FEDERAL MINISTRY OF HEALTH
Department of Food and Drug Services

NATIONAL PRODUCT SUPPLY CHAIN MANAGEMENT PROGRAMME

Harmonized

STANDARD OPERATING PROCEDURES (SOP)

For The

LOGISTICS MANAGEMENT

Of

PHARMACEUTICALS AND OTHER HEALTHCARE PRODUCTS

(Within the National Public sector supply chain management system)

First Edition
June, 2020

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FOREWORD

In line with the Sustainable Development Goals (SDG 3.8), access to essential medicines is critical to reaching universal health coverage; and one of the key strategies for promoting same is to develop medicines policies and strengthen pharmaceutical systems for evidence-based selection, procurement, supply management, financing, rational use, leadership and governance. In this regard, the first set of Standard Operating Procedures (SOPs) for the Logistics Management of public health programme medicines and other health products were based on individual programme and were developed through the near total guidance and support of Implementing Partners between the years 2004 – 2009. The country has since then, passed through a long learning ladder in modern supply chain management, substantially reformed and transformed most aspects of her health products supply systems nationwide. It is therefore imperative to consolidate all these in a document that reflects current structures and best practices.

The relentless efforts of the Federal Ministry of Health (FMoH) since the year 2011 can be said to have elevated supply management in the public sector from a highly verticalized, service-focused national effort to a government-led and system-based development programme. Since 2011, the Ministry traced the alarming weaknesses in the supply chain management of health commodities to the lack of ownership and coordination of activities at all levels of government. She responded by setting up a supply chain-specific programme - National Product Supply Chain Management Programme (NPSCMP) in the Department of Food and Drug Services to coordinate all supply chain activities for the country. In March 2016, the Ministry further supported the states to embed and guide two (2) consultants in each of the 36 +1 states to set up and operationalize their coordinating units known as the Logistics Management Coordinating Units (LMCUs). This again, led to the inauguration of LGA-level LMCUs in all 774 LGAs of the country before October 2017.

The activities of these coordinating bodies, under the guidance of NPSCMP, have substantially raised the critical mass of HR for supply chain (number and skill sets); improved integration and collaboration, transformed infrastructures and systems as well as mindsets, corporate behavior and practices. These have ultimately led to enhanced quality of service delivery and access coverage in line with global best practices. As the country gears up for another tranche of transformation of her national supply system through the implementation of the 2021-2025 National Health Supply Chain Strategy, it is important to consolidate all current best practices in a well-articulated SOP document.

That is the purpose of the "harmonized Standard Operating Procedures for the logistics management of Pharmaceuticals and other Healthcare Products". While I appreciate the contribution of our partners and other stakeholders in the development of the document, I encourage all logistics managers and operators to use and make the best out of the guidance it provides.

Abdulaziz Mashi Abdullahi
Permanent Secretary, Federal Ministry of Health.

ACKNOWLEDGMENT

The Department of Food and Drug Services of Federal Ministry of Health, wishes to appreciate all the National and International stakeholders who participated in the development of this document. The Department is grateful that we have been able to glean from decades of experience to develop a document we will all use.

The department wishes to acknowledge the National Public Health Programmes (NASCP, NACA, NTBLCP, NMEP, RH/FP, NPHCDA, NTD), FMOH- Laboratory division, MLSCN and NCDC for participating in the development and ownership of this document.

Similarly, we would like to thank all our donor agencies, implementing partners, Principal Recipients and The Global Fund for supporting all the steps we have taken in this endeavor.

We acknowledge the additional support of Society for Family Health, United Nations Populations Fund Agency, Global Health Supply Chain- Procurement and Supply Management, Nutrition International, Clinton Health Access Initiative and Management Sciences for Health for hosting several meetings.

We recognize the effort of the management and staff of the NPSCMP in the actualization of this project. We know it was difficult meeting up with some of the timelines but, we are grateful you made the finalization of this document top priority.

As we all take the next steps towards deploying this document for use at all supply chain levels in the country, we would like to say: Thank you.

Fubara A. Chuku
Director Food and Drug Services Department
FMOH

LIST OF CONTRIBUTORS

Director. Food and Drugs Services Department- DFDs

National Product Supply Chain Management Programme - NPSCMP

National Tuberculosis and Leprosy Control Programme - NTBLCP

Family Planning - FP

National AIDS and STDs Control Programme - NASCP

National Malaria Elimination Programme - NMEP

National Agency for the Control of AIDS - NACA

National Primary Health Care Development Agency - NPHCDA

National Agency for Food and Drug Administration and Control - NAFDAC

Federal Ministry of Health Laboratory Division - FMOH Laboratory Division

Medical Laboratory Science Council of Nigeria - MLSCN

Management Sciences for Health - MSH

United Nations Population Fund – UNFPA

United Nations Children's Fund - UNICEF

Nigeria Centre for Disease Control - NCDC

Institute of Human Virology of Nigeria - IHVN

Global Health Supply Chain- Procurement Supply Chain Management - GHSC-PSM

Society for Family Health - SFH

Clinton Health Access Initiative for Health - CHAI

Nutrition International - NI

State Ministry of health (Adamawa, Akwa Ibom, Anambra, Ondo, Lagos, Nasarawa and Sokoto)

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BACKGROUND

The essential background provides the user of the SOP with the basis for the prescribed procedures. The "Introduction" sheds light on the trigger for the review and updating of subsisting SOPs and their consolidation into an integrated document; it also describes how the document harvests the bests in current skill sets and prevailing body of knowledge that already exist in different programmes, DMAs and in NPSCMP.

The national supply system has defined objectives. To achieve those objectives requires that the workforce follows the prescribed procedures and guidelines for the management of the system. Thus, the "Background" broadly shows the connection between the objectives and the procedures/guidelines.

The use of the terms "Logistics" and "Supply Chain" management is often confusing to many. Beyond the terminology, the practical implication of the management also differs greatly in the Public Health sector as against the private sector. Thus, the topic on logistics and supply chain management provides a deep understanding of the basis for the do's and don'ts in the SOP; helps the manager to appreciate the nuances of the implementation environment which will more properly guide him/her on how best to make progress despite the volatilities, uncertainties, complexities and ambiguities of the environment.

The Nigerian supply chain system is still evolving; arguably, it is about 60% up the ladder of evolution. While as NPSCMP is the midwife of the development process, all categories of the HR4SC from the LGA supervisors to the programme managers at the federal level are essential agents of that change. They need to understand how the supply system is being transformed, and be able to fit in and participate in its process. Also in that way, they understand why, how and when the SOP should be reviewed. The topic on "Reforms and current Structure of Nigeria's Public Health supply chain management system" explains that.

TITLE: SOP FOR PRODUCT SELECTION	
Functional Area:	**Date issued:**
Code:	**Revision No.**
Prepared by:	**Approved by:**
SOP No:	**Effective Date:**

Introduction
Product selection refers to the process by which health programmes select, evaluate and ultimately procure the products that will be used and consumed in service delivery. It is a key element of the logistics cycle. Product selection is directly linked to serving customers by defining what products are procured and used in the health system and the range of products that a customer can receive.

Purpose
To identify different range of health products that are effective, affordable, safe and of good quality; that can be procured and made available for use by different categories of customers in Nigeria. It also helps to reduce the size of product list that are used at both public and private sectors and will make the management of the supply chain efficient and effective.

Scope
Selection of pharmaceuticals and other healthcare products to be used to manage health conditions depends on several processes, stakeholders and supply feasibility among others. The choice of regimen to be used in the management of health conditions lies with the treatment and guidelines committees of the various health programmes, the National Drug Formulary, National Laboratory Technical Working Group and Essential Medicines List Review Committee. Membership of these committees includes (but not limited to) Doctors, Pharmacists, Medical Laboratory Scientists, Ministries, departments & agencies (MDAs), finance managers and supply chain experts. The scope of this Standard Operating Procedure (SOP) will be limited to the choice of the product to be used in making up the recommended regimens and testing protocols in the treatment guidelines. This SOP covers product selection of pharmaceuticals and other healthcare products procured and used at the National, State and LGA levels.

Definition of Terms

- Products: Means pharmaceuticals and other healthcare products
- Pharmaceuticals: A drug or other preparation for the treatment or prevention of disease and other health conditions
- Other healthcare products: Other Health Products refers to health-related products or devices. A health product could be a diagnostic tool and reagent for clinical testing, medical device, health monitoring device, surgical material, dietary supplement, herbal product, nutraceutical, biologic or vaccine.
- Testing protocol: An outlined sequence of requirements, activities, resources, documentation and schedule to establish diagnosis
- Treatment Regimen: A structured treatment/management plan designed to improve and maintain health
- Committee of experts: This committee consists of stakeholders from diverse field of expertise, Programmes and thematic areas such as PSM-TWG, Academia, Researchers, etc.
- Cost effectiveness: Most efficient and least expensive approach in providing healthcare service. Note however, that the cheapest approach may not be the most efficient

Abbreviations

- EDL: Essential In-Vitro Diagnostics Lists
- EML: Essential Medicine List
- INN: International Non-Proprietary Name
- MDAs: Ministries Departments and Agencies
- NAFDAC: National Agency for Food and Drug Administration and Control
- NDF: National Drug Formulary
- NDP: National Drug Policy
- PSM-TWG: Procurement and Supply Management – Technical Working Group
- SON: Standards Organisation of Nigeria
- SOP: Standard Operating Procedure
- STG: Standard Treatment Guideline

Responsibilities

No	Personnel / Group	Responsibility
1.	Programme Treatment and Guidelines Committees	✓ Review available evidence on safety and efficacy of products ✓ Make recommendations on treatment regimen ✓ Develop treatment guideline and testing protocol for products ✓ Disseminate new guidelines ✓ Conduct periodic reviews of guidelines
2.	National Drug Formulary and Essential Medicines List Review Committee	✓ Review recommendations from Programme Treatment and Guidelines Committee to ensure that selected health products are: • relevant to the local disease patterns • proven to be of good quality, effective and safe • Cost-effective when considering total treatment and/or investigative cost. ✓ Update the essential medicines list with selected products ✓ Provide information on product and guide on use in the National Drug Formulary
3.	Programme Procurement and Supply Chain Management Technical Working Group	✓ Support the Treatment and Guideline Committee with supply intelligence during regimen selection ✓ Review and streamline regimen options from the Treatment and Guideline Committee ✓ Periodically review and harmonize equipment and reagents used for diagnosis
4.	National Agency for Food and Drug Administration and Control (NAFDAC)	✓ Conduct relevant analysis on new products to ascertain quality and safety prior to selection for national use ✓ Ensure timely registration of new products ✓ Grant waivers (e.g. Registration waivers, waiver on NAFDAC charges at the port, waiver on No-Objection etc.) for selected products in special cases that require importation ✓ Ensure pharmacovigilance for selected products ✓ Ensure in-country quality assurance/ quality control
5.	Standards Organization of Nigeria (SON)	✓ Conduct relevant analysis on other health products to ascertain standard prior to selection for national use ✓ Provide regulatory oversight on standards ✓ Issue SON Product Certificate and Standards Organization of Nigeria Conformity Assessment Programme (SONCAP) Certificate

No	Personnel / Group	Responsibility
6.	Finance Managers	✓ Provide financial advice and perspective to the various committees/technical working groups involved in product selection ✓ Support development of cost benefit analysis
7.	National Laboratory Technical Working Group	✓ Provide information on laboratory products and guide on their use in the laboratory ✓ Disseminate new Essential In-vitro Diagnostic List (EDL) ✓ Periodically review Essential In-vitro Diagnostic List (EDL) ✓ Play an advisory role on the selection of affordable and appropriate laboratory products ✓ Coordinate the implementation of the document

Procedure

No	Guidance	Action Owner
1.	Establish a committee of experts that will review product selection based on efficacy, affordability, safety and quality.	Programme PSM-TWG
2.	Committee will refer to each selected product by its International Non-proprietary name (INN).	Committee of experts
3.	Check for inclusion of the name of the selected product on the Essential Medicines List, Essential Diagnostics List, National Drug Formulary, Standard Treatment Guidelines and Testing Protocols.	Committee of experts
4.	Confirm the registration status of the selected product with NAFDAC.	Committee of experts
5.	Where selected product is not registered, the manufacturer or intending marketing authorization holders should be contacted to initiate registration with appropriate regulatory authorities.	Programme PSM-TWG
6.	Pending the registration of the product, the programme should secure a waiver in the interim, otherwise use alternative product.	Programme PSM-TWG
7.	For donor-funded products, align donor requirements with national product selection requirements to ensure that key criteria are met.	Committee of experts
8.	Where needed, train service providers on proper use of products in line with STGs.	Programme PSM-TWG

Process Owner

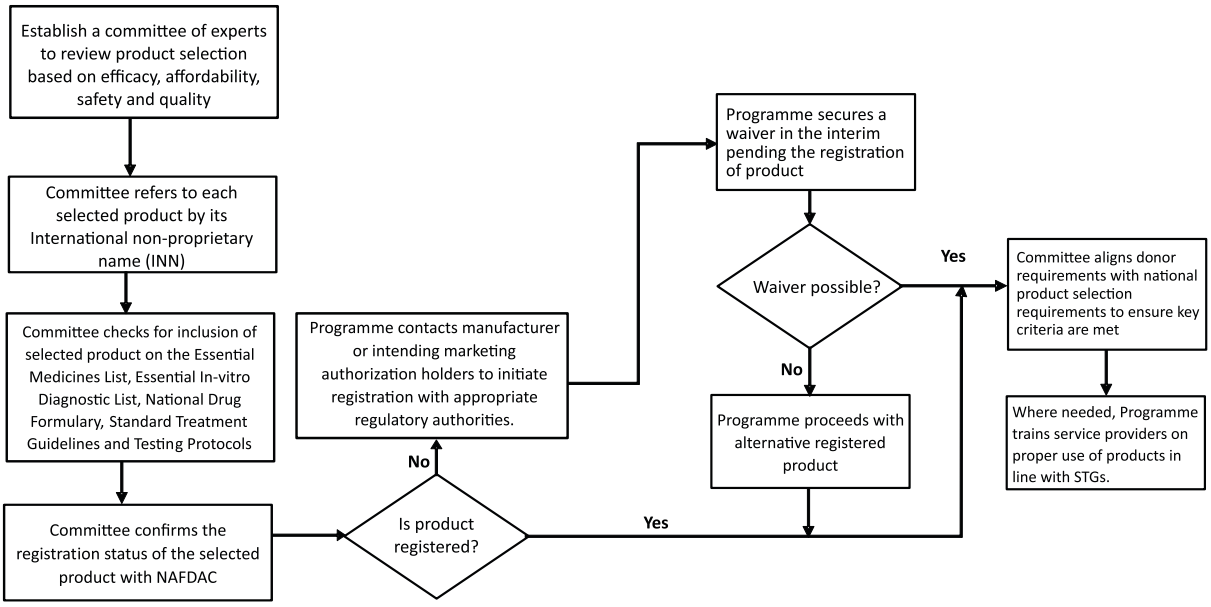
- Programme PSM-TWG

Product Selection Criteria

- Government Policies: Product selection should be in accordance with all relevant government policies. These include STG, NDF, NDP, EMLs, Regulatory guidelines (NAFDAC, SON), Essential In-vitro Diagnostic List
- Safety: The selected product should have a good safety profile in the general population
- Convenience: The product that offers benefits in terms of dosing (frequency and pill burden) and route of administration should be selected
- Ease of handling: The Products that requires minimal storage and transportation requirements should be selected

- Cost Effectiveness: The product that offers better cost effectiveness should be selected. Note that a product with a lower unit cost may not necessarily be cost effective.
- Availability of product: Choice of product should consider availability from the supplier. As much as possible, a product with more than one supplier should be considered over the other with a single supplier. In the case of medical devices and equipment, considerations should be given to products that are easy to maintain
- Availability of Human Resource: In a case where the use of a product may require significant capacity building, consideration should be given to the other one that requires less capacity building if other conditions are the same.

PROCESS FLOW FOR PRODUCT SELECTION



References

1. FMOH, NASCP (2014), Standard Operating Procedure for the quantification of health commodities in Nigeria
2. USAID (2011), Logistics handbook
3. USAID (2017), Logistics handbook

TITLE: SOP FOR QUANTIFICATION	
Functional Area:	**Date issued:**
Code :	**Revision No.**
Prepared by:	**Approved by:**
SOP No:	**Effective Date:**

Introduction

The next step after products have been selected by programmes is to determine the quantity required by the programme. Quantification is the process of estimating the quantity and costs of the products required for a specific health programme and determining when the products should be delivered to ensure an uninterrupted supply for the programme. This process consists of forecasting and supply planning.

Purpose

To guide programmes on the various steps involved in estimating the quantities and costs of products required for a health program over a period according to its strategic plan or target.

Scope

This SOP covers quantification of pharmaceuticals and other healthcare products required for management of health products at National, State and LGA levels.

Definition of Terms

- Quantification: The process of estimation of the quantity and costs of products required by a specific health program over a period. It takes cognizance of procurement plan, supply plan and storage facilities.
- Forecasting: The process of estimation of quantity of products required by a program over a period.
- Supply planning: Supply planning involves activities to meet future demand in the best possible manner. It's a forward-looking process that tries to meet supply with demand
- Quantification team: A team of experts which comprises Head of PSM, monitoring and evaluation officers, procurement officers, donor agencies, implementing partners, quantification experts, supply chain specialist, representative of the harmonized quantification monitoring team and other relevant stakeholders.
- Assumption: Informed guess and statement on disease incidence, products and regimen use, demographic data, laboratory protocols and other information needed to build product forecast
- Harmonized quantification monitoring team: A team of PSM technical officers selected from all the relevant national health programmes, NPSCMP, FDS, agencies and partners

Abbreviations

- CSO: Civil Society Organisation
- LGA: Local Government Area
- LMIS: Logistics Management Information System
- MDAs: Ministries Departments and Agencies
- NGO: Non-Governmental Organization
- PSM: Procurement and Supply Chain Management
- PSM-TWG: Procurement and Supply Management - Technical Working Group
- SOH: Stock On Hand
- STG: Standard Treatment Guideline

Responsibilities

	Personnel / Group	Responsibility
	Head of PSM	✓ Initiate and coordinate quantification process
1.	Monitoring and Evaluation Officer	✓ Monitors the implementation of forecast output ✓ Supports forecast accuracy analysis ✓ Provides service delivery data ✓ Advise on the KPIs
2.	Procurement Officer	✓ Develops procurement and supply plans ✓ Initiates both local and international procurement with approved vendors ✓ Advises on procurement processes ✓ Monitor the performance of procurement and supply plans
3.	Government of Nigeria	✓ Provides fund ✓ Provides information on program/project strategic direction and target ✓ Provides technical support and human resources ✓ Provide enabling environment (including policies, guidelines and legislation)
4.	Donor Agencies	✓ Provide intervention fund ✓ Provide technical support ✓ Serve as international advocacy channel
5.	Implementing Partners	✓ Identify and recommend suitable vendors for health products ✓ Provide technical support
6.	Quantification expert	✓ Provide all the appropriate reference documents ✓ Provide technical support including collection, collation and analysis of data ✓ Provide guidance on the use of quantification software and populate
7.	Supply chain specialist	✓ Provide information on the availability of storage requirements for forecasted products. ✓ Provide information on LMIS data
8.	Health care workers	✓ Provide required source data for assumption building
9.	Procurement and Supply Management - Technical Working Group (PSM-TWG)	✓ Provide oversight function ✓ Validate and recommend quantification output for approval
10	Harmonized quantification Monitoring Team	✓ Collaborate with different programme to draft annual quantification plan ✓ Support programme specific quantification ✓ Evaluate programme specific quantification ✓ Conduct bi-annual review quantification process ✓ Report on programme specific performance
11.	Other relevant stakeholders	✓ Act as support members ✓ Serve as a pool for extra resources

Procedure:

The process of quantification involves three basic steps, namely; preparation, forecasting and supply planning:

a) Preparation

No	Guidance	Action Owner
1.	Constitute a quantification team where it is not in existence	Programme PSM-TWG
2.	Assemble quantification team to drive preparatory activities and other quantification process	Quantification Team
3.	Hold quantification preparatory meetings to develop a work plan for the quantification process	Quantification Team
4.	Determine quantification approach depending on supply chain level e.g. facility, state, region or national. The approach could be bottom-up or otherwise	Quantification Team
5.	Clearly state the purpose, scope, products to be quantified and beneficiaries (e.g. private, public, NGOs, program, etc.)	Quantification Team
6.	Identify and access documents relevant to quantification such as the current STGs, Standard Testing Protocols, Essential Medicines List (EML), Program Strategic Planning documents, etc.	Quantification Team
7.	Determine, agree and document quantification data to use according to Programme's Strategic Plan (i.e. consumption, morbidity, demographic or services data).	Quantification Team
8.	Collect required data (demographic, prevalence/morbidity, epidemiologic, prevailing regimen spread, SOH, etc.).	Quantification Team
9.	Decide on forecasting tool to use.	Quantification Team
10.	Plan and hold assumption building meetings/ workshop.	Quantification Team

Note: The purpose of the assumption building workshop is to build consensus on future targets, drug regimen use, laboratory testing protocols and product use that will inform the forecast process. Participants at the workshop should include: Supply Chain Technical Working Group of the Programme, Treatment Working Group, Laboratory Technical Working Group, Funders, CSOs, representatives of the Service Delivery Points and Implementing Partners.

b) Forecasting: At forecasting, the output from the assumption building workshop and other relevant data are used to determine the quantity of products required by programme. The steps involved are as follows:

No	Guidance	Action Owner
1.	The team will agree on forecasting assumptions and a method to be used (it is advisable to use two parallel methods to validate the output)	Quantification Team
2.	Organize the data collected in the preparation phase by type as either consumption, services, morbidity or demographic data	Quantification Team
3.	Analyze data for quality and suitability (for consumption method, facility reporting rate should be at least 75 percent complete)	Quantification Team
4.	Obtain program targets and priority intervention categories from MDAs, funders and other stakeholders and factor into the assumptions	Quantification Team
5.	Document forecasting assumptions on adjustments made to historical program data (i.e. for missing, unreliable, outdated, or incomplete data) and factors influencing demand for services and products	Quantification Team

No	Guidance	Action Owner
6.	In line with the National Supply Chain policy, develop a five-year broad forecasting plan that reflects the needs at National, State and LGA levels	Quantification Team
7.	Calculate product requirement from forecasted consumptions for each product regardless of which type of data used	Quantification Team
8.	Compare output if two methods were used in forecast generation	Quantification Team

c) Supply Planning: At supply planning, the forecast output and other relevant data are used to determine actual quantity of products to procure, their cost and the time to be delivered. The steps involved are as follows:

No	Guidance	Action Owner
1.	Collect and analyze data for supply planning. Data to collect and analyze include: • National/programme-level stock on hand (physical inventory) of each product to be quantified • Shipment quantities of product(s) already on order but not yet received • Established programme-level maximum and minimum stock levels (min-max level should be lean enough) • Storage capacity • Supplier prices • Supplier packaging information • Supplier lead times • Amount of funding commitments by MDAs, funders and other stakeholders for products and other PSM costs (shipping and handling, storage and distribution, sampling/quality testing, Customs' clearance). • Funding disbursement schedules to determine when funding will be available for procurement from each source. • All procurement mechanisms (e.g. government or international bidding/tendering, donor procurement, or local procurement) for all products to be quantified • Procurement lead time for each procurement mechanism	Quantification Team
2.	Builds supply planning assumptions, documents sources of information and arrives at a consensus	Quantification Team
3.	Compares available funds with total cost and adjusts forecast accordingly if there is a funding gap.	Quantification Team

Quantification exercise is complete when:

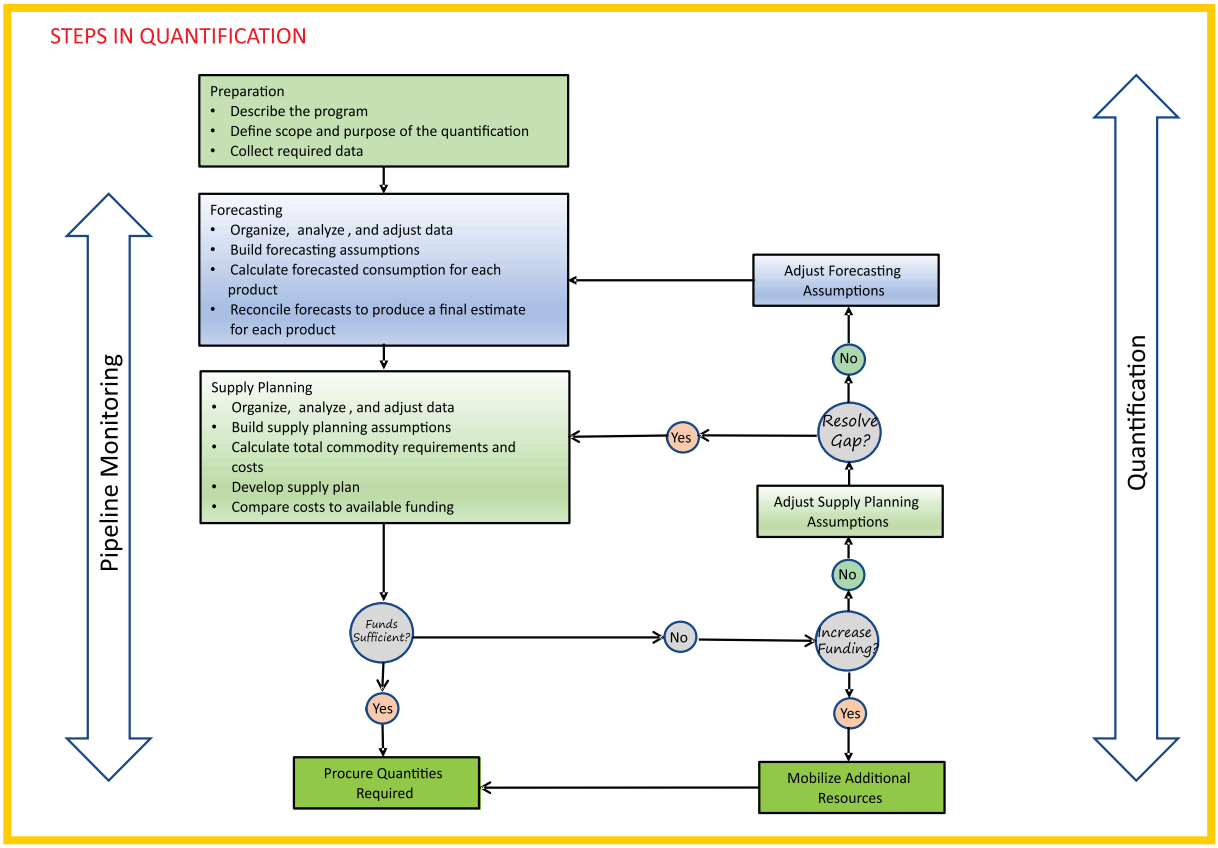
- Steps in a), b) and c) above are completed
- The report of the exercise is developed
- The report is approved by relevant authority and disseminated to stakeholders

Note: Quantification exercise should happen every two years.

Process Owner

- Head of PSM or its equivalent

PROCESS FLOW FOR QUANTIFICATION



References

1. FMOH, FDS, NPSCMP (2016). Nigerian supply chain policy for pharmaceuticals and other healthcare products.
2. USAID (2017), Logistics Handbook.

TITLE: SOP FOR PROCUREMENT	
Functional Area:	**Date issued:**
Code:	**Revision No.**
Prepared by:	**Approved by:**
SOP No:	**Effective Date:**

Introduction

After products are quantified, the next step is to procure the required quantities. Procurement is the decision-making process or act of buying products and services required for the health programme.

Purpose

To ensure the right products and services are procured and available for the health programme in line with best practices.

Scope

The SOP covers the procurement of pharmaceuticals and other healthcare products that will be used at all levels of healthcare.

Definition of Terms

- Procurement: The process of acquiring pharmaceuticals and other healthcare products/services at the right quality, right quantities, at the right time, in the right place, at the right price, from the right source and for the right client.
- Procuring entity: This refers to the organisation purchasing the products (Federal, State, LGA, health facilities, other organisations).
- Procuring agent: They are buyers and purchasing agents which buy products and services for organisations to use or resell. They negotiate contracts for other organisations.
- Procurement committee: This is a group of designated staff established for independent review and evaluation of procurement documentation whose main roles are to recommend the most appropriate supplier or service provider and ensure compliance with stipulated regulations.
- Tenders Board/Head of procuring entity: This is the approving authority for the procurement process.
- User department: The technical department/Programme that initiates procurement and utilizes the products.

Abbreviations

- LGA: Local Government Area
- NAFDAC: National Agency for Food and Drug Administration and Control
- SON: Standard Organisation of Nigeria

Responsibilities

No	Personnel / Group	Responsibility
1.	Head of User Department	✓ Provides the list and technical specification for pharmaceutical and other healthcare products to be procured
2.	Warehousing Manager	✓ Provides information on available storage space for inbound products ✓ Takes delivery of procured products
3.	Head of PSM or its equivalent	✓ Provides quantification output ✓ Provides technical specification for pharmaceuticals and other healthcare products to be procured ✓ Recommends potential suppliers to procurement unit
4.	Procurement Manager	✓ Initiates and implements procurement process
5.	Quality Manager	✓ Carries out quality checks on supplied pharmaceuticals and other healthcare products
6.	National Agency for Food and Drug Administration and Control (NAFDAC)	✓ Enforce registration of procured pharmaceuticals and other healthcare products ✓ Carry out quality checks on supplied pharmaceuticals and other healthcare products ✓ Issue product registration waiver where necessary ✓ Issue Import Permit where required
7.	Standard Organization of Nigeria (SON)	✓ Ensure all procured non-pharmaceutical healthcare products meet specified national standard
8	Tenders Board	✓ Review procurement process and grant approval
9.	Head of Finance	✓ Process payment for procured pharmaceuticals and other healthcare products
10.	Head of Audit	✓ Ensure compliance of procured pharmaceuticals and other healthcare products to agreed criteria. ✓ Mitigate against financial risk

Procedure

In line with the procurement Act 2007, the procurement of pharmaceuticals and other healthcare products follows the processes below**:**

No	Guidance	Action Owner
1.	The procuring entity constitutes a procurement committee to develop a procurement plan based on quantification output and approved budget	Procuring entity
2.	The procurement Committee constitutes a technical evaluation subcommittee with the responsibility for the evaluation of bids and assisting with procurement process	Procurement Committee
3.	Select the procurement methods to be used which include: • International competitive bidding • National competitive bidding • Limited international/national competitive bidding • International/national shopping Sole sourcing/Direct contracting • Pooled procurement • Procurement by framework agreement	Procurement Committee

No	Guidance	Action Owner
	The choice of procurement method should depend on: *The nature of products and services to be procured, the value of the procurement, local availability and cost of products and services, timelines for delivery, agreement with the funding agency and transparency of procedure proposed.*	
4.	Preparation of all relevant documents for the procurement process.	Procurement Committee
5.	Call for Expression of Interest from bidders where applicable.	Procurement Committee
6.	Prequalify bidders based on approved criteria where applicable.	Procurement Committee
7.	Issue bidding documents to pre-qualified bidders	Procurement Committee
8.	Receive tenders from bidders	Procurement Committee
9.	Evaluate tenders, negotiate (where applicable) and make recommendation of the winning bid to the Procurement committee	Evaluation Sub-committee
10.	Certifies procurement action and recommends award of contract to the procuring entity	Procurement Committee
11.	Grants final approval based on recommendation.	Head of Procuring entity
12.	Contract Management	Procurement Committee
13.	Delivery and receipts of products and services • The procuring entity in collaboration with the user department receives and inspects the procured products from supplier(s) • Validate and subject the procured products to compliance checks. • Generates and circulates report of products delivered (specification, quantity ordered, quantity delivered, quality of products, variance, etc.) • Issues Certificate of Completion to supplier(s) and initiate payment (please note: payment initiation depends on contractual agreement)	• Procuring entity • Audit units • Procuring entity • Procuring entity

Guiding principles: The principal hallmarks of proficient public procurement are

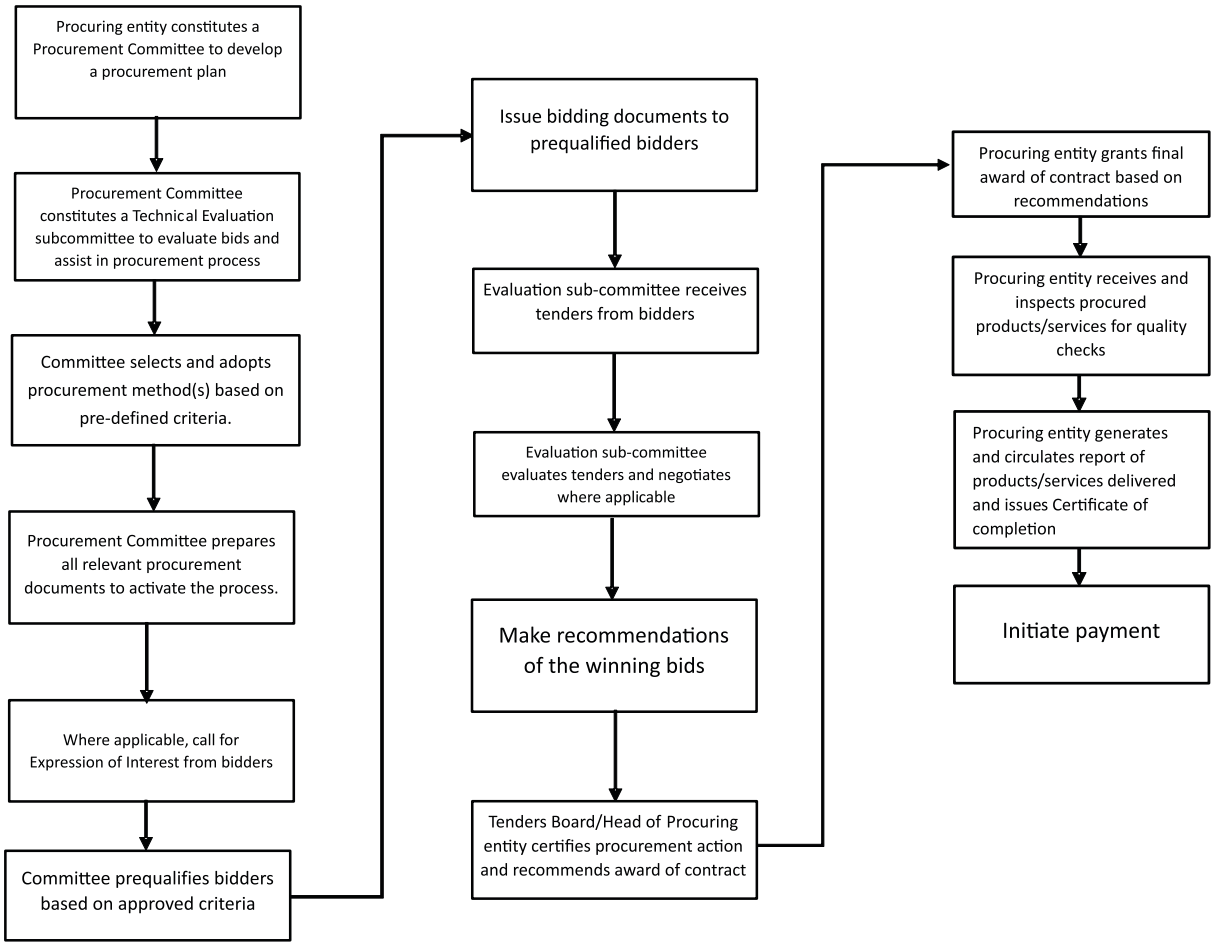
- Economy: All procurements should achieve maximum value for money
- Efficiency: Procurement processes should be simple and swift, producing positive result without protracted delays
- Fairness: The process should be impartial, consistent, giving all potential suppliers a level-playing field to compete
- Transparency: Good procurement establishes and maintains rules and procedures that are accessible and unambiguous. It is not only fair, but it is seen to be fair
- Accountability and ethical standards: Good procurement holds its practitioners responsible for enforcing and obeying the rule
- In line with the executive order 003 (2017) of Federal Government of Nigeria, procurement should be done to promote Nigeria content development.

Note: For donor-funded procurement, additional procurement requirements may apply as may be stipulated in the programme procurement manual.
The procurement process is complete when Certificate of Completion is issued to the supplier(s).

Process Owner

- Head of PSM or its equivalent

PROCESS FLOW FOR PRODUCT PROCUREMENT



References

1. FGON (2007). Public Procurement Act. 2007

2. FMOH, NASCP (2014), Standard Operating Procedure for the quantification of health commodities in Nigeria

3. FMOH, FDS, NPSCMP (2017). Operational guidelines for the provision of information on the procurement or donation of pharmaceutical and other healthcare products by the government and development partners

TITLE: SOP FOR WAREHOUSING	
Functional Area:	**Date issued:**
Code:	**Revision No.**
Prepared by:	**Approved by:**
SOP No:	**Effective Date:**

Introduction
Following procurement of pharmaceuticals and other health products, the next step is to store the products in a warehouse temporarily, before release to the end users. Warehousing involves the physical management of products in a suitable storage facility to preserve product integrity, maintain appropriate documentation, comply with various product-specific requirements and enhance easy retrieval for distribution, through various levels of an in-country supply chain. It is done in a structured way to protect the warehouse workers from risk of injury.

Purpose
To ensure the integrity, safety and packaging of pharmaceuticals and other healthcare products are maintained throughout the various storage levels until they are distributed to end users.

Scope
This SOP covers the warehousing of pharmaceuticals and other health products at Federal, Zonal, State, Local Government Area (LGA) and health facility levels.

Definition of Terms
- Warehousing: This involves the physical management of pharmaceuticals and other healthcare products, through various levels of an in-country supply chain, done in a structured way to ensure that it will be secured and protected from harmful environmental conditions or handling, available, accessible, and in good condition while posing no risk of injury to warehouse workers.
- Inventory management: Are the processes involved in managing the flow of products and ensuring that adequate stocks are stored, product quality maintained and service delivery points have products available when needed.
- Distribution: The movement of pharmaceuticals and other healthcare products from the premises of the manufacturer/another central point to the end user/an intermediate point by means of various transport methods via various storage and/or health establishment.
- Shelf life: This is the length of time from manufacturing date to the final date a product can be safely used or the length of time that product can be stored without affecting its usability, safety, purity or potency.
- Stock-taking team: This team is composed of the Program Team Lead, Warehouse Manager, Store Officer, Inventory Manager, Quality Assurance Manager and other relevant stakeholders responsible for conducting stock-taking in a warehouse or store.
- Warehouse staff: This is composed of staff working in the warehouse.
- Quarantine: Is a practice of separation of inventory stock not yet ready for use from the usable stock. There are several reasons a quarantine product may not be ready for use and this includes but not limited to the following: inventory stock undergoing quality assurance analysis, stock that have not been completely entered into the inventory record, stock awaiting inbound and outbound inspection, stock marked for transfer between warehouses and other reasons that may suspend the continuous usage of the products.
- Slow Moving Products: These are products that have not been registered a use for over six months in the warehouse.

Abbreviations
- 3PL: Third Party Logistics
- WA: Warehousing Assistant
- RDC: Receiving and Dispatch Clerk
- SO: Store Officer

- WMIS: Warehouse Management Information System
- PTL: Program Team Lead
- SRV: Store Receipt Voucher
- SIV: Store Issue Voucher
- LPO: Local Purchase Order
- PO: Purchase Order
- PFI: Pro-Forma Invoice
- SRIV: Store Receipt and Issue Voucher
- GRN: Goods Receiving Note
- HSE : Health Safety and Environment

Responsibilities and Procedure
The responsibilities of personnel and procedure will be discussed under the various activities considered in warehousing.

A. Operational Activities
Most operational activities for warehousing of pharmaceuticals and other healthcare products are similar regardless of the size of the storage facility. However, the complexity of these activities will depend on the volume and type of products being managed. These activities include:

I. Receiving of Health Products
Purpose: To ensure an efficient and effective receipt of all inbound products into the warehouse or storage facility.
Responsible Personnel: Warehouse Manager, Store Officer, Inventory Manager, Quality Assurance Manager, Program Officer, Procurement Manager, Receiving and Dispatch Clerk, Superintendent Pharmacist and other relevant stakeholders.

The responsibilities will apply for the above activity:

No	Personnel / Group	Responsibility
1.	Warehouse Manager (WM)	✓ Coordinate and oversee all warehouse operations ✓ Review expected deliveries on a regular basis together with the Program Team Leads (PTL) ✓ Liaise with PTL and clearing agents to schedule deliveries to the identified warehouse and indicate desired delivery times to the 3PL. ✓ Raise a query if the supplier documents do not match the approved PFI or local purchase order ✓ Escalate all cases of non-compliance to the Program Technical Lead
2.	Store Officer	✓ Make provisions for adequate resources where applicable to unload goods for any expected delivery ✓ Engage with distribution agents, i.e., third party logistics (3PLs). ✓ Put away and arrange products in line with the warehouse management system setup
3.	Inventory Manager	✓ Determine which warehouse/bay shall receive specific deliveries. ✓ Update the WMIS ✓ Supervise the use of SRV and SIV ✓
4.	Quality Assurance Manager	✓ Assess the quality of items received using a preliminary Quality Assessment Checklist ✓ Record discrepancies and reject or quarantine defective/non-compliant goods ✓ Make samples available for routine quality assurance testing

No	Personnel / Group	Responsibility
5.	Head of PSM	✓ Liaise with Warehousing and Procurement Manager to confirm product specification during or/and after delivery ✓ Notify the warehouse manager of incoming shipments ✓ Authorize the issuance/release of program specific commodities for distribution
6.	Procurement Manager (PM)	✓ Ascertain that vendors submit relevant documents for payment ✓ Submit vendor's LPO/PO and other relevant documents to Finance Unit for payment
7.	Receiving and Dispatch Clerk	✓ Update incoming ledger, ensure that bin cards are raised for new products while updating for existing stock ✓ Raise a store receipt voucher (SRV) for only quantity received ✓ Receive inbound commodities under the supervision of the Superintendent Pharmacist ✓ Dispatch commodities under the supervision of the Superintendent Pharmacist ✓ In all cases of missing items, fill out a query form, endorse and forward to PM/SP/WM for follow up
8.	Superintendent Pharmacist (SP)	✓ Register the premises ✓ Serve as Quality Assurance Focal Person ✓ Provide technical support to the Warehouse Manager on good storage practices ✓ Approve GRN/ SRV ✓ Endorse delivery note and confirm that goods have been received in right quantity and condition ✓ Supervise the receipt and dispatch of commodities to ensure compliance to standards
9.	Other relevant stakeholders	✓ Provide relevant support to warehousing processes

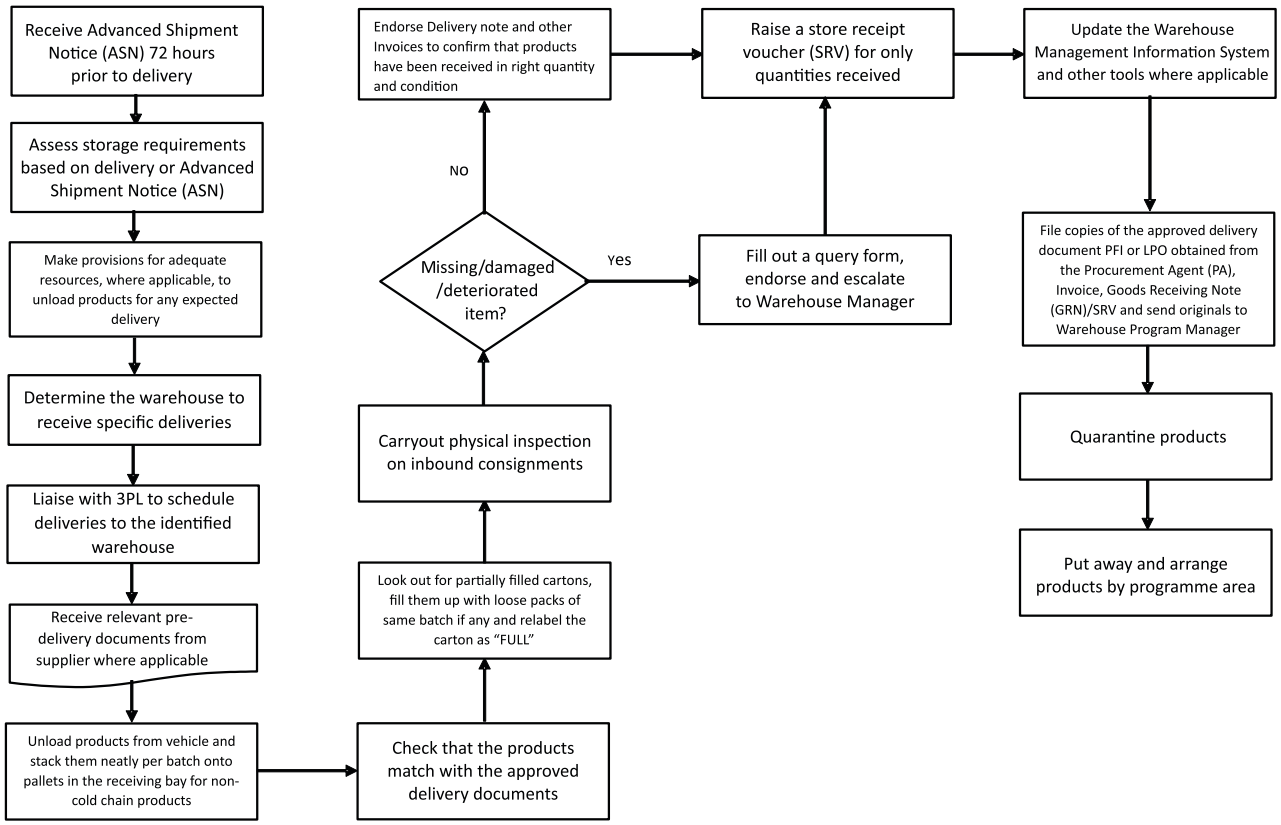
The procedure below will apply for the activity above:

No	Guidance	Action Owner
1.	• Receive Advanced Shipment Notice (ASN) 72hours prior to delivery • Assess storage requirement based on delivery or Advanced Shipment Notice (ASN) • Confirm that the remaining shelf life (where applicable) is equal or above 75%. Where remaining shelf is below 75% seek for exceptional approval from the user	Warehouse Manager
2.	Make provisions for adequate resources, where applicable, to unload product for any expected delivery	Head of PSM
3.	Determine which warehouse should receive specific deliveries	Inventory Manager
4.	Liaise with the 3PL/clearing agent/delivery agent to schedule deliveries	Warehouse Manager

No	Guidance	Action Owner
5.	Where applicable, receive relevant pre-delivery documents from 3PL/clearing agent/delivery agent. These may include: • Foreign consignments: Advance Shipment Notice (ASN), Airway bill, Bill of laden, packing list, Certificate of Analysis (COA), Documents to confirm the quantity of samples collected by NAFDAC, Certificate of Origin, International Commercial Terms (Incoterms) for each batch where applicable and clearing agent's delivery notes. • Local Consignments: tax invoice, Local Purchase Order, packing list, Certificate of analysis (COA) for each batch where applicable and supplier's delivery note, contract award letter, contract agreement, intent to supply.	Warehouse Manager
6.	For non-cold chain products, unload products from vehicle and stack them neatly onto pallets in the receiving bay, ensuring that each batch is placed on a separate pallet.	Store Officers
7	Check that the products match with the approved delivery documents • Item Description and Unit of measure • Quantity per box (Open each of the sampled boxes - at least 1out of 10 for random sampling to verify the content)	Store Officer
8.	Look out for partially filled cartons, fill them up with loose packs of same batch if any and relabel the carton as "FULL".	Inventory Manager, Quality Assurance Manager, Warehouse Manager
9	Carryout physical inspection on inbound consignments. Look out for partially filled cartons, ensure they are filled with loose packs of same batch if any and label the carton as "FULL". In all cases of missing, damage and deteriorated items, fill out a query form, endorse and escalate to Warehouse Manager Endorse delivery document	Superintendent Pharmacist
10	Receive and move products to the storage area	Store Officer
11.	Raise a store receipt voucher (SRV) for only quantities received.	Receiving and Dispatch Clerk
12.	Update the soft and hard copies of the inventory management tool (Warehouse Management Information System-WMIS, incoming ledger or bin cards where applicable. Raise new bin cards for new products).	Inventory Manager Receiving and Dispatch Clerk
13.	In all cases of missing, damage and deteriorated items, fill out a query form, endorse and forward to Program Manager/SP/WM for follow up.	Receiving and Dispatch Clerk
14.	Endorse Delivery note and other Invoices to confirm that goods have been received in right quantity and condition.	Superintendent Pharmacist
15.	File copies of the approved delivery document PFI or LPO obtained from the Procurement Agent (PA), Invoice, Goods Receiving Note (GRN)/SRV and send originals to Warehouse Program Manager and communicate receipt to product owner	Store Officer
16.	Quarantine products	Store Officer
17.	Put away and arrange products by programme area, assign them to their storage spaces (shelf, rack, pallets, etc.) or in a way that will make tracing and retrieval a seamless process.	Store Officer

Note: Receiving of health products is completed when steps 1 to 16 have been carried out.

PROCESS FLOW FOR RECEIVING OF HEALTH PRODUCTS



II. Issuing Products from Warehouse

Purpose: To provide guidance on how to issue products and thus ensure proper inventory management and control.

Responsible Personnel: Superintendent Pharmacist, Warehouse Manager, Store Officer, Head of PSM, Inventory Manager and Receiving & Dispatch Clerk.

The responsibilities will apply for the above activity:

No	Personnel / Group	Responsibility
1.	Superintendent Pharmacist	✓ Assures process quality in the warehouse ✓ Ensures all orders are filled/or attended to ✓ Reviews order sheet ✓ Ensures that pharmaceuticals and other healthcare products issued are of good quality ✓ Assesses the quality of items dispatched using a preliminary Quality Assessment Checklist
2.	Warehouse Manager	✓ Receives request for products from the Head(s) of PSM) ✓ Oversees and ensures the smooth running of the warehouse operations ✓ Review and approve picking and packing lists
3.	Store Officer (SO)	✓ Generates product pick slip and forwards to SP/WM for approval. ✓ Picks and pack stock for issuing and document all transactions

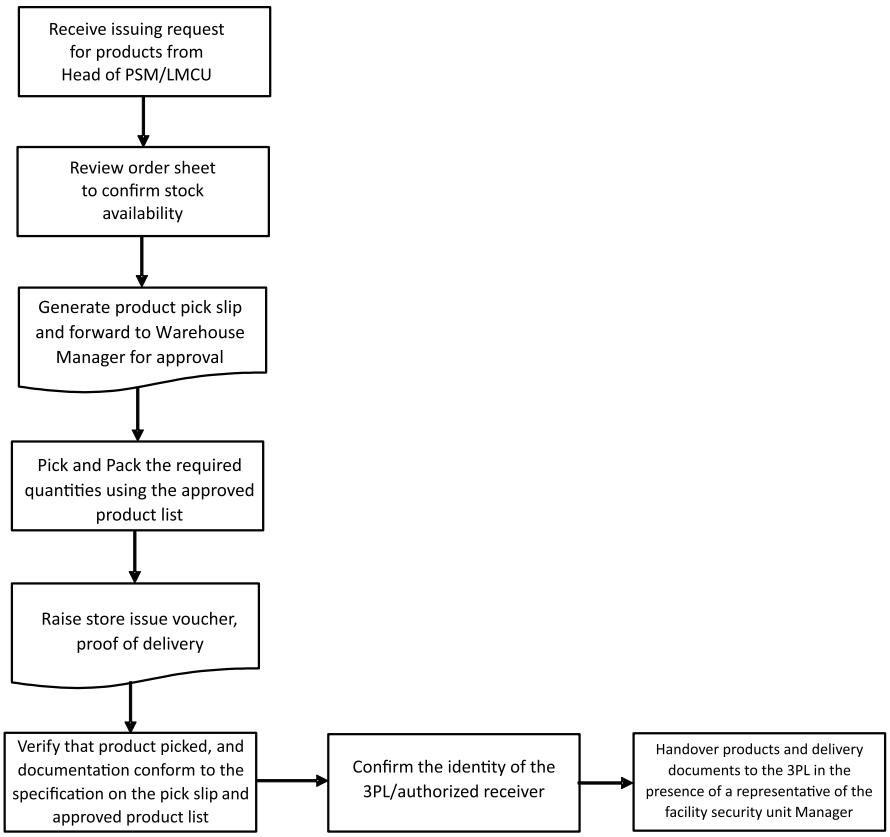
No	Personnel / Group	Responsibility
4.	Head of PSM	✓ Ensure pharmaceuticals and other healthcare products security (availability all the time) ✓ Send requisition for stock to be prepositioned at depot level
5.	Inventory Manager	✓ Coordinates picking and packing processes ✓ Lead the team of inventory and warehouse employees to issue and record stock order.
6.	Receiving & Dispatch Clerk (RDC)	✓ Ensures that right products and quantities are picked and packed and documented on the store receive and issue voucher (SRIV) ✓ Picks the quantity required using the product pick slip and verifies that product picked conforms to the specification on the pick slip
7	State LMCU	✓ Generates issue request ✓ Ensures that correct data are available for issuing ✓

The procedure below will apply for the activity above:

No	Guidance	Action Owner
1.	Receives issuing request for products from the Head of PSM/LMCU	Warehouse Manager
2.	Reviews order sheet to confirm stock availability.	Inventory Manager
3.	Generates product pick slip and forwards to WM for approval	Store Officer
4.	Pick and Pack the required quantities using the approved product list	Store Officer
5	Raise store issue voucher, proof of delivery	Receiving and Dispatch Clerk
6	Verifies that product picked conforms to the specification on the pick slip. Verifies that documentation conforms with the approved product list and submits same for approval by the Warehouse Manager	Superintendent Pharmacist
7	Confirms the identity of the 3PL/Authorized receiver	Warehouse Manager
8.	Handover products and delivery documents to the 3PL/Authorized receiver in the presence of a representative of the facility security unit	Store Officer

Note: The process is complete when products are issued and documented.
Security Personnel should witness and document the handover of commodities to 3PL

PROCESS FLOW FOR ISSUING PRODUCTS FROM WAREHOUSE



III. Monitoring Products

Purpose: To ensure that products are properly located and retrieved; stock expiry is proactively monitored; and obsolete items are properly managed.

Responsible Personnel: Warehouse Manager, Store Officer, Inventory Manager, Superintendent Pharmacist, and Program Officer.

The responsibilities will apply for the above activity:

No	Personnel / Group	Responsibility
1.	Warehouse Manager	✓ Coordinate and oversee all monitoring-related activities in the warehouse
2.	Store Officer	✓ Ensure products are arranged appropriately
3.	Superintendent Pharmacist	✓ Quarantine defective goods. ✓ Generate non-conformance report and submit to the Warehouse Manager
4.	Inventory Manager	✓ Generate slow moving products report and send to Program Officer for analysis

The procedure below will apply for the activity above:

a) General product monitoring process: Shall be done at least once a month

No	Guidance	Action Owner
1.	Use WMIS or other available tools to track all product locations, batch numbers and expiry dates	Store Officer
2.	Receive and investigate reports from stock checkers on all stock discrepancies (e.g. stock not found on location, wrong stock on location, or wrong batch numbers and expiry dates)	Warehouse Manager
3.	Identify wrongly located products	Inventory Manager
4.	Physically move product to correct locations by batch numbers and expiry dates.	Store Officer
5.	Extract the stock status of short-dated and slow-moving products from the Quarterly Monitoring Report and escalate to the Warehouse Manager for necessary action.	Inventory Manager
6.	Prepare a one-year expiry report from the WMIS or other available tools, indicating which products are likely to expire before issue/use	Inventory Manager
7	Prepare a list of Potential write off (product with minimum RSL of less than 3months) and liaise with the relevant Head of PSM/LMCU to fast track distribution where necessary. There could be an exception for cold chain dependent products or products with short shelf life.	Warehouse Manager

This monitoring exercise should be done at least once a month.

b) Obsolete and slow-moving items:

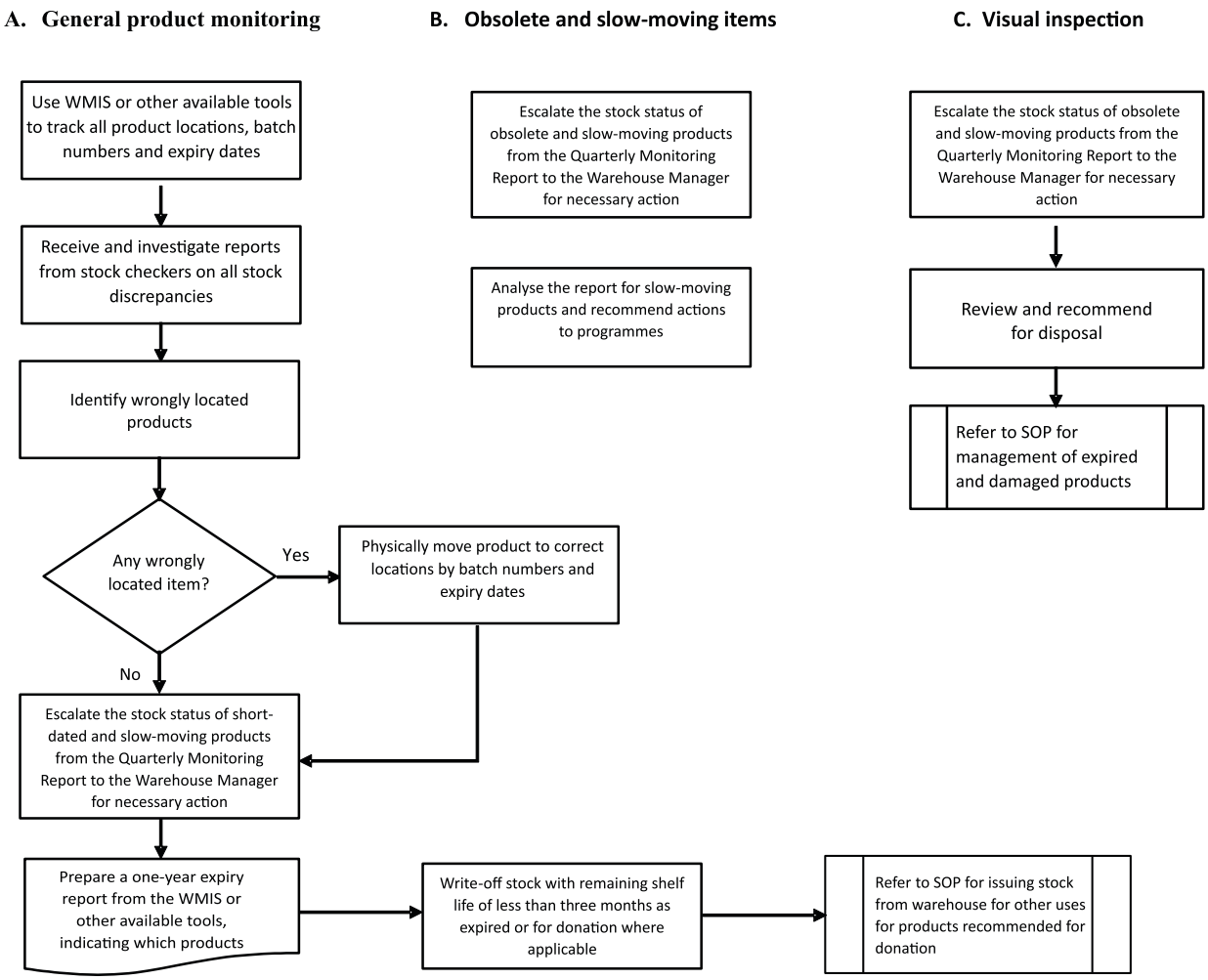
No	Guidance	Action Owner
1.	Extract the stock status of obsolete and slow-moving products (products that have not registered a use for over six months) from the Quarterly Monitoring Report and escalate to the Warehouse Manager for necessary action	Inventory Manager
2.	Analyze the report for slow-moving products and recommend actions to programmes.	Warehouse Manager

c) Visual inspection:

No	Guidance	Action Owner
1.	Supervises the visual inspection to identify damaged, expired and unusable products and submit report to Warehouse Manager	Superintendent Pharmacist
2.	Review and recommend for disposal in line with the disposal procedure for damaged, expired and unusable products	Superintendent Pharmacist

Note: Monitoring is complete when products are properly located and retrieved; stock expiry is proactively monitored and obsolete items are properly managed.

PROCESS FLOW FOR MONITORING PRODUCTS



IV. Physical Inventory (stock taking)

Purpose: To describe all activities to be conducted during physical inventory to ensure accurate physical counts; proper stock reconciliation and management of discrepancies.

Responsible Personnel: Superintendent Pharmacist, Warehouse Manager, Store Officer, Warehouse Assistant/Checkers/Pickers/Casual officers, Programme Head of PSM and Stock-taking Team.

The responsibilities will apply for the above activity:

No	Personnel / Group	Responsibility
1.	Superintendent Pharmacist	✓ Prepares a schedule of activity for stock-taking detailing: • Activities to be carried out and their timeframes Stock taking team (counting team, Programme Head of PSM and other groups where applicable) ✓ Supervise the stock taking exercise and generate a report
2.	Warehouse Manager	✓ Circulates the finalized schedule to the Stock-taking Team for implementation. ✓ Circulate final stock-taking report to relevant stakeholders

No	Personnel / Group	Responsibility
3.	Warehouse Assistant/Checkers/ Pickers/Casual officers	✓ Ensure that the store is clean, tidy and in good order to facilitate stock taking process
4.	Programme Head of PSM/LMCU	✓ Liaise with the warehouse manager to schedule physical inventory
5.	Stock-taking Team	✓ Conducts physical inventory ✓ Checks variance report against counting sheets, provides justification if any and ensures correct entry and endorse ✓ Check variance in stock location and make necessary adjustments ✓ Inventory Manager carries out stock adjustment and update bin card explaining any difference in stock ✓ Team lead approves count results, carries out stock adjustment and update bin card explaining any difference in stock

The procedures below will apply for the activity above:

a) Pre stock-taking activity:

No	Guidance	Action Owner
1.	Prepares a detailed schedule for stock taking, the schedule will indicate the following: • Activities to be carried out and their timeframe • Stock taking team (counting team, Program Head of PSM and other groups where applicable)	Superintendent Pharmacist
2.	Share the schedule with Warehouse Manager for approval prior to circulation	Superintendent Pharmacist
3.	Circulate the finalized schedule to the team for implementation	Warehouse Manager
4.	Liaise with procuring entity to ensure that no product (locally sourced or imported) is delivered during the stock taking period	Warehouse Manager
5.	Ensure that the store is neat, tidy and in good order to facilitate counting: • Label and properly arrange stock in locations • Label all storage locations	Warehouse Assistant/Checkers/Pickers/Casual officers
6.	Ensure that all outstanding stock adjustments are effected; all expired and damaged products are sorted out, labelled and placed in the designated areas.	Warehouse Assistant/Checkers/Pickers/Casual officers
7.	Conduct a brief meeting for stock taking team to clarify any issues and share previous experiences	Warehouse Manager
8.	Print inventory counting sheets & distribute to the team members	Superintendent Pharmacist
9.	Obtain clipboards, writing materials and calculators	Store Officer

NOTE: In the event of critical emergencies that will compel the receipt of product within the scheduled time of stock taking, the stock taking exercise will be rescheduled to give way to the receipt process.

b) Stock taking:

No	Guidance	Action Owner
1.	Physically identify and count products by location in a sequence and record the physical count on the inventory counting sheets provided. • Take note of product description and units of measure • Take note of pack sizes • Take note of quantities per carton • Take note of partially filled cartons and loose packs • Take note of any mix-ups • Take note of variance in location • Record any expired and damaged products • Record any short-dated products (< 6 months) • Reconcile the record of the inventory counting sheet with the comprehensive inventory list as recorded by the WMIS (or other inventory records) and note the discrepancies	Stock-taking Team
2.	Take note of variances. (Between the first count figure and WMIS figure/ the SKU list of the first count and the SKU list in the WMIS/ the location of SKU on physical counting and location of SKU in the WMIS) • Conduct a second count	Stock-taking Team
3.	Conduct a third count for items where the first and second count do not tally • Deploy a different stock-taking team • Use a fresh inventory counting sheet	Stock-taking Team
4.	At the end of physical inventory, update all inventory control cards (using red pen) or WMIS with physical quantity counted.	Inventory Manager
5.	Generate a variance report for all locations where the third count has been completed: • Attach a list of expired or near expiry and damaged products • Attach a list of variances in products between the inventory counting sheet and the comprehensive inventory list • Document all variances and remarks	Stock-taking Team

c) Post stock-taking activity:

No	Guidance	Action Owner
1.	Investigate discrepancies and posting • Print inventory as hand report (stock status report) for use to investigate variances • Check and document variance reports against inventory counting sheets and bin cards, provide justification if any, and ensure correct entry and endorse • Generate stock count report	Stock-taking Team
2.	Investigate all variances (NB: Shrink (variances) below 1.5% are still within acceptable industry best practices- https://retailmavens.com) • Collate finding and generate a variance report	Inventory Officer
3.	• Approve stock count report • Approve and follow up action on variance report • Authorize stock adjustment. • Archive inventory variance analysis and stock count report and disseminate to stakeholders	Warehouse Manager
4.	Update inventory record	Inventory Officer

Note: The process is complete when all inventory cards/WMIS are updated and report circulated. Physical inventory should be conducted monthly.

Process Owner

- Warehouse Manager

COUNTING SHEET

NAME OF FACILITY /WAREHOUSE ----------

LGA/STATE ----------

DATE ----------

S/N	DESCRIPTION OF ITEM	UNIT	PACK SIZE	BATCH NUMBER	EXPIRY DATE	QUANTITY	REMARKS

Names of Counters **Designation of Counters** **Signature of counters**

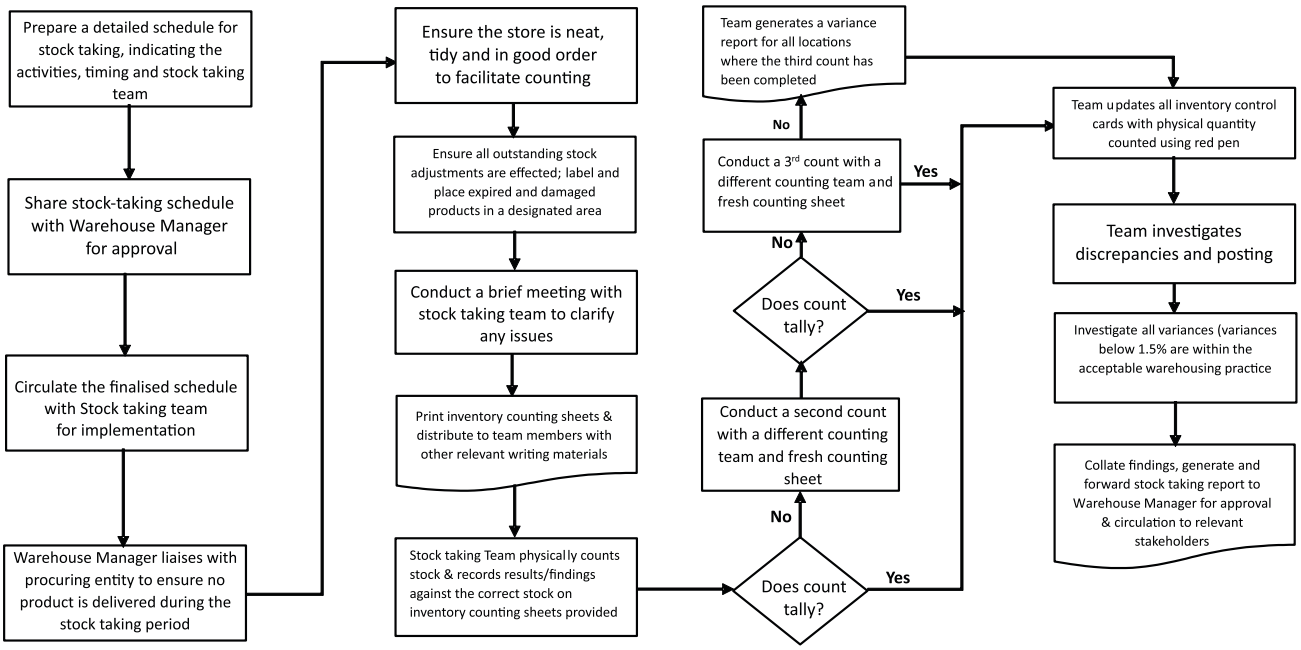
1. _____ _____ _____

2 _____ _____ _____

3 _____ _____ _____

Approved by _____

PROCESS FLOW FOR PHYSICAL INVENTORY (STOCK TAKING)



B. Environmental Control

Purpose: To spell out activities to be followed to ensure that the warehouse environment (external and internal) is suitable for proper storage of pharmaceuticals and other healthcare products as well as promote the health and safety of persons within the warehouse environment.

The following responsibilities will apply for the above activity:

No	Personnel / Group	Responsibility
1.	Warehouse Manager	✓ Provides oversight and coordination function ✓ Ensures climate (temperature and humidity) control and monitoring devices are installed at the appropriate places inside the warehouse and are functional
2.	Superintendent Pharmacist	✓ Ensures that these devices are monitored and logs maintained. ✓ Ensures these devices are calibrated as at when due. ✓ Checks daily that all products are stored in the conditions specified on packages and initiates corrective actions accordingly ✓ Notify the Warehouse Manager where necessary of any storage condition(s) that may affect the quality of products while in storage
3.	Warehouse Assistant	✓ Assist store officer in environmental monitoring
4	Procurement Manager	✓ Initiates procurement of environmental control and monitoring devices
5.	Head Finance	✓ Make funds available for procurement and maintenance of monitoring devices
6.	Maintenance unit	✓ Perform scheduled and unscheduled maintenance activities.
7.	HSE Officer	✓ Ensure compliance to health, safety and environmental requirements.

The procedure below will apply for the activity above:

I. Environmental Control – Climate Condition:

No	Guidance	Action Owner
1.	• Provides oversight and coordination function • Ensure climate (temperature and humidity) control and monitoring devices are installed and functional	Warehouse Manager
2.	Read and record minimum, maximum and current temperatures for the stores/warehouse every morning, afternoon and evening. Maintain temperature and humidity monitoring charts.	Store Officer
3.	Notify the Superintendent Pharmacist if: • Humidity is above 70% for >3 days • Temperature above 30^0C for > 3 days • There is a difference in temperature readings of >5^0C in 3 consecutive day's average readings • There is a difference in humidity readings of >5% in 3 consecutive day's average readings • Share copies of temperature and humidity readings with Superintendent Pharmacist	Store Officer
4.	Plot the readings on a monthly chart or generate charts from digital device and file	Superintendent Pharmacist
5.	Check daily that all products are stored in the conditions specified on packages and initiate corrective actions accordingly	Superintendent Pharmacist
6	Conducts / supervises scheduled and unscheduled maintenance and servicing activities	Maintenance Unit

Note: Temperature mapping of the warehouse should be done as need arises e.g. when increasing warehouse holding capacity.

II. Environmental Control – Infrastructure:

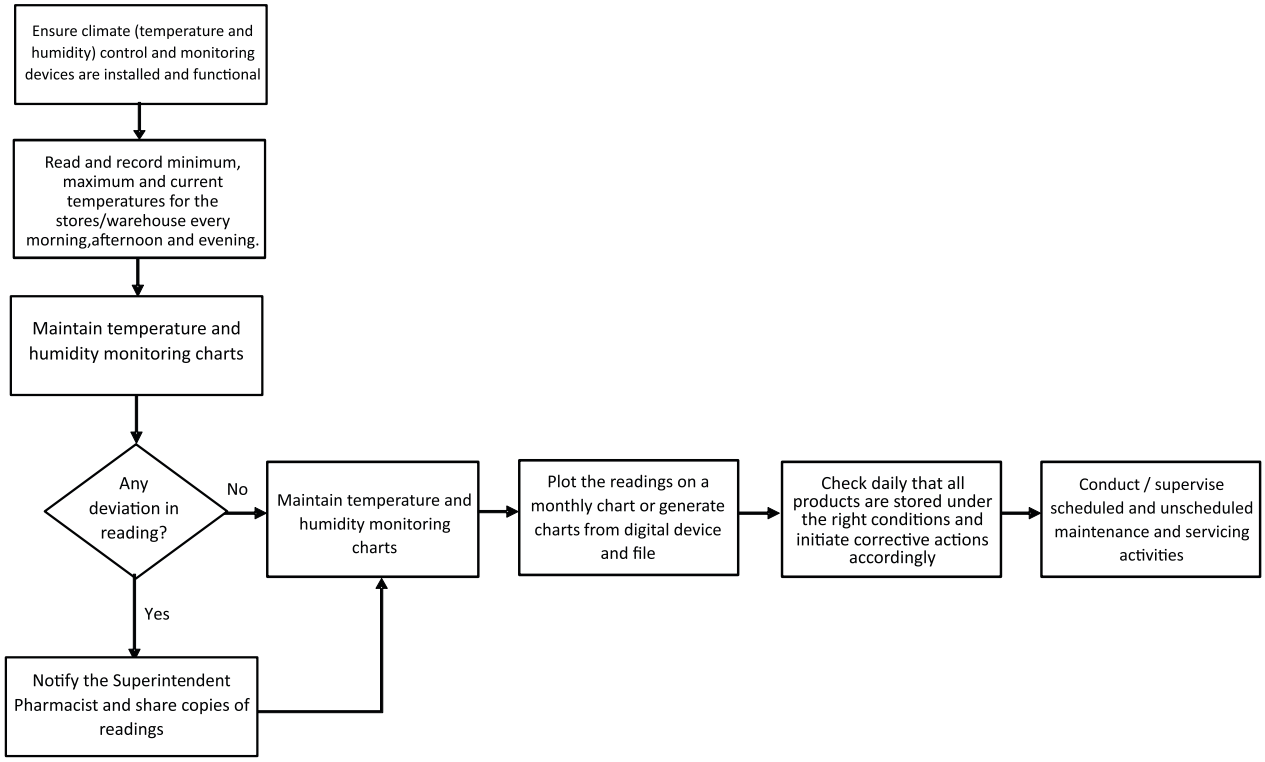
No	Guidance	Action Owner
1.	Perform a physical inspection of the stores at least once a month and check for: • Electrical faults and lighting • Signs of vermin (Pests and rodents) • Leakages or ground water seepage and blocked drainages • Flaking paint/damp walls • Cracks in walls, windows, ceiling and floor • Integrity of door locks • Integrity of racks and pallets	Store Officer
2.	Prepare and present inspection report, and indicate any potential problems to Warehouse Manager	Store Officer
3.	• Provides oversight and coordination function • Arrange to have the problems fixed in time	Warehouse Manager
4.	Supervise the maintenance operations by external vendors or warehouse maintenance unit	Head of Maintenance Unit
5.	Conduct routine inspection of warehouse surroundings and report any signs of breach to health, safety and environment to the warehouse manager	HSE Officer

III. Environmental Control – Pest:

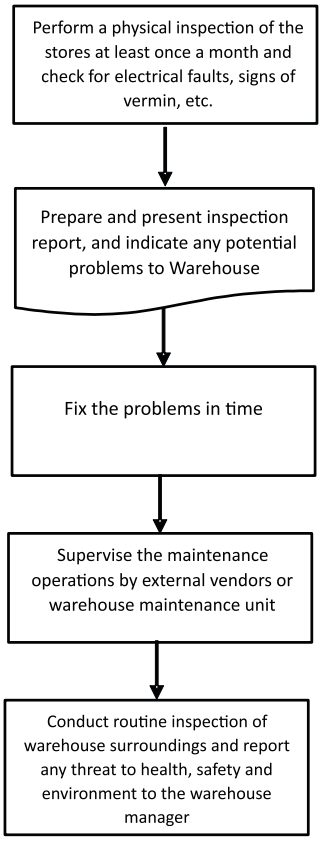
No	Guidance	Action Owner
1.	• Provides oversight and coordination function • Conduct biannual pest treatment and control	Warehouse Manager
2.	Inspect the interior and exterior warehouse environment for any signs of pests	Store Officer
3.	Use the specified pre-agreed regulatory approved pesticides and pest control methods to control pests	Warehouse Assistant
4.	Document observations and interventions in the Pest Control & Treatment Report Book and share with Warehouse Manager	Store Officer
5.	Preventive measures/activities • Eliminate perches near doors and ensure that evidence of bird activity is not present in the storage areas • Wherever applicable and feasible keep exterior doors closed when not in use, to minimize pest entry to the warehouse • Prohibit eating and drinking in the warehouse to deter pest activity and infestations • Maintain a clean, neat, and tidy warehouse	All warehouse personnel
6.	Ensure bushes are cleared and the height of the grasses maintained within acceptable limit	HSE Officer

PROCESS FLOW FOR ENVIRONMENTAL CONTROL

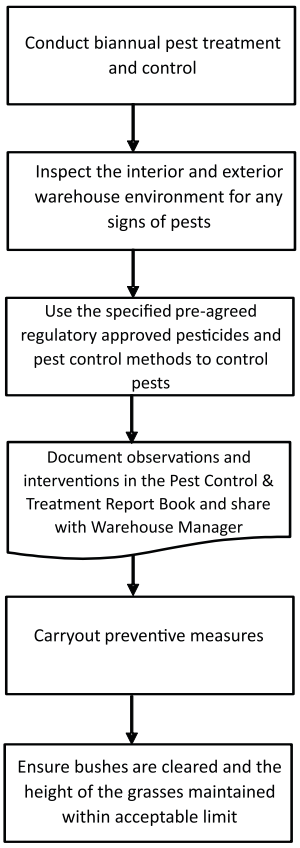
I. Environmental Control – Climate Condition



II. Environmental Control – Infrastructure



III. Environmental Control – Pest



C. Equipment Maintenance and Calibration

Purpose: To ensure that the warehouse equipment are adequately inspected, cleaned, and maintained to their desired specifications to promote their service life span.

The responsibilities below will apply for the above activity:

No	Personnel / Group	Responsibility
1.	Warehouse Manager	✓ Provides oversight and coordination function.
2.	Store Officer	✓ Inspects and cleans all equipment before and after use to ensure high-quality performance
3.	Head of Maintenance Unit	✓ Ensure planned service and maintenance of all warehouse equipment by developing a planned preventive maintenance schedule for each equipment and indicate those that are still under warranty
4.	Procurement Manager	✓ Initiate procurement processes of maintenance and replacement of equipment
5.	Head of Finance	✓ Makes funds available for procurement and maintenance of equipment
6.	Head of Audit	✓ Ensures compliance of vendors to warehouse requirements in line with agreed service contracts
7	HSE Officer	Advise and provide guidance for compliance to health, safety and environmental requirements

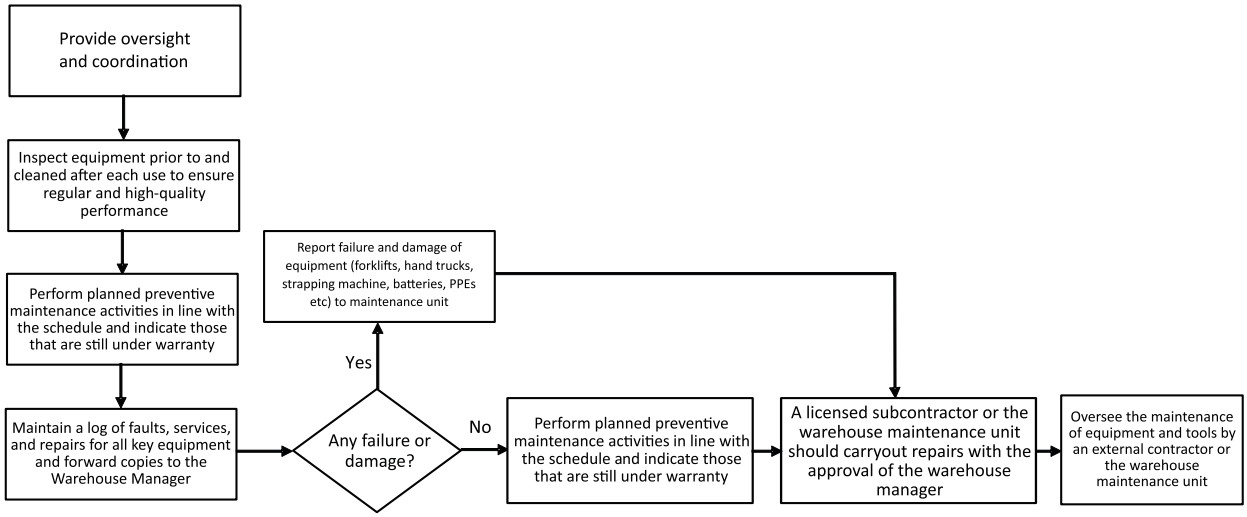
The procedure below will apply for the activity above:

I. Equipment Maintenance:

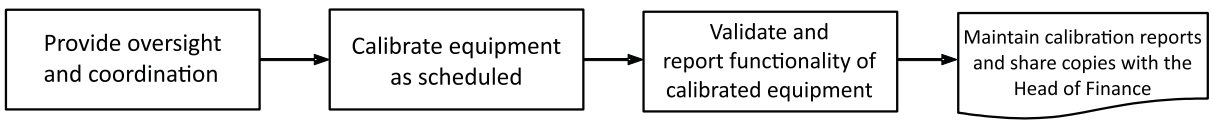
No	Guidance	Action Owner
1.	Provides oversight and coordination function	Warehouse Manager
2.	All equipment used in the warehouse should be inspected prior to and cleaned after each use to ensure regular and high-quality performance.	Store Officer
3.	Perform planned preventive maintenance activities of all warehouse equipment in line with the schedule and indicate those that are still under warranty	Head of Maintenance
4.	Maintain a log of faults, services, and repairs for all key equipment to allow checking of historical performance/issues and forward copies to the Warehouse Manager	Head of Maintenance
5.	Report failure and damage of equipment (forklifts, hand trucks, strapping machine, batteries, PPEs etc) to maintenance unit	Store Officer
6.	A licensed subcontractor or the warehouse maintenance unit should carryout repairs with the approval of the warehouse manager.	Head of Maintenance
7.	Oversee the maintenance of equipment and tools by an external contractor or the warehouse maintenance unit	Head of Maintenance

PROCESS FLOW FOR EQUIPMENT MAINTENANCE AND CALIBRATION

I. Equipment Maintenance



II. Calibration of Equipment



II. Calibration of Equipment:

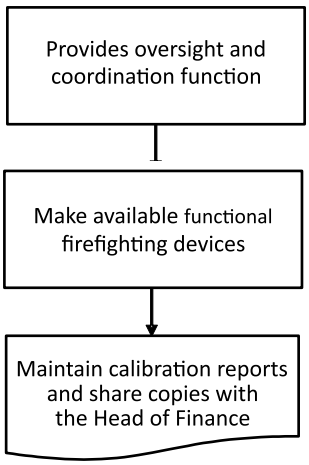
No	Guidance	Action Owner
1.	Provides oversight and coordination function	Warehouse Manager
2.	Calibrate equipment as scheduled	Head of Maintenance
3.	Validate and report functionality of calibrated equipment	Equipment Users
4.	Maintain calibration reports and share copies with the Head of Finance	Warehouse Manager

D. Routine Inspection for Fire Prevention, Detection & Fighting Equipment

The procedure below will apply for the activity above:

No	Guidance	Action Owner
1.	Provides oversight and coordination function	Warehouse Manager
2.	Make available functional firefighting devices such as: • Fire extinguishers • Sand buckets • Smoke detectors • Fire alarms • Fire hydrant system • Fire hoses, reels, and glasses etc.	HSE Officer
3.	Share copies of the maintenance and service reports of firefighting equipment with the Warehouse Manager	HSE Officer

PROCESS FLOW FOR ROUTINE INSPECTION FOR FIRE PREVENTION, DETECTION & FIGHTING EQUIPMENT



Reference

FMOH, FDS, NPSCMP (2017). Nigerian Supply chain warehousing and inventory control, Standard operating procedures for pharmaceutical and other healthcare products

TITLE: SOP FOR DISTRIBUTION AND REDISTRIBUTION	
Functional Area:	**Date issued:**
Code:	**Revision No.**
Prepared by:	**Approved by:**
SOP No:	**Effective Date:**

Introduction

Products kept at the warehouse are not yet ready for use by the client until they are moved to the service delivery points through an appropriate distribution channel. Distribution consists of moving products through the pipeline until they get to the service delivery points. Similarly health products delivered at health facilities stand the risk of expiration if not consumed before the expiry date. Redistribution involves the movement of viable health products from one service delivery point to another service delivery point in order to improve commodity availability and mitigate wastages and stock out.

Purpose

To ensure effective movement of pharmaceuticals and other healthcare products to the service delivery points

Scope

This SOP covers the distribution/redistribution of pharmaceuticals and other healthcare products from the Federal/State warehouses through the pipeline to the service delivery points and effective movement of usable pharmaceuticals and other healthcare products from one service delivery point to another to improve commodity security and minimize waste/redundancy.

Definition of Terms

- Distribution: The effective movement of pharmaceuticals and other healthcare products from the warehouses to the service delivery points.
- Redistribution: This is the horizontal movement of products from one service delivery point to the other often to improve commodity security (availability).
- Reverse logistics: This is the reverse movement of products up the pipeline often due to product recall, mop-up or waste drive.
- End user: The client that finally utilizes the pharmaceuticals and other healthcare products.
- Long haul: The long distance movement of bulk products from one warehouse to another. .
- Last mile: the final movement of products from the zonal or state warehouse to the service delivery point for client use.
- Right volume of inventory: This is the total inventory in-country that leaves at least six months of shelf life of products that will guarantee commodity security at the last mile.
- Month of Shelf Life Protection (MoSP): Is a metric used to guarantee that a minimum length of shelf life (in months) has been reserved to precede the time estimated for the complete consumption of a batch of supply to a facility.
- Effective Movement of Products: The distribution of products through approved channel, using appropriate transportation mode to achieve desired results in timeliness, quantity, quality, condition, cost and destination for use by the right clients.
- Service Delivery Point: A designated place where service providers render services to clients/patients/users. This will include community level, laboratory, health facility dispensaries, pharmacies, clinics and wards.
- Commodity Security: Generally defined as the ability to choose, obtain and use health product when and where they are needed.
- Designated Receiver: Is an officer who has been given the authority to receive products at health facility/service delivery point from the 3PL. This may be the head of facility (PHCs), head of unit (SHC) or an officer designated by the head. Such person must be enlisted in the list of designated receivers compiled by the State LMCU.

Abbreviations

- 3PLs: Third Party Logistics
- LMD: Last Mile Distribution
- LMCU: Logistics Management Coordinating Unit
- NHLMIS: Nigeria Health Logistics Management Information System
- LGA: Local Government Area
- NWAC: National Warehousing Advisory Committee
- MoSP: Month of Shelf Life Protection
- SDP: Service Delivery Point
- POD: Proof of Delivery
- SHC: Secondary Healthcare Centre
- PHC: Primary Healthcare Centre

Responsibilities

No	Personnel / Group	Responsibility
1.	Head of PSM	✓ Plans, coordinates and monitors long haul distribution process ✓ Develops long haul distribution matrix based on historical data to preposition products to zonal warehouses/ state stores ✓ Shares the long haul distribution matrix with the 3PLs to commence long haul distribution ✓ Initiates and coordinates inter-state redistribution ✓ Coordinates product recall
2	State Program me Manager(s)/ Programme logistic officer(s)	✓ Determine the quantity of products requiring redistribution.
3	LGA Program me Manager(s)/ Programme logistic officer(s)	✓ Determine the quantity of products requiring redistribution.
4.	Third Party Logistics (3PLs)	✓ Support the development of route plan for effective delivery ✓ Carries out long haul and last mile distribution
5.	Implementing Partners	✓ Support programs to ensure that products are effectively and efficiently distributed to the last mile
6.	Procurement Officer	✓ Procures the services of the third party logistics (where applicable)
7.	Head of Finance	✓ Make funds available for 3PL services ✓ Verifies the proof of delivery and other related documents ✓ Make payment for 3PL services
8	State LMCU Coordinator	✓ Determines quantity of the products requiring redistribution and the secondary health facilities/LGAs that are involved and initiate the process as applicable ✓ Shares with the Head of PSM the quantity, batch number, expiry date of products requiring redistribution and the list of health facilities/LGAs involved

No	Personnel / Group	Responsibility
9	Head of LGA LMCU	✓ Share with the State LMCU coordinator the quantity, batch number and expiry date of products requiring redistribution and list of PHC facilities within the LGA that are involved in the redistribution
10.	State LMCU	✓ Receives, collates and reviews product requests from health facilities ✓ Update list of health facilities and their locations in the NHLMIS ✓ Update the list of designated receivers ✓ Maintain a repository of approved receivers at the health facilities or their designates ✓ Generates state's last mile distribution request using the NHLMIS or other approved sources of inventory record and share with the warehouse manager ✓ Receive and acknowledge the receipt of the approved last mile distribution plan ✓ Coordinate and monitor distribution of products within the state ✓ Determine the secondary healthcare facilities and the LGAs involved in the redistribution ✓ Finalizes logistics arrangement with Facility Focal Person and relevant stakeholder for the purpose of redistribution ✓ Plan, initiate and facilitate redistribution of pharmaceuticals and other healthcare products amongst secondary health facilities in the state/inter-LGA PHC facilities and report to appropriate Programme Head of PSM and NPSCMP ✓ Initiates and facilitates reverse logistics ✓ Updates and shares LMD route plans with the LGA LMCU and the 3PL
11.	LGA LMCU	✓ Determine the primary healthcare facilities involved in the redistribution ✓ Plan, initiates and facilitates the redistribution of pharmaceuticals and other healthcare products between PHC facilities within the LGA and share information with state LMCU ✓ Support the implementation of LMD for pharmaceuticals and other healthcare to health facilities within the LGA
12.	Designated Receiver	✓ Receives and confirm delivery of pharmaceuticals and other healthcare products
13.	NWAC	✓ Responsible for maintaining good warehousing/distribution practices
14	Facility Focal Person	✓ Documents the transaction and updates all relevant tools
15.	Warehouse Manager	✓ Confirms stock availability at the warehouses ✓ Generates SIV and POD ✓ Give advance shipment notice to the receiving warehouses or service delivery point. ✓ Ensures security of pharmaceuticals and other healthcare products

Procedure

The distribution of pharmaceuticals and other healthcare products is made up of the following tiers as outlined below:

a) Long haul distribution

The procedure below will apply for the activity above:

No	Guidance	Action Owner
1.	Develops Long haul distribution matrix based on historical data to preposition products to zonal warehouses	Head of PSM
2.	Shares Long haul distribution matrix with the 3PL and Warehouse Managers at the dispatching and receiving warehouses	Head of PSM
3.	• Confirm stock availability at the dispatching warehouses • Give Advance Shipment Notice to the receiving Warehouses • Generate SIV, POD and other relevant documents in relation to the shipment	Warehouse Manager (Dispatching facility)
4.	Receiving Warehouses give feedback on readiness to receive products	Warehouse Manager (Receiving facility)
5.	Track the movement of products in transit using any available tools	Head of PSM
6.	Receives, confirms and documents signed PODs from the 3PLs	Warehouse Manager (Receiving facility) /3PLs
7.	Return signed POD and other documents to the Warehouse Manager (dispatching facility)	3PL/Delivery Agent/Designated Receiver

Note: Long haul distribution exercise is complete when steps 1 to 7 have been executed.

a) Last Mile Distribution: This procedure below applies to last mile distribution

No	Guidance	Action Owner
1.	Receives, collates and reviews LMIS report from health facilities	State LMCU Coordinator
2.	Generates last mile distribution request based on the reviewed LMIS report and shares with Warehouse Managers and the Head of PSM to confirm stock availability	State LMCU Coordinator
3.	Finalizes LMD plan based on LMD request from state and stock status within the warehouse; and notifies State LMCU Coordinators, 3PLs and National Programme Head(s) of PSM	Warehouse Manager
4	Generate SIV, POD and other relevant documents in line with the LMD plan and shares the document with Head of PSM (LMD plan), 3PL (SIV, LMD plan and POD) and State LMCU (LMD plan)	Warehouse Manager
5.	• Support the 3PL to update the route plan • Update the list of designated receivers and shares with 3PL and LGA LMCU coordinator	State LMCU
6.	Receives the pharmaceutical and other healthcare product and implement LMD in line with the LMD plan	3PL
7.	Use the final LMD plan and route plan to coordinate and supervise LMD	State LMCU Coordinator
8.	Take deliveries and endorse Proof of Delivery (POD)	Designated Receiver

No	Guidance	Action Owner
9.	Receive signed PODs from 3PL, confirm and save in a designated file	State LMCU Coordinator/Warehouse Manager/ Designated Receiver
10.	Generate end of distribution report and share with State and National Programme and NPSCMP • Validate POD • Conformance and non-conformance report	State LMCU Coordinator

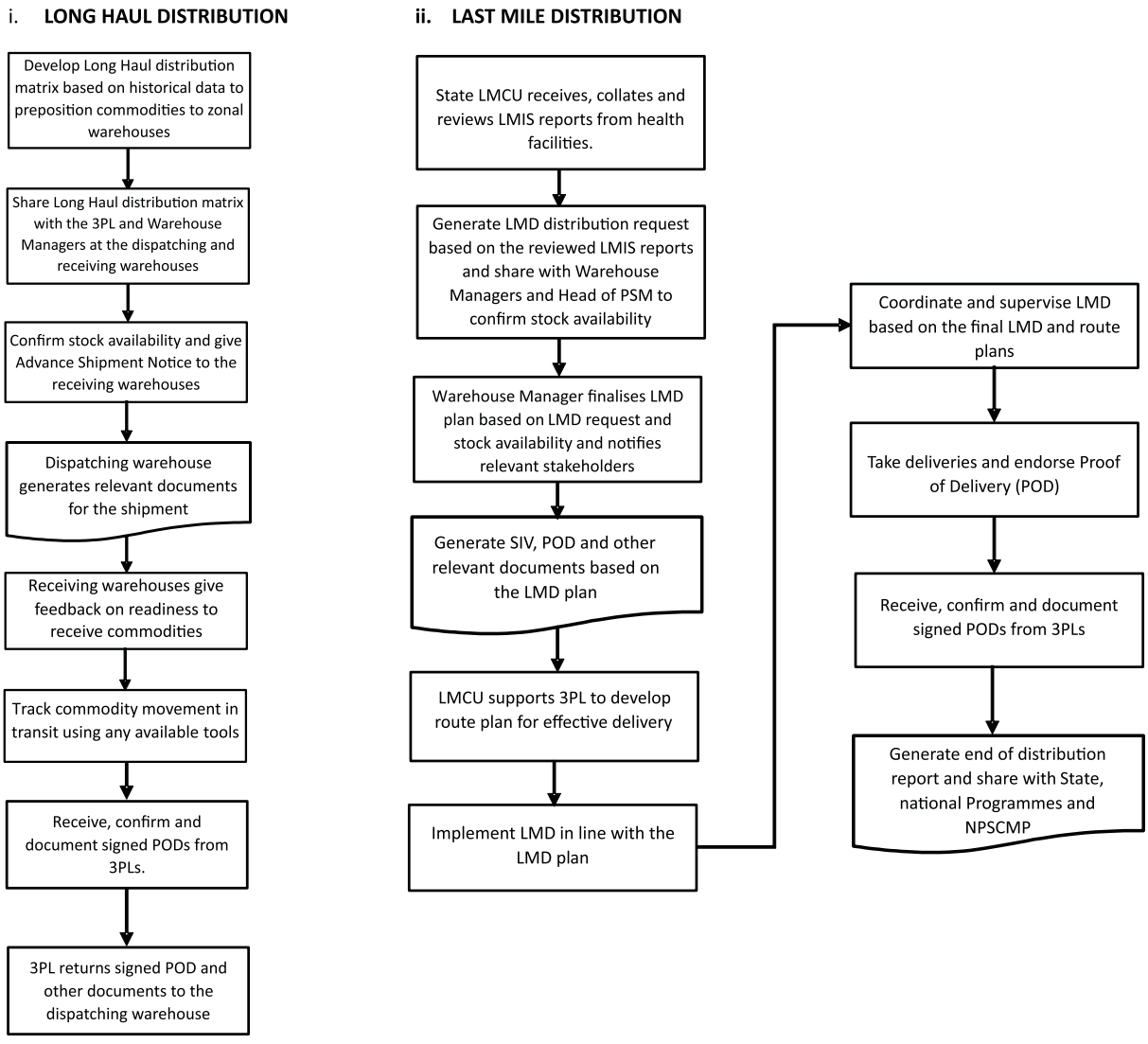
Note: Last Mile Distribution exercise is complete when steps 1 to 10 have been executed.

National Programme Head of PSM should ensure that the total in-country Inventory Volume is maintained within the optimal min-max level and lean enough to guarantee products distributed to the last mile have sufficient Month of Shelf Life Protection (MoSP) at the time of distribution.

Process Owner

- Head of PSM

PROCESS FLOW FOR DISTRIBUTION



c) Redistribution: This procedure below applies to redistribution

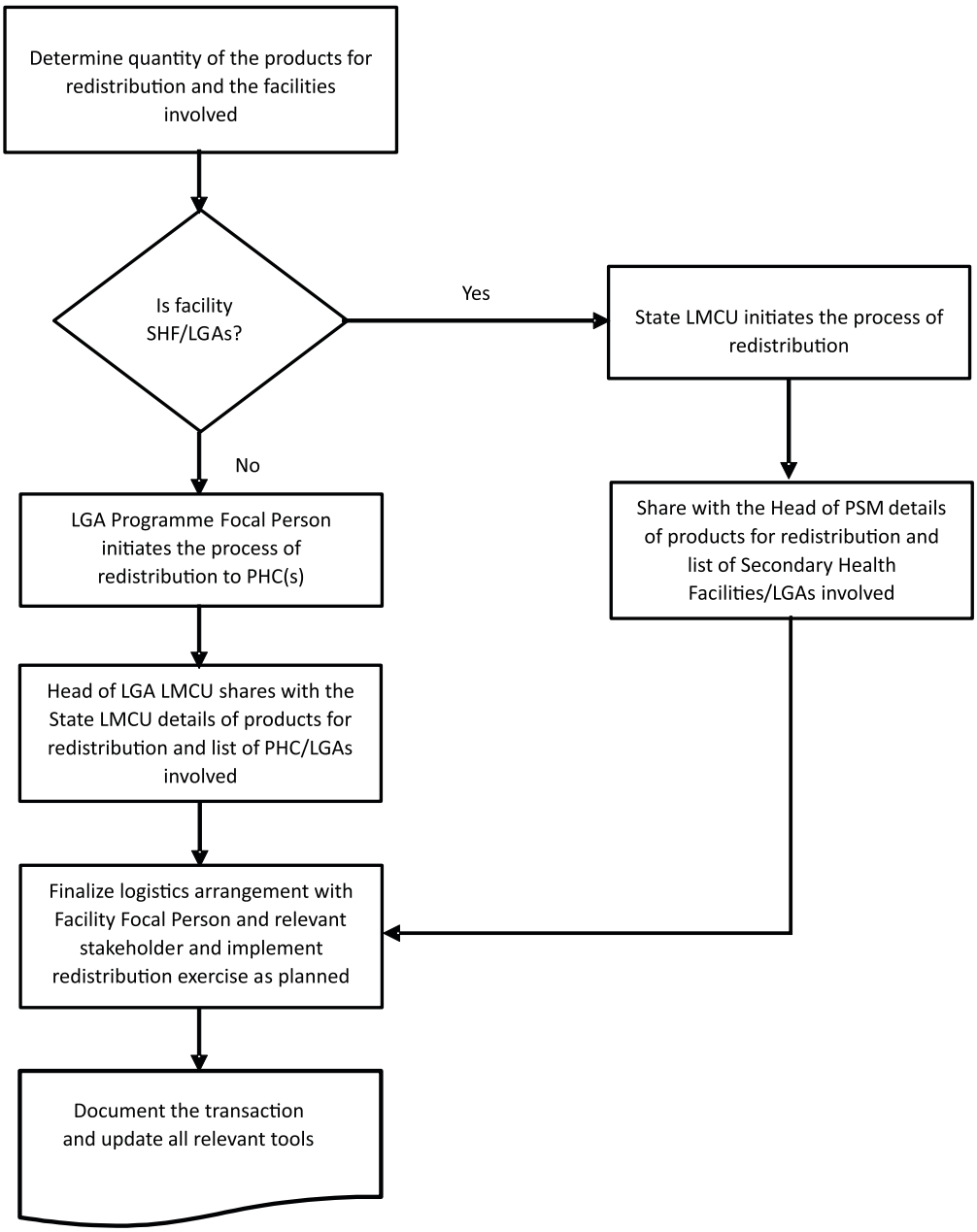
No	Guidance	Action Owner
1.	Determines quantity of the products requiring redistribution and the secondary health facilities/LGAs that are involved and initiate the process as applicable	State LMCU Coordinator
2	Determines quantity of the products requiring redistribution and the Primary Healthcare facilities involved and initiate the process as applicable	LGA Programme focal person(s)
3	Shares with the State LMCU Coordinators the quantity, batch number and expiry date of products requiring redistribution and the list of PHC facilities within the LGA that are involved in the redistribution	Head of LGA LMCU
4.	Shares with the Head of PSM the quantity, batch number, expiry date of products requiring redistribution and the list of health facilities/LGAs involved	State LMCU Coordinator
5.	Finalizes logistics arrangement with Facility Focal Person and relevant stakeholder and implement redistribution exercise as planned	• State LMCU Coordinator (SHC/LGA) • Head of LGA LMCU(PHC facilities within the LGA)
6.	Documents the transaction and updates all relevant tools	Facility Focal Person

Note: Redistribution exercise is complete when steps 1 to 6 have been executed.

Process Owner

- State LMCU Coordinator (Secondary healthcare facilities and Inter-LGA redistribution
- Head of LGA LMCU (Intra-LGA redistribution)

PROCESS FLOW FOR REDISTRIBUTION



References

1. FMOH, FDS, NPSCMP (2016). Nigerian supply chain policy for pharmaceuticals and other healthcare products
2. FMOH, FDS, NPSCMP (2017). Guidelines on the distribution of public health pharmaceuticals and other healthcare products,
3. FMOH, FDS, NPSCMP (2017). Nigerian supply chain guidelines and procedures for repositioning of inbound shipment of pharmaceuticals and other healthcare products at zonal hubs,
4. FMOH, FDS, NPSCMP (2017). Nigerian Supply chain warehousing and inventory control, Standard operating procedures for pharmaceutical and other healthcare products, FMOH, FDS, NPSCMP
5. FMOH, FDS, NPSCMP (2017). Guidelines on the distribution of public health pharmaceuticals and other healthcare products,
6. FMOH, FDS, NPSCMP (2017). Nigerian Supply chain warehousing and inventory control, Standard operating procedures for pharmaceutical and other healthcare products

TITLE: SOP FOR PRODUCT TRANSITION	
Functional Area:	**Date issued:**
Code:	**Revision No.**
Prepared by:	**Approved by:**
SOP No:	**Effective Date:**

Introduction
Product transition is a switch from health product(s) to another that is considered to provide a better outcome. During transition the new product is introduced while phasing out the old one in a controlled manner to avoid disruption of services and care.

Purpose
To ensure product transition is carried out efficiently without interrupting services, as well as ensuring availability of new product, accountability, complete phase out of the former product with minimal wastage.

Scope
This SOP covers the transition of pharmaceuticals and other healthcare products used at all levels.

Definition of Terms
Product transition is a switch from health product(s) to another that is considered to provide a better outcome.

Transition protocol: This is an illustration of a detailed step by step activities, timelines, resources and outputs to ensure smooth migration from the use of one product to another one.

Transition plan: This is a detailed plan of switch from one product to another, providing complete information as follows:

1. Quantity of the old and new product (including in-country, incoming shipment, Stock on Hand, Expiry date and Batch numbers).
2. Number of patients to be transitioned
3. Consumption pattern of the old product
4. Projected consumption pattern of the new product
5. List of resources required
6. Training plan for service providers on the new product
7. Shipment plan of the new product
8. Proposed duration of transition (Start up and end date)
9. Value of commodities being mopped up
10. Active PV plan for the new product
11. Develop a transition plan

Abbreviations
- ADR: Adverse Drug Reaction
- CSO: Civil Society Organization
- FGN: Federal Government of Nigeria
- FMoH: Federal Ministry of Health
- LMCU: Logistics Management Coordinating Unit
- NAFDAC: National Agency for Food and Drug Administration and Control
- SMoH: State Ministry of Health
- PV: Pharmacovigilance

Responsibilities

No	Personnel / Group	Responsibility
1.	FMoH (Permanent Secretary)	✓ Approves the transition plan
2.	National Programme	✓ Provides policy directions and guidelines
3.	Head of PSM	✓ Secure approval of transition plan from the Permanent Secretary through the Director of Food and Drugs Services ✓ Ensure that report from ethical committee is submitted to Department of Food and Drugs Services ✓ Circulate all approved transition plans to State level stakeholders
4	National Quantification Team	✓ Develop a transition plan ✓ Monitor rational use of products ✓ Monitor equipment functionality and usage(in case of reagents and devices) ✓ Ensure product security ✓ Ensures prepositioning of new products at all service delivery points ✓ Guide and facilitate the product recall and waste drive
5.	Implementing Partners	✓ Provide technical and programmatic support for the transition process
6.	Warehouse Manager	✓ Make adequate provision for receipt, documentation and storage of recalled products
7.	Service provider	✓ Initiate client on the new product replacing the existing one ✓ Educate the clients on the new product ✓ Reporting and management of ADR ✓ Promote rational use of both new and existing products ✓ Monitor the consumption of the new products ✓ Commits to complete recall of the phased out product ✓ Update the stock cards of old and new products
8.	LMCU	✓ Coordinate to ensure effective transitioning ✓ Monitor the consumption of the new products ✓ Monitor the recall of the phased out product ✓ Generate an end phase transition report and share with National programme (refer to annex for a template) ✓ Intensify surveillance and report adverse drug reactions (Active pharmacovigilance for new products) ✓ Support consumption (Patient per regimen) data collection, collation and analysis ✓ Support the mop up of the old products
9	LLMCU	✓ Support consumption (Patient per regimen) data collection and collation ✓ Support the collection and collation of stock status of the old product ✓ Support preposition of the new product at service delivery point and ensure proper inventory entry in new ICC/stock card ✓ Support the mop up of the old products ✓ Support active pharmacovigilance of the new product
10.	Donor	✓ Provide technical and programmatic support ✓ Provide support for effective transitioning
11.	Warehousing Manager	✓ Coordinate and oversee all warehousing operations related to transition ✓ Liaise with the Programme Team Lead on the implementation of waste drive ✓ Mobilise all the resources within the warehouse to ensure adequate documentation and storage provisions
12.	Superintendent Pharmacist	✓ Serve as quality assurance focal person ✓ Provide technical support to warehouse manager on good warehousing practice in relation to product transition ✓ Support the warehouse manager for effective implementation of waste drive

No	Personnel / Group	Responsibility
13.	SMOH (State Program Focal Person)	✓ Coordinates the sensitization of service providers and other stakeholders on the transition exercise ✓ Provide resources (fund and personnel) to ensure successful transition ✓ Support the mop up of old products ✓ Build capacity of providers on the transition exercise ✓ Liaise with the Director Pharmaceutical Services/ Director PHC Services to provide a transit storage space for the mopped up products
14.	NAFDAC	✓ Registration of new products or issuance of waivers where necessary ✓ Ensure quality assurance of the new product ✓ Actively monitor, collate and report adverse drug reactions to the relevant program ✓ Conduct periodic post-market surveillance of the new product
15.	SON	✓ Conduct relevant analysis of the new products to ascertain standard prior to selection for national use ✓ Provide regulatory oversight on standards to ensure that national and international specifications are met
16.	CSO	✓ Sensitization and demand creation for the new product
17	Other relevant stakeholders	✓ Sensitization and demand creation for the new product ✓ Support the uptake of the new product optimization and also monitor adverse drug reaction

Procedure:

No	Guidance	Action Owner
1.	National Program develops a detailed transition protocol for the new product, including identification of target population, product requirements, region or facility	National Programme Team Lead
2.	National Program obtains approval of the transition plan from Permanent Secretary	National Programme Team Lead
3	Support consumption (Patient per regimen) data collection, collation and analysis	LMCU/LLMCU
4.	Take inventory of existing products to be phased out	National Programme Team Lead
5.	Develop phase-out plan (Transition plan) for existing product that will be transited to include: • Identifying target population and planning demand for the existing product to minimize wastage • Tracking consumption to ensure accountability and rational use	National Programme Team Lead
6.	Develop a supply plan for a new product to align with the phase-out plan for the existing product	National Programme Team Lead
7.	Disseminate the approved transition plan to health facilities and other stakeholders	National Programme Team Lead
8.	Develop Job Aid and other educational manuals for the new product	National Programme Team Lead
9.	Conduct training and mentorship on the new product.	National Programme Team Lead
10.	Implement transition plan	All Stakeholders
11.	Monitor transition and review plan where necessary	National Programme Team Lead
12	Mop up old products	All Stakeholders

Considerations for Product Transition

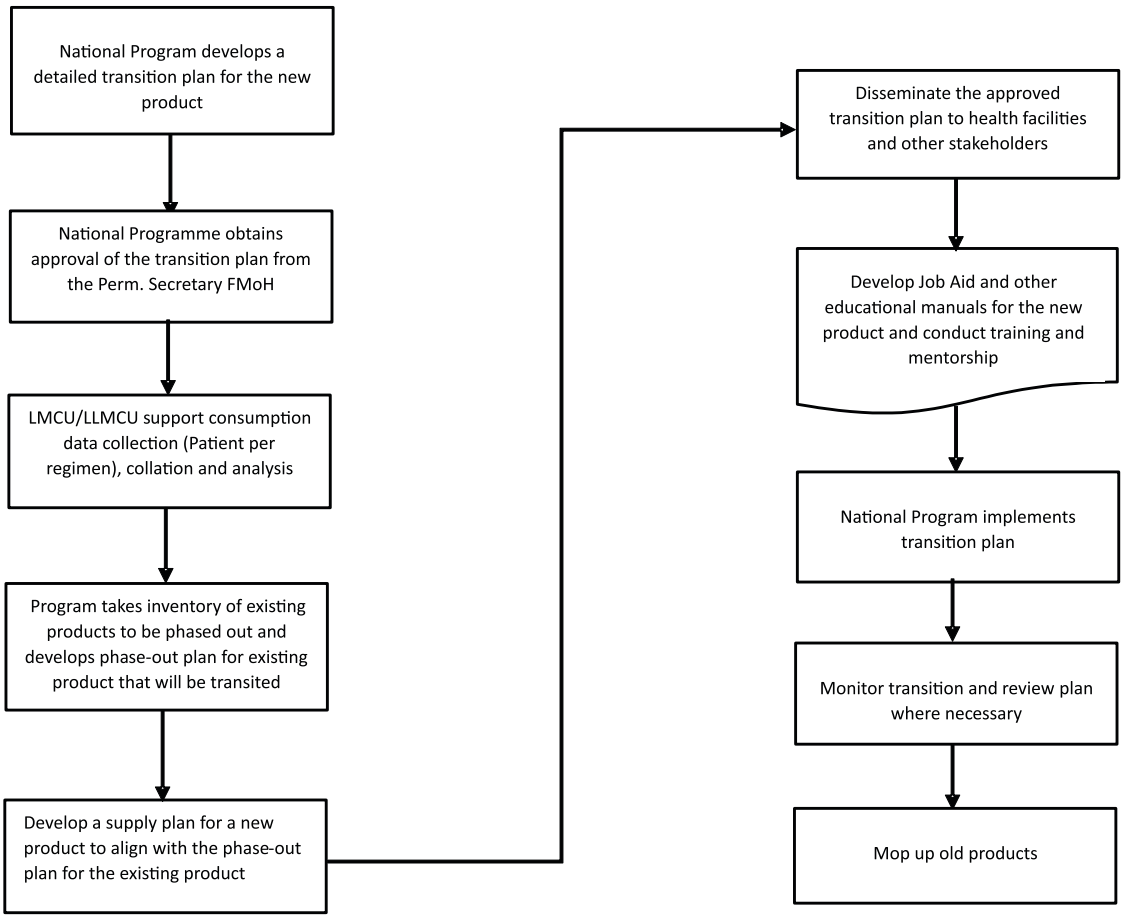
- Global supply security
- Pharmacovigilance
- Training of personnel on the use of the new product or technology Documented and approved justification for transitioning

Note: This process is complete when steps 1 to 11 are executed.

Process Owner

- Programme Team Lead

PROCESS FLOW FOR PRODUCT TRANSITION



References

1. FMOH, NASCP (2014), Standard Operating Procedure for the quantification of health commodities in Nigeria
2. FMOH, FDS, NPSCMP (2016). Nigerian supply chain policy for pharmaceuticals and other healthcare products
3. FMOH, FDS, NPSCMP (2017). Nigerian Supply chain warehousing and inventory control, Standard operating procedures for pharmaceutical and other healthcare products
4. FMOH, FDS, NPSCMP (2017). Operational guidelines for the provision of information on the procurement or donation of pharmaceutical and other healthcare products by the government and development partners
5. National Malaria Elimination Program (2017). Procurement and supply chain management GF grant operational manual
6. NTBLCP (2018). Tuberculosis commodity procurement and supply chain management, National Standard Operating Procedures and Job aids manual
7. USAID (2017), Logistics handbook

TITLE: SOP FOR LOGISTICS MANAGEMENT INFORMATION SYSTEM	
Functional Area:	**Date issued:**
Code:	**Revision No.**
Prepared by:	**Approved by:**
SOP No:	**Effective Date:**

Introduction

The effective provision of health services requires that relevant accurate, complete and comprehensive information on all health products are properly recorded, reported and analyzed on time. Therefore, the use of Standard Operating Procedures (SOPs) is important to ensure effective healthcare services. The Logistics Management Information System (LMIS) SOP seeks to provide public health workers with easy-to-use procedures and guides for correctly completing the harmonized LMIS tools. It is anticipated that this will improve the overall quality of data management system for all health products.

Purpose

This document focuses on the management of all health products logistic data for informed decision making. The purpose of this SOP is to:

- Ensure quality LMIS data are reported
- Serve as useful tool for training on LMIS
- Clarify roles, procedures and responsibilities on LMIS
- To provide minimal data sets that must be included in the harmonised LMIS tools
- Serve as reference guide on LMIS quality systems
- To have a common understanding of logistic terms

Scope

The LMIS SOP covers the, roles, responsibilities and the minimal data to be collected by all relevant officers that will promote efficiency in logistics management information for an improved management system for health products. It has provided harmonized LMIS tools for adoption by all health programmes to be used at service delivery points. It further indicates step by step instructions on how to fill the LMIS forms as well as the flow of information across the supply chain pipeline

Definition of Terms

- Average Monthly Consumption (AMC): Average number of a product issued, consumed or dispensed in a month within a reporting period. It is usual calculated as follows:

  $$AMC = \frac{\text{Total Quantity consumed or Dispensed over a given reporting period.}}{\text{The number of months in the reporting period}}$$

- Beginning Balance: This is the quantity of the opening stock of a product at the onset of a specified period. It is also the same as the usable stock of the closing balance from the immediate previous reporting period.
- Quantity Received: Quantity of healthcare product and other items received by service delivery point.
- Quantity Issued: Quantities of products/items in units supplied to another level for storage or dispensing
- Quantity Consumed: Quantities of products/items dispensed or used by a patient/client.
- Quantity to Order (QTO): This is the total quantity of a product to be requested by a facility to bring back the quantity of Stock on Hand to the maximum stock level. It is usual calculated as follows:

  QTO= Maximum Stock quantity – Physical Count

- Stock on Hand: Physical quantity of useable stock following a physical inventory count
- Closing Balance: Arithmetic calculation at a particular point in time of quantity used/dispensed/issued subtracted from the sum of opening balance and quantity received, while taking cognisance of stock adjustments (+/-)
- Physical Count: This is the process of counting by hand the total number of usable health products available in the health facility/store at any given time. This is done to verify the quantity of usable stock and identify discrepancies between physical stock (stock on hand) and closing balance reported on the LMIS forms
- Losses: Losses are the quantities of health product removed from the stock due to expiry, loss, damage or theft
- Adjustment: Quantities of health products received or given out to another facility during the reporting period outside the routine supply (issues, dispenses and receipt). This could be as a result of lateral transfer between two facilities of the same level or samples taken for post market surveillance by regulatory agencies and losses. Adjustments may be a negative (-) or positive (+). Positive Adjustments are quantities of a product received from any source/ facility other than the routine delivery from the zonal/state/LGA store including counting error. Negative adjustment could be as a result of lateral transfer (issuing) to other facilities, counting error, provision of samples for post market surveillance and losses as defined above. Nevertheless, losses in this case shall be investigated.
- Emergency Order Point (EOP): The EOP is set by the programme as one of the stock level parameters.
  Whenever the stock level hits that point before the next resupply time, emergency order is initiated to bring stock levels of affected products to the maximum. The Emergency Order Point can be reached at any point during the review period.
- Minimum-Maximum inventory control system: A controlled system that ensures that quantities of stock fall within the range of maximum stock level and minimum stock level as designed by the programme. It is abbreviated as max-min.
- Maximum Stock level: This is a programme-controlled parameter under max-min inventory-controlled system. It is the level of stock (expressed in months) above which inventory levels (stock status) should not exceed under normal circumstances. A facility with stock status above the maximum stock level is overstock and could result to many inventory-management risks.
- Minimum Stock level: This is a programme-controlled parameter under max-min inventory-controlled system. It is the level of stock (expressed in months) below which inventory levels (stock status) should not fall under normal circumstances. A facility with stock status below the minimum stock level is understock and may expose the programme to stock deficit challenges like out of stock.
- Month of Stock (MOS): The duration in months that the SOH will last based on subsisting AMC of Stock. It is calculated by the (SOH/AMC).
- Month of Stock Cover (MOSC): This is defined as the period in months the Stock on Hand with specific expiry date can still be useful before expiration. MOSC has been found to be a better indicator in stock utilisation since it defines the duration (in months) the SOH will be useful before expiry while MOS does not project the implication of the SOH expiring while in stock. It is calculated by considering the lesser of the two between MOS and the RSL.
- Potential write off (PWO): PWO is an early warning sign of potential wastage through expiration. PWO can only occur when the RSL is less than the MOS. This is calculated by subtracting MOS from RSL. It can be expressed in quantity or in months of stock.
- Months of Shelf Life Protection (MoSP): This is a distribution or redistribution management policy that allows for 2months beyond the time of complete consumption of a product before its expiration. Therefore, if a product is expiring in 5months time, the maximum quantity that can be allowed to be shipped is 3months. The last 2months will be a window to ensure that the product does not expire in the facility due to reduced consumption rate or other factors that affect consumption. Hence the 2 months window is regarded as MoSP. The National PSM TWG (December 2018) has agreed that the National MOSP should be 2 months.
- Number of days stocked out: The Number of days within the reporting period that the health product was not available for dispensing/use.

- Near Expiry Products (NEPs): It is a classification of a product into a special category for closer monitoring whenever the RSL drops to a defined value. Every programme should be able to set the NEP point putting in consideration of certain parameters such as Maximum and Minimum Stock level, Treatment duration, MOSP and Shelf life Span of the product.
- Redistribution limit: This is the minimum number of RSL a product has below which it should not be considered for redistribution between facilities i.e. MOS to be supplied should be ≤ RSL- 2 months (MoSP).

Abbreviations

- AMC: Average Monthly Consumption
- CHEW: Community Health Extension Worker
- EOP: Emergency Order Point
- FMoH: Federal Ministry of Health
- FP: Family Planning
- HIV: Human Immuno-Deficiency Virus
- HF: Health Facility
- LGA: Local Government Area
- LMIS: Logistics Management Information System
- LMCU: Logistics Management Coordinating Unit
- Max: Maximum stock level
- Min: Minimum stock level
- MoH: Ministry of Health
- MOS: Month of Stock
- MOSC: Month of Stock Cover
- MoSP: Months of Shelf Life Protection
- NEP: Near Expiry Product
- NHLMIS: Nigeria Health Logistics Management Information System
- NPSCMP: National Product Supply Chain Management Programme
- NSCIP: Nigeria Supply Chain Integration Project
- NTD: Neglected Tropical Diseases
- QTO: Quantity to Order
- Qty: Quantity
- RH: Reproductive Health
- SDP: Service Delivery Point
- SOP: Standard Operating Procedures
- TB: Tuberculosis

Responsibilities

No	Personnel / Group	Responsibility
1.	PHC OIC/Service Provider/Focal Person	✓ Record required information of health products on the stock card, EOP chart and reporting tool ✓ Summarize and report required data on the reporting tool for a specified period of time ✓ Receives report on facility performance and take appropriate action
2.	Local Government Area LMCU Focal Person(LLMCU)	✓ Collect and collate populated health facility stock reporting tools ✓ Review harmonised LMIS tools submitted by the health facilities ✓ Provide feedback to the health facility personnel ✓ Ensure data triangulation across all programmes ✓ Submit reporting forms to State Program Officer/State LMCU ✓ Submit updated health facilities list under respective LGA ✓ Mentor the facility personnel on data collection and reporting ✓ To provide the necessary reporting tools and other resources to facilitate data collection and reporting.
3.	State Program Officer	✓ Ensures availability of the harmonised LMIS tools in the state ✓ Support the collection and collation of reports from the health facilities ✓ Supports LMCUs to review harmonised LMIS tools submitted by the health facilities to ensure accuracy of the data captured ✓ Ensure data triangulation for the programme

No	Personnel / Group	Responsibility
		✓ Submit the reporting tools to LMCU ✓ Collaborate with the LMCU to collate and upload new health facilities providing services. ✓ Support data entry ✓ Support the LMCU in resolving data related issues during the data entry phase ✓ Receive and review report about State's performance and take appropriate actions ✓ Ensure that all programmatic changes are communicated to LMCU and vice-versa ✓ Coordinate training on harmonised LMIS tools
4.	State Logistics Management Coordinating Unit (LMCU)	✓ Ensure uniform standard of reporting for all the programmes especially with regards to data content, analysis, use and share best practices ✓ Ensure distribution of the harmonised LMIS tools ✓ Oversee the collection and collation of Health Facility stock reporting tools ✓ Facilitate data entry into NHLMIS ✓ Obtain warehouse information prior to every LMD cycle ✓ Conduct stock status monitoring ✓ Prepare stock status report for the PSM-TWG ✓ Prepare risk and issue reports and ensure all highlighted issues are resolved ✓ Ensure data triangulation across all programmes ✓ Upload new health facilities on the NHLMIS ✓ Resolve flagged data errors ✓ Provide technical oversight to LLMCU on facility performance ✓ Review State's performance, and take appropriate actions ✓ Generate routine report to review KPIs
5.	National Programmes	✓ Print and distribute harmonised LMIS tools to health facilities nationwide ✓ Provide oversight in the collection, collation and submission of data reports ✓ Generate routine report on KPIs ✓ Ensure consumption/service data triangulation for the programme ✓ Obtain warehouse information prior to every LMD cycle ✓ Conduct stock status monitoring ✓ Review state report for the programme ✓ Ensure that programme maintain minimum and maximum stock levels ✓ Provide data for the effective management of Near Expiring Products ✓ Track product life cycle data from ordering to SDP. ✓ Provide data for management of product switches in accordance with approved procedures ✓ Ensure compliance with national tools, procedures and quality standards as recommended by NPSCMP ✓ Follow-up with state program officers and LMCU to ensure the list of health facilities are updated in the NHLMIS ✓ Review National performance for respective health program and take appropriate actions ✓ Conduct training on new or updated harmonised LMIS tools
6.	National Product Supply Chain Management Program (NPSCMP)	✓ Develop new visions of improvement of harmonised LMIS tools, technologies, process, procedures, contents, and drive reviews ✓ Ensure all programmes use the harmonised LMIS tool at all levels ✓ Continuously address the need to introduce new concepts or KPIs in response to new challenging situations or to remove redundant ones ✓ Provide adequate LMIS resources at all levels and strengthen their capacity for use, ownership and review ✓ Access global resources for LMIS and ensure that global best practices are maintained ✓ Implement Evidence-Based performance management system for all health programs. ✓ Coordination of LMIS activities for all health programs ✓ Provide guidelines for enlisting facilities on NHLMIS ✓ Update approved list of health facilities in NHLMIS

Required Data Tools: Harmonized LMIS Tools

The table below lists all harmonized LMIS tools which include the names of the forms and their purpose. The step by step instructions on how to completely and correctly fill the harmonized LMIS tools can be found below. Copies of these forms can be found in the Annex of these SOPs. The Respective National programs will be responsible for the printing of the harmonized LMIS Forms and will work with the State Logistics Management Coordinating Unit for distribution of the forms to the health facilities. ***All harmonized LMIS tools should be printed using Landscape Format and health program should gray out irrelevant columns before printing.***

The harmonized LMIS tools to be used in the health facilities are:

S/N	Harmonized LMIS Tool	Purpose
1	Stock Card	To record information on quantity received/issued, stock on hand, losses and adjustments, expiry dates and batch number of health products in the facility store. Information on each stock keeping unit should be captured on a separate stock card.
2	Harmonized Stock Reporting Tool	To collect and sum up information on beginning balance, quantity received, quantity issued/dispensed, closing balance, physical count and number of patient's/end users/episodes per health product. Information of all health product should be reported on the same stock reporting tool.
3.	Emergency Order Point Chart	To keep track of immediate past consumption data in order to know when products are approaching emergency levels in the current reporting period
4	Return and Transfer Form	To report on movement of health products from one health facility to another. The form can also be used to manage expiries, overstock, short-dated health products and prevention of stock out.
5	Nigeria Health Logistics Management Information System (Electronic Platform)	For the purpose of electronic data entry: To collect and sum up information on beginning balance, quantity received, quantity issued/dispensed, closing balance, physical count and number of patient's/end users/episodes per health product. Information of all health product should be reported on the same stock reporting tool.

Job Aid

1. Stock Card: The stock cards across all health programme should capture the same basic data elements

Procedure:

Task:	Completing the unified stock card
To be completed by:	OIC (PHCs), Service Provider/Focal Person
Purpose:	-To record information on quantity of health product received/issued -To record stock balance and physical count for health products used in the health facility -To track losses and adjustments -To track expiry dates and batch numbers for all health products received -To update minimum, maximum and EOP stock quantities- Refer to Step 9 to 11 of the Procedure below
The task is performed:	-When health products are received or issued -When health products are transferred to another facility (negative (-) Adjustment) -When health products are transferred in from another facility, which is not the zonal/state/LGA store (positive (+) Adjustment) -When health products are removed from the facility store for reasons other than for issuing to end users (e.g. for loss, theft, expiration, damage) -When physical count is conducted

Note:	-Use separate stock card for each stock keeping unit managed in the facility -If opening a new stock card, continue with Step 1 below -If recording a new transaction skip to Step 12 below -Enter only one information on each line -If you have filled the last line of the front of the Stock Card, turn to the back of the card and write "Balance from previous row" in the **"Received from/Issued to"** column. Carry the balance from the front of the card and write it in the "**Stock Balance"** column of the back of the card. - Keep the stock card close to where health products are being stored and issued.

Step	Procedure
Steps 1- 11: Opening a new Stock Card	
1	**Name of the Health Facility:** Write the name of the Health Facility (write in full) *Example: Primary Health Care Centre, Omagwa*
2	**LGA:** Write the name of the LGA where the health facility is located *Example: Ikwerre*
3	**State:** Write the name of the State where the health facility is located *Example: Rivers*
4	**Store Name:** Write the name of the store issuing/dispensing health product/commodities to end users *Example: Inpatient store, GOPD store*
5	**Product Name:** Enter the name of the particular product whose information is being recorded *Example: Condom Male, AA3 - Artesunate/Amodiaquine*
6	**Strength:** Enter the strength of the product as indicated in step 5 *Example: 100mg/270mg*
7	**Product Unit:** Write the individual unit of issue for the particular health product indicated in step 5 *Example: 1 X 6 tabs, Vial*
8	**Program:** Enter the program whose information is being recorded *Example: RH/FP, Malaria, TB, HIV/AIDS, MNCH, Nutrition or NTD*
9	**Maximum Stock Level:** Enter the maximum stock level for specific health program (refer to Table 1 below)
10	**Minimum Stock Level:** Enter the minimum stock level for the specific health program (refer to Table 1 below)
11	**EOP:** Enter the Emergency Order Point Stock level for the specific health program (refer to Table 1 below)
Steps 12 – 25: Recording Stock Transactions	
12	**Date:** Enter the date of the transaction *Example: DD/MM/YYYY – 31/12/2019*
13	**Voucher No/Reference No:** Write the voucher no/reference no of the Delivery Voucher
14	**Received from/Issued to:** For **"Received from"** enter the name of the warehouse or store from which the item was received *Example: Gombe Zonal Store* Note: If the product is received from another facility (Positive adjustment), indicate the name of the Health facility. For **"Issued to"** *Enter the names of the SDP that the Health Products were issued to* *Example: GOPD Pharmacy*
15	**Batch No:** Write all the batch numbers of the product received as indicated in the packet/cartoon NB; Enter products with different batch numbers separately (on the same card) *Example: AABC/GH/IJK*
16	**Expiry Date:** Enter the expiry date of the product received as indicated on the packet/cartoon *Example: 19th Dec, 2022*

Step	Procedure
Steps 1- 11: Opening a new Stock Card	
17	**Quantity received:** Enter the exact amount of the health product received on the day the Health Products/Commodities arrives the facility. If stock is received from other facilities, this is recorded as a positive adjustment. The quantity should be written in terms of units of issue *Example: pieces, cycles, vials, tablets, packs*
18	**Quantity Issued:** Record the number of units of the health product issued on the date of transaction. (The quantity should be written in terms of units of issue)
19	**Losses:** Enter the exact amount of health product that has expired, damaged, stolen or lost.
20	**Adjustment (Column H):** Enter the exact quantity of health product that were received from another facility under "**Positive (+) Adjustment"** and the exact quantity of Health Products that were issued to another facility under **"Negative (-) Adjustment"** Be sure to indicate if the adjustment was negative or posi tive and note the reason for the adjustment in the "Remark column".
21	**Stock Balance (Column J):** **If receiving Health Products**: Add the **"Quantity Received"** to the Balance from the previous row and then enter the new balance. **If issuing Health Products**: Subtract the **"Quantity Issued"** from the Balance from the previous row and then enter the new balance. **If recording a "Balance from the end of the front page"**: Pick from the last row and enter into the first row of the next page of the stock card. **If reco rding a loss or adjustment** : Add or subtract the loss or adjustment quantity to/ from the Balance from the previous row and then enter the new Balance
22	**Physical Count (Column J):** Count and record the exact quantity of usable Health Products. a. This should be done on the last working day of the month along with a**"monthly close out"** which entail summing up each column of quantity received, quantity issued, losses and adjustments for the month. b. A **bi-monthly/ Quarterly rule off** should be done at the endof every two months for the bimonthly programs and every 3 months for the quarterly program. This is done by adding the figures of the monthly close out for the period in review and doing a physical count. The final sum for the bi-monthly or Quarterly rule off is entered into the reporting tool.
23	**Remarks:** Provide comments as necessary
24	**Signature:** Signature of the officer that performed the task
25	**Please document reason(s) and date(s) for losses and adjustment:**

2. Harmonized Facility Reporting Tool

Procedure:

Task:	Completing the harmonized facility reporting tool
To be completed by:	OIC (PHCs), Service Provider/Focal Person
Purpose:	- To report the quantity of health product at the beginning of the reporting period -To collect and sum up information on the total quantity of health product received from the regular source/issued to end users and average monthly consumption within the reporting period -To record the losses and adjustment, no of patient per prod uct, no. of days out of stock, quantity of stock expiring in less than six (6) months and their expiry dates - To calculate the quantity to order for each of the health product used/ dispensed in the facility

The task is performed:	From the first to the seventh day of the reporting month , *For example, for bimonthly reporting period (January – February), this tool is to be completed by the 7th of March while for quarterly reporting period (January – March), the tool should be completed by 7th April with the exception of the immunization program that reports every Friday*

Step	Procedure
1	**Program Name:** The program name is already printed on the form
2	**Name of the Health Facility:** Write the name of the Health Facility (write in full) *Example: Primary Health Care Centre, Omagwa*
3	**LGA:** Write the name of the LGA where the health facility is located *Example: Ikwerre*
4	**State:** Write the name of the State where the health facility is located *Example: Rivers*
5	**Product Description:** The list of the health products is printed on the form. However, for a new health product, Enter the health product name and strength on the empty spaces provided *Example: Artemether injection 80mg/1ml ampoule*
6	**Unit:** The units used to record data on the reporting tool are printed. However, for a new health product, Enter the unit of the health product on the empty spaces provided *Example: 1 X 6 tabs, Vial*
7	**Reporting Period:** Enter the reporting period in view. *Example:* Weekly (Every Friday), Bimonthly reporting period(January – February) and for Quarterly reporting period(January – March)
8	**Report Prepared Date:** Enter the date when the report was completed. The date should follow the format below *Example: DD/MM/YYYY – 31/12/2019*
9	**Beginning Balance (column A):** Enter the SOH of the previous reporting period at the first day of the reporting period in view *Example: For Bimonthly reporting period (March – April, 2020) enter the SOH for January – February, 2020 and for Quarterly reporting period (April – June), enter the SOH for January – March, 2020.*
10	**Quantity Received (column B):** Enter the total quantity of health product received at any point in the reporting period in view, from the regular source of delivery (Zonal/State/LGA Store). *Example: for January –February, 2019 reporting period ; the total quantity received from the 1st of January to the 28th of February, 2019*
11	**Quantity Dispensed (column C):** Enter the total quantity of health product issued to end users at any point in the reporting period. *Example: for January –February, 2019 reporting period; the total quantity dispensed/used to end users from the 1st of January to the 28th of February, 2019*
12	**Losses (column D):** Enter the total number of health product that was lost within the reporting period in view. *Example: for January –February, 2019 reporting period; the total quantity that was expired, damaged, stolen from the 1st of January to the 28th of February, 2019*
13	**Adjustment (column E):** *"**Negative (-) Adjustment"** – The total quantity of health product that was transferred to another facility at any point in the reporting period in view.* ***"Positive (+) Adjustment"** - The total quantity of health product that was received from another facility other than the regular delivery source (Zonal/State/LGA Store) in the reporting period*

14	**Closing Balance (column F):** The calculated quantity of health product as at the last working day of the reporting period. **Procedure** The closing balance (F) = (Beginning Balance (A) + Quantity Received (B) + Positive Adjustment (E)) – (Quantity Dispensed (C) + Losses (D) + Negative Adjustment(E)) *Example:* *For January- February Reporting Period.* *If Primary Health Care Centre Lugbe had a beginning balance of 10 for condom male, received 120 pieces within the reporting period (quantity received), dispensed 100 pieces (quantity dispensed), lost 2 pieces due to flood (loss), transferred 1 piece to a close by facility (negative (-) adjustment) and received 2 pieces from another facility (positive (+) adjustment)* *The closing balance = (10+120+2) – (100+2+1)* *= 132-103= 29* **The closing balance for condom male will be = 29**
15	**Physical count (column G):**Count and record the exact quantity of usable health product. This should be done at the last working day of the reporting period. Take note of quantity of commodity expiring in the next 6 months. Under normal circumstances, the physical count and stock balance should be the same
16	**Number of patients on product/regimen (column H):** Sum up thenumber of patients that received the product at any point of the reporting period under review
17	**Patients per regimen index (column I):** This compares the total number of patients that received the health products/commodities to the total number of health products/commodities that was dispensed. *This is auto calculated column*
18	**Average Monthly Consumption (column K):** The total quantity of health products/commodities dispensed divided by the number of month in review. *Example:* *For Bimonthly Reporting Period (January- February).* *The AMC = The total Quantity Dispensed/2* *For Quarterly Reporting Period (January- March).* *The AMC = The total Quantity Dispensed/used/3* *This is an auto calculated column*
19	**Quantity to Order (column L):** **Procedure**: The QTO = (AMC (K) X Maximum Stock Level (months)) – Physical Count (G) *Example:* *For January- February Reporting Period.* *If PHC Lugbe had an AMC of 56 for condom male and physical count was 9.* *The QTO = (56*4)- 9* *= 224 -9* *=215* *Therefore, PHC Lugbe will order 215 pieces of Condom Male* *This is an auto calculated column*
20	**Product Expiry Date and Quantities (column M):** List the expiry dates and quantity of health product that will be expiring in less than 6 months from the day of completing the report.
21	**Remarks:** Provide a brief explanation for any loss/adjustment or add any other comments as needed.
22	**Total End users Summary** : Sum up the total number of patients attended to within the reporting period under review.
23	**Signature:** **Report completed by SDP:** Write the name and phone number of the health facility focal person, the date the report was collected and signature **Report received by LGA LMCU:** The LGA LMCU should enter his/her name and phone number, the date the report was collected and signature

3. Emergency Order Point Chart

Procedure:

Task:	Completing the harmonized facility Emergency Order Point Chart
To be completed by:	OIC (PHCs), Service Provider/Focal Person
Purpose:	- To record the quantity of product that will trigger an Emergency order
The task is performed:	The first week of the month following the reporting period in view, example for bimonthly reporting period (January – February), this tool is to be completed by the 7th of March and for quarterly reporting period (January – March), the tool should be completed by 7th April.

Step	Procedure
1	**Facility Name:** Enter the name of the Facility
2	**State Name:** Enter the name of the State
3	**LGA Name:** Enter the name of the LGA
4	**Program Name:** Enter the name of the Programme
5	**Product Description (A):** Enter the names of the tracer products, strength and pack size *Example: Artemether injection 80mg/1ml ampoule*
6	**Reporting Period (B):** Divide the consumption from the previous reporting period by 2 or 3 depending on the programme specific review period *Example: i. For Jan-Mar Reporting Period divide by 3 for quarterly programmes* *ii. For Jan- Feb Reporting Period divide by 2 for bimonthly programmes*
7	**Date of EOP (C):** The date at which EOP occurred per health product at the service delivery point *i.e the date at which the stock hit the EOP quantity for the review period*

4. Return and Transfer form

Procedure:

Task:	Completing the Return and Transfer Form (RTF)
To be completed by:	OIC (PHCs) and Service Provider/Focal Person
First Approval by:	OIC (PHCs) and HOD Pharmacy/Laboratory (Secondary and Tertiary Facility)
Endorsed by (email):	State LMCU and State Programme logistic officers *State LMCU to notify LGA LMCU and the programme about all product transfers
Purpose:	To report on movement of health products from one health facility to another and to return expiries from health facility to the warehouse
The task is performed:	When transferring or returning health products from one facility to another and when returning expired products from the health facility to the warehouse.
Note:	-This form is in quadruplicate. When writing, make sure to press hard so it goes through the copies. -Keep a copy for your records once you have completed and signed the form and send the remaining three copies with the health products to the receiving facility. On receiving the products at the Facility, the Receiving Officer signs the three copies of the RTF, keeps a copy and returns one to the Sending Facility and the last copy should be sent to LGA/State LMCU.

	-In case of expiries, fill the form and keep it until a waste drive is scheduled to retrieve the health products from the facility. -When the health facility is at emergency order pointhe RTF can be used to execute the inter-facility transfer

Step	Procedure
1	**Name of health facility returning/transferring:** Write the name of the facility transferring or returning health products *Example: Primary Health Care Centre, Omagwa*
2	**Receiving Facility:** Write the name of the health facility/store/agency that is receiving the health product *Example: Primary Health Care Centre, Omarelu*
3	**LGA:** Write the LGA of the health facility returning or transferring the health products *Example: Ikwerre*
4	**State:** Write the State of the health facility returning or transferring the health products *Example: Rivers*
5	**Serial Number (A):** Enter the number corresponding to the entry of the transaction. Enter only one transaction per line *Example: the first entry will be 1, the second entry will be 2, and so on*
6	**Product Description (B):** The list of the health products is printed on the form. However, for a new health product **OR** if the name is not printed on the form, enter the health product name and strength on the empty spaces provided. *Example: Artemether injection 80mg/1ml ampoule*
7	**Unit(C):** The units used to record data on the reporting tool are printed. However, for a new health product **OR** if the unit is not printed on the form, Enter the unit of the health p roduct on the empty spaces provided. *Example: 1 X 6 tabs, Vial*
8	**Batch No (D):** Enter the batch number of the product you are transferring or returning. *Example: AABC/GH/IJK*
9	**Expiry Date (E):** Enter the expiry date for the health product *Example: 19th Dec, 2022*
10	**Quantity Requested (F):** In the case of fulfilling an emergency order request from a health facility, kindly enter the quantity of health product being requested for. ***Note: This information should be obtained from the facility.***
11	**Quantity Tra nsferred (G):** In the case of fulfilling an emergency order/inter facility transfer due to over stock or other reasons, kindly enter the quantity of health product being transferred.
12	**Quantity Received (H):** In the case of fulfilling an emergency order/inter facility, this is entering the quantity received at the requesting/receiving health facility
13	**Reason(s) for return/transfer (I):** Provide a brief explanation for the return or transfer. *Examples: Short-dated products, Product at risk of expiries, to prevent stock out* *Overstock of health products etc.*
14	**Record Compiled by***:* Enter the name and signature of the person completing the form. Also enter the date of the transaction
15	**Record Approved by***:* Enter the name and signature of the authorizing officer. Also enter the date of approval. *note: This is done by the personnel in charge of the facility*
16	**Transfer/Return by:** Enter the name and signature of the person initiating the transfer. Also enter the date of the transaction
17	**Carrier Comment:** Enter any comment the carrier may have on the conditions of the health products. *i.e. The person transporting the health products*

18	**Carrier Designation:** Enter the designation of the carrier *Example: Driver, Conveyor etc.*
19	**Carrier signature:** Enter the signature of the person transporting the health products
20	**Date:** Enter the date of the transaction *Example: DD/MM/YYYY – 31/12/2019*
21	**Receiving facility comment:** Enter any comment the receiving facility may have on the quantity and condition of the health products
22	**Receiver's name:** Write the name of the receiving officer
23	**Sign:** Signature of the receiving officer
24	**Date:** Write the date of the transaction *Example: DD/MM/YYYY – 31/12/2019*
25	**Transfer approved by:** Enter the name of the person approving the transfer of the health products. ***Note:*** *The transfer must be approved by LGA/State LMCU coordinator/Program officer*
26	**Sign:** Signature of the person approving the receipt of the health products
27	**Date:** Write the date of the transaction *Example: DD/MM/YYYY – 31/12/2019*

5.. Nigeria Health Logistics Management Information System (electronic tool)

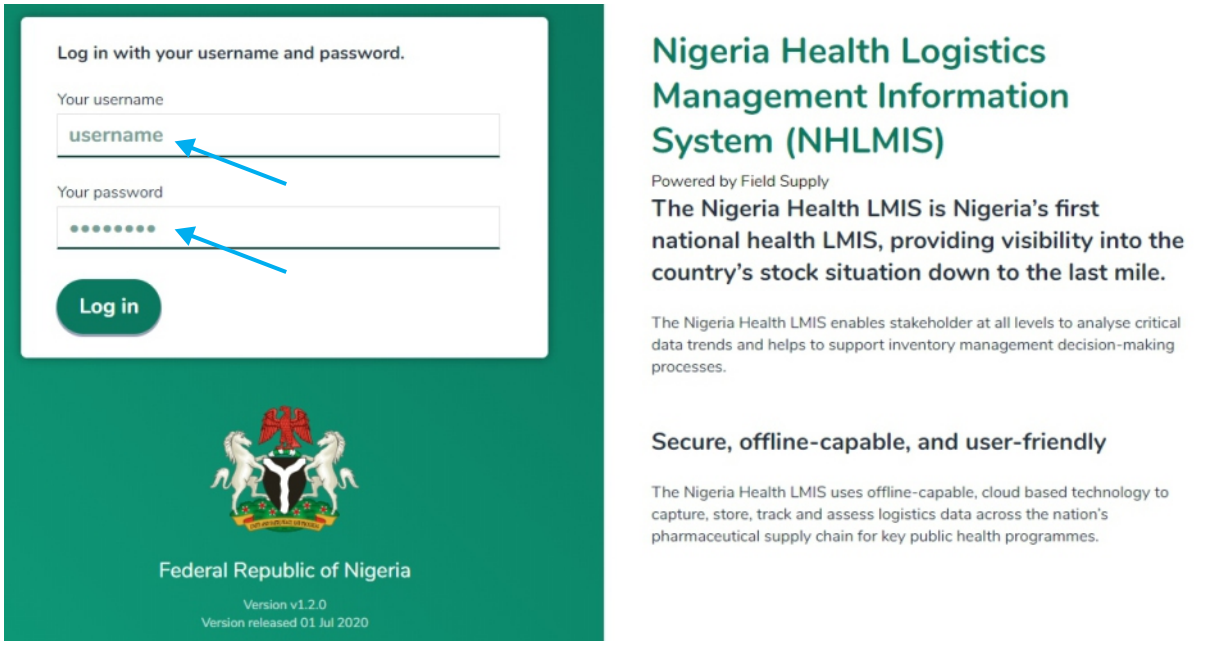
Procedure:

Task:	Completing the NHLMIS platform
To be completed by:	OIC (PHCs), Service Provider/Focal Person, LGA Focal Persons,
Purpose:	- To report the quantity of health product at the beginning of the reporting period -To enter information on the total quantity of health product received from the regular source/issued to end users and average monthly consumption within the reporting period -To record the losses and adjustment, no of patient per product, no. of days o ut of stock, quantity of stock expiring in less than six (6) months and their expiry dates - To export the quantity to order for each of the health product used/ dispensed in the facility
The task is performed:	From the first to the fourteenth day of the reporting month, *For example, for bimonthly reporting period (January – February), this tool is to be completed by the 14th of March while for quarterly reporting period (January–March), the tool should be completed by 14th April with the exception of the immunization Programme that reports every Friday*

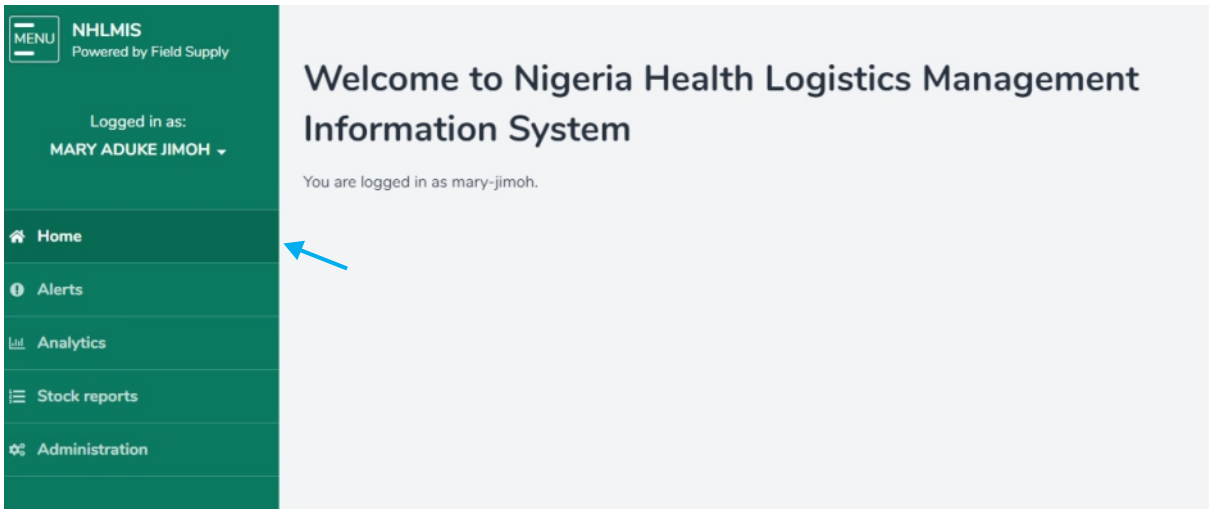
NHLMIS STOCK REPORTING JOB AID USING TB AS AN EXAMPLE

STEP 1: Power your laptop "Press the Power button Φ" to start up your computer.
STEP 2: Locate the google chrome browser on your desktop and click on it
STEP 3: Type **"www.healthlmis.ng"** on the url bar.

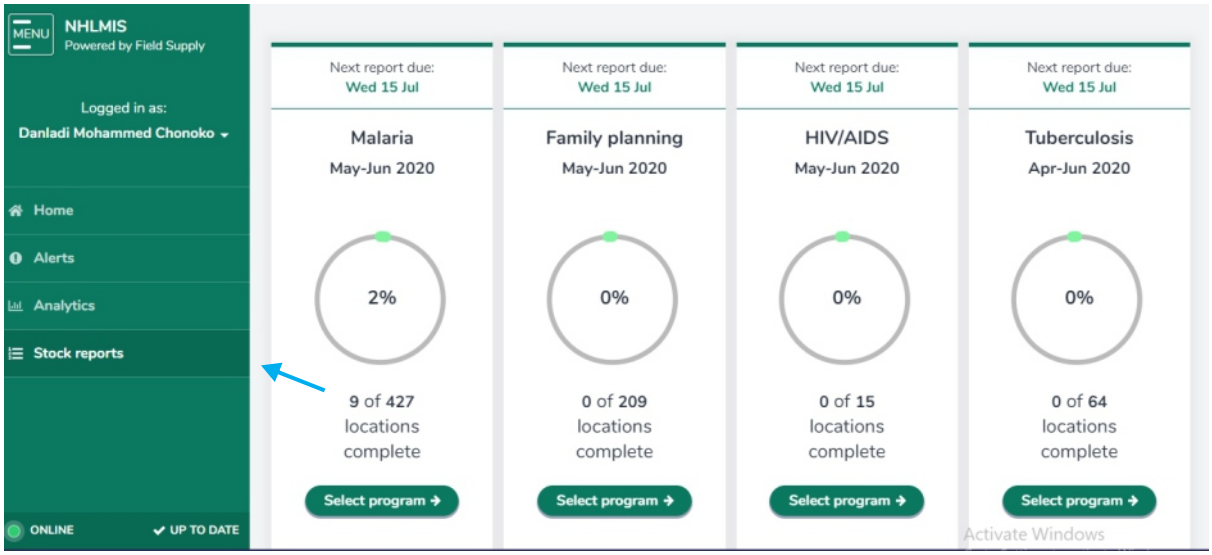
STEP 4: On the health LMIS log in page, Enter your **Username,** press the tab key then enter your **Password**



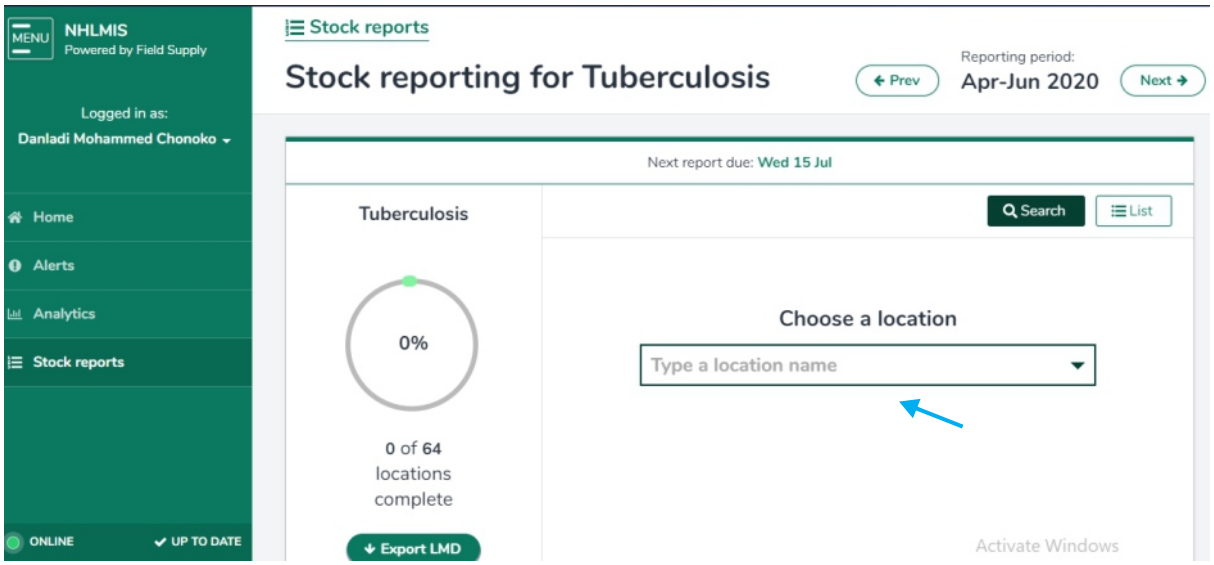
STEP 5: Click on "Stock reporting" from the menu option



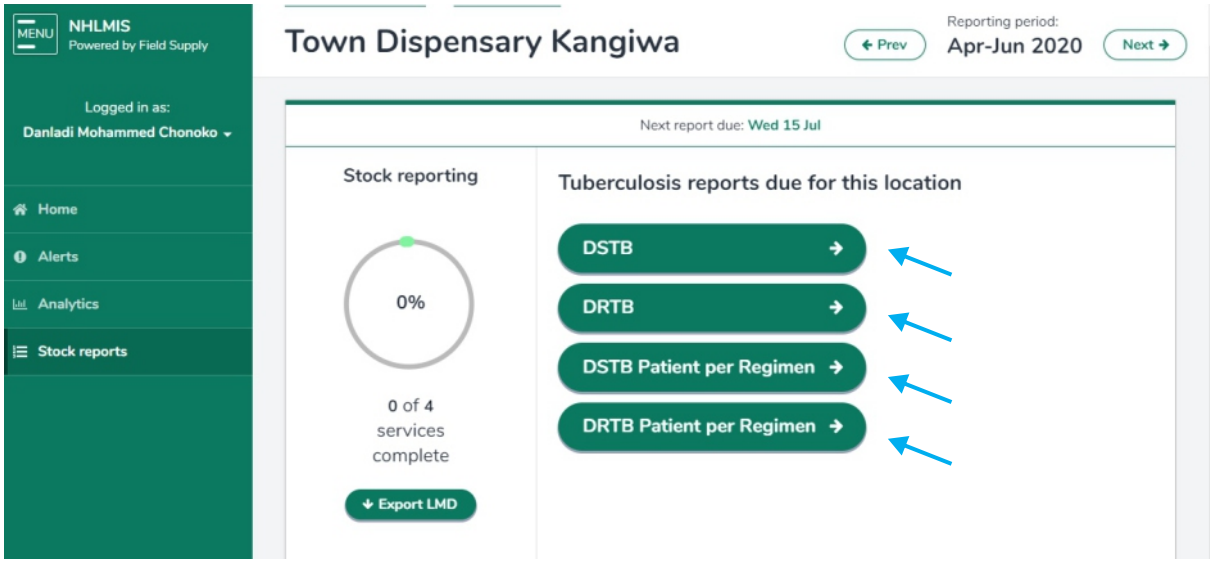
STEP 6: Click on stock reports and Select a Programme (Tuberculosis Programme) precisely



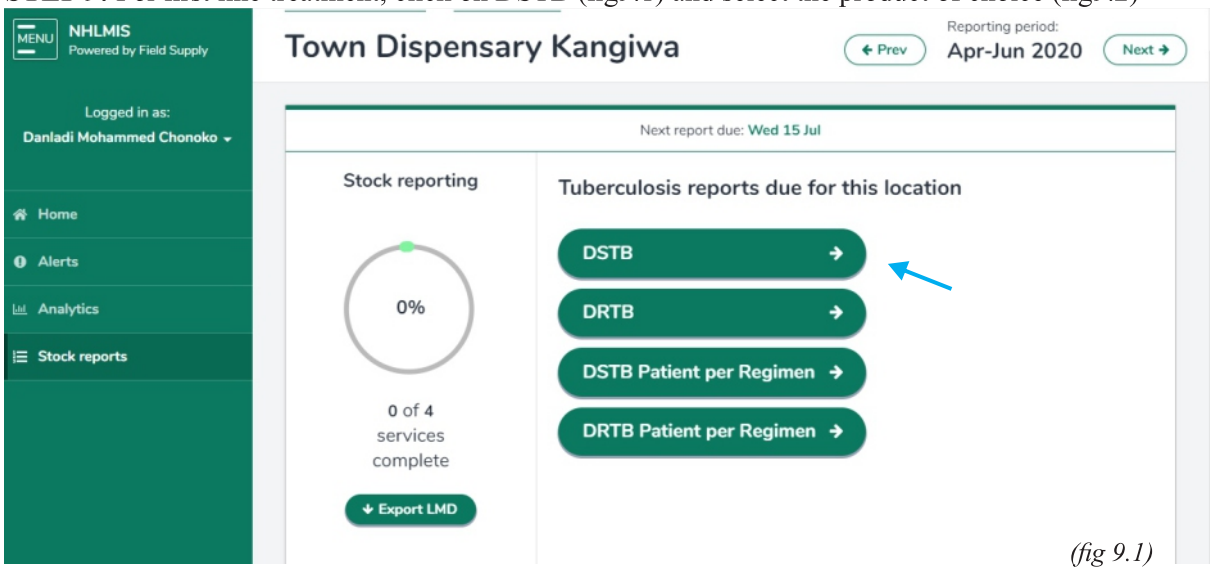
STEP 7: Type a facility name to select from the drop-down menu



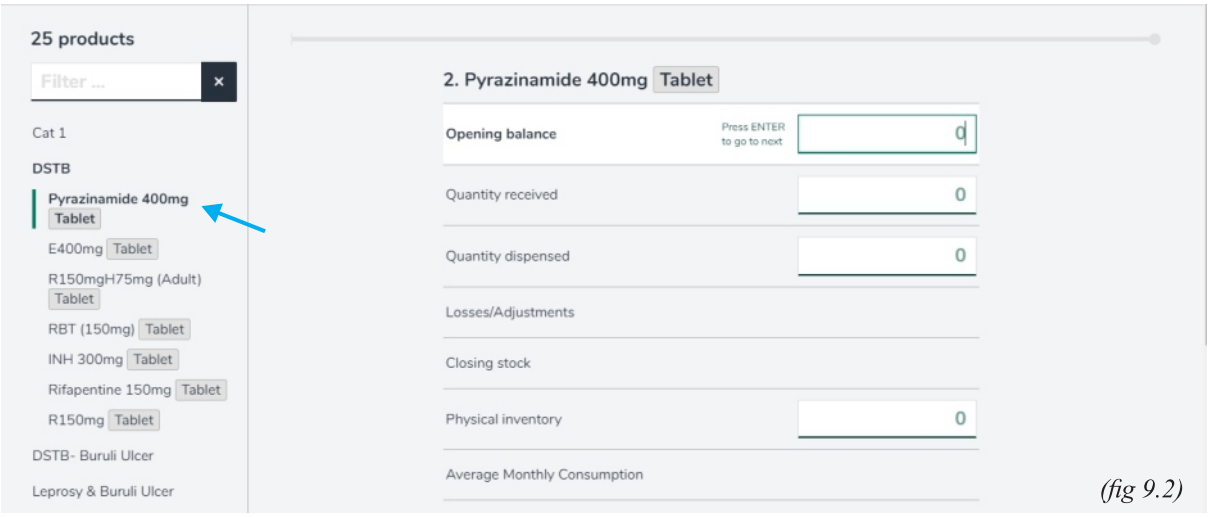
STEP 8: Select the product service line



STEP 9: For first line treatment, click on DSTB (fig9.1) and select the product of choice (fig9.2)

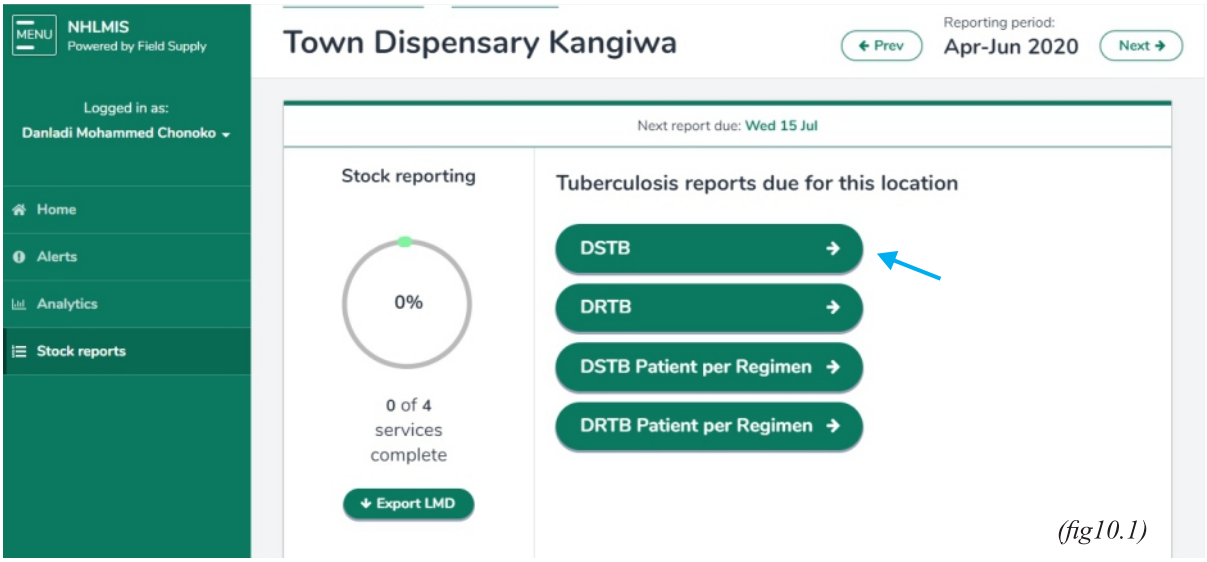


(fig 9.1)

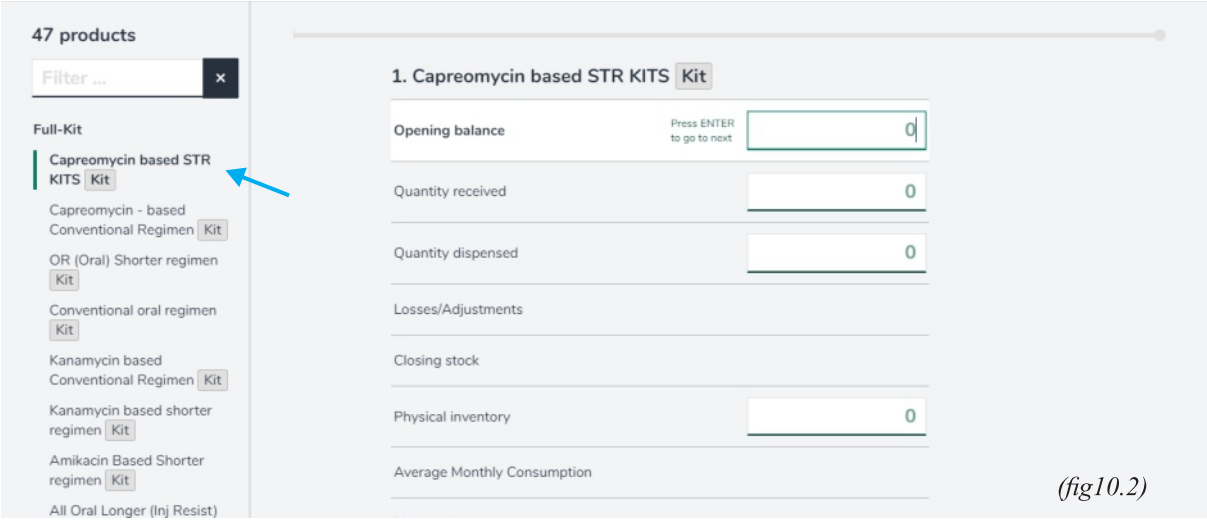


(fig 9.2)

STEP 10: For second line treatment, click on DRTB (fig10.1) and select the product of choice (fig10.2)

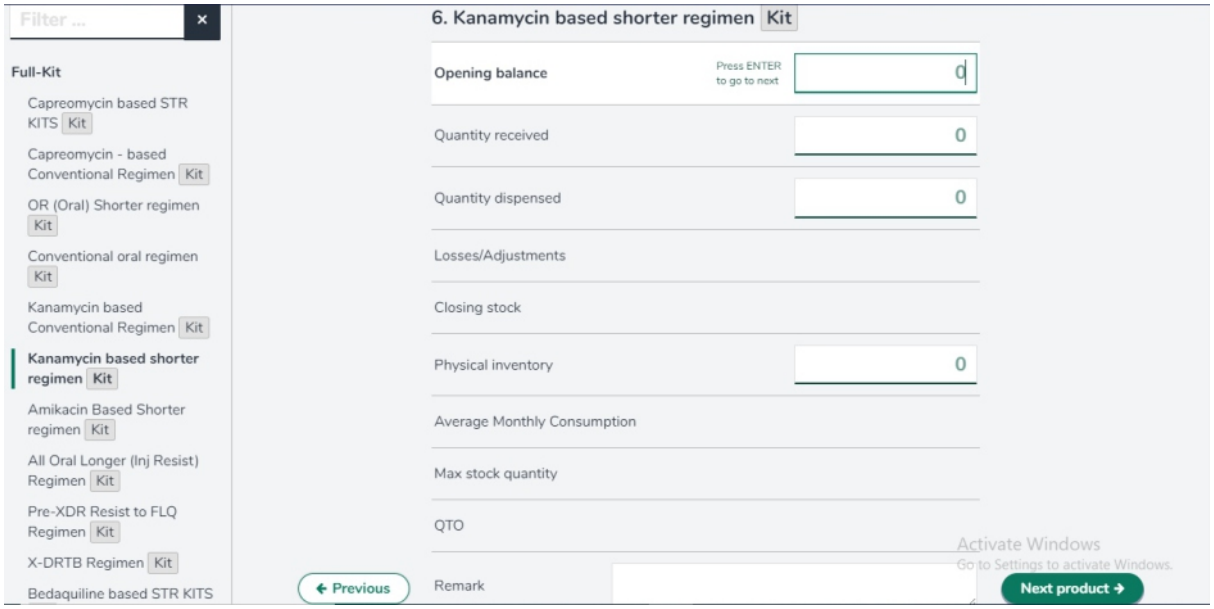


(fig10.1)



(fig10.2)

STEP 11: Fill the required fields. Then click on Next Product



STEP 12: Submit stock counts after completing data entry for all products

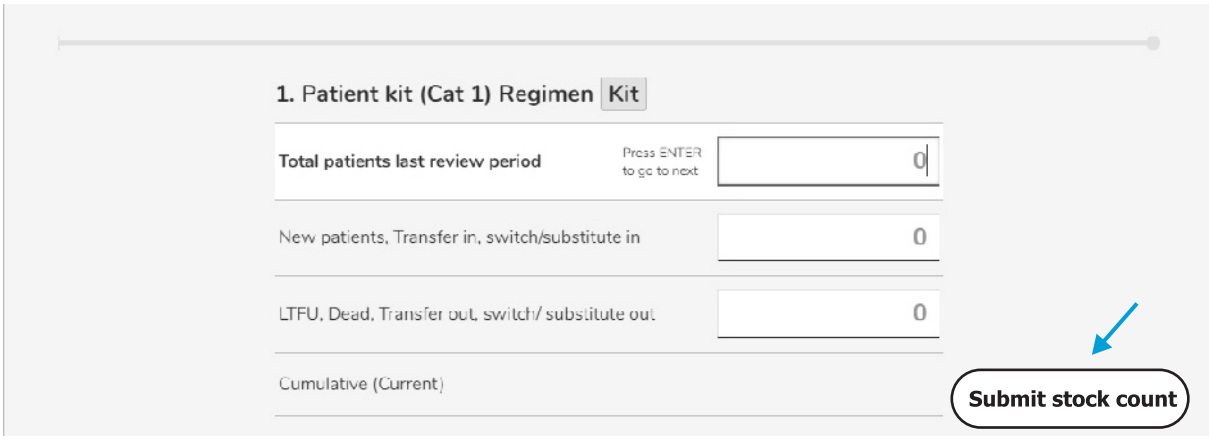
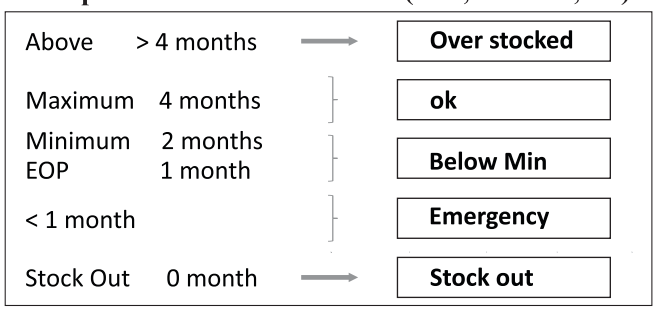


Table 1 Stock Levels at the Health Facility

	HIV	TB	MAL	RH	IMM	MNCH	NUTRITION	NTD
Descriptive Stock levels								
Maximum (MOS)	4	5	4	4	5 weeks	4	NA	NA
Maximum (MOS)	2	2	2	2	1 week	2	NA	NA
EOP (MOS)	1	1	1	1	None	0.5	NA	NA
Out of Stock	0	0	0	0	0		0	0

Descriptive Stock Status of MOS (HIV, Malaria, FP)



FEDERAL MINISTRY OF HEALTH

NATIONAL XXXXXXXXX PROGRAMME

FORM NAME e.g BFSR/CRRF/QRIRF

NAME OF HEALTH FACILITY _____

NAME OF LGA _____

STATE _____

Reporting period Jan-Feb 2019

Report Prepared Date _____

S/N	Product Description (Dosage form eg Tab; Product name and strength- Tab Artemeter/Lumefantrine 20/120mg)	Unit/ Pack size (E.g 1000 tabs/bottles/vials)	Opening Balance A	Quantity Received B	Quantity Dispensed C	Losses (Expiries, theft, spoilage) D	Adjustments E -ve (Transfers to other facilities) -	Adjustments E +ve (Transfers from other facilities) +	Closing Balalnce F=(A+B)-(C+D)+E	Physical Count G	Number of Patient on product/ regimen H	Patient per regiment index I = C/H	AMC J =(C/No of months in review period)	EOP K = (J/No of months in review period)	Quantity to order QTO L	M = Product Expiry date and quantities: Expiration Date < 6 months (MM/YY)	M = Product Expiry date and quantities: Quantity	REMARKS: REMARKS
1	AL - Artemether/Lumefantrine 20mg/120mg	1x6 tabs	10	100	100	2	2	1	9	9	50	2.0	50	25	191	01-06-19	3	
2	AL - Artemether/Lumefantrine 20mg/120mg	1x12 tabs										#DIV/0!						
3	AL - Artemether/Lumefantrine 20mg/120mg	1x18 tabs										#DIV/0!						
4	AL - Artemether/Lumefantrine 20mg/120mg	1x24 tabs										#DIV/0!						
5	AA - Artesunate 25 mg /Amodiaquine 67.5 mg	1x3 tabs										#DIV/0!						
6	AA - Artesunate 50 mg /Amodiaquine 135 mg	1x3 tabs										#DIV/0!						
7	AA - Artesunate 100 mg /Amodiaquine 270 mg	1x3 tabs										#DIV/0!						
8	AA - Artesunate 100 mg /Amodiaquine 270 mg	1x6 tabs										#DIV/0!						
9	SP (Sulphadoxine 500 mg + Pyrimethamine 25 mg)	1x3 tabs							0			#DIV/0!						
10	Quinine 300 mg tablet	tablet										#DIV/0!						
11	Quinine Injection 300 mg/1ml	2ml ampoule										#DIV/0!						
12	Artesunate suppository 50mg	Each										#DIV/0!						
13	Artesunate Injection 60mg/1ml	1ml vial							0			#DIV/0!						
14	Artemeter injection 80mg/1ml ampoule	1ml ampoule										#DIV/0!						
15	Rapid Diagnostic Test (RDT)	Each										#DIV/0!						
16	Long Lasting Insecticidal Nets (LLIN)	Each										#DIV/0!						
17									0			#DIV/0!						
18												#DIV/0!						
19												#DIV/0!						
20												#DIV/0!						

Report completed by (SDP):

Name of Focal Person/ reporting officer _____ Phone no. Date

Report received by (LGA LMCU):

Name/Signature of authorizing officer Phone no. Date

Total Client Summary

Adults(1st line)	Adult(2nd Line	Adult Salvage Regimen		Paediatric 1st Line	Paediatric 2nd line	Paediatric 3rd Line	Paediatric Salvage Regimen

Quarterly EOP Card

FEDERAL MINISTRY OF HEALTH

EMERGENCY ORDER POINT CHART

PROGRAM NAME	TRACER COMMODITIES E.G. Full names and strength eg	Q1 2019 *(Enter consumption for immediate past quarter i.e Q4 2018 divided by 3)*	Q2 2019 *(Enter consumption for immediate past quarter i.e Q1 2019 divided by 3)*	Q3 2019	Q4 2019	Q1 2020	Q2 2020	Q3 2020	Q4 2020
TB/LEPROSY									
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

UNIFIED STOCK CARD

Name of Facility _____ LGA _____

State _____ Store Name _____

Product Name _____ Strength _____ Unit _____ Program _____

Maximium Stock Level (Months)	
Minimium Stock Level (Months)	
E.O.P (Months)	

S/N	Date	Voucher No/Ref. No A	Received From/Issued To B	Batch No C	Expiry Date D	Quantity Received/Issued E	Losses G	Adjustments H		Stock Balance I = (E-G±H) + I	Physical Count J	Remarks	Signature
								+	-				
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

PLEASE DOCUMENT REASON AND DATE FOR LOSSES AND ADJUSTMENT

REASON	DATE	REASON	DATE

FEDERAL MINISTRY OF HEALTH

EMERGENCY ORDER POINT CHART

FEDERAL MINISTRY OF HEALTH

FACILITY NAME:									
STATE/LGA NAME:	A	EMERGENCY ORDER POINT (B)							
PROGRAM NAME:	**TRACER COMMODITIES (Full product description: Generic name, strength and pack size)**	**JAN-FEB 2019** *(Enter consumption in Nov/Dec 2018 divided by 2)*	**MAR-APR 2019** *(Enter consumption in Jan/Feb 2019 divided by 2)*	**MAY-JUNE 2019** *(Enter consumption in Mar/Apr 2019 divided by 2)*	**JULY AUG 2019**	**SEPT- OCT 2019**	**NOV-DEC 2019**	**JAN-FEB 2020**	**MAR-APR 2020**
HIV/AIDS	***ADULT REGIMEN***								
1	Tenofovir/Lamivudine/Dolutegravir TLD (300/300/50mg) x 30								
2									
3									
4									
5									
6									
7									
8									
9									
10									
MALARIA	**TRACER COMMODITIES**	**JAN-FEB 2019 (**	**MAR-APR 2019**	**MAY-JUNE 2019**	**JULY AUG 2019**	**SEPT- OCT 2019**	**NOV-DEC 2019**	**JAN-FEB 2020**	**MAR-APR 2020**
1	AL (Artemeter 20 mg + Lumefantrine 120 mg)								
2	AL (Artemeter 20 mg + Lumefantrine 120 mg)								
3	SP (Sulphadoxine 500 mg + Pyrimethamine 25 mg)								
4	Rapid Diagnostic Test (RDT)								
FAMILY PLANNING	**TRACER COMMODITIES**	**JAN-FEB 2019 (**	**MAR-APR 2019**	**MAY-JUNE 2019**	**JULY AUG 2019**	**SEPT- OCT 2019**	**NOV-DEC 2019**	**JAN-FEB 2020**	**MAR-APR 2020**
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
IMMUNIZATION	TRACER COMMODITIES	JAN-FEB 2019 (	MAR-APR 2019	MAY-JUNE 2019	JULY AUG 2019	SEPT- OCT 2019	NOV-DEC 2019	JAN-FEB 2020	MAR-APR 2020
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

RECORD FOR TRANSFERING/RETURNING HEALTH PRODUCTS

Name of facility returning/transferin LGA _____

Sent to: _____ LGA _____

State:

S/No	Product Description	UNIT	Batch No.	Expiry Date	Quantity Requested	Quantity Transferred	Quantity Received	Reason for return/ transfer
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Record compiled by: Sign_____ Date _____

Record approved by:_____ Sign_____ Date_____

Transfer / return by:_____ Sign_____ Date_____

Carrier:

I certify that the above quantities of transfer/return were received by me except where explained below.

Comments:

Name of Carrier:

Designation:

Carrier Signature: Date

Receiving Facility: I certify that the above quantities were received by me except where explained below (Please explain the condition of items on receipt).

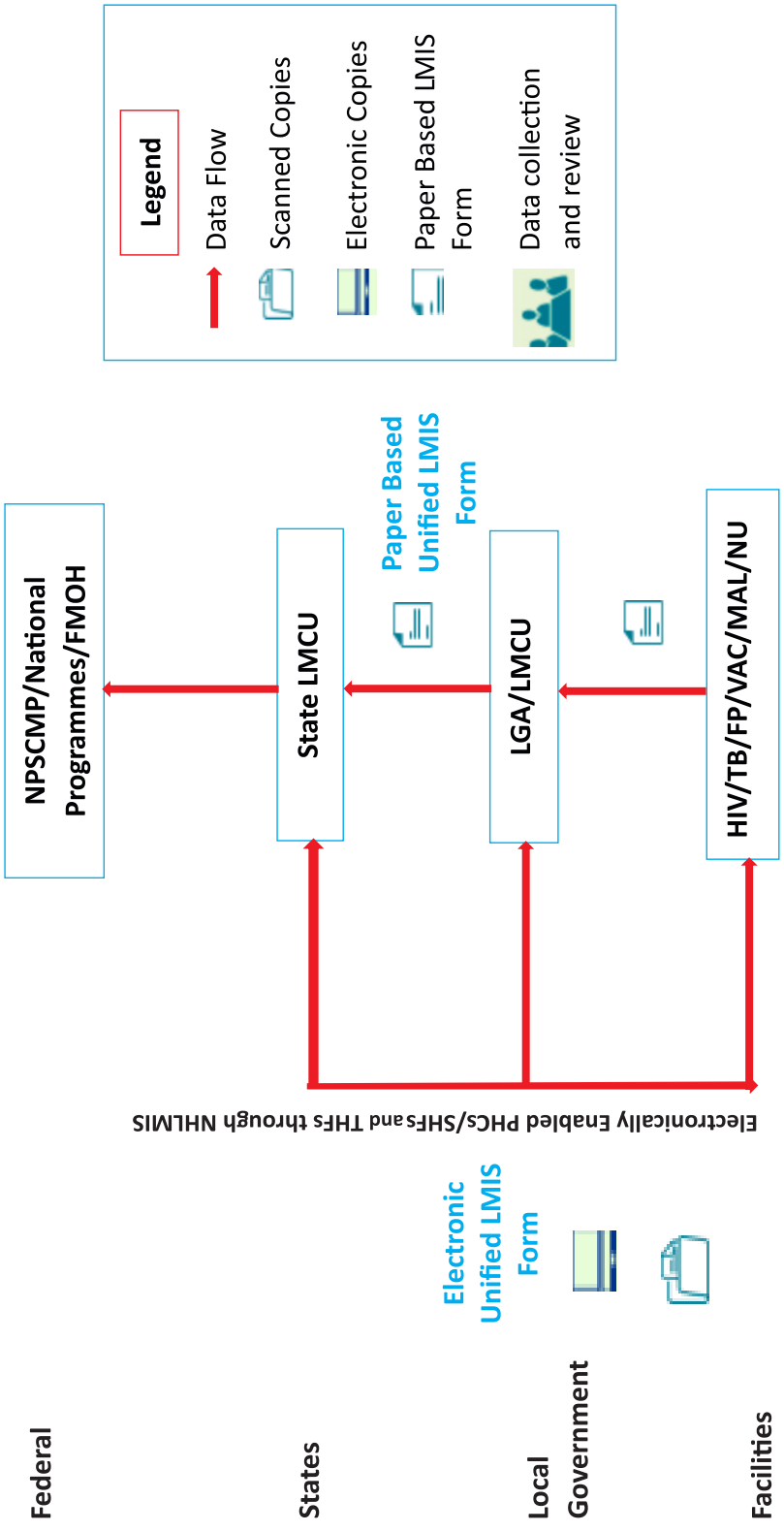
Comments:

Receiver's name: Sign_____ Date_____

Transfer approved by: Sign Date

NOTE: TO BE COMPLETED IN QUADRIPLICATE

Process Flow for LMIS



Reference

- Unified HIV Standard Operating Procedures, 2014
- Supply Chain Communication and Coordination Framework for Public Health Programmes at the Secondary and Tertiary Facilities in Nigeria 2017
- Supply Chain Communication and Coordination Framework for Public Health Programmes at the Local Government Area (LGA) in Nigeria 2017
- Logistics Management Information System tools for public health programs

TITLE: SOP FOR MONITORING AND EVALUATION	
Functional Area:	**Date issued:**
Code:	**Revision No.**
Prepared by:	**Approved by:**
SOP No:	**Effective Date:**

Introduction

Most of the Health programmes do not have a documented supply chain Monitoring and Evaluation (M&E) SOP. What is obtainable is a high-level description of data flow without a comprehensive indicator framework to track supply chain performance. This creates a gap in the ability to meet information needs of stakeholders for tracking progress and identifying supply chain bottleneck across programmes. Hence the need to develop a standardized supply chain M&E SOP that represents the minimum requirement for respective health programmes in tracking supply chain performance and making requisite products accessible.

Purpose

This document provides a framework for tracking the country supply chain performance with key indicators to enable Evidence-Based decision making to improve the system and demonstrate impact of the integration effort. It enables program managers analyze logistics, services and demographic data, to identify issues and trends that affect product security and is geared toward achieving the following objectives:

- To provide a common standard for tracking supply chain performance in the country for necessary intervention by stakeholders
- To demonstrate some measure of accountability to stakeholders including Government of Nigeria, donors and implementing partners
- To support learning and best practice among stakeholders
- To improve system performance
- To monitor the progress of procurement and supply chain in the various health programs
- To provide information on the effectiveness and efficiency of the supply chain programme

Scope

The M&E SOP is tailored to track performance of supply chain functions that are of paramount interest as listed below. Respective health programmes can then expand on this framework to capture their scope of work:

- Product selection
- Quality Assurance
- LMIS reporting
- Forecasting and supply planning
- Procurement
- Warehousing
- Distribution

Definition of Terms

- Monitoring: This is the ongoing collection of data in order to track the progress of an organisation, program or project against the desired goals. Evaluation: This is the episodic assessment of progress towards programmes targets.
- Indicator(s): An indicator is a specific, observable and measurable characteristic that can be used to show changes or progress towards a specific result.
- Data Quality: Data quality is "*fitness of data for grant management, analysis, evaluations and external reporting*." Four key elements define data quality: accuracy, completeness, integrity and timeliness.

Abbreviations

- M & E: Monitoring and Evaluation
- SOP: Standard Operating Procedure
- PSM: Procurement and Supply Management
- LMIS: Logistics Management Information System
- NPSCMP: National Product Supply Chain Management Programme
- NSHDP: National Strategic Health Development Plan
- KPI: Key Performance Indicator
- NHLMIS: Nigeria Health Logistics Management Information System
- QSSR: Quarterly Stock Status Report
- LMCU: Logistics Management Coordinating Unit
- LGA: Local Government Area
- QA: Quality Assurance
- HFS: Health Facility Staff
- LO: Logistics Officer
- LGS: Local Government Staff
- STG: Standard Treatment Guidelines

[1] MONITORING AND EVALUATION TOOLKIT HIV, Tuberculosis, Malaria and Health and Community Systems Strengthening. Part 1: The Global Fund M&E requirements

Responsibilities

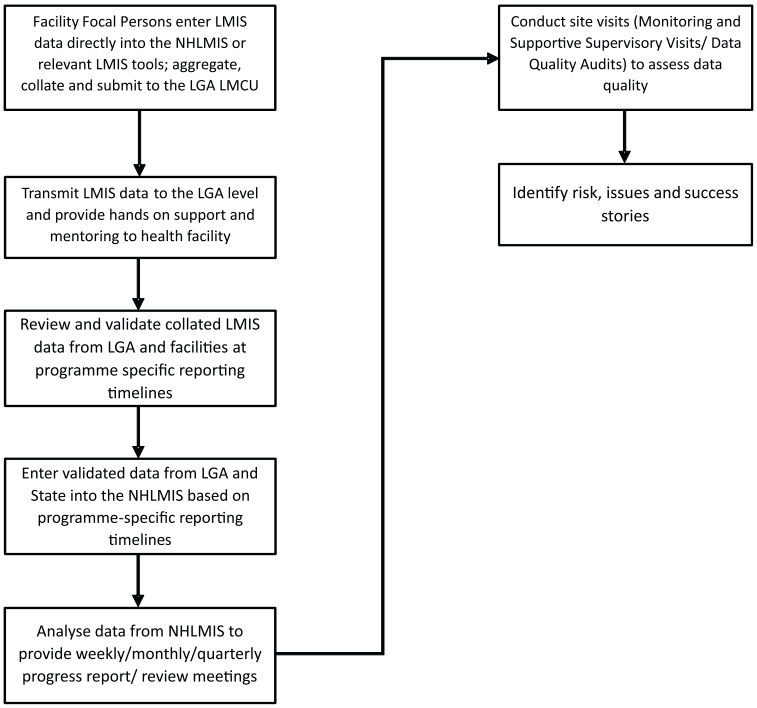
No	Personnel / Group	Responsibility
1.	Facility focal person	✓ Maintain correct stock management records at facility ✓ Prepare stock status reports that will initiate resupply of commodities based on programme reporting design. ✓ Use facility data to generate trends of monthly attendance by case management, number of referred cases, etc ✓ Submit report to LGA LMCU Officer.
2.	Facility focal person in Large facilities	✓ Maintain correct stock management records at facility ✓ Prepare stock status reports that will initiate resupply of commodities based on programme reporting design. ✓ Use facility data to generate trends of monthly attendance by case management, number of referred cases, etc ✓ Enter report into the NHLMIS platform ✓ Analyse data and present results to hospital management for decision making
3.	LGA LMCU M&E officer	✓ Provide technical assistance to facility focal persons ✓ Coordinate periodic data quality check on all health facility report in the LGA to verify reports availability, accuracy, completeness and timeliness. ✓ Support periodic review meetings with LGA programme and health facility focal persons across the LGA ✓ Analyze collated LGA data for informed decision-making at the LGA level ✓ Report to State LMCU M&E officer
4.	State LMCU M&E officer	✓ Develop and support implementation of Monitoring and Evaluation plan and framework ✓ Ensure effective performance indicators tracking ✓ Coordinate periodic data quality audit exercise across the states to verify reports availability, accuracy and timeliness. ✓ Actively coordinate indicator calculation to enhance and present trends to SMoH for decision making ✓ Support the collection, collation and coordination of data entry of facility reports where necessary ✓ Follow up with LGA LMCU and health facility focal persons to resolve flagged issues on the NHLMIS
5.	National Health Programme PSM M&E Officer	✓ Adapt M&E checklist based on established KPIs. ✓ Report on standardised KPIs and programme specific KPIs (when necessary) to the National programme PSM ✓ Coordinate stakeholders to articulate appropriate indicators, baseline and targets ✓ Support state programme officers to collect PSM M&E data ✓ Ensure data quality systems are established at all levels ✓ Support the national health programme PSM on data management and report findings to stakeholders ✓ Promote use of M&E data for evidence based programme implementation and decision-making ✓ Archive data and reports

No	Personnel / Group	Responsibility
	NPSCMP M&E officer	✓ Support and build the capacity of RIV officer in the LMCU for PSM M&E at state level on monitoring and evaluation, supportive visits, data analysis and presentation ✓ Support State LMCU to adapt and implement the National Monitoring and Evaluation plan and framework ✓ Analyze state report (LMIS, MSSV, LMCU assessment report) for different health programmes, based on programme-specific reporting timelines ✓ Report findings to stakeholders for informed decision-making ✓ Provide feedback report to state LMCU on supply chain performance ✓ Participate in the review of Nigeria Health LMIS data and outputs to assess quality of data entry process ✓ Conduct periodic data quality assessment to verify accuracy, completeness and timeliness of facility and warehouse report.

Procedure

No	Guidance	Action Owner
1.	Input the LMIS data directly into the NHLMIS **OR** enter the data into relevant LMIS tools, aggregate, collate and submits to the LGA LMCU	Facility Focal Person
2.	✓ Transmit LMIS data from the facility to the LGA level ✓ Validate data at the LGA level ✓ Provide hands on support and mentoring to the health facility	LGA LMCU
3.	Review and validate collated LMIS data from LGA and facilities at specific reporting timelines.	State LMCU
4.	According to the specific reporting timeline, enter validated data from LGA and state into the NHLMIS	S tate and LGA LMCU
5.	Analyze data from NHLMIS to provide weekly/monthly/quarterly progress report/ review meetings	State LMCU RIV officer
6.	Conduct site visits (Monitoring and Supportive Supervisory Visits/ Data Quality Audits) to assess data quality	NPSCMP, National Health Programme M&E Officer, State LMCU RIV officer.
7.	Identify risk, issues and success stories	NPSCMP, National Health Programme M&E Officer, State LMCU RIV officer.

PROCESS FLOW FOR MONITORING AND EVALUATION



Intermediate Results Framework

The supply chain intermediate results framework shows how the goal of NPSCMP aligns with the overall goal of the Second National Health Strategic Development Plan (NHSDP II) 2018 – 2022. It also conveys the cause-effect relationship between the strategic objectives of the supply chain and the intermediate results. As such, the intermediate results framework provides the basis for performance monitoring and planning for decision making.

The results from the supply chain activities of the public health programmes will contribute to the strategic objectives of the NPSCMP performance measurement plan and the development of the overarching goal of NHSDP II.

Strategic goal:
To integrate Health Programmes Supply Chain Management activities for optimal PSM service provision

Strategic objectives:

- Ensure the efficient and effective procurement and supply of public health products to warehouses and facilities
- Support warehouses and facilities to minimize stock-outs, expiries and other forms of wastages
- Ensure the availability of and access to relevant data on all aspects of the supply chain process
- Support PSM staff at the central, state and local government levels to become effective in the coordination and management of public health products supply chain
- Build strong partnership and collaboration with health programmes, donors and implementing partners to encourage sustainability

The following intermediate results have been derived based on the NPSCMP strategic objectives:
Intermediate Result 1.1: Increased access to products.
Intermediate Result 1.2: Improved warehousing capacity.
Intermediate Result 1.3: Improved Information flow for demand and supply planning
Intermediate Result 1.4: Strengthened quality assurance process for pharmaceuticals and other healthcare products.

NSHDP Vision: To ensure healthy lives and promote the wellbeing of the Ni gerian populace at all ages

NSHDP Mission: To ensure that the Nigerian populace have universal access to comprehensive, appropriate, affordable, efficient, equitable and quality essential health care through a strengthened health care system

NSHDP Strategic Pillar 3, Priority Area 11 (Medicines, Vaccines and other Health Technologies & Supplies) Goal:
To ensure that quality medicines, vaccines, and other health products and technologies are available, affordable and accessib le to all Nigerians

National Product Supply Chain Management Programme (NPSCMP) Goal: To effectively and efficiently coordinate products supply chain management activities for optimal PSM services that prevent stockout & minimize wastages; encourage timely availability of qu ality commodities to consumers.

Intermediate Result 1.1: Increased access to products

- 1.1.1 Reduction in number of facilities experiencing stock out
- 1.1.2 Improved and harmonized integrated distribution network for products
- 1.1.3 Available capacity at state LMCU to develop Last Mile distribution order
- 1.1.4 Availability of annual / periodic program product procurement plan
- 1.1.5. Improvement in timeliness and completeness of orders

Intermediate result 1.2: Improved warehousing capacity

- 1.2.1 Reduction in wastage due to losses, expiries etc.
- 1.2.2 Improved inventory management processes
- 1.2.3 Optimized warehouse operations

Intermediate result 1.3: Improved information flow for demand and supply planning

- 1.3.1 Improved quality of LMIS reports from health facilities
- 1.3.2 Increased usage of NHLMIS by health facilities
- 1.3.3 Increased access to harmonized LMIS reporting tools and SOP
- 1.3.4 Improved capacity of programs to provide timely stock status reports

Intermediate result 1.4: Strengthened quality assurance process for pharmaceuticals and other healthcare products

- 1.4.1 Improved reporting of adverse drug reaction
- 1.4.2 Improved coordination between the health programs and drug regulatory bodies

Key Performance Indicators for Monitoring

Performance monitoring is usually done with a set of parameters known as indicators. To assess performance, it is necessary to select Key Performance Indicators (KPIs) that best track progress towards and measures the achievement of targeted results - outputs and outcomes. There are numerous indicators that could be used to assess the performance of PSM systems; however, some are considered more relevant than others in the prevailing context.

The table below is adapted from the NPSCMP Performance Monitoring Plan, Procurement and Supply Chain Management (June 2016).

S/N	Indicator	Purpose	Numerator	Denominator	Frequency of data collection	Data source	Supply chain level	Intermediate Result
1	Stock-out rate of tracer products in the reporting period	Assess stock availability during a specified period	Number of treatment sites and service delivery points that experience stock-out in the reporting period (Tracer products?)	Total number of treatment sites and service delivery points in the reporting period	Weekly/Bi - monthly/Quarterly	Stock cards, other stock management tools, NHLMIS	Health facility, SMOH, FMOH	Intermediate result 1.1
2	Percentage of health facilities that received all orders in full and on time during a defined period	Measures the performance and reliability of the national distribution system	Number of health facilities that received all orders of pharmaceuticals and other healthcare products in full and on time during a defined period	Total number of health facilities that received orders for pharmaceuticals and health care products during the same period	Weekly/ Bi-monthly/ Quarterly	LMDs, Requisition forms, Proof of Delivery (POD), from health facility disaggregated for timeliness (on time or late) and quantity (in full or incomplete).	SMOH, FMOH	Intermediate result 1.1
3	Percentage of pharmaceuticals and other healthcare products (procured plus donated) or planned to be received that are in line with the national standard treatment guidelines	Measures the extent to which the pharmaceuticalsand other healthcare products are in line with those recommended in the national standard treatment guidelines (STG).	Number of pharmaceuticalsand other healthcare products received (procured plus donated) or planned found in the STG	Total number of pharmaceuticalsand other healthcare products received (procured plus donated) or planned	Annually	Standard Treatment Guidelines, Essential Drug List, Procurement orders, list of items received	FMOH	Intermediate result 1.1

S/N	Indicator	Purpose	Numerator	Denominator	Frequency of data collection	Data source	Supply chain level	Intermediate Result
4	Percentage of total stock holding that expired (disaggregated by value & quantity)	Measure the cost efficiency of supply chain functions	Value of expired stock in the past 6 months (Jan - Jun, Jul - Dec)	Value of stock in the past 6 months (Jan - Jun, Jul - Dec)	Bi – Annually??	Facility reports, Warehouse reports,	Health facility, Warehouse, SMOH, FMOH	Intermediate Result 1.2
5	Percentage of LMIS reports submitted on time	Measure facility reporting rates and the degree of completeness within the LMIS	Number of reports completed in full and submitted on time in the reporting period	Total number of expected reports in the reporting period	Weekly/ Bi-monthly/Quarterly (Facility level 7th day in the new reporting period, State level 14th day in the new reporting period or every Friday where applicable)	NHLMIS	Health facility, SMOH, FMOH	Intermediate result 1.3
6	Percentage of quarterly stock status reports (QSSR) collated and shared	Assess stock status reporting rates within the LMIS	Number of QSSRs sent by LMCUs, to the NPSCMP in the reporting period	Total number of QSSRs expected in the reporting period	Quarterly	NHLMIS, State CMS reports,	State and LGA	Intermediate Result 1.3
7	Coordinated data reporting for all disease programs by logistics management control units (LMCUs)	Assess the coordination of supply chain processes at the state level	Number of coordination reports received by the NPSCMP from the state LMCU in the past year	Total number of coordinated reports expected in the past year	Annually	LMCU reports, eLMIS	SMOH, FMOH	Intermediate Result 1.4
8	Percentage of the product batches tested in the past year that met national and international quality control standards	This indicator measures the extent to which procured products meet quality requirements.	Number of tested product batches that met the quality standards in the past year	Total number of batches tested for quality control during the same period	Annually	Purchase orders, transaction records, quality control reports, consolidated QA report	Public Health Programme, Regulatory Authority,	Intermediate Results 1.4

Quality Assurance and Quality Improvement

The ultimate goal of data collection is its use in performance measurement for timely and accurate decision making. Data quality is therefore a key component of data management as it ensures that the process of data capturing, verification and analysis is of high standard. In performance-based programming, the quality of data underpins the quality of process improvement. Poor data quality is risky for the decision-making process.

As defined in the data quality framework developed by the Global Fund;

- Accuracy defines the correctness of data. How true is the data set being presented? Data are deemed accurate if they measure what they are intended to measure.
- Completeness entails inclusiveness. Does the data set contain all expected information?
- Data integrity is the extent to which data are safeguarded from prejudices and intentional manipulation for unethical reasons. Data could be integrity-assured through the implementation of depersonalized protocols for consistent collection, measurement and reporting of data.
- Timeliness is about making data available on time and up to date.

Data quality is assessed through the following methods: State validation meetings, Data quality assessments and Integrated Monitoring and Supportive Supervision.

i. State validation meetings:

This meeting takes place bi-monthly or quarterly, in the first week after the end of the reporting cycle. The main objective of the meeting is to collate data that has been submitted by the health programmes of the small and medium facilities. Participants at this meeting include members of the state LMCU, implementing partners in the states and public health programme heads. During the meeting, data from the LGA officers are validated by comparing with the harmonized reporting tools and Unified stock card etc. before entry into the National Health LMIS.

ii. Data Quality Assessment:

A data quality assessment will be conducted on a bi-annual basis. This activity will be done to assess the availability, accuracy and timeliness of reports submitted by the health facility, LGA and states using standardized checklists. The activity will also be used to verify stock status reports at central stores.

iii. Integrated Monitoring and Supportive Supervision:

Integrated Monitoring and Supportive Supervision (IMSSV) will be conducted on a quarterly basis. The objective of the IMSSV will be to supervise health facilities and provide on-the-job training to the Service Delivery Points (SDPs). In addition, the IMSSV will identify and follow up on challenges or issues at the state and facility level and provide on-site mentoring where such issues have been identified. The activity will enforce the system of feedback to facilities and follow up by the state LMCU to drive in continuous performance improvement at the last mile.

Data Dissemination and Use

Data-driven PSM processes are the mainstay of a viable PSM system. It is essential that data is available when needed at all levels of the supply chain particularly for decision-making. Dissemination is the intentional distribution of data and/or information through defined channels in order to reach target audiences such as national policymakers, researchers, health professionals or service users. Reasons for dissemination of data/information include but are not limited to: prompting immediate action, sharing new insights, educating about latest findings and promoting behaviour change. Data dissemination or communication is an essential part of the health information system. It is important to pay attention to how data or information is packaged and presented as information is of little or no value if it is not available in formats that meet the needs of intended users.

There are four major steps in making data available for dissemination:

i. Data generation: It involves data collection at health facilities and other service points including central medical stores, zonal warehouses and distribution hubs. Data quality assurance measures should be part of data collection processes in order to ensure the accuracy, timeliness, integrity as well as relevance of data collected.
ii. Data compilation: Data collected at the facilities and service delivery points are to be sent to state LMCUs for collation, processing as necessary and onward transmission to the NPSCMP.
iii. Data analysis and synthesis: Processing, analysis and packaging of data is undertaken thereafter, in order to make the data fit for dissemination to stakeholders. This will be done centrally at both state and national levels (by the LMCUs/NPSCMP).
iv. Data communication and use: Data communication or dissemination will be carried out by both the state LMCUs/DPS and NPSCMP/DFDS to target audiences.

Data dissemination will also be done through the production of information products such as fact sheets, bulletins and newsletters. Abstracts for conferences and publication of journal articles will also be avenues for disseminating M&E findings.

The state LMCUs and NPSCMP will maintain functional data hubs (at the state and national levels respectively). These data hubs will maintain records of all collected and processed data and will retain an open-access policy to authorized stakeholders, to enhance data availability and transparency.

Process Owner

- M&E officer of the health programmes

References

- MONITORING AND EVALUATION TOOLKIT HIV, Tuberculosis, Malaria and Health and Community Systems Strengthening. Part 1: The Global Fund M&E requirements
- Harmonized monitoring and evaluation indicators for procurement and supply management systems: early-warning indicators to prevent stock-outs and overstocking of antiretroviral, antituberculosis and antimalarial medicines**.**
- Performance Monitoring Plan: Procurement and Supply Chain Management (FMOH, Food & Drugs Services)

TITLE: SOP FOR QUALITY ASSURANCE/QUALITY CONTROL	
Functional Area:	**Date issued:**
Code:	**Revision No.**
Prepared by:	**Approved by:**
SOP No:	**Effective Date:**

Introduction

Consumption of goods and services within the supply chain systems is usually on the basis of implicit trust. It is therefore imperative to build in different controls and checks across the supply chain systems to entrench total quality and reliability within the system. This quality management system includes quality assurance and quality control.

Purpose

To describe Quality Assurance/Quality Control (QA/QC) activities to be conducted during storage and distribution of products ensure that the necessary and relevant tests are carried out and that products are not released for use and restrained in quarantine until their quality have been proved to be in accordance with their specifications and intended purpose.

Scope

This procedure covers QA/QC activities required to be undertaken during procurement, storage, distribution, recall of defective products, quality control, dispensing of pharmaceuticals and other healthcare products. It also covers waste management, personnel and documentation of pharmaceuticals and other healthcare products.

Definition of Terms

- Quality Assurance: This is the systematic monitoring and evaluation of various components of a project, service or facility to ensure that standards of quality are maintained.
- Quality Control: This is an aggregate of activities such as design, analysis and inspection for defects to ensure good quality especially in manufacturing sector.
- Health Products: Include medicines, laboratory equipment, devices, reagents, consumables and related items which are used for health interventions.
- Storage: This is the process by which products are kept or restrained under controlled environment and defined condition as specified by manufacturer.
- Distribution: Is the movement of goods through the pipeline from source of production to the end users.
- Defective products: This is a product that has a manufacturing/design defect or is defective because of inadequate storage, transportation conditions or mishandling.
- Process Owner: Responsible Person for specific action statement or instruction to be carried out as outlined in the SOP.

Abbreviations

- PSM: Procurement and Supply Management
- QA: Quality Assurance
- QC: Quality Control
- HF: Health Facility
- HFFP: Health Facility Focal Person
- OIC Officer In Charge

- DTC: Drug Therapeutic Committee
- SOP: Standard Operating Procedures
- COA: Certificate of Analysis
- WM: Warehouse Manager
- QAM: Quality Assurance Manager
- QAO: Quality Assurance Officer
- QCM: Quality Control Manager
- WO: Warehouse Operator

Procedure:

No	Guidance	Action Owner
1.	**Product Selection**	
1.1	Participate in meetings for decision making on product selection for every program at national, state, LGA and HF levels.	Head of PSM
1.2	Ensure that product selection must be based on current essential medicines list (EML), Programme treatment guidelines, etc.	Head of PSM
1.3	Ensure that selection of products outside official lists such as the EML must be based on approval.	Head of PSM
2.	**Forecasting & Supply Planning**	
2.1	Collaborate with program Leads to initiate forecasting & supply planning activity by notifying relevant stakeholders of roles and responsibilities based on approved schedule.	Head of PSM
2.2	Participate in quantification committee meeting and decide on modalities for the activity including method and data sources; also identify funding source for the process.	Supply Planning Manager
2.3	Provide quality logistics data for forecasting and supply planning exercise.	PSM M&E Advisor
2.4	Provide good inventory and pipeline data to support supply planning decisions	Inventory Manager
2.5	Monitor Implementation of supply plan	Inventory Manager
3	**Procurement – Refer to procurement SOP**	
4	**Inventory Management**	
4.1	Review expected deliveries on a regular basis together with the Head of PSM and take note of applicable/required QA/QC processes (such as documents review, sampling for basic analysis, and sampling for laboratory analysis).	Superintendent Pharmacist
4.2	Make adequate provision of resources for applicable/required process.	Health Facility Focal Person (HFFP)
4.3	For inbound product review/inspect supplier's documents that MUST include the following; packing list, Certificate of analysis (COA), certificate of batch release, certificate of pharmaceutical product, delivery note Forward report to Warehouse Manager	Superintendent Pharmacist
4.4	Raise a query if the required documents are not available or do not conform to the product description/specifications and inform the next authority.	Warehouse Manager
4.5	Visually inspect package/products integrity and inform warehouse manager on any deviations from standard.	Superintendent Pharmacist
4.6	Put away products in appropriate designated places/area in the warehouse	Store Officer
4.7	Obtain samples based on approved sampling plan and submit for analysis with appropriate documentation.	Superintendent Pharmacist
4.8	Quarantine consignment and label appropriately- *'UNDER TEST'*	Store Officer
4.9	Follow-up with the laboratory to obtain result of analysis	Superintendent Pharmacist
4.10	Document the result of Analysis issued.	Superintendent Pharmacist

No	Guidance	Action Owner
4.11	Tag the quarantined consignment certified okay 'PASS'. Release for storage and subsequent distribution.	Superintendent Pharmacist
4.12	Tag the quarantined consignment certified fail 'ON HOLD'. Retain in quarantine awaiting appropriate action.	Superintendent Pharmacist
4.13	Refer to relevant SOP for handling damaged or expired products	Superintendent Pharmacist
5	**Transport Facilities**	
5.1	Confirm the suitability of vehicle, transportation mode and personnel for distribution of products	Superintendent Pharmacist,
5.2	Monitor transportation process and ensure strict compliance with distribution SOP	3PL Quality Assurance Manager, LMCU Coordinator
6	**Serving Clients/ Patients**	
6.1	Store health products in appropriate conditions to maintain integrity	OIC
6.2	Document all health products received on stock cards for accountability	OIC
6.3	Ensure rational use of products at the facility level to promote efficiency and effectiveness	OIC(PHCs), DTC(where applicable), Head of Pharmacy/Head of Lab(where applicable)
6.4	Document all transaction data at the facility using appropriate LMIS tool.	OIC(PHCs), Program FP (Secondary & tertiary facilities)
6.5	Advice patients to report back on any untoward effect of pharmaceuticals and other healthcare products dispensed to them.	Service provider
6.6	Compile ADR report on yellow form for patients' complaints where applicable and submit to appropriate authority.	Service provider

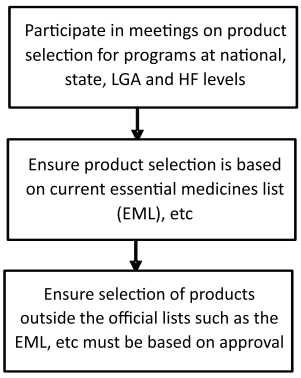
Process is completed when health product is dispensed/used at service delivery points.

Process Owner

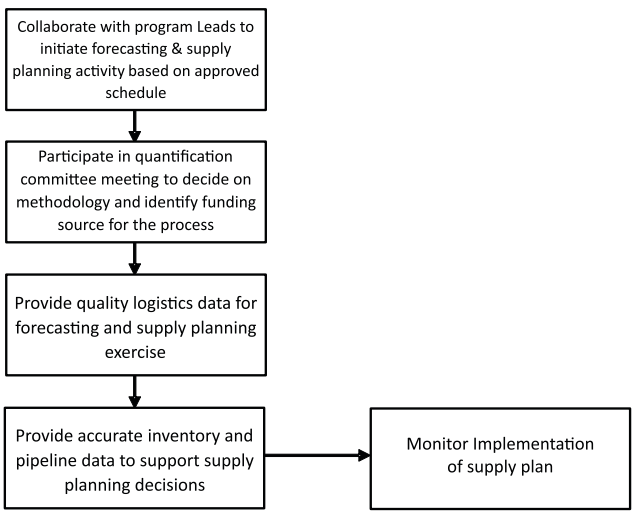
- Superintendent Pharmacist, Quality Assurance Manager, Program Focal Person, OIC (PHCs), DTC, Head of Pharmacy/Head of Lab

PROCESS FLOW FOR QUALITY ASSURANCE/ QUALITY CONTROL

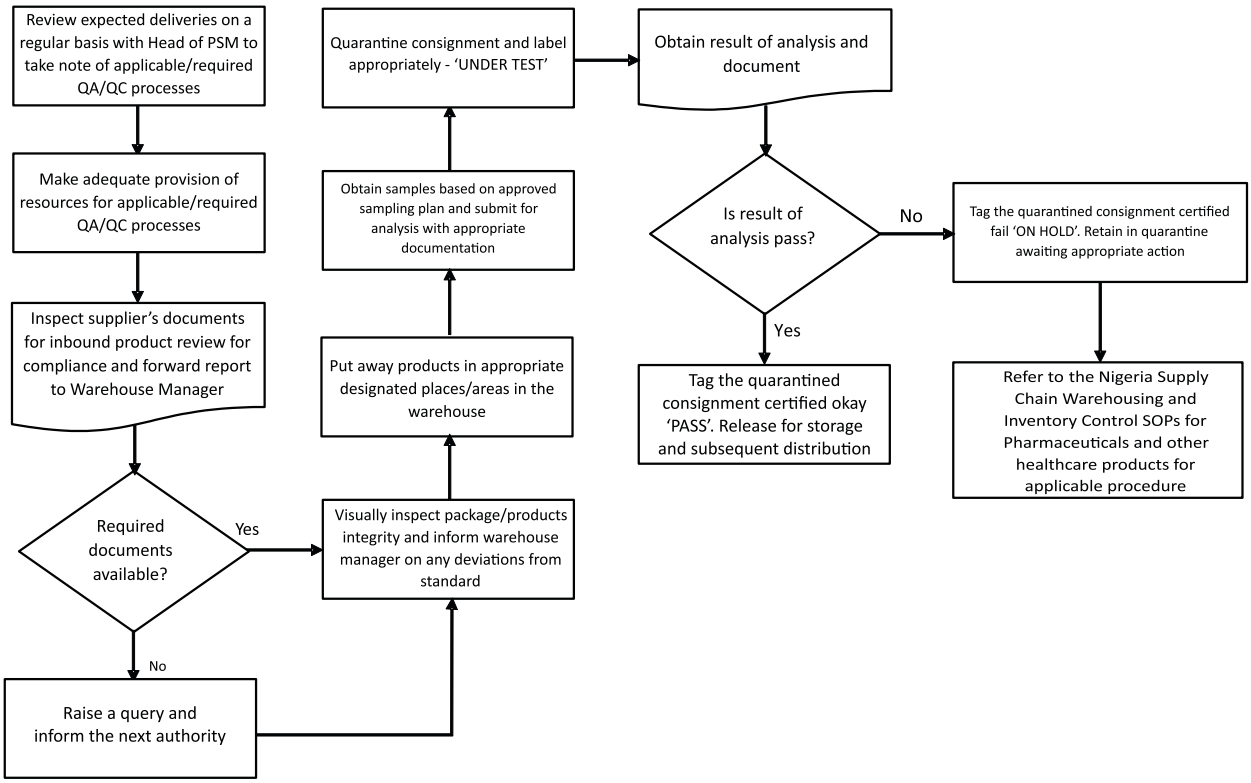
A. Process flow for QA/QC in Product selection



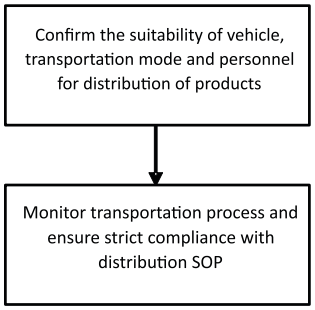
B. Process flow for QA/QC in Forecasting and supply planning



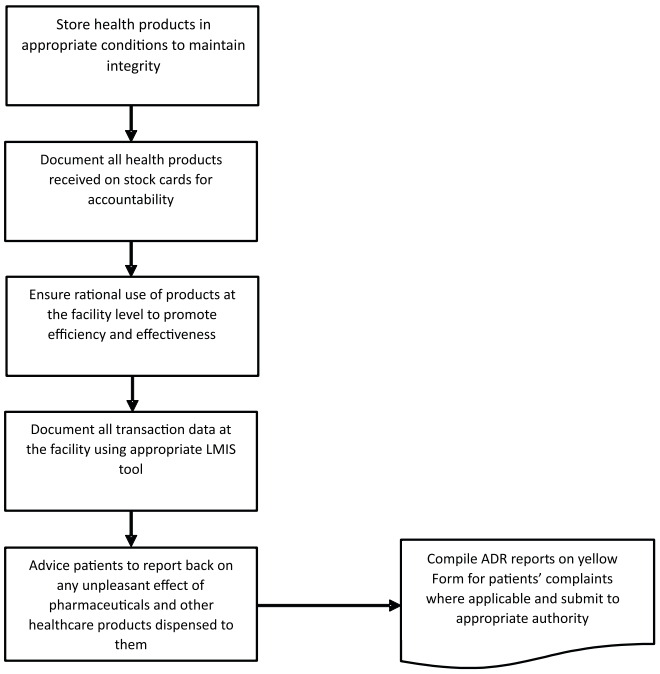
C. Process flow for QA/QC in Inventory Management



D. Process flow for QA/QC in Transport facilities



E. Process flow for QA/QC in Serving clients/patients



Reference

1. National Quality Assurance Policy for Medicines and other Health Products.
2. WHO PQS guidelines

TITLE: SOP FOR RISK MANAGEMENT	
Functional Area:	**Date issued:**
Code:	**Revision No.**
Prepared by:	**Approved by:**
SOP No:	**Effective Date:**

Introduction

The effective management of pharmaceuticals and other healthcare products is essential to avert stock out, expiries, pilferage and wastages that come with poor management. Several factors may be responsible for wastages; however, identifying the factors and effective plan to limit their impact before they occur can reduce the extent of wastages. This is the principle upon which risk management is based.

WHO defines risk management as "the process of weighing policy alternatives to accept, minimize or reduce assessed risks and to select and implement appropriately". Risk management in the context of public health involves dealing with uncertainties such as supply shortfall, delayed deliveries, erratic facility demands and changes.

Purpose

This is to provide guidance for logistics risk management and subsequent prevention of pharmaceuticals and other healthcare products wastages and expiries at all levels of supply chain pipeline.

Scope

This SOP outlines the logistics risk management processes namely risk identification, assessment, mitigation (response/decision), monitoring, reporting and closure within the Nigeria health logistics and supply chain system.

The procedures are in tandem and applicable with the risk management policies of the Nigeria health programmes.

Risk Management Cycle

Definition of terms

- Risk: An event with uncertain likelihood and outcome which if allowed to occur will have negative impact on the system.
- Opportunity: An uncertainty that could have a positive effect leading to benefit or reward.
- Impact: This is the consequence of a risk or an opportunity.
- Probability: The chance of a risk occurring once identified.
- Risk Rating: This is the process of combining impact (consequences) and likelihood (probability) of a risk to determine the overall impact.
- Risk assessment: It is a systematic process for gathering, assessing and documenting information to characterize and assign a level of risk.
- Risk register: A document used in recording any identified risk.
- Controls: Measures put in place to manage risk.
- Actions: Planned activities for risk management.
- Risk Management Team: is a separate and often independent unit within the project management team made of the technical leads, finance lead and headed by the Risk Manager or the Chief Risk Officer.

Abbreviations

- IP: Implementing Partners
- LMCU: Logistics Management Coordinating Unit
- NPSCMP: National Product Supply Chain Management Programme
- iNSSR: Integrated National Stock Status Report
- RMT: Risk Management Team
- RM: Risk Manager
- SOP: Standard Operating Procedure
- PICSO: Performance Improvement, Coordination and Strategy Officer
- WHO: World Health Organisation
- RIVO: Risk, Issue and Visibility Officer

Responsibilities

Procedure

No	Guidance	Action Owner
1.	**National**	
1.1	Open a risk register	✓ Chief Risk Officer ✓ Risk Manager
1.2	Identify supply chain risk across areas such as warehousing, distribution, product selection, quantification, procurement, inventory control, human resources, coordination, funding and others using available tool such as NHLMIS, iNSSR and other necessary tools.	✓ RMT of all health programmes ✓ NPSCMP
1.3	Document causes and consequences of identified supply chain risk.	✓ RMT of all health programmes ✓ NPSCMP
1.4	Develop risk assessment plan	✓ RMT of all health programmes ✓ NPSCMP
1.5	Assess likelihood of risks occurring, its consequences and subsequent rating or scaling to enable prioritization of action.	✓ RMT of all health programmes ✓ NPSCMP ✓ IPs
1.6	Develop risk management plan.	✓ RMT (National programmes) and IP

No	Guidance	Action Owner
1.7	Enter established risk into the risk register for effective monitoring.	✓ RMT of all health programmes ✓ NPSCMP
1.8	Communicate supply chain risk with relevant stakeholders	RMT, NPSCMP, IP
1.9a	Deploy effective and efficient mitigation strategy and control in order of priority	RMT, National programmes and IP
1.9b	Monitor and report on the implementation of mitigation strategy and control.	RMT, NPSCMP, IP.
1.9c	Close all supply chain risk from the risk register.	RMT (NPSCMP, IP)
2.	**State**	
2.1	Open a risk register	Risk and issue visibility officer (RIVO)
2.2	Identify supply chain risk across areas such as warehousing, distribution, coordination, inventory control, service delivery and others using available tool such as NHLMIS, QSSR and other relevant tools.	RMT (LMCU), Risk and issue visibility officer (RIVO)
2.2	Document causes and consequences of identified supply chain risk.	RMT (LMCU)/ Risk and issue visibility officer (RIVO).
2.3	Develop risk assessment plan	RMT (LMCU)/ Risk and issue visibility officer (RIVO).
2.4	Assess likelihood of risks occurring, its consequences and subsequent rating or scaling to permit management according to priority.	RMT (LMCU) and State programmes.
2.5	Develop risk management plan	RMT (LMCU) and State programmes.
2.5	Enter established risk into the risk register for effective monitoring.	RIVO
2.6	Communicate of supply chain risk to relevant stakeholders	PICSO
2.7	Deploy effective and efficient mitigation strategy and control such as treating, transferring, terminating or tolerating in order of priority.	State programme lead/ IPs
2.8	Monitor and report on the implementation of mitigation strategy and control	PICSO
2.9	Close all supply chain risk from the risk register.	State programme lead/ IPs

Process Owner

- Chief Risk Officer, Risk Manager

Required Records

- Policy guidelines, iNSSR, iMSS report, Technical Report and NHLMIS.

RISK REGISTER

NAME OF PROGRAMME: ……..…….....……

RISK NO.	DESCRIPTION OF RISK	LIKELIHOOD OF OCCURRENCE	CONSEQUENCE	RISK SCORE	RISK MITIGATION ACTIVITIES	RESIDUAL RISK SCORE

PREPARED BY/DATE: ……..

APPROVED BY/DATE: ……

Risk Analysis Excerpt

1.1 Risk Analysis

1.1.1 The risk management team should analyse all identified risks based on the following criteria:

1.1.1.1 **Consequence/Impact:** Outcome of an event affecting objectives.

Likelihood/Probability: Chance of something happening

1.1.1.2 **Proximity:** The time period in which the risk is likely to occur. This assists with prioritization and urgency associated with managing risks.

1.1.1.3 **Trend:** This is the direction/pattern of the risk.

1.1.2 **Levels of Risks Consequences/Impact:**

This is a multiplying effect of both consequence and impact, in which each ranges from between 0 to 3

The consequences can be defined as follow:

1.1.2.1 **High**: Risk that has the potential to greatly impact on our quality objectives (7 to 9)

1.1.2.2 **Medium**: Risk that has the potential to slightly impact on our quality objectives (4 to 6).

1.1.2.3 **Low**: Risk that has relatively little or no impact on our quality objectives (3 or less).

1.1.3 **Levels of Risks Likelihood/Probability:**

Valid options include the following: High, Medium, and Low. These are defined as follows:

1.1.3.1 **High**: Risk that are highly likely to occur. (Several times in a year)

1.1.3.2 **Medium**: Risk that are likely to occur. (once in every one to five years)

1.1.3.3 **Low**: Risk that is unlikely to occur. (once in every five to ten years)

1.2 Risk Evaluation

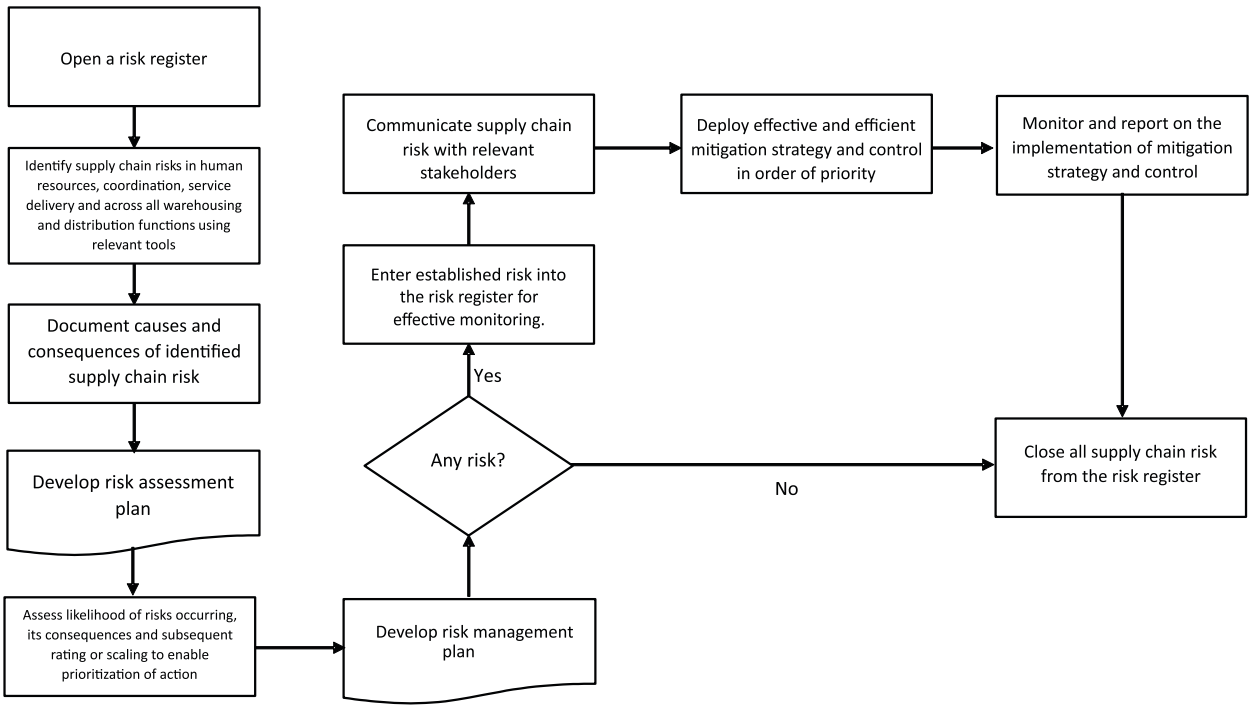
1.2.1 The **Risk score** is the result of the "consequence" multiplied by the "likelihood" and its captured in Table 1 below:

Table 1: Risks Scores

		Impact/ Consequences		
		Low	Medium	High
Likelihood		1	2	3
High	3	3	6	7-9
Medium	2	2	4	4-6
Low	1	1	2	0-3

Risk Score 7-9 (Red)	- High or very high risk exposure - Very close monitoring by Risk Management Team - Very urgent, there is need to consider additional risk mitigation action. - Contingency plan required.
Risk Score 4-6	Medium exposure - may consider additional risk mitigation measures - Close monitoring/management by risk owner
Risk Score 0-3	Low exposure -Well within control. - Periodic monitoring by Risk Owner - Risk owner should give consideration to continual improvement

PROCESS FLOW FOR RISK MANAGEMENT (NATIONAL AND STATE)



References

1. https://www.who.int/foodsafety/risk-analysis/risk-management/en/
2. https://extranet.who.int/hsip

TITLE: SOP FOR GOVERNANCE	
Functional Area:	**Date issued:**
Code:	**Revision No.**
Prepared by:	**Approved by:**
SOP No:	**Effective Date:**

Introduction

National Products Supply Chain Management Programme (NPSCMP) has a mandate to ensure effective management, coordination and supervision of the supply chain of pharmaceuticals and other healthcare products across all levels in Nigeria. The NPSCMP shall harmonize supply chain of all health programmes in Nigeria. This will be effected by coordinating and facilitating supply chain events with relevant ministries, departments and agencies at the Federal and Directorate of Pharmaceutical Services (DPS)/ Logistic Management Coordinating Unit (LMCU) of all the states.

Significant progress has been made in achieving this mandate with the development of a National Supply Chain Policy Coordination Framework, Procurement and Supply Management (PSM) Performance Monitoring Plan and the institutionalization of Logistics Management Coordinating Units (LMCUs) in the 36 plus 1 states of the federation. Considerable work has been done through the LMCU to achieve a level of coordination for supply chain activities; however, clear visibility on communication and coordination is still fairly absent. A key step to addressing this issue is the development of an SOP which outlines structures, personnel, roles and responsibilities, systems for information flow and coordination at the health facilities, states and national.

Purpose

The purpose of this SOP is to improve information sharing within the procurement and supply system in health by clarifying roles and responsibilities and reporting lines amongst supply chain actors at the different levels (health facilities, LGA, State and Federal). This SOP is aimed at providing clarity in roles, responsibilities and visibility in the supply chain system which will enhance decision making and ultimately good governance.

Scope

This SOP will cover areas relating to governance structures across the different levels within the supply chain, their inter-operability, responsibilities and commitment of each stakeholder.

Definition of Terms

- Coordination: The process of managing resources (personnel, processes, infrastructure) to achieve organisational goals.
- Governance: The way organisations rules, norms and actions are structured, sustained, regulated and held accountable.
- Commitment: It is the willingness to give your time and energy to something that you believe in, or firm decision to do something.
- Funding: The money given by a government or organizations for an event or activity
- Product Supply Chain Management (PSCM) Tools: These are management tools that are used to gather data in a standardised manner, allowing users to manage information, process orders, improve reporting and information sharing for analytically-driven insights rather than intuition or experience.

Abbreviations

- CMD: Chief Medical Director
- C&SC: Coordination and Strategy Consultant
- DDIC: Direct Delivery Information Capture

- D&LC: Data and Local Government Consultant
- DPH: Director Public Health
- DPS MoH: Director Pharmaceutical Services Ministry of Health
- FAC: Facility Audit Capability
- FHPLMCU: Facility Health Product Logistics Management Coordinating Unit
- FMC: Federal Medical Centre
- FMoH: Federal Ministry of Health
- HIV: Human Immunodeficiency Virus
- HMB: Health Management Board
- HMIS: Health Management Information System
- HoD: Head of Department
- IC&DD: Information Capture and Direct Delivery
- INSSR: Integrated National Stock Status Report
- ISCMC: Integrated Supply Chain Management Coordinator
- IP: Implementing Partner
- LGA: Local Government Area
- LGSC: Local Government Service Commission
- LMCU: Logistics Management Coordinating Unit
- LMD: Last Mile Delivery
- LMIS: Logistics Management Information System
- MS: Medical Superintendent
- iMSSV: integrated Monitoring and Supportive Supervisory Visit
- NSCIP: Nigeria Supply Chain Integration Project
- NPSCMP: National Product Supply Chain Management Programme
- NWAC: National Warehousing Advisory Committee
- PSM-TWG: Procurement and Supply Management Technical Working Group
- PSM: Procurement and Supply Management
- SHF: Secondary Health Facility
- SMoH: State Ministry of Health
- SPHCDA: State Primary Health Care Development Agency
- TB: Tuberculosis
- THF: Tertiary Health Facility
- TWG: Technical Working Group
- RASCI: Responsible, Accountable, Supporting, Consulted and Informed
- R&DD: Review and Direct Delivery
- R&R: Review and Resupply
- VED: Vital, Essential and Desirable
- 3PL: Third Party Logistics
- CMS: Central Medical Store
- SCMP: Supply Chain Management Product
- DHPRS: Department of Health Planning Research and Statistics
- DPS: Director Pharmaceutical Services
- PIC: Performance Improvement Coordination and Strategy
- RIV: Risk Issue and Visibility
- QSSR: Quarterly Stock Status Report
- LLMCU: LGA Logistic Management Coordinating Unit
- PSH: Permanent Secretary of Health

Responsibilities

The following personnel will have the responsibility of carrying out supply chain tasks at the facility, LGA, state and national levels:

No	Personnel	Responsibility
1.	**Facility Level**: See Figure 1 below for secondary and tertiary facility organogram and Table 1: RASCI Matrix – primary, secondary and tertiary facilities roles and responsibilities.	
1.1	Service Delivery Personnel (Primary HF)	✓ Provide care and services to clients daily. ✓ Input, document, aggregate, collate and transmit logistics information generated by the facilities to the relevant LGA focal persons. ✓ Harmonize service data with logistics data working with the LGA logistics focal person

No	Personnel	Responsibility
1.2	Facility Programme Focal Person (Secondary and Tertiary facilities)	✓ Input, document and submit logistics information of the respective health programmes to the ISCMC at the end of review periods.
1.3	Facility Health Product Logistics Management Coordinating Unit (FHPLMCU)	✓ Coordinate all supply chain related activities for health programmes that exist within the health facility. ✓ Harmonize service data with logistics data working with the LGA logistics focal person
1.4	Integrated Supply Chain Management Coordinator (ISCMC)	✓ Collect and collate logistics data from health programmes operating within the facilities. ✓ Work directly with the LGA LMCU or State LMCU coordinator to share logistics information ✓ Provide feedback to the facilities.
2.	**LGA Level:** The LGA LMCU is responsible for coordination of all the health supply chain activities within the LGA. See Figure 2 below for LGA level organogram, Figure 3: Governance, Information Sharing, Supervision and Feedback Framework at the LGA level and Table 2: RASCI Matrix – PHC/ LGA Roles and Responsibilities.	
2.1	LGA Programme Logistics Focal Person	✓ Aggregate and validate logistics data received from the primary health facilities within the LGA
2.2	LGA Programme Focal Persons	✓ Manage health programmes operating within the LGA ✓ Coordinate all aspects of the programme within the LGA and provide oversight to facility programme staff ✓ Work closely with the LLMCU Coordinator, to promote visibility on service and logistics data
2.3	LGA HMIS/M&E Officer	✓ Transmit all health management data from the facility to the LGA level. ✓ Submit or upload HMIS data on DHIS2 platform. ✓ Harmonize service data with logistics data working with the LGA logistics focal person
2.4	LGA LMCU (LLMCU) Coordinator	✓ Coordinates supply chain activities at the LGA level ✓ Coordinates capacity building, supervisory, monitoring and oversight functions of facilities within the LGA ✓ Periodically prepare and disseminate reports for all the health supply chain activities within the LGA to LGA HOD Health/PHC Director ✓ Respond to flagged issues and provide clarification/correction to identified logistics data issues ✓ Works closely with state LMCU coordinator
2.5	LGA HOD Health/LGA Director PHC	✓ Supervises the LGA programme focal persons and the LGA LMCU ✓ Accountable for the collection, collation and transmission of logistics management information to the state LMCU ✓ Coordinates supply chain activities that operate within the LGA level ✓ Maintain and update health facility list within the LGA in collaboration with the LGA LMCU. ✓ Report all supply chain issues to the LGA Supervisory Counsellor Health, Executive Secretary (SPHCDA)/Director PHC Services, Local Government Service Commission (LGSC)
3.	**State Level**: The State LMCU is responsible for coordination of all the health supply chain activities within the state. See Figure 4: Governance, Information Sharing, Supervision and Feedback Framework at the state level.	
3.1	HCH, PSH, DPS, DPH	✓ Provide overall leadership, guidance and oversight to the state supply chain management system
3.2	State LMCU Coordinator	✓ Reports to the DPS ✓ Responsible for the leadership and governance of the state management supply chain system;

No	Personnel	Responsibility
		• Adopt/adapt NPSCMP resources (SCMPs such as processes, structures, metrics, techniques, framework, strategies etc) for the supply chain management for effective oversight of the supply chain system in the state ✓ Coordinates all the programme health supply chain activities within the state in order to achieve unity of action and aligns them with the state health strategic objectives ✓ Acts as the first point of contact for supply chain in the state ✓ Manages and oversees the systems for the delivery of programme logistics services (forecasting, procurement, shipment, warehousing, LMIS, distribution, budgeting and financing and other resource mobilization activities etc) ✓ Monitors the performance improvement efforts of programme logistics units ✓ Coordinates all partners detects abnormal trend in Partner behaviour and in delivery of logistic activities and normalize them; reports to NPSCMP on the partner coordinating reporting template ✓ Coordinates the periodic reviews using the quarterly TWG meetings ✓ Supports and technically supervises the programme logistics units in documenting logistics services at the health facilities and state stores; collecting, collating, validating, transmitting, analysing, using and implementing feedback ✓ Periodically reviews job roles of state logistics officers and capacitates them for any changes ✓ Collaborates with and accounts to NPSCMP and DPS on the performance of programme logistics units ✓ Facilitates the implementation of the strategic plan for supply chain activities. ✓ Facilitates engagement of supply chain actors and other relevant stakeholders ✓ Collaborates with DHPRS for convening and participating in the partners' forum meeting ✓ Develop and disseminate quarterly reports for supply chain activities within the State ✓ Monitors and oversees the last mile delivery (LMD) activities within the state. ✓ Facilitate and serves as secretariat for the PSM Technical Working Group meetings; provides relevant feedback to the national TWG ✓ Reports periodically to the Honourable Commissioner of Health and Permanent Secretary through the DPS SMoH
3.3	State Logistics Management Coordinating Unit	✓ Collects, collates, validates, analyze, archive and disseminates LMIS reports ✓ Coordinates reporting of logistics data as well as the development of distribution matrices across public health programs within the state. ✓ Support the periodic assessment of the maturity and development of the LGA LMCU ✓ Conduct IMSSV to CMS, LGA stores and HFs ✓ Serves as secretariat for state PSM TWG
3.4	State Programme Logistics officer	✓ Adopt/adapt programme resources (SCMPs such as processes, structures, metrics, techniques, framework, strategies etc) for the supply chain management for effective delivery of supply chain services to achieve overall programme goal ✓ Manages and oversees all programme logistics processes (forecasting, procurement, shipment, warehousing, LMIS, distribution, budgeting and financing and other resource mobilization activities etc) with the support of the programme manager

No	Personnel	Responsibility
		✓ Manages the cyclic performance improvement management system ✓ Coordinates all partners, detects abnormal trend in Partner behaviour and in delivery of logistic activities and normalize them ✓ Coordinates periodic programme logistics review meetings with LGA supervisors in the state ✓ Supports and technically supervises the LGA logistics officers for the programme in documenting logistics services at the health facilities and state stores; collecting, collating, validating, transmitting, analysing, using and implementing feedback ✓ Periodically reviews job roles of LGA supervisors and capacitates them for any changes ✓ Collaborates with and accounts to the LMCU coordinator and programme manager ✓ Aggregates, validates and analyses logistics data received from the LGA LMCU, secondary and tertiary facilities within the State ✓ Reports directly to the State LMCU coordinator and the State Programme focal person.
3.5	State Programme Focal Persons	✓ Manages the health program in the state ✓ Work closely with the focal programme logisticians to ensure an enabling environment for Programme implementation
3.6	Performance Improvement Coordination and Strategy officer	✓ Provide technical support to the state LMCU on all supply chain activities. ✓ Building the capacity of the LMCU personnel on supply chain leadership (integration and coordination). ✓ Integrate all the supply chain systems in the State into the LMCU mainstream. ✓ Influence all supply chain stakeholders (programs, partners, government) to align their systems and synchronize their activities (including work plans) with the LMCU. ✓ Actively search for and manage risks that may affect the successful integration, alignment, synchronization and performance of LMCU activities. ✓ Ensure that all activities performed in LMCU transcend output towards expected outcomes i.e. build capacity of LMCU to effectively manage both out-sourced and owned activities. ✓ Use the Risk and Issue Visibility Report to determine appropriate interventions required to resolve issues and mitigate risks. ✓ Influence and support the relevant supply chain partners and other stakeholders to resolve identified issues and mitigate risks. ✓ Prepare and submit summary supply chain performance improvement report on key indicators i.e. (reporting rate, stock out rate, wastage rate and LMCU funding rate). ✓ Prepare all periodic reports as may be required by the State and NPSCMP .

No	Personnel	Responsibility
		✓ Monitor, track and document supply chain indicators based on performance monitoring framework at state level. ✓ Participating in state Monitoring and Supervisory Visits (MSVs). ✓ Perform any other duties as assigned.
3.7	Risk, Issue and Visibility officer	✓ Receive and translate EMRs and other work orders as appropriate from the zonal coordinators or NPSCMP work stream leads; interpret same with due contextual adaptations for implementation and acculturation in the states and LGAs; provide timely and regular feedback to NPSCMP. ✓ Building the capacity of the LMCU personnel on quality LMIS practices – data recording, collection, transmission, analysis, interpretation and communication of intelligence generated from the process. ✓ Ensuring the timely receipt and processing of routine reports, which is not limited to: monthly LMIS data, stock status report, forecasting & quantification reports/reviews, etc. (where applicable). ✓ Conduct appropriate data validation on data collection, collation and content. ✓ Prepare and submit RIV report as at when due. ✓ Liaise with the PIC officer to review RIV report and determine appropriate interventions. ✓ Use the RIV report to prioritize Monitoring and Supervisory Visits (MSVs). ✓ Deploy capacity building interventions, not limited to training, coaching and mentoring, designed to build state LMCU capability to conduct audits, lead operational improvements, educate and train facility staff, collate data, provide reports, apply better inventory techniques and manage performance. ✓ Prepare all periodic reports as may be required by the State and NSCIP. ✓ Prepare State LMCU work-plan. ✓ Perform any other duties as assigned.
3.8	State Director PHC LGA Service Commission/Executive Secretary of the Primary Health Care Development Board or Agency	✓ Supervises and oversees all LGA officers, including those working directly with the state LMCU ✓ In states where the PHC Department of the LGA Service Commission has evolved into a Primary Health Care Board or Agency, the Executive Secretary of the Board/Agency is responsible for the supervision and oversight of Primary Health Care LGA Officers
3.9	State PSM Technical Working Group	Provides a platform for stakeholders' buy-in for supply chain implementation plan.
3.10	State Partners Forum	✓ Provide oversight on procurement and supply chain activities in the country. ✓ Facilitate approval of supply chain policies, SOPs and guidelines ✓ Stakeholders engagement ✓ Resources mobilization ✓ Facilitate advocacies and collaboration with the State Ministry of health ✓ Oversees the development of policies and initiates legislations relating pharmaceuticals and other healthcare products
4.	Federal Level Department of Food and Drugs Services of Federal Ministry of Health	✓ Oversee all the functions of NPSCMP as illustrated above especially at strategic level ✓ Operationalizes the integrated Supply Chain System in-country as well as implement the strategy of the FMOH with regards to Supply Chain Management. ✓ Initiates innovative approach to improving the supply chain system across health programmes. ✓ Develops and coordinates implementation of strategic plan for supply chain activities

No	Personnel	Responsibility
4.1	The National Product Supply Chain Management Programme (NPSCMP)	✓ Initiate the development and review of supply chain policies, SOPs and guidelines. ✓ Coordinates all the health supply chain activities within the country in order to achieve unity of action and aligns them with the national strategic health development plan (NSHDP) objectives ✓ Determines and develops new vision of change or improvement and develops appropriate agenda for its implementation ✓ Determine and develop supply chain management products (frameworks, strategies, SOPs, guidelines and metrics) for the country ✓ Monitor the implementation and adherence of the supply chain management products (frameworks, strategies, SOPs, guidelines and matrix) for the country ✓ Develops capacity of state and LGA LMCU for implementing supply chain initiatives. ✓ Develops supply chain suprastructures to govern the supply chain management systems ✓ Collaborates with global community to ensure that Nigerian supply chain align with global best practices ✓ Coordinate supply chain management activities of health programmes ✓ Provide mentorship and oversight to the state logistic management coordinating unit ✓ Reviews the status of supply chain activities, identify gaps and proffer interventions. ✓ Identify responsible stakeholder for interventions ✓ Escalate issues to higher authorities for resolution ✓ Provide opportunities for peer review on supply chain practices to enhance efficiency and effectiveness ✓ Federal-led initiative for supply chain to the health programmes and state ✓ NPSCMP manages and oversees the state linkage i.e. the mechanism whereby NPSCMP transmit capacity and other support to the state and have them implement and provide feedback that will guide further action. ✓ Serves as the secretariat to the National PSM TWG and communicates feedback to the state PSM TWG
4.2	National Coordinator (NPSCMP)	✓Adopt/adapt NPSCMP resources (SCMPs such as processes, structures, metrics, techniques, framework, strategies etc) for the supply chain management for effective delivery of supply chain services within their programme area to achieve their overall programme goal ✓ Manages and oversees all programme logistics processes (forecasting, procurement, shipment, warehousing, LMIS, distribution, budgeting and financing and other resource mobilization activities etc) ✓ Manages the performance improvement management system ✓ Coordinates all partners, detects abnormal trend in Partner behaviour and in delivery of logistic activities and normalize them ✓ Coordinates and chairs periodic review using TWG sub committee meetings

No	Personnel	Responsibility
		✓ Supports and technically supervises the state and LGA logistics officers for the programme in documenting logistics services at the health facilities and state stores; collecting, collating, validating, transmitting, analysing, using and implementing feedback ✓ Periodically reviews job roles and capacitates them for any changes ✓ Collaborates with and accounts to NPSCMP and FDS for the performance of programme logistics officer ✓ Facilitates the implementation of the strategic plan for supply chain activities. ✓ Facilitates engagement of supply chain actors and other relevant stakeholders
4.3	Head of PSM	✓ Adopt/adapt NPSCMP resources (SCMPs such as processes, structures, metrics, techniques, framework, strategies etc) for the supply chain management for effective oversight of the supply chain system in the state ✓ Coordinates all programme health supply chain activities within the country in order to achieve unity of action and aligns them with the national health strategic objective plan ✓ Manages and oversees the systems for the delivery of programme logistics services (forecasting, procurement, shipment, warehousing, LMIS, distribution, budgeting and financing and other resource mobilization activities etc) ✓ Monitors the performance improvement efforts of the states programme logistics system ✓ Coordinates all partners, detects abnormal trend in Partner behaviour and in delivery of logistic activities and normalize them; reports to NPSCMP and FDS ✓ Coordinates the periodic review of TWG sub committee meetings ✓ Supports and technically supervises the programme logistics officers in documenting logistics services at the health facilities and state stores; collecting, collating, validating, transmitting, analysing, using and implementing feedback ✓ Periodically reviews job roles of state logistics officers and capacitates them for any changes ✓ Collaborates with and accounts to NPSCMP and FDS on the performance of programme logistics management ✓ Facilitates the implementation of the strategic plan for supply chain activities. ✓ Facilitates engagement of supply chain actors and other relevant stakeholders ✓ Coordinates and serves as the chairman of the programme PSM sub-committee meeting

Figure 1: Secondary & Tertiary Facility Organogram

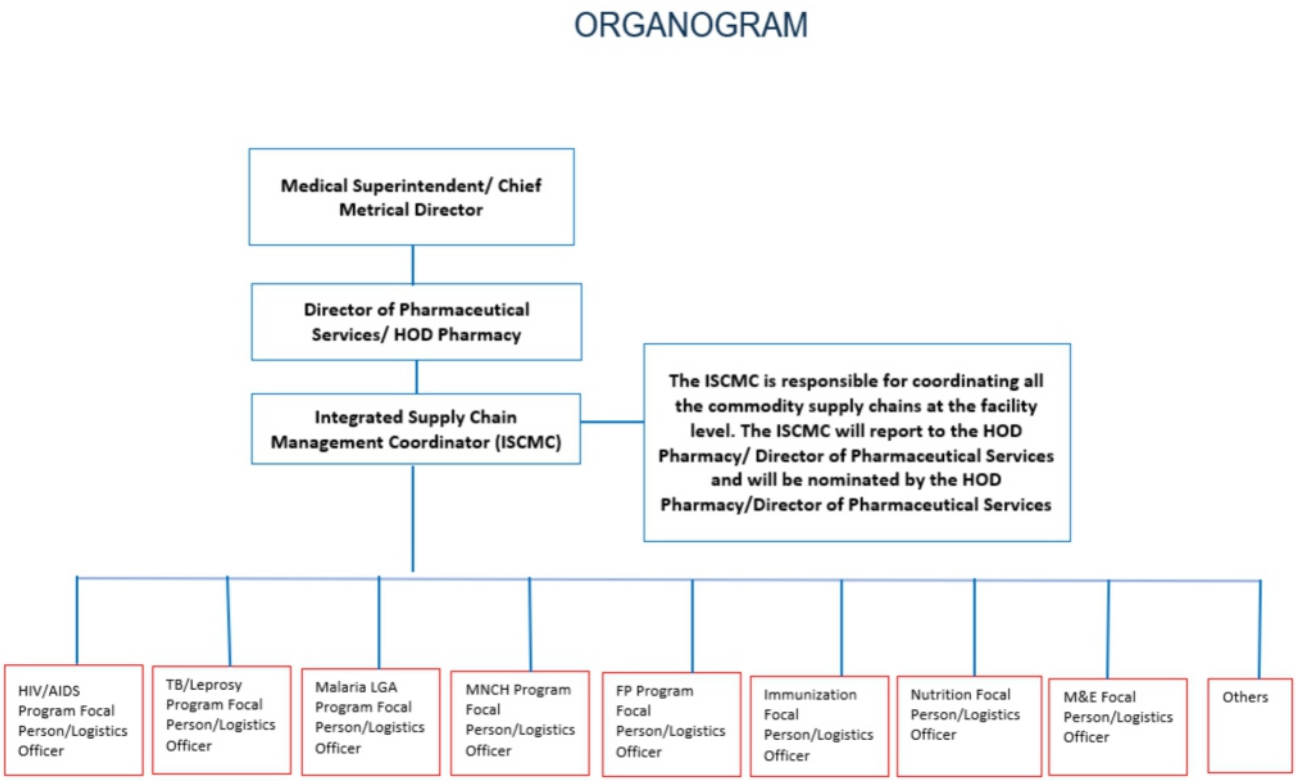


Figure 2: LGA Level Organogram

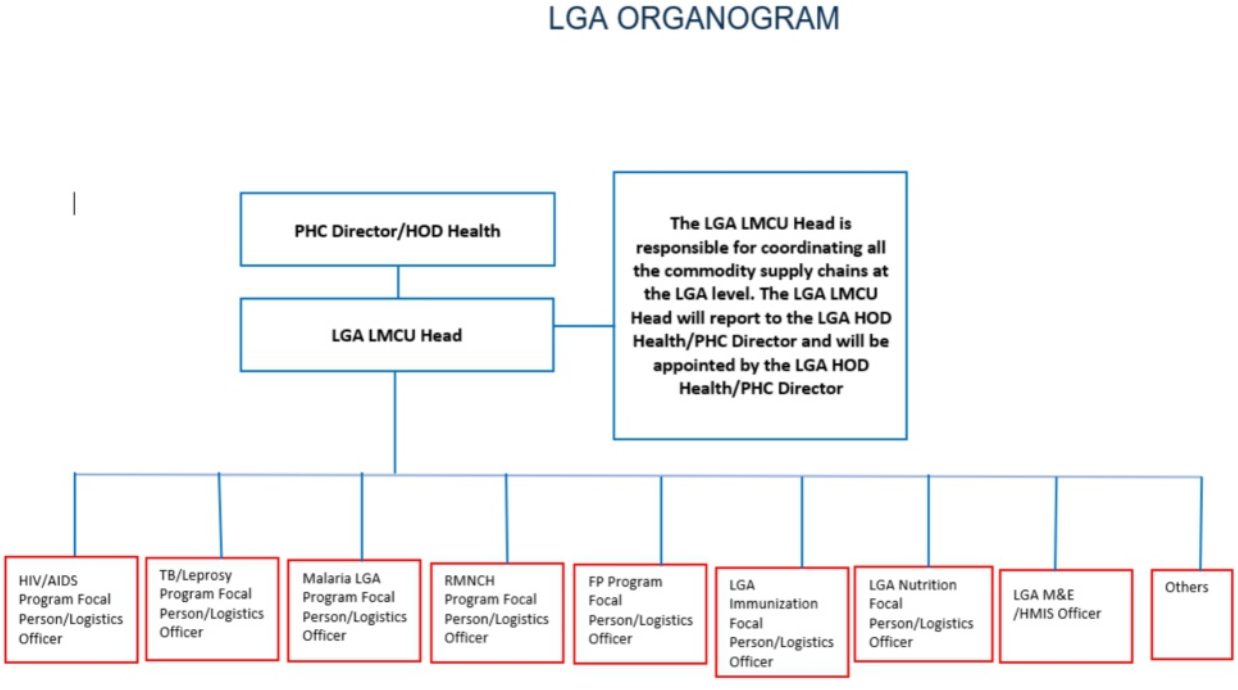


Figure 3: Governance, Information Sharing, Supervision and Feedback Framework – LGA Level

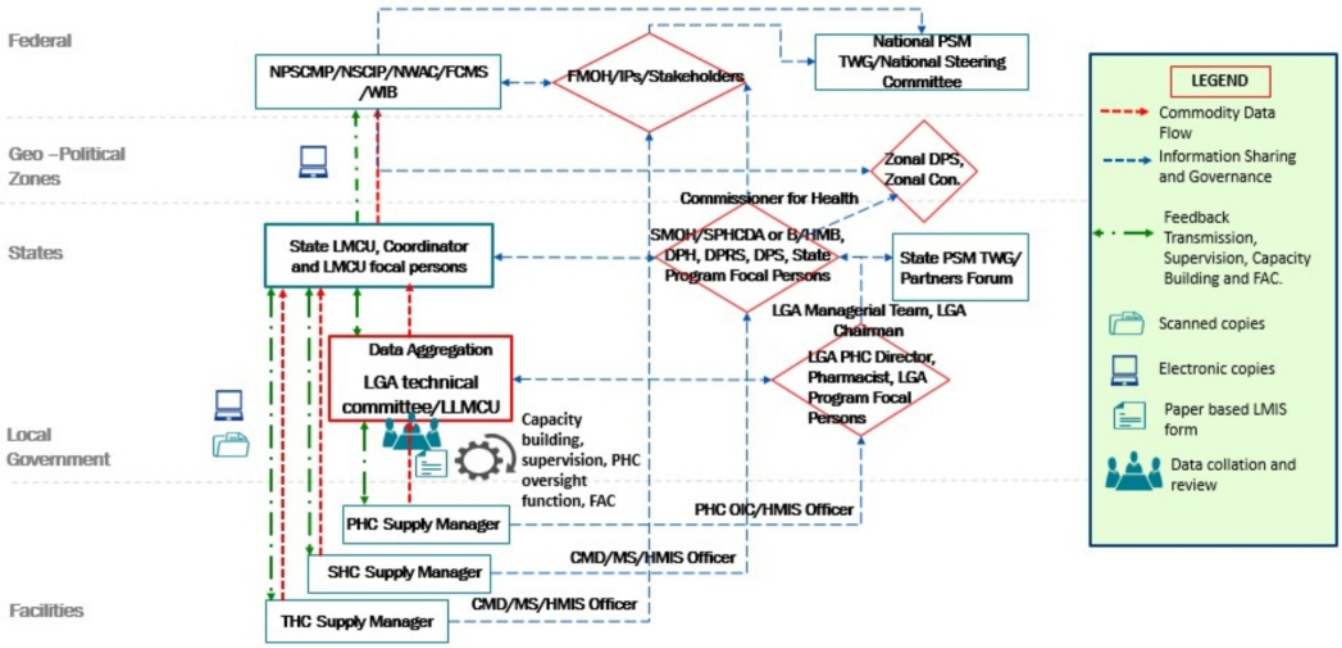


Figure 4: Governance, Information Sharing, Supervision and Feedback Framework – State Level

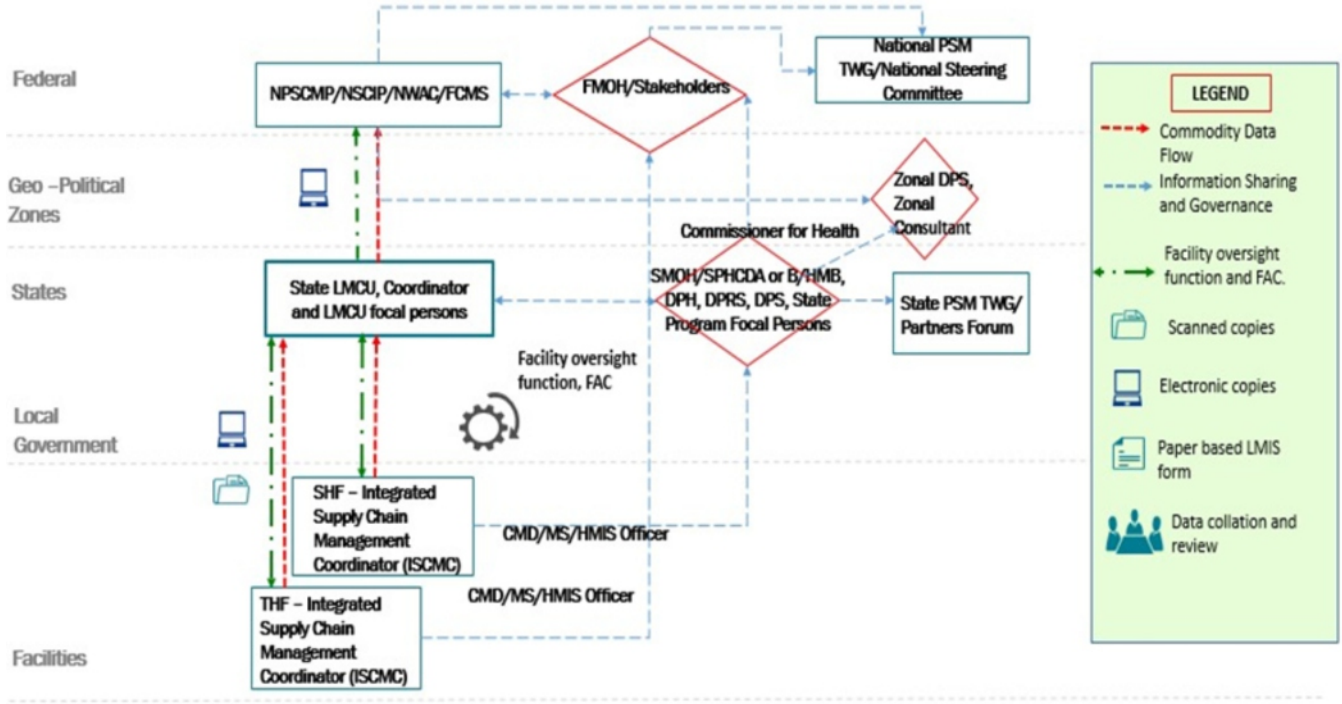


Table 1: RASCI MATRIX – SECONDARY AND TERTIARY FACILITIES, ROLES AND RESPONSIBILITIES

RASCI MATRIX - SECONDARY AND TERTIARY ROLES & RESPONSIBILITIES														
Role / Activity	Facility program focal persons	Integrated Supply Chain Management Coordinator	Facility Head of Laboratory/ Pharmacy	State LMCU focal logisticians	State Program focal persons	State Consultants	State LMCU Coordinator	State DPS of the Ministry of Health	Permanent Secretary	NPSCMP/ NWAC	Zonal Consultant	Zonal LMCU Coordinator	Zonal DPS	State PSM Technical Vorking Group
Completion of LMIS Tools	R	S		C										
Transmission of LMIS data from the facility to State LMCU	R	S	A	I										
Internal supervision of the FLMCU		R	A											
State Level Data aggregation				S	S	S	R	A		C				
Development of LMD Plan				S	C	S	R	A		C				
Transmission of LMD Plan to the NPSCMP				I	I	S	R	A		I	I	I	I	
Engagement of 3PL						I	S	R	A	C	I	I	I	I
Distribution from Zonal Hub to Facility	I	I		I	I	I	I	C		I	S	R	A	I
External Supervision of the FLMCU				I	I		R	A		I				I

RESPONSIBLE	ACCOUNTABLE	SUPPORT	CONSULTED	INFORMED
Person assigned to do the activity	Person makes final decision and has final decision	Person who supports other team members and can perform task in their place	Person who may be consulted before a decision or action is taken	Person who must be informed when a decision or action has been taken

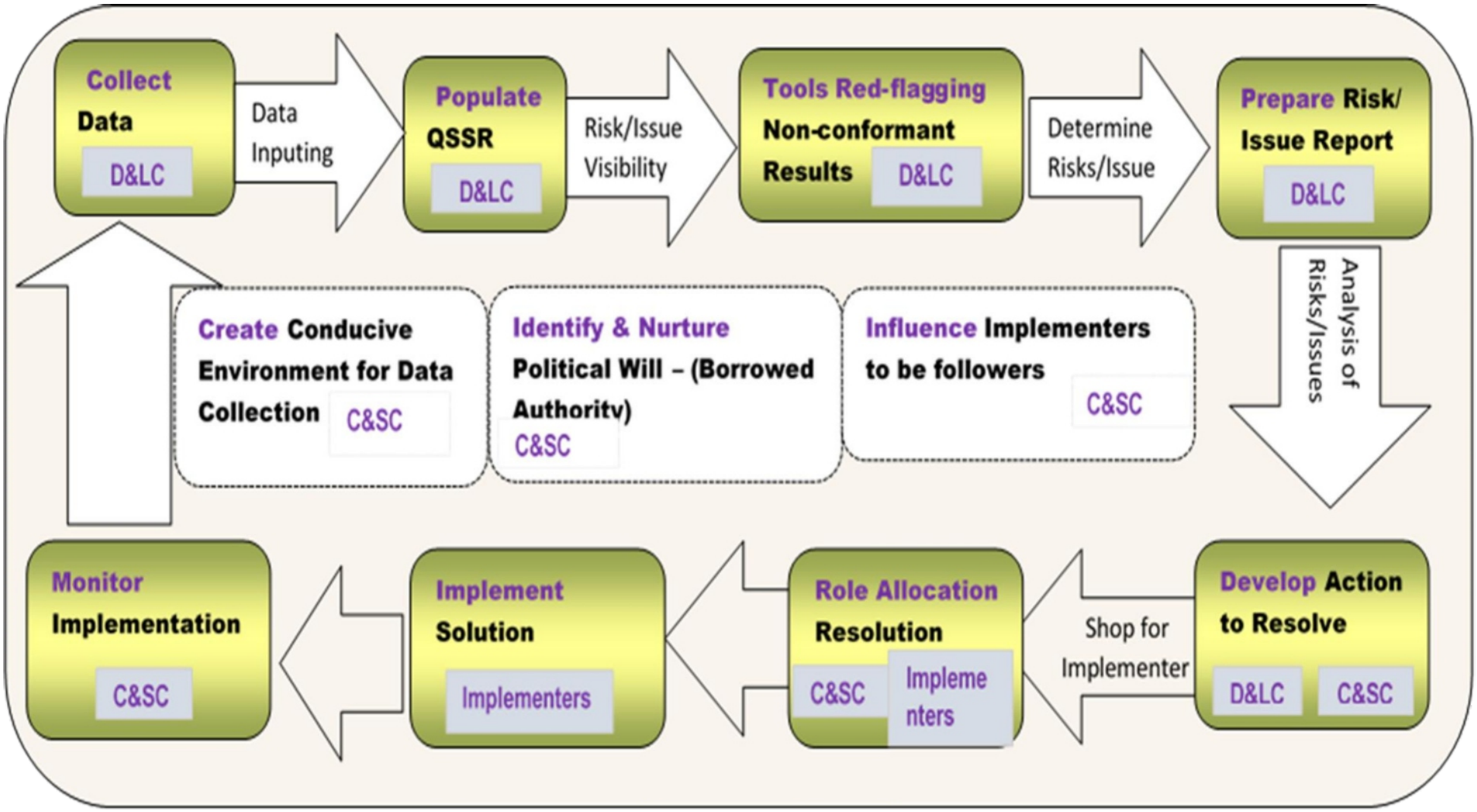
Table 2: RASCI MATRIX – PHC/ LGA ROLES AND RESPONSIBILITIES

RASCI MATRIX - PHC/LGA ROLES & RESPONSIBILITIES																	
Role / Activity	Service delivery personnel	Integrated Supply Chain Management Coordinator	LGA Program Focal Logisticians	LGA Program Focal Persons	LGA LMC Team Head	LGA HMIS Officer	LGA PHC Director	State LMCU focal Logistician	State Program focal persons	State LMCU Consultants	State LMCU Coordinator	State DPS Ministry of Health	NPSCMP/NWAC	Zonal NSCIP Consultant	Zonal LMCU Coordinator	Zonal DPS	State PSM Technical Working Group
Completion of LMIS Tools	R	S	C														
Transmission of LMIS data from the facility to LGA		S	R	S	S	S	A										
LGA Level Data aggregation			S	S	R	S	A	C	C		C						
Transmission of aggregated Data from LGA to State			S	S	R	S	A	S	I	S	I	I					
State Level Data aggregation								S	S	S	R	A	C				
Development of LMD Plan										S	R	A	C				
Transmission of LMD Plan to the NPSCMP										S	R	A	I	I	I	I	
Distribution from Zonal Hub to Facility	I	I			I	I	I			I	I	I	I	S	R	A	I

RESPONSIBLE	ACCOUNTABLE	SUPPORT	CONSULTED	INFORMED
Person assigned to do the activity	Person makes final decision and has final decision	Person who supports other team members and can perform task in their place	Person who may be consulted before a decision or action is taken	Person who must be informed when a decision or action has been taken

Table 3: CYCLIC PERFORMANCE IMPROVEMENT MANAGEMENT SYSTEM

Note: D&LC and C&SC have been replaced with RIV and PIC officers in the state LMCU



Stakeholder Commitment

LGA commitment:
The LGA personnel reports directly to the LGA service commission or the Primary Health Care Board/Agency within the state. A commitment by the service commission or the board to establish a coordinating unit for data collation, review and capacity building is vital to the implementation of supply chain activities.
The LGA HOD Health shall have the responsibility of conducting advocacies for resource mobilization and ensuring adequate human resource for LGA level supply chain activities.

Federal and States Government Commitment:
The government at both levels has the responsibility to drive the integration process and in extension, the success of the supply chain integration. The active participation of the government in formulating policies providing directions and resources to support the overall implementation of t supply chain activities is required .

NPSCMP Commitment:
To achieve the objective of supply chain efficiency, advocacy is required of the NPSCMP to the Teaching Hospitals Unit and the Federal Medical Centers Unit of the Directorate of Hospital Services of the FMOH as well as the SMOH. This will ensure the set-up of the FLMCU, budget provision for supply chain and overall successful implementation of the secondary and tertiary facilities supply chain activities

Donor Commitment:
In order to create an enabling environment for the implementation of the supply chain activities, technical support from donors is an essential factor. There must be consensus amongst donors on harmonization of reporting and product distribution mechanisms in line with that of the Nigeria Supply Chain Policy.

Funding

A Budget for supply chain activities at all levels:
Funding is required for operationalization of an effective and efficient supply chain system. Government at all levels of the supply chain is required to have a budget line for supply chain and disburse funds accordingly to enable implementation.

Process Owner

- FMOH, SMOH, LMCU, TWGs, Service Delivery Personnel

References:

- Supply Chain Communication and Coordination Framework for Public Health Programmes at the Secondary and Tertiary Facilities in Nigeria 2017
- Supply Chain Communication and Coordination Framework for Public Health Programmes at the Local Government Area (LGA) in Nigeria 2017
- Cambridge Dictionary
- Federal Ministry of Health website

APPENDIX 1: GUIDELINE ON SUPPLY CHAIN ISSUES IN PHARMACOVIGILANCE

Introduction

Any program involving the distribution of large volume of pharmaceuticals and other healthcare products should have a system that collates, documents and reports to the relevant regulatory authority, adverse drug reaction (ADR) as well as reports dealing with suspected Substandard and Falsified (SF)- products. Such a system should also have capacity to capture medication error reports.

The ultimate goal of pharmacovigilance is to promote the safe and rational use of these products, thereby improving patient care and public health. An effective pharmacovigilance system serves to boost patients' confidence in the healthcare system and provides data for post market surveillance of pharmaceuticals and other healthcare products

Purpose

To identify pharmacovigilance issues in the health supply chain system and provide steps for efficient and effective management.

Scope

The scope of this guideline covers actions to be taken along the supply chain to address pharmacovigilance issues based on appropriate guidelines.

Definition of Terms

- Pharmacovigilance is defined as the science and activities relating to the detection, assessment, understanding and prevention of adverse effects or any other medication-related problem (WHO).
- Adverse Drug Reaction (ADR) is a response to a medicine which is noxious and unintended, and which occurs at doses normally used in man for the prophylaxis, diagnosis or therapy of disease, or for modification of physiological function.

Abbreviations

- ADR: Adverse Drug Reaction
- NACA: National Agency for Control of AIDS
- NAFDAC: National Agency for Food and Drug Administration and Control
- PV: Pharmacovigilance
- RO: Reporting Officer
- SR: Spontaneous Reporting
- WHO: World Health Organisation

Responsibilities

No	Personnel	Responsibility
1.	Health facility focal person	✓ Report all ADR to health facility management ✓ Report all ADR to the program lead, LGA and State LMCU ✓ Document and report the discontinuation of pharmaceuticals and other healthcare products being withdrawn for safety reasons to LGA and State LMCU ✓ Document all ADR in the ADR Form and ADR Screening Form ✓ Report the replacement of an existing pharmaceutical and other healthcare products with a new one to LGA and State LMCU (refer to SOP on Product Transition)
2.	LGA LMCU focal person	✓ Report all ADR and product replacement to the state LMCU ✓ Support recall of health products being withdrawn for safety reasons ✓ Send feedback to health facility
3.	State LMCU focal person	✓ Report all ADR and product replacement to the NPSCMP and Program Team Lead ✓ Coordinate and support recall of health products being withdrawn for safety reasons ✓ Send all collected ADR forms to NAFDAC ✓ Provide feedback to the LGA LMCU
4.	NPSCMP/ Head of PSM/ PSM-TWG	✓ Take necessary supply chain decisions to ensure security of the product and its safety ✓ Review safety data regularly with National Pharmacovigilance Centre (NPC)/NAFDAC and align supply chain decisions ✓ Provide feedback to the state LMCU

APPENDIX 2:
GUIDELINE ON SUPPLY CHAIN ISSUES WITH EQUIPMENT BREAKDOWN

Introduction

Equipment breakdown may affect the supply chain of health products. Such a breakdown could be devastating in terms of the wastage of health products. To avoid this, there is need to repair the equipment as quickly as possible and where this is delayed, certain actions need to be taken to prevent wastage of health products.

Purpose

To identify supply chain issues with equipment breakdown, certain steps are required to be taken for efficient and effective supply chain management.

Scope

The scope of this guideline covers all equipment for Laboratory services, cold chain, non-cold chain, medical devices and warehouse equipment, with corresponding actions to be taken along the supply chain to address equipment breakdown.

Definition of Terms

Health facility focal person: This is the person responsible for the products or services at the facility level and could be ascribed as the Officer in Charge (OIC), Head of facility, Cold Chain Officer (CCO), laboratory Scientist and Store officer for cold chain and non-cold chain products.

Abbreviations

- CRRF: Combined Report and Requisition Form
- LGA: Local Government Area
- LMCU: Logistics Management Coordinating Unit
- NPSCMP: National Products Supply Chain Management Program
- OIC: Officer in Charge
- CCO: Cold Chain Officer

Responsibilities

No	Personnel / Group	Responsibility
1.	Health facility focal person	✓ Report all equipment breakdown to health facility management ✓ Report all equipment breakdown to the program lead, LGA and State LMCU ✓ Document and relocate health products to functional equipment for safe keeping and to maintain integrity. ✓ Undertake sample transfer to another testing site in the event of equipment breakdown. ✓ Contact service providers for repairs ✓ Inform LGA and State LMCU when equipment is repaired ✓ Document all equipment breakdown in the CRRF and Equipment maintenance charts
2.	LGA LMCU focal person	✓ Report all equipment breakdown to the state LMCU ✓ Ensure redistribution of health products to other health facilities if equipment repairs and/or replacement are prolonged.
3.	State LMCU focal person	✓ Report all equipment breakdown to the Head of PSM ✓ Supervise redistribution of health products of faulty equipment.
4.	Head of PSM	✓ Ensure necessary actions are taken to avoid wastage due to equipment down time.

APPENDIX 3: GUIDELINE ON HUMAN RESOURCES

Introduction

The most critical factor that determines performance of healthcare is the quality and adequate number of human resources (HR). World Health Organization referred to Human Resource for Health (HRH), a sub-system of HR as "Health workforce". It is a cross-cutting issue touching every function in the supply chain from quantification to service delivery.

Without motivated and competent staffs that have the requisite skills and capacity to operate the supply chain effectively and efficiently, no individual element of the chain functions. It is, as such, necessary to enhance the capabilities of employees and ensure that they possess the requisite level of core and functional competence, knowledge, skills and attitude which must be continually improved upon to increase productivity in supply chain management.

The skill levels and requirements for supply chain human resources:

1. **NPSCMP Level:** Leadership, Governance, and Innovation with emphasis on

    - Perimeter Surveillance
    - Business intelligence
    - Stewardship training
    - Resource mobilization
    - Supply Chain Audit Capability
    - Project Management
2. **National Programme Level**: Operational Management and Strategies
3. **LMCU level**: Leadership and Coordination with emphasis on:
    - Performance Improvement, Coordination and Strategy
    - Facility Audit Capability
4. **State Logistic Officer**: Logistic Management with emphasis on Risk/Issue Visibility and Mitigation/Resolution
5. **LGA LMCU**: Leadership and Coordination with emphasis on the implementation of SOP and other guidelines compliance
6. **LGA Supervisor**: Hands on support capability with emphasis on Last Mile logistics services
7. **Health facility Officer**: Capacity to use all SOPs and guidelines with emphasis on patient outcomes support

    - **Crosscutting skill**:

    1. Performance management
    2. Culturing and maintaining Political Will
    3. Data/ knowledge Management

Purpose

To provide a systematic approach to HR plans and policies that supports supply chain management activities and performance.

Scope

It covers the entire HR needs, required to implement the SOP.

Definition of Terms

- Continuing Professional Development: involves updating the knowledge, skills and experience related to your professional activities following completion of your formal training.
- In Service Training: is a professional training or staff development effort, where professionals are trained and discuss their work with others in their peer group.

Abbreviations

- COP: Country Operational Plan
- CPD: Continuing Professional Development
- CPDP: Continuing Professional Development Programme
- DFDS: Department of Food and Drugs Services
- FMOH: Federal Ministry of Health
- FGoN: Federal Government of Nigeria
- GON: Government of Nigeria
- HRH: Human Resources for Health
- HPSM: Head of PSM
- HRHIS: Human Resources Health Information System
- iHRIS: Integrated Human Resources Information System
- IST: In Service Training
- LMCU: Logistics Management Coordinating Unit
- M&E: Monitoring & Evaluation
- MOH: Ministry of Health
- NGO: Non-Governmental Organisation
- NHRH–TWG: National Human Resources Health Technical Working Group
- NPSCMP: National Product Supply Chain Management Programme
- PEPFAR: President's Emergency Plan for AIDS Relief
- QA: Quality Assurance
- SCM: Supply Chain Management
- SDGs: Sustainable Development Goals
- TWG: Technical Working Group
- SCAC: Supply Chain Audit Capability
- FAC: Facility Audit Capability
- RIV: Risk Issue and Visibility
- PICS: Performance Improvement Coordination and Strategy

Responsibilities

No	Personnel	Responsibility
1.	FGON (Honourable Minister, Permanent Secretary, Directors of; Food and Drugs Services, Health Planning, Research and Statistics, Procurement, Hospital Services in connection with the Secondary and Tertiary Health facilities)	✓ Provides policy direction for supply chain management of Pharmaceutical and other healthcare products in Nigeria ✓ Grant approvals via the relevant programmes/ Agencies ✓ Ensure the recruitment of adequate and competent personnel for supply chain management. ✓ Ensure adequate training for personnel and deployment of trained personnel to relevant department. ✓ Provide enabling work environment. ✓ To identify the gaps in the supply chain management for collaboration with partners.
2.	Donor Agencies/ Implementing Partners	✓ To collaborate with GON and other stakeholders to bridge identified gaps.
3.	Head of PSM	✓ Assessment of HR needs in supply chain management for the programme. ✓ Escalate needs assessment report to bridge identified gaps in supply chain management. ✓ Share results of HRH analysis with relevant programs, ministries, department and agencies as part of the Country Operational Plan (COP) ✓ Coordinate, manage and delegate roles to supply chain logistics officers ✓ Identify outcomes, channel areas of challenges for interventions through NPSMTWG.
4.	NPSCMP	✓ In collaboration with relevant stakeholder, develop and ensure standard for operations of HRH in supply chain management. ✓ Monitor the use of assessment tools/analysis plan in collaboration with all programme and relevant stakeholders. ✓ Collaborate with programmes to build capacity of personnel on supply chain management.

No	Personnel	Responsibility
		✓ In collaboration with programme and other relevant stakeholders, review periodically the HRH guidelines. ✓ Provide oversight functions towards implementation of the guidelines
5.	Human Resource Department	✓ In collaboration with the employer (GON), deploy the personnel to the relevant department.
6.	States Ministry of Health {Honourable Commissioner of Health, Permanent Secretary, Directors (DPS, DPH, ES, DPRS, etc)}	✓ Adopt and disseminate policy direction for supply chain management of Pharmaceutical and other healthcare products in the state. ✓ Grant approvals via the relevant programmes/ Agency. ✓ Ensure the recruitment of adequate and competent personnel for supply chain management. ✓ Ensure adequate training for personnel and deployment of trained personnel to relevant department. ✓ Provide enabling work environment. ✓ To identify the gaps in the supply chain management for collaboration with partners.
8.	Local Governments (LGSC/COH/PHC Directors, LLMCU Coordinators).	✓ Adopt and implement policy direction for supply chain management of Pharmaceutical and other healthcare products at the LGA level ✓ Placement of competent personnel for supply chain management at the LGA level. ✓ Recruit adequate personnel where necessary. ✓ Ensure adequate training for personnel and deployment of trained personnel to relevant health facilities/unit. ✓ Provide enabling work environment. ✓ To identify the gaps in the supply chain management for collaboration with state and partners. ✓ Provide hands on support to health facility staff. Local Governments coordination, Support, approvals, Linkages & operations via PHC Directors & LLMCUs at the primary health facility levels.

Procedure

No	Guidance	Action Owner
1.	Conduct periodic assessment of human resource capabilities in supply chain at different levels. t	National/ NPSCMP, Programmes and partners States/ LMCU and Partners
2.	Develop national HRH strategic plan for supply chain management to provide a roadmap for supply chain workforce.	FGON/NPSCMP/Programmes/Partners
3.	Adopt task shifting and sharing policies to bridge the gap.	FGON/States/Partners
4.	Conduct annual stock taking of progress on selected task sharing policies, number of health workers produced through pre-service education, and facility level staffing	FGON/Programmes/States
5.	Align HR investment in supply chain management with current and future healthcare services requirements.	FGON/Programmes/ Agencies, States/Local Governments & Implementing Partners/Donors
6.	Establish and implement supply chain management mentorship and supportive supervision systems for field/facility-based staff to strengthen capacity and relationships.	NPSCMP/NWAC/States & LGA LMCU/Implementing Partners
7.	Optimize supply chain management performance, quality and impact of the health work force by harnessing appropriate technologies that monitor and improve HR performance.	FGON/Programmes/States/Implementing Partners
8.	Ensure basic Quality Assurance (QA) mechanisms e.g. Continuing Professional Development (CPD) and Standard Operating Procedures (guidelines) for supply chain staff continuous improvement at all levels.	FGON/NPSCMP/Regulatory bodies/Programmes/ Implementing Partners
9.	Conduct HRH research in supply chain management to inform trends and needs for the logistics workforce, health systems resilience and interventions.	FGON/NPSCMP/ Programmes/States/Partners
10.	Improve remuneration and rewards to motivate supply chain staff for comparison of the health workforce nationally and globally.	FGON/Donors/Partners

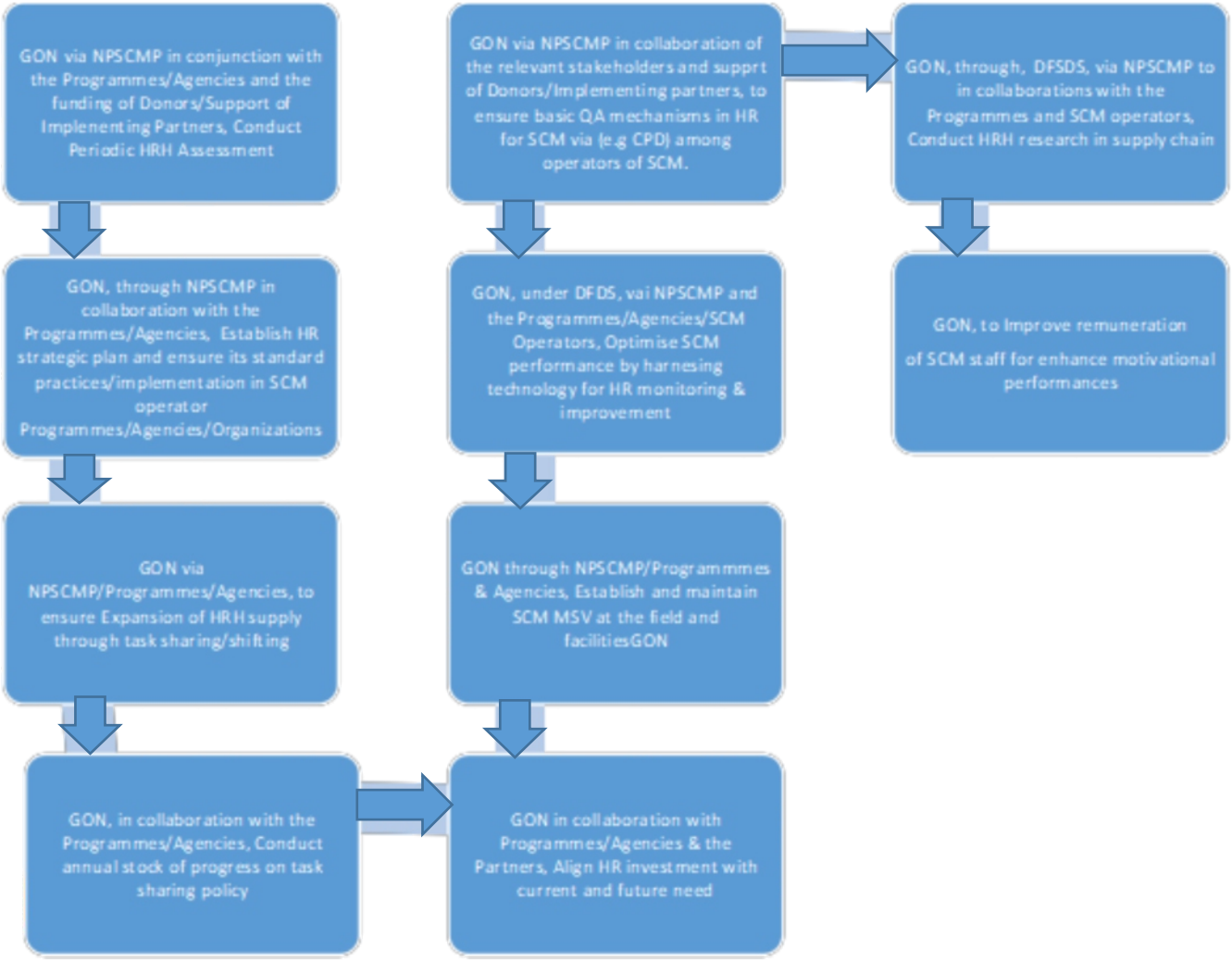
Process Owner

- Federal Government of Nigeria

Required Records

- Human Resources Assessment Process tool
- HR Data Collection Tool
- HR capacity in Public Health SCM Tool
  ANNEX

Process Flow for Human Resources in Health Supply Chain Management



References

- Rachel H. D. and Hayley R., (2018). Human Resources for Health; Principles and Practice. Global health e-learning
- PEPFAR (2015). President's Emergency Plan for AIDS Relief human resources for health strategy
- USAID/Deliver Project; Human Resources Capacity Development in Public Health Supply Chain Management Assessment Guide Tool, June 2013.
- National Product Supply Chain Management Programmes/National Supply Chain Integration Project, September, 2017
- Public Service Rules, Office of the Head of the Civil Service Of The Federation: 2007, Revised Edition.

APPENDIX 4: GUIDELINE ON OPERATION RESEARCH

Introduction

The national drug policy under the caption of research and development specifies that operation research is key to identifying the best methods of selecting, procuring, distributing and using drugs rationally. Its application shall lead to practical and cost-effective measures which would inform managerial, educational and regulatory interventions to improve access to and the use of drugs. As recognized by the national drug policy the application of operations research to major supply chain functions has great potential to improve product availability in the health sector.

Purpose

To serve as a guide to carry out processes involved in operation research (OR) in health supply chain management. It would ensure that outputs from operation research will facilitate learning and knowledge management across programs, fosters collaboration and encourage scale up of new initiatives in an integrated manner. This intervention will ultimately project supply chains solutions and contribute to success of the global community.

Scope

Operation research is employed to improve efficiency and effectiveness of supply chain management system, through optimization of logistics network design, warehousing operations, demand and supply planning, transportation management, fleet management, materials handling, order fulfillment and inventory management.

Abbreviations

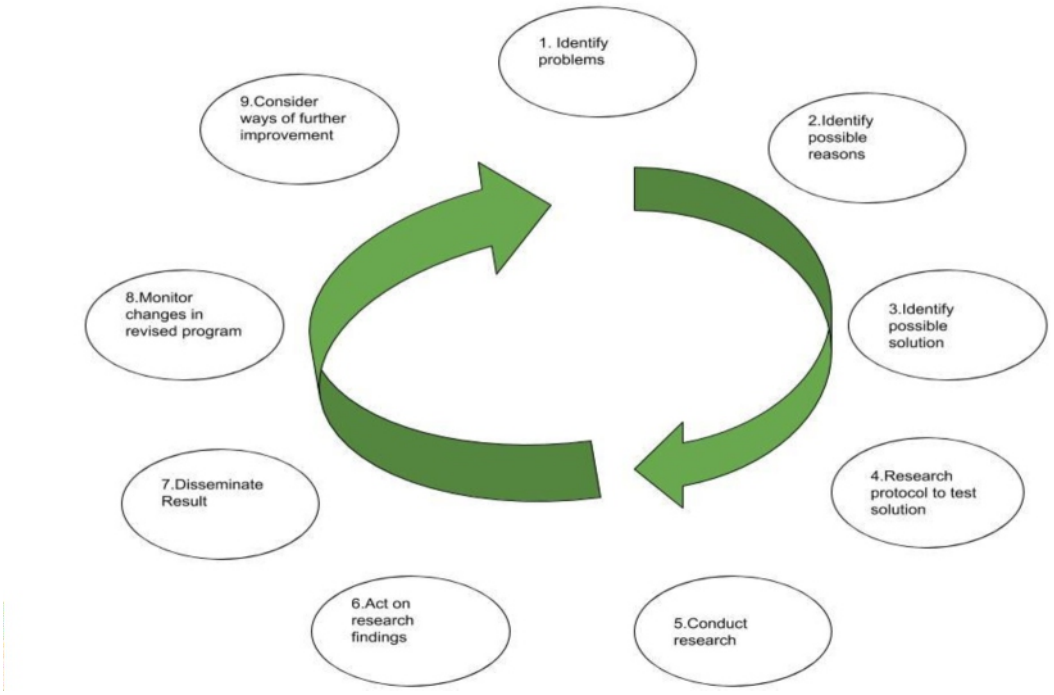
- R&D: Research and Development
- FMoH: Federal Ministry of Health
- DFDS: Director, Food and Drug Services
- NPSCMP: National Products Supply Chain Management Programme
- OR: Operation Research

Research and Development Principles (and framework)

Operation research i is a systematic approach to provide evidence-based information which will serve as rationale for decision making that will ultimately lead to improvement in the system. The Federal Ministry of Health has developed the National Health Research Policy and Priorities and Procurement and Supply Chain Management System Operation Research Plan., which will serve as reference in operation research in the country This SOP will therefore draw strategic direction and concepts from the above listed documents. The major steps in operation research are outlined below:

- Identify problems
- Identify possible reasons
- Identify possible solution
- Research protocol to test solution
- Conduct research
- Act on research findings
- Disseminate Result
- Monitor changes in revised program
- Consider ways of further improvement

The steps are represented in a cyclical process as seen in the diagram below



PROCEDURES

The stages are to be followed in conducting operation research

- Operation Research Initiation Stage
- Operation Research Implementation Stage
- Operation Research Closing Stage

Operation Research Initiation Stage:

No	Method	Responsible Person
1.	Activity 1: Development of Concept Paper Purpose: Concept paper provides the background on the need for operations research and serves as a first attempt at describing what issues or challenge the OR will address. It should highlight the potential impact or goal of the OR. In addition, the proposed duration or schedule for the assessment should be stated. The concept note should include a communication plan to carry along all relevant stakeholders in key steps of the OR.	
1.1	A draft of concept note will be developed and shared with wider audience through presentation at the PSM TWG meeting or via electronic means including email and other platforms.	Head of PSM or designate
2.	Activity 2: Set up of research team Purpose: Operation research requires a multidisciplinary team to draw on different required expertise to conduct the research effectively	
2.1	Identify and reach out to the people with the right skill set and program knowledge to execute the research, this will include but not limited to supply chain personnel, statisticians, management information specialist, communication specialist etc. Sub teams can be created to handle different aspects of the research or sub task.	Head of PSM
3.	Activity 3: Develop meeting schedule. Purpose: To ensure proper coordination and timely completion of OR	
3.1	Develop meeting schedule and share with the research team. The team will reach a consensus on suitability of the timing, modality and venues.	Designated team member or secretary of the research team

Operation Research Implementation Stage:

No	Method	Responsible Person
4.	Activity 4: Identification of supply chain issues, challenges or priority for intervention Purpose: It is very important to have clarity on the focus for the OR. A proper understanding and definition serve as the foundation or basis of the research and will determine the implementation modalities.	
4.1	Conduct a desk review of supply chain performance by analyzing the KPI for respective programme. Where this is not adequate to provide comprehensive perspective on the issue or challenge, a rapid assessment (cross sectional methodology) should be carried out. In addition, other qualitative methods can be employed such as key informant interview and focus group discussions. A flowchart that outlines the processes and highlight the relationship between entities in the supply chain system can also be used.	Research Team
5.	Activity 5: Develop a model for the OR Purpose: A model is a representation of the system understudy that is a miniature of the complex system which allows research to mimic the system and expose it to various possibilities to make predictions that can guide decisions on optimization or best alternative resolution.	
5.1	Determine the decision variables which are the unknowns to be determined by the solution to the model, mention the constraints to represent the physical limitations of the system, state the objective function that reflects the optimized system.	Research Team
6.	Activity 6: Data Management Purpose: The data used in OR should be of high quality and should be easily accessible. Supply chain system often involves multiplayers whose operations are driven by data. For health supply chain programs data sharing needs to be encouraged to foster collaboration and integration of activities where applicable.	
6.1	Conduct data collection and analysis using appropriate tools. Note: Where OR involves collection of data at the service delivery points, the names of health facilities should be in line with those in the NHLMIS) and the sampling frame where applicable should also be derived from the NHLMIS. Storage of data should also be in a national repository.	Research Team
7.	Activity 7: Derive Solution from Model Purpose: To decide on alternative solutions, experiments must be conducted on the data models either by simulation or mathematical analysis. It is important that quality data be used at this stage to get appropriate output. Data collection tool or the algorithm for mathematical analysis will be selected based on the nature of the model.	
7.1	Select an appropriate method ranging from linear programming to dynamic programming, network scheduling, simulation, inventory theory, queuing theory, game theory before deriving the solution. It is important to validate the model to ensure input data is free of errors, computer program is error free and is a good fit for the supply chain model being examined. Validation may involve the use of historical data in the model and comparison with historical result achieved.	Research Team

Operation Research Closing Stage:

No	Method	Responsible Person
8.	Activity 8 Implementation of Research Results Purpose: This phase involves the implementation of the results of the research or the implementation of the algorithm for solving the model as an operational tool (usually in a computer package).	
8.1	Develop a plan for implementation which includes detailed instructions on what must be done (including time schedules) to implement the results.	Research Team
8.2	Produce operating manuals and training schemes	Research Team

References

- Federal Ministry of Health. Operation research plan: Nigeria Procurement Supply Chain Management for pharmaceuticals and other health related products, 2018-2020.
- Federal Ministry of Health, National Drug Policy 2005.
- http://www.pondiuni.edu.in/storage/dde/downloads/mbaii_qt.pdf

- https://www.cleverism.com/rd-research-and-development-overview-process
- https://www.businessmanagementidaes.com/personnel-manegement/operation-research/top-6-methhods-used-in-operation-research/6727
- https://www.britanica.com/topic/operations-research

APPENDIX 5: GUIDELINE ON KNOWLEDGE MANAGEMENT

Introduction

To ensure the use of evidence for decision making and continuous improvement of the supply chain system, there is a need to facilitate the implementation of a comprehensive knowledge management plan. The interconnecting nature of the multiple elements of procurement and supply management (PSM) constitutes challenges to sorting, verifying and coordinating existing data, information and knowledge across all levels in the health programmes. There is therefore a need to intensify the conceptualization and implementation of knowledge management in response to existing knowledge gaps in PSM which includes sub-optimal documentation, dissemination, contextualization and application of available knowledge.

Purpose

The knowledge management plan for health supply chain system, aims to:

- Introduce, nurture and entrench a knowledge sharing culture for the procurement and supply management of pharmaceuticals and other health care products.
- Improve knowledge sharing on health supply chain among stakeholders and to provide a structured mechanism for knowledge management across health programmes.

Scope

The knowledge management plan for Nigeria supply chain is focused on entrenching knowledge management at all levels of the supply chain pipeline by creating a reliable access to and usage of valid PSM knowledge and practices across the health programs.

Definition of Terms

- Knowledge Management: This is the deliberate and systematic coordination of an organisation's people, technology, processes and organisational structure in order to add value through knowledge reuse and innovation.
- Explicit Knowledge: Knowledge that can be captured and written down in documents or databases
- Tacit knowledge: Knowledge that people store in their heads. An unspoken understanding about something that is difficult to write down in a document or database and is therefore difficult to access.

Abbreviations

- KM: Knowledge Management
- PSM: Procurement and Supply Management

Responsibilities

No	Personnel / Group	Responsibility
1.	Knowledge management officer or team	✓ Designing, evaluate or choose information content, database structures, indexing and knowledge representation ✓ Maintain data integrity (availability, accessibility, timeliness, completeness, comprehensiveness, accuracy, reliability, relevance, validity, legitimacy, precision, consistency) ✓ Update, modify, improve and operate the system. ✓ Manage information resources to support organizational missions ✓ Coach and mentor community of practice, provide life cycle training support and incorporate lessons learnt and best practices into training content ✓ Design and generate information services and products, which includes publications, databases, information systems etc.

Implementation of Knowledge Management
The implementation process is shown in the figure below:

Figure1: Knowledge Management Cycle

i. **Identification:** This involves identifying existing body of knowledge and gaps in the supply chain system. The gap analysis may be conducted in the form of interview and questionnaires to analyse the specific needs. Target respondents should include all stakeholders who will benefit from the intervention. Based on the analysis, decisions should be made ranking the KM level based on priority objectives.

ii. **Refine**: This is the process by which knowledge is converted from tacit to explicit form (residing

within people, artefacts or organizational entities) and vice versa through the sub-processes of externalization and internalization.

iii. **Disseminate:** It involves sharing knowledge. It seeks to "classify, map, index, and categorize knowledge for navigation, storage, and retrieval" (Botha et al. 2008). For knowledge to be shared, it must be arranged in such a way that it can be identified, retrieved, and understood by the knowledge user.

iv. **Organizational learning:** Is a process through which knowledge is exchanged among people and members of an organization. This often begins with common practices such as instruction manuals or "how to" guidelines. The next step from there is to identify and share best practices.

v. **Assessment:** The knowledge management assessment provides an understanding of the current strengths, gaps, and opportunities for intervention in order to introduce a fully operative knowledge management framework across the health supply chain. It will also provide a baseline for the knowledge management implementation and identify the missing elements that need to be filled to create an effective framework.

vi. **Apply:** The implementation of the intervention should follow a well-elaborated communication strategy, which takes into account the communication before, in-between and after the rollout. After the rollout, the intervention should be evaluated according to the set goals with regard to the effects and input factors on the individual, organizational and technical level.

vii. **Knowledge creation:** Knowledge creation refers to the continuous combination, transfer, and conversion of different kinds of knowledge. It serves to:
    - Enable and encourage knowledge sharing
    - Create a suitable work environment
    - Provide systems that support the work process
    - Provide workers with timely, relevant information and data

References

- Davenport, T.H. and Prusak, L. (1988) *Working Knowledge: How Organisation Manage What they Know*, Harvard Business School Press, Boston, MA.
- Edvinsson, L. (2000) *Some perspectives on intangibles and intellectual capital*, *Journal of Intellectual Capital*, 1 (1), 12-16.
- Grudin, J. (1994) *Computer supported co-operative work: History and focus*, Computer, 37 (7), 19 – 26.
- KMPG (1998), *Knowledge Management Research Report*, KMPG Management Consulting, London.
- Nonaka, I. and Takeuchi, H. (1995) *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*, Oxford University Press, New York.
- Quintas, P., Lefrere, P. and Jones, G. (1997) Knowledge management: a strategic agenda. *Long Range Planning*, 30 (3), 385 – 401.
- Scarbrough, H., Swan, J. and Preston, J. (1999) *Knowledge Management: A literature review-Issues in People Management*, Institute of Personnel and Development, The Cromwell Press, Wiltshire.
- Tiwana, A. (2000) *The Knowledge Management Toolkits*, Prentice Hall, New Jersey.