NIGERIA HEALTH WATCH

Informed commentary, intelligence and insights on the Nigerian health sector

A Brief Report on Nigeria's Procurement System for Maternal Health Medicines

OCTOBER 2022

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Executive Summary

The purpose of this review is to understand existing maternal health medicine procurement practices, identify challenges within Nigerian states and share recommendations of how Nigeria can improve the quality of its maternal health medicines and supply chain. This considered quality in terms of the medicines meeting pre-determined specifications, manufacturing medicines upholding the Current Good Manufacturing Practices (CGMPs) to eliminate harmful contaminations or impurities, delivering drugs safely, in a timely manner and at an affordable price to end users.

The review, which took place from April 2021 to December 2021 and was carried out in six states representing the six geopolitical zones in Nigeria:

- Delta (South-South)
- Ebonyi (South-East)
- Ekiti (South-West)
- Gombe (North-East)
- Kaduna (North-West)
- Plateau (North-Central)

As part of this process, the following thematic areas were examined:

a. The policies and guidelines that govern procurement processes across States
b. Systems and processes designed to retain the quality of medicines across the supply chain to the end users
c. The critical gaps and challenges contributing to poor quality maternal medicines

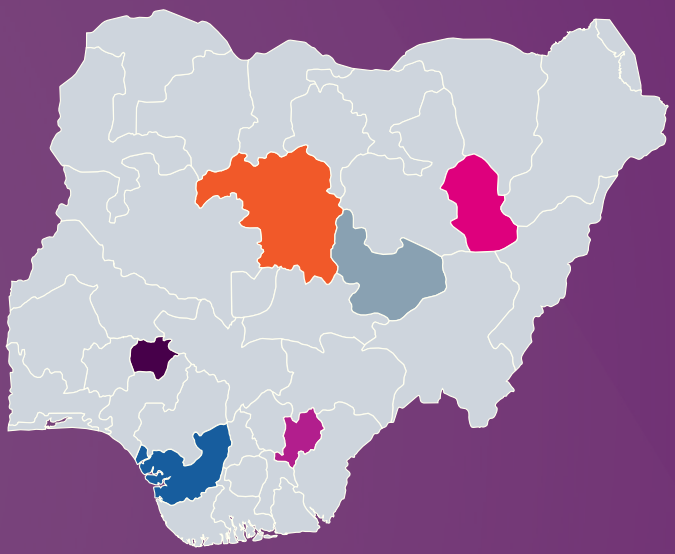
The States selected acted as windows to their respective geo-political zones, as they represented the diverse structures, policies, and practices of each region. Discussions with subject matter experts at the World Health Organization (WHO) and National Product Supply Chain Management Programme (NPSCMP) contributed to the working knowledge for procurement practices of quality maternal medicines in Nigeria.

The Review

Purpose

To understand existing maternal health medicine procurement practices, identify challenges within Nigerian states and share recommendations of how Nigeria can improve the quality of its maternal health medicines and supply chain.

Timeline



States

- Delta (South-South)
- Ebonyi (South-East)
- Ekiti (South-West)
- Gombe (North-East)
- Kaduna (North-West)
- Plateau (North-Central)

Thematic Areas

The policies and guidelines that govern procurement processes across States

Systems and processes designed to retain the quality of medicines across the supply chain to the end users

The critical gaps and challenges contributing to poor quality maternal medicines

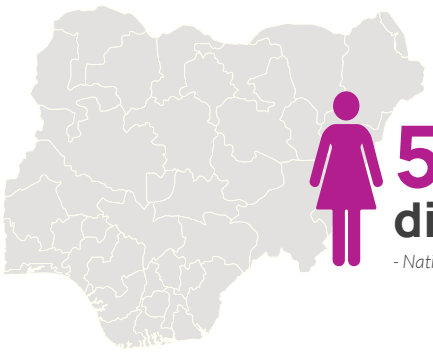
Maternal Health in Nigeria: Background

Nigeria, like many countries in Africa and other low and middle-income countries, still battles with a high maternal mortality rate. According to the National Demographic Health Survey 2018, maternal mortality rate is 512 out of 100, 000 live births. Most of these deaths occur within a few hours of delivery and are usually due to postpartum haemorrhage (PPH)[1].

Maternal deaths caused by postpartum haemorrhage (PPH) are preventable through the use of uterotonics; however, studies have shown that most medicines used to stop postpartum haemorrhage are sub-standard. Sub - standard medicines are *"authorised medical products that fail to meet either their quality standards or specifications, or both"*.

One of the studies, funded by the U.S. Agency for International Development (USAID) Mission in Nigeria, through the Promoting the Quality of Medicines (PQM) program of the United States Pharmacopeia (USP), sampled the quality of uterotonics such as oxytocin injections, misoprostol tablets, magnesium sulfate, and calcium gluconate injections across six geopolitical zones in Nigeria and found that about 74% and 33% of oxytocin and misoprostol samples, respectively, were found to be sub-standard.

Nigeria, like other Low-Middle-Income-Countries (LMICs), struggles with quality procurement systems. As the country transitions its health system towards a mandatory universal health insurance for all citizens, quality is a crucial element that should be integrated into all forms of procurement, and supply chain policies and procedures. The inter-dependency between effective policies and quality assured processes in the procurement of maternal medicines aligns with Nigeria's goal of achieving universal health coverage, hence it is important for the government to prioritise availability of quality assured medicines nationwide.



512 women
die per 100,000 live births
- National Demographic Health Survey, 2018

Procurement practices, challenges and recommendations for Delta, Ebonyi, Ekiti, Gombe, Kaduna, and Plateau states

This section highlights key observations from each State, with recommendations developed in collaboration with the decision makers in each State. It presents procurement processes, challenges and opportunities to strengthen practices.

DELTA STATE

In Delta State, medicines are procured through the Drug Revolving Fund (DRF) which is designed as a profit-based parastatal. The DRF has been operating for twenty–one (21) years, without board of directors; and no law governs the existence of the DRF in the state as of December 2021.

Delta state offers free maternity care to pregnant women and children under five years in all public health facilities under the Delta State Contributory Health Scheme (DSCHC).

Challenges encountered in the procurement process showed that the cost price of medicines has continuously increased since the pandemic started, and global supply chain issues have increased delivery timelines for medicines and equipment which are procured from countries outside Nigeria. International non-profit organisations also contribute to the supply of maternal medicines directly to health facilities without informing the appropriate department within the state such as the DSCHC who also procure same medicines. Lastly, solar powered refrigerators were provided to secondary health facilities across the state for the storage of cold chain medicines, and no provision was made for Primary Health Care (PHC) centres to enable them store medicines that are thermolabile in refrigerators.

Recommendations

The recommendations to the Delta State Ministry of Health, the Drug Revolving Fund, the State Contributory Health Scheme, and the State Primary Health Care Development Agency were to consider signing memorandum of understanding with local manufacturing companies to avoid stock out and reduce costs of commodities. To develop a coordination strategy that promotes inter-sectoral collaboration,

and pooling resources together at a state level to minimise duplication of efforts. The state should provide solar powered refrigerators across all the primary health care facilities across the different states, to ensure that the cold chain to necessary to maintain the quality of maternal medicines is conserved, in line with the manufacturer's storage conditions. In addition, there is a need to push for the DRF to be backed by law to legalise and further strengthen the existence of DSCHC.

EBONYI STATE

The state's procurement of maternal medicines focuses on public health care facilities. The state was establishing a Drug Revolving Fund (DRF) system for the procurement of all drugs, including maternal medicines at the time of visiting the state, in the last quarter of 2021. However, the DRF is not yet backed by law and is being managed by both the State Ministry of Health and State Primary Health Care Development Agency (SPHCDA).

A notable challenge with the Ebonyi State DRF is the focus on strengthening access to the supply chain for only public health facilities. There are inadequate quality control mechanisms to assure the quality of medicines procured by the private health care facilities and gaps in access to the GHSC PSM for private health facilities.

Recommendations

One of the recommendations to Ebonyi State includes the need to develop a business case model to enable the state to sustain the Drug Revolving Fund model. To create an enabling environment for private hospitals to be a part of the GHSC PSM support, from a system strengthening approach, there could be a potential opportunity for private hospitals to access quality maternal health medicines at a state-wide level. However, this would need to be discussed and agreed with GHSC PSM in order for the existing model to incorporate private healthcare facilities.

EKITI STATE

Prior to the recent passage into law of the Ekiti State Drugs & Health Commodities Management Agency in October 2021, procurement of maternal medicines for public facilities was through the Central Medical Store, with sub-units including the Unified Drug Revolving Fund and the Mega Store. Ekiti State provides free maternity care for pregnant women and for children under five years in all public health facilities.

Challenges encountered in the procurement process included inadequate accountability in the Drug Revolving Fund, where funds were used for other purposes, frequent stock outs of medicines leading to procurement processes that may compromise quality. In addition, the storage facilities for medicines procured need to ensure that the quality of medicines are not compromised before they reach the bedside of patients.

Recommendations

A recommendation made by stakeholders at the policy level was the need for routine training of health workers involved in the supply chain including quantification, forecasting, storage, transportation, and administration of medicines. This is to ensure that quality control mechanisms are employed and maintained through the entire maternal medicines supply chain.

GOMBE STATE

Procurement of medicines is not driven by the public sector but by donors and international non-government organisations. The procurement of maternal medicines in Gombe State is driven by the United Nations Population Fund (UNFPA) program which supports the state to procure and distribute medicine and commodities to primary and secondary health facilities. Private health facilities operate separately from government facilities, as they operate a parallel procurement process that is independently determined by each facility.

Challenges encountered in the procurement process of medicines in Gombe State included limited state funding and dependence on donor support, but despite this, the supply does not meet the existing demand from health care facilities in the state. There are inadequate mechanisms in place to assess and ascertain the quality of maternal medicines in the state.

Recommendations

The recommendations for Gombe State are the need to strengthen stakeholder capacity to diversify sources of funds for medicines procurement and establish quality control mechanisms. These quality control mechanisms would include ensuring that that the storage conditions of medicines procured in health care facilities are able to maintain the medicine quality. Furthermore, the Gombe State government needs to establish a Drug Revolving Fund to enable the state to meet the demand from health facilities to avoid stock-out.

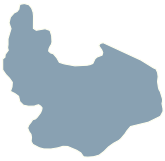
KADUNA STATE

There are two agencies responsible for procurement, supplies, and management of maternal medicines. The primary agency is the Kaduna State Public Procurement Agency (KADPPA) responsible for all procurement (beyond maternal medicines). It oversees the state health supplies agency which is the Kaduna State Health Supplies Management Agency (KADSHMA). KADSHMA is the agency specifically tasked with procurement, storage, and distribution of public health commodities in the state, including, maternal medicines. A major driver of the procurement of maternal medicines is the Free Maternal and Child Programme (FMCP) funded by the Kaduna State government for pregnant women and children under the age of five.

Challenges observed in Kaduna were that there were no clear processes that stipulate strict quality standards in medicines procured, which affects coordination and communication amongst the procurement actors (KADPPA, KADSHMA, FMCP and development partners). This means that within the state, there is no formalised system that documents processes, procedures, and responsibilities for ensuring adherence to procurement processes that stipulate quality standards in procurement. This contributes to weak state level harmonisation amongst procurement actors.

Recommendations

A key recommendation is the need for the different states to review their existing procurement processes, and re-align to the national guidelines for Procurement, and supply chain Management (PSM). To collectively develop coordination guidelines and standard operating procedures to strengthen quality control and logistic processes within the state's procurement landscape.



PLATEAU STATE

Plateau State has a complex procurement process, which connects the State Medical Store to the Drug Revolving Funds (DRF) in Public health facilities. The state's procurement processes showed that the government funds the procurement of maternal health medicines through the State Medical Store. Health facilities are responsible for raising requests and deciding what maternal medicines will be used. Tertiary Health facilities are running in-facility DRF which is utilised when medicines needed are out of stock at the State Medical Store. Procurement of medicines is carried out depending on the availability of funds, rather than the needs of end-users.

The challenge with the state's procurement system is the long turnaround time for the entire state requisition and procurement process to be completed. The fact that medicines are procured centrally through the State Medical Store, the long trail of reviews and approvals from the state procurement committee to the Governor, means that these requests will not be delivered to health facilities in time. There are multi DRFs across health facilities in the state, because of the absence of a central, state-wide DRF.

Recommendations

This review recommends that operational linkages between the agencies responsible for financing, budgeting, forecasting, and procurement should be strengthened to coordinate and meet the supply chain needs with available funds, thus increasing the availability of lifesaving maternal health products. Also, to establish a state-wide DRF, for a seamless quality focused procurement system in the State.

Section 1

National policies that guide procurement in Nigeria

A Drug Revolving Fund (DRF) is a system designed to generate revenue from the sale of drugs to patients, which is then reused to purchase new drugs thus ensuring availability, quality, and affordable medicines in the system. The DRF was originally established with financial and technical support from donor and support agencies such as the World Health Organization (WHO), United Nations Children's Fund, and the United Kingdom Departments for International Development (DFID).

The DRF mechanism within the Bamako initiative was adopted as the initial approach for sustainable drug supply at the local level. The Bamako Initiative (BI) is a policy statement, adopted in 1987 by African health ministers in Bamako, Mali. It was formulated by UNICEF and WHO, the initiative aimed to promote universal access to primary health care It was developed in the context of economic crises and negative effects of adjustment programmes in many Sub-Saharan countries.

Nigeria has national policies established to coordinate and perform oversight functions for medicine procurement in Nigeria. There are five national policies that provide the legal and regulatory framework for public procurement, forecasting, quantification, storage, and distribution of medicines. These are:

1. The Public Procurement Act (2007) which is the statute document that establishes the National Council on Public Procurement and the Bureau of Public Procurement as the regulatory authority responsible for the monitoring and oversight of public procurement, harmonising the existing government policies and practices.
2. The National Health Act (2014) provides a framework for the regulation, development and management of a national health system and sets to achieve UHC standards for rendering health services in Nigeria, and for related matters.
3. The National Drug Policy (2021) was introduced in 1990 to govern the public drug supply in Nigeria with a recent edition that was released in 2021. The policy serves as an implementation guideline, for medicine, quality assurance of pharmaceuticals and procurement. To support sub-national stakeholders, implement this policy, a national level program called the National Product Supply Chain Management Programme (NPSCMP) was established to provide technical support to 36 states and the FCT to implement the NDP 2021. The NPSCMP is domiciled within the Federal Ministry of Health (FMoH) in the department of food and drug services. The mandates of the NPSCMP are to address challenges and build the capacity of actors at the sub national level in the following PMS components:

   - Improving access to essential medicines
   - Improving systems to avoid stock out of essential supplies
   - Establishing effective mechanisms to track expired products
   - Support in ensuring warehouse upgrades to Pharma Grade Standard
   - Establishing standard distribution systems
   - Logistics management control/information systems

4. The Essential Medicines List (EML) was recently updated as the EML 2020. The sixth edition which was produced in 2016 with an addendum that was later incorporated in March 2018. The need arose in respect of some emerging health conditions in the country which necessitated the revision of the sixth edition in 2020, making it the seventh edition of EML. This edition considered the rational use of medicines by practitioners at the various levels of health care, in this regard; with emphasis on the complementary (restricted) sections which indicate medicines that should only be prescribed by Specialists after thorough evaluation/assessment of patients.
5. The National Health Supply Chain Strategic and Implementation Plan (2021-2025) is a new policy document that is expected to strengthen governance in supply chain management in Nigeria through improved coordination amongst all stakeholders. This strategic plan was developed with reference from the three preceding policies and the guidelines below to create a wholistic national strategic document for supply chain.

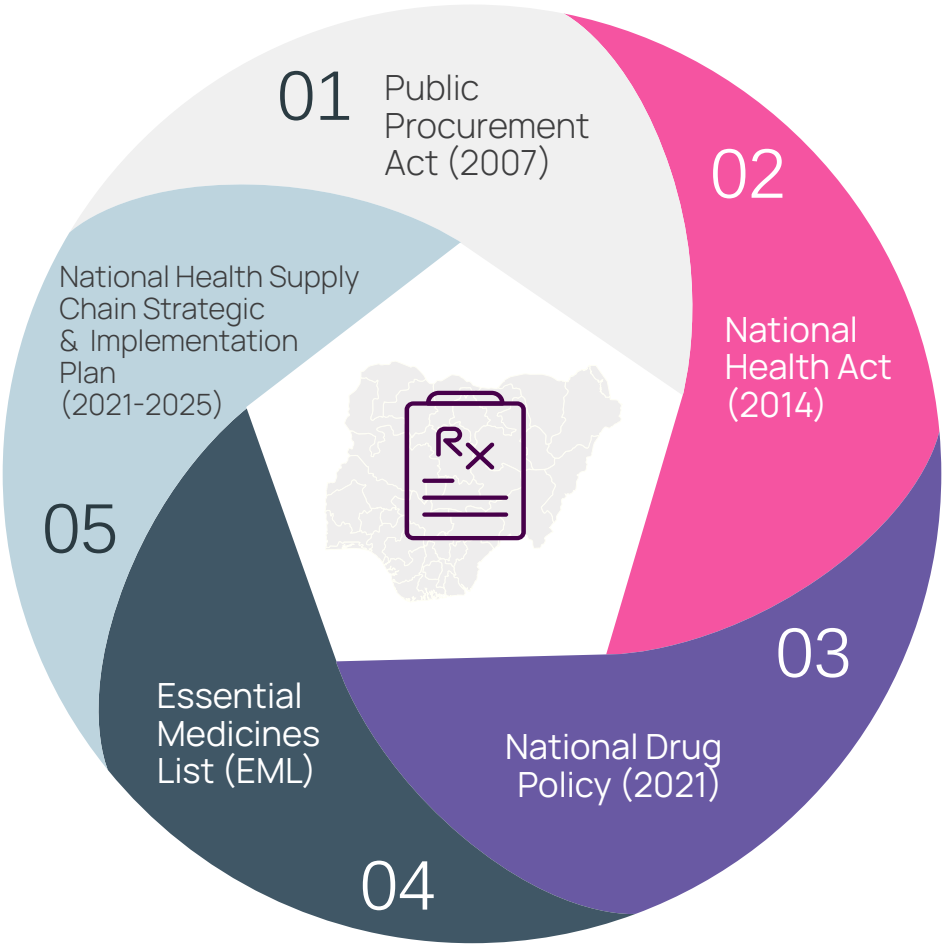
- National Health policy 2016
- National Strategic Health Development plan II
- National Drug policy 2003
- Nigeria Supply Chain Policy for Pharmaceuticals and health care products 2016
- National Drug Distribution Guidelines 2012
- National Quality Assurance for Medicines and other health products 2015
- Essential medicines list 2016 (focused on improving quality of maternal and child services)
- National Policy on Public-Private Partnership

States in Nigeria have autonomy to institutionalise national policies; however, these are the recognised national policy documents that should inform state's procurement standards, mechanisms, and practices especially the Public Procurement Act of 2007 and the Essential Medicines List.

INSIGHTS FROM EXPLORATORY STATE VISITS

The six States were selected based on the political willingness of the state and safety level as evidenced by the security report from the Council on Foreign Relation website. These states acted as windows to the rest of their respective geo-political zones, representing the diverse structures, policies, and practices of each region.

The reporting team conducted an advocacy visit to all the State Ministries of Health between April through December of 2021, which led to the formation of the technical committee to provide support to Nigeria Health Watch team during this initiative. The review methodology included desk reviews, data collection and analysis. Details on the review methodology is included in the appendix.



The Five national policies that provide the legal and regulatory framework for public procurement, forecasting, quantification, storage, and distribution of medicines.

THE POLICIES AND GUIDELINES GOVERNING STATE PROCUREMENT PROCESSES ACROSS STATES REVIEWED

This section discusses the policies, and guidelines that governs the entire procurement process state-wide. Generally, the states reviewed referred to the 2007 Procurement Act and the use of the 2016 Essential medicines list with the exception of Delta State that has a standard operating procedure for the management of the Delta State Contributory Health Commission (DSCHC).

DELTA STATE

The concept of a drug revolving fund started through a World Bank project called the essential drugs project, an initiative which was funded by the World Bank that provides loans to states across the federation for sustained supplies of essential drugs to health facilities in different states in Nigeria. This initiative ended in 1999 when the World Bank withdrew its support.

The Delta State government continued by scaling up the project into an organisation, called the Drug Revolving Fund (DRF) in the year 2000 as a parastatal.

One of the mandates, of the DRF is to ensure the availability of safe and effective drugs and other pharmaceuticals required by the state health facilities at a reasonable cost on a continuous basis.

The journey towards achieving Universal Health Coverage (UHC) commenced with the transmission of an Executive Bill to the Delta State House of Assembly in 2015, to establish the Delta State Contributory Health Commission (DSCHC) for health care financing. The state acknowledges the use of the Essential Medicines List 2016 as a reference guideline used for the procurement of medicines. The DRF has a guideline which is used to establish their mechanisms and processes, and this guideline is different from the policies listed in pages 12 – 13 and has been used for the past 21 years by the State.

EBONYI STATE

Ebonyi State does not have a distinct procurement policy for medicines. The state has adopted the National Essential Medicine List and the National Procurement Act.

As at the time of this visit in 2021, the state was in the process of developing a drug revolving fund legislation with the aim of establishing an Agency that will manage the procurement of medicines in Ebonyi State. Maternal health medicines receive significant partner involvement through the USAID Global Health Supply Chain Program (GHSC PSM) supporting over 480 Primary Health Care (PHC) centres across the country with drugs and commodities for family planning and HIV, amongst others.

EKITI STATE

Ekiti State has a Central Medical Store (CMS), which is domiciled in the State Ministry of Health, a Unified Drug Revolving Fund (UDRF) and a Megastore for storage and distribution of medicines and commodities. The CMS oversees the procurement of medicines for Ekiti State. An additional responsibility of the CMS is the regulation of prices for cost of medicines procured by the health facilities, and this is done through the UDRF. The UDRF ensures that medicines are sold at a uniformed unit cost irrespective to the health facility. All medicines are stored and distributed to public health facilities from the Megastore. The state governor signed into law a bill establishing the Drug Management Agency, and for the CMS, there is a guideline and an existing National essential medicines list (2016) and the Procurement Act of 2007.

In Ekiti State, there are two modes of procurement systems that are being implemented.

The first is Sales on Return (SOR), where the CMS is in partnership with reputable manufacturers

and importers who bring in medicines and commodities which are stored at the megastore with no initial payment. Within a month, usage of necessary commodities occurs from this pre-supply and at month's end, a joint stock-taking exercise takes place and what has been consumed is paid for.

The second mode in the state is Direct Purchase and is within the purview of the sales and dispensing unit of the UDRF. Here, procurement is done directly. Quantification of monthly need is taken into consideration and some forecasting done prior to purchase from some pre-selected vendors.

GOMBE STATE

There are no specific policies for the procurement of maternal medicines in the state. Procurement is done through the Drug Revolving Fund Committee led by the Commissioner of Health, consisting of the Permanent Secretary and the Directors in the Ministry of Health. The Director, of Pharmaceutical Services, serves as the secretary of this committee with the responsibility of presenting drug requests from the health facilities and processing the procurement of agreed-upon purchases to the State Central Store. No reference was made to the use of EML as a guideline for medicines to be procured.

KADUNA STATE

The procurement landscape in Kaduna State is multi-faceted in nature, coordinated and funded by the state government.

The Kaduna State Public Procurement Authority (KADPPA) is responsible for all public procurement (goods, services, both pharmaceuticals and non-pharmaceutical commodities) for the state and is guided by the Kaduna State Public Procurement guideline.

The State Ministry of Health forecasts and quantifies all medicines (inclusive of maternal) required for the state. These requests are always directed to the Kaduna State Health Supplies Management Agency (KADSHSMA). The reason for this is because KADSHSMA is an agency that is under the state's Ministry of Health with the sole mandate to make requests to KADPPA on what maternal medicine needs to be procured for the state. They are also responsible for managing the state's Central Medical Store, for the provision of the state government-funded maternal medicines to be accessible to all public health facilities within the state. The CMS also has a drug revolving fund mechanism to avoid stock out of medicines.

PLATEAU STATE

Plateau State is still awaiting the passage into law of the bill establishing the Drug Management Agency (DMA) by the state house of Assembly. At the time of the state visits in October 2021, legislature backing autonomous DMA did not exist. There was no reference to any specific national policies or guidelines that were institutionalised or adopted by the state for the purpose of procurement. However, the state procures centrally through the State Medical Store after health facilities send in requisitions. Following a long trail of reviews and approvals from the State Procurement Committee to the Governor, medicines are supplied quarterly to the Central Medical Store for onward distribution to facilities based on original requests made to the State Medical Store.

Delta State
Essential Medicines List 2016

Ebonyi State
Essential Medicines List & National Procurement Act

Ekiti State
Sales on Return (SOR) & Direct Purchase

Gombe State
Through the Drug Revolving Fund Committee

Kaduna State
Kaduna State Public Procurement guideline

Plateau State
State Procurement Committee

Section 2

Systems and processes designed to retain the quality of medicines across the supply chain to the end users

This section provides insights on the internal processes established within the procurement agencies to guide and ensure medicine quality in the six States. A common practice for quality across all States is the physical assessment for expiration dates, prescriptions based on first expiring, first out system and delivery of cold chain medicines directly to health care facilities.

The only State that conducts chemical and microbiological analysis of medicines to ascertain the active ingredients of medicines that has been purchased is Delta State although the frequency was not ascertained.

DELTA STATE

Delta State has measures that are in place to ensure retention of quality control assurance for medicines. The DRF has a laboratory unit that has the following measures in:

Laboratory tests for all newly procured medicines before they are stored and circulated within the state, inclusive of medicines that have been certified by the National Agency for Food and Drug Administration and Control.

Routine quality checks of medicines in-store to ensure that the quality of these medicines is not compromised.

Blacklisting manufacturers whose drugs fail the laboratory test.

Procurement of medicines directly from shortlisted manufacturers.

Storage of medicines within the stipulated manufacturers' storage conditions (temperature).

The State has a compendium of brands – for instance, the British Pharmacopeia, the CODEX used as a guide to conduct this assessment both physical, chemical, and microbiological analysis.

EBONYI STATE

There is an inadequate cold chain infrastructure within the Central Medical Store. Quality control feedback mechanisms were informal and non-structured where health workers report instances of poor quality or ineffective maternal medicines to pharmacy technicians.

All medicines that are supplied to the central medical store, are stored on shelves. Heat-sensitive maternal medicines are not received at the central medical store, as the store does not have fridges. These heat-sensitive medicines are sent directly to the health facilities.

EKITI STATE

Quality control processes for Central Medical Stores in Ekiti State include:

Procuring medicines with long shelf lives.

Quality control feedback mechanisms through informal reporting systems where health workers report instances of poor quality or ineffective maternal medicines to facility pharmacy departments, who then report to medicine stores and the identified batches are recalled and the manufacturer/distributor is called to replace that batch.

At the facility level, public facilities conduct extra physical checks to ensure quality. Quality control systems for private facilities across cadres seem limited to physical checks and a reliance on reputation and size of pharmaceutical companies that supply maternal medicines since they are not often included in central medicine supply structure.

Physical checks (complete labelling checks, expiry dates, scratch card confirmation where applicable, label confirmation, inspection of drug

appearance, etc.). Prequalification of vendors is often case by case and based on terms such as the reputation of the distributor or manufacturer, length of time as a distributor as well as asking price of the manufacturer/distributor

- Open bids and tenders are encouraged through the website of Kaduna State Health Supplies Management Agency (KADSHSMA) to the public and the final selection is done by Kaduna State Public Procurement Authority (KADPPA) to award contracts for the bids.

GOMBE STATE

Evidence shows that quality control measures in place were:

- Physical checks on batch numbers, expiry dates, manufacturer, etc.
- Storage of cold chain medicines in the fridge.
- Dispensing drugs based on the **'first expiring first out'** system.
- Quality control feedback mechanisms were informal and non-structured where health workers report instances of inferior quality or ineffective maternal medicines to pharmacy technicians.

KADUNA STATE

Kaduna State have put measures in place to ensure the quality of commodities circulated within public health facilities. Some of them include:

- All procurement in Kaduna State is handled and vetted by Kaduna State Public Procurement Authority (KADPPA).
- All procurement is done via an e-platform managed by Kaduna State Public Procurement Authority (KADPPA).
- Kaduna State Health Supplies Management Agency (KADSHSMA) conducts a market survey of the best medicines and prices.

PLATEAU STATE

Quality control processes for the Procurement Committee in Plateau State include:

- Physical checks (complete labelling checks, expiry dates, scratch card confirmation where applicable, label confirmation, an inspection of drug appearance, etc.).
- Pre-qualification of vendors is often done on case by case and based on terms such as the reputation of the distributor or manufacturer, length of time as a distributor as well as asking price of the manufacturer/distributor.
- Verbal feedback from health workers on the medicines' efficiency

A common practice for quality across all States is the physical assessment for expiration dates, prescriptions based on first expiring, first out system and delivery of cold chain medicines directly to health care facilities.

Section 3

State-specific critical gaps and challenges contributing to inadequate quality maternal medicines and recommendations

This section presents gaps, challenges and recommendations developed in collaboration with state procurement actors to address the gaps and mitigate the challenges.

Quality with reference to good manufacturing practices, adherence to manufacturer's storage conditions (cold chain), and delivering of drugs safely to end users are not optimised in all six states. This was evident in the policies and guidelines that govern procurement processes across states; systems and processes designed to retain the quality of medicines to the point of care.

The overarching themes across all the States are:

1. *The absence of a coordination mechanism at the state level to ascertain the retention of medicine quality that are distributed from the Central Medicines Stores to the end user point of care.*
2. *All the states implement a public sector focused Drug Revolving Fund with little to no provisions made for private sector participation and engagement from the state owned DRF.*
3. *There is minimal public – private partnerships across the states or engagement with local manufacturers as a sustainable alternative to address quality and stock out.*
4. *Only Delta State had a sustainable business model to sustain their drug revolving funds, the other 5 states had no comparable model to sustain their drug supply without donor support which are both financial and operational.*
5. *Existence of a weak quality assurance mechanism; there is no formal pharmacovigilance process in place to track and report poor quality medicines from the end user, and health facilities to the Central Medical Store or to the State Ministry of Health.*
6. *Storage conditions of medicines across the supply chain to the end user is not optimal, and even when quality of medicines is comprised, they are left undetected and still recommended for use.*

The tables below show detailed findings and recommendations across states.

EKITI STATE

IDENTIFIED GAPS	RECOMMENDATIONS
Central Medical Store Standard: The CMS is not Pharma Grade; this compromises room temperature and storage conditions for all medicines	The CMS should be upgraded to Pharma Grade standard, managed by an effective asset management framework (documents, systems, and processes) to ensure good pharmaceutical storage and transportation.
Quality Retention and Distribution: Absence of a wholistic approach towards quality was a critical gap within the procurement system at the Central Medical Store.	Quality is beyond storage conditions, it also includes personnel capacity to understand asset management, quality control mechanisms and temperature retention during distribution as stipulated in NPSCMP guideline. The focus on quality should shift from transportation to a wholistic approach to reduce chances of degradation across the supply chain.
Donor dependency: The PSM interventions to establish the DRF was led by donor funded projects.	For a sustainable Drug Revolving Fund (DRF) programme, it is recommended that funding for medicines at all levels needs to be revolving and self-sustaining through a strong autonomous Drug Management Agency (DMA) with less dependence on donors for funds
Weak Public-Private Engagement: Existence of a parallel procurement approach indicates a weak PPP. This was one of the recommendations for all states in Nigeria to adopt to increase efficiency, cost – effective and sustainable delivery of medicines to patients	Increased Multi-stakeholder Collaboration between Public and Private Health Sector - The state government should explore actionable ways to unify and strengthen procurement systems and processes for private facility as they form a core component of the Ekiti State Health System. Additionally, active engagement with the Guild of Medical Directors among private facilities should form a core component of the newly established Drug Management Agency.
Stock-outs: A significant challenge that respondents across the stakeholder categories cited was stock-outs of required medicines at the CMS. The impact of stockouts is the search for alternatives, which leads to non-quality assured procurement systems as service providers go to the nearest medicine vendors in emergencies.	States should establish strong key supply chain performance indicators to increase efficiency and avoid stockout. This also indicates, to strengthen the PSM actors on acceptable forecasting and quantification of medicines in the state through a collaborative approach with key actors from both the demand and supply sides.
Non structured feedback mechanism: There is no formal pharmacovigilance process in place to track and report poor quality medicines from the end user to health facilities to the Central Medical Store.	Ekiti State needs to have a structured pharmacovigilance mechanism in place from all the facilities to the central medical store to monitor adverse effects. This would influence policy and practice for the procurement of maternal medicines. Effect to establish this should not be done without involving the states' Maternal and Perinatal Death Surveillance Response (MPDSR) team who assess causes of maternal deaths.

DELTA STATE

IDENTIFIED GAPS	RECOMMENDATIONS
Legislation gaps: The Drug Revolving Fund is not backed by law and has no board of Directors	Legislation to back operations of the DRF: State to see to it that the Drug Revolving Fund is backed by legislation to promote its sustainability and legalise its role in the state.
Inadequate coordination between procurement actors: There is no coordination platform to integrate stakeholder efforts involved in procurement in the state such as non-governmental organisations' efforts with Ministries, Departments and Agencies that work to promote improved maternal health outcome within the state.	Development of Partner Integration Platform for maternal health and medicines: It is recommended that the state establish an integration platform to address duplication of efforts, additional procurement of medicines outside those procured for the state by the DRF and aligning international non-governmental organisations' intervention on reproductive and maternal health drugs with that of the state to avoid running parallel programs.
Substandard storage conditions at primary health care facilities: The storing condition of oxytocin is compromised in primary health care facilities because of the unreliable power supply in the state. Provisions have been made to address this in secondary health facilities, but none in the primary health care centre.	There needs to be an expansion of the provision of solar fridges and panels from secondary to primary health care facilities by the State ministry of health, hospital management board, and department of medical services and training to minimize wastage of thermolabile medicines
Weak Public-private partnerships: Private health clinics procure their medicines from the open market, which studies have shown to contain a high proliferation of falsified and substandard medicines. This will counter the state's efforts, if not addressed.	Innovative private sector engagement - The state to explore an information dissemination plan to increase awareness about the DRF to private facilities and communicate the benefits private facilities stand to gain from procuring the DRF: which include promoting the circulation of quality medicines at an affordable cost.
Absence of a standard operating guideline: There is no cooperation between the agencies responsible for the primary health care centres in the state, insurance coverage for maternity care, and the DRF. This has resulted in duplication of efforts, and inefficient use of funds and resources in the procurement of medicines supplied within the state.	The State Primary Health Care Development Agency (SPHCDA) works closely with the DRF and State Contributory Health Commission to close gaps, foster cooperation, and promote cost-effective measures for the procurement of medicines in the state.

GOMBE STATE

IDENTIFIED GAPS	RECOMMENDATIONS
Inadequate coordination between procurement actors: There is no coordination platform to integrate partner and government efforts involved in procurement of medicines in the state.	Strong stakeholder collaboration is required to map out all the sources of fund and commodities for maternal medicines is needed in Gombe State. In addition, a stronger DRF system which pools the funds for procurement in an integrated manner is needed.

Poor Public-Private Partnership: Public and private health care providers work independent of each other in their procurement of maternal medicines.	Increased multi-stakeholder collaboration between the public and private health sector is required to unify the procurement system in the state
Frequent stockouts: Facilities in Gombe State experience frequent stockouts of maternal medicines which leads to development of alternative procurement systems for these medicines that may be even less quality assured.	Gombe State to establish effective measures within the Inventory Management System to track stock of medicines, avoid stock-outs, and minimise wait times for health facilities to receive their order from the Central Medical Store.
Poor cold chain storage of medicines which leads to degradation of the medicines by the time they are delivered to the health facilities.	The state government to strengthen the capacity of health workers and those in the inventory management for medicine supply chain to ensure that quality control mechanisms are put in place, and quality is maintained through the entire supply chain, till it reaches the mother's bedside.

PLATEAU STATE

IDENTIFIED GAPS	RECOMMENDATIONS
Drug Management Bill not implemented yet: The Drug Management Agency bill is still awaiting assent by the governor, thus currently, there is no guideline or policy in place to promote a transparent and effective procurement process	Increased advocacy is needed to the Government on the urgency of passing and implementing the DMA bill. The absence of this agency and the current procurement landscape in Plateau State impacts the quality of maternal medicines and continue to affect maternal health outcomes.
Poor asset management: There are no stringent measures in place for the effective delivery and storage of medicines.	To establish an effective asset management framework that considers (quality control measures and processes) that will strengthen logistics, storage, and distribution of medicines, especially heat-sensitive medicines.
Inadequate quality control mechanism in place to conduct laboratory analysis of medicines	To improve quality control systems and structures, including a full laboratory to ensure that adequate laboratory analysis of medicines is routinely carried out to verify the quality of maternal medicines, before distributing them to health facilities.

EBONYI STATE

IDENTIFIED GAPS	RECOMMENDATIONS
Inadequate coordination between procurement actors and partners: There is no coordination platform to integrate partner and government efforts involved in procurement of medicines in the state.	The stakeholders with the Ministry of Health needs to coordinate partner efforts to ensure alignment with the state's strategic plans and legislations, through a state-wide public private partnership engagement Forum.
Inadequate quality control mechanism exists thus there is no strong assurance of quality of medicines at facility	**Strengthen Quality control and Logistic Processes:** Due to the nature of maternal medicines, stronger quality control mechanisms are needed to ensure that the quality of the medicine is not compromised. Last mile transportation and storage systems must be strengthened at both the store and the facility levels.

KADUNA STATE

IDENTIFIED GAPS	RECOMMENDATIONS
Poor quality assurance: Inadequate quality control mechanism in place to conduct laboratory analysis of medicines	The State needs to establish a standard laboratory to assess the active ingredients of medicines to ascertain their standards before distributing them to health facilities. Alternatively, a third-party testing arrangement could also be cost effective alternative. This is a critical recommendation; to validate the quality of medicines received from manufacturers.
Non structured feedback mechanism: There is no formal pharmacovigilance process in place to track and report poor quality medicines from the end user, and health facilities to the Central Medical Store.	Kaduna State needs to have a structured pharmacovigilance mechanism in place from all the facilities to the central medical store to monitor adverse effects. This should be done in partnership with the facility level MPDSR Committee.
Inadequate human resource capacity: there is a significant capacity and knowledge gap with health workers at facility level in the areas of proper quantification and storage of maternal medicines.	Health workers involved in the supply chain of medicines (including maternal medicines), need to be regularly trained on concepts such as quantification, forecastwing, storage, movement, and administration of medicines, to ensure that quality control mechanisms are employed, and quality is maintained through the entire maternal medicines supply chain.

Conclusion

In conclusion, it will be beneficial for all States to adopt the National Health Supply Chain Strategic and Implementation Plan (NHSCSIP) 2021-2025, which harmonised all existing policies to develop an evidence-based guideline that is expected to strengthen governance and improve quality in supply chain management in Nigeria through improved coordination amongst all stakeholders. A new national guideline for the NHSCSIP is currently being developed. When rolled out it will create standards for the operationalisation of a sustainable financing mechanism for health care commodities and contribute to universal access to affordable, quality-assured medicines for all Nigerians.

Key roles for procurement actors to play in ensuring that quality remains central in the procurement, and supply chain management of maternal health medicines are:

Federal Government	To continue supporting the implementation of the NHSCSIP guidelines, through routine mentorship and capacity building of sub-national stakeholders to set up a DRF scheme and Drug Management Agency that priorities quality assured processes.
Donor and International Non-Government Organisations	The USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC PSM) currently support five states in Nigeria (Sokoto, Kebbi, Bauchi, Ebonyi, and Nasarawa) to strengthen their DRF. The DRF is a solution for accounting for women's health needs effectively, supplying sufficient quantities of the right commodities, and ensuring their quality is maintained to the point of care. To promote the development and implementation of sustainable DRF model across states, to ensure that donor funded initiatives are sustained by Stakeholders after the project close out.
State Government	Should adopt an inter-sectoral approach towards the implementation of the NHSCIP to strengthen quality assured procurement system management. Adopt sustainable quality assured DRF models to enable the state government to be able to sustain all donor funded initiatives beyond the life span of projects.

Appendix

METHODOLOGY

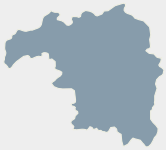
One state was selected from each of the six geo-political zones. The selection of the six states was informed by: political will presence of donor agencies in the state and the states' willingness to participate in the survey across the geo-political zones in Nigeria namely:

SOUTH-SOUTH
Delta State

SOUTH-EAST
Ebonyi State

SOUTH-WEST
Ekiti State

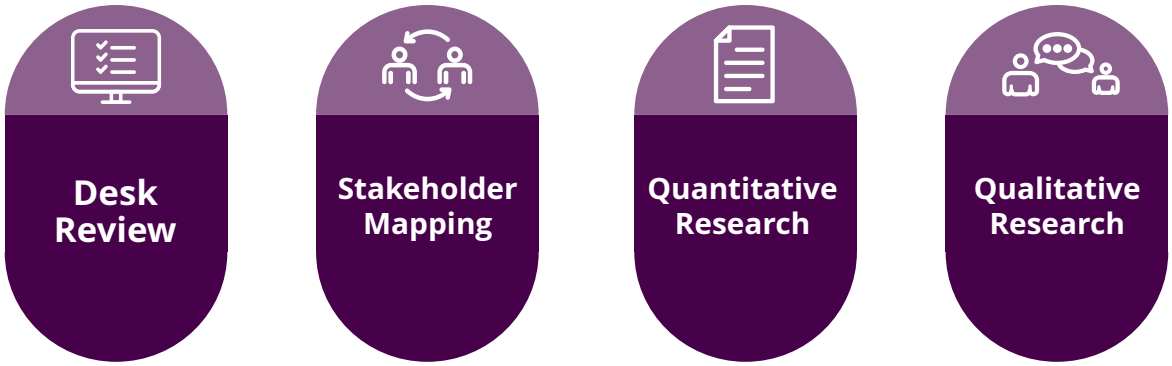
NORTH-EAST
Gombe State



NORTH-WEST
Kaduna State

NORTH-CENTRAL
Plateau State

The assessment was conducted using a **mixed methodology.** A desktop review of existing policies, laws, and publications on the procurement of maternal medicines was conducted. Following this, the research team conducted a stakeholder mapping with the officials of the State Ministry of Health. Data collection comprised of quantitative and qualitative approaches. The qualitative component consisted of key informant interviews. Below is a summary of the research approach.



1. Desk Review

An in-depth desk review was carried out to comprehensively analyse existing studies, data, and reports on procurement processes for maternal medicines in Nigeria.

2. Stakeholder Mapping

This was conducted with key stakeholders in each State to obtain a detailed stakeholders list, showing the persons responsible for the supply of essential medicines in each state through the supply chain. Stakeholders were categorised by policymakers, inventory management and service providers. This categorization was based on each stakeholder's role in the procurement value chain for maternal medicines.

Policymakers: This group of stakeholders are regarded as those who set the tone for decision making for procurement of maternal medicines in the state. Some of the policymaker representatives across states included:

- Leadership at the State Ministry of Health including Commissioners for health, permanent secretaries, and directors of the following departments:
  - Department of Research, Planning, and Statistics
  - Pharmaceutical Services
  - Hospital Management Board
  - Hospital Services.
- National Primary Health Care Development Agency
- Drug Revolving Fund (DRF) or Central Medical Store Management

Inventory Management: These officers are responsible for the implementation of procurement practices. When maternal medicines are procured, the responsibility of ensuring that the right quantity and quality of medicines are supplied rests on inventory management. Inventory management respondents for this survey were officers in procurement, supply, logistics, storage units/departments of the DRF, and pharmacists.

Service Provider: The service provider level in this stakeholder categorization ensures that maternal medicines from the central medical store and other sources get to the patient with their quality maintained. Officers-in-charge of Primary Health Care centres, Heads of Nurses and Midwives in primary and secondary health facilities, Chief Medical Directors (CMDs) and Medical Directors were service provider respondents for this study.

Notably, there are overlapping roles among the stakeholders. For example, when maternal medicines are out-of-stock, officers in charge at the PHCs and chief medical directors at both public and private hospitals take decisions on the procurement of maternal medicines within their jurisdiction. In addition, at the service provider level, inventory management is deployed in a smaller scale in the health facility.

Research Methods

3. Quantitative Research: The survey was conducted using a structured questionnaire uploaded through Magpie software. Since this is process flow research, the questions included a series of multiple-choice options based on common practices of procurement practices identified from the literature review.

4. Qualitative Research: In-depth interviews were conducted with policymakers, inventory management officials, and service providers to further explore the procurement landscape among these stakeholders. A total of 37 policymakers, 30 inventory management officials, and 174 service providers were interviewed across the six states.

Key Themes

The open-ended questions explored were the policy landscape for procurement of maternal medicine in the states, how these policies are implemented across states including quality control measures at each implementation level and challenges experienced with current procurement processes and the recommendations for an improvement in the current procurement processes.