RAPID ASSESSMENT OF THE MASTER SUPPLY CHAIN TRANSFORMATION PLAN IMPLEMENTATION: IMPACT OF DRUG SUPPLY CHAIN STAKEHOLDER EFFORTS IN ADDRESSING PERSISTENT DRUG STOCK-OUTS AND EXISTING GAPS REPORT

Prepared by JONEHA

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List of acronyms

3PL	Third-party logistics provider
ACB	Anti-Corruption Bureau
CHAM	Christian Health Association of Malawi
CMST	Central Medical Stores Trust
CSO	Civil Society Organization
DHO	District Health Office
DHTSS	Directorate of Health and Technical Support Services
DTIU	Drug Theft Investigations Unit
EHIN	Electronic Health Information Network
ERP	Enterprise Resource Planning
FEFO	First Expiry First Out
GoM	Government of Malawi
HAC	Health Advisory Committee
HCMC	Health Center Management Committee
HSSP III	Health Sector Strategic Plan Three
JONEHA	Network of Journalists Living with HIV
JSI	John Snow Inc
LMIS	Logistics Management Information System
MSCTP	Master Supply Chain Transformation plan
NGO	Non-Governmental Organization
NLGFC	National Local Government Finance Committee
NTC	National Transport Logistics Cluster
PMRA	Pharmacy Medicine Regulatory Authority
PPDA	Public Procurement and Disposal of Assets
PSC	Parallel Supply Chain
RIV	Requisition Issue Voucher
USAID	U.S Agency For International Development

Executive Summary

Health commodity supply chains are a critical component of a well-functioning health system. In Malawi, despite ongoing efforts to enhance the supply chain for drugs and essential commodities across all health facilities and hospitals, significant challenges remain. In 2019, 679 health facilities reported stockouts of essential drugs and commodities (MSCTP 2021-2026). A follow-up assessment by JONEHA indicated that the availability of the essential drug list for district hospitals averaged only 60%, while central hospitals reported an even lower average of 44%.

To tackle these persistent challenges, Malawi developed the Master Supply Chain Transformation Plan (MSCTP) for the period 2021-2026. This comprehensive document aims to ensure a constant and uninterrupted supply of high-quality, essential health commodities for all public health facilities in the country. The MSCTP serves as a six-year roadmap for supply chain management, engaging all relevant national stakeholders and informing national health strategies to create a patient-centered and integrated health commodity supply chain.

To assess the progress of the MSCTP's implementation, JONEHA conducted a rapid assessment of the drug supply chain to evaluate improvements in the availability of drugs and commodities. A total of 22 institutions participated in the assessment including 16 health facilities, 4 district hospitals (Lilongwe, Mangochi, Phalombe, and Mulanje), and 3 national level stakeholders; the Central Medical Stores, Directorate of Health and Technical Support Services (DHTSS), and the Drug Theft and Investigation Unit (DTIU). The findings from this assessment were organized around six key themes, highlighting critical areas for further action as follows;

Drugs and Commodity stock levels: Efforts have been made to enhance the availability of drugs and commodities across all health facilities in Malawi. This includes the recapitalization of the Central Medical Stores Trust (CMST), an initiative aimed at strengthening its capital base to increase the procurement of essential drugs and commodities, thereby addressing gaps in buffer stocks. However, due to the devaluation of the Malawian kwacha that happened in November, 2023 and a scarcity of foreign exchange for drug procurement, the goals of this recapitalization

have not been fully realized. In addition; limited drug budgets allocated to health facilities compel them to prioritize purchasing only the most essential medications**.** As a result health facilities continue to report stockouts of critical drugs and commodities

Transport and distribution of drugs and commodities: A route optimization strategy is currently in place and is reviewed every six months to improve delivery schedules. However, challenges persist, including the absence of a fixed delivery schedule for some facilities. Despite ongoing efforts to optimize routes, delivery times remain unpredictable, leading to supplies arriving at facilities either earlier or later than anticipated.

Management and disposal of expired drugs: Policies, guidelines, and standard operating procedures for the management and disposal of expired drugs have been developed, with most health facilities now adopting the First Expiry First Out (FEFO) strategy. Additionally, the redistribution of excess drugs to other facilities is another strategy currently being implemented. Despite these initiatives, many facilities continue to hold significant stockpiles of expired drugs and commodities that have yet to be disposed of. The Central Medical Stores Trust (CMST) reported stock suffered losses to expiry and damages worth K1.8 billion in year 2024, against K3.4 billion in the previous year.

Without effective monitoring and regulation, there is a risk that expired drugs could be repackaged and sold as counterfeits or disposed of irresponsibly, leading to serious health and environmental hazards.

Drugs and commodities Financing: To address the persistent stockouts of drugs and commodities in Malawi as highlighted above; a recommendation was made to recapitalize the Central Medical Stores Trust (CMST) with a once of amount of K28.2 billion to achieve financial equilibrium. The Government of Malawi has however been providing the recapitalization funds to CMST in installments from 2020 to 2023 with the largest allocation being K12 billion. Despite these additional resources, health facilities continue to experience significant shortages of

essential drugs and commodities, impacting the overall effectiveness of the healthcare system in Malawi.

Management of drug theft and Pilferage: In 2016, the Ministry of Health established DTIU to combat drug theft and pilferage in health facilities. Additionally, the Health Advisory Committee (HAC) which is now Health Center Management Committee (HCMC) at the facility level plays a crucial role in ensuring the security of drugs. Upon receipt of supplies, HAC members are required to sign a form confirming the delivery of drugs. Despite these safeguards, drug theft and pilferage remain prevalent in health facilities and hospitals.

Although a three-lock system has been introduced to enhance security, it primarily proves effective only after working hours, leaving drugs vulnerable to theft during the day, particularly during busy prescription periods.

Procurement of drugs and commodities: Several strategies have been implemented to enhance the procurement of drugs and commodities at the CMST. Currently, inventory management systems such as Open LMIS and NAVISION are in use, and efforts are underway to fully digitize supply chain processes. This digitization aims to streamline the delivery of commodities from manufacturers to patients through better integration of supply chain systems.

Despite these advancements, challenges persist, including lengthy procurement processes that delay drug delivery and limited district budgets for drug procurement.

Recommendations

To address the above challenges the following recommendations must be taken into consideration;

To enhance **drug and commodity stock levels**, the Central Medical Stores Trust (CMST) should negotiate advance payments and letters of credit with suppliers to expedite the procurement process. It should explore the Southern African Development Community (SADC) procurement mechanisms and collaborate with other countries to optimize procurement strategies. The

department of treasury must also prioritize drug procurement when allocating foreign exchange. Lastly the drug budget for health facilities should be increased to align with their specific needs.

To enhance the **transportation and delivery of drugs** and commodities, health facility drug budgets should include a specific line item for transportation costs. Facilities must also ensure timely order placement to prevent delays in receiving supplies. Additionally, the CMST should review and optimize delivery routing plans to improve overall efficiency.

To effectively **manage and dispose of expired drugs**, the government should allocate funds to Health Facilities for constructing dedicated incinerators in District Hospitals for the safe disposal of expired medications and hazardous medical waste. Additionally, there is a need to coordinate the donation of drugs, as this can also lead to an increase in expired products.

To address **drug theft and pilferage**, the government should consider implementing the use of national IDs for accessing services, particularly in facilities located near border areas. Additionally, there is a need for enhanced supervision at health facilities to closely monitor staff involved in drug issuance and to identify and address any gaps in the process.

Last but not least to enhance the **procurement of drugs and commodities,** it is essential to streamline procurement processes and facilitate direct purchasing from manufacturers.

1.0 Introduction

1.1 Background

Health commodity supply chains are a critical component for a well-functioning health system. Strong supply chains enhance health outcomes and help build trust among patients. A patient-centered approach is therefore critical, ensuring that patients have timely access to quality medicines[1]. Implementing effective supply chain processes requires a comprehensive understanding of patient disease trends, product consumption patterns, and how patients access healthcare services.

John Snow Inc. (JSI) defines public health supply chains as a network of interconnected organizations that ensures health commodities are available to those in need[2]. Various actors and stakeholders play crucial roles in this supply chain. These include; Ministries of Health (procurement, planning, drug regulatory boards, human resources, and health programs) Central medical stores, Donors, Non-governmental organizations (NGOs) Regional and district health authorities, Health facilities, Community health worker teams, Private sector partners, such as third-party logistics providers, drug manufacturers, distributors, and private service providers.

The supply chain system for essential drugs and commodities in Malawi has evolved significantly over the years; however, challenges persist. The system follows a structured process that includes selecting essential medicines, forecasting demand, planning, procurement, and managing warehousing and distribution. Despite ongoing efforts to improve and integrate this system, stockouts of essential health products continue to impede access to and delivery of services. Key issues contributing to these challenges include gaps in workforce capacity, limited

[1] Donata, A. et al. (2016), ADB Brief: Strong supply chain transform public health: https://www.adb.org/sites/default/files/publication/214036/strong-supply-chains.pdf

[2] John Snow Inc, (2012),: https://www.childhealthtaskforce.org/resources/report/2012/getting-products-people-integrated-supply-chain-management-public-health-jsi

governance, fragmented information systems, and inadequate financing. Additionally, Malawi operates numerous parallel supply chains for health products managed by different stakeholders, which complicates coordination. The existence of these parallel reporting systems has created structural challenges and weakened the mainstream supply chain monitoring, further exacerbating the inefficiencies in the supply chain.

To address these challenges, Malawi has developed the National Master Supply Chain Transformation Plan (2023-2030), which aims to align stakeholders around common goals and secure financial support from both the Government of Malawi and development partners. This initiative is essential for ensuring the efficient delivery of high-quality medical products.

Strengthening the Supply chain is also recognized as a key pillar in the Health Sector Strategic Plan III, particularly under Infrastructure and Health Technologies (HSSP III). Achieving the goals outlined in these documents will rely on strengthened partnerships and collaboration among stakeholders, as well as sustained financing to ensure a continuous supply of health commodities and technologies. Continuous monitoring and assessment of the supply chain will be critical for tracking progress, identifying bottlenecks, and addressing emerging challenges effectively.

To date, several assessments conducted by the U.S. Agency for International Development (USAID) and other partners have aimed to understand the current state of Malawi's supply chain, identifying its strengths and weaknesses. Recent national supply chain assessments conducted in 2021 and 2023 revealed several challenges, including a lack of unified national supply chain operations, insufficient timely communication and coordination among departments and partners that leads to duplication and inefficiency, inadequate logistics preparedness and prepositioning efforts, road access constraints exacerbated by limited mapping information, poor commodity tracking resulting in stockouts and uninformed decision-making, and a lack of sufficient resources for effective logistics management. Addressing these issues is crucial for improving the overall efficiency and reliability of the supply chain in Malawi.

It is important to recognize the critical role that communities play in enhancing social accountability for health programs in Malawi. Civil society and local communities have been at

the forefront of efforts to hold stakeholders accountable within the supply chain. They have been instrumental in identifying stockouts of drugs and commodities, as well as reporting incidents of pilferage and theft.

1.2. Supply chain Context in Malawi

The Master Supply Chain Transformation Plan (MSCTP) has been developed in response to ongoing challenges within Malawi's health supply chain, particularly highlighted by the stockouts experienced by all 679 health facilities in 2019[3]. This shortage of essential medicines severely limits healthcare providers' ability to treat patients and manage diseases, a chronic issue that has been documented in previous studies[4]. The Network of Journalists Living with HIV (JONEHA) identified persistent drug stockouts during a Community-Led Monitoring Initiative in 2020, where 15 out of 16 monitored health facilities reported shortages of essential medicines.

The MSCTP aims to ensure a constant and uninterrupted supply of high-quality health commodities by focusing on key areas such as quantification, procurement, warehousing, storage and inventory management, distribution, waste management, information systems, financing, human resources, policy and regulation, and monitoring and evaluation. These focus areas are designed to address the challenges affecting the availability of essential medicines, including limited funding for procurement, high costs associated with the Central Medical Stores Trust (CMST), inadequate storage capacity, suboptimal infrastructure, lack of visibility in order flow, and inefficient logistics processes.

Since the MSCTP's implementation, significant efforts have been made to improve the drug supply situation. For instance, CMST has been identified as needing recapitalization of approximately $36.6 million (K28.2 billion) to achieve financial stability[5]. This recapitalization is

[3] Master Supply Chain Transformation Plan (MSCTP), 2021-2026.

[4] Ojonugwa, U.A., (2020), Availability of Essential Medicines in Malawi's Public Health Facilities

[5] Chemonics, (2020), Financial Needs Assessment Report for CMST, http://www.cmst.mw/

crucial for reducing creditor days from 265 to 60, settling pipeline orders, increasing working capital for procurements and integration efforts, financing immediate fixed asset acquisitions, and completing an ongoing enterprise resource planning (ERP) project. Although the government provided a capital injection of $6.7 million (K5 billion) during 2019-2020 and finalized CMST's recapitalization in year 2023, challenges persist[6]. The availability of essential medicines remains inadequate, with district hospitals averaging only 60% availability and central hospitals at 44% in year 2024[7]. The MSCTP acknowledges that government-led procurement has the potential to sustainably supply essential medicines; however, existing processes and resource allocations hinder effective distribution to meet national demand. To establish CMST as a reliable supplier for health facilities, the plan advocates for closing funding gaps and updating procurement policies and contract management systems. The CMST Annual Report (2022) highlights ongoing procurement challenges, including prolonged approval chains that delay the procurement cycle and panic purchasing due to delivery delays exacerbated by foreign exchange shortages and disruptions caused by the COVID-19 pandemic[8].

Transport and distribution of essential medicines also face significant challenges. An assessment conducted by the National Transport Logistics Cluster (NTC) in 2023 revealed various transport constraints[9]. In response, the MSCTP prioritizes transportation and distribution improvements by adopting a more flexible distribution model. It proposes consolidating distribution efforts, enhancing third-party logistics provider (3PL) contract management processes, and optimizing routes from centralized warehouses to health facilities. The goal is to reduce delivery points each month while decreasing costs and increasing efficiency throughout the distribution process.

[6] ibid

[7] CMST Annual Report (2022), Back cover.cdr (cmst.mhttp://www.cmst.mw/files/Annual%20Report_2022.pdfw)

[8] Master Supply Chain Transformation Plan (MSCTP), 2021-2026.

[9] National Transport and Logistics Cluster, (2023), Malawi National Transport and Logistics Cluster Meeting, Meeting Minutes, 30 March 2023 - Malawi | ReliefWeb

Theft of drugs and commodities also poses as a challenge for the supply chain in Malawi. DTIU reported that 1.5 billion Malawi Kwacha worth of drugs were stolen during the 2016/2017 period. Despite limited literature on the causes and effects of drug theft on availability, DTIU findings indicate persistent gaps that facilitate pilferage. Issues include unrecorded drug receipts at health facilities, discrepancies between physical counts and stock card balances, unauthorized issuance of drugs without proper documentation, unaccounted intra-facility transfers of supplies, issuing anti-rabies vaccines without proper authorization, and excess issuance beyond requisitioned amounts.

Given these persistent issues surrounding drug stockouts and availability of essential medicines in Malawi's healthcare system, conducting a rapid assessment of the drug supply chain is deemed necessary to evaluate progress in implementing the MSCTP and the efforts made by stakeholders to address these critical challenges effectively.

2.0 Purpose and Objectives of the Assessment

2.1 Purpose

The purpose of this exercise was to assess the progress made in implementing the Master Supply Chain Transformation Plan in Malawi, focusing on how effectively it has improved the availability of drugs and commodities across health facilities and hospitals.

2.2 Objectives

The specific objectives of the assessment were as follows:

1. Understand the impact of drug/essential medicines supply chain stakeholders' efforts in addressing persistent drug stock-outs in Health facilities
2. Assess systems and controls put in place to guard against essential medicines and commodities wastages and theft and pilferage

3. Identify existing gaps and challenges in addressing medicine stockouts in relation to the MSCTP
4. Identify solutions for addressing gaps identified during the drug supply rapid assessment.

3.0 Methodology

The drug supply rapid assessment was caried out from June to October, 2024. The assessment employed a qualitative approach conducted in two phases. The first phase involved a comprehensive desk review of supply chain policies, reports, and peer-reviewed journal articles. This was followed by in-depth interviews with stakeholders at the community, district, and national levels. A total of 22 institutions participated in the assessment, including 16 health facilities, 4 district hospitals (Phalombe, Mulanje, Lilongwe, and Mangochi), and 3 national-level stakeholders: the Central Medical Stores Trust (CMST), the Directorate of Health and Technical Services (DHTSS), and DTIU. These institutions were selected for their critical roles throughout the supply chain, from selecting essential medicines to last-mile distribution across the country. Data collection was facilitated using the Kobo Toolbox, ensuring a systematic gathering of insights and experiences from various stakeholders involved in the health supply chain. A maximum variation sampling technique was employed to gather a diverse range of perspectives from stakeholders at all levels. Face-to-face interviews were conducted using a semi-structured interview guide, which was pretested with selected stakeholders to ensure the validity and refinement of the questions. During the interviews, participants were encouraged to ask questions and seek clarification before responding, fostering an open dialogue that contributed to the consistency and trustworthiness of the study's findings. To ensure accuracy, interviews were recorded using a digital voice recorder, and the recordings were transcribed verbatim and carefully reviewed against the original audio for precision. Data was securely kept using passwords in Kobo toolbox. The transcribed interviews were then analyzed thematically, focusing on emerging themes of interest. A list of interviewed stakeholders has been provided in annex 1.

A number of ethical considerations were observed. Participants were shared the purpose of the rapid assessment to voluntarily agree to participate without coercion or undue influence. Interviewees were also notified that audios will be recorded and will strictly be used for report generations.

4.0 Assessment Findings

After analyzing the data from the desk review and in-depth interviews, we identified six key themes that will be discussed in the next section: i) Stock Levels of Drugs and Commodities (ii) Transportation and Delivery (iii) Management and Disposal of Expired Drugs (iv) Financing for Drugs and Commodities (v) Drug Theft and Pilferage Management and (vi) Procurement of Drugs and Commodities. For each theme, we will highlight what is currently working and what are the existing challenges. We have also identified some recommendations for addressing the identified challenges which will be discussed in the next section.

4.1. Drugs and Commodities stocks levels

What's working

Ensuring uninterrupted access to medicines and medical supplies is a core part of the Central Medical Stores' mission which is to: 'Improve health in Malawi by providing reliable, continuous access to high-quality medicines and medical supplies through efficient procurement, warehousing, and distribution services at the most affordable cost'. Malawi has a prioritized list of medicines called the Essential Medicine List, frequently revised by the Ministry of Health which guides the procurement of medicines and medical supplies by CMST for public and Christian Health Association of Malawi (CHAM) facilities. The CMST uses a must have list a Product Catalog which has a master list of 3400-line items for medicines and medical supplies that can be sourced from suppliers.[10] . The Catalog is regularly updated to reflect new medical advancements and emerging disease occurrences.[11] Participants interviewed acknowledged that Malawi continues to face a high demand of drugs and commodities more than what is procured.

[10] Central Medical Stores Trust (2020), CMST Business Plan 2020-2025. Business_Plan_2020-2025_Print_Version_May 2023.pdf (cmst.mw)

[11] Kaupa, (2015)

An analysis conducted by Chemonics and its partners on the Revenue Generation Strategy and the development of a Commercialization Strategy for the CMST revealed that CMST struggles to meet the demand for pharmaceutical supplies, delivering only an average of 63% of what is ordered. In response to these challenges, the Malawi government successfully completed the recapitalization of CMST with **K28.2 billion** as recommended in Chemonics' financial needs report for the 2023/24 financial year. This recapitalization aims to strengthen CMST's capital base, enabling it to increase its procurement of drugs and commodities, which will ultimately help address gaps in buffer stock levels and improve the availability of essential medicines across health facilities[12].

"Sometimes we procure less and that creates shortages. Unfortunately, we can't control how many people get sick" (CMST participant).

To ensure a continuous supply of drugs and commodities, the Central Medical Stores Trust has extended the tendering process for suppliers to 6 months. This extension allows bidders additional time to source supplies and prepare comprehensive bids. Additionally, it is recommended that CMST maintain a buffer stock of at least three months' worth of essential commodities, ensuring hospitals and health facilities also have sufficient supplies to last this duration. This strategy is supported by direct procurement from manufacturers, which can enhance supply reliability. However, achieving these goals is contingent upon securing adequate resources. These measures aim to alleviate the pressure on District Health Offices (DHOs) and local health centers across Malawi, ultimately improving the availability of essential medicines and health products.

[12] Chemonics, (2020), Financial Needs Assessment Report for CMST, http://www.cmst.mw/

Keeping track of all drugs and commodities, both within the country and in the pipeline, is a crucial best practice for effective supply chain management. An interviewee from the Central Medical Stores Trust (CMST) highlighted that CMST utilizes **Open LMIS**, an open-source, cloud-based electronic logistics management information system specifically designed to manage health commodity supplies. Additionally, CMST employs **NAVISION**, an enterprise resource planning (ERP) system that plays a vital role in managing inventory for medical supplies. Together, these systems streamline inventory management processes at CMST, enhancing the efficiency of tracking, procurement, warehousing, and distribution of medicines throughout Malawi.

District stakeholders confirmed that the District Health Office plays a vital role in facilitating the distribution of drugs and commodities to health facilities within the district, including the redistribution of excess supplies. In situations where there is a shortage of drugs and commodities, district health officials implement rationing measures to ensure that each facility has access to essential supplies. This proactive approach helps to manage limited resources effectively and maintain service delivery across health facilities.

> *"Sometimes to manage the high demand for drugs and commodities District health officials may be forced to ration what is available to ensure that at least each health facility has access" (CMST participant).*

At the health facility level, annual drug audits are conducted by the council through internal audit and DTIU to monitor all drugs and commodities effectively. These audits aim to ensure that the distributed drugs and commodities are utilized optimally while also checking for misuse and mismanagement. Upon receiving the audit reports, health facilities implement the recommended actions to enhance the security of medicines, prevent damage, and ensure that expired drugs do not re-enter the supply chain for reuse.

Access to sufficient funds for the procurement of drugs and commodities is essential for health facilities to maintain a steady supply in the right quantities. Efforts are underway to decentralize

authority, allowing local health facilities to manage their drug budgets and resources more effectively. In some facilities, in-charge personnel participate in district-level drug and commodity quantification meetings, which will be further strengthened once health centers are authorized to manage their budgets as part of the initiative to reduce stockouts.

At the health facility level, established drug delivery processes are followed, with the involvement of the HAC. Stock cards are utilized to track supplies upon delivery at each facility, while Requisition Issue Vouchers (RIVs) are employed whenever orders are placed—whether for internal use within departments or for redistributing supplies to other health facilities in need within the district.

Current Challenges

Several challenges significantly impact the availability of drugs and commodities in hospitals and health facilities across Malawi. The CMST is tasked with procuring medicines and medical products for public and CHAM facilities. However, since most supplies are imported, access to foreign exchange (forex) is critical for the procurement process. Since 2021 Malawi has faced a shortage of forex, and the lack of prioritization in forex allocation for medicine procurement, coupled with delayed payments from the Treasury, has hindered CMST's ability to acquire necessary medicines and supplies in adequate quantities and on time. Additionally, inadequate funding for District Hospitals have further affected the availability of drugs across the country's health facilities. Stakeholders have expressed concerns about lengthy procurement processes, including protracted subcontracting and tendering procedures that delay drug availability in hospitals.

At the district level, limited funds for drug procurement force health facilities to order only critical items, complicating efforts to maintain a three-month buffer stock as recommended by CMST. This situation has resulted in frequent stockouts across nearly all health facilities involved in this assessment. Furthermore, the November, 2024 44% devaluation of the kwacha has led to price

increases for drugs and commodities, adversely affecting the purchasing power of available resources.

The goal of recapitalizing CMST was to enhance its operational resources, including drug procurement. However, the devaluation of the kwacha has diminished the purchasing power of the earmarked **K28.2 billion** for recapitalization, which has not been revised since then, leaving it insufficient to meet its intended objectives. Additionally, stock levels at CMST and private wholesalers contribute to rising medicine prices, further limiting the quantities that districts can order.

Procurement lead times also exacerbate shortages. One CMST participant noted that it takes approximately a year from initiating a tender to completing all necessary processes, including approvals and sign-offs by the Anti-Corruption Bureau. Reducing this timeframe is essential for addressing drug shortages effectively.

District health facilities continue to experience persistent stockouts. In all four districts assessed, participants reported that facilities face shortages of essential drugs for an average of 1 to 3 months each year. Although health facilities are encouraged to place emergency orders as needed, delays by District Health Offices (DHOs) in fulfilling these orders often exceed acceptable limits, resulting in missed delivery dates and ongoing shortages.

Stakeholders at health facilities reported several challenges at the operational level. A significant issue is that facilities frequently receive smaller quantities of drugs than ordered due to low stock levels at the district level, leading to rationing among multiple facilities. Moreover, delays in order approvals by DHO officials further worsen shortages. In some districts, such as Mangochi and Phalombe, the **Electronic Health Information Network (eHIN)** system used for real-time tracking of medicines by batch and expiry was reported as non-functional in certain health centers. Additionally, there is a knowledge gap regarding the eHIN system among district stakeholders across all four districts assessed.

4.2. Transportation and Distribution of drugs and commodities

What's working

Transportation and distribution of drugs and commodities are vital components of the drug supply chain in Malawi. Disruptions in these processes can lead to critical shortages of essential medications. To mitigate potential disruptions at the district level, a route optimization strategy is being implemented, with reviews conducted every six months to enhance delivery schedules. Health facilities collaborate with DHOs and various health partners to ensure the effective transport and delivery of drugs and commodities. This collaborative approach aims to streamline logistics, improve efficiency, and ultimately ensure that essential medicines reach health facilities in a timely manner, thereby reducing stock shortages and improving patient care across the country.

Existing Challenges

During the assessment, several challenges related to the transportation and distribution of drugs and commodities were identified. A significant issue is the absence of a fixed delivery schedule; despite efforts to optimize routes, delivery times remain unpredictable, leading to supplies arriving either earlier or later than expected. Delays in placing orders from health facilities further disrupt the delivery schedule.

> *"Transportation is a challenge, when orders are placed, we wait for transport that can go to DHO from the health center, as orders are processed based on hard copy' Pharmacists Assistant*

Additionally, poor terrain and inadequate road infrastructure in certain districts hinder timely deliveries. During the rainy season, damaged roads and bridges can render some health facilities inaccessible, causing substantial delays in distribution. Participants noted that not all health facilities in the four assessed districts have dedicated vehicles for transporting drugs and commodities. In urgent situations, health workers often resort to using personal vehicles for

transporting medicines between DHOs and health centers. This practice poses risks, as there are no security measures in place to monitor and track deliveries made using personal vehicles.

> *"sometimes we have to use our personal vehicles to transport drugs and commodities from the DHOs to the health facility (DSCT participant)"*

Insufficient fuel for vehicles also poses a challenge in the distribution of medicines.

> *"There is no available funds or petty cash for emergency orders for us to go collect. We just depend on partners or ambulances coming to the health center" Assistant pharmacist*

CMST previously consolidated a monthly distribution schedule shared with all DHOs and health facilities, but this practice was discontinued several years ago due to security concerns.

4.3. Management and disposal of expired drugs

What's Working

To prevent the expiration of drugs and medicines, stakeholders have developed and implemented various policies and strategies. All health facilities visited reported adhering to existing guidelines, standard operating procedures, and manuals that prioritize the management of drugs and medicines. Currently, most health centers employ the First Expiry First Out (FEFO) method to minimize the risk of expiries. Additionally, when health facilities have excess stock of drugs and medicines, they redistribute these surplus items to facilities experiencing stockouts. This redistribution process is facilitated by filling out Requisition Issue Vouchers (RIVs), which are submitted to the pharmacy in charge to ensure proper tracking and accountability.

These practices are crucial for optimizing resource use and ensuring that essential medicines remain available for patient care.

The CMST is also committed to ensuring a continuous supply of drugs and commodities by enhancing the monitoring of long shelf-life products through its inventory systems. It collaborates with other government agencies, including the Pharmaceuticals and Medicines Regulatory Authority (PMRA) and DTIU of the Ministry of Health, to track parallel donations and illegal supplies within the drug supply chain. This effort aims to prevent the distribution and use of expired medicines throughout the country.

Challenges

The management and disposal of expired drugs and pharmaceuticals is a significant concern for the supply chain in Malawi. Currently, health facilities, district health offices, and central medical stores are burdened with large stockpiles of expired medications. These stockpiles often result from procuring commodities with short shelf lives, particularly laboratory reagents, as well as from donations. Stakeholders have noted that certain critical medicines, such as antivenoms, must be ordered in bulk due to supplier requirements, even when domestic demand is low, leading to unnecessary expirations. It has been learnt that CMST stock suffered losses to expiry and damages worth K1.8 billion in year 2024, against K3.4 billion in the previous year[13].

Without proper monitoring and regulation, there is a risk that expired pharmaceuticals could be repackaged and sold as counterfeits or disposed of irresponsibly, posing serious health and environmental hazards. To address these issues, an oversight committee has been established to prevent the re-entry of expired commodities into the supply chain and to ensure ongoing verification of their management. Additionally, to mitigate the problem of bulk purchases leading to expiries, CMST, with the support of the Malawi Government, recommends collaborating with neighboring countries like Zambia through the Zambian Central Medical Stores to purchase medicines directly from manufacturers. The aim of the approach is to reduce the volume of

[13] CMST Annual Report (2024), http://www.cmst.mw/files/2024_ANNUAL_REPORT.pdf

medicines that may expire while in stock.

Disposing of current stockpiles of expired drugs and commodities requires significant funds, which may not be prioritized by many stakeholders who might prefer to allocate those funds toward procuring urgently needed supplies. While guidelines for disposing of expired drugs exist, CMST has faced delays in initiating this process due to lengthy approval requirements involving multiple entities such as the Public Procurement and Disposal Authority (PPDA), PMRA, Auditor General's Office, Ministry of Finance, Environmental Protection Agency (EPA), and the Anti-Corruption Bureau (ACB). Although CMST began this process two years ago, it remains unresolved, leading to on-going accumulation of expired commodities.

Moreover, CMST lacks its own incinerator for disposing of expired drugs; instead, it relies on incinerators at CHAM facilities or Kamuzu Central Hospital. These facilities have limited capacity to handle the large quantities of expired items accumulated from CMST, District Health Offices (DHOs), and local health facilities. This limitation increases the risk of expired drugs re-entering the market for reuse.

4.4. Drugs and commodity financing

What's Working well

Adequate financing is crucial for driving the supply chain in Malawi. The CMST accounts for 17% of the value of medical supplies to public facilities, with the remainder sourced from donations and private sector contributions[14]. However, undercapitalization and operational inefficiencies have significantly weakened the Trust's capacity to fulfill its mandate. A financial needs assessment conducted by Chemonics and the Global Fund in 2020 identified these issues and recommended a recapitalization of K28.2 billion to achieve financial equilibrium. The Malawi government has allocated funds for this recapitalization gradually until its completion from year 2020 to 2023.

[14] Chemonics, (2020), Financial Needs Assessment Report for CMST, http://www.cmst.mw/

This level of recapitalization is essential for reducing creditor days from 265 to 60, settling outstanding pipeline orders, increasing working capital for procurements, enhancing supply chain integration, financing the acquisition of necessary fixed assets, and completing an ongoing enterprise resource planning (ERP) software project[15]. Furthermore, it has been revealed that the World Bank has committed **$**12 million to Malawi for the procurement of medicines, which is expected to improve stock levels significantly.

The need for adequate financing is underscored by the challenges CMST faces in meeting demand; its deliveries to facilities average only 62% of what is ordered[16]. Stakeholders have emphasized that sustained investment in CMST is critical not only for enhancing its operational capacity but also for ensuring that essential medicines are consistently available across public health facilities in Malawi.

Existing challenges

While the recapitalization of the **CMST** has strengthened its capital base, significant challenges persist. Hospitals continue to operate with inadequate drug funding, leading to persistent shortages and stockouts. CMST medical stores is supposed to supply to DHOs based on allocation of funds to Hospitals. Since DHOs are underfunded by the Ministry of Finance DHOs over draw their budges which leads to debt being owed to CMST. In 2023-2024 Financial year, K15.104 billion was transferred by the National Local Government Finance Committee (NLGFC) to CMST for the year ended 31st March 2024, against total deliveries valued at K30.319 billion, reflecting arrears of K15.215 billion which is a big gap[17]. When essential medicines are unavailable due to funding gaps or deficits, patients are often directed to purchase these drugs from private pharmacies or clinics, creating a substantial barrier to accessing quality healthcare when it is most

[15] Chemonics, (2020), Financial Needs Assessment Report for CMST, http://www.cmst.mw/

[16] CMST Annual Report (2024), http://www.cmst.mw/files/2024_ANNUAL_REPORT.pdf
[17] CMST Annual Report (2024), http://www.cmst.mw/files/2024_ANNUAL_REPORT.pdf

needed. The November, 2024 44% devaluation of the kwacha has further diminished the purchasing power of the earmarked **K28.2 billion** for recapitalization. Additionally, a shortage of foreign exchange limits CMST's ability to procure necessary drugs and commodities. It is important to note that CMST has been receiving recapitalization funds in installments from 2020 to 2023, which hampers the ability to see immediate improvements on the ground. Currently, Malawi is experiencing debt distress, further restricting available capital.

Districts also face delayed funding, and there has been a slow increase in DHO budgets, which often fail to keep pace with rising drug and commodity prices. This situation forces districts to procure less than their actual needs. Furthermore, suppliers have been underperforming, exacerbated by demotivation stemming from delays in payments. District hospitals and health centers do not have control over their budgeting; they are only allocated drugs and commodities, which leads to an unrealistic focus on their procurement needs. Central hospitals do not collaborate with CMST when quantifying their commodities, negatively impacting projections for drug and essential medicine requirements.

4.5. Management of drug theft and pilferage

What's working

In response to widespread concerns about medical product theft from the public health supply chain, the Ministry of Health established DTIU in 2016. This unit aims to address the negative impact of theft on the availability of medicines in public health facilities.[18] DTIU is collaborating with the Health Education Unit of the Ministry of Health to disseminate information regarding the dangers associated with the unauthorized possession of medical drugs and supplies. These preventative efforts focus on enhancing the capacity to address existing gaps in the national drug supply chain that facilitate theft. To ensure that these initiatives yield sustainable results, DTIU and its implementing agencies are conducting comprehensive awareness and sensitization

[18] Global Fund, (2017),

campaigns. DTIU has also been receiving funding from the Global Fund to beef up its operations and has also been supported to conduct workshops to raise awareness among police, magistrates, and medical practitioners about drug theft. In addition to DTIU's monitoring role, various strategies have been implemented at both district and facility levels to combat drug theft. At health facilities, once supplies are received, HAC members are required to sign a form confirming receipt of the drugs. Drug theft and pilferage have been reported in Malawi since 2010, driven by several factors, including weak internal controls, inadequate security measures such as burglar bars and fences at government facilities, and the management of facility pharmacies by untrained personnel. Furthermore, DTIU has collaborated with the Health Technical Support Services Department within the Ministry of Health to update Pharmacy stock cards. This update mandates the inclusion of details pertaining to the responsible pharmacy personnel involved in transaction recordings. Such measures will facilitate DTIUs ability to identify personnel in instances of fraudulent activities recorded on the stock cards, thereby enabling the presentation of evidence in legal proceedings. Additionally, this initiative aims to enhance monitoring throughout the drug distribution process, from delivery to dispensing within various departments of health facilities. Also, efforts are underway to transition from manual systems to electronic platforms for monitoring drug distribution, which will significantly improve the tracking of drugs and commodities all the way to the end-user health facilities.

To further strengthen the security of drugs, many facilities are implementing a three-lock system. This multi-layered approach is designed to safeguard against theft and ensure that medications are securely stored until they are dispensed to patients. By integrating these measures, DTIU aims to enhance accountability and reduce instances of drug theft and pilferage, ultimately improving the availability of essential medicines in Malawi's healthcare system.

Challenges

Despite the safeguards implemented, drug theft and pilferage in health facilities and hospitals remain prevalent. For example, there has been an increase in drug theft cases of Chiponde in Health Facilities recently. Also, although a three-lock system has been introduced at health

facilities, it is primarily effective after working hours, leaving drugs vulnerable to theft during the day, especially during prescription periods. In some health facilities, they use two lock systems, with no security guards during the day's hours. It has been noted that in many cases where three-lock systems have been damaged in health facilities, such as at Chisitu Health Center in Mulanje, authorities at the District Health Office (DHO) have not addressed these issues. Additionally, the lack of security guards during the day increases the risk of medicines and commodities being stolen. Majority of the health-care workers are not aware of the PMRA Act of 2019 aimed to ensure their basic understanding of the aiding and abetting related crimes on drug theft and pilferage. Furthermore, there is no mechanism to track false recipients when stock discrepancies occur.

4.6. Procurement of drugs and commodities

What's Working Well

Several strategies have been implemented to enhance the procurement of drugs and commodities at CMST. Inventory management systems, such as Open LMIS and NAVISION, are currently in use. Efforts are underway to fully digitize the supply chain processes, streamlining the delivery of commodities from manufacturers to patients through better integration of supply chain systems.

Procurement of medicines occurs directly from manufacturers, with regulatory oversight at the district level to ensure compliance with procurement processes. All procurements must undergo a rigorous approval process, and internal control systems are in place at the district level to safeguard the procurement of drugs and commodities. Additionally, audits of the procurement system are conducted annually to ensure transparency and accountability.

Challenges

Despite the above milestones, challenges persist. One major issue is the lack of foreign currency for drug and commodity procurement, largely due to the treasury not prioritizing foreign exchange allocations for medicines. Additionally, lengthy procurement processes delay drug

delivery. It has also been learnt that district hospitals are underfunded, yet CMST still delivers medicines even when DHOs have exhausted their allocations which leads to budget drawdowns and debt owed to CMST. The challenging aspect to this is that the Malawi government through the National Local Government Finance Committee delays payment to CMST which leads to shortages of funds in Malawi kwacha that affects its operations. When resources are limited, facilities prioritize purchasing only critical items.

5.0 Recommendations

To enhance the procurement and supply chain management of medicines and commodities, several key recommendations have been identified:

Drugs and Commodities stocks levels

Advance Payments and Letters of Credit

CMST should negotiate with suppliers for advance payments and letters of credit, facilitating more timely procurement.

Utilization of SADC Procurement Mechanism

The government should leverage on the Southern African Development Community (SADC) procurement mechanism to improve efficiency in sourcing medical supplies. This is particularly essential for commodities required in small quantities such as antivenom,

Collaboration with Other Countries

CMST should explore partnerships with other countries, such as Zambia, to optimize procurement practices and share resources.

Investment in Electronic Inventory Systems

The government needs to invest heavily in electronic systems for managing inventories, enhancing accuracy and efficiency in tracking supplies.

Prioritization of Forex Allocation

The department of treasury should prioritize the allocation of foreign exchange to CMST specifically for medicine procurement, ensuring that funds are available when needed.

Increased Budget Allocation for Pharmaceuticals

There should be a significant increase in the budget allocation for the drug budget to meet the growing needs of health facilities.

Timely Payments to CMST

The treasury must ensure timely payments to CMST to maintain a smooth flow of operations and prevent disruptions in supply.

To promote accountability treasury should make the payment process transparent to CMST and health facilities for easy follow -ups

Framework Agreements

Establishing framework agreements with suppliers can provide stability and predictability in procurement.

Negotiating Open Terms with Suppliers

CMST should negotiate with suppliers for open terms that allow for more flexible purchasing arrangements.

Direct Procurement from Manufacturers

Emphasizing direct procurement from manufacturers can enhance cost-effectiveness and ensure better supply reliability.

Increased Budget for Health Facilities

Health facilities should receive increased budgets to enable them to procure necessary medicines and supplies effectively.

Transportation and Deliveries of drugs and commodities

Increase Budget Allocation for Drug Procurement

The government should increase the budget allocation for the miscellaneous budget dedicated to drugs, ensuring that health facilities have adequate funding to meet their pharmaceutical needs. This drug budget should also include provisions for fuel allocation to facilitate timely delivery of medicines from DHOs to health facilities.

To enhance the efficiency of drug and commodity delivery within districts, it is recommended that ambulances be designated as dedicated transport vehicles for emergency orders and the redistribution of medicines. By utilizing ambulances in this capacity, health facilities can ensure that critical supplies reach their destinations promptly, thereby improving overall access to essential medications for patients in need.

Timely Order Placement by Facilities

Health facilities must prioritize placing their orders on time to avoid stockouts and ensure a steady supply of essential medications.

Investment in Electronic ordering system:

The government needs to invest in an electronic system for ordering drugs to speed up the processing of orders.

Revision of Routing Plans by CMST

CMST should initiate a process to revise and optimize routing plans for the distribution of drugs and commodities. This will help improve efficiency, reduce delivery times, and ensure that health facilities receive their supplies promptly.

Management and disposal of expired drugs

Construction of an Incinerator

The government should allocate funds for Health Facilities to construct dedicated incinerators for the safe disposal of expired and hazardous medical waste, ensuring environmental compliance and public safety.

Centralized Supply Chain Coordination

All supply chain activities should be managed by a single supply unit to enhance coordination, streamline processes, and improve overall efficiency.

Improvement in Financing

Efforts must be made to secure better financing options for the procurement and management of medical supplies, ensuring adequate resources are available.

Enhanced Quantification Processes

Improve methods for accurately quantifying the needs for drugs and commodities, enabling more effective planning and procurement.

Coordination of Donations

Strengthen coordination efforts regarding donations to avoid duplication and ensure that resources are effectively distributed to meet the needs of health facilities. There should be efforts to ensure that there is adherence to donation guidelines to mitigate short shelf-life medicines and commodities.

Standardization of Equipment

Implement standardization for essential equipment, such as laboratory instruments, to ensure compatibility and enhance the quality of healthcare services.

Increased Budget Allocation

The government should increase budget allocations for health services and ensure the availability of funds to support procurement and operational needs

Decentralization of Approval Processes

The Public Procurement and Disposal of Assets Authority (PPDA) should decentralize the approval process, allowing the Board of Governance and Independent Procurement and Disposal Committees (IPDCs) to expedite decision-making.

Management of drug theft and pilferage

Implementation of National IDs

Health service providers should utilize national IDs when dispensing medicines to ensure accurate identification and accountability, thereby enhancing the integrity of the dispensing process.

Accurate Stock Card Management

It is essential to indicate the actual names of medications on stock cards during drug issuance. This practice will improve tracking and inventory management, reducing the risk of errors and enhancing accountability.

Enhanced Supervision in Health Facilities

Health facility management should take proactive steps to supervise staff involved in drug issuance. This can include regular training, performance reviews, and oversight to ensure compliance with established protocols and improve overall efficiency in dispensing practices.

Procurement of drugs and commodities

Prioritize Forex Allocation for Medicine Procurement

The government should prioritize the allocation of foreign exchange for the procurement of medicines, ensuring that health facilities have the necessary funds to maintain a consistent supply.

Increase the Drug Budget

The government should consider increasing the budget dedicated to drug procurement to meet the growing healthcare needs and ensure that facilities have access to essential medications.

Investment in Electronic Inventory Systems

The government should invest in electronic systems for managing inventories, transitioning from manual stock cards to digital solutions. This will enhance accuracy, efficiency, and real-time tracking of stock levels.

Streamline Procurement Processes

The Public Procurement and Disposal of Assets Authority (PPDA) should work to reduce the complexity and duration of procurement processes, facilitating quicker access to necessary supplies.

Direct Procurement from Manufacturers

Emphasizing direct procurement from manufacturers can help address pricing challenges and ensure a reliable supply of quality commodities.

Utilize the SADC Procurement Mechanism

The government should leverage the Southern African Development Community (SADC) procurement mechanism and collaborate with countries like Zambia to work directly with manufacturers, optimizing sourcing and reducing costs.

6.0 Conclusion

The Ministry of Health through various departments are working tirelessly to ensure that there is a well-functioning drug/medicine supply chain which is evidenced in the development of key strategic documents such MSCTP and NSCTP. These documents have prioritized and concentrated efforts to key areas that make up the supply chain that is crucial to improving the system such as quantification, procurement, warehousing, storage and inventory management, distribution and transformation, waste management, information system, financing, human resource, policy and regulation, and monitoring and evaluation.

Evidence is clear that there has been progress in implementation of key areas in the NSCTP and MSCTP as there has been improvement in the capital base and increased allocation. Further to these, systems for procurement, management of drugs in the supply chain and deliveries have been developed and are being used. However; despite efforts made to improve the drug/medicine supply chain, Malawi's health supply chain is still facing significant issues such as low stock levels, limited funding for procurement of medicines for health facilities, delayed funds disbursement to supplying agencies and institutions, transportation and delivery challenges, expiries of medicines and disposal challenges, and not forgetting theft and pilferage.

Whilst local communities and civil society are expected to continue playing their crucial role of monitoring and reporting stockouts, theft and enhancing accountability, the report recommends improving financing, transportation and distribution, procurement systems, quantification processes, delivery of drugs/medicines and coordination of donations to address the gaps in the supply chain.

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8.0. Annexes

Annex 1

Stakeholder Level	Stakeholder Institution	Stakeholder interviewed
National	Central Medical Stores	Director of Pharmaceutical, Head of Transport and Logistics,
National	Directorate of Health & Technical Support Services	Director of Health & Technical Support Services
National	Drug Theft Investigation Unit	Head of drug Theft Investigations Unit
District	Phalombe	Pharmacy Incharge
District	Mulanje	Pharmacy Incharge
District	Mangochi	Pharmacy Incharge
Health Facility	Mpasa	Incharge, Pharmacy Assistant
Health Facility	Migowi	Pharmacy Assistant
Health Facility	Chitekesa	Incharge, Pharmacy Assistant
Health Facility	Chilinga	Incharge, Pharmacy Assistant
Health Facility	Mitundu	Incharge, Pharmacy Assistant
Health Facility	Area 25	Incharge, Pharmacy Assistant
Health Facility	Kawale	Incharge, Pharmacy Assistant

Health Facility	Iba	Incharge, Pharmacy Assistant
Health Facility	Chikole	Incharge, Pharmacy Assistant
Health Facility	Chisitu	Incharge, Pharmacy Assistant
Health Facility	Kambenje	Incharge, Pharmacy Assistant
Health Facility	Muloza	Incharge, Pharmacy Assistant
Health Facility	Namulonde	Incharge, Pharmacy Assistant

Annex 2

Data Collection Tools

Procurement

1.Which entity(ies) are responsible for implementing health commodity procurements?

2. Which entity is responsible for regulation and oversight of the overall procurement process?

3. Who approves procurements of medicines and commodities

4. What are the challenges faced during procurement processes?

5. What internal control systems are in place for procurement?

6. Is there a procurement ethics or anti corruption program in place?

7. If yes, what are these procurement ethics and how do they work?

8. How often do formal EXTERNAL audits of the procurement system take place?

9. How are procurement audit results utilized?

10. Are there policies and guidelines that specifically guide decentralized units - such as warehouses, hospitals and service delivery points for purchase of their own medicines from the private sector? If yes, what policies or guidelines are there?

11. Are there procedures in the form of guidelines, manuals or standard operating procedures (SOPs) available for procurement (in electronic or paper copy)?

11. During sourcing and procurement (prequalification or bidding), is reference made to the following?

12. Is there an approved vendor list?

13. What is the criteria for identifying these vendors?

14. Is detailed feedback provided to vendors and other stakeholders after the qualification process is completed?

15. Do the tenders include terms and conditions?

16. What percentage of procurements require vendor competition for tenders?

17. Do procurements benchmark or compare its purchase prices against market prices?

18. Is there a system with documented criteria and processes in place to evaluate vendor performance?

19. When assessing vendor performance, which of the following criteria are used?

20. Are procurement appeal decisions made publicly available?

21. Is there a contract management or an order and delivery management system in place?

22. Are there penalties for vendors that do not fulfill contracts?

23. Where is the master information on upcoming and completed procurements maintained?

24. Are procurement metrics used to measure procurement performance?

25. Do you use an electronic procurement (e-procurement) process?

26. If yes, what e-procurement system are you currently using?

27. Which partner is supporting that system?

28. Are there staff trained on the use of e-procurement at all levels (central, district level?

28. Where are medicines and commodities procured from (international suppliers/local suppliers)?

Financing

29. What are your sources of funding for supply chain operations and procurement of medicines?

30. What does each of the mentioned sources of funding finance?

31. What is the program's annual budget and expenditure from all sources for drugs and logistics

32. How much is the government budget or health facility revenue/cost recovery contributing to the total supply chain operations budget or for procurement of medicines & commodities at this level of the supply chain system?

33. How much are the donors/Implementing partners contributing to the total supply chain operations budget or for procurement of medicines & commodities at this level of the supply chain system?

34. What process is used to develop the program's budget?

35. Is there an opportunity for different stakeholders (e.g. donors, implementing partners, other government entities, CSOs and affected Communities, Private sector etc.) to provide input into the budgeting process?

36. How often are budgets prepared or updated?

37. Can funding be reallocated at the management level for example to allow for flexibility in the use of budget resources?

38. Does the budget include miscellaneous funds - money that can be used to address unexpected issues that arise during the year

39. Are supply chain costs recorded and records maintained (e.g. products, warehousing, distribution, personnel, overhead, service delivery etc.)?

40. Are there policies and SOPs to guide donations to ensure that we are not receiving donations that are nearly expiring?

41. Does your facility/entity have a funding strategy that explicitly includes supply chain costs?

42. Is there a cost sharing policy/plan in place with donors for the supply chain?

43. Do you use an Income or Profit and Loss statement?

44. Estimate the percentage of products bought from domestic versus international Suppliers

45. What challenges and bottlenecks with regards to supply chain financing

Transportation and Distribution

46. How are products delivered between each level of the system (include frequency and means of transportation)?

47. How are routes determined?

48. Do written procedures specify what type of distribution system should be used to distribute products between each level?

49. Is there a documented distribution schedule for all levels?

50. Which essential health products are distributed together (e.g., contraceptives, essential drugs, TB drugs, STI and HIV test kits and drugs, laboratory supplies, etc.)?Specify which ones and at which level.

51. Are a sufficient number of functioning vehicles available, with fuel and drivers, at appropriate levels, to meet the desired product distribution schedule?

52. Are vehicles regularly available for supervision?

53. Are vehicles available for biohazardous material, sharps waste transport and disposal of expired medicines?

54. Are vehicles used effectively for routine and emergency deliveries at all levels?

55. Are all vehicles in running order?

56. How is vehicle maintenance handled at the different levels?

57. Where are the vehicles kept (at what levels of the system)?

59. In general, are orders from suppliers delivered as scheduled at the following levels:

60. Is transportation outsourced at any level of the system?

61. Does the program's budget have a line items

62. Are any of the above items supported by external funds?

63.Are there plans to phase out or end this support?

64. Other comments on transport and distribution:

Management of Medicines Expiries & Security

65. What security measures are in place and currently operational

66. What is the national policy / SOP / etc. for determining which stock for a given item to issue first?

67. How do you determine which stock for a given item to issue out first? .

68. What aspects do you check for during dispatch of outbound orders?

69.Which of the following measures are in place to ensure commodity loss prevention?

70.How are shipments and orders confirmed between the sender and receiver

71.Is the delivery process traceable at all levels (Central, District, Facility)?

72. How are deliveries tracked?

73.IIs delivery confirmation documented?

74.Are picking and shipping operations monitored using standardized metrics?

75. Does your inventory management system include buffer stock/security stock?

76. How buffer stock is done

77. How is security stock done

78. What security management measures are in place for distribution activities?

79. Are there documented security requirements for trucks and personnel?

80. Are drugs and medical supplies received at health facilities recorded on stock cards/books?

81. Are differences between drugs and medical supplies counted physically and balances indicated on stock card?

82. Is issuing of drugs and medical supplies from pharmacy done with authorization and support of Requisition and Issue Vouchers RIVs/ by user departments?

83.Are drugs and medical supplies accounted for by user departments?

84.How are intra – transfers of drugs and medical supplies issued by pharmacies to intended other health facilities traced?

85.Does Health Center Advisory Committee (HAC/(HCMC) witness the delivery of drugs and medical supplies at health facility

86. Do HAC/HCMC members sign off once drugs have been delivered?

87. Are drugs audit being conducted periodically in all facilities

88. How are products that cannot be maintained in full supply allocated at the following levels:

89. Are there written provisions for the redistribution of overstocked supplies?

90. How are stock imbalances handled by supervisors/managers at the following levels:

91. Are there established procedures for placing emergency orders?

92. How often are emergency orders placed by the following levels (include product):

93. How successfully are emergency orders filled for the following levels?