine if item to be accepted with or without conditions. If yes, proceed to step 3.3 3.2.4 If no, return item to supplier. Information is updated in the system with details of rejection of product specified.	Clerk/ authorised personnel	DO LPO Letter of Undertaking (for short expiry item) Letter on Product Quality Control (for Biological Products) Cold Chain Monitor Borang Laporan Terimaan Barang-Barang (Kew.PS-2)
3.3	Check item. If it is Dangerous Drug/Psychotropic item, pharmacist will do the verification.	Clerk	• DO • LPO
3.4	Update receiving details item for psychotropic and dangerous drug items. 3.4.1 Verify receiving of items 3.4.2 Send items for storage	Pharmacist	• Issue note • Kew. PS-4 • Kew. PS-1

No.	Procedure Name : Receiving	Responsibility	Remarks/ Data/ Document/ etc.
3.5	Update receiving details in the system for non Psychotropic/Dangerous Drug	Clerk	• DO • LPO • Issue Notes • Kew.PS-1
3.6	Update Kew.PS 4 and store item at the dedicated location	Clerk	• Kew.PS 4
3.7	File Delivery Order (DO)	Clerk	• DO

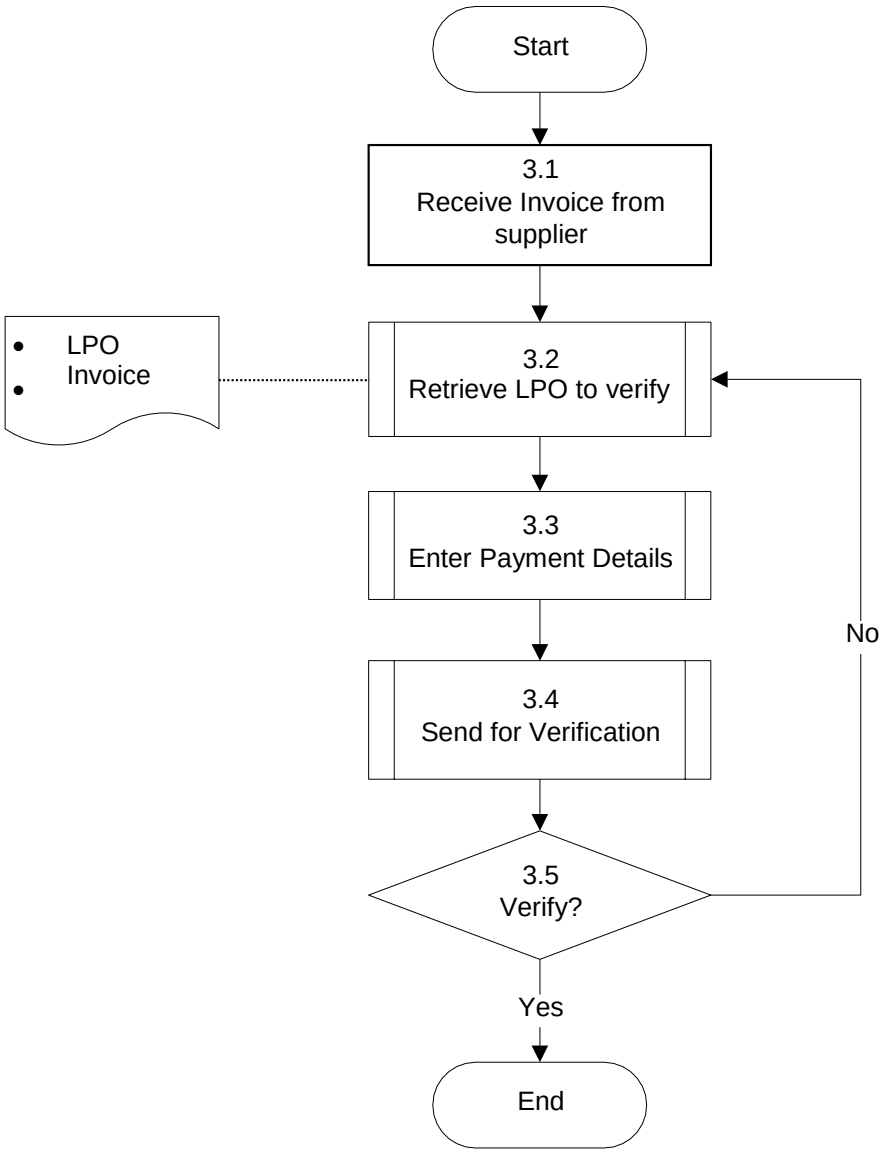
Process Workflow : Receiving



Procedure III : Payment

No.	Procedure Name : Payment	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive invoice from the supplier	Authorised personnel	
3.2	Retrieve the LPO that needs to be verified.	Pharmacist	
3.3	Update the following details into the system: • LPO No • Invoice No • Invoice receive date • Payment reference number 3.3.1 If incomplete supply, create credit notes.	Executive Officer / Pharmacist/ Clerk	LPO Invoice NO Invoice Rec Date
3.4	Send for verification to the head of unit	Executive Officer / Pharmacist	
3.5	Ensure that the LPO details and invoice receive date is correct. If the date is incorrect amendment can be made. Determine if the LPO can be verified; If yes the process ends here. If no the payment for LPO is rejected and the process begins again at 3.2.	Pharmacist	LPO Invoice Document

Process Workflow : Payment



SECTION 18.3: REQUISITION OF NON -STANDARD ITEM

1.0 OBJECTIVE

This procedure is applicable for the procurement of non-standard items (items not generated in the Recommended Purchase List (RPL) or listed in the hospital formulary.

2.0 POLICY

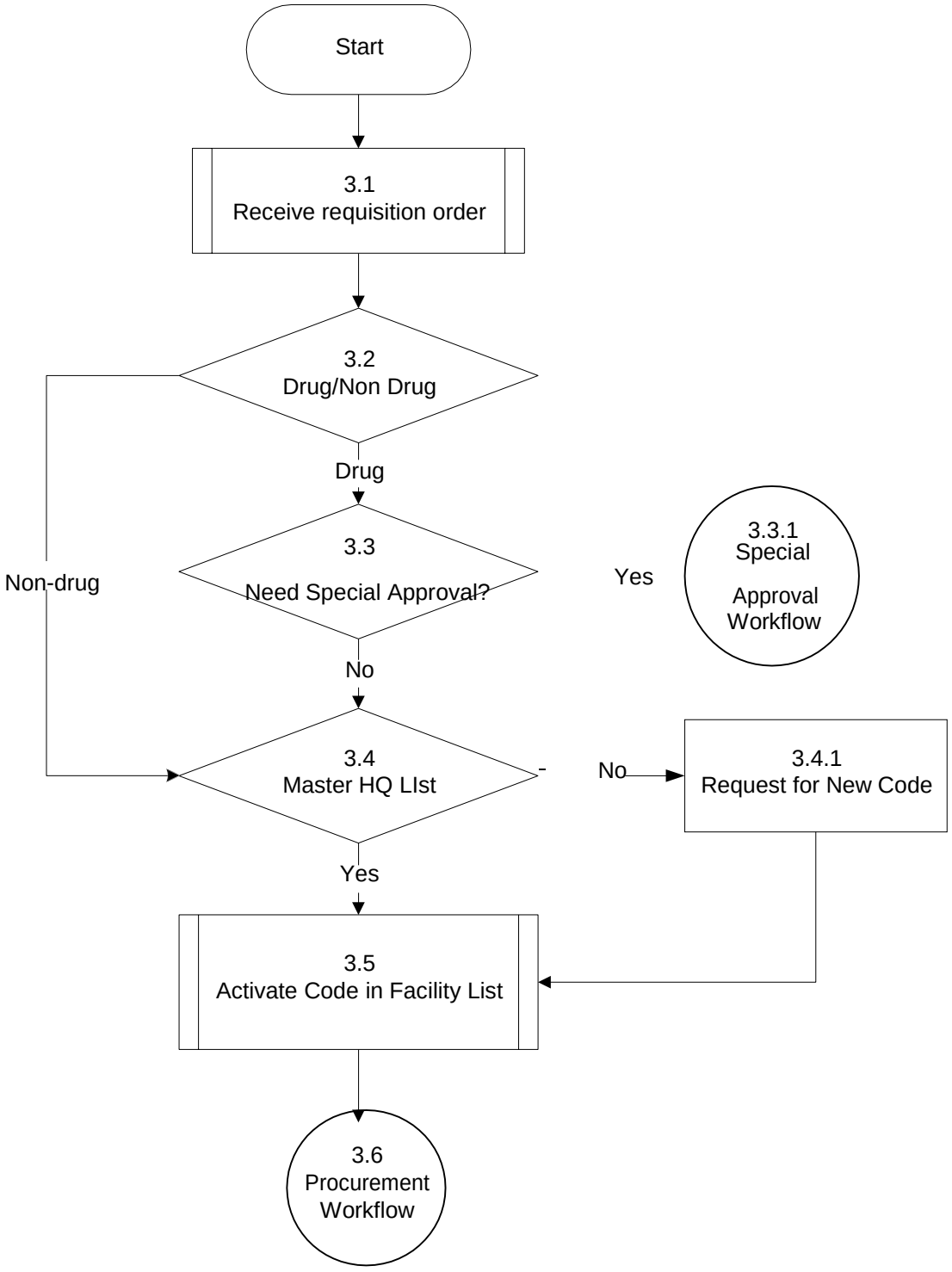
2.1 Non-standard items replenishment shall be made based on requisition by the requesting unit and quantity to purchase based on the estimated usage.

3.0 PROCEDURE AND PROCESS WORKFLOW

Procedure I : Requisition of Non Standard Item

No.	Procedure Name : Requisition of Non Standard Item	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive/Enter requisition order from requesting unit	Clerk / Authorized Personnel	Request Form Quotation
3.2	Determine item type whether it is drug or non drug. If it is drug, proceed to 3.3. If it is non drug, proceed to 3.4.	Authorized Personnel	
3.3	Determine whether the drug needs special approval. 3.3.1 If yes, proceed to special approval workflow. If no, proceed to 3.4.	Authorized Personnel	
3.4	Refer master list from headquarters (HQ). 3.4.1 Request for new code if item not available in Master List.	Authorized Personnel	
3.5	Activate code in facility list.	Authorized Personnel	
3.6	Proceed to procurement workflow.	Authorized Personnel	

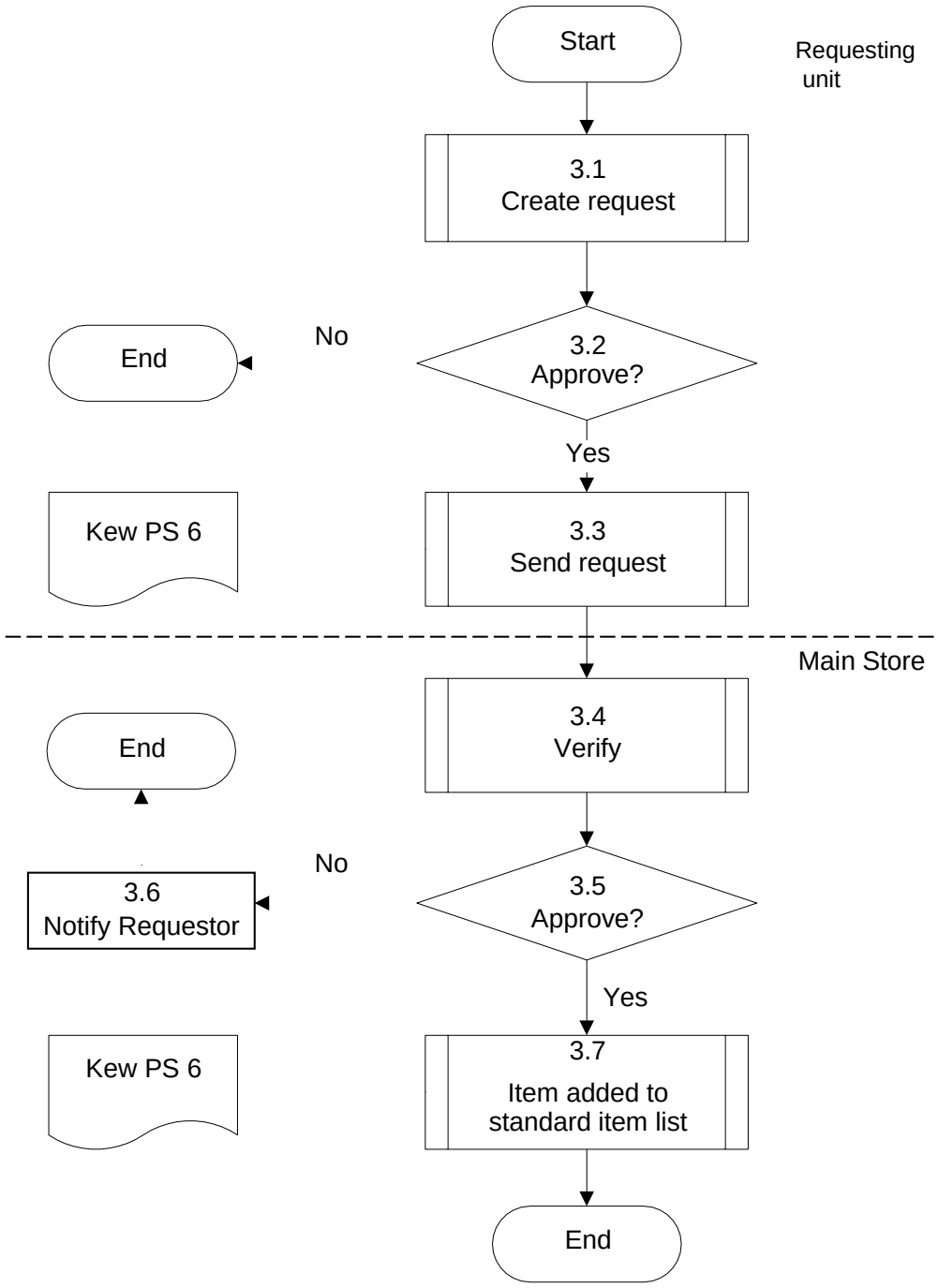
Process Workflow : Requisition of Non Standard Item



Procedure II : Request to Change Non-Standard Item to Standard Item

No.	Procedure Name : Request to Change Non-Standard Item to Standard Status	Responsibility	Remarks/ Data/ Document/ etc.
3.1	The user creates request to change the current setting for the product from non-standard to standard.	Authorized Personnel (Requesting or supplying unit)	
3.2	The request is sent to Head of Unit or Department of requesting unit for approval. If the request is approved proceed to 3.3. If it is not approved process ends here.	Head of Unit / Department	
3.3	Send the request to pharmacy department	Requesting unit	KEW PS 6
3.4	The request is then retrieved and verified by the supplying unit.	Store Pharmacist	Min / max storage quantity Min / max order quantity Default vote code Buffer level
3.5	The request needs approval by Head of Department, Pharmacy before the status can be changed in the facility formulary.	HOD Pharmacy	
3.6	Add item approved into the facility standard item list.	Pharmacist	KEW PS 6

Process Workflow : Request to Change Non-Standard Item to Standard Item



SECTION 18.4 : DISTRIBUTION

1.0 OBJECTIVE

This procedure is applicable for routine and supplementary distribution process, transfer of stock and stock replenish activity. This process comprises of three main activity, such as:

i) Indenting by the requesting unit;
ii) Issuing of items by the supplying units, and;
iii) Receiving of items by the requesting units

2.0 POLICY

2.1 Indenting

2.1.1 Indenting procedure applies to standard items and shall be done in accordance to facility supply schedule.

2.1.2 Indenting of medicine to level 1 (main store) shall be done from level 2 (pharmacy sub store) only.

2.1.3 Indenting of intravenous solution, irrigation solution and non drug shall be done directly to level 1 (main store) by level 2 (pharmacy sub store) or level 3 (ward/clinic/unit/counter).

2.1.4 Indenting of standard items shall be generated from Recommended Indent List (RIL). Indent quantity shall be determined by user based on RIL and usage trending.

2.2 Requisition order

2.2.1 Requisition order applies to distribution of non standard items and shall be initiated and managed by requestor at level 2 or 3.

2.2.2 Only one item can be requested for each requisition order.

2.2.3 Quantity requested shall not exceed the average usage of 6 months.

2.2.4 Requesting unit shall planned requisition to the main store to ensure there is no interruption in stock.

2.3 Issuing

2.3.1 Issuing of standard items shall be generated from Recommended Issue Quantity (RIQ). Issue quantity shall be determined by supplying unit based on availability of stocks.

2.3.2 Issuing of items from level 1 shall be based on PKU as unit of measurement (UOM). The use of SKU is allowed for certain products that is not possible to be indented in PKU by requestor.

2.3.3 All stores must practice "First Expiry First out (FEFO)" for item with expiry date or "First in First out (FIFO)" for item with no expiry date for all issuing items.

2.3.4 Stock transfer shall be requested and issued within the same level per item basis.

2.3.5 The price of all issuing items shown as an average price at issuing time. The price shall be different at different transaction.

2.3.6 The batch number and quantity of all items shall be checked before issuing.

2.4 Receiving

2.4.1 Total value of stocks shall include all stocks received from suppliers and external facilities.

2.4.2 Items issued from level 1, level 2 or level 3 shall be checked and verified by the receiving personnel.

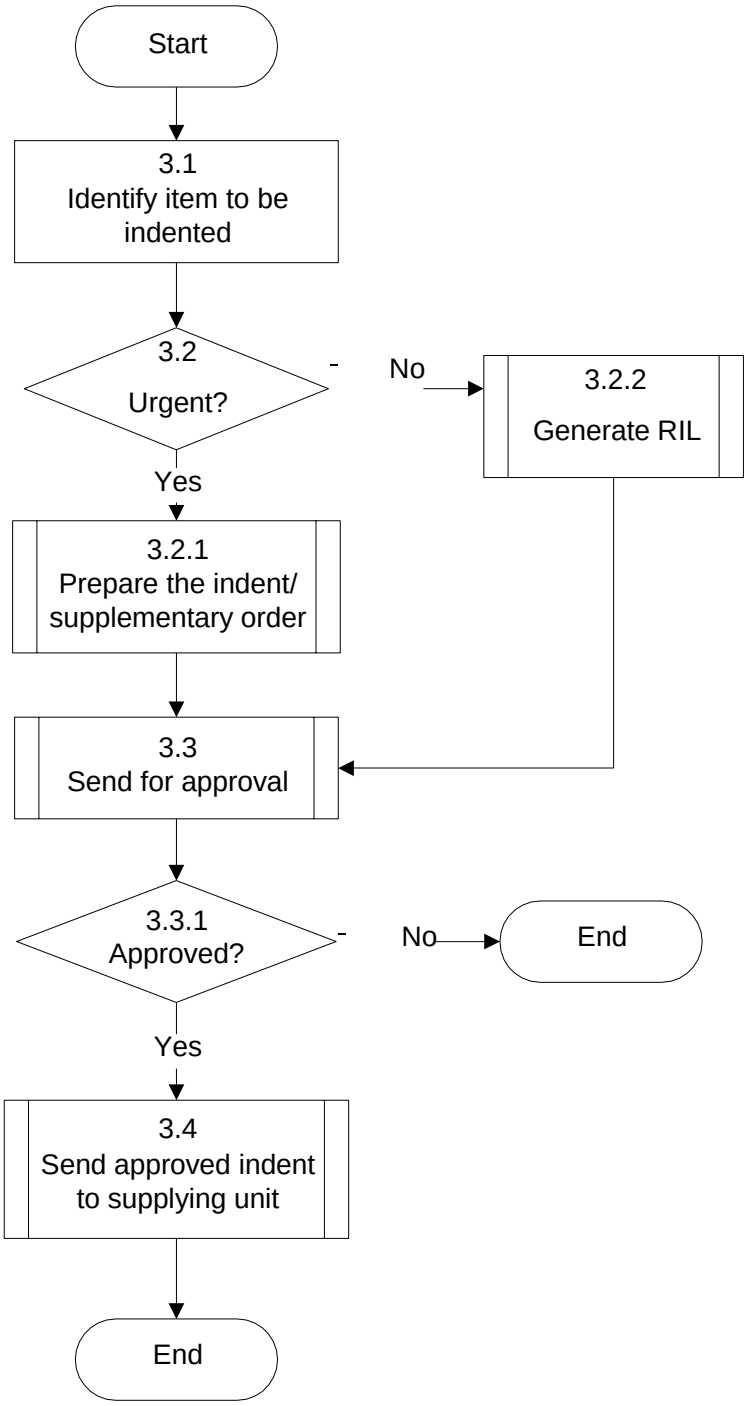
2.4.3 Requesting unit shall update receiving of indents in system to ensure the stocks are updated.

3.0 PROCEDURE AND PROCESS WORKFLOW

Procedure I : Indenting

No.	Procedure Name : Indenting	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Identify item to be indented.	Authorized Personnel	Unit catalogue
3.2	Determine indent type – urgent or routine basis 3.2.1 For urgent indent, select the supplementary order function. 3.2.2 For routine indent, generate Recommended Indent List (RIL), check for the suggested item and quantity. Do the amendment if necessary. .	Authorized Personnel	
3.3	Send for Head of Unit/Department approval 3.3.1 Determine if indent is approved or not If approved, proceed to step 3.4. If not approved, the process ends here.	Authorized Personnel	
3.4	Send approved indent to supplying unit (medical store / in-patient / out-patient / external facility).	Authorized Personnel	

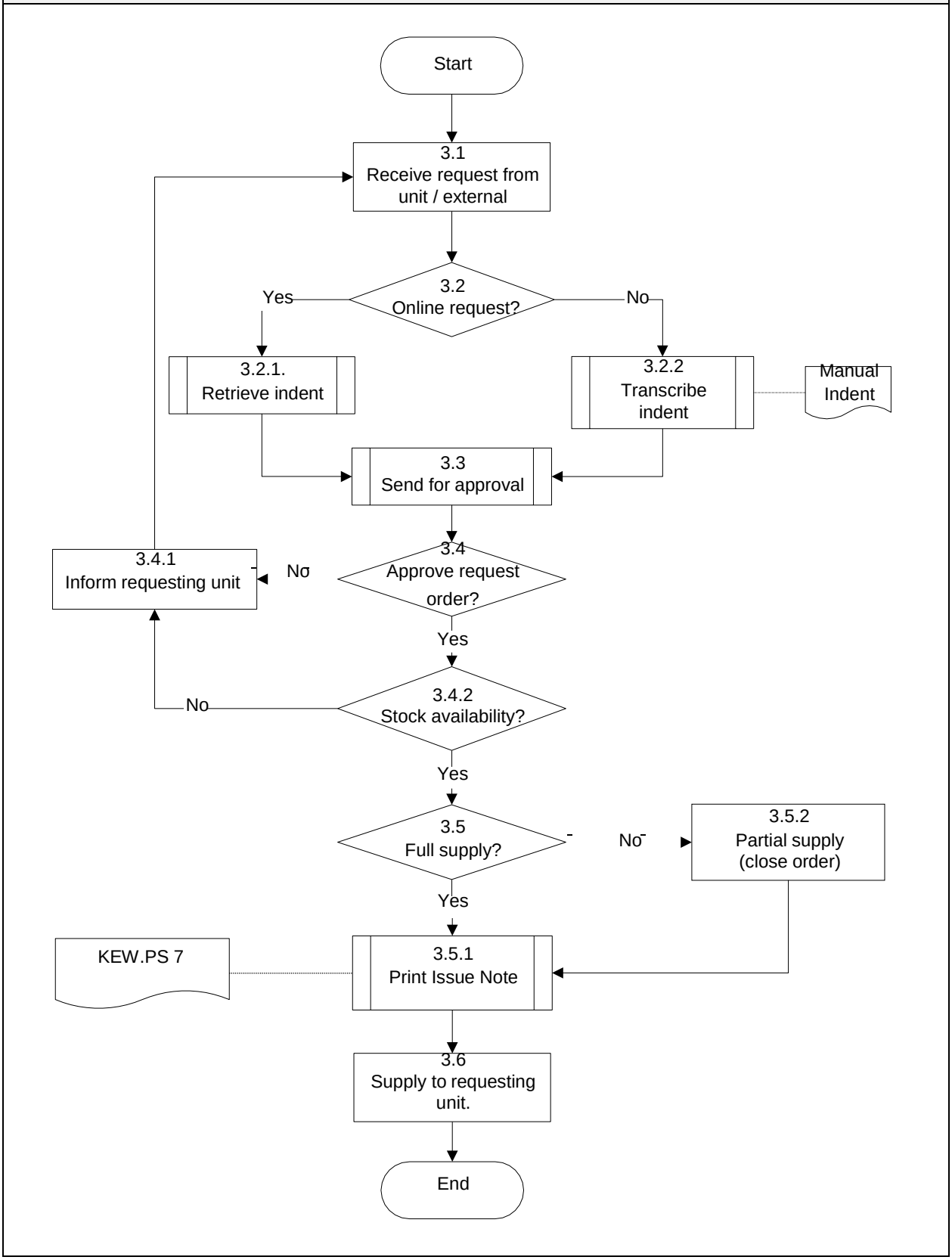
Process Workflow : Indenting



Procedure II : Issuing

No.	Procedure Name : Issuing	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive indent from requesting unit (internal/external).	Pharmacist / Authorised personnel	
3.2	Determine the type of request (online or offline indent). Determine if the indent is an urgent indent that needs immediate attention (based on the listing), or normal indent and shall be processed based on First Indent First Issue criteria. For online indent, proceed to step 3.2.1 to retrieve the indent and amend accordingly. *Retrieve RIQ online indent (internal/ external) from tasklist or external indent list before proceed with approval For offline indent, proceed to step 3.2.2 to transcribe the order and generate online request order. • Non-standard item shall be directly issued to the requesting unit once stock received from the supplier.	Pharmacist / Authorised personnel	
3.3	Send indent for approval	Pharmacist/ Authorised personnel	
3.4	Approve request order; 3.4.1 If not approved, inform requesting unit with reason. If approved, proceed to step 3.4.2 to determine the stock availability. If stock is not available, inform requesting unit. If stock is available, proceed to step 3.5	Pharmacist/ Authorised personnel	Approved request order
3.5	Determine to supply full to the requesting unit. 3.5.1 If yes, print issue note 3.5.2 If no, supply the indent partially and the indent is considered closed. Any partially supplied item shall go through new indent.	Pharmacist/ Authorised personnel	Unit Catalogue Issue note KEW PS 7
3.6	Issue and supply items. * Offline issue to Non MOH facility to use KEW.PS-17 – Borang Pindahan Stok.	Pharmacist / Pharmacist Assistant	Approved Issue Note KEW PS 4 Psychotropic record book

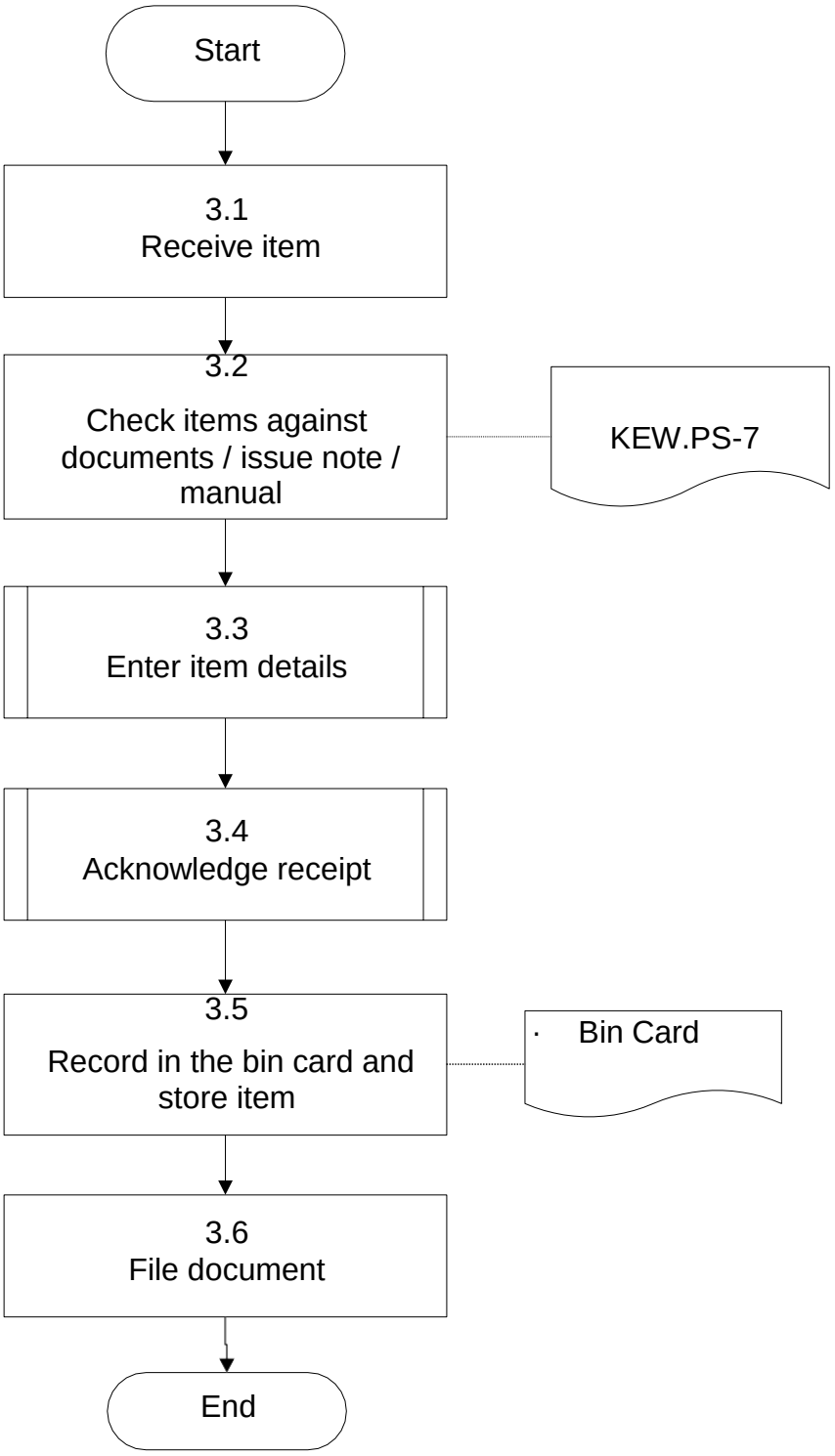
Process Workflow : Issuing



Procedure III : Receiving (for all unit)

No.	Procedure Name : Receiving	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive item from supplying unit (internal or external facility)	Authorised Personnel	
3.2	Check item against document provided.	Authorised Personnel	Issue note Manual note
3.3	Enter item details (if required)	Authorised Personnel	
3.4	Acknowledge receipt *to reject or return stock to indenter if necessary	Authorised Personnel	
3.5	Update bin card and store / keep item at designated location.	Authorised Personnel	Bin card
3.6	File document.	Authorised Personnel	

Process Workflow : Receiving



SECTION 18.5 : INVENTORY – STOCK MANAGEMENT

1.0 OBJECTIVE

This procedure is to maintain the good storage practices and enhance the efficiency in stock management. It comprises:

i) stock taking/stock verification
ii) stock adjustment
iii) management of slow moving and nearly expired item

2.0 POLICY

2.1 Standard items

Criteria:

3.1 Fast moving items
3.2 Commonly used by many requesting departments/units
3.3 Items need to be stored by main store
3.4 For next purchased, the estimation of purchased quantity based on transaction trending at level 1 store

2.2 Non-standard items (Direct Issue)

Criteria:

2.2.1 Items used by specific/limited number of requesting units
2.2.2 High value items with small purchased quantity
2.2.3 High volume items

2.3 Level 1 store must ensure availability of all standard items by practising good stock management.

2.4 All stocks level shall be determined to ensure no interruption in supply. Stocks level shall be maintained as shown below:

2.4.1 Standard items storage

Stocks level	Main Store (Level 1)	Sub-stores (Level 2)	Units/Wards/Workstation (Level 3)
Minimum	≥ 1 month	≥ 2 weeks	≥ 1 week
Buffer	≤2 months	≤1 months	≤2 weeks
Maximum	≤3 months	≤2 months	≤1 month

2.4.2 Non-standard items storage

Maximum stock for **non-standard items** shall not exceed more than six months usage at sub-stores/wards/units.

2.4.3 Emergency trolley stock shall be made available all the time.

2.5 Authorised personnel shall be responsible to check, update and maintain stock level.

2.6 List of items and quantity to be kept as ward or unit stock shall be reviewed by pharmacist from time to time and according to local policy. Ward or unit stock shall be auto replenished.

2.7 Periodical inspection and spot-check shall be carried out at all levels. Frequency of inspection shall be determined by individual facility.

2.8 Stock checking can be carried out at main store and sub-stores while stock verification is compulsory to be carried out annually at main store only. Implementation of stock checking at sub-stores and units shall be based on local policy.

2.9 Stock adjustment shall be performed if there is any discrepancies occur between physical stocks and records by an authorized personnel

2.10 Authorised personnel shall generate the slow moving list on regular basis. Monitoring of slow moving item shall be done at least twice a year.

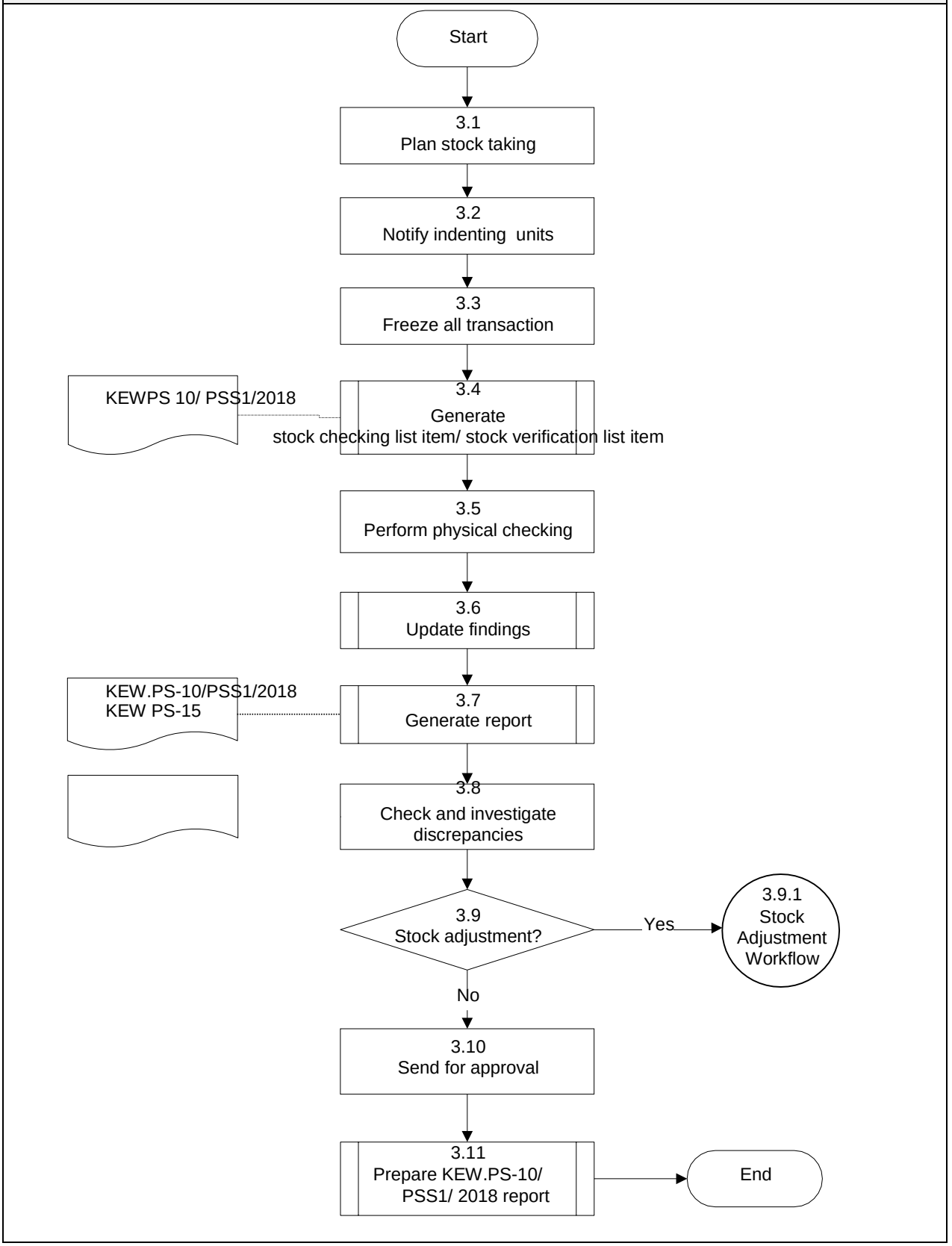
3.0 PROCEDURE AND PROCESS WORKFLOW

Procedure I: Stock Checking / Stock Verification

No.	Procedure Name : Stock Checking /Stock Verification	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Plan for stock checking/ verification	Pharmacist	Scheduled plan *Tatacara Pengurusan Stor*
3.2	Notify indenting units : To ensure that there is sufficient stock in use during stock checking/ verification period.	Pharmacist	Notice to other units
3.3	Freeze all transactions, unless in a real emergency situation	Clerk	
3.4	Generate stock checking list item	Stock Keeper	KEW.PS-10 / PSS1/2018

No.	Procedure Name : Stock Taking /Stock Verification	Responsibility	Remarks/ Data/ Document/ etc.
	(based on Store level) Main store : may perform stock checking and stock verification Main store or sub-store : may perform stock checking only		
3.5	Perform physical checking against the stock checking/ verification list item to compare quantity, expiry date and batch number for each item.	Stock Checker	KEW.PS-10 / PSS1/2018
3.6	Update findings in the system.	Stock Checker / Pharmacist	KEW.PS-14
3.7	Generate report	Pharmacist	KEW.PS-14 KEW.PS-15
3.8	Check and investigate for any discrepancies	Store Pharmacist	KEW.PS-14 KEW.PS-17
3.9	Determine the need for stock adjustment 3.9.1 If yes, refer to stock adjustment workflow If no, proceed to step 3.10	Authorized personnel	
3.10	Send to authorized personnel for approval.	Pharmacist	
3.11	Prepare KEW. PS-10 for stock verification/ PSS1/ 2018 for stock checking report	Authorized personnel	

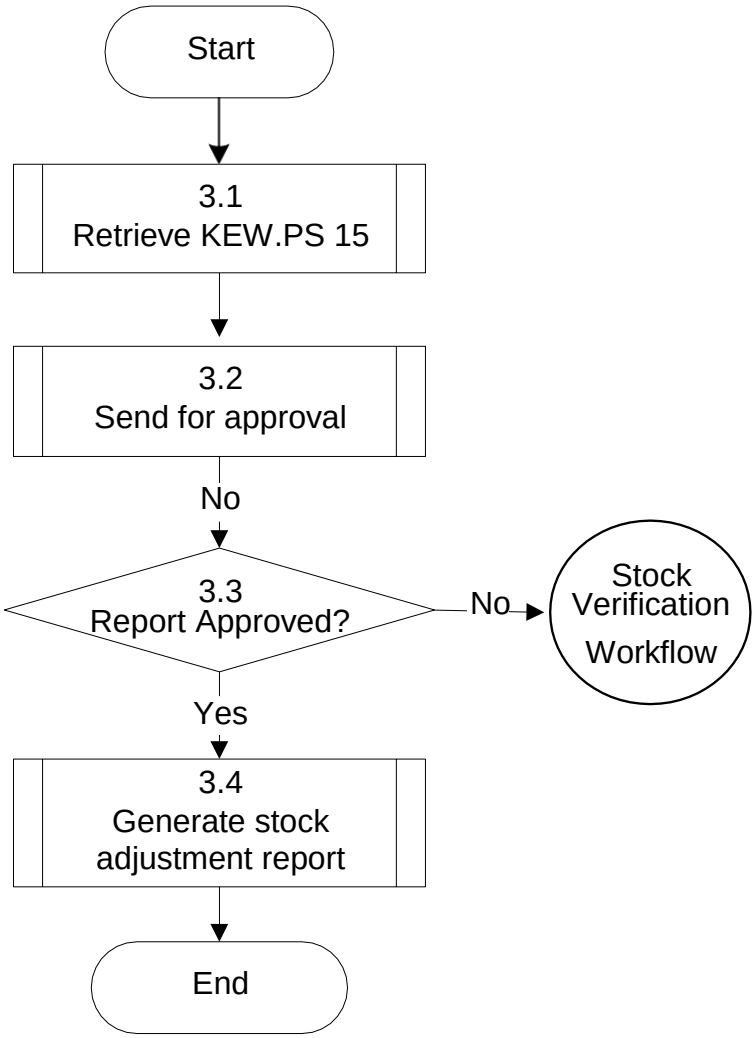
Process Workflow : Stock Checking / Stock Verification



Procedure II: Stock Adjustment

No.	Procedure Name : Stock Adjustment	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Retrieve KEW.PS 15 from count sheet module.	Pharmacist / Clerk	Count Sheet
3.2	Send suggested adjustment quantity to authorised personal for approval to proceed with stock adjustment	Pharmacist / Clerk	Count Sheet
3.3	Verify and approve suggested adjustment quantity. If approved, proceed to step 3.4. If not approved, proceed to Stock Verification Workflow. Remark(s) is mandatory if not approved.	Authorized Personnel	KEW.PS 15
3.4	If approved, generate stock adjustment report.	Pharmacist / Clerk	

Process Workflow : Stock Adjustment

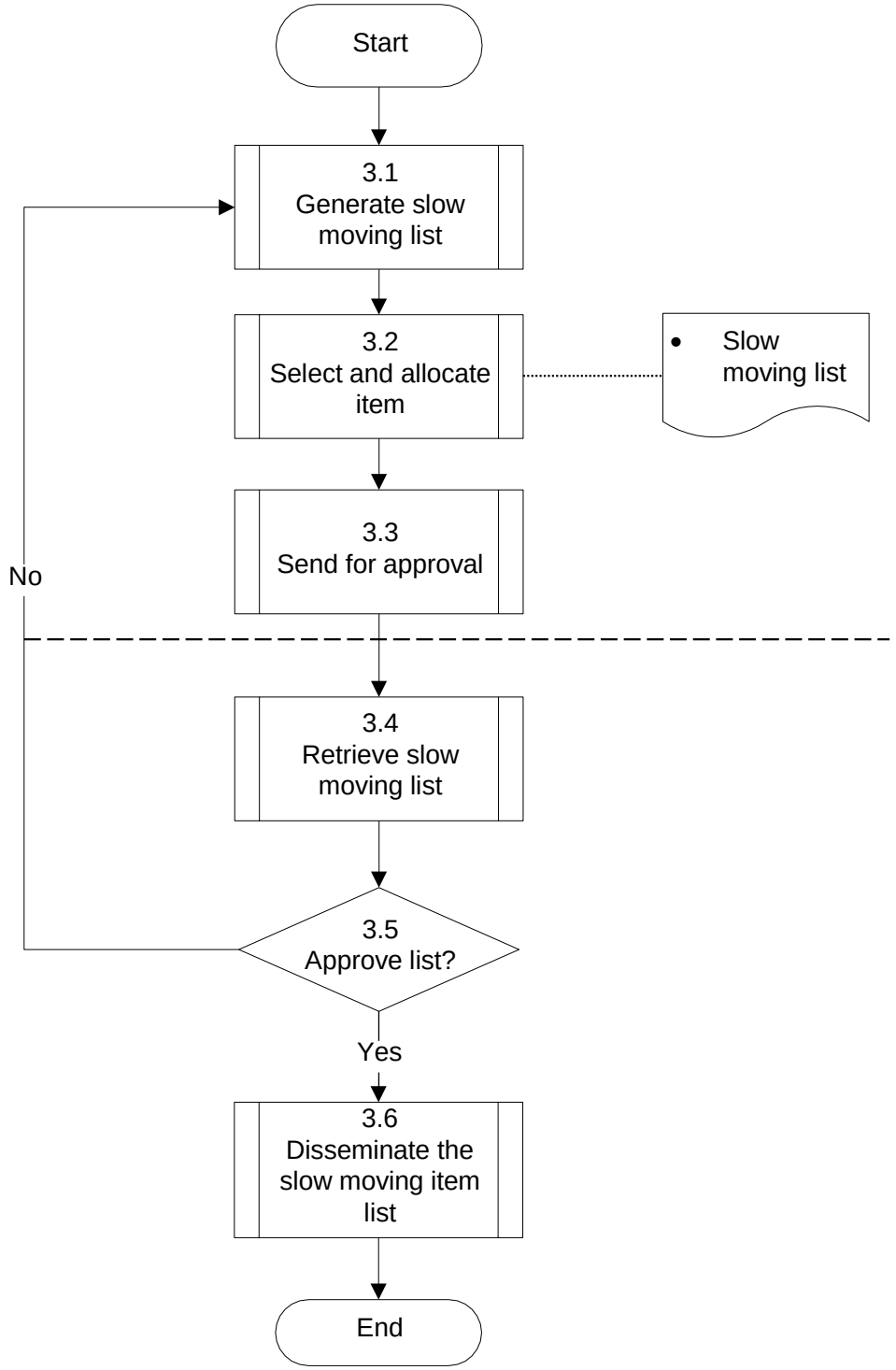


Procedure III: Management Of Slow Moving and Nearly Expired Item

3.0 PROCEDURE AND PROCESS WORKFLOW

No.	Procedure Name : Management of Slow Moving Item and Nearly Expired Item	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Generate Slow Moving Item List/nearly expired item	Pharmacist / Clerk	Slow moving period Item group Item type
3.2	Determine item and quantity to offer to other units.	Pharmacist / Clerk	
3.3	Send the list for approval.	Pharmacist / Clerk	
3.4	Verify and approve suggested quantity to disseminate. If approved, proceed to step 3.5. If not approved, proceed to step 3.1	HOD/Head of Unit	Slow moving list
3.5	Disseminate slow moving list to all units (if necessary).	Head of unit	Slow moving notification letter.

Process Workflow : Management of Slow Moving and Nearly Expired Item



SECTION 18.6 : INVENTORY –PRODUCT RECALL

1.0 OBJECTIVE

This procedure is applicable for management of product recall notification received from National Pharmaceutical Control Bureau (NPCB)/supplier/manufacturer

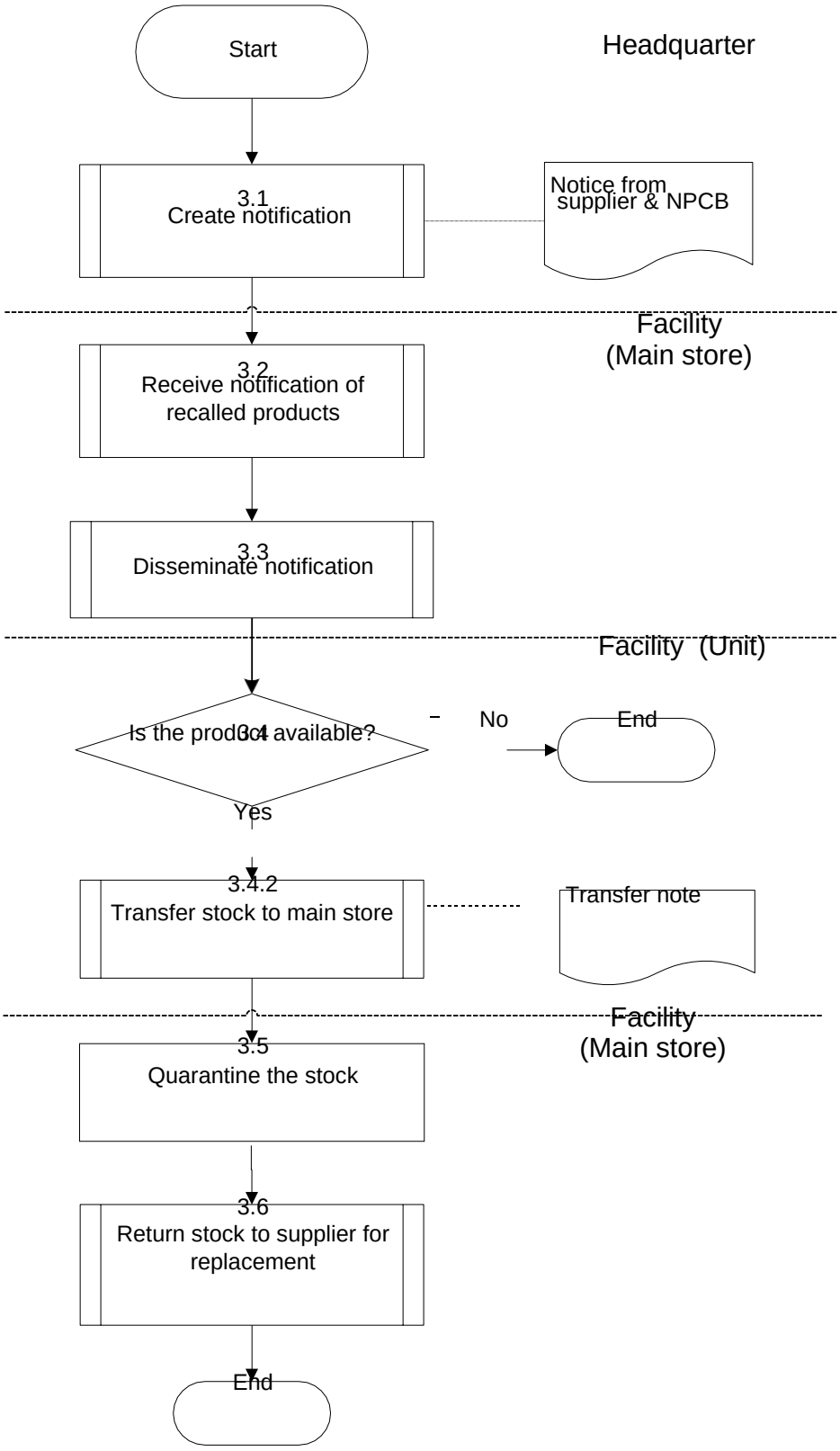
2.0 POLICY

2.1 Notification of product recalls shall be carried out according to relevant guideline/ Procedure.

3.0 PROCESS WORKFLOW AND PROCEDURE

No.	Procedure Name : Product Recall	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Create notification regarding product recall received from NPCB /supplier/manufacturer	Authorised Personnel (HQ)	Product recall notice
3.2	Received notification of recall products from NPCB / supplier / manufacturer.	Chief Pharmacist (Facility)	Product recall notice
3.3	Disseminate the product recall information to Head of Units e.g. Outpatient Pharmacy, Inpatient Pharmacy and Satellite Pharmacy.	Pharmacist	Product recall notice
3.4	Receive information and documents about product to be recalled. All level of stores need to check whether the product is available in the unit. 3.4.1 If the product is not available, process ends here. 3.4.2 If yes , transfer stock to main store	Head of unit	Product recall notice
3.5	Quarantine the stock until further notice by the supplier. Update bin card and adjust inventory.	Authorised personnel	Bin Card (KEW.PS-4)
3.6	Return the stock to supplier for replacement	Authorised personnel	

Process Workflow : Product Recall



SECTION 18.7 : INVENTORY- PRODUCT COMPLAINT

1.0 OBJECTIVE

This procedure is applicable for handling of product complaints.

2.0 POLICY

2.1 Product complaints shall be done according to the type of items purchased by the facility.

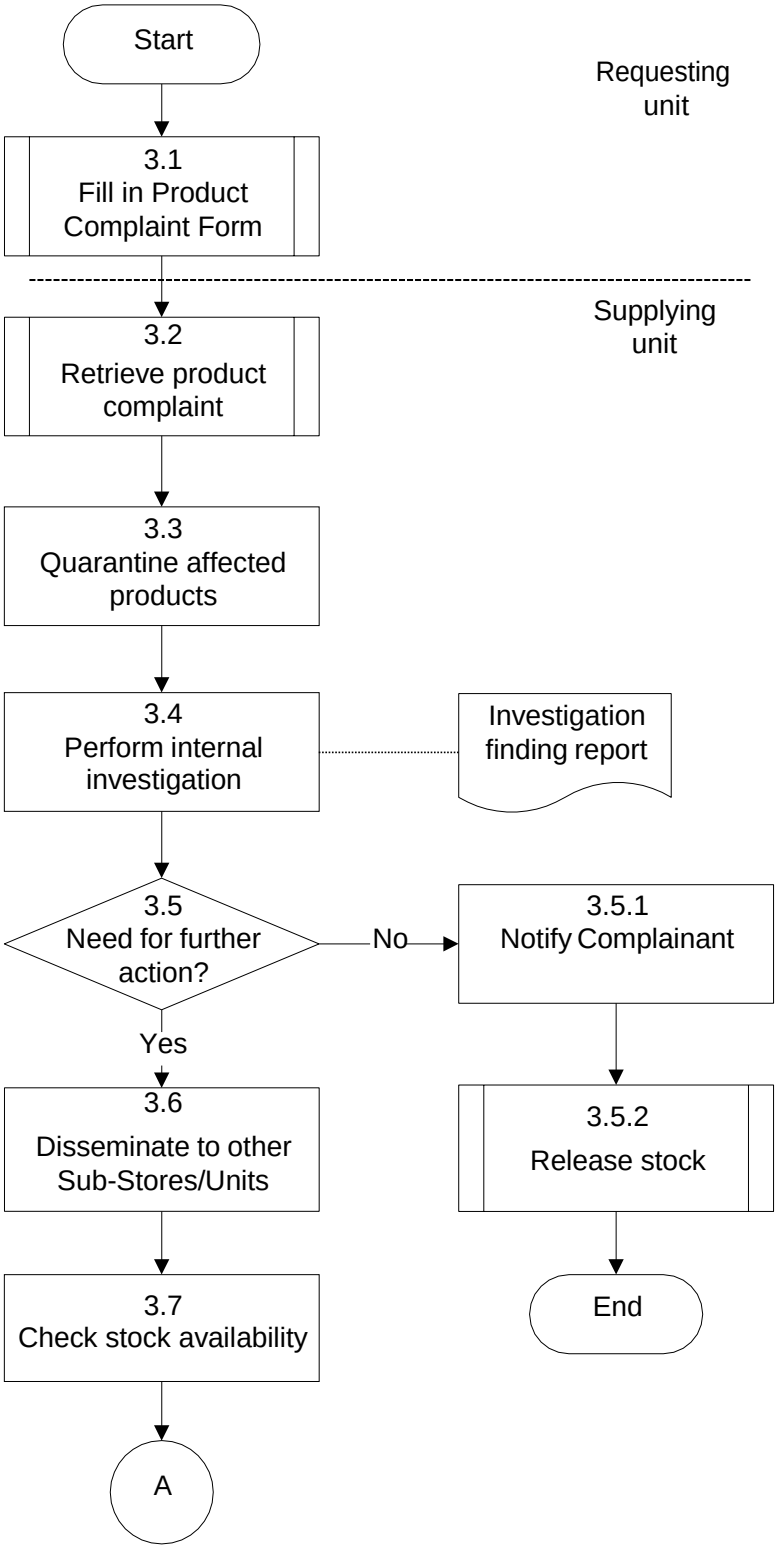
2.2 Product complaints apply to registered products only.

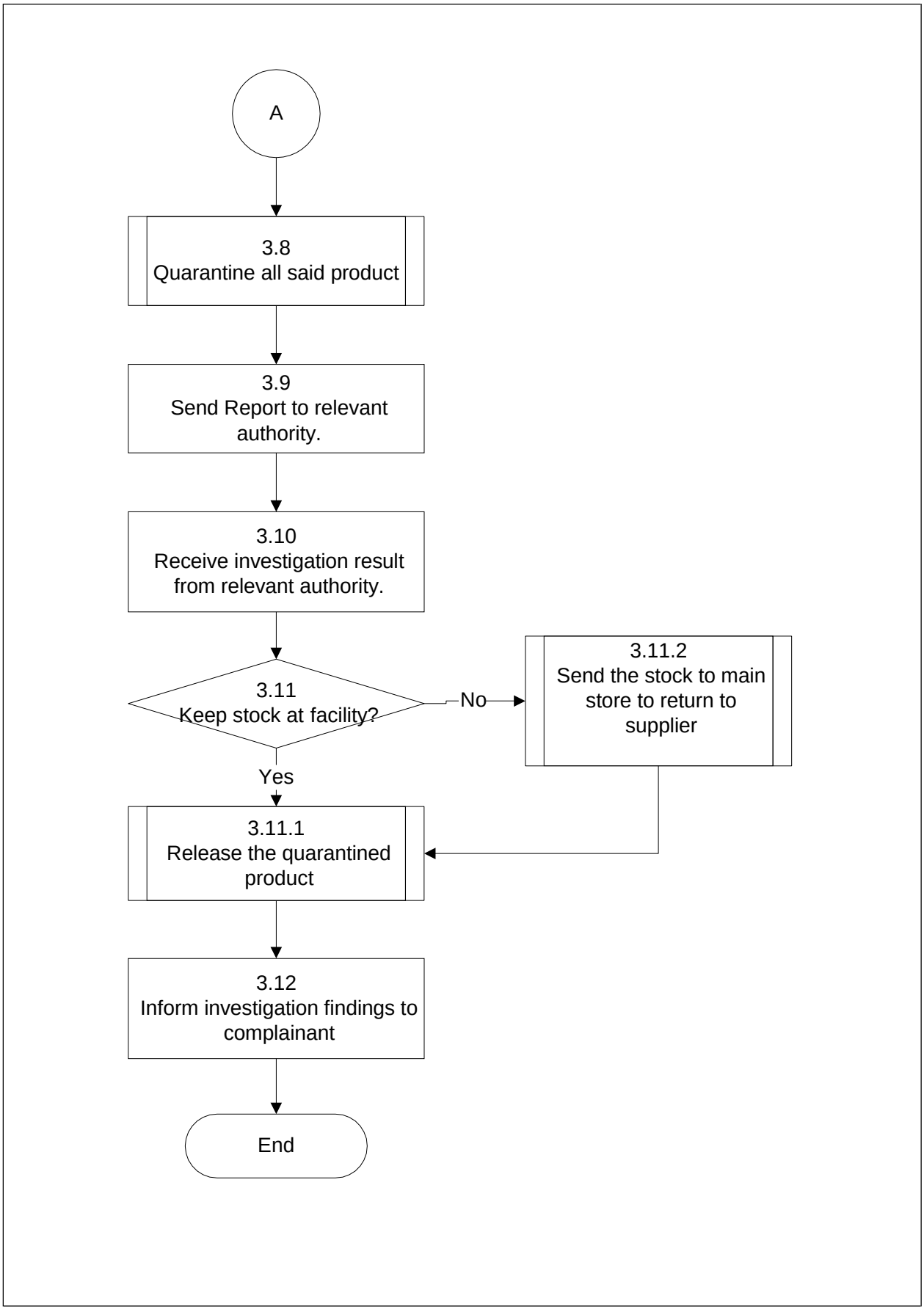
3.0 PROCESS WORKFLOW AND PROCEDURE

No	Procedure : Product Complaint	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Fill in product complaint form.	Pharmacist Store/sub store/Unit	BPFK 418.4 Medical Device Incidence form
3.2	Retrieve product complaint information from the system.	Pharmacist	
3.3	Quarantine affected products.	Clerk	
3.4	Perform internal investigation. Record and document investigation finding.	Pharmacist	Samples Users Investigation finding report.
3.5	Determines is there ground for further investigation: 3.5.1 If no, inform the finding to the complainant. 3.5.2 Release quarantine stock and the process ends here.	Pharmacist	Notification of investigation findings
3.6	If Yes, disseminate the information to other units and sub-store.	Pharmacist / Clerk	
3.7	Check the stock availability at each pharmacy / Unit.	Pharmacist / Clerk	
3.8	Quarantine product if necessary and decide the sample quantity to be sent to the relevant authority for testing.	Pharmacist	

No	Procedure : Product Complaint	Responsibility	Remarks/ Data/ Document/ etc.
3.9	Print the product complain form and send samples together relevant authority: i. Drug (BPFK) ii. Non-Drug (Medical Device Bureau)	Pharmacist	
3.10	Receive investigation result from the relevant authority. Release the quarantined stock if finding shows that the stock is safe to be used. Return stock to supplier through Pharmacy Store if the finding shows that the stock is not safe to be used. Inform complainant regarding investigation result.	Pharmacist	Investigation result from the relevant authority
3.11	Determine if the product is safe to use based on the investigation report from the relevant authority. 3.11.1 If yes, release product from quarantine. 3.11.2 If no, send all reported product from sub-store / unit to main store.	Pharmacist	Product complaint file
3.12	Inform investigation findings to complainant.	Pharmacist / Clerk	Investigation result.

Process Workflow : Product Complaint




A
3.8
Quarantine all said product
3.9
Send Report to relevant authority.
3.10
Receive investigation result from relevant authority.
3.11
Keep stock at facility?
No
3.11.2
Send the stock to main store to return to supplier
Yes
3.11.1
Release the quarantined product
3.12
Inform investigation findings to complainant
End

SECTION 18.8: CONTINOUS AMBULATORY PERITONEAL DIALYSIS (CAPD) ITEMS FOR HOME DELIVERY MANAGEMENT

1.0 OBJECTIVE

This procedure is applicable for procurement and management of CAPD items for home delivery. This procedure is shall be used together with current guideline *(Garispanduan Tatacara Pelaksanaan Pembekalan Alat Disposable Twin Bag Integrated Disconnect Peritoneal Dialysis System (Konsumabel CAPD) kepada pesakit kegagalan ginjal peringkat akhir untuk rawatan Continuous Ambulatory Peritoneal Dialysis (CAPD) di rumah)*.

2.0 POLICY

2.1 Allocated budget for CAPD items *(Objek Lanjut 27401 an 27499)* shall be managed by authorised personnel.

2.2 CAPD items shall be procured by relevant OL accordingly.

2.3 All LPO details for CAPD items created in *ePerolehan* shall be entered in PhIS to monitor CAPD items stock management.

2.4 LPO details for CAPD items shall be entered in PhIS by item type (Drug and Non Drug) accordingly.

2.5 CAPD items replenishment shall be made based on order by the requesting units (CAPD Unit/Nephrology Department) and actual number of patients.

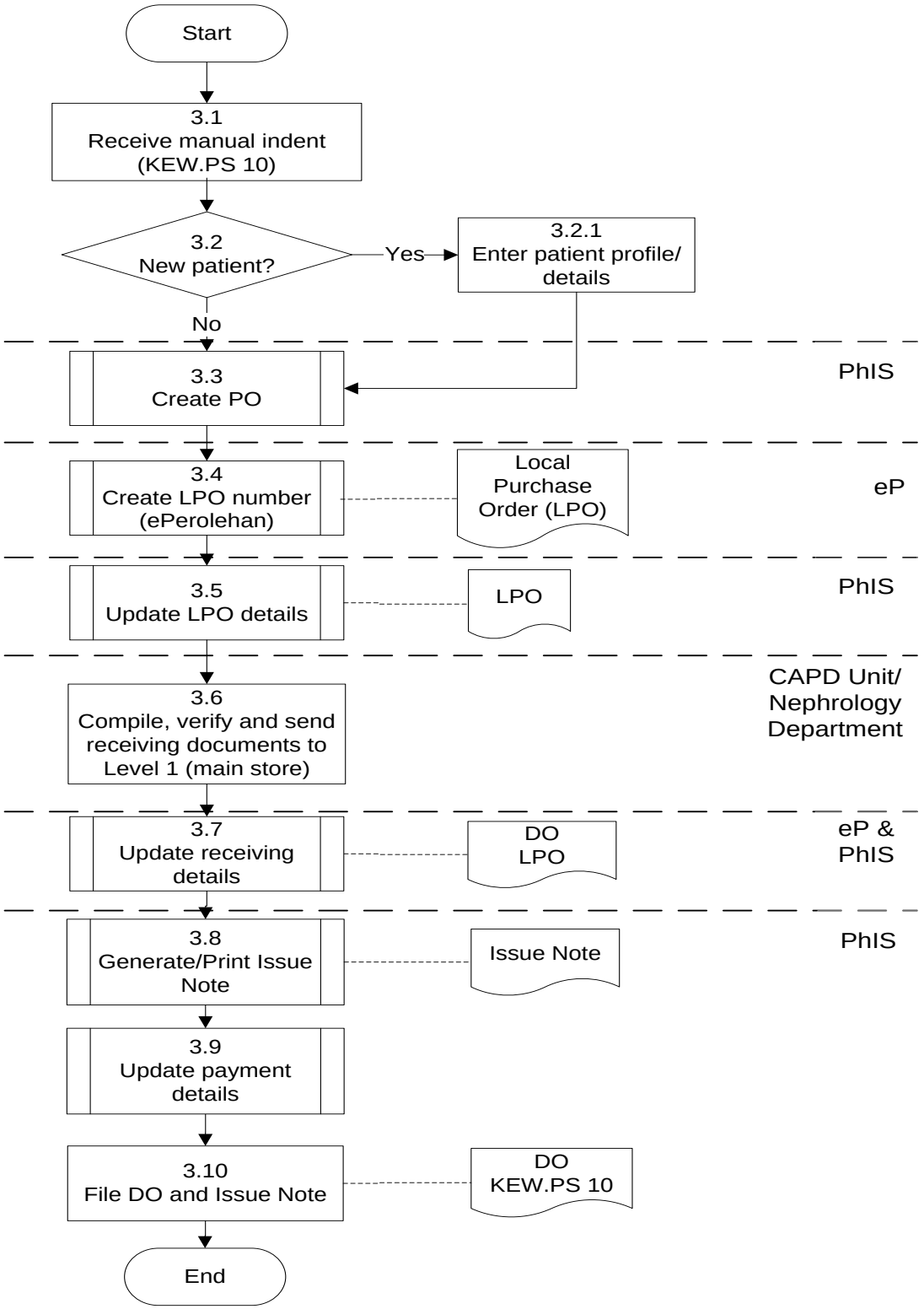
2.6 Each CAPD items' Purchase Order (PO) in PhIS shall be comprise no more than 10 patients

3.0 PROCEDURE AND PROCESS WORKFLOW

No.	Procedure Name : CAPD items for home delivery management	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Receive manual indent (KEW.PS 10) from requesting unit (– CAPD Unit/Nephrology Department)	Authorized Personnel	• Borang Pesanan Item CAPD Untuk Penghantaran Ke Rumah • KEW.PS 10
3.2	Determine if patient is new and need to be created. If Yes, proceed to step 3.2.1 – enter patient profile /details If no, check the indent with patient's CAPD items usage and proceed to step 3.3	Pharmacist/ Clerk	• Borang maklumat pesakit (baru) • Preskripsi
3.3	Create PO details in the PhIS .	PhIS Authorized Personnel	• Local Purchase Order (LPO)

No.	Procedure Name : CAPD items for home delivery management	Responsibility	Remarks/ Data/ Document/ etc.
3.4	Create the LPO number in the *e-Perolehan* (eP) with patient's details, delivery information, drugs and non drugs used for CAPD treatment (patient basis)	eP Authorized Personnel	• LPO • CAPD Procurement Summary
3.5	Update LPO details (eP) in the PhIS by supplier with condition as stated below: a. Multiple LPO (patient basis) generated by eP to combine in the PhIS according to Drug Item Code b. Multiple LPO (patient basis) generated by eP to combine in the PhIS according to Non Drug Item Code	PhIS Authorized Personnel	• LPO
3.6	Compile, verify and send receiving documents for CAPD items to Main Store	CAPD Unit/ Nephrology Department	• DO • Patient receiving checklist • LPO • Invois
3.7	Update receiving details in both eP and PhIS	eP and PhIS Authorized Personnel	• DO • LPO
3.8	Generate/print Issue Note and return to CAPD Unit/Nephrology Department for acknowledgement	Authorized Personnel	• Issue Note (KEW.PS 10)
3.9	Update payment details in the PhIS	Authorized Personnel	• DO • LPO • Invois
3.10	File Delivery Order (DO) and Issue Note	Clerk	• DO • KEW.PS 10

Procedure Name : CAPD items for home delivery management



SECTION 19 : HOUSEKEEPING (MAINTE NANCE OF PRESCRIPTION RECORD)

1.0 OBJECTIVE

This procedure is applicable for the maintenance of prescription record due to incomplete during dispensing. The prescription/preparation need to be released or discarded to ensure the inventory is updated and prescription/preparation is not locked at any stage.

2.0 POLICY

2.1 Housekeeping/maintenance of prescription/preparation record data shall be conducted on a daily basis by the authorised personnel.

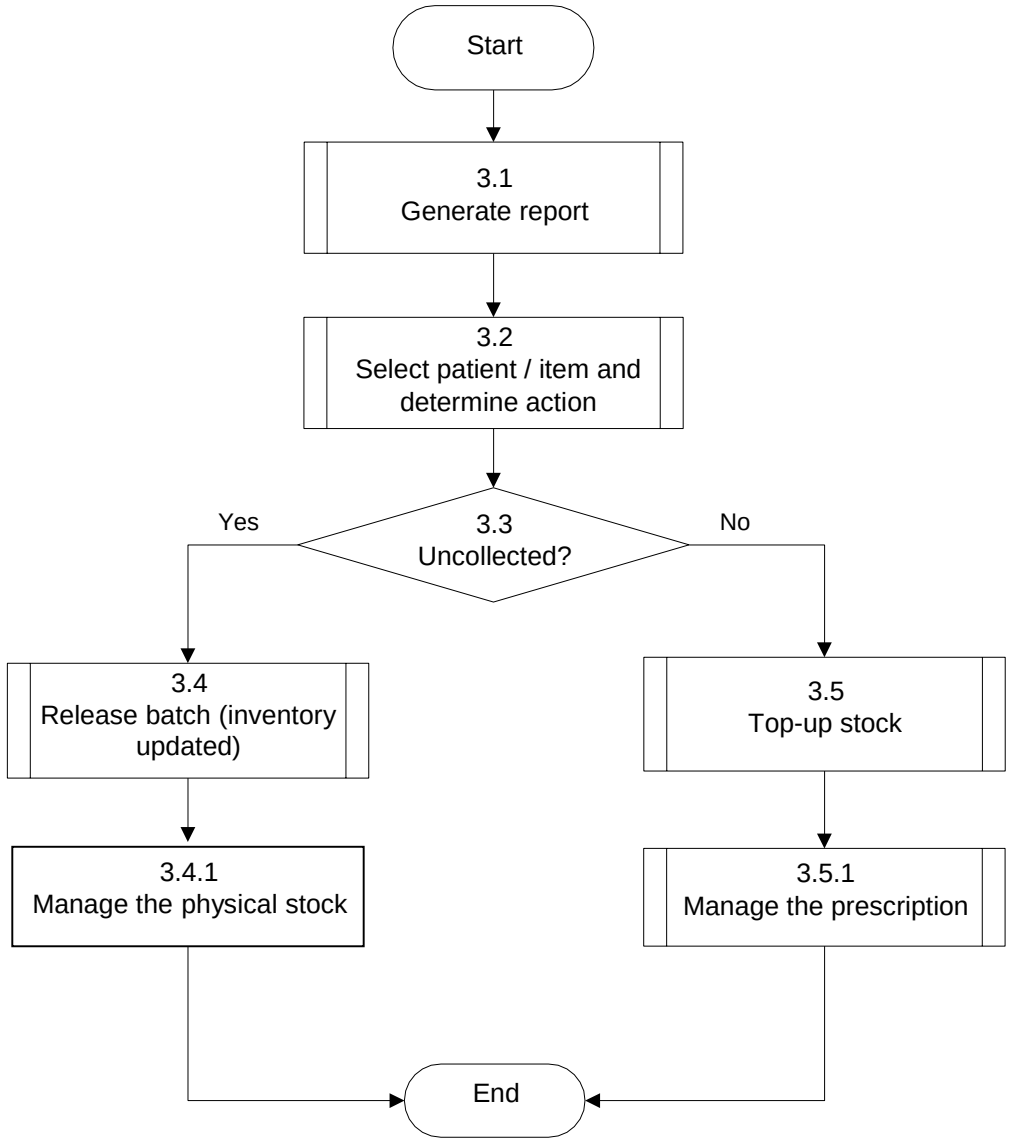
2.2 Maintenance of the record is to be conducted at all location – in patient, out-patient and manufacturing unit.

3.0 PROCEDURE AND PROCESS WORKFLOW

No	Procedure Name : Maintenance of prescription/ record/ data	Responsibility	Remarks/ Data/ Document/ etc.
3.1	Generate the housekeeping report		
3.2	Search patient name or item to be maintained and determine action to be taken	Pharmacist/ Pharmacist Assistant	
3.3	If prescription is uncollected, proceed to step 3.4. If due to other reason, proceed to step 3.5 based on Appendix I	Pharmacist/ Pharmacist Assistant	• Appendix I
3.4	For uncollected prescription, release item. Reasons to release are as follows: -Uncollected -Wrong Allocation -Change of regimen -Patient refused -Intervention -Faulty product The selected item will be released and inventory will be updated. 3.4.1 Manage the physical stock (return to counter/sub store)	Pharmacist/ Pharmacist Assistant	

No	Procedure Name : Maintenance of prescription/ record/ data	Responsibility	Remarks/ Data/ Document/ etc.
3.5	Take necessary action for the item according to the reason chosen and the process ends here. 3.5.1 Manage the prescription accordingly	Pharmacist/ Pharmacist Assistant	• Appendix I

Process Workflow : Maintenance of prescription record/data



SECTION 19: USER PROFILE CREATION AND UPDATE

1.0 OBJECTIVE

To define the process of creating and updating User Profile and User Role Assignment for Pharmacy Information System & Clinic Pharmacy System

2.0 POLICY

2.1 All users shall be registered by System Administrator. User profile shall be created and user role shall be assigned in order to use the system .

2.2 Each user shall have a unique login that is not shared with or disclosed to any other user.

2.3 System administration accounts must only be provided to users that are required to perform system administration tasks.

2.4 The use of group accounts and group passwords shall not be allowed.

2.5 User assignment roles shall be based on the job responsibilities and separation of duties. One user may be assigned to a single or multiple roles depending on their job functions.

2.6 Head of department of each facility shall have the final decision on a user access level in the system.

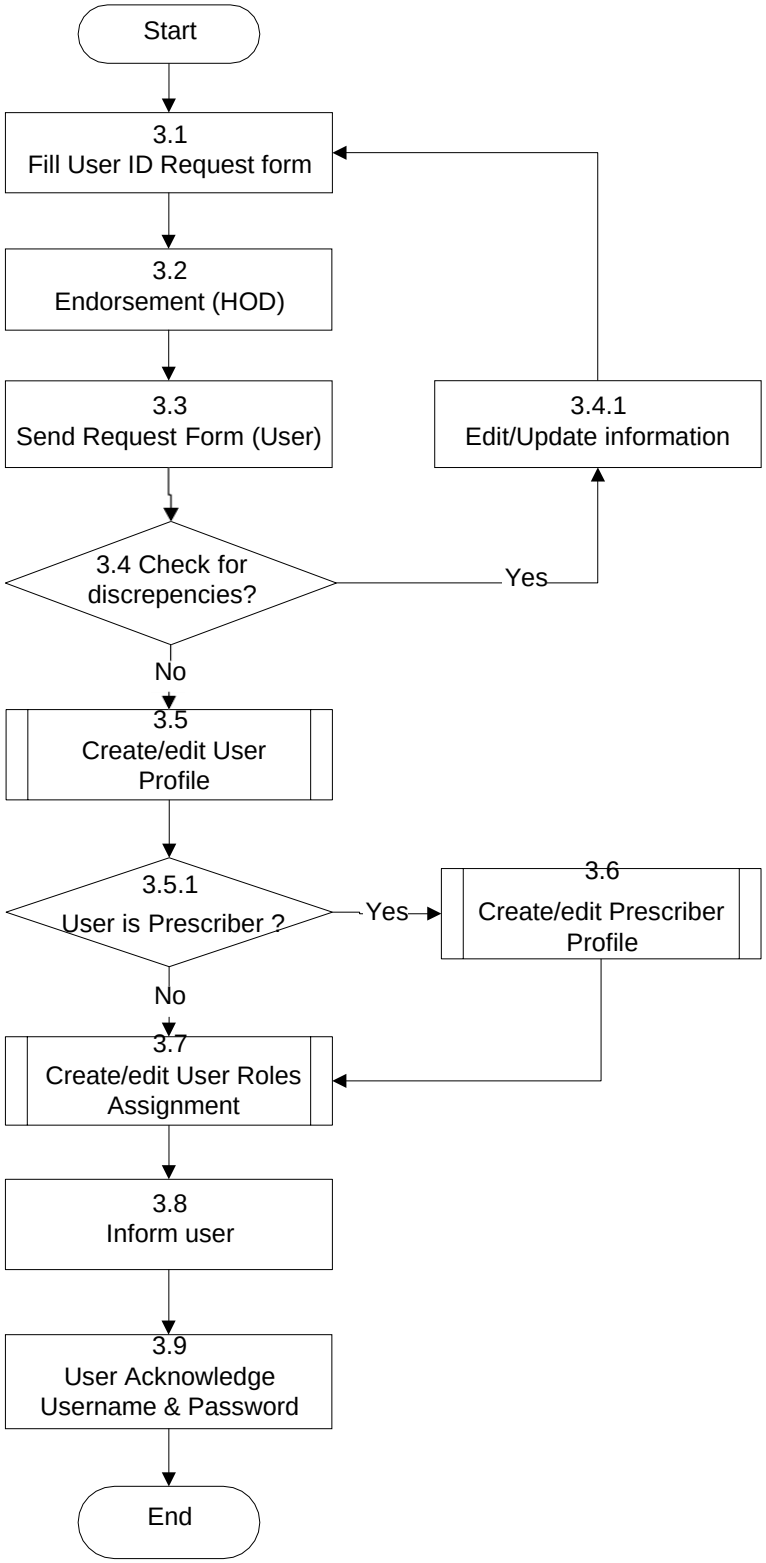
2.7 When a user leaves the facility, their access to the system and data must be disabled at the end of the employee's last working day. User Termination Form to be submitted to the System Administrator.

2.8 If user has the authority to work at another facility as a replacement or visiting personnel, user must also be registered at the other facility.

3.0 PROCEDURE AND PROCESS WORKFLOW

No	Procedure Name : User Profile Creation & Update	Responsibility	Remarks/ Data/ Document/ etc.
3.1	User fill up User ID Request form - New User - Update requester/ location unit - Reset password - Update Role assignment	User	User ID Request Form
3.2	Endorsement by Head of Department.	Head of Department	User ID Request Form
3.3	Submit request to User Profile Administrator.	User	User ID Request Form
3.4	Administrator receive request form and check for any discrepancies or incomplete information. If Yes, user shall edit or update request form (step 3.4.1) If No, proceed to step 3.5	Administrator	User ID Request Form
3.5	Administrator create or update user profiles in system Determine if user is a prescriber. 3.5.1 If yes, proceed to step 3.6 If not, proceed to step 3.7	Administrator	• User Role Assignment for PhIS & CPS
3.6	Create or update prescriber's information.	Administrator	
3.7	Create or update User Role Assignment.	Administrator	• User Role Assignment for PhIS & CPS
3.8	Inform user upon completion of user ID creation.	Administrator	
3.9	User acknowledge the user ID and password.	User	

Process Workflow : User Profile Creation & Update



SECTION 20: DATA MANAGEMENT

1.0 OBJECTIVE

To define the process of creating and updating master data and reference table for Pharmacy Information System & Clinic Pharmacy System

2.0 POLICY

2.1 Pharmacy Information System data elements definitions shall be specified and formatted according to National Health Data Dictionary (NHDD).

2.2 Pharmacy Information System Master Drug and Non Drug Catalogue shall be maintained by Pharmaceutical Services Division (PSD), Ministry of Health (MOH).

2.3 Facility shall maintain its catalogue based on the master catalogue. Users at Facility shall request for new items to be registered in the Master Catalogue and activate the list in the Facility Catalogue.

2.4 Each data set /master shall refer to respective Data Owner from each branch in PSD for verification.

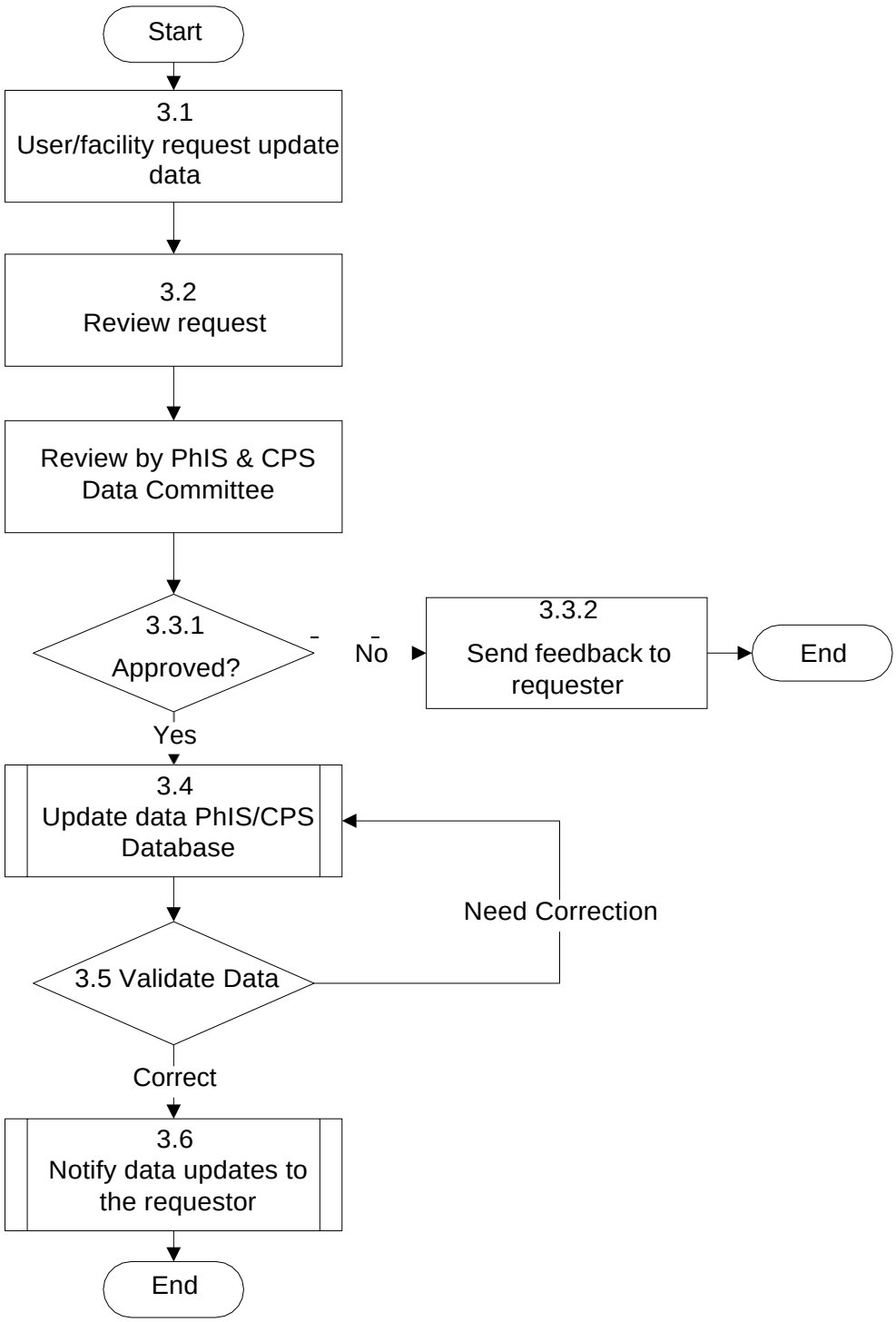
2.5 Data administrator shall be appointed and responsible to update each data in the system to maintain the data integrity

3.0 PROCEDURE AND PROCESS WORKFLOW

No	Procedure Name : Data Management	Responsibility	Remarks/ Data/ Document/ etc.
3.1	User/facility send request to update or amend data	Data Administrator (Facility)	Change Request Form
3.2	i. Review request and contact requester for additional information (if required) ii. Send to respective data owner for standardization	Data Administrator (Headquarters)	
3.3	Review by PhIS & CPS Data Committee at Headquarters 3.3.1 If request is approved, proceed to step 3.4 3.3.2. If request is rejected, notify the requester.	PhIS & CPS Data Committee Data Administrator (Headquarters)	

No	Procedure Name : Data Management	Responsibility	Remarks/ Data/ Document/ etc.
3.4	Create new formulation or edit current formulation. Update data in the system	Data Administrator (Headquarters)	
3.5	Validate data in the system - If Correct, proceed to 3.6 - If Incorrect and need amendment, repeat step 3.3	Data Administrator (Headquarters)	
3.6	Notify data updates to the requestor	Data Administrator (Headquarters)	

Process Workflow : Data Management



6.0 REFERENCES

6.1 Protocol Medication Therapy Adherence Clinic :Retroviral Disease (Adult & Paediatric)
6.2 Respiratory Medication Therapy Adherence Clinic Protocol : Asthma/COPD (Adult & Paediatric
6.3 Protocol Medication Therapy Adherence Clinic Hepatitis
6.4 Garispanduan Kaunseling Ubat-ubatan
6.5 Protocol Medication Therapy Adherence Clinic, Ward & HMR : Neurology (Stroke), First Edition 2013
6.6 Protocol Medication Therapy Adherence Clinic : Rheumatology
6.7 Protocol Medication Therapy Adherence Clinic : Psoriasis
6.8 Protocol Haemophilia Medication Therapy Adherence Clinic
6.9 Protocol Medication Therapy Adherence Clinic : Geriatric
6.10 Guide on Handling of Look Alike, Sound Alike Medications First Edition 2012
6.11 Polisi Operasi Farmasi Ambulatori (Hospital & Klinik Kesihatan Edisi 1 : 2011)
6.12 Garispanduan Pembekalan Ubat Farmasi Pesakit Dalam
6.13 Garispanduan Pengurusan Stor Farmasi di Hospital & Klinik Kesihatan Kementerian Kesihatan Malaysia
6.14 MOH Extemporaneous Formulary 2011
6.15 Guideline for Inpatient Pharmacy Practice 2010,
6.16 Manual For Sterile Preparations, 2010
6.17 Garispanduan Pengesanan Pesakit dengan Alahan Ubat
6.18 Malaysia Drug Code 2010
6.19 User Role Assignment for Pharmacy Information System 2014
6.20 Standard Operating Procedure for Maintenance of Pharmacy Information System Master Data 2014