

No Funding, No Product:

Solutions to Address the Challenges of Insufficient and Uncertain Funding for Select Maternal, Newborn, and Child Medicines



Clinic in Fafia, Cameroon. Photo by Alain Ngann.

Overview

Despite impressive gains towards the Sustainable Development Goals (SDGs) in many communities worldwide, mothers, children, and newborns are dying because they or their health provider cannot access quality-assured medicines needed for the provision of care. Essential medicines such as antibiotics, anesthetics, and antianemia medicines are often country-financed and frequently underfunded, making them unavailable to mothers, newborns, and children needing them. Priority maternal, newborn, and child health (MNCH) products include uterotonics to prevent and treat postpartum hemorrhage and antibiotics to treat pneumonia. The root causes of the lack of funding for MNCH products are known and well-documented, yet complex. They include constrained health budgets, inadequate financial processes, and insufficient prioritization of critical MNCH commodities among other medicines.

As a partner to over a dozen countries, the USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project is supporting governments and health system stakeholders to develop strategies and tools to engage, advocate, and monitor allocated funding of MNCH medicines. This work has helped identify the following areas:

- 1 Maximizing the use of accurate, complete, and timely data.** Ensuring supply chain managers have the data necessary, including consumption trends, in order to advocate for resources to positively impact the availability of quality commodities. This includes implementing data analytics tools and automating data analytics functions and capabilities for collection, aggregation, and validation.
- 2 Coordination, transparency and accountability.** Facilitating increased coordination and transparency can enable accountability among those responsible for using public resources for the procurement and supply of health products.
- 3 Prioritization and advocacy.** Prioritization of medicines to meet the needs of women, newborns and children including medicines such as uterotonics and antibiotics. Evidence-based advocacy is documented and disseminated by various actors, including champions.

This document describes the complex challenges of increasing funding for quality essential medicines and experiences from various countries to inform other contexts. These lessons are particularly relevant as the landscape of health commodity financing continues to evolve.

Background

In the past few decades, increased access to quality medicines, consumables, and equipment has contributed to impressive improvements in health outcomes globally. Notably, critical products including antiretroviral (ARV) therapy for people living with HIV, artemisinin-based combination therapies (ACTs) to treat malaria, and voluntary modern contraception to support reproductive health have been made available in large part due to financing by global health organizations such as USAID, UNICEF, UNFPA, and the Global Fund.

However, primary health care, the means to achieving universal health coverage, includes providing a range of essential medicines such as antibiotics to provide quality care for maternal, newborn, and child health. Priority MNCH essential medicines include uterotonics to prevent and treat post-partum hemorrhage; amoxicillin, used to treat pneumonia and possible serious bacterial infection (PSBI) in children under five; oral rehydration salts (ORS) and zinc, used to care for children with diarrhea; and newborn resuscitation equipment to support babies that do not breathe at birth. These MNCH essential medicines are often country-financed, and purchased by governments through centralized public procurements managed by the central medical store or the authorized government procurement and supply division at the Ministry of Health (MOH). In some contexts, MNCH essential medicines are funded and procured through a decentralized system by subnational government structures, such as district health offices and public health facilities. As a result of constrained health budgets, the ability to procure the necessary quantities of quality essential medicines, including those identified as underutilized by the UN Commission on Life-Saving Commodities for Women and Children (UNCoLSC), is significantly impeded.

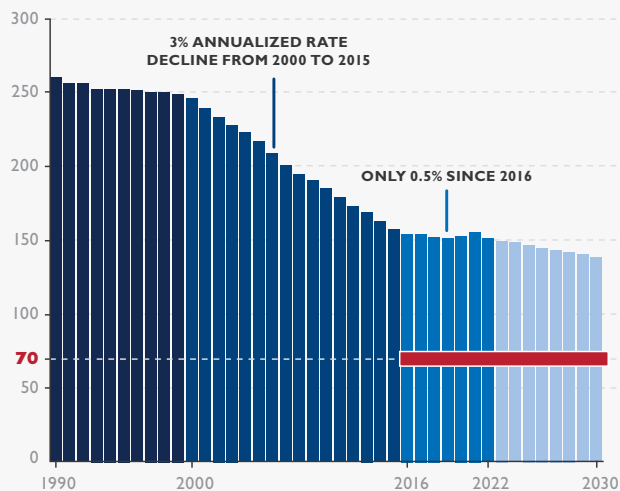
For those products that do not have sufficient and sustainable funding, the USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project partners with governments to develop strategies and tools to engage, advocate, and monitor allocated funding of MNCH medicines to address the challenge. Sufficient and sustainable financing for health medicines is not unique to MNCH programs, however, as many essential medicines have historically been country-financed, the MNCH community can share experiences and lessons learned so they may inform other contexts experiencing the evolving landscape in health commodity financing.



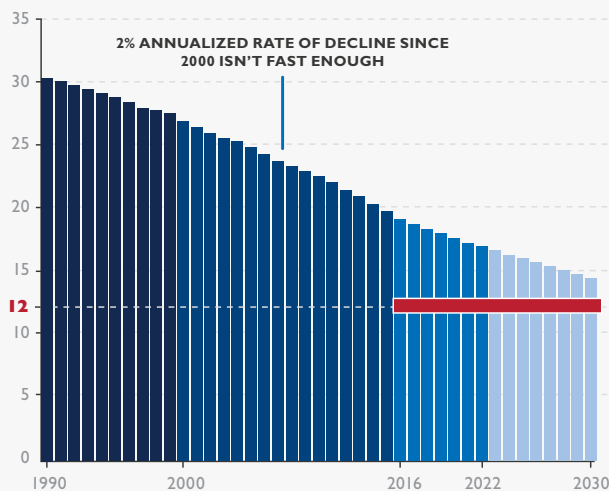
Meeting SDGs Requires Access to Quality Essential Medicines

Despite impressive gains toward the SDGs, progress is not on track to meet the targets of two critical goals: maternal deaths and neonatal deaths.

MATERNAL DEATHS PER 100,000 LIVE BIRTHS



NEONATAL DEATHS PER 1,000 LIVE BIRTHS

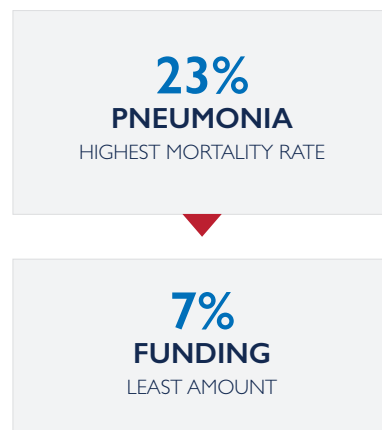


- No Global Goals
- MDGs
- SDGs
- Projections
- SDG Target

Insufficient Funding for MNCH Remains a Primary Barrier to Reliable Product Availability

In many communities worldwide, mothers, children, and newborns die partly due to unavailable and inaccessible quality-assured medicines— lack of funding for medicines is a root cause.

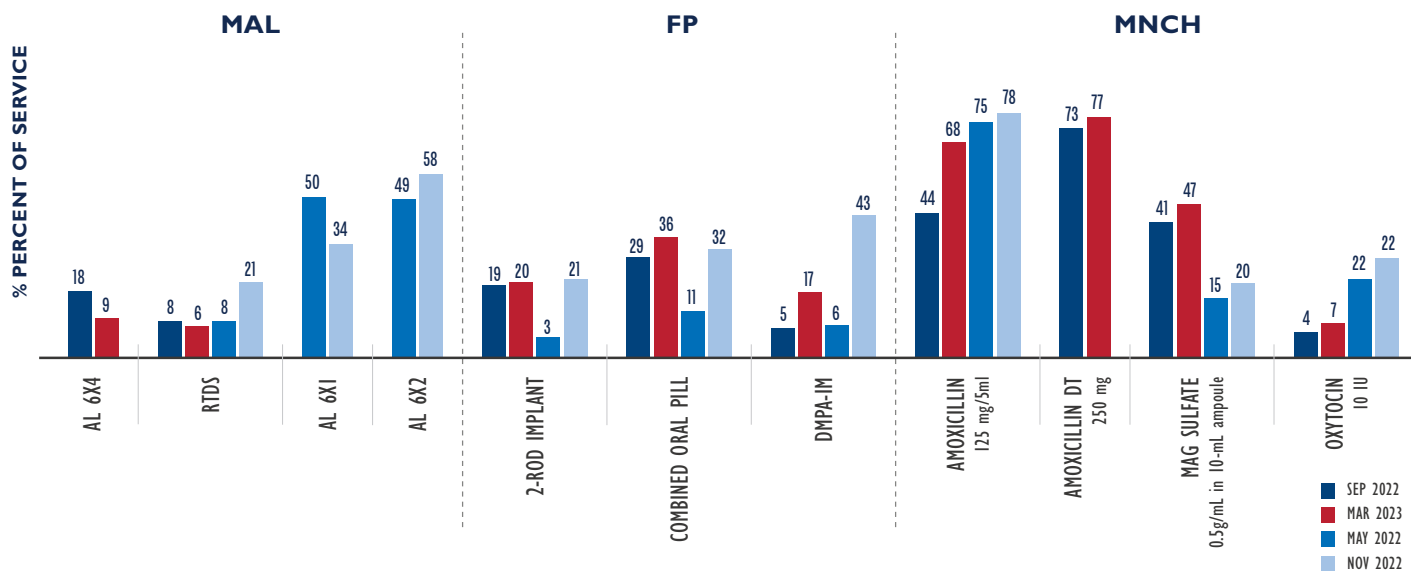
Global health institutions including donors, multilateral initiatives such as the Global Fund, and philanthropic initiatives such as the Bill & Melinda Gates Foundation are an important source of financing for some medicines. These groups finance over half of health products in low-income countries, namely ARVs, ACTs, and vaccines in public health supply systems.¹ Essential medicines, including select MNCH products, receive minimal financing from these institutions. An analysis conducted by Results for Development (R4D) shows that despite pneumonia being the single leading cause of death of children under five years old, pneumonia funding, including vaccines and medicines or treatment, received only 7 percent of the amount of funding that went to HIV and malaria programming during the same time period.²



¹An Initial Estimation of the Size of Health Commodity Markets in Low- and Middle-Income Countries: <https://www.cgdev.org/publication/initial-estimation-size-health-commodity-markets-low-and-middle-income-countries>
²Market Report | Amoxicillin Dispersible Tablets Progress and Opportunities: <https://r4d.org/resources/market-report-amoxicillin-dispersible-tablets-progress-and-opportunities/>

Most essential medicines, including MNCH products, are primarily financed by national health budgets. However, funding availability for these products can be limited because governments operate within resource-constrained environments and must balance numerous priorities. The impact is a lack of medicine availability for women and children who need it most. The table below compares select MNCH medicines with malaria and family planning (FP) products in three countries. On average, MNCH products have stockouts twice as high as malaria and FP products.

Percent of Service Delivery Facilities Stocked Out on the Day of the Survey Visit, Data from USAID’s End Use Verification Surveys Collected in 3 Countries.



The Root Causes of Insufficient Commodity Financing are Known But are Complex

The lack of domestic funding for medicines is a complex challenge, however, its causes can be categorized into the three areas illustrated in the table below.

Inadequate Financial Processes

- Lack of defined roles, appropriate oversight, and process for budget execution.
- Inefficient and costly procurement processes that negatively impact the available budget for commodities.
- Inaccurate and underestimated forecasts incorrectly inform funding needs.

Lack of Transparency & Coordination

- Lack of coordination and monitoring of allocated budget for MNCH commodities.
- Lack of transparency and information on the total available budget, funding for specific levels, for how long, and for what commodities.
- Poor alignment with donor funding opportunities and domestic budgets creates gaps in programming and the flow of funds.
- Lack of transparency on which entities (government, partners, etc.), are procuring, which commodities, quantities, duration of support, etc.

Insufficient Prioritization

- Difficult to prioritize specific MNCH commodities among other essential medicines.
- Insufficient attention = insufficient funding. Unlike priority “program” commodities such as FP or malaria that are a priority for donor and national programs.
- Lack of budget line; lack of specific budget lines for child health commodities at health facility and community level.

Solutions: What Works for Increasing Funding for MNCH Commodities

The countries that GHSC-PSM supports are implementing actions that impact financing for MNCH medicines. These strategies and tools identified can be organized into the following three categories.

Critical Areas to Increase Commodity Financing:



Maximizing the Use of Accurate, Complete, and Timely Data

Ensuring supply chain managers have the data necessary to make decisions that can positively impact the availability of quality medicines. This includes enabling practical purposes through data analytics functions and capabilities to automate data collection, aggregation and validation.



Coordination, Transparency and Accountability

Coordination among individuals and groups, transparency to ensure accountability and of those responsible for using public resources for the procurement and supply of health products.



Prioritization and Advocacy

Prioritization of medicines to meet the needs of women and their families including medicines such as uterotonics and antibiotics. Evidence-based advocacy that is documented, disseminated by various actors including champions.

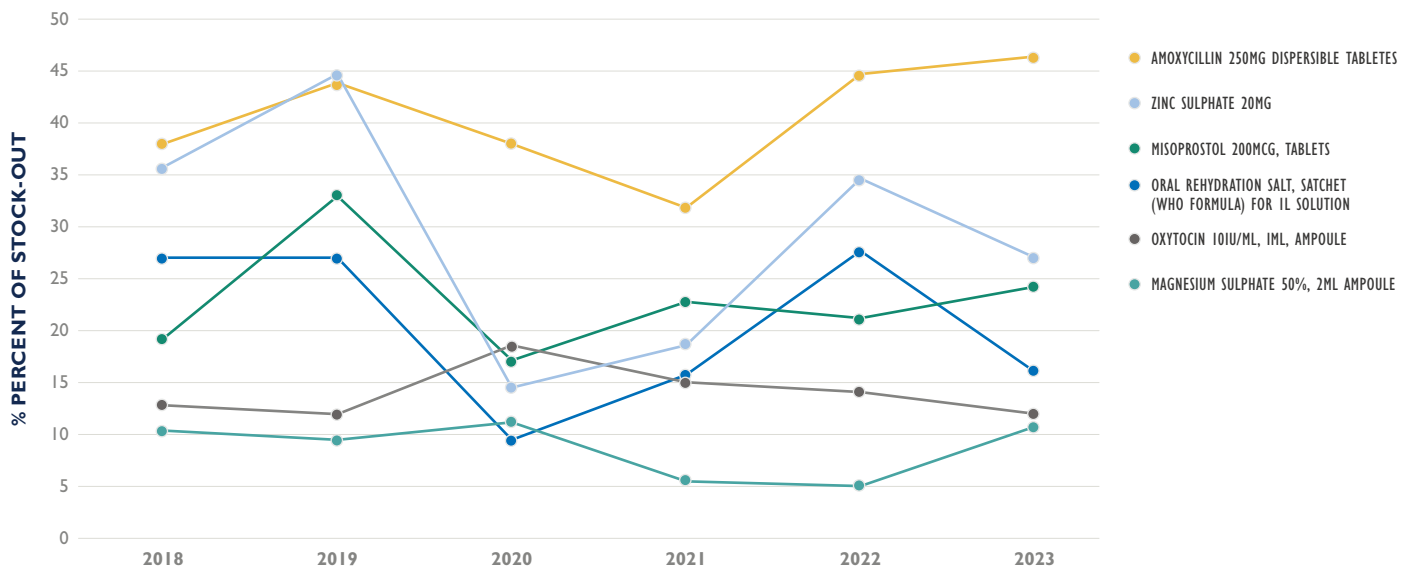
These approaches are described in detail with select country cases to demonstrate specific lessons and experiences that other contexts may find useful.

Data and Data Systems

A well-designed and operated health supply chain is essential to ensuring products are available to individuals and families when needed. A logistics management information system (LMIS) is an infrastructure system of data and records on products in the health system—which can be paper-based and/or electronic. It includes information on product quantities and consumption trends within and across regions and facilities. Data in the LMIS is required to efficiently answer questions about what works and why, enabling supply chain managers to make decisions that can positively impact the availability of medicines.

Strengthening the functioning of LMIS systems, specifically upgrading to electronic LMIS (eLMIS) and ensuring the inclusion of MNCH commodities, is a primary activity of the GHSC-PSM program in USAID priority countries. The government of **Malawi** provides reproductive, maternal and other health services to its people through the Directorate of Reproductive Health (RHD). Key health conditions addressed by the RHD's Maternal and Newborn Health section include eclampsia, post-partum hemorrhage, prevention of anemia in pregnancy and care of the newborns. In 2018, the Ministry of Health, through the Department of Health and Technical Services (HTSS), partnered with GHSC-PSM to successfully modernized its supply chain by developing an open-source, web-enabled, enterprise-class electronic LMIS purpose-built to manage medicines in the health system. MNCH commodities were included in the system and health facilities were trained on reporting, enabling real-time insight on stock availability. As a result of the data visibility, the MOH through the RHD teams placed emergency orders to Central Medical Stores Trust to resolve stockouts, redistributed products to address stock imbalances among health facilities and Drugs and Therapeutics Committees (DTCs) at District Hospitals used the data to advocate for MNCH commodity procurement at the district level. Stockout rates of select MNCH commodities decreased following these actions thanks to the use of the eLMIS data. However, despite the initial stock-out rate improvement, due to budget constraints, and, therefore, lack of product availability at the central level, ultimately, stockouts increased again in 2022.

Stock-out of select MNCH commodities, Malawi, 2018-2023



The government of **Mozambique** is also using technology to better quantify and address MNCH needs— its Central de Medicamentos e Artigos Médicos (CMAM) has transitioned from a paper-based LMIS to the eLMIS called Novo Sistema de Informação de Medicamentos e Artigos Médicos, (Logistics Management and Information System for Health Facilities) or nSIGLUS. It allows for end-to-end visibility of medicines across all 11 provinces, comprising 154 districts and 1,928 sites. In 2023, GHSC-PSM supported the MOH MNCH program and the Centro Abastecimento (Equipment & Maintenance Department) to adapt and pilot a simplified, sustainable inventory management system, SIG-EQUIP, for MNCH equipment and oxygen equipment. For small and sick newborns, equipment, including resuscitation devices, is essential to provide respiratory support for those who do not breathe at birth, and more advanced equipment, such as Continuous Positive Airway Pressure (CPAP), may be necessary to support newborns in respiratory distress. SIG-EQUIP is designed to automate much of the work related to equipment management, including maintenance and repair, and shift the burden of tasks from health workers to the software platform. SIG-EQUIP will first be piloted in Nampula province with the expectation that it will be successfully scaled nationally. It is anticipated that the system will bring improved visibility on the quantity and useability of the equipment

Maximizing Data Use

Establishing LMIS/eLMIS systems and ensuring the inclusion of MNCH commodities is only part of the solution to improved data visibility and use. In many countries, the newly established and strengthened systems fill a void of information, however, can create an opposite challenge: an overwhelming amount of data. In some cases, LMIS data requires significant manual effort to collect, aggregate, and validate to improve data quality and timeliness. In other contexts, data comes from various sources outside the LMIS, data is structured impractically, and must be joined with other data to be informative.

Supply chain data are only valuable to the extent that they are used, and for data to be used it needs to efficiently answer questions about what works and why. This enables supply chain managers to make decisions to positively impact the availability of quality commodities.

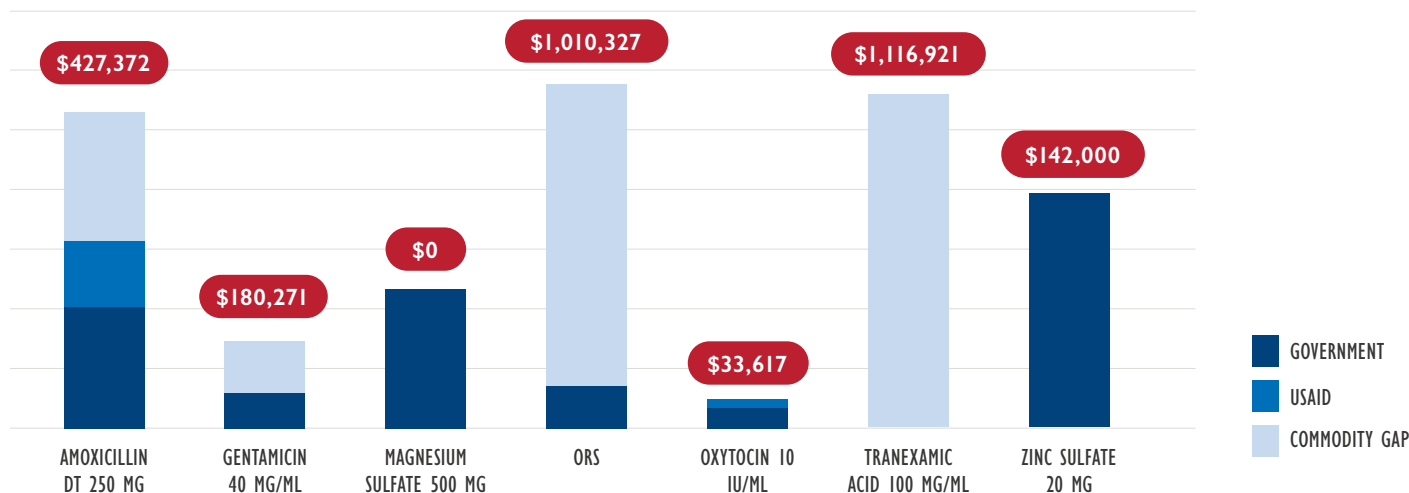
To address this issue, GHSC-PSM generates improvements in data analytics functions and capabilities, to maximize available data within LMISs for practical use. The project team in **Zambia**, the project developed the [Anomaly Detection Tool](#) through Python coding to streamline and automate the analysis to determine if health product stock levels are above or below the norm. The anomaly tool is also able to capture trends in consumption and seasonality. As a result of near real-time data analysis of 200,000 LMIS records at more than 2,900 health facilities, supply chain managers can rapidly address abnormalities in stock levels. The report generated by the tool also supports the National Drug Theft Task Force in intelligence gathering, while provincial task forces use the tool to conduct audits and determine supportive supervision needs.

GHSC-PSM manages a catalog of 35 data tools contributed by eight of its partner countries—tools they've found useful in their respective health logistics systems. Many of the tools are being refactored. Analytics tools can be shared, reused, and integrated with other data systems to enable efficiencies.

Data is also used successfully to conduct commodity gap analyses that summarizes the amount of medicines needed for a specific time period compared to funding available to purchase those medicines. These figures are frequently presented in a graph format for review by stakeholders and utilized as an advocacy tool to address the gap. In **Mozambique**, the MOH utilizes nSIGLUS data to generate a commodity gap analysis. After using this information to advocate for resources to address the gaps, there were no stockouts of amoxicillin at the central level in 2021 and the average stockout rate at the subnational levels was only 15%. In 2022, the MOH established contracts with amoxicillin suppliers and more recently, GHSC-PSM coordinated the approval for World Bank funding for procurement of oxytocin, ORS/zinc, hydralazine and other products, reducing gaps anticipated in 2024.

Zambia also uses reliable stock data to generate commodity gap analyses. The Quantification Analytics Tool (QAT) automatically produces commodity gap analyses each month which are then shared and reviewed each month at the national level with health and supply chain officials, donors, NGOs, and faith-based organizations. This report has led the Government of Zambia to release emergency funds in 2019 to procure and deliver 25,000 vials of magnesium sulfate, the medicine used to treat eclampsia and pre-eclampsia, and to reinstate the delivery of health center kits to health facilities. The commodity gap analysis has contributed to the decision of donors including USAID, UNICEF and UNFPA to procure pediatric formulations of amoxicillin, oxytocin, and tranexamic acid (TXA).

MNCH Commodity Gap Analysis, Zambia, 2024



2 Coordination, Transparency and Accountability

Coordination

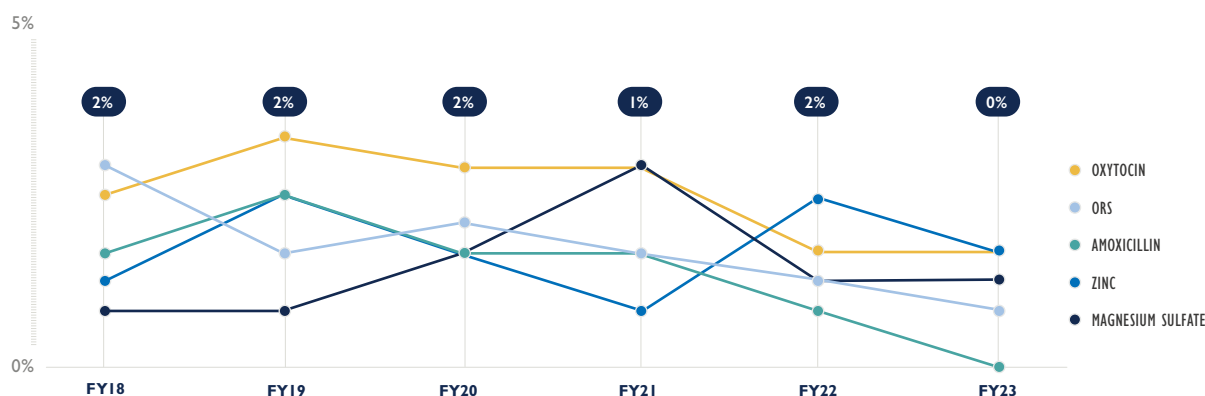
Ensuring the availability of medicines is the responsibility of government agencies, supply chain managers, logisticians and many other professional individuals and groups who work in the health supply chain. Critical to a well-functioning supply chain and ensuring the availability of products at all levels of the supply chain is the coordination among these stakeholders. In several contexts, including **Zambia, Mali, Rwanda,** and **Liberia,** dynamic technical working groups are at the core of effectively managing commodities and the supply chain.

In **Mali,** government partners discuss priorities in the national working group Comité Technique de Coordination et de Suivi de la Gestion des Médicaments Essentiels to ensure optimal implementation and avoid duplication. The coordination mechanism is supported by USAID, UNICEF and UNFPA champions, active advocates for MNCH commodity financing and procurement. The working group has been most effective with the inclusion of service delivery partners, who can communicate the needs at health facilities and the impact of medicine stockouts. The working group is also held at the regional levels where specific commodity issues at the health facility level can be reviewed, discussed, and actioned. Various partners and programs must have dedicated representatives and resources to ensure national and regional coordination.

In addition to supporting the national working group, GHSC-PSM's Mali team facilitates a bi-monthly meeting with all departments within the Pharmacie Populaire du Mali (PPM), the entity responsible for procuring, storing, and distributing essential health commodities in Mali. Through these working sessions, the departments and individuals responsible for taking the actions discussed work with GHSC-PSM to immediately address commodity supply challenges. The activity is gradually increasing PPM stewardship over its own supply chain.

In the 2010s, the government of **Rwanda** faced significant challenges managing multiple parallel supply chains, numerous global health institution medicine donations, and stakeholders siloed by health area. To address these challenges, the government established the integrated Coordinated Procurement and Distribution System (CPDS) to oversee forecasting, supply planning, procurement, storage, and distribution for all medicines. Under this mechanism, the Resource Mobilization Committee (RMC) maintains stakeholder engagement and develops strategies for optimizing the available resources within the restrictions of each individual global health institution. Whereas in other countries, qualifications would be conducted, and supply plans monitored by health area, the Quantification Committee and the Implementation Committee oversee these activities for all medicines. As a result of this integration, the average stockout rate of select MNCH medicines decreased and for the past five years has remained at a stockout rate of less than 2%.

Stockout of select MNCH Medicines Over Five Years, Rwanda, 2018-2023



In some countries, there is no dedicated working group for MNCH medicines. In **Liberia**, the Family Health Division, with support from partners, integrated priority MNCH products including misoprostol, oxytocin, and amoxicillin DT into the reproductive health program to generate required national level attention. In this reproductive health working group, the stock levels of products are monitored monthly, stock imbalances are identified and prioritized for action. The group follows a detailed terms of reference to maintain organization and efficiency. Similarly, in **Zambia**, the Safe Motherhood Sub Committee Technical Working Group is also guided by agreed-upon terms of reference and meets monthly to review commodity stock levels, discuss solutions, and take action to address identified issues. The Safe Motherhood Working Groups are led by the MOH and organized at the national and district levels.

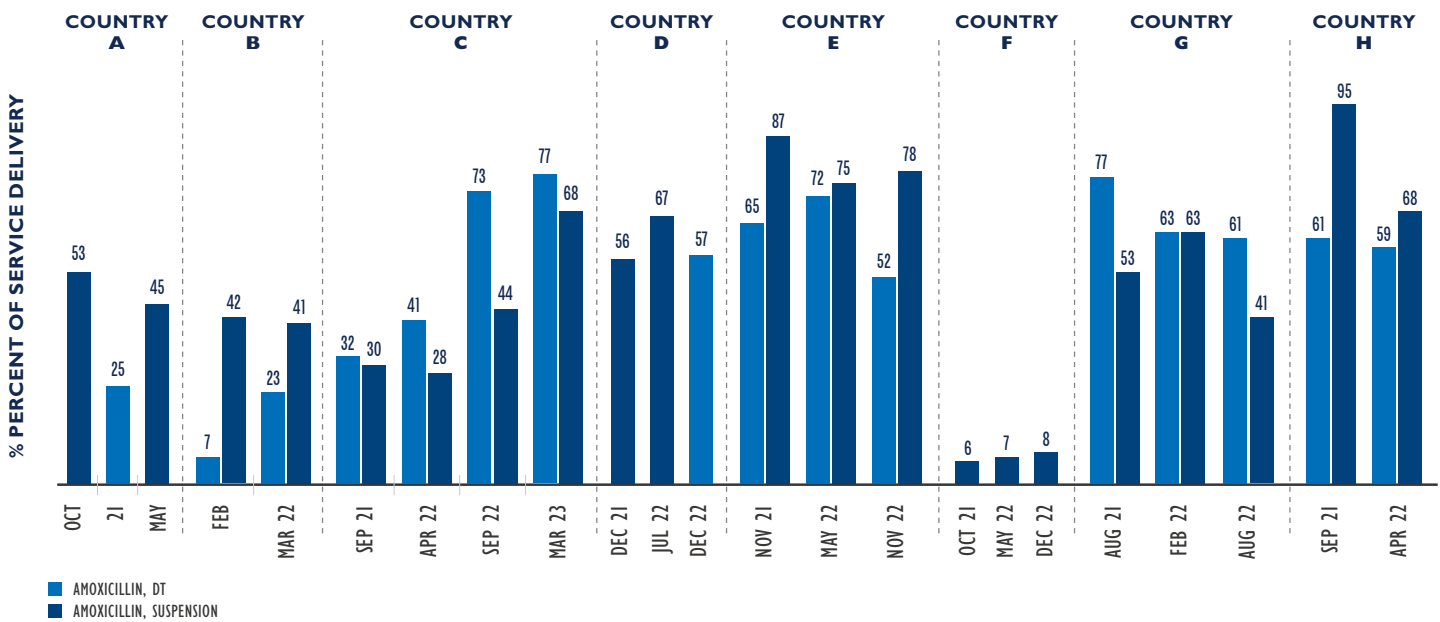
In these groups, stock availability data from central and facility levels is reviewed and stakeholders provide updates on strategies under implementation to improve MNCH commodity availability. The national level TWG has influenced greater investments in MNCH commodities from donors including USAID, UNFPA and the Japanese government.

Transparency and Accountability

Vital to ensuring the proper use of public resources to contribute to a nation's health goal, is transparency and accountability in the fiscal process. Supporting civil society to develop and use these tools such as commodity and funding gap impact analyses or budget tracking tools to engage and monitor allocated funding for MNCH medicines is an important component of increasing transparency and ensuring accountability. The following section describes country initiatives to increase transparency and accountability for essential medicines.

In **Mali**, the government regulates much of its pharmaceutical purchasing through a central entity with effective built-in transparency and accountability mechanisms. The PPM in Mali is a parastatal, semi autonomous agency that receives a budget allocation from the government of Mali to purchase select essential medicines. The PPM also sells products at cost-price, plus a markup to health facilities. The revenue generated replenishes stocks, ensuring that medicines remain continually available. The stringent regulations and the cash flow management systems enable PPM to meet demand and as a result, stockouts are mitigated. The table below compares stock levels of amoxicillin in health facilities across 8 countries. Mali is represented as "Country F", with significantly lower stock out rates compared to other countries.

Percent of Service Delivery Facilities Stocked Out of Amoxicillin DT and Amoxicillin Suspension on the Day of the End Use Verification Survey Visit



In **Nigeria**, GHSC-PSM has led the establishment of a [Drug Revolving Fund](#) in five states. A drug revolving fund (DRF) uses initial (or "seed") funds to procure medicines on a user-fee basis for sustainability. A pivotal component of the DRF is the role of community members and leaders in the design and management of the system through DRF-integrated health supply chain committees. These steering committees exist within each state and act as a governance mechanism to oversee the work of the DRF. The committee effectively works with the government, civil society, and other partners to track funding allocated, planned procurements and expenditures to reduce instances of funding misuse.

At the same time, DRF stakeholders developed financial monitoring and tracking tools and focused on strengthening warehouse and health facilities' financial management and governance capacities. Due to the monitoring and oversight of the DRF funding in Bauchi State, a significant amount of financial abuse was detected and resolved.

However, even if the financial mechanisms for commodity procurement are transparent, there can still be other significant issues including timing. In **Nigeria**, when the DRF funds are not fully released on time, it impacts the buying power of facilities to replenish stock at the central and facility level. Also in Nigeria, when funds are released from the national government, political will from state governments are needed to utilize the funds timely and appropriately. Due to these challenges, only a small fraction of the DRF funds are being utilized.

3 Prioritization and Advocacy

Prioritization

In some countries, health commodities are categorized as “program commodities,” such as antimalarials, antiretrovirals, and contraceptives leaving all other medicines to be categorized as “essential medicines”. The medicines in the latter category often include hundreds of other medicines necessary for health facilities to provide care and treatment. This creates challenges for life-saving medicines like oxytocin and magnesium sulfate to be prioritized.

Aligned with the World Health Organization (WHO) Essential Medicines List, the National Essential Medicines List in **Pakistan** lists 428 medicines required in the healthcare system. To help ensure the availability of priority life-saving medicines for women and children, GHSC-PSM's Pakistan team worked with each province to develop a custom Very Essential Medicine List (VEML) listing the supplies which should be consistently available, even in financially constrained environments, to reduce morbidity and mortality. GHSC-PSM organized consultations with officials from the Departments of Health, pediatricians, gynecologists and service providers at various levels of the healthcare system to review WHO's recommended priority life-saving medicines for women and children under and province-specific health indicators. Country representatives from UNFPA, UNICEF, and WHO attended the consultations.



“We are grateful to USAID for extending technical support to the Baluchistan province in finalizing MNCH Very Essential Medicines List and stand committed to adequate financing for commodity security of these products at last mile.”

—Dr. Masood Qadir Nousherwani,
Director General Health Services
Government of Balochistan

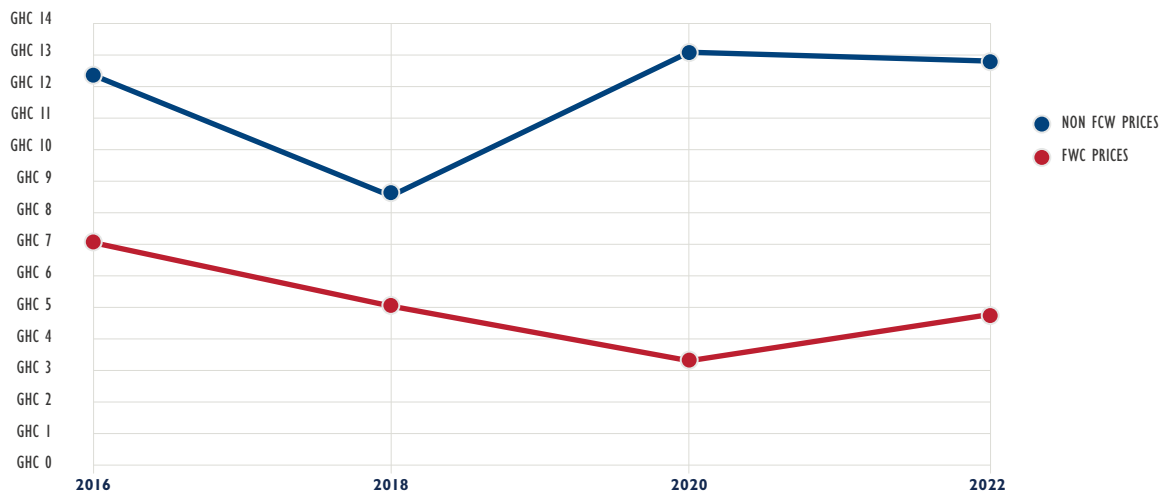


By September 2021, all provincial health departments in Pakistan had instituted MNCH VEML. On average, each VEML contains 20 life-saving products and is available via a [mobile application](#) along with other medicine and supply chain resources. GHSC-PSM developed the mobile application in coordination with the Drug Regulatory Authority of Pakistan to make the VEMLs more readily available. With training and tools from GHSC-PSM, staff from the provincial MNCH program, Lady Health Workers program, Expanded Program on Immunization, and Medical Store Depot on using the tool and conducted five-year provincial-level forecasts. The project has now supported the government to integrate the VEMLs into the digitized health and logistics systems (HLMIS and DHIS2), allowing district store workers to effectively record demographic and commodity supply and consumption data for MNCH very essential medicines on one integrated platform.

In **Ghana**, the MOH has improved the availability of select medicines through national framework contracts (FWC). In 2018, with technical assistance from GHSC-PSM, the MOH in Ghana established the first FWC mechanism with the goal of increasing economies of scale through pooled procurement, ensuring quality medicines, and reducing costs and level of effort at Regional Medical Stores and teaching hospitals to conduct procurements.

To establish the FWC, the MOH conducted a prioritization

exercise to determine a limited number of products to be included in the framework contract. Due to their vital, life-saving importance, MNCH products in the FWC include but are not limited to oxytocin, methyldopa, nifedipine and ORS. A recent analysis on the FWC mechanism found a reduction in unit price for these products and reduced number of stockouts.



Advocacy

Advocacy can be an important tool in influencing financing and procurement policy. Advocacy should be evidence-based, focused on the community, and can be most impactful when supported and/or carried out by champions.

Through identifying individuals as champions for women's health in **Ethiopia**, significant progress has been made in creating awareness for quality maternal health services and commodities including oxytocin and TXA for preventing and treating PPH. Specifically, GHSC-PSM facilitated advocacy workshops with women parliamentarians on maternal supply financing and challenges. The project collaborated with other partners to hold an advocacy symposium and panel discussions with veteran university and professional association scholars, and prominent leaders of professional associations. At the launching of a safe maternity event, scholars presented and discussed issues of PPH, PPH medicines quality, and financing to broad audiences that included politicians, and community leaders. As a result, financial resources were committed to procurement and delivery of maternal health commodities, notably the enhancement in the government's funding contributions, from 4 percent in 2021–2022 to 8 percent in 2022–2023, and 11 percent in 2023–2024, as compared to the total funding requirement of lifesaving maternal commodities for the year. Find additional information on the success in [A Case Study: Improving Financing for Maternal Health Commodities in Ethiopia](#).

Conclusion

Sufficient and sustainable financing for health medicines is not unique to MNCH programs. The root causes of the lack of funding are known and well-documented. However, it is more challenging to document experiences and lessons learned across the areas of increasing financing for medicines. Despite this, health systems can be strengthened through 1) maximizing the use of accurate, complete, and timely data 2) coordination, transparency, and accountability, and 3) prioritization and advocacy to increase the availability of MNCH commodities. GHSC-PSM will continue to partner with governments to develop strategies and tools with a vision of increasing countries' stewardship of their own supply chains.