USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM
Procurement and Supply Management

FISCAL YEAR 2024

ANNUAL REPORT

October 1, 2023 — September 30, 2024

USAID FROM THE AMERICAN PEOPLE

PEPFAR U.S. President's Emergency Plan for AIDS Relief

PMI U.S. PRESIDENT'S MALARIA INITIATIVE LED BY USAID FROM THE AMERICAN PEOPLE CDC

FISCAL YEAR 2024

ANNUAL REPORT

October 1, 2023 to September 30, 2024

Contract No. AID-OAA-I-15-00004

The USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project is funded under USAID Contract No. AID-OAA-I-15-00004. GHSC-PSM connects technical solutions and proven commercial processes to promote efficient and cost-effective health supply chains worldwide. Our goal is to ensure uninterrupted supplies of health commodities to save lives and create a healthier future for all. The project purchases and delivers health commodities, offers comprehensive technical assistance to strengthen national supply chain systems and provides global supply chain leadership.

Chemonics International implements GHSC-PSM in collaboration with Akesis, Arbola Inc., Connexi, IDA Foundation, IBM, IntraHealth International, Kuehne + Nagel Inc., McKinsey & Company, Panagora Group, Population Services International, SGS Nederland B.V., and University Research Co., LLC. To learn more, visit ghsupplychain.org.

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ACRONYMS

3HP	isoniazid and rifapentine (combination treatment for tuberculosis)
3HR	isoniazid and rifampicin
3PL	third-party logistics
4R	rifampicin
ABC	activity-based costing
ABC/3TC	abacavir/lamivudine
ABM	activity-based management
ABREMA	Burundian Regulatory Authority for Medicines for Human Use and Food
ACT	artemisinin-based combination therapy
AEFI	Adverse Events Following Immunizations
AIDC	automatic identification and data capture
AL	artemether-lumefantrine
AMC	average monthly consumption
AMF	Against Malaria Foundation
API	active pharmaceutical ingredient
ARPA	American Rescue Plan Act
ARTMIS	Automated Requisition Tracking Management Information System
ARV	antiretroviral
ASAQ	artesunate and amodiaquine
ASLM	African Society for Laboratory Medicine
BMGF	Bill & Melinda Gates Foundation
BSRHI	Botswana Sexual and Reproductive Health Initiative
CAB-LA	long-acting cabotegravir
CAD	consumption anomaly detection

CDC	Centers for Disease Control and Prevention
CHAI	Clinton Health Access Initiative
CHW	community health worker
CLHIV	children living with HIV
CMS	Central Medical Store
CNM	National Center for Parasitology, Entomology, and Malaria Control
COE	Center of Excellence
CO2	carbon dioxide
COVID-19	novel coronavirus
CPAP	continuous positive airway pressure
CPDS	Coordinated Procurement and Distribution System
CPI	Consumer Price Index
CS	contraceptive security
CSI	Contraceptive Security Indicator
DAP	delivered at place
DCP	decentralized procurement
DDP	delivery duty paid
DHIS2	District Health Information System
DRC	Democratic Republic of the Congo
DT	dispersible tablet
DTG	dolutegravir
ECG	electrocardiogram
EDD	estimated delivery date
EDI	electronic data interchange
EID	early infant diagnosis
eLMIS	electronic logistics management information system

EOC	Emergency Operations Center
EPCIS	Electronic Product Code Information Services
EPI	Expanded Programme on Immunization
ePOD	Electronic Proof of Delivery
ePL	ePackingList
EPPQ	equipment planning and placement questionnaire
EUV	end-use verification
EWEA	early warning, early action
FASP	forecasting and supply planning
FCA	Free Carrier
FDC	fixed-dose combination
Fe	ferrous fumarate
FP	family planning
FP/RH	family planning/reproductive health
FTO	Francophone Task Order
FY	fiscal year
GDSN	Global Data Synchronization Network
GHSC-PSM	USAID Global Health Supply Chain Program-Procurement and Supply Management project
GHSC-QA	USAID Global Health Supply Chain Program-Quality Assurance project
GHSC-RTK	USAID Global Health Supply Chain Program-Rapid Test Kit project
GHSC-TA	USAID Global Health Supply Chain Program-Technical Assistance project
GLN	Global Location Number
GTIN	Global Trade Item Number
HDP	hypertensive disorders of pregnancy
HPV	human papillomavirus

HR	human resources
IDIQ	indefinite delivery, indefinite quantity
I2I	Innovation to Impact
ITP	invoice-to-pay
IUD	intrauterine device
JMS	Joint Medical Stores
KII	key informant interview
KPI	key performance indicator
KSM	key starting material
LLIN	long-lasting insecticide-treated net
LMIS	logistics management information system
LQAG	LLIN Quality Assurance Group
MCAI	Malaria Commodity Accountability Initiative
MCH	maternal and child health
mCPR	modern contraceptive prevalence rate
MDM	Master Data Management
M&E	monitoring and evaluation
M4All	Medicines for All Institute
MH	maternal health
MIS	management information system
MMD	multi-month dispensing
MMV	Medicines for Malaria Venture
MNCH	maternal, newborn, and child health
MOH	Ministry of Health
MOP	malaria operational plan
MOPDD	Malaria & Other Parasitic Diseases Division

MOSAIC	Maximizing Options to Advance Informed Choice for HIV Prevention
MPA-IM	medroxyprogesterone acetate intramuscular
mRDT	malaria rapid diagnostic test
MSF	Médecins Sans Frontières
MSPAS	Ministry of Public Health and Social Assistance
MVP	minimum viable product
NACP	National AIDS Control Program
NDSO	National Drug Service Organization
NextGen	USAID Next Generation Global Health Supply Chain projects and other follow-on mechanisms
NFO PMU	non–field office program management unit
NMCP	National Malaria Control Program
NSCA	National Supply Chain Assessment
OC	oral contraceptive
OMS	Order Management System
OOS	out-of-specification
OpEx	operational excellence
OS	oral suspension
OTD	on-time delivery
OTIF	on time, in full
pALD	pediatric abacavir/lamivudine/dolutegravir
P&L	profit and loss
PBO	piperonyl butoxide
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PLHIV	people living with HIV
PMI	U.S. President's Malaria Initiative

PNSR	National Reproductive Health Program
PO	purchase order
PPH	postpartum hemorrhage
PPMRm	Procurement Planning and Monitoring Report for malaria
PrEP	pre-exposure prophylaxis
PSA	pressure swing adsorption
Q	quarter
QA	quality assurance
QAT	Quantification Analytics Tool
QC	quality control
QR	quick response
RDC	regional distribution center
RECO	Relais Communautaires
RFP	request for proposal
RHSC	Reproductive Health Supplies Coalition
RO	requisition order
RTK	rapid test kit
SAM	Sourcing Assistance Messenger
SC	subcutaneous
SCM	supply chain management
SDP	service delivery point
SLA	service-level agreement
SMO	social marketing organization
SOP	standard operating procedure
SOW	scope of work

SP	sulfadoxine-pyrimethamine
SPAQ	sulphadoxine-pyrimethamine + amodiaquine
SSCC	serial shipping container code
TA	technical assistance
TB	tuberculosis
TE	tenofovir/emtricitabine
TIOP	Traceability Interoperability Platform
TL	tenofovir/lamivudine
TLD	tenofovir/lamivudine/dolutegravir
TO	task order
TOSP	Transition Order Supply Plan
TPA	technical priority area
TPT	TB preventive treatment
TWG	technical working group
TXA	tranexamic acid
UNAIDS	Joint United Nations Programme on HIV and AIDS
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USG	U.S. Government
VAN	Global Family Planning Visibility and Analytics Network
VIPMA	vendor and instrument performance management agreement
VL	viral load
VMI	vendor-managed inventory
VMMC	voluntary medical male circumcision
VMS	vendor-managed solutions

VSI	vendor-stored inventory
WHO	World Health Organization
ZAMMSA	Zambia Medicines and Medical Supply Agency

EXECUTIVE SUMMARY

The U.S. Agency for International Development (USAID) Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project, funded by USAID, is pleased to present this report summarizing our work and performance for quarter 4 (Q4) fiscal year 2024 (FY 2024). The project provides lifesaving medicines and other health commodities. GHSC-PSM builds efficient, reliable, and cost-effective supply chains to deliver these drugs and health supplies for the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), the U.S. President's Malaria Initiative (PMI), USAID programs in voluntary family planning and reproductive health (FP/RH), and the Agency's program in maternal, newborn, and child health (MNCH), which share the cost of the project. This report also describes USAID's response to the novel coronavirus (COVID-19).

GHSC-PSM Life of Project Fast Facts

- **Delivered $5.7 billion** in drugs, diagnostics, and health commodities**.**
- Achieved **on-time delivery (OTD)[1] of over 80 percent for 25** consecutive quarters.
- Averted an estimated **104,000 maternal deaths, 1.1 million child deaths, 54 million unintended pregnancies, prevented 21 million abortions and saved countries about $4 billion in direct healthcare costs** as a result of contraceptives and condoms delivered.
- **Delivered enough antiretroviral therapy to provide nearly 26.6 million patient years of HIV treatment**.
- Delivered over **603 million antimalarials to treat malaria infections.**
- Delivered over **332 million long-lasting insecticide-treated nets (LLINs),** potentially protecting nearly **665 million people.**
- Delivered contraceptives to country FP programs to provide **116 million couple-years** of protection.
- Delivered a total of **$28 million in MNCH commodities.**
- Supported **48 countries** with technical assistance.

[1] The project's delivery window is –14/+7 days. With this window, deliveries are considered on time if they are made within the period 14 days before or seven days after the agreed-to delivery date.

FY 2024 PERFORMANCE AND PROGRESS HIGHLIGHTS

INTRODUCTION: REFLECTION ON FY 2024

FY 2024 was envisioned as a transition and close-out year at its start but evolved into a full implementation year as task order extensions provided a two-year time frame for a successful transition to the USAID Next Generation Global Health Supply Chain (NextGen) projects and other follow-on mechanisms. Throughout the year, countries remained responsive to the changing needs of their supply chains, whether that entailed new ways of providing last-mile delivery in conflict areas or introducing new products such as injectable long-acting cabotegravir (CAB-LA).

In FY 2024, the project continued to surpass its on-time delivery (OTD) targets, achieving 88 percent OTD. GHSC-PSM achieved cost savings through a host of activities that improved supply chain efficiencies to ensure that the project makes the best use of U.S. taxpayer dollars wherever possible, saving over $169.7 million on commodities through the effective implementation of procurement and sourcing strategies. The project also saved $24.3 million in logistics costs and reduced emissions by 13,423 metric tons of CO2 by opening competition in freight lanes, optimizing RDC warehousing and routing, shipping by ocean over air, and reducing packaging on select products.

Data continues to drive everything that GHSC-PSM does, and the project is moving the needle on data capture and analytics for decision making. In FY 2024, GHSC-PSM saw significant advancements with in-country data systems and worked to connect in-country data to platforms such as the Global Family Planning Visibility and Analytics Network (VAN). The project made progress on the global standards, which are being adopted by GHSC-PSM suppliers as they recognize that these standards will make it easier to drive data through the various systems and countries, providing a feedback loop that is valuable for global and local supply chains.

GHSC-PSM continues to identify opportunities that support USAID's localization vision. In FY 2024, the project qualified a third Africa-based supplier for malaria commodities, bringing the total number of eligible African manufacturers procured from in FY 2024 to four across all commodities, socialized research on localized hormonal contraceptive manufacturing, and worked to increase use of quality local manufacturers through international wholesalers. GHSC-PSM takes a holistic view of localization that includes governments, civil society, and engagement of the local private sector.

GHSC-PSM also introduced new standard operating procedures (SOPs) for commodities that require special handling. The SOPs integrate real-time data in monitoring temperature excursions to ensure products meet temperature requirements. A notable improvement to warehousing included a warehousing Center of Excellence (COE) pilot in Ethiopia and publication of a guide for other countries on COE implementation. The guide will help countries align the layout and flow of warehouses with best practices to save money while delivering products more effectively and efficiently.

The public health supply chain relies on the private sector as products flow through the chain of custody between public- and private-sector actors. Strategic sourcing that expands the role of the private sector in the supply chain is an essential part of GHSC-PSM's market-shaping activities and is a win-win for

GHSC-PSM and suppliers. A significant component of this enhanced private-sector engagement is creating greater certainty for suppliers by sharing forecasting and supply planning data with suppliers to demonstrate the amount of projected demand. This allows suppliers to plan their production cycle, inventory, and activities to meet demand and enables them to offer the project better prices.

GHSC-PSM continued to identify creative ways to surmount challenges when faced with unforeseen events, including inflation, political unrest, civil strife, and extreme weather. The project strengthened its relationships with local and global partners to ensure a continuous, reliable supply of products reaches the people who need them most. For example, in Ethiopia, GHSC-PSM responded to the humanitarian crisis with an approach focused on public-private partnerships using local third-party logistics (3PL) providers to deliver lifesaving commodities to people in high-risk areas. The project collaborated closely with the World Food Programme to leverage the expertise and resources of the humanitarian sector. In Haiti, GHSC-PSM needed to deliver through a multi-pronged protracted crisis. Even with high levels of urban violence, GHSC-PSM was able to conduct uninterrupted last-mile distribution of antiretrovirals (ARVs), opportunistic infection, lab, and family planning products. During the ongoing crisis, there have been no stockouts of tracer and life saving commodities.

Looking ahead to FY 2025, the project is about to pilot an electronic data interchange with eight strategic suppliers of ARVs and reagents. This will automate transmission of four standardized messages—purchase order, purchase order acknowledgement, despatch advice, and invoicing—all based on the GS1 XML format. This work will continue to evolve in FY 2025 and we will seek to operationalize the significant efficiencies that electronic dispatch advice can bring to the receiving function at central warehouses in Haiti, Nigeria, Zambia, and Zimbabwe. GHSC-PSM expects to be in transition mode as it continues to ensure an uninterrupted supply of commodities and technical assistance to strengthen the supply chain. The project aims to be a good transition partner, ensuring the supply chain advances accomplished over the past nine years continue under NextGen.

TRANSITION TO NEXTGEN

In FY 2024, GHSC-PSM continued to make progress in deploying transformative supply chain solutions while laying a strong foundation for a successful transition to USAID's NextGen suite of awards. GHSC-PSM entered its transition phase before the end of the fiscal year. Country transition began in Cameroon, where a NextGen bilateral award was made under CompTA. Other country offices closed in Kenya, Pakistan, and the Regional Development Mission for Asia (RDMA). In Q4, GHSC-PSM continued supporting its closing country offices, including refining and implementing the transition of in-country procurement support functions to local mechanisms and documenting learnings to apply to future country office closures.

In FY 2024, GHSC-PSM worked with new awardees, updating data inventories, and engaging with USAID through various working groups to plan anticipated transition needs. The project reinitiated the dialogue on technical data sharing with the NextGen Supply Chain Control Tower partner.

The project worked to streamline data-sharing decision points and conducted an annual review of headquarters' data and information assets, in preparation for a transition handover. GHSC-PSM is managing a transition of the Quantification Analytics Tool (QAT) to Digital Square as a public good.

HIGHLIGHTS FROM FY 2024

HIV/AIDS

In FY 2024, the project used HIV/AIDS funds to support PEPFAR's goals to control the HIV/AIDS epidemic by ensuring an uninterrupted supply of commodities for prevention, treatment, and viral load (VL) testing at all levels, achieving OTD and on time, in full (OTIF) delivery of HIV commodities of 88 percent OTD and 87 percent OTIF. The project also implemented technical assistance and systems strengthening initiatives to promote country ownership of the HIV/AIDS response; participating in global policy dialogues; creating and disseminating global resources; supporting health supply chain research; and modifying supply chain data tools to improve procurement, management, availability, and quality of health commodities.

The project continued to reshape the ARV treatment and molecular diagnostic markets, addressing systemic barriers in HIV treatment and VL/early infant diagnosis (EID) supply chains by increasing private-sector engagement and creating a more sustainable environment where suppliers are partners in addressing in-country supply chain challenges. The project has maintained a treatment cost of under $40 per patient per year for inventory pre-positioned in Southern Africa through the USAID vendor-managed solutions program, and expanded all-inclusive service-level agreement (SLA) and optimizing laboratory services to be more cost effective, efficient, and responsive to patient needs. GHSC-PSM was instrumental in procuring and delivering the first shipments of CAB-LA for pre-exposure prophylaxis (PrEP) to nine PEPFAR countries. See section B1: HIV/AIDS for details.

MALARIA

In FY 2024, GHSC-PSM achieved 88 percent OTD and 88 percent OTIF for malaria commodities. As part of PMI's efforts to shift countries toward higher procurements of Dual AI nets, which are more effective against mosquitoes that have developed resistance to pyrethroid insecticides, the quantity of Dual AI nets procured by GHSC-PSM in FY 2024 doubled compared to FY 2023. The project began working with a newly onboarded African manufacturer for antimalarials, aligning with PMI's local investment efforts. GHSC-PSM published an advocacy paper highlighting opportunities for better-integrating community health workers into the supply chain, co-organized a webinar to present the paper, and developed technical resources such as the Malaria Commodity Accountability Guidebook and Tool. The project also implemented QA strategies focusing on LLIN durability, refined an inventory management tool for low-malaria-endemic settings, and contributed to enhanced LLIN traceability and global standards by collaborating with the TraceNet group to produce revised guidelines. Some of GHSC-PSM's successes will be shared at the 2024 American Society for Tropical Medicine and Hygiene (ASTMH) Annual Meeting and Global Health Supply Chain Summit (GHSCS) events. See Sections B2, Malaria, and C3, Global Collaboration for details.

FP/RH

In FY 2024, GHSC-PSM used FP/RH funds to deliver contraceptives to 17 countries, achieving OTD of 93 percent and OTIF of 91 percent. GHSC-PSM also improved FP/RH supply chain data visibility through submitting data to the VAN platform and participated in the Consensus Planning Group (CPG), and updated and promoted the 2023 Contraceptive Security Indicators dashboard. GHSC-PSM and GHSC-QA also qualified three new suppliers of oral contraceptives, surveyed countries to understand demand for implant removal kits, and continued stocking commonly procured FP commodities in its RDC to fill orders quickly and to mitigate potential supply constraints. To support these achievements, the project published papers, participated in global dialogues, supported initiatives to increase supply chain visibility, improved stakeholder collaboration, expanded access to data tools that increase supply chain visibility, and engaged social marketing organizations, among other activities. See Section B3, FP/RH for details.

MNCH

In FY 2024, GHSC-PSM continued to share MNCH supply chain information, including strategies for MNCH commodity financing, newborn equipment and supplies, and commodity quality and availability for hypertensive disorders of pregnancy (HDP) and postpartum hemorrhage. The project provided tailored support to countries to procure MNCH commodities—achieving 100 percent OTD for MNCH products—to adjust MNCH supply chain policies and operations, and to improve MNCH supply chain data analysis. GHSC-PSM published Solutions to address insufficient and uncertain funding for MNCH medicines and Winning the Logistics Game, among other major MNCH resources, and took part in six global MNCH events to share MNCH supply chain knowledge and country learnings. To support data visibility for decision making, the project assisted seven countries in collecting end-use verification survey data for MNCH programs and continued implementing advanced analytics tools, including operationalizing the consumption anomaly detection tool in Liberia and Malawi. GHSC-PSM co-chaired the Maternal Health Supplies Caucus, helping launch the Caucus's tranexamic acid working group, and worked with partners to develop global newborn health supply chain guidance. GHSC-PSM and partners also embarked on a new QA study, collecting and analyzing sample HDP medicines from Ghana, Malawi, and Nigeria as one of the first multi-country studies to assess HDP product quality at lower levels of the supply chain. See section B4: Maternal, Newborn and Child Health for details.

GLOBAL SUPPLY CHAIN PERFORMANCE

In FY 2024, GHSC-PSM continued to lead advancements in global health supply chain management by maintaining on-time delivery above the contractual target of 80 percent for 25 consecutive quarters. Each year, the project refines its sourcing strategies to adapt to changing conditions and ensure continued high performance. Over the project's lifetime, GHSC-PSM has achieved more than $1.2 billion in commodity cost savings.

The project also made strides in digital transformation to strengthen operational efficiency, including introducing an electronic data interchange to standardize and streamline transactions with suppliers. Additional accomplishments include expansion of vendor-managed solutions, increased procurement

from African manufacturers, and collaboration with viral load suppliers to improve laboratory network performance. See section C.1 for more details.

STRENGTHENING HEALTH SYSTEMS

GHSC-PSM's strategic goal is for every country to have an integrated, optimized, accountable, agile, lean, sustainable, locally led health supply chain capable of supplying quality products to all citizens. In FY 2024, GHSC-PSM continued to advance USAID's goal of placing local communities in the lead by equipping public- and private-sector actors with tools and skills to independently manage their country's health supply chains. GHSC-PSM enhanced such data analytics tools as the warehouse orchestration tool in Nigeria and the dynamic routing tool in Zambia, making them adaptable and easier to hand over for country ownership.

To promote sustainability, GHSC-PSM supported the central medical stores in Eswatini, Lesotho, and Rwanda to move closer toward financial independence, with the National Drug Service Organization (NDSO) in Lesotho now serving as a model for self-sufficient health supply chain operations in Southern Africa. Furthermore, the project focused on enhancing human capacity across the health supply chain by collaborating with countries like the Democratic Republic of the Congo (DRC), Rwanda, and Sierra Leone to develop homegrown solutions tailored to country-specific supply chain workforce challenges. For more information, see section C2.

GLOBAL COLLABORATION

GHSC-PSM collaborates with international and local partners that integrate work across health sectors and share information and resources in order to reach more people with essential medicines. The project engages with local and global partners through technical working groups, meetings, and presentations to reach more communities, allocate scarce supplies, harmonize standards and practices, and manage commodity stock information as a global good. In Q4, USAID presented GS1 standards and GHSC-PSM's Traceability Interoperability Platform pilot program at the Francophone Africa GS1 and the GS1 India conferences. The project also delivered dengue lab diagnostics to Jamaica, the first procurement of such supplies by GHSC-PSM. For more information about global collaboration, see section C3.

Introduction

A1. BACKGROUND

The U.S. Agency for International Development (USAID) Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project works to ensure uninterrupted supplies of quality medicines and commodities to save lives and create a healthier future for all. The project directly supports the following global health areas of importance to the U.S. Government (USG):

- The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) to help reach its HIV/AIDS global 95-95-95 testing, treatment, and viral load (VL) suppression targets.
- The U.S. President's Malaria Initiative (PMI) to reduce malaria deaths and substantially decrease malaria morbidity toward the long-term goal of elimination.
- USAID's Family Planning and Reproductive Health (FP/RH) program to ensure that key RH commodities are available for safe and reliable voluntary FP.
- USAID's maternal and child health (MCH[2]) program to prevent child and maternal deaths.
- Other public health threats as they emerge, such as Zika and novel coronavirus (COVID-19).

The project procures and delivers medicines and commodities, offers comprehensive technical assistance (TA) to strengthen national supply chain systems, and provides global supply chain leadership to ensure that lifesaving health supplies reach those most in need. GHSC-PSM procured commodities or provided TA to more than 70 countries over the life of the project. (See Exhibit 1 below.)

A2. ABOUT THIS REPORT

We are pleased to present our performance report for the fourth quarter (Q4) fiscal year 2024 (FY 2024) (July 1, 2024, through September 30, 2024). GHSC-PSM is a matrixed project that integrates work across two axes: health areas and technical objectives. Accordingly, the report is organized as follows:

- Section B summarizes major activities in each of the **five health areas**, including HIV/AIDS; malaria; FP/RH; maternal, newborn, and child health (MNCH); and other public health threats.
- Section C describes activities under **three main technical objectives** (global commodity procurement and logistics, systems strengthening, and global collaboration), including key indicator results for those objectives.
- Annex A describes the activities GHSC-PSM has undertaken with **COVID-19 funding** to respond to the pandemic.

[2] To clarify, the program externally is referred to as the "Maternal and Child Health Program," which was the impetus to name the task order the "Maternal and Child Health" task order. However, we often refer to maternal, newborn, and child health when discussing the technical content because we have a particular emphasis on supporting newborns.

- Annex B provides **performance indicators** for July 1, 2024, through September 30, 2024.

Given the size and complexity of GHSC-PSM, this report summarizes the project's primary efforts and achievements. It reflects only a fraction of the project's daily efforts to help people around the world live healthier lives.

Exhibit 1. Countries for Which GHSC-PSM Procured Commodities (proc.) or Provided TA Over Life of Project (does not include COVID-19 procurements)[3]

	Proc.	TA		Proc.	TA
AFRICA:			ASIA:		
Republic of Angola	●	●	Islamic Republic of Afghanistan	●	
Republic of Benin	●		People's Republic of Bangladesh	●	
Republic of Botswana	●	●	Union of Burma	●	●
Burkina Faso	●	●	Kingdom of Cambodia	●	●
Republic of Burundi	●	●	Republic of Indonesia		●
Republic of Cameroon	●	●	Lao People's Democratic Republic	●	●
Democratic Republic of the Congo (DRC)	●		Nepal	●	●
Republic of Côte d'Ivoire	●	●	Islamic Republic of Pakistan	●	●
Kingdom of Eswatini	●	●	Independent State of Papua New Guinea	●	●
Federal Democratic Republic of Ethiopia	●	●	Republic of the Philippines	●	
Gabonese Republic	●		Kingdom of Thailand	●	●
Republic of Ghana	●	●	Socialist Republic of Vietnam	●	●
Republic of Guinea	●	●	LATIN AMERICA & CARIBBEAN:		
Republic of Kenya	●	●	Antigua and Barbuda	●	
Kingdom of Lesotho	●	●	Commonwealth of the Bahamas	●	
Republic of Liberia	●	●	Barbados	●	●
Republic of Madagascar	●	●	Federative Republic of Brazil	●	
Republic of Malawi	●	●	Republic of Chile	●	
Republic of Mali	●	●	Republic of Colombia	●	●
Islamic Republic of Mauritania	●		Dominican Republic	●	
Republic of Mozambique	●	●	Republic of Ecuador	●	
Republic of Namibia	●	●	Republic of El Salvador	●	●
Republic of Niger	●	●	Republic of Guatemala	●	●
Federal Republic of Nigeria	●	●	Co-operative Republic of Guyana	●	●
Republic of Rwanda	●	●	Republic of Haiti	●	●
Republic of Senegal	●		Republic of Honduras	●	●
Republic of Sierra Leone	●	●	Jamaica	●	●
Republic of South Africa	●		Republic of Nicaragua	●	
Republic of South Sudan	●	●	Republic of Panama	●	●
United Republic of Tanzania	●	●	Republic of Paraguay	●	
Togolese Republic	●		Republic of Peru	●	
Republic of Uganda	●	●	Federation of Saint Kitts and Nevis	●	
Republic of Zambia	●	●	Saint Lucia	●	
Republic of Zimbabwe	●	●	Saint Vincent and the Grenadines	●	
EUROPE & EURASIA:			Republic of Suriname	●	●
Republic of Kazakhstan	●		Republic of Trinidad and Tobago	●	
Kyrgyz Republic	●	●	MIDDLE EAST:		
Republic of Tajikistan	●	●	Hashemite Kingdom of Jordan	●	
Ukraine	●		Republic of Yemen	●	

[3]Procurement and TA country count criteria have been refined and clarified. Country counts may vary from previous reports. Procurement countries include all countries for which GHSC-PSM has released a purchase or distribution order during the life of the project. The table includes these countries for all routine product groups, with COVID-19 procurements excluded. TA countries include all countries where GHSC-PSM has conducted long- or short-term technical assignments for all health areas. Countries with limited in-country logistics support only are not counted.

PROGRESS BY HEALTH AREA

This section summarizes GHSC-PSM's support in Q4 FY 2024 for HIV/AIDS, malaria, FP/RH, MNCH, and other public health threats.

B1. HIV/AIDS

GHSC-PSM has delivered enough antiretrovirals (ARVs) to provide nearly **26.6 million patient years of HIV treatment over life project**, including over **827 thousand patient years of treatment in Q4.**

As of Q4, GHSC-PSM has delivered **101.4 million bottles of tenofovir/lamivudine/dolutegravir (TLD)**[4] to 34 countries,[5] which provided over **21.7 million patient years of treatment**.

Multi-month bottle counts of TLD first-line treatment accounted for **100 percent of all quantities delivered** in Q4. Patients saved **an estimated 6.7 million trips** to the pharmacy in Q4 and **more than 159 million trips over the life of the project.** Multi-month dispensing (MMD) saves patients time and money and gives clinicians more time with other patients.

In Q4, **29 countries**[6] procured HIV/AIDS medicines and commodities through GHSC-PSM**.**

A total 26 countries[7] **received health supply chain systems strengthening** from GHSC-PSM with HIV/AIDS funding in FY 2024.

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[4] For more information, see Section B1. HIV/AIDS, TLD, and multi-month dispensing.

[5] Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, DRC, Dominican Republic, Ecuador, El Salvador, Eswatini, Ethiopia, Gabon, Guatemala, Haiti, Honduras, Kenya, Mozambique, Namibia, Nepal, Nigeria, Panama, Papua New Guinea, Peru, Rwanda, South Africa, Tanzania, Togo, Uganda, Ukraine, Vietnam, Zambia, Zimbabwe

[6] GHSC-PSM procured HIV/AIDS commodities for the following countries: AFRICA: Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, DRC, Eswatini, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, Rwanda, Senegal, Tanzania, Togo, Uganda, Zambia, and Zimbabwe. CENTRAL/SOUTH AMERICA: El Salvador, Honduras, Nicaragua, CARIBBEAN: Haiti; EUROPE & EURASIA: Ukraine, Vietnam

[7] GHSC-PSM has provided HIV-funded TA support to the following countries in FY 2024: AFRICA: Angola, Botswana, Burkina Faso, Burundi, Cameroon, Eswatini, Ethiopia, Ghana, Kenya (TO5), Lesotho, Liberia, Malawi, Mali, Mozambique, Namibia, Nigeria, Rwanda, Uganda, Zambia, Zimbabwe; ASIA: Burma; CARIBBEAN: Haiti, CENTRAL/SOUTH AMERICA: El Salvador, Guatemala, Honduras, Panama. The project also provided HIV-funded short-term assistance to Jamaica and Tanzania in FY 2024.

GHSC-PSM supports PEPFAR's goal of controlling the HIV/AIDS epidemic by procuring and delivering medicines and commodities to prevent infection and treat people living with HIV (PLHIV), including VL testing commodities to monitor treatment efficacy. This requires global collaboration with suppliers, other donors, the Global Fund, the USG, and supported country governments. GHSC-PSM implements data visibility initiatives to procure and distribute ARVs and diagnostics appropriately, linking patients with necessary health commodities. Project activities support USAID's efforts to achieve 95-95-95 goals: 95 percent of PLHIV people know their status, 95 percent of these are on HIV treatment, and 95 percent of these have no detectable virus.

REFLECTIONS ON FY 2024

Over the past year, GHSC-PSM continued to address systemic barriers—like supply chain inefficiencies, regulatory hurdles, and pricing models—that limit the availability of lifesaving treatments and address them through strategic partnerships, innovative financing models, and scalable solutions.

GHSC-PSM's ARV procurement strategies increase private-sector involvement in the delivery process and create a more sustainable environment where suppliers are true partners in addressing in-country supply chain challenges. In FY 2024, the project expanded the USAID vendor-managed solutions (VMS) program, exceeding targets by delivering 5.8 million TLD 90-count bottles (~$55M) to five participating countries. The success of the program is reflected in shorter delivery lead times, reduced stock levels and holding costs, and alleviation of in-country warehousing constraints.

Looking forward to FY 2025, GHSC-PSM is engaging with suppliers under the VMS program to bypass overcrowded central warehouses and deliver products downstream, directly to provincial warehouses. The program has demonstrated to countries that they can leverage their purchasing power to require private-sector partners to take on more aspects of the supply chain. In Mozambique, for example, these downstream services will further lessen the burden of high stock levels and inventory holding costs at the Central Medical Stores (CMS), while also alleviating government budget constraints for in-country distribution.

The project continues to reshape the molecular diagnostic market, bringing more countries under an all-inclusive service-level agreement (SLA) and optimizing laboratory services to be more cost effective, efficient, and responsive to patient needs. This strategic sourcing approach has changed the market dynamics, altering the relationship between buyers and suppliers from a short-term transactional relationship to a more long-term strategic partnership. This benefits the global community beyond GHSC-PSM, as project-negotiated terms and pricing are available to other procurers in countries using public funds, such as Ministries of Health (MOHs) and the Global Fund. The project worked to expand the program, engaging laboratory stakeholders through a workshop for partner countries in Ethiopia and the ongoing series of webinars in collaboration with African Society for Laboratory Medicine (ASLM).

These key GHSC-PSM–led market-shaping initiatives have led to potential opportunities to significantly strengthen the supply chain and introduce sustainable, long-term solutions that benefit the manufacturers and procuring countries and donor agencies.

GHSC-PSM played a key role in scaling up new and emerging biomedical prevention products, procuring and delivering the first shipments of the long-acting injectable CAB-LA for PrEP and dapivirine rings in support of USAID's prevention strategy. In February 2024, Nurse Dorcas Kapupa of Zambia became the

first, outside of the U.S., to offer her clients CAB-LA outside of a study. This was a monumental event for all working to end the HIV epidemic.

GHSC-PSM worked closely with the PEPFAR Pediatric Treatment Workstream and the Global Fund to introduce and scale a more optimal ARV for children living with HIV, pediatric abacavir/lamivudine/dolutegravir (pALD), and to help countries prepare for the drawdown of legacy regimens and the uptake of pALD.

GHSC-PSM made strides in implementing GS1 global standards to advance efficiency and patient safety in the global health supply chain. Highlights of this work included creating the Traceability and Interoperability Platform (TIOP), a pilot concept to share serialized data between an ARV supplier, a procurement agent, and a national traceability system in Nigeria; a proof of concept in Zambia to implement and test a serialization module in the Zambia Medicines and Medical Supply Agency (ZAMMSA) warehouse management system; and requirements development for automatic identification and data capture (AIDC) capability in Zimbabwe.

FY 2024 ended with GHSC-PSM joining USAID and PEPFAR in Geneva for discussions with the World Health Organization (WHO), Joint United Nations Programme on HIV and AIDS (UNAIDS), the Global Fund, and the International AIDS Society. Project representatives offered valuable insights into market trends, ARV and VL/EID demand forecasts, and the progress, challenges, and opportunities in engaging the private sector and fostering sustainable regional manufacturing in Africa. Increased collaboration with governments and private-sector stakeholders will play a crucial role as we continue to focus on our goal: to improve global health outcomes and ensure access to essential products and services.

GHSC-PSM remains dedicated to advancing PEPFAR's mission to end the HIV epidemic by fostering transformative partnerships that enhance public health systems. We are committed to improving access to HIV prevention, lifesaving treatment, and routine viral load monitoring through differentiated care models and optimized supply chains.

IMPACT OF GHSC-PSM PROCUREMENTS

GHSC-PSM estimates that a total of 470,000 adult and child deaths and approximately 1.7 million HIV infections were averted over the life of the project.[8] This is a result of the project's deliveries of antiretroviral therapy—providing nearly 26.6 million patient years of HIV treatment to date—and condoms procured by the project**.** When combined with proper counseling and correct use, these medicines save lives and prevent future infections, contributing to PEPFAR's goal of ending the HIV/AIDS pandemic as a public health threat by 2030. Calculating the estimated number of deaths averted due to USAID support through GHSC-PSM provides an important measurement. These indicators report actual direct impact, as opposed to output and outcomes, and are powerful messages highlighting the positive health impact of GHSC-PSM's commodity procurements on behalf of the U.S. Government.

HIV/AIDS SUPPLY CHAIN ON-TIME DELIVERY AND COST SAVINGS

Procurement

[8] Methodology to support impact indicators.

GHSC-PSM has procured more than $4.1 billion in HIV commodities over the life of the project, with more than $448 million procured in FY 2024. Adult ARVs made up 49 percent of all procurements by value in FY 2024.

Savings from strategic sourcing of HIV commodities

GHSC-PSM's strategic sourcing activities generated significant cost savings for PEPFAR—resources that can be channeled into expanded procurement and programming opportunities. As shown in Exhibit 2, GHSC-PSM has saved $863 million on core HIV commodities[9] over the life of the project compared to baseline prices, including over $138 million in the second half of FY 2024.

Commodity cost savings for VL/EID laboratory commodities have been reported since the 2020 global request for proposals (RFP). Beginning in Q4 FY 2024, and applied retroactively, the analysis now includes an inflation adjustment, which is in alignment with other reported commodity cost savings categories. Because laboratory commodities now also include SLAs for equipment rental, maintenance, and repair, calculating "savings per test" (rather than "savings per saleable unit)" is more accurate. To factor inflation into price-per-test, the baseline cost of a VL test (pre-global RFP cost) is compared to current cost per test and adjusted for inflation as determined by the Bureau of Labor Statistics Consumer Price Index (CPI)[10]. The project accounts for inflation-driven changes to isolate the cost implications of strategic sourcing market shifts, rather than general inflation. Near-historic inflation in the last few years coupled with falling actual prices has had a synergistic effect on the outcome, leading to large savings figures.

As of the first half of FY 2024, TLD orders purchased under D-series Incoterms are now included in the adult ARV commodity cost savings calculation. D-Term procurement for TLD began with a small trial in FY 2020 Q3–Q4 has since expanded to account for as much as 99 percent of ordered TLD units in some years. Therefore, the commodity cost savings calculation now more accurately reflects the procurement of TLD products. The commodity cost savings graph (Exhibit 2) incorporates this change historically starting in FY 2020 Q3 and Q4. Over the life of the project, $619 million in cost savings were generated from adult ARVs. In Q3 and Q4, $93 million in savings TLD D-Term procurements.

VL/EID products, for which inflation was calculated for the first time, have seen savings of $44 million in the second half of FY 2024, resulting in $236 million in savings over the life of the project.

Condoms accounted for $285 thousand of the cost savings in Q3 and Q4 and $503 thousand over the life of the project. Procurement of blue/gold and no-logo condoms doubled in comparison to the first half of FY 2024.

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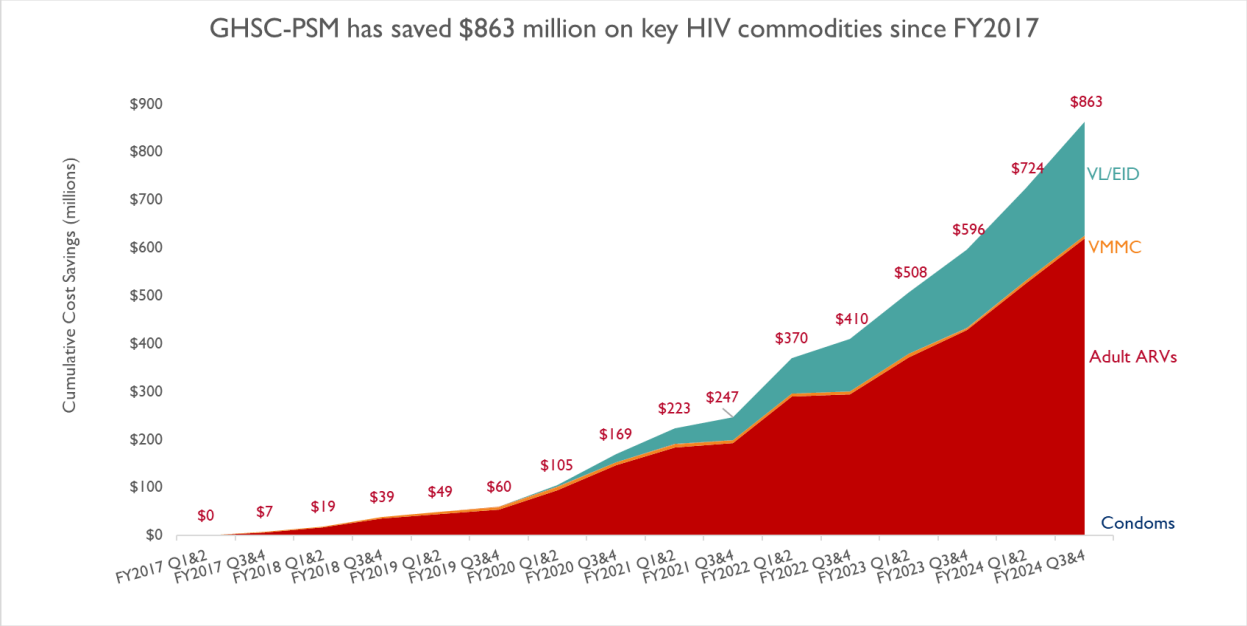
[9] Commodity cost savings are calculated using a comparison of the weighted average baseline cost of products when they were first procured to an average weighted cost of the product in the current review period, adjusted for inflation as determined by the USG Bureau of Labor Statistics (BLS) consumer price index (CPI).

[10] In the absence of a specific inflation measurement for the health commodity market, GHSC-PSM uses CPI as the most relevant proxy.

Voluntary medical male circumcision (VMMC) accounts for just over $6 million in cost savings over the life of the project. In the latter half of FY 2024, cost savings for VMMC slowed slightly due to increased use of slightly more expensive providers.

Exhibit 2. Life-of-Project Savings on HIV Commodities



DELIVERIES

GHSC-PSM delivered more than $93 million in HIV commodities to countries in Q4, and more than $3.93 billion over the life of the project.

On-time delivery and on-time, in-full delivery

The timeliness of HIV commodity deliveries remained consistently strong over the reporting period, as shown in Exhibit 3. In Q4, OTD was 85 percent. GHSC-PSM's OTIF rate (Exhibit 4) measures the percentage of deliveries delivered on time and in full during a given period. Delivery of late orders in a subsequent month to the agreed-upon delivery date drives down the OTIF rate, as can delivery of split shipments, which helps explain the difference between OTD and OTIF rates. For OTIF, project performance continued to exceed the target of 80 percent, achieving 87 percent in Q4. See Annex A for further details.

Exhibit 3. Monthly HIV Commodities OTD

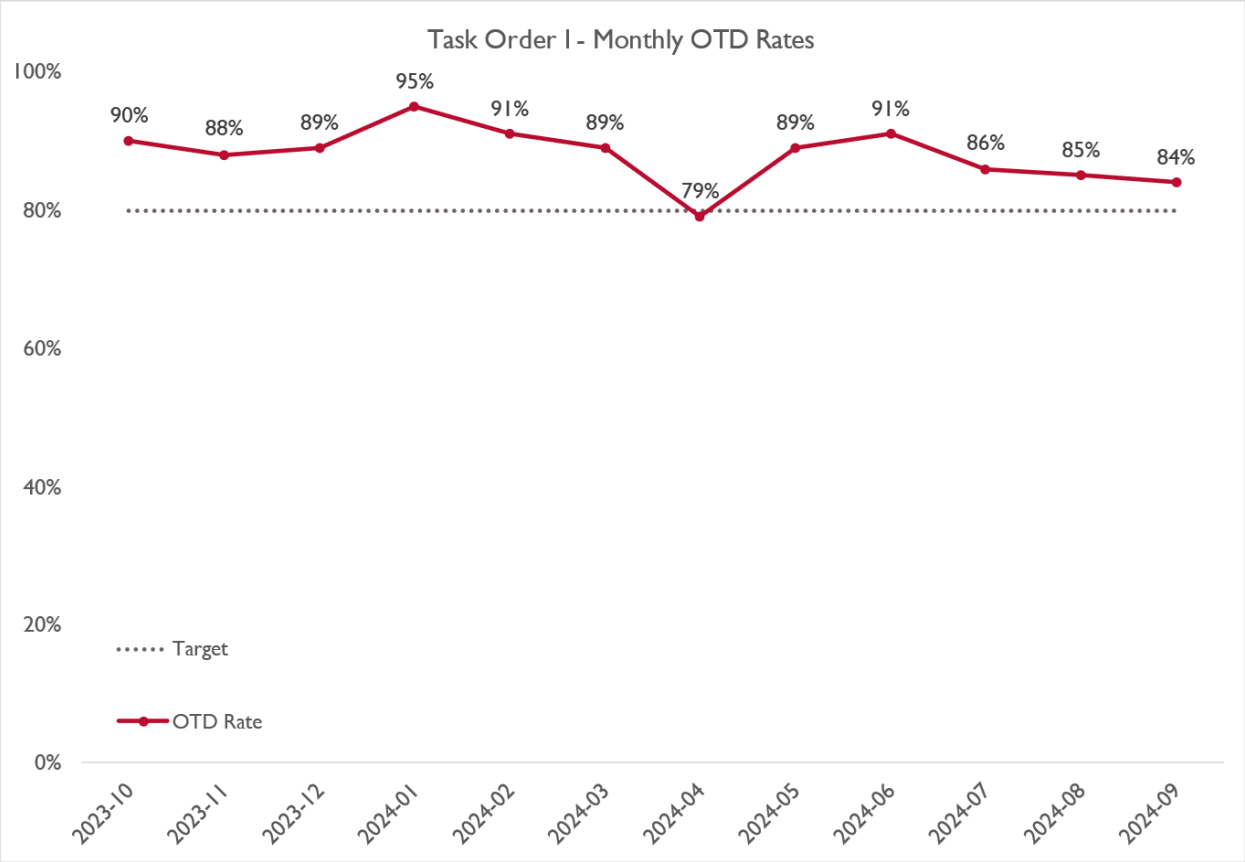
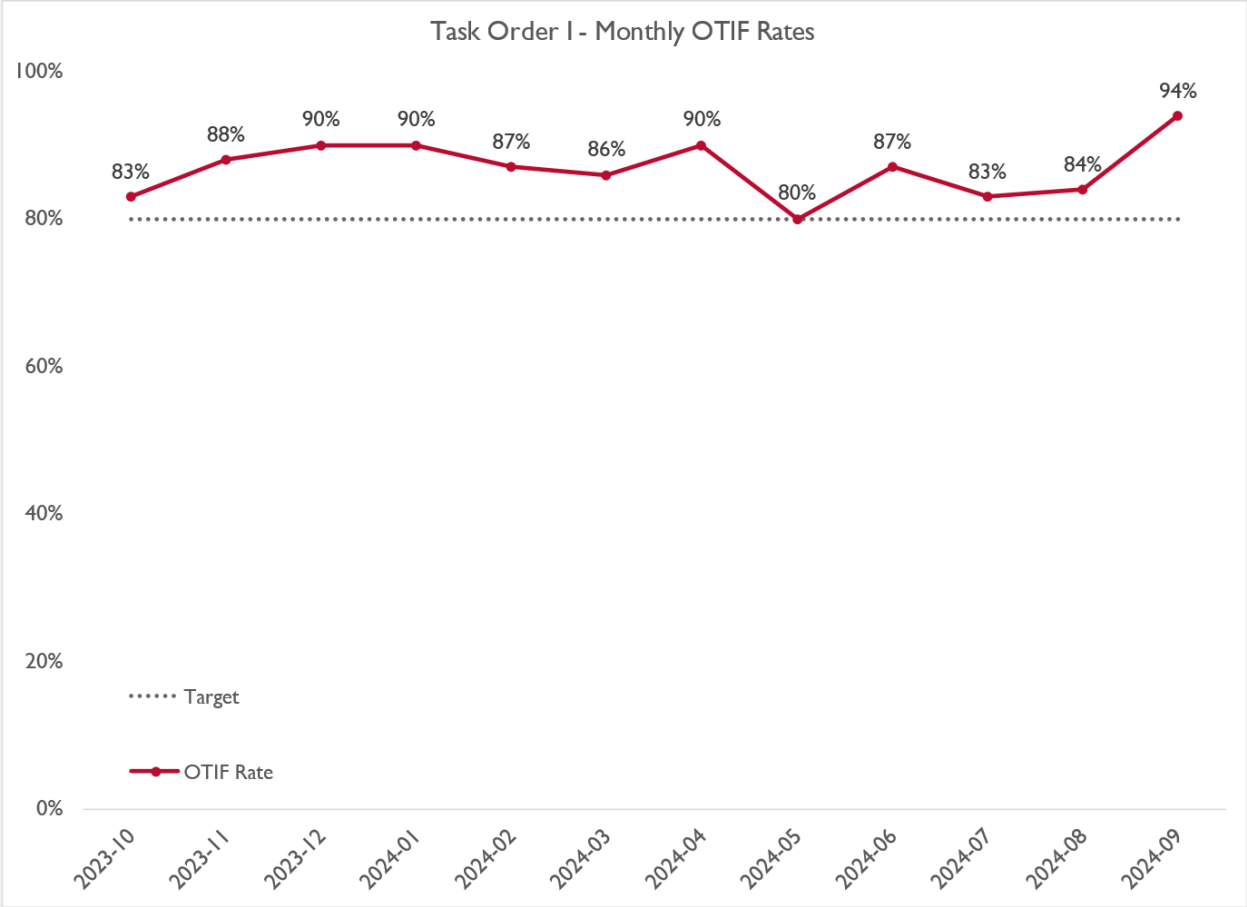


Exhibit 4. Monthly HIV Commodities, OTIF



SUPPORTING PEPFAR's HIV/AIDS AGENDA

Pre-exposure prophylaxis

GHSC-PSM monitors supply capacity and lead times for PrEP products listed in the catalog and tracks their delivery to 24 countries quarterly to determine the impact of the PrEP program. This monitoring and tracking enables the project to adapt to the dynamics of each country's PrEP scale-up program by advancing or delaying shipments when necessary. The project also actively tracks regulatory approval lead times for new PrEP commodities, such as CAB-LA and long-acting lenacapavir, or LEN.

Daily oral PrEP using the antiretroviral medicines tenofovir/emtricitabine (TE) or tenofovir/lamivudine (TL) dramatically reduces the risk of HIV infection in people who use it as directed. In FY 2024, GHSC-PSM delivered $14.6 million worth of PrEP to 19 countries, totaling nearly 4.4 million PrEP bottles.[11]

[11] Cameroon, DRC, Côte d'Ivoire, Guatemala, Haiti, Honduras, Lesotho, Malawi, Mozambique, Namibia, Nigeria, Panama, Papua New Guinea, Tanzania, Togo, Ukraine, Vietnam, Zambia, and Zimbabwe.

In Q4, GHSC-PSM delivered 1,064,905 bottles of oral PrEP products to nine countries.[12] Among those deliveries, the project delivered an urgent order of 9,500 bottles to Cameroon, and coordinated an early delivery of 105,984 bottles of TE to Zambia originally planned for Q1 FY 2025. A shipment for Zambia was expedited to avoid a stockout, replacing a delayed Global Fund order. The project also shipped an emergency order of 13,700 bottles of TE for El Salvador, expected for delivery in Q1 FY 2025.

GHSC-PSM continued to build on the USAID objective to expand choice within PrEP in 2024. In addition to the assured supply and delivery of oral PrEP products highlighted above, the project completed four deliveries of the dapivirine ring in FY 2024 to Kenya (7,008 rings) and Uganda (7,056 rings) in support of the MOSAIC program. Additional rings are held in the Dubai regional distribution center (RDC), earmarked for FY 2025 delivery to Zimbabwe in support of the MOSAIC program and to Botswana in support of the NIH-funded Botswana Sexual and Reproductive Health Initiative (BSRHI) research program.

A significant milestone in expanding choice in the PrEP program was the introduction of CAB-LA for PrEP in FY 2024. In Q3, the Bureau of Global Health Security and Diplomacy and USAID identified 12 countries for the introduction of CAB-LA.[13] Leveraging an established long-term supply contract with the manufacturer, GHSC-PSM procured 254,525 vials of CAB-LA 600 mg/3 ml in FY 2024. The project completed 15 deliveries of 146,625 vials to nine of the 12 priority PEPFAR countries.[14] The remaining vials are staged in the Belgium RDC and scheduled for delivery to the 12 priority countries in FY 2025.

In Q4, GHSC-PSM received 111,950 vials of CAB-LA at the Belgium RDC and completed eight deliveries of 71,700 vials of CAB-LA 600 mg/3 ml to seven PEPFAR countries.[15] The project processed nine new requisition orders of CAB-LA to be delivered to seven countries in FY 2025.[16]

In Q4, GHSC-PSM began collecting demand data from countries earmarked for CAB-LA. The project coordinated with USAID Missions in Malawi and Zambia to access service delivery point consumption reports. Other country programs are expected to report these data in FY 2025. GHSC-PSM will use insights from this information to advise USAID on how best to allocate vials of CAB-LA to targeted PEPFAR countries. This analysis is particularly important as the potential demand for CAB-LA could outstrip the initial supply. CAB-LA is registered in five of these 12 countries,[17] is pending registration in four others,[18] and will require registration waivers in the final three countries.[19] GHSC-PSM is working with stakeholders in each country to enable the product to be imported with little to no delay.

Condoms

Correct and consistent use of condoms and lubricants significantly reduces the risk of HIV transmission. USAID's support for the condoms program targets regions with high demand and supply gaps. Over the life of the project, GHSC-PSM has delivered 4.3 billion condoms (over 4 billion male condoms and 60

[12] Cameroon, Côte d'Ivoire, Mozambique, Namibia, Nigeria, Tanzania, Ukraine, Zambia, and Zimbabwe.

[13] Botswana, Eswatini, Ethiopia, Lesotho, Malawi, Mozambique, Namibia, Nigeria, Rwanda, Ukraine, Zambia, and Zimbabwe.

[14] Botswana, Eswatini, Lesotho, Malawi, Mozambique, Nigeria, Ukraine, Zambia, and Zimbabwe.

[15] Botswana, Eswatini, Lesotho, Malawi, Mozambique, Nigeria, and Zambia.

[16] Botswana, Ethiopia, Malawi, Namibia, Nigeria, Zambia, and Zimbabwe.

[17] Botswana, Malawi, Nigeria, Zambia, and Zimbabwe.

[18] Mozambique, Namibia, Rwanda, and Ukraine.

[19] Eswatini, Ethiopia, and Lesotho.

million female condoms, plus personal lubricants) to 61 countries. In FY 2024, GHSC-PSM delivered 333 million male condoms, 3 million female condoms, and 33.4 million sachets of personal lubricant to 29 countries.[20]

In Q4, GHSC-PSM delivered almost 90 million male condoms, 1 million female condoms, and 9.8 million sachets of personal lubricant to 18 countries.[21] The project processed an emergency order of personal lubricant for Nicaragua, and custom artwork and completed language translation services for no-logo blue/vanilla and red/strawberry condom orders for Ukraine.

As part of GHSC-PSM's made-to-stock strategy, the project sourced 19 percent, or 18.4 million, plain, no-logo condoms from two suppliers who under our vendor-stored inventory (VSI) strategy manufactured and stored the product ahead of confirmed demand. The project also delivered nearly 37 million no-logo condoms and 1.3 million female condoms from the Dubai RDC. GHSC-PSM established these fulfillment options to increase flexibility within the supply chain and enable the project to be more responsive to immediate demand and smaller orders. This proved pivotal as the FY 2024 Condom Fund was not approved until Q2, which led to 93 percent of purchase orders tied to the FY 2024 Condom Fund being processed between late Q2 and Q4.

In Q4, GHSC-PSM supported PEPFAR countries with access to the Condom Fund to use up their remaining budgets. The project processed 43 percent of FY 2024 orders (53 orders) for delivery in FY 2025.

Also, in Q4, the project conducted an annual price refresh for male condoms and personal lubricant suppliers. The evaluation of bids will be completed and long-term agreements extended with FY 2025 pricing in Q1 FY 2025.

In FY 2024, GHSC-PSM published the Annual Comprehensive Agency Report on Condoms and Lubricants for FY 2023. This report captures information on male condoms, female condoms, and lubricants procured for the PEPFAR and FP/RH programs. The project also conducted a condom social marketing analysis to better understand demand from social marketing organizations (SMOs) in 26 countries. This analysis provides visibility on historical spending while helping to predict future demand and identify potential funding gaps.

Voluntary medical male circumcision kits

Male circumcision is cost-effective and reduces female-to-male sexual transmission of HIV by 60 percent. WHO and Joint United Nations Programme on HIV and AIDS (UNAIDS) support VMMC scale-up in 14 priority countries in sub-Saharan Africa that have a high burden of HIV and low male circumcision

[20] Afghanistan, Angola, Benin, Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, DRC, Eswatini, Ethiopia, Ghana, Haiti, Lesotho, Liberia, Malawi, Mali, Mozambique, Namibia, Nigeria, Rwanda, Senegal, Sierra Leone, Tajikistan, Tanzania, Togo, Uganda, Ukraine, Zambia, and Zimbabwe.

[21] Angola, Benin, Burundi, Cameroon, Côte d'Ivoire, DRC, Ethiopia, Liberia, Malawi, Mali, Namibia, Nigeria, Senegal, Sierra Leone, Togo, Uganda, Zambia, and Zimbabwe.

prevalence. GHSC-PSM has delivered VMMC kits to 11 VMMC priority countries since the start of the project.[22] In FY 2024, the project delivered 955,127 VMMC kits to seven countries.[23]

In Q4, GHSC-PSM delivered 187,452 VMMC kits to Eswatini, Malawi, and Tanzania. The breakdown of kits delivered was: 8,105 single-use essential consumables kits to Eswatini, 31,500 single-use essential consumables kits to Malawi, and 147,847 single-use essential consumables kits to Tanzania.

GHSC-PSM issued a request for quotation (RFQ) for VMMC kit suppliers to refresh their price quotes to be valid into Q1 FY 2026. This RFQ is expected to close in Q1 FY 2025. The project also solicited feedback from suppliers on the potential impact of a specification change that USAID is considering for VMMC kits with reusable instruments. The project shared feedback from three suppliers with USAID for further consideration.

The Shang Ring device offers an alternative method of male circumcision. In Q4, GHSC-PSM delivered 160 Shang Ring kits (200 devices per kit) to Malawi. In addition, GHSC-PSM issued an RFP to the Shang Ring device manufacturer to solicit and negotiate varying volume-based price reduction options based on anticipated FY 2025 demand. The goal of the sourcing event was to enable countries to benefit from lower unit prices, making the devices more cost-competitive with VMMC kits. The project plans to finalize contract and price negotiations in Q1 FY 2025.

GHSC-PSM included an additional pack size (50 devices per kit) in this RFP, in addition to the 200 devices per kit ordered by PEPFAR countries since 2021. The 50-device Shang Ring kit allows countries to procure smaller quantities of lower-demand sizes with less risk of product expiry. It will be available for countries to order pending eligibility notification by GHSC-QA and approval by USAID.

Summary of VMMC Kits and Devices (quantities) delivered to PEPFAR-supported countries in FY 2024							
VMMC Product Description	**Eswatini**	**Malawi**	**Mozambique**	**Namibia**	**Tanzania**	**Uganda**	**Zimbabwe**
Reusable Kit, Instruments for Dorsal Slit			314		5,573	2,650	
Reusable Kit, Instruments for Forceps Guided Procedure			170				

[22] Botswana, Eswatini, Ethiopia, Malawi, Mozambique, Namibia, Rwanda, South Africa, Tanzania, Uganda, and Zimbabwe.

[23] Eswatini, Malawi, Mozambique, Namibia, Tanzania, Uganda, and Zimbabwe.

Single Use Kit, Convenience Kit for Dorsal Slit							15,500
Single Use Kit, Essential Consumables	12,245	41,500	105,794	19,200	751,895		
Shang Ring Device with Consumables, 200 Devices		160			85		41

Essential medicines

In Q4, GHSC-PSM made significant strides in improving the availability of essential medicines, explicitly targeting the treatment of cryptococcal meningitis, a leading opportunistic infection among individuals with advanced HIV. Following recent WHO guidelines recommending the use of amphotericin B (liposomal) in combination with flucytosine, which low-income and middle-income countries have widely adopted, GHSC-PSM obtained approval to source amphotericin B (liposomal) directly from an eligible manufacturer and concluded contracting to enable procurement. The project also continued with contract negotiations with a second manufacturer of amphotericin B (liposomal). In FY 2025, the project will focus on refining and streamlining the procurement strategy for amphotericin B (liposomal).

GHSC-PSM collaborated with USAID and GHSC-QA to align on regionalization objectives, focusing on increasing procurement from African sources (wholesalers and manufacturers). In support of these strategic sourcing goals, the project conducted market dynamics research and award simulations to inform future shifts in sourcing strategy. These efforts underscore the project's commitment to strengthening regional supply chains and fostering sustainable procurement practices within Africa.

In Q4, GHSC-PSM completed the first phase of the local wholesaler evaluation activity in Zimbabwe. This activity includes a landscape analysis to identify potential local sources for essential medicines and lab commodities in Zimbabwe, a PEPFAR partner country with stringent registration requirements. GHSC-PSM continues collaborating with GHSC-QA to ensure that identified sources meet required quality standards and can be considered for procurement once eligible.

Tuberculosis preventive treatment

As the leading cause of morbidity among PLHIV, tuberculosis (TB) causes over a third of all AIDS-related deaths. WHO recommends that PLHIV who are unlikely to have active TB should receive tuberculosis preventive treatment (TPT) as part of a comprehensive package of HIV care, including pregnant women and those who have previously been treated for TB, regardless of the degree of immunosuppression, even if latent TB infection testing is unavailable. Completion of TPT for all PLHIV (including eligible household contacts of PLHIV with TB disease) is a PEPFAR Minimum Program Requirement.

Three months of weekly high-dose isoniazid and rifapentine (3HP). The preferred PEPFAR TPT regimen for adults and adolescents is 3HP. In Q4, the procurement hold from GHSC-QA on

RPT/INH 300 mg/300 mg fixed-dose combination (FDC) tablets from one supplier was still in place. Until this procurement hold can be resolved, only one supplier is eligible for RPT/INH 300 mg/300 mg FDC tablets. GHSC-PSM worked with PEPFAR-supported countries to process RPT/INH FDC orders as early as possible to avoid potential delays.

In Q4, GHSC-PSM delivered 26,071 36-count packs of RPT/INH 300/300 mg FDC tablets to two countries.[24]

Other TPT regimens endorsed by WHO. In 2020, WHO released consolidated, updated guidance on tuberculosis preventive treatment (Module 1: Prevention) and endorsed using four shorter regimens.[25] In addition to 3HP, other TPT regimens include:

- One month of daily rifapentine plus isoniazid (1HP)
- Three months of daily isoniazid and rifampicin (3HR)
- Four months of daily rifampicin (4R)

GHSC-PSM supports PEPFAR countries in procuring isoniazid, rifapentine, and isoniazid/rifampicin co-formulated formulations to support implementation of various TPT regimens when the demand arises and for unique sub-patient populations.

SUPPORTING THE FIRST 95: TESTING

To support rapid test kit (RTK) availability and reach the first 95 (HIV diagnosis), GHSC-PSM provides forecasting and supply planning as well as in-country logistics support to the USAID Global Health Supply Chain Program-Rapid Test Kit (GHSC-RTK) project (implemented by Remote Medical International), which undertakes the commodity procurement and international freight. GHSC-PSM promotes management of HIV RTK orders and deliveries through regional- and central-level stock data collection using the HIV/AIDS Data Visibility Dashboard. The project shares data monthly with GHSC-RTK to guide HIV RTK procurement planning and data triangulation, and it reviews HIV testing targets against HIV RTK stock in countries with PEPFAR-supported HIV testing programs. In Q4, the project reported four RTK stockout risks and resolved them by supporting stock redistribution at the district and facility levels.

SUPPORTING THE SECOND 95: TREATMENT

Increased private-sector involvement in ARV delivery

For FY 2024, GHSC-PSM set a target to issue a minimum of 60 percent of ARV purchase orders to the 10 D-Term eligible countries under modified delivered at place (DAP) and modified delivery duty paid (DDP) Incoterms to support PEPFAR's private-sector engagement strategy. Incoterms (international commercial terms) represent how international shipments may be organized, indicating when the ownership, freight, insurance, and customs costs transfer from the seller to the buyer. Under Group D Incoterms (D-Term Incoterms) such as DAP and DDP, the seller assumes responsibility for all aspects of the transportation process, including arranging the shipment, selecting the carrier, and covering transportation and customs clearance costs. This transfers the risks associated with international shipping and customs clearance, including loss or damage, away from USAID and enables GHSC-PSM to

[24] 11,871 packs to Côte d'Ivoire and 14,200 packs to DRC.

[25] https://www.state.gov/wp-content/uploads/2023/07/FY-2024-PEPFAR-Technical-Considerations.pdf

establish fixed costs for product delivery. GHSC-PSM considers the DAP and DDP Incoterms as modified arrangements as the recipient countries provide suppliers with a waiver to ensure the project does not incur typical import duties and value-added tax.

In FY 2024, GHSC-PSM issued a total of 255 purchase orders to the 10 targeted D-Term countries.[26] A total of 79 percent of these orders were placed under DAP or DDP Incoterms, exceeding the annual target of 60 percent. Of the 54 shipments processed under Free Carrier (FCA) and Carriage and Insurance Paid (CIP), Incoterms, 31 were for DRC, one of the 10 countries identified by GHSC-PSM as a D-Term priority country. However, GHSC-PSM maintained these shipments under FCA Incoterms for FY 2024 due to the uncertainty regarding the prevailing DRC import waiver process. All but two of the remaining shipments were for new products or suppliers not eligible for the D-Term program.

In Q4, the project issued 71 percent of purchase order lines to the 10 targeted countries under D-Terms (63 of 89). A total 18 purchase orders for DRC brought the metric below target. By value, 88 percent of ARV orders placed in Q4 were under modified DAP and DDP Incoterms ($147 million of $168 million). D-Term suppliers delivered 54 orders to eight D-Term countries under modified DAP and modified DDP Incoterms in Q4.[27]

Supplying TLD

Over life of project, GHSC-PSM has delivered more than **101.4 million bottles of TLD**[28] to **34 countries**.

This is enough to provide over **21.7 million patient years of TLD treatment**.

As of Q4, GHSC-PSM has delivered over **68.9 million 90-count bottles of TLD to** 31 countries.

GHSC-PSM maintained **a treatment cost of under $40 per patient per year** for inventory pre-positioned in Southern Africa through the VMS program.

TLD and MMD

To achieve HIV treatment goals, GHSC-PSM supports PEPFAR-supported countries' transition to TLD, the preferred first-line ARV. MMD of TLD is a high priority in the global fight against HIV. The project supplies TLD in bottles of 30, 90, and 180 tablets. Over the life of the project, GHSC-PSM has delivered 101.4 million bottles of TLD, including more than 68.9 million 90-count bottles, 28 million 30-count bottles, and 4 million 180-count bottles.

[26] DRC, Eswatini, Haiti, Kenya, Mozambique, Nigeria, Tanzania, Uganda, Zambia, and Zimbabwe. DRC is being targeted for D-Term, but remains operating under Free Carrier Incoterms until a more standardized waiver process is established.

[27] Eswatini, Haiti, Kenya, Mozambique, Nigeria, Tanzania, Zambia, and Zimbabwe.

[28] This total figure for TLD delivery includes 66 million 90-count bottles, 28 million 30-count bottles, and 4 million 180-count bottles.

In Q4, GHSC-PSM delivered 3.1 million TLD 90-count bottles to eight countries,[29] 79,488 180-count bottles to DRC, and emergency orders of 30-count bottles to Guatemala (1,836) and Honduras (756). Also, in Q4, the project placed time-sensitive orders for 634,987 90-count bottles for Kenya, to be received in-country in Q2 FY 2025.

In FY 2024, GHSC-PSM delivered 14.6 million TLD 90-count bottles to 16 countries,[30] 858,885 180-count bottles to seven countries,[31] and 2,592 30-count bottles to Guatemala and Honduras.

Apart from the emergency orders to Guatemala and Honduras, multi-month bottle counts of TLD first-line treatment accounted for 100 percent of all quantities delivered in Q4. Patients saved an estimated 6.7 million trips to the pharmacy in Q4 and more than 159 million trips over the life of the project. MMD saves patients time and money and gives clinicians more time with patients in need.

In FY 2024, GHSC-PSM significantly shifted its TLD procurement and fulfillment strategies by adopting an annual allocation procurement approach for TLD, with market allocation distributed among a select number of strategic suppliers. This strategic shift allowed suppliers to enhance their planning processes to ensure adequate stock levels of active pharmaceutical ingredients (APIs). Simultaneously, this approach streamlined the GHSC-PSM ordering process and reduced the order cycle time by eight business days.

In FY 2024, the project fulfilled 93.2 percent of TLD orders through this allocation strategy or the VMS strategy, achieving a significant milestone by reducing the need to pre-position TLD at the RDCs. In Q4, the project fulfilled 88 percent of TLD orders through the annual allocation procurement approach or the VMS program.

Vendor-managed solutions program

GHSC-PSM established a regional VMS program in Southern Africa in FY 2023. The VMS program encompasses three ARV suppliers staging TLD in quality-assured regional warehouses for delivery to PEPFAR countries in the region. Through the VMS program, GHSC-PSM has maintained a treatment cost of under $40 per patient per year for inventory pre-positioned in Southern Africa by the supplier. In Q4, VMS supply partners completed nine deliveries, totaling over 1.3 million TLD 90-count bottles from VMS warehouses to Mozambique, Zambia, and Zimbabwe.

In FY 2024, GHSC-PSM delivered 5.8 million bottles to Angola, Eswatini, Mozambique, Zambia, and Zimbabwe from VMS warehouses, exceeding its preliminary forecast of delivering 3.5 million bottles. VMS shipments reduced the average lead time from order placement to delivery by more than 50 days.

A second objective for the VMS program in FY 2024 was to increase private-sector engagement in PEPFAR's Southern Africa supply chain by having VMS suppliers deliver TLD downstream to warehouses or facilities beyond the CMSs. To help countries better understand this opportunity and its benefits, GHSC-PSM completed a baseline assessment report summarizing Mozambique's healthcare landscape in Q3. The assessment identified key challenges and bottlenecks in the TLD supply chain while highlighting significant capacity constraints in regional warehouses and funding limitations for in-country distribution.

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[29] Burkina Faso, Côte d'Ivoire, DRC, Mozambique, Nigeria, Tanzania, Zambia, and Zimbabwe.

[30] Angola, Benin, Burkina Faso, Burundi, Côte d'Ivoire, DRC, Haiti, Kenya, Mozambique, Nigeria, Swaziland, Tanzania, Togo, Ukraine, Zambia, and Zimbabwe.

[31] Benin, Burkina Faso, Côte d'Ivoire, DRC, Haiti, Togo, and Zambia.

These challenges add complexity to planned distribution routes. The report also helped other countries in the region working with the project to understand how the VMS program can help minimize their supply chain challenges.

In Q4, GHSC-PSM worked with stakeholders in Mozambique and Zambia to identify intermediate and provincial warehouses to which VMS suppliers could deliver TLD. The project held sourcing events to establish fixed lane rates for these downstream locations from VMS warehouses. These deliveries will begin in Q2 FY 2025.

Optimizing pediatric ARV treatment

Over the life of the project, GHSC-PSM has delivered over 4 million bottles of dolutegravir (DTG) 10 mg to 26 countries.

Pediatric ARVs

GHSC-PSM works with PEPFAR-supported countries to provide optimal formulations to infants and children living with HIV (CLHIV). Over the past three years, GHSC-PSM has transitioned CLHIV to DTG-based ARV regimens consisting of DTG 10 mg, an integrase strand transfer inhibitor, or INSTI, and a nucleoside backbone, usually abacavir/lamivudine (ABC/3TC 120/60). The project analyzes orders and supply plan data monthly to increase USAID and stakeholder visibility into the pace and progress of country transitions. In FY 2024, GHSC-PSM delivered 892,416 bottles of DTG 10 mg. These deliveries assist countries in maintaining children living with HIV on DTG-based regimens. In Q4, GHSC-PSM delivered 204,050 bottles of DTG 10 mg to six countries,[32] including an emergency order of 6,000 bottles to Namibia. The project also placed an emergency order of 5,832 bottles for Angola to be delivered in Q1 FY 2025.

Also, in Q4, the project made three deliveries of abacavir/lamivudine 120/60 mg scored dispersible 30-count bottles to Cameroon, Nigeria, and Tanzania. These orders are combined with DTG 10 mg to treat CLHIV.

Throughout FY 2024, GHSC-PSM has worked with USAID to analyze readiness and prepare partner countries to introduce a triple fixed-dose combination of pALD 60/30/5 mg, 180-count bottles. The project created a forecasting tool to estimate demand for each product to prevent wastage and ensure sufficient stock before the introduction of pALD in FY 2024. GHSC-PSM used the tool to analyze the readiness of the country's program for the drawdown of DTG-10 and ABC/3TC and the uptake of pALD. In FY 2024, the project shared this assessment with the PEPFAR Pediatric Treatment Workstream and the Global Fund to collaborate on introducing pALD. It has been used to guide teams in-country about the ideal time to start the transition to minimize wastage of legacy products.

[32] DRC, Côte d'Ivoire, Mozambique, Namibia, Tanzania, and Zimbabwe.

In FY 2024, GHSC-PSM delivered two shipments of pALD tablets to Zambia, totaling 35,964 180-count bottles. In Q4, a third shipment of 20,304 packs of 180-count tablets for Zimbabwe was shipped, with delivery expected in Q1 FY 2025.

In Q4, GHSC-PSM issued two master orders[33] of 30,000 10 ml bottles of nevirapine oral suspension (OS) in anticipation of FY 2025 country needs. The two master orders of nevirapine OS placed in Q3 were depleted in Q4 to cover demand from Mozambique (33,978), Nigeria (8,732), and Zimbabwe (17,290). The project used the master order of 12,000 240 ml bottles of zidovudine 10 mg/ml solution w/syringe placed in Q3 to cover demand from Nigeria (5,132) and shipped the balance of 6,838 bottles to the Dubai RDC to meet future demand.

SUPPORTING THE THIRD 95: VIRAL LOAD TESTING

In partnership with USAID, GHSC-PSM delivers high-quality results in the laboratory supply chain. The GHSC-PSM laboratory strategy focuses on developing and maintaining a laboratory supply chain that supports the evolution of a patient-centered public and private laboratory network to improve the availability and visibility of laboratory services. This section outlines progress and activities toward achieving this goal in FY 2024.

In Q4, GHSC-PSM hosted preparatory meetings for the WHO Forecasting Technical Working Group (TWG), presenting historical and forward-looking PEPFAR-funded procurement volumes of HIV high-throughput and Point of Care VL/EID tests, as well as CD4 and tests for other diseases. This helped WHO and other global procurers and donor stakeholders involved in the process to prepare for the annual global Access to Medicines and Diagnostic Services summit with manufacturers in Geneva, also attended by the project.

Execute and leverage all-inclusive agreements to improve laboratory network outcomes in all PEPFAR-supported countries.

USAID's strategy, through GHSC-PSM, leverages the scale of the U.S. Government's total investment in HIV testing, conducts a global strategic sourcing activity, and makes the manufacturing companies partners in optimizing laboratory testing services. In FY 2023, GHSC-PSM concluded the Wave-2 RFP process by executing updated global SLAs with three global diagnostics manufacturers to contractually document new all-inclusive pricing and service terms for 48 Wave-2 PEPFAR-supported countries.

In FY 2024, GHSC-PSM focused on building the capacity of lab stakeholders to implement SLAs within their countries and advocating for the adoption of comprehensive agreements among non-GHSC-PSM stakeholders, including both PEPFAR and non-PEPFAR entities. This involved collaboration with country MOHs, the Global Fund, and other procurement agents for VL/EID reagents and consumables. Additionally, GHSC-PSM worked to enhance the all-inclusive package by adding value through vendor-managed inventory (VMI) services and expanding real-time remote instrument connectivity with a third global VL manufacturer developing a data and connectivity solution for GHSC-PSM clients.

[33] A master order is an advanced order wherein the project essentially makes a financial commitment to purchase a specific quantity of a product from the supplier. By aggregating future demand for these products, the master order allows the project to divert certain quantities directly to the country instead of through an RDC.

Maintain the gains of the global pricing and SLAs for all PEPFAR-funded procurements. Preliminary data analysis shows that in Q4, GHSC-PSM delivered 3.82 million VL/EID tests valued at approximately $40.8 million, saving approximately $23.2 million under the terms of the global SLAs.[34]

Life-of-project savings on VL/EID tests delivered by GHSC-PSM since 2020 was more than $236 million.[35] Cumulative savings on all VL/EID tests delivered for GHSC-PSM and other PEPFAR buyers since 2020 were more than $263 million.[36] This represents significant cost savings, averaging $2–3 savings per test in Q4.

GHSC-PSM's key performance indicator (KPI) data collection and performance management process with global VL manufacturers continued in 21 countries.[37] Throughout FY 2024, GHSC-PSM continued to support countries' management of the KPI reporting process, focusing on countries with GHSC-PSM-led procurement of VL/EID tests. The project holds monthly virtual KPI 'office hours' offering assistance on analysis and visualization of KPI data, and facilitates regular technical calls with the global VL suppliers on testing failure rates and instrument uptime and quarterly business reviews of the 10 standardized KPIs. Having access to validated manufacturers' performance data through KPIs empowers the project as a whole and the PEPFAR-supported countries to make better, evidence-based decisions on how to improve lab network performance at the site level and informs Ministries and PEPFAR how to invest their procurement budgets for VL/EID by potentially re-allocating volumes to better performing suppliers.

In Q4, GHSC-PSM launched PEPFAR's VL/EID annual volume commitment-level process for calendar year 2025, globally and for each of the six Wave-1 countries.[38] This process, which will continue into Q1 FY 2025, will determine PEPFARs global pricing for reagents and country-specific service prices, involves extensive analytical analysis and scenario modeling, and consensus-building with laboratory TWGs.

Expand instrument data coverage and connectivity under PEPFAR SLAs in countries with a vendor and instrument performance management agreement. The vendor and instrument performance management agreement (VIPMA) is an information-sharing agreement signed by the national lab TWG, including the MOH, in Ethiopia, Mozambique, Nigeria, and Zambia. This agreement allows manufacturers to connect their instruments to their instrument data aggregators as well as to a global dashboard built by GHSC-PSM.

In Q4, GHSC-PSM prepared case studies on the project's experiences implementing VIPMA and VMI globally, and highlighting how lessons learned could be applied in Rwanda, a Wave-2 country. These studies will be presented to the MOH for consideration with a view to facilitating Rwanda's transition from its current SLA status to all-inclusive SLA execution.

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[34] Compared to 2019 pre-global RFP prices

[35] Compared to the pre-RFP prices

[36] Compared to the pre-RFP prices. Includes cost savings on VL/EID reagents globally plus savings on the service and maintenance of laboratory equipment, as well as procurements by GHSC-PSM and other PEPFAR buyers who benefit from the global agreements.

[37] Angola, Benin, Burkina Faso, Burundi, Cameroon,Côted'Ivoire, DRC, Eswatini, Ethiopia, Haiti, Kenya, Lesotho, Mali, Mozambique, Nigeria, Rwanda, Tanzania, Togo, Uganda, Zambia, and Zimbabwe.

[38] Kenya, Mozambique, Nigeria, Tanzania, Uganda, and Zambia.

Implement an early warning–early action process and procedures for proactive "whole of lab" performance management in those Wave-1 PEPFAR countries where we have data visibility. GHSC-PSM initiated an early warning, early action (EWEA) process to address VL and EID instrument performance issues related to lab instrument downtime in a timely, proactive, and collaborative manner. EWEA ensures the lab and suppliers identify and engage early in resolving issues such as analyzer downtime, reagent and commodity stockouts, and failure to meet KPI targets. If these parties cannot find timely solutions, the project intervenes and works on a solution in collaboration with USAID and local stakeholders.

In Q4, GHSC-PSM continued to make bi-weekly EWEA deep-dive presentations to USAID focused on KPI results and instrument performance. The project grouped countries into three levels based on the ease of access to data (e.g., a VIPMA) and the presence of a GHSC-PSM project country office. As of Q4, the project has conducted deep dives for Ethiopia, Mozambique, Nigeria, and Zambia.

Advocate for the expansion of all-inclusive SLAs in all PEPFAR-supported countries. GHSC-PSM launched all-inclusive service-level pricing in PEPFAR-supported Wave-2 countries in FY 2023 immediately following the execution of the updated global SLAs with the three VL suppliers.[39] Now, all PEPFAR-supported countries can access competitive pricing for services and defined service levels. Countries with a data-sharing agreement in place benefit from access to transparent and accountable data on vendor and instrument KPI performance. Transforming VL testing through strategic procurement will impact the sector beyond GHSC-PSM, as project-negotiated terms and pricing are now available to other procurers in countries using public funds, such as MOHs and the Global Fund.

In FY 2024, the project held a workshop in Ethiopia to assist non-GHSC-PSM actors in 10 countries in understanding the concepts, tools, and approaches that are needed to implement all-inclusive SLA agreements for the procurement of lab services in their respective countries. In Q4, the project created a comprehensive eight-module toolkit based on the training materials. GHSC-PSM used the toolkit, available in English, French, and Portuguese, as the basis for in-depth training and discussions during the weeklong workshop. Discussions are ongoing between GHSC-PSM and USAID, as well as within the community of Integrated Diagnostics Consortium (IDC), on how this valuable resource can be shared more broadly with procurement agents, Global Fund principal recipients, and national government entities who are interested in implementing the all-inclusive reagent-rental model championed by PEPFAR through GHSC-PSM.

Following the workshop in Ethiopia, GHSC-PSM leveraged the ASLM Lab Community of Practice to promote broader awareness of the all-inclusive SLA concepts. The first webinar, entitled "demystifying service-level agreements for molecular-based testing: a VL/EID PEPFAR experience," was attended by over 300 ASLM members in Q4. This was the first of a series of presentations on various aspects of SLA management that the project will present in collaboration with USAID in FY 2025.

[39] Wave-2 countries are AFRICA: Angola, Benin, Botswana, Burundi, Burkina Faso, Cameroon, Côte d'Ivoire, DRC, Eswatini, Ethiopia, Ghana, Lesotho, Liberia, Malawi, Mali, Namibia, Rwanda, Senegal, Sierra Leone, South Sudan, Togo, Zimbabwe; ASIA & EUROPE: Cambodia, India, Indonesia, Kazakhstan, Nepal, Papua New Guinea, Philippines, Thailand, Ukraine, Vietnam; LATIN AMERICA & CARIBBEAN: Bahamas, Brazil, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Nicaragua, Panama.

Ensure a smooth and continuous supply chain to minimize expiries and stockouts. In FY 2024, the project delivered laboratory supplies to 27 countries,[40] and delivered to 22 countries[41] in Q4.

A technical issue with the supply of a critical raw material used to produce a TB Rapid Diagnostic Test (RDT) impacted supply of this product in Q1–Q3. The supplier resolved this issue and began processing orders in Q4.

A production issue with the manufacturer of Genexpert HIV-1/VL Assay cartridges impacted the project's ability to supply this product, resulting in partial order fulfillment and prioritization of high-priority orders for allocation. The supplier resolved this issue in Q4 and the project began processing full allocations. The delays were due in part to the transition approach implemented by the supplier,

launching a newer version (XC) of the cartridges. The GeneXpert HIV-1 Qual XC cartridge (EID) received WHO pre-qualification in Q2, and the VL XC cartridges received WHO prequalification in Q4, with supply issues being resolved.

In Q4, GHSC-QA approved the updated Plasma Separation Card bundle with a new plastic capillary tube. The new plastic tube has better availability and pricing than the previous glass tube. The supplier is training recipients in using this updated product. Also, following a request by GHSC-PSM, the supplier is making the product available for pick-up in South Africa where the bundle is manufactured. This saves costs and time, and extends the product's remaining shelf life. Previously, the bundle was transported from South Africa to Germany for pick-up to transport back to the African continent.

Provide technical assistance for sustainable laboratory networks using program and project-generated data for proactive management and decision making. GHSC-PSM promotes improving laboratory network performance and quality service delivery by encouraging decision making using project-generated supply chain data. Technical assistance centers on 1) ensuring that instrument and equipment requests follow equipment planning and placement questionnaire (EPPQ) processes and promote the use of tools such as Quantification Analytics Tool (QAT) for forecasting and supply planning (FASP) of laboratory commodities and 2) establishing routine country-driven SLA KPI management and EWEA processes using available data. More information is provided in the Laboratory Networks section of C2: Systems Strengthening Technical Assistance.

Accurate FASP is critical to a successful supply chain. In Q4, GHSC-PSM provided 31 countries[42] with FASP technical assistance. This TA integrates FASP capabilities, develops country-led solutions, and improves program managers' ability to maintain enough inventory to meet disease prevention and treatment targets and address client demand. The project strengthens MOH's capacity to forecast lab commodities in QAT through country-tailored support, remote training, lab quantification workshops,

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[40] Angola, Benin, Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, DRC, El Salvador, Eswatini, Ethiopia, Guatemala, Haiti, Honduras, Jamaica, Kenya, Malawi, Mali, Mozambique, Namibia, Nigeria, Philippines, Tanzania, Togo, Uganda, Ukraine, Zambia, and Zimbabwe.

[41] Angola, Benin, Burkina Faso, Burundi, Cameroon, DRC, Côte d'Ivoire, Eswatini, Ethiopia, Haiti, Jamaica, Kenya, Mali, Mozambique, Namibia, Nigeria, Tanzania, Togo, Uganda, Ukraine, Zambia, and Zimbabwe.

[42] Angola, Benin, Botswana, Burkina Faso, Burundi, Cambodia, Côte d'Ivoire, DRC, Eswatini, Ethiopia, Ghana, Guinea, Haiti, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, South Sudan, Tanzania, Togo, Uganda, Zambia, and Zimbabwe.

and supply plan reviews. As of Q4, 12 countries use QAT to forecast VL and EID commodities and 15 countries have active supply plans in QAT for VL and EID.

For general information on QAT and the project's work in FASP, see section C2: Systems Strengthening Technical Assistance.

Implement vendor-managed inventory in select PEPFAR-supported countries. Vendor-managed inventory for VL commodities is a strategic initiative that enables PEPFAR and country stakeholders to benefit from private-sector innovation by placing more responsibility on in-country exclusive distributors for supply chain activities to the last mile. This approach streamlines inventory management and order fulfillment by improving collaboration among suppliers, buyers, and distributors. The VMI model is a task-shifting approach that promises to improve supply chain performance. VMI transfers key decisions and risks concerning the number of commodities and timing of supplies to specified locations to the supplier.

In **Nigeria**, GHSC-PSM, PEPFAR, and the Nigerian MOH laboratory units are partnering with the supplier to co-create and implement a VMI approach, which will gradually transfer inventory management and resupply decision rights to the supplier. This approach aligns with PEPFAR's country operating plan guidance and mandate to collaborate with the private sector in designing and delivering development and humanitarian programs, leveraging market-based approaches, and applying private-sector innovations and approaches to accelerate countries' progress toward epidemic control.

To promote cross-country knowledge sharing and cross-fertilization, GHSC-PSM organized a workshop in Q4 to exchange lessons learned in the implementation of VMI pilots in Mozambique and Nigeria. The implementation teams shared experiences and best practices for gaining stakeholder buy-in, operational aspects, and considerations regarding procurement and resupply.

Harness private-sector engagement in PEPFAR-supported countries with known suppliers for long-term sustainability options. GHSC-PSM and suppliers will explore opportunities following further guidance from USAID.

In Q4, GHSC-PSM held a strategy discussion with an executive team of one of the leading global diagnostic manufacturers to align on priorities of our partnership in the laboratory space in the near- and mid-term. Among other important topics, the manufacturer shared its experience working with private-sector providers of laboratory diagnostic services in Latin America and Africa, some of which can be considered for adaptation through public-private partnerships and bringing innovations to strengthen laboratory systems overall with donor- and national funding support.

HIV/AIDS SUPPLY CHAIN DATA VISIBILITY AND COMMODITY SECURITY

GHSC-PSM improves data visibility and analysis of HIV commodity inventories at all levels of the supply chain. The project reviews national inventory data monthly for more than 142 HIV medicines and commodities at the central, regional, and facility levels in 21 PEPFAR-supported countries to identify global stock imbalances. These data assist in monitoring commodity stock risks and progress toward specific initiatives, such as the success of the TLD and MMD transition, the transition to optimal PrEP and TPT regimens, and the scale-up of VL/EID programs. The reports help mitigate stock imbalances and

avoid rationing and waste by raising awareness, identifying opportunities to shift GHSC-PSM shipments, and supporting redistribution within countries.

GHSC-PSM hosts monthly Proactive Stock Risk Management (ProStock) meetings. Building on the project's HIV/AIDS data analysis and reporting, this meeting is a forum for GHSC-PSM, GHSC-RTK, and USAID to discuss actual and imminent gaps in HIV commodity access and implement action plans to address them. The project also presents potential HIV commodity stock risks in this forum, allowing for early action and mitigation of longer-term stockout and expiry risks across all categories of HIV products, including adult and pediatric ARVs, PrEP, TPT, HIV RTKs, VL/EID tests, and VMMC kits.

In Q4, GHSC-PSM reported monthly on 30 unique commodity stockout risks across 17 countries. The most common causes of stockout risks were increased consumption/demand higher than expected, product expiry, late order placement of host government-funded orders, late order placement of Global Fund-funded orders, funding gaps, late delivery of Global Fund-funded orders, and late order placement of USAID-funded orders. The products most commonly reported as at risk of stockout were VL/EID tests (14 risks), adult ARVs (five risks), HIV RTKs (four risks), and pediatric ARVs (three risks).

In Q4, the project reported the resolution of 19 commodity stockout risks. The most common resolutions were deliveries funded by USAID (seven) or the Global Fund (seven). Most stockout risks were mitigated by coordinating with donors and suppliers, sharing bilateral data, facilitating inter-country transfers, processing emergency orders, and redistributing stock within in-country supply chains.

ADOPTION OF STANDARD-BASED IDENTIFICATION, BARCODING, AND DATA SHARING

In Q4, GHSC-PSM continued implementing identification, barcoding, and data sharing requirements for procured HIV/AIDS products, creating an enabling environment for data exchange and visibility. By the end of the reporting period, total compliance scores by area for the 665 TO1-specific task order items in-scope were:

- Identify [Global Trade Item Number/Global Location Number (GTIN/GLN) collection]: 87 percent.
- Capture (standards-compliant barcoding on labels): 74 percent.
- Share [Global Data Synchronization Network (GDSN) data synchronization]: 75 percent.

Traceability Interoperability Platform

In Q4, GHSC-PSM continued developing the TIOP, a semi-centralized architecture to enable the exchange of serialized traceability data between suppliers, country-national regulatory authorities, and procurement agents. The project implemented the TIOP pilot with two ARV manufacturers, USAID, and the Nigeria National Authority for Food and Drug Control; results and lessons learned will be ready to be shared in Q1 FY 2025.

For more information on TIOP and GS1 standards, see section C2: Systems-Strengthening Technical Assistance.

COUNTRY SUPPORT

The HIV/AIDS TO funded supply chain systems strengthening activities in 26 countries in FY 2024. In Q4, GHSC-PSM completed the following activities:

In **Botswana**, facilitated a workshop to share best practices in organizational efficiency with the CMS and its stakeholders, including representatives from the CMS, the MOH, PEPFAR, USAID, WHO, and key regulatory authorities. During the workshop, stakeholders discussed various models to enhance CMS effectiveness and sustainability as a supply chain organization. Stakeholders agreed on a proposal to the MOH to transition CMS into a semi-autonomous entity. The workshop also provided a platform for Lesotho's National Drug Service Organization (NDSO) to share insights from their transformation journey.

In **Botswana**, the CMS manually manages close to 400 procurement contracts each year with 2,080-line items of health commodities. To improve efficiency and accuracy, GHSC-PSM supported development of the electronic contract and supplier relationship management (eCSRM) system. The system is an open-source application, which has been customized to meet the needs of CMSs, helping to support contract and procurement operations and alleviate the burden of manual contract management of the many supplier contracts that CMS executes. The project hosted several trainings on the system in Q4, including;

- A training session for 19 system administrators and key personnel from MOH and CMS IT departments, and MOH Health Informatics who will manage the eCSRM system. This in-depth training covered the system architecture, management, troubleshooting, and advanced features.
- A training session for 32 CMS staff who will use the eCSRM system. The training covered basic functionalities, day-to-day operations, and common tasks that regular users would need to perform in the system.
- User acceptance testing that allowed 31 end users to test the system in a controlled environment, ensuring it meets their needs and functions as expected.

In **Lesotho**, the health supply chain relied on standard operating procedures (SOPs) and checklists for performance monitoring at health facilities, but lacked a centralized database to track indicators over time. Paper-based checklists limited accessibility, hindering data sharing among stakeholders and slowing data quality assessments. This manual approach prevented timely performance feedback for facilities and made tracking progress at both facility and central levels difficult. To address these challenges, GHSC-PSM supported the MOH Supply Chain Management Department (SCMD) in developing the Reporting and Assessment Tool (RAT). This electronic database enables efficient collection and monitoring of supply chain indicators, featuring dashboards for data visualization to simplify analysis and support data-driven decision-making.
RAT offers online and offline modes for use in remote areas, generates immediate reports for facilities, and sends automated email reminders for any pending actions. It provides access to all supply chain officers through individual login credentials. With GHSC-PSM's support, district-level data collection on logistics indicators began in Q4. Data from facilities is now accessible in the database, enabling targeted supervisions based on performance indicators. In Q4, RAT was used at 85 health facilities; logistics data were collected from 45 facilities, and data quality assessments were completed at all 85 facilities.

In **Malawi**, the continuous availability of VMMC commodities is critical in contributing to HIV prevention efforts. However, the incoming USAID VMMC services implementing partner (IP) under Family Health Services (FHS) was understocked of essential consumable kits, while the outgoing IP, was adequately stocked. GHSC-PSM supported the MOH in redistributing essential consumable kits from the outgoing IP to the incoming IP to ensure continued availability of VMMC services across service delivery points. The redistribution prevented a stockout of essential consumable kits, which would have disrupted VMMC service provision for two months.

In **Myanmar**, GHSC-PSM conducted a follow-up visit to the Tanintharyi Regional Essential Medicines Program warehouse to supervise mSupply trainer-of-trainer (TOT) training and meet with the State Head Director to coordinate township-level mSupply training in alignment with the national plan for the National AIDS Program, the National Malaria Control Program, National Tuberculosis Program, and Essential Medicines Program. The Tanintharyi warehouse was prioritized for this visit due to missed reporting following the Q3 TOT training. During the visit, the team discovered that the trained focal person was being transferred, with no replacement yet in place, creating a capacity gap. To address this, the project identified suitable staff at the warehouse, provided on-the-job training, and guided them in updating, adjusting, and reporting stock levels in mSupply. The team also demonstrated use of the "Issued and Received Voucher" system to manage commodity transfers between township and central warehouses. Following the visit, the Tanintharyi warehouse resumed consistent mSupply reporting and secured Ministry of Health approval to begin township-level training, with laptops procured by GHSC-PSM and a training date tentatively set for November. By closely monitoring the national mSupply revitalization, GHSC-PSM has made significant progress in improving the management and oversight of essential health commodities.

B2. MALARIA

Delivered more than **603 million** artemisinin-based combination therapies (ACTs) to treat **malaria infections over the life of the project**, including nearly **19 million** in Q4 FY 2024.

A total 23 countries[43] received health systems strengthening support with malaria funding in FY 2024.

GHSC-PSM delivered malaria medicines and commodities to 24 countries[44] in Q4, and over $1.37 billion worth of the same to 31 countries over the life of the project.

Delivered enough long-lasting insecticide-treated nets (LLINs) to provide **protection from malaria for over 12.7 million people in Q4 and nearly 665 million people over the life of the project**.

GHSC-PSM's work contributes to the focus areas of PMI's 2021–2026 strategy to end malaria faster: reaching the unreached, strengthening community health systems, keeping malaria services resilient, investing locally, and innovating and leading. The activities completed in Q4 FY 2024 demonstrate the commitment of GHSC-PSM and USAID to this vital mission of eliminating malaria and saving lives.

REFLECTIONS ON FY 2024

In FY 2024, GHSC-PSM's activities focused on supporting and accelerating the achievement of PMI's 2021–2026 strategy to end malaria faster. During the year, GHSC-PSM procured malaria commodities, with a total value of $177 million, for 29 countries[45] and delivered malaria commodities worth more than $173 million to 30 countries[46].

In FY 2023, the project developed and published an advocacy paper, "Effective Community-Level Supply Chains for iCCM and Malaria," highlighting lessons learned, challenges, and opportunities for better integrating community health workers into the supply chain. During FY 2024, GHSC-PSM co-organized a webinar with the Child Health Task Force on "Institutionalizing Supply Chains for Community Case Management," where the project presented the advocacy paper to promote these opportunities and encourage industry and stakeholder buy-in.

[43] GHSC-PSM provides health supply chain system strengthening support with funding for malaria for the following countries: AFRICA: Angola, Burkina Faso, Burundi, Cameroon, Ethiopia, Ghana, Guinea, Kenya (TO5), Liberia, Malawi, Mali, Mozambique, Niger, Nigeria, Rwanda, Sierra Leone, Uganda, Zambia, Zimbabwe; ASIA: Burma (Myanmar), Cambodia, Laos, Thailand. The project also provided malaria-funded short-term assistance to Cote d'Ivoire, Madagascar, and Tanzania in FY 2024.

[44] Angola, Burkina Faso, Burundi, Cameroon, Congo DRC, Côte d'Ivoire, Ethiopia, Ghana, Guinea, Kenya, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Tanzania, Uganda, Zambia, and Zimbabwe.

[45] Angola, Benin, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Congo DRC, Côte d'Ivoire, Ethiopia, Ghana, Guinea, Kenya, Laos, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Tanzania, Thailand, Uganda, Zambia, and Zimbabwe.

[46] Angola, Benin, Burkina Faso, Burundi, Cambodia, Cameroon, Congo DRC, Côte d'Ivoire, Ethiopia, Ghana, Guinea, Guyana, Kenya, Laos, Liberia, Madagascar, Malawi, Mali, Mozambique, Myanmar, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Tanzania, Thailand, Uganda, Zambia, and Zimbabwe.

Contributing to PMI's efforts to keep malaria services resilient, GHSC-PSM produced a Malaria Commodity Accountability Guidebook and Tool to help identify discrepancies between malaria commodities consumed and malaria services provided, enable country programs to address accountability challenges, and promote efficiencies.

The project also contributed to enhanced traceability and global standards for LLINs by producing revised TraceNet guidelines.

In Q4, PMI mandated GHSC-PSM to sunset the Procurement Planning and Monitoring Report for malaria (PPMRm) platform in a bid to streamline the reporting of malaria commodity stock status and orders; PMI-partner countries will continue to provide in-country stock and commodity order shipment information for malaria commodities through monthly and quarterly supply plan updates using the QAT.

A significant highlight for the year included working with the newly onboarded African manufacturer for antimalarials to support PMI's local investment efforts.

The Task Order Malaria, or TOM, management view dashboard was crucial in facilitating biweekly PMI meetings in FY 2024. The dashboard enabled efficient tracking and recording of order information, malaria operational plan (MOP) verification checks, and funding decisions at the order line level for each commodity team, supporting informed decision making throughout the procurement cycle.

Looking forward, GHSC-PSM will share some of this year's successes at the American Society of Tropical Medicine & Hygiene Annual Meeting and Global Health Supply Chain Summit, which will take place in Q1 FY 2025. Success highlights include last-mile delivery optimization in Malawi, data analysis in Guinea, integrated community case management in Zambia, and leveraging of the QAT for forecasting and supply planning in Malawi.

The project looks forward to working alongside PMI in reaching the unreached, strengthening community health systems, keeping malaria services resilient, investing locally, and innovating and leading.

COST SAVINGS ON MALARIA COMMODITIES

GHSC-PSM's strategic sourcing activities generated significant cost savings[47] for malaria products and the countries served by its malaria programs, freeing resources that can be channeled into expanded procurement and programming opportunities. Commodity cost savings on core malaria products has reached nearly $340 million over the life of the project, including $28 million in savings during the second half of FY 2024, as shown in Exhibit 5.

As a whole, AL products accounted for nearly $6 million in cost savings in the second half of FY 2024 and $124 million over life of project. One example of a driver of this is AL 6x3 whose procurement

[47] Commodity cost savings are calculated using a comparison of the weighted average baseline cost of products when they were first procured to an average weighted cost of the product in the current review period, adjusted for inflation as determined by the Consumer Price Index.

volume and pricing (well below baseline) remained static throughout FY 2024, contributing to an increase in cost savings.

As expected, to meet contract minimums as part of the pooled procurement strategy, artesunate-amodiaquine (ASAQ) procurement volumes increased in the second half of FY 2024. ASAQ products are in low demand, meaning new suppliers are unlikely to enter the market. As such, the market remains relatively stable. ASAQ cost savings in the second half of FY 2024 was just over $1.7 million. The ACT category (AL and ASAQ products) saw cost savings of over $137 million over the life of the project. Notably, the cost of artemisinin is decreasing within the overall ACT market, and greater savings are expected in the future.

Cost savings on LLINs grew in the latter half of FY 2024. PMI recently launched a campaign to shift countries toward higher procurements of the more-effective Dual AI (active ingredient) nets, specifically the less expensive Dual AI 150cm nets. GHSC-PSM increased procurement of Dual AI 150cm and 170cm nets in Q3 and Q4. The quantity of Dual AI nets procured in FY 2024 doubled compared to FY 2023, and was the largest net category procured in the second half of FY 2024. However, the current price of Dual AI 150cm is above the baseline cost, while the price of Dual AI 170cm is below the baseline cost, contributing to a growth in savings in the second half of FY 2024 of nearly $3 million.

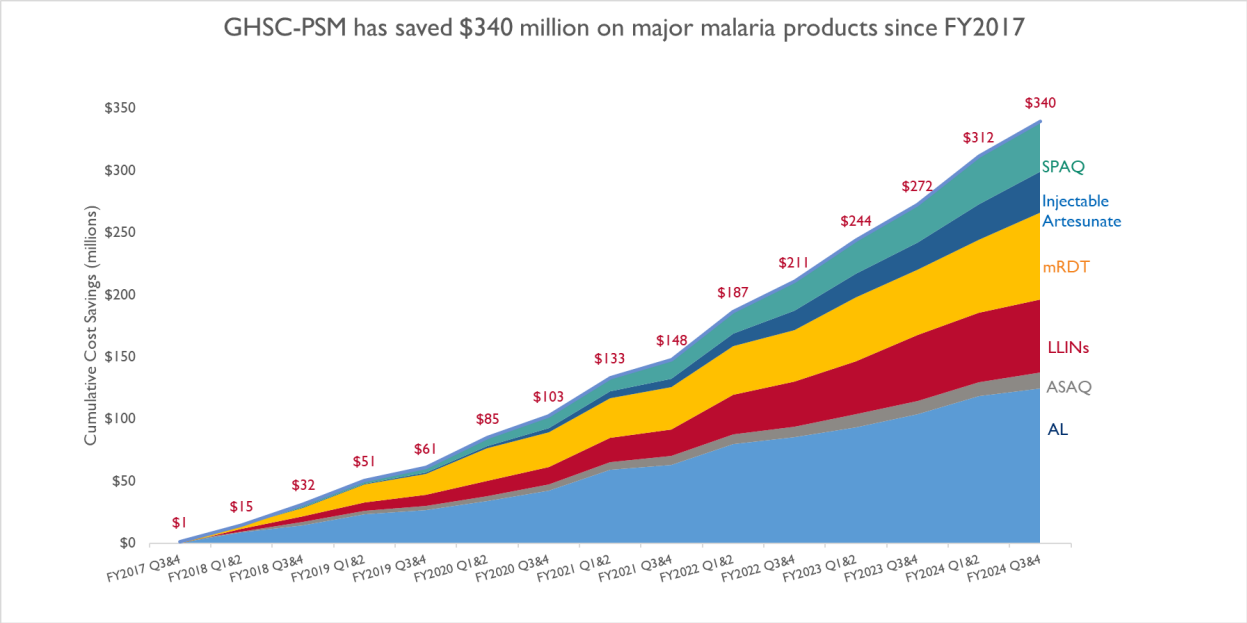
Consistent with past years, piperonyl butoxide (PBO) 150 cm and 170 cm nets were the second-largest net category procured in the second half of FY 2024, while the single pyrethroid 150 cm and 170 cm nets had the lowest volume of procurements in second half of FY 2024. Single pyrethroid net procurements are expected to continue to decline as countries increase procurement of Dual AI nets. Collectively, LLINs accounted for more than $3 million in cost savings in the second half of FY 2024, amounting to over $58 million over the life of the project.

In the mRDT category, large pack sizes accounted for a larger proportion of the total procurement volume, leading to a reduced cost per unit, and therefore resulting in a price decrease in the second half of FY 2024. Procurement nearly doubled compared to the first half of FY 2024 and the life-of-project cost savings increased to over $10 million. GHSC-PSM procured mRDTs from a diverse set of providers in Q3 and Q4 FY 2024.

Prices for injectable artesunate (severe malaria medicines) remained stable throughout FY 2024. Procurement volumes also remained relatively consistent with the first half of FY 2024. Savings for severe malaria medicines in the second half of FY 2024 were $4.7 million, contributing to life-of-project cost savings of over $33 million.

In the latter half of FY 2024, sulphadoxine-pyrimethamine + amodiaquine (SPAQ) amassed a cost savings of $1.6 million, contributing to the life-of-project cost savings of $40 million. While SPAQ products are generally ordered once a year, in the first half of the FY, there were some small procurements in Q3 and Q4 to meet country needs.

Exhibit 5. Life-of-Project Savings on Malaria Commodities



COMMODITY SOURCING, PROCUREMENT, AND DELIVERY

GHSC-PSM assesses market conditions and the sources of critical commodities, key starting materials (KSMs), and APIs to inform project strategies for ensuring product availability and accessibility.

STRATEGIC SOURCING AND SUPPLIER RELATIONSHIP MANAGEMENT

In Q4, GHSC-PSM conducted 14 business review meetings with mRDT, pharmaceutical, lab, and LLIN suppliers. Participants exchanged updates, discussed supplier performance, product pipelines, manufacturing facilities and capacity, and plans to establish or expand regional manufacturing in Africa, as per PMI priorities. Additionally, GHSC-PSM onboarded a new mRDT supplier.

In Q4, GHSC-PSM placed the remaining dual AI LLIN MOP 23 orders with suppliers.

Procurement and delivery

In Q4, GHSC-PSM procured malaria commodities, with a total value of $46.4 million, for 26 countries[48] and delivered malaria commodities worth more than $39 million to 24 countries.

[48] Angola, Benin, Burkina Faso, Burundi, Cambodia, Cameroon, Ethiopia, Ghana, Guinea, Kenya, Laos, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Tanzania, Thailand, Togo, Uganda, Zambia, and Zimbabwe.

On-time and on-time, in full delivery

The timeliness of GHSC-PSM deliveries remained consistent for standard OTD and OTIF. In Q4, the OTD rate for malaria commodities was 83 percent (see Exhibit 6 for monthly breakdown). The OTIF rate in Q3 was 86 percent (see Exhibit 7 for monthly breakdown).

Exhibit 6. Monthly On-Time Delivery Rates for Malaria Commodities

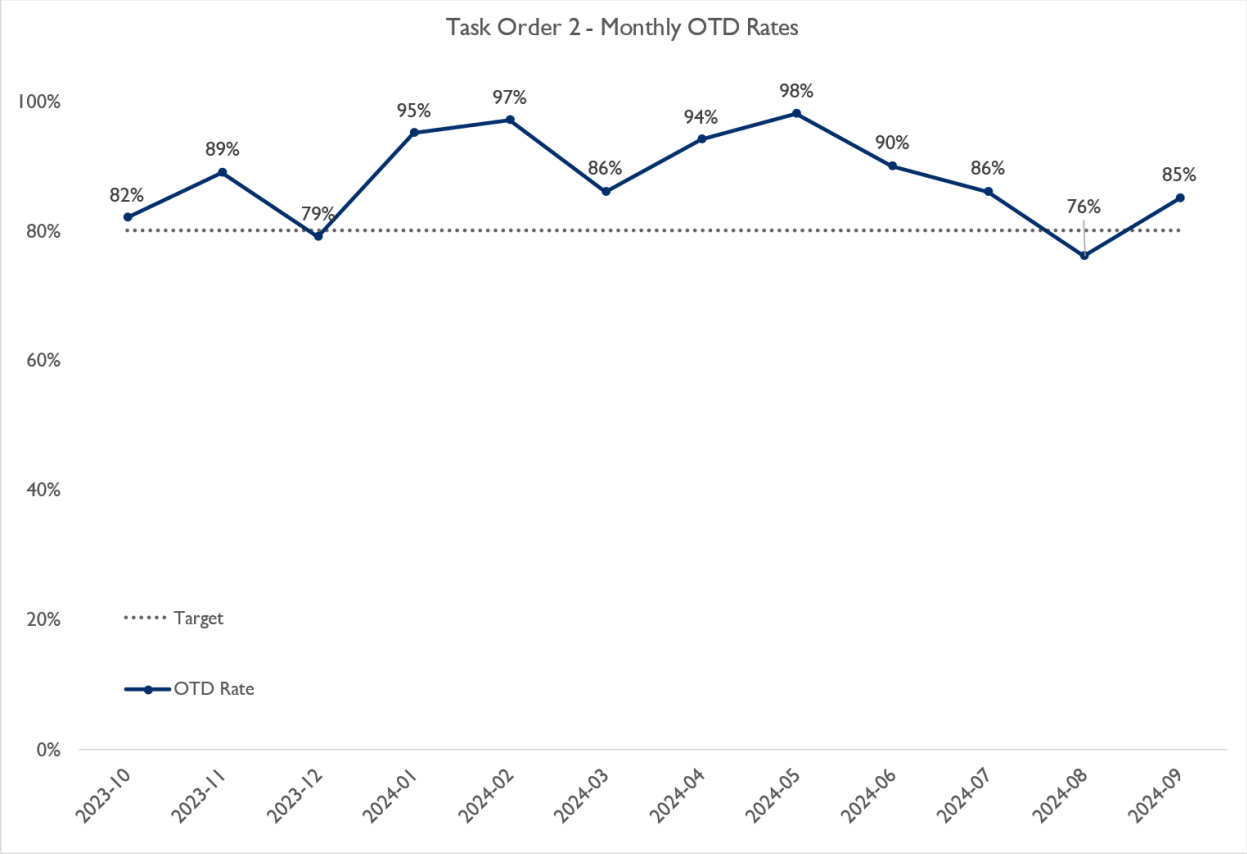
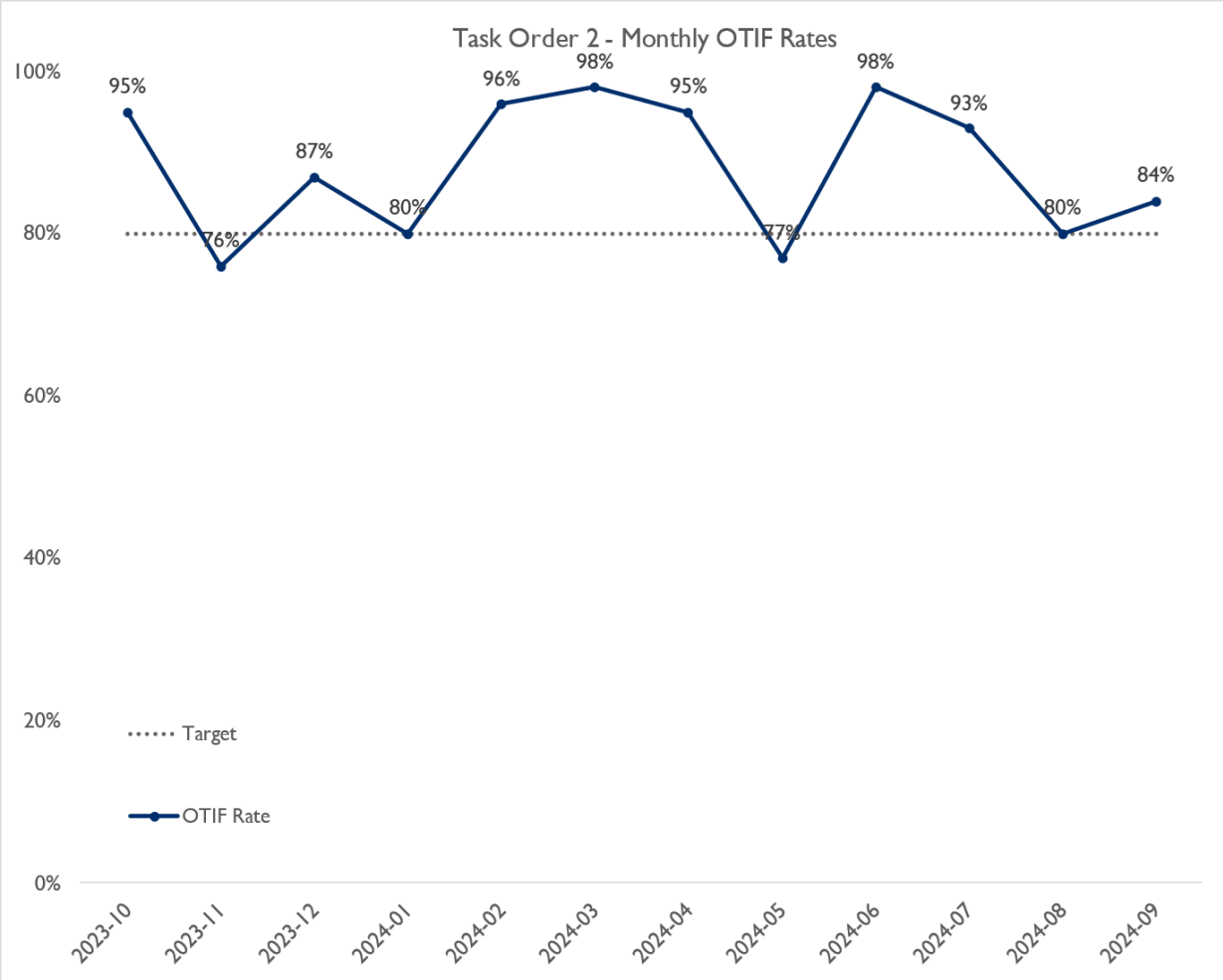


Exhibit 7. Monthly On-Time, In-Full Rates for Malaria Commodities



GLOBAL SOURCING COLLABORATION

Throughout FY 2024, GHSC-PSM participates in the Malaria Pharmaceuticals (Pharma) Task Force,[49] mRDT Task Force,[50] Vector Control Access Task Force,[51] and LLIN Donor Collaboration meetings.[52]

[49] Malaria Pharma Task Force members include Clinton Health Access Initiative (CHAI), Bill & Melinda Gates Foundation (BMGF), GHSC-PSM, the Global Fund, Impact Malaria, the Malaria Consortium, Medicines for Malaria Venture (MMV),Médecins Sans Frontières (MSF), Pan-American Health Organization, PATH, PMI, UNICEF, and WHO.

[50] mRDT Task Force members include CHAI, Foundation for Innovative New Diagnostics, BMGF, the Global Fund, the Malaria Consortium, MSF, PATH, PMI, GHSC-PSM, UNICEF, United Nations Development Program, Unitaid, and WHO.

[51] Vector Control Access Task Force members include the Against Malaria Fund (AMF), CHAI, BMGF, GHSC-PSM, the Global Fund, Innovative Vector Control Consortium, International Federation Red Cross, MMV, MSF, PMI, Population Services International, Results In Health, UNICEF, Unitaid, and WHO.

[52] LLIN Donor Collaboration calls include members from AMF, GHSC-PSM, PMI, the Global Fund, and UNICEF.

These groups are valuable forums for exchanging information on market risks and improving collaboration across the global malaria community.

COMMODITY RISK PROFILES

Commodity risk profiles visualize volumes shipped from suppliers by geographic region. GHSC-PSM reviews each commodity category to identify challenges or risks in a given period and shares updates on the status of active orders. In Q4, the project responded to the following challenges and updated PMI:

- A rectal artesunate supplier experienced a three-month delay in goods availability dates (GADs) for orders to DRC and Madagascar, due to delays with incoming artesunate API. To mitigate this, GHSC-PSM reiterated the importance of redundancy in upstream supply chains and validation of more than one source. The supplier has subsequently worked with its artesunate API supplier to stagger future API deliveries to prevent manufacturing delays.

- Two ACT suppliers for ASAQ and high-dose AL encountered out of specifications as part of routine testing. ASAQ orders for Angola and DRC were held under quarantine in-country while the project pulled additional samples for testing to determine whether the final batches could be released. The investigation into high-dose AL with a separate supplier impacted an order for Senegal, which remains at the supplier while the investigation is underway.

RAPID FULFILLMENT STRATEGY

The project uses a strategy where the regional distribution center (RDC) stockpile and vendor-stored inventory work in tandem as critical mechanisms to fulfill a) "emergency" and b) "urgent" orders for AL.[53] The RDC maintains quality control (QC) stock that is tested and ready to distribute. For emergency orders, the priority is to fulfill them, fully or partially, from the RDC stockpile. If the RDC stockpile is insufficient to meet the need, GHSC-PSM can fulfill emergency orders through VSI, which may not have QC-tested stock readily available and, therefore, may not be as fast of a fulfillment mechanism. The project uses VSI as a first option in fulfilling urgent orders. Demand data—derived from quarterly country supply plans and the monthly Procurement Planning and Monitoring Report for Malaria (PPMRm)—inform these strategies for AL. The project translates these data into the country stock risk dashboards that illustrate the timing and scope of upcoming stock risks.

In Q4, GHSC-PSM used VSI to fulfill seven urgent orders of AL 20/120 mg hard tablets for Burundi, Malawi, Mozambique, Niger, and Senegal. In addition, GHSC-PSM fulfilled three emergency orders through the RDC stockpile of AL 20/120 mg dispersible tablets and AL 20/120 mg hard tablets to Mozambique and Senegal. In Q4, GHSC-PSM delivered three VSI orders of AL 20/120 mg hard tablets to Côte d'Ivoire and DRC and six RDC orders of AL 20/120 mg hard tablets and AL 20/120 mg dispersible tablets to Côte d'Ivoire and Mozambique.

The project implements a rapid replenishment strategy for SPAQ. SPAQ is stockpiled at the Belgium RDC to rapidly replenish unplanned orders to ensure timely delivery, reduce fulfillment lead times, and mitigate future stockout risks by hedging against market uncertainty and disruption. The project

[53] Task Order 2 (TO2) Emergency order definition: Orders with less than a four-month lead time from the requisition order entry date and the requested delivery date. TO2 Urgent order definition: Orders with more than a four-month lead time but less than the standard lead time to be met through routine procurement.

leverages a rotating emergency loan fund to secure large volumes of supplier production capacity in markets with limited supply. GHSC-PSM places orders based on data-driven demand signals to secure production capacity earlier in the ordering process—often before receiving country orders.

QUALITY ASSURANCE

Collaboration

GHSC-PSM plays a leadership role among global stakeholders in the LLIN quality assurance (QA) space as the LLIN Quality Assurance Group (LQAG) chair. In Q4, the LQAG discussed LLIN stability, shelf life, storage, transportation requirements, and the potential use of the Resistance to Damage (RD) score in procurement. The project noted that upcoming tender activity for LLINs solicited information from suppliers on their efforts to generate data in these aspects. The LQAG also discussed member input on the TraceNet guideline on the definition of LLIN release date and label requirement at the three different product packaging levels: the LLINs label, individual bag label, and bale label. These discussions will continue in FY 2025 when the LQAG will provide a final recommendation to the TraceNet group.

Implementing strategies and innovations

In Q4, the project took a new approach to quality reviews during the tendering process. In the past, quality management system reviews focused on the supplier's internal manufacturing and control process to ensure that its LLINs met product specifications. In FY 2024, the project prioritized LLIN durability and stability in its scoring for quality. The project included questions in the tender to understand suppliers' activities and progress in these areas, awarding higher points during the evaluation to those that demonstrated more progress. This exercise signaled to suppliers that LLIN durability and stability, as well as the potential use of the RD score is a high priority and its components as a proxy for these factors.

In Q4, after the tendering process for ACTs, GHSC-PSM initiated a vendor-stored inventory procurement agreement for AL dispersible tablets. The project generated a new product review questionnaire to gather the supplier's critical storage stability and validation study reports to ensure that this mechanism does not impact product quality. The project will finalize the QA data review in Q1 FY 2025 to determine whether it will proceed with the agreement.

FOSTERING QUALITY IN MALARIA PRODUCTS

Malaria LLIN products

In Q4, GHSC-PSM completed a request for quotations for LLIN testing to update third-party laboratory pricing, capacity, and capabilities and extend contracts with laboratories through the project's extended performance period. GHSC-PSM initiated QA evaluation of a third brand of dual AI LLINs. If successful, this will significantly increase the overall supply of eligible dual AI LLINs, which is crucial considering the growing global demand for this net type.

Malaria pharmaceutical products

In Q4, GHSC-PSM initiated three preliminary out-of-specification (OOS) investigations. One of the investigations undertaken was for an artesunate assay in ASAQ. GHSC-PSM's third-party lab reported results below specifications for assay results in the ASAQ infant (25/67 mg) and toddler (50/135 mg)

dosage levels, as well as relative difference greater than two percent for assay results in these dose levels and the child (100/270 mg x3) and adult (100/270 mg x6) dose levels for two orders. Since the project designated the product for concurrent shipment, additional samples were obtained for further testing once the product arrived in DRC and Angola. GHSC-PSM also notified the supplier conducting an internal investigation and will provide recommendations to PMI once additional testing is complete.

In Q4, the project initiated the second OOS investigation on the particle size of artesunate powder for the artesunate injectable 60-mg product. GHSC-PSM's third-party analytical testing laboratory reported that the artesunate powder in three kit batches of the 60 mg injectable had particle size ≥10 μm greater than the 6,000 maximum per vial. The OOS impacted two orders. They were shipped concurrently with testing, so the project retrieved samples and sent them to another of its third-party labs experienced in testing this product type. The project will make a recommendation to PMI based on the findings of the confirmatory test at the GHSC-PSM laboratory that is most experienced at testing the product.

The third preliminary OOS investigation initiated in Q4 was for residual substances that were above specification for a brand of high-dose AL. Preliminary investigation findings suggested a difference in testing equipment, and test methodology. Following a lengthy investigation, which included a supplier visit to GHSC-PSM's third party laboratory, a root cause could not be determined. The project has requested a report from the supplier and will make a recommendation to PMI once we receive and review all the hypothesis testing results and supplier reports.

As part of GHSC-PSM's due diligence and continuous improvement, the project began investigating syringes kitted with a brand of artesunate injectables after becoming aware of an incident of OOS syringes on another task order. Since the initiation of the project, GHSC-PSM has procured the kitted product (the injectable and two syringes with needles attached). GHSC-PSM QA investigated the risk associated with procuring the kitted product and determined that the syringe manufacturer received a U.S. Food and Drug Administration warning letter for syringes, which the supplier noted were not the ones in the kitted product. Since the artesunate injectable is a WHO-prequalified product, the project also liaised with the WHO Prequalification (WHO PQ) team for pharmaceuticals to understand the regulatory requirement of the kitted product. WHO noted that the kitted product was a convenience kit not under its regulatory authority and required approval from the national regulatory authority of the country receiving it. PMI requested a formal recommendation from the project. GHSC-PSM is reviewing this and all available data, including past and upcoming orders and national regulatory agency registration, to provide a comprehensive recommendation on managing orders of the kitted product.

mRDT products

In Q4, the project engaged with WHO PQ Diagnostics and the Global Fund to better understand the similarities and differences between the Expert Review Panel for Diagnostics (ERPD) and WHO PQ processes, including the third party testing procedures required for prequalification. The discussion revealed that the ERPD process is primarily a documentation review where the supplier can request renewal as long as it is committed to applying for WHO PQ. The WHO PQ process includes CDC testing, site audits, and documentation review. Both the ERPD and the WHO PQ teams share information. This exercise enhanced the project's and PMI's understanding of the processes, providing additional insight to the potential use of the ERPD in support of regional manufacturing.

PROMOTING SUPPLY CHAIN MARKET HEALTH

In Q4, the project completed a method update for one product to ensure the project has established test methods with third-party laboratories to perform routine testing, ensuring the quality, safety, and efficacy of the product procured.

PRODUCT REVIEW FOR ELIGIBILITY

In Q4, GHSC-PSM supported access to quality-assured products by completing quality reviews for six products (see Exhibit 8) to facilitate their addition to the Restricted Commodity Waiver list governed by USAID Automated Directives System 312, making the products eligible for procurement. The activity included a review of the new product dossier, reports, and certification documents. The project also reviewed a new topical repellent; however, the product did not meet the quality standards for GHSC-PSM eligibility.

Exhibit 8. New Products Added to the Restricted Commodity Waiver List in Q4

Product category	**Product subcategory**	**Product detail**
Pharma	SPAQ	Sulfadoxine-pyrimethamine (SP) dispersible tablets (250 mg/12.5 mg) and amodiaquine dispersible tablets 76.5 mg
Pharma	SP	SP dispersible tablets (500 mg/25 mg)[54]
Pharma	SP	SP dispersible tablets (250 mg/12.5 mg)
Pharma	SP	SP dispersible tablets (500 mg/25 mg)[55]

[54] Two SP dispersible tablet (500 mg/25 mg) products offered by different suppliers and thus requiring individual reviews.

[55] Two SP dispersible tablet (500 mg/25 mg) products offered by different suppliers and thus requiring individual reviews.

LLIN	LLIN	Dual AI net
Topical repellent	Topical repellent lotion	Diethyltoluamide (DEET)

Key performance indicators

In Q4, GHSC-PSM:

- Completed 93 percent of QA/QC processes within the required lead times, above the target of 85 percent.
- Identified OOS findings in zero percent of batches tested during the quarter, thus meeting the target of one percent maximum.
- Completed 100 percent of investigation reports on time.
- Generated cost savings of $629,362 in FY 2024 from randomized testing instead of testing all batches, and over $2.11 million during the life of the project.

IMPLEMENTATION OF STANDARD-BASED IDENTIFICATION, BARCODING, AND DATA SHARING

In Q4, GHSC-PSM continued implementing identification, barcoding, and data-sharing requirements for procured malaria products, enabling data exchange and visibility. In total, for the 258 malaria task order items in-scope (subject to requirements, actively procured in the past, and available for procurement in the future), by the end of Q4, total compliance scores by area were:

- Identify (GTIN/GLN collection): 99 percent.
- Capture (Standards-compliant barcoding on labels): 93 percent.
- Share (GDSNdata synchronization): 91 percent.

In Q4, the Global Fund and PMI endorsed the TraceNet guidelines. The project expects a formal United Nations Children's Fund (UNICEF) endorsement in Q1 FY 2025. Notable changes to the guidelines include updated guidance on LLIN release date, serial shipping container code, lifespan extension to three years, trade item variants, sizing of data carriers on bales established as min and max X-dimensions, and guidance on label quality, durability, and placement. Once fully endorsed, the guidelines will be published on the GHSC-PSM website and shared with the TraceNet TWG, a community of

global health stakeholders, including manufacturers, procurement agents, donors, implementing partners, and select donor-funded country programs co-convened by PMI and Global Fund.

Further, in this period, the GHSC-PSM worked with GS1 Global on a video and success story to showcase the outcomes of the 2022 LLIN Verification Pilot conducted in Calabar State, Nigeria. The project expects to publish the video and success story in Q1 FY 2025.

For additional highlights and milestones related to these standards in Q4, see Section C.

PRIORITY SETTING AND ORDER REDIRECTION

GHSC-PSM works with USAID to address country needs and market constraints, prioritize orders based on needs, and conduct commodity order transfers to improve stock status.

A total of 24 countries[56] submitted data to the PPMRm, which collects and reports information on stock status and host government and donor shipments. Visibility into this stock status and shipment information enables PMI, the project, and countries to make decisions on prioritizing, expediting, or delaying procurements or shipments and facilitates forecast and supply plan reviews to optimize procurements. Based on PPMRm data and coordination with the Global Supply Chain team at headquarters, in Q4, GHSC-PSM:

- In **Benin,** took the following actions:
    - Requested to postpone the delivery of AL 20/120 mg dispersible tablets and AL 20/120 mg hard tablets.
    - Reallocated approximately 70 percent of manufactured goods for Benin to support emergency orders for Cameroon, Liberia, and Malawi.
- In **Niger**: Expedited a shipment of artesunate injectables to prevent a stockout.
- In **Madagascar**: Expedited shipments of artesunate injectables.

REFINING THE MODELING TOOL AND GUIDANCE FOR INVENTORY MANAGEMENT FOR LOW-MALARIA-ENDEMIC SETTINGS

Low consumption of malaria products in low-malaria-endemic settings can result in product expiries and additional expenses incurred from redistributing products between facilities. In FY 2023, the project developed a Modeling Tool for optimizing supply management for low-consumption malaria medicines, which uses case information as a surrogate for consumption data. Users can plug in data to test stockpiling and distribution strategies and calculate the cost of these scenarios and their relative risk of leading to expiries or stockouts. GHSC-PSM offices in Cambodia, Laos, and Thailand provided feedback on the tool in Q4 FY 2023. In the first half of FY 2024, the project added a scenario/sensitivity analysis

[56] Burma has ended TO2 activities; Thailand and Laos have closed the field offices. Cameroon FO has closed out and Senegal did not report for July and August as they only report quarterly.

to help decision making for stockpile quantities to reduce or optimize distribution events, along with built-in user instructions, and edited the tool based on country feedback.

In Q4, GHSC-PSM demonstrated the tool's utility using Cambodia's malaria cases data from 2023 to project the case data for 2025 to analyze stockpile options for service delivery points. Additionally, the project proposed using the options for quantification and prepared a technical brief that was presented to the National Center for Parasitology, Entomology and Malaria Control (CNM) and implementing partners in a supply chain coordination meeting. CNM expressed its interest and suggested that the project include a note highlighting that the expired quantities should not be considered waste, as the stockpiles are intended for rapid response to urgent, unexpected cases. The project has added such a note in response to this request.

MALARIA COMMODITY ACCOUNTABILITY INITIATIVE

In Q4, GHSC-PSM continued developing the Malaria Commodity Accountability Initiative (MCAI) Guidebook and associated tool to help country stakeholders identify discrepancies between the total number of malaria products consumed according to the logistics management information system (LMIS) and the number of malaria services reported in the District Health Information System 2 (DHIS2). The tool provides stakeholders with the data needed to conduct root-cause analysis and identify interventions to improve accountability for malaria commodities. This activity contributes to PMI's 2021–2026 strategy focus areas "innovate and lead" and "keep malaria service resilient" by enabling country programs to identify and address accountability challenges and promote efficiencies.

Several countries have inquired about the MCAI and how the initiative could work in their country's context. A few countries have developed similar tools and requested feedback, while others are only starting the processes of establishing a commodity accountability initiative and need guidance on where to start.

LLIN DELIVERY AND DISTRIBUTION SUPPORT

In Q4, GHSC-PSM delivered nearly 6.4 million LLINs to seven countries for distribution as a malaria prevention measure (Exhibit 9). Through this initiative, communities received nets before the rainy season through mass campaigns and year-round through continuous channels. In some countries, the project provided transportation through third-party logistics (3PL) service providers to deliver LLINs from the central level to district or health facility levels for continuous or mass distribution. In Q4, the project supported nine countries[57]to prepare, launch or conduct LLIN distribution campaigns.

[57] Angola, Burundi, Liberia, Mali, Nigeria, Sierra Leone, Uganda, Zambia, and Zimbabwe.

Exhibit 9. Quantity of LLINs Delivered to Countries in Q4 FY 2024

FY24 Q4 (Quarter)	(7 countries delivered to)
Country	Number of LLINs delivered
Ethiopia	1,600,000
Kenya	1,474,000
Madagascar	325,200
Malawi	393,000
Mali	79,105
Tanzania	2,118,861
Zimbabwe	400,000
	6,390,166

In Q4, GHSC-PSM supported the following LLIN distribution activities:

- In **Zambia**, the project procured 1.2 million PBO LLINs for continuous distribution across six provinces. In addition, the project collaborated with the Vector Control Team from the National Malaria Elimination Centre to determine LLIN allotments and shared them with the 3PL for further action. The country expects the LLINs to arrive in Q1 FY 2025. These LLINs will be delivered directly to health facilities in the Copperbelt, Eastern, Luapula, Muchinga, Northern, and Northwestern provinces.

- In **Zimbabwe**, supported the 2024 LLIN mass campaigns through:

    - Joint planning.
    - Storage assessments at 52 holding/distribution points in four districts planning LLIN mass campaigns.
    - Provision of transport support for last-mile distribution, including daily movement of nets from holding points to community distribution points that did not have optimal storage conditions.
    - Procurement of 24 padlocks to enhance security at LLIN holding/distribution points
    - Last-mile LLIN distribution to four Zimbabwe Assistance Program in Malaria II districts implementing mass campaigns in Mashonaland Central province. Nine GHSC-PSM trucks delivered 92,500 LLINs to 55 holding and distribution points.
    - Deployment of two service vehicles for the distribution of LLINs in hard-to-reach areas.

    - Participation in monitoring visits for districts that implemented mass campaigns during the period under review.

  Stakeholders plan to analyze results from the 2024 mass campaigns to identify lessons and best practices and inform planning for the upcoming 2025 mass campaigns, which involve more than four times the volume of LLINs distributed in 2024.

COUNTRY SUPPORT

In FY 2024, GHSC-PSM worked to strengthen supply chain systems for malaria medicines and commodities in 23 countries.[58] Some highlights from this quarter include:

In Q4, training on the forecasting module covered key aspects, including an overview of the forecasting workflow in QAT, necessary data inputs, different forecasting methods, and forecast output analysis.

The training on the supply planning module took place later in Q4, focusing on understanding essential data elements, knowing when to manage programs (load, validate, import, export, or delete), and correctly entering the three main data elements to submit supply plans. Participants also learned to plan shipments for strategic products, distinguish inventory from adjustments, and understand core supply planning concepts. The session covered identifying and correcting reported issues in QAT and the process for validating draft versus final versions.

A total of 15 participants attended the forecasting module training and 17 participated in the supply planning module training, including 13 staff from MOH institutions (National Integrated Malaria Control Program-PNILP, PNSR, National AIDS Control and Sexually Transmitted Infections Program-PNLS/IST, National Integrated Tuberculosis Control Program-PNILT, Drug and Food Regulatory Authority-ABREMA, and United Nations Development Program-UNDP) and three from GHSC-PSM.

- In **Ethiopia**, a surge in malaria cases resulted in a significant increase in the consumption of malaria medicines and mRDTs, necessitating frequent revisions of the average monthly consumption (AMC). The rise in malaria cases has been observed since 2021, with contributing factors, including the conflict in the country, weak capacity of government structures to implement malaria control strategies at district and lower (Kebele) levels, compromised vector control interventions, insecticide resistance to chemicals used for indoor residual spraying, and climate change. In Q3 FY 2024, cases increased threefold compared to the number of cases registered three years before, leading to the implementation of a cluster-based campaign approach. The National Emergency Operations Center (EOC) was established in Q3, and nine teams from the MOH, Ethiopian Public Health Institute (EPHI), regional health offices, and development partners, including GHSC-PSM, were deployed to tackle and reverse the malaria case surge. GHSC-PSM supported the national EOC and the cluster-based regional campaign in close consultation with the Mission.

  In Q4, the project supported the MOH in reviewing and updating the supply plan based on the revised AMC using QAT. This resulted in identifying potential stockout risks and developing action points shared with stakeholders for intervention and follow-up. Based on the supply plan action points, GHSC-PSM identified additional stock requirements and funding gaps that the project then raised with stakeholders to address the gaps and avert potential stock interruptions. As part of these interventions, the MOH secured a donation of 160,000 vials of artesunate injectable from UNICEF and began the procurement of 1.1 million vials of artesunate injectable, along with 110,000 boxes (100 tablets each) of chloroquine 250 mg tablets from the

[58] In FY 2024, GHSC-PSM provided technical assistance to countries with malaria funding: AFRICA: Angola, Burkina Faso, Burundi, Cameroon, Ethiopia, Kenya (TO5), Ghana, Guinea, Liberia, Malawi, Mali, Mozambique, Niger, Nigeria, Rwanda, Sierra Leone, Uganda, Zambia, and Zimbabwe; ASIA: Burma, Cambodia, Laos, and Thailand. The project also provided malaria-funded short-term assistance to Cote d'Ivoire, Madagascar, and Tanzania in FY 2024.

government capital budget. This procurement is ongoing through the Ethiopian Pharmaceutical Supply Service.

In FY 2024, the project and other in-country stakeholders are working to facilitate clearance and distribution with the MOH to coordinate receiving a donation of AL 6x2 and AL 6x4 from the MOH in Tanzania, expected to be received in FY 2025.

- In **Ghana,** collaborated with UNFPA and the Ahafo Regional Health Directorate to provide logistics management training for 48 commodity managers from hospitals, health centres and CHPS in the Ahafo region. The objective was to strengthen their capacity to effectively manage malaria and other health commodities, supporting efforts to improve last-mile access. As highlighted in the region's Supply Chain Strategic Plan, this intervention forms part of efforts to bridge logistics management capacity gaps.

  GHSC-PSM's approach included:

  - Developing a trainers' guide and participants' workbook based on the updated standard operating procedure (SOP) manual.
  - Organizing a pre-training conference for facilitators to review course content and assign responsibilities.
  - Training participants on health logistics management, covering key areas such as inventory management, health commodity storage management, monitoring, and supervision.

  As a next step, the project will support the region in monitoring and promoting the adoption of supply chain best practices at health facilities.

- In **Malawi**, provided financial and technical support to the National Malaria Control Program (NMCP) to conduct the Malaria Commodity Accountability Performance Tracking (CAPeT) exercise. The exercise targeted 30 health facilities in 15 districts. Key findings included an improved, but still high, discrepancy ratio for the targeted facilities (1.31 from 1.46 observed during desk review). Key challenges and leading causes of the discrepancy included: data mismatch between facility reports and DHIS2 and OpenLMIS (overreporting in OpenLMIS by 0.9 percent and underreporting in DHIS2 by 9.2 percent); no designated or unavailable personnel (data clerk or pharmacy person) for data recording and reporting; and incomplete recording of clients in the AL register. At the end of the exercise, the assessment teams, jointly with the concerned facility staff, developed action plans and shared them with the district health office and the NMCP for follow-up and support.

B3. FAMILY PLANNING AND REPRODUCTIVE HEALTH

As of Q4, GHSC-PSM has delivered contraceptives to country FP programs estimated to provide a potential **116 million couple-years of protection**, including **5.1 million in Q4.**

Delivered FP/RH commodities[59] to 17 countries[60] in Q4 and provided **health supply chain systems-strengthening support** to **19 countries[61] in FY 2024** with FP/RH funding.

Continued timely fulfillment of USAID-supported countries' orders, **achieving 92 percent OTD in Q4**.

Published four case studies in FY 2024 documenting USAID human resource efforts for supply chain management in Rwanda.

The FP/RH task order (TO3) serves as the primary vehicle through which USAID procures and provides FP/RH commodities for its voluntary FP/RH programs; offers technical assistance to improve supply systems and contraceptive security in partner countries; and provides technical leadership to strengthen global supply, increase financing, and introduce new FP/RH commodities.

REFLECTIONS ON FY 2024

GHSC-PSM continued to expand access to FP/RH methods of choice by meticulously analyzing the allocation of available stock in countries, using strategic sourcing, and collaborating with manufacturers, partners, and global organizations to secure a continuous supply of various contraceptives. GHSC-PSM strengthened business partnerships with its FP/RH suppliers, maintaining regular contact to address supply challenges as they materialized. To promote and sustain market health, in FY 2024, GHSC-PSM and GHSC-QA qualified three new suppliers of oral contraceptives. An expanded supply base increases available production capacity and reduces supply risk by increasing supply diversity; this supports GHSC-PSM's objective of improving FP/RH contraceptive security. In addition, increased competition can

[59] Per USAID guidance, all condom procurements are counted under the HIV/AIDS task order.

[60] GHSC-PSM delivered FP/RH commodities to the following countries: Bangladesh, Burkina Faso, Burundi, DRC, Ethiopia, Ghana, Haiti, Kenya, Madagascar, Malawi, Mali, Mozambique, Rwanda, Senegal, Tanzania, Togo, and Uganda.

[61] GHSC-PSM provided technical assistance with FP/RH funding to the following countries in FY 2024: Angola, Burkina Faso, Burundi, Ethiopia, Ghana, Guatemala, Guinea, Haiti, Kenya (TO5), Liberia, Malawi, Mali, Mozambique, Nigeria, Pakistan, Rwanda, South Sudan, Uganda, and Zambia.

improve performance, expand services, and lower prices, thereby increasing the value provided to recipient countries.

In FY 2024, GHSC-PSM worked with the Consensus Planning Group and UNFPA to ensure clients had access to high-demand, sole-sourced, one-rod implantable contraceptives. GHSC-PSM continued expanding contraceptive options by collaborating with global stakeholders, including the Hormonal Intrauterine Devices (IUD) Access Group, to introduce and scale up access to IUDs in USAID priority countries. GHSC-PSM maintains partnerships with UNFPA and members of the reproductive health community through participation in the VAN Steering Committee, the Consensus Planning Group, and other convening mechanisms.

In FY 2024, the project implemented the Transition Order Supply Plan (TOSP) mechanism to secure FP/RH supply and avoid delivery disruptions as GHSC-PSM prepares for the transition to the NextGen Integrated Procurement Service Agent. To that end, GHSC-PSM worked with USAID to establish clear expectations of supply needs during transition, the process for countries to create and update quarterly supply plans, and receive regular feedback from the project and USAID through the TOSP mechanism. In addition, GHSC-PSM consolidated all of its stocked FP/RH products into a single warehouse to ease the transition process.

The project deployed its fourth round of the bi-annual Contraceptive Security Indicators (CSI) Survey that assesses access to a wide range of affordable, high-quality contraceptives in more than 40 countries. GHSC-PSM also published findings from its multi-year research initiative on the policy drivers of contraceptive prevalence and private-sector method-mix strategies in *Global Health Science and Practice*, a peer-reviewed academic journal. In addition, GHSC-PSM's analysis of country adaptation strategies to mitigate the negative impacts of COVID-19 on access to FP, based on the 2021 CSI results, was presented at the Reproductive Health Supplies Coalition (RHSC) General Membership Meeting (GMM) in FY 2024.

Contraceptive use can improve the overall health and economic status of a country's population. By using the Impact 2 modeling approach,[62] the project estimated the expected benefits resulting from the contraceptives GHSC-PSM delivered to USAID-supported countries. In total, over the life of the project, the contraceptives delivered globally equate to 116,170,600 couple-years of protection[63]. Over the life of the project, these FP commodities are estimated to prevent approximately 104,000 maternal and 1,156,000 child deaths when combined with proper counseling and correct use. Commodities delivered in just FY 2024 are estimated to have prevented 17,000 maternal and 162,000 child deaths (179,000 total). The positive impact on mortality is driven by the prevention of approximately 53,800,000 unintended pregnancies over the life of the project (8,750,000 in FY 2024), which is estimated to prevent approximately 20,800,000 abortions (3,400,000 in FY 2024). This represents a substantial contribution to preventing suffering, saving lives, improving economic outlooks, and creating a brighter future for families. As a downstream consequence of contraceptive availability, not only are lives saved, but also a considerable amount of money in these resource-limited LMICs.

[62] https://www.msichoices.org/what-we-do/technical-expertise/impact-2/

[63] https://www.usaid.gov/global-health/health-areas/family-planning/couple-years-protection-cyp

Over life of project, a total of $3.9 billion in direct spending by countries is estimated to have been saved on health care, much-needed resources that can be reinvested in the overall health system.[64]

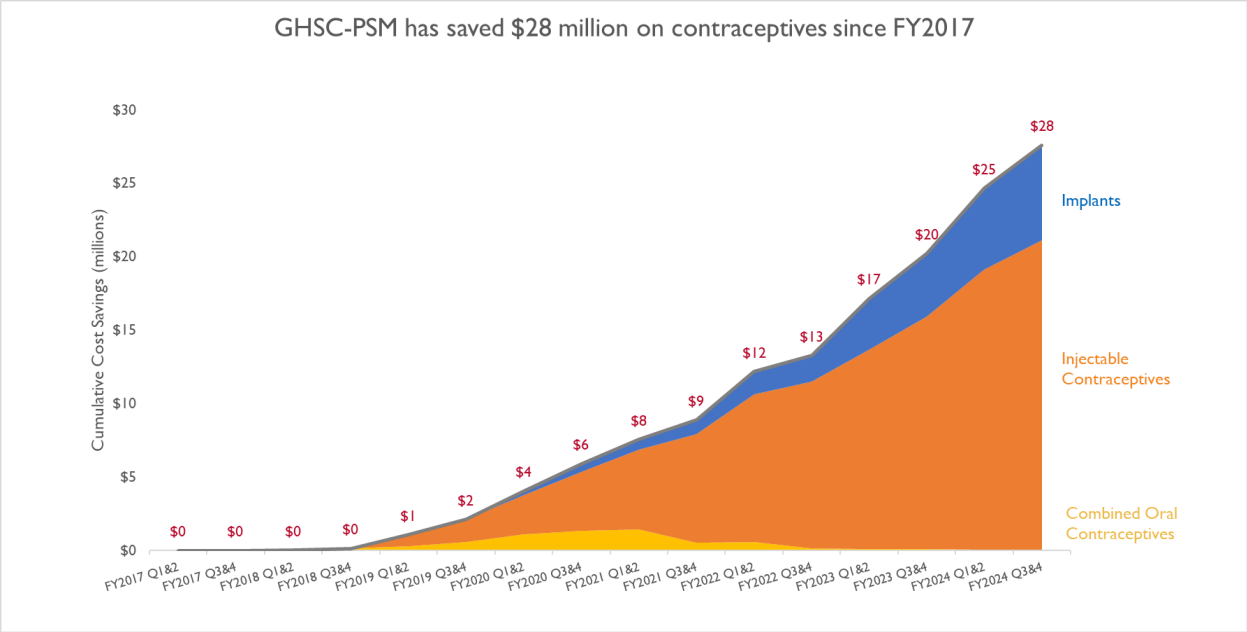
COST SAVINGS ON CONTRACEPTIVES

GHSC-PSM's strategic sourcing activities generated significant cost savings[65] for FP products and the countries and people served by its FP programs. Commodity cost savings on core FP products reached nearly $28 million over the life of the project, including $3 million in savings during the second half of FY 2024, as shown in Exhibit 10.

A notable contribution to these savings includes MPA-IM. One procurement of commodities accounted for about one million of the five million vials of MPA-IM procured by the project in Q3 and Q4, contributing $2 million to the cost savings. Due to the short shelf life remaining, the supplier offered the product at a discount. MPA-IM injectable contraceptives have been the largest FP product cost savings driver, generating over $21 million over the life of the project.

The price for contraceptive two-rod implants, the second largest cost savings driver for FP products, remains well below the baseline price, leading to a savings of almost $1 million. Over the life of the project, GHSC-PSM has saved a total of $6.4 million on implantable contraceptives.

Exhibit 10. Life of Project Savings on Contraceptives



[64] The direct healthcare costs saved modeled in Impact 2 are an estimation of the direct costs (supplies and personnel) associated with pregnancies and birth. The cost estimate represents money that would have been spent by families or the healthcare system for pregnancy care, safe delivery and treatment of complications

[65] Commodity cost savings are calculated by comparing the weighted average baseline cost of products when they were first procured to an average weighted cost of the product in the current review period, adjusted for inflation as determined by the Consumer Price Index.

ADDRESSING FP/RH PRIORITIES

Global Supply Chain

GHSC-PSM maintains its commitment to achieving commodity security by employing multiple supply chain strategies, including maintaining a "made to stock" inventory where specific goods are produced and warehoused in advance to meet anticipated future demand. GHSC-PSM employs a coordinated ordering approach, working through the Consensus Planning Group, coordinating with other buyers to prioritize orders based on need and to maximize available production capacity. This approach is particularly effective when global demand for certain commodities significantly exceeds available supply.

GHSC-PSM stocks commonly procured FP commodities in its RDC for quick order fulfillment and mitigation of potential supply constraints. The project reviews the forecasted volume and prioritizes products with a long shelf life to reduce expiry risk when determining what FP/RH commodities to stock in the RDC. GHSC-PSM also prioritizes storing products in the RDC that are registered and eligible for importation in several recipient countries to increase the availability of these commodities.. In 2024, GHSC-PSM consolidated all of its stocked FP/RH products at the Belgium RDC. This reduced complexity by placing all products under the management of a single warehouse team, enabling unified stock reporting and reducing freight lanes for service.

Procurement of one-rod implantable contraceptives, a high-demand, sole-source product, faced manufacturing production delays in the first half of FY 2024, which affected Q3 and Q4 deliveries. The manufacturer has resolved these issues and GHSC-PSM does not expect delays to persist into FY 2025.

Digital Supply Chain

The digital supply chain technical priority area (TPA) strengthens country supply chains, making them scalable, flexible, and integrated. In Q4, GHSC-PSM continued increasing data visibility, providing support to VAN countries.[66] The project also published Lessons Learned in Product Master Data Management and Human resource planning guidance document for health supply chain information system.

Enabling Environment

The enabling environment TPA strengthens leadership, management, and governance for FP/RH supply chains while increasing country governments' investments and accountability. GHSC-PSM supports policies, financing, and guidelines that improve FP/RH commodity security. In Q4, GHSC-PSM drafted the Procurement Impact Brief User Guide and received input from the USAID Knowledge SUCCESS project. This document advises countries on using the Impact Briefs in their advocacy efforts. The project drafted a case study on Rwanda's Contraceptive Logistics Committee and its integration into the more expansive Coordinated Procurement and Distribution System (CPDS). CPDS is a government mechanism that, since 2016, has streamlined the integration of supply chain practices across health program areas and improved quantification, procurement, and supply plan monitoring of all public health commodities. The case study is targeted at policymakers at the country level looking to improve contraceptive security in the country. GHSC-PSM expects to publish the final version in Q1 FY 2025.

[66] Ghana, Liberia, Rwanda, Malawi, Nigeria.

Last Mile

The last-mile TPA improves availability and access to family planning commodities in communities and service delivery points by spurring innovation and utilization of best practices for policies, processes, or technology. In FY 2024, GHSC-PSM published a logistics overview of country governments and parastatals that outsource warehousing and distribution services through government funding and private-sector contracts. In Q4, GHSC-PSM conducted an in-depth assessment in Botswana, Malawi, and Nepal to identify the enabling and inhibiting factors behind outsourcing decisions and to understand how CMSs in these countries manage their warehousing and distribution services. GHSC-PSM will disseminate the results of this assessment in Q1 FY 2025.

Workforce Development

The workforce development TPA strengthens the performance of supply chain managers and other in-country staff who support supply chain activities. In Q3, GHSC-PSM launched its courses in introductory supply chain management and emerging trends and, in Q4, began work toward transitioning the courses for NextGen. This work was completed in cooperation with other task orders.

Achieving OTD and OTIF

The timeliness of GHSC-PSM deliveries remained strong in Q4 for FP/RH commodities at 92 percent OTD. OTIF numbers also remained strong at 91 percent.

Exhibit 11. FP/RH Commodities, Monthly OTD

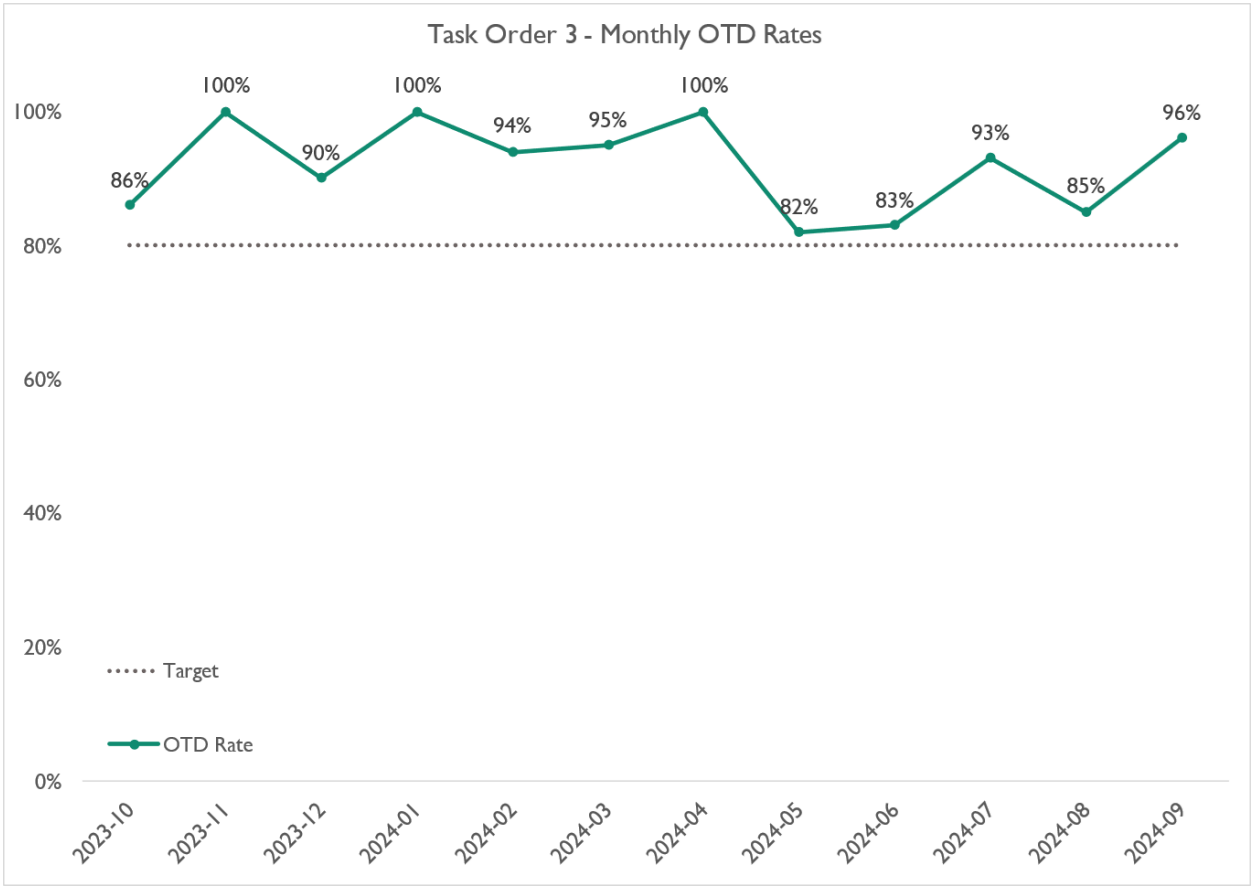
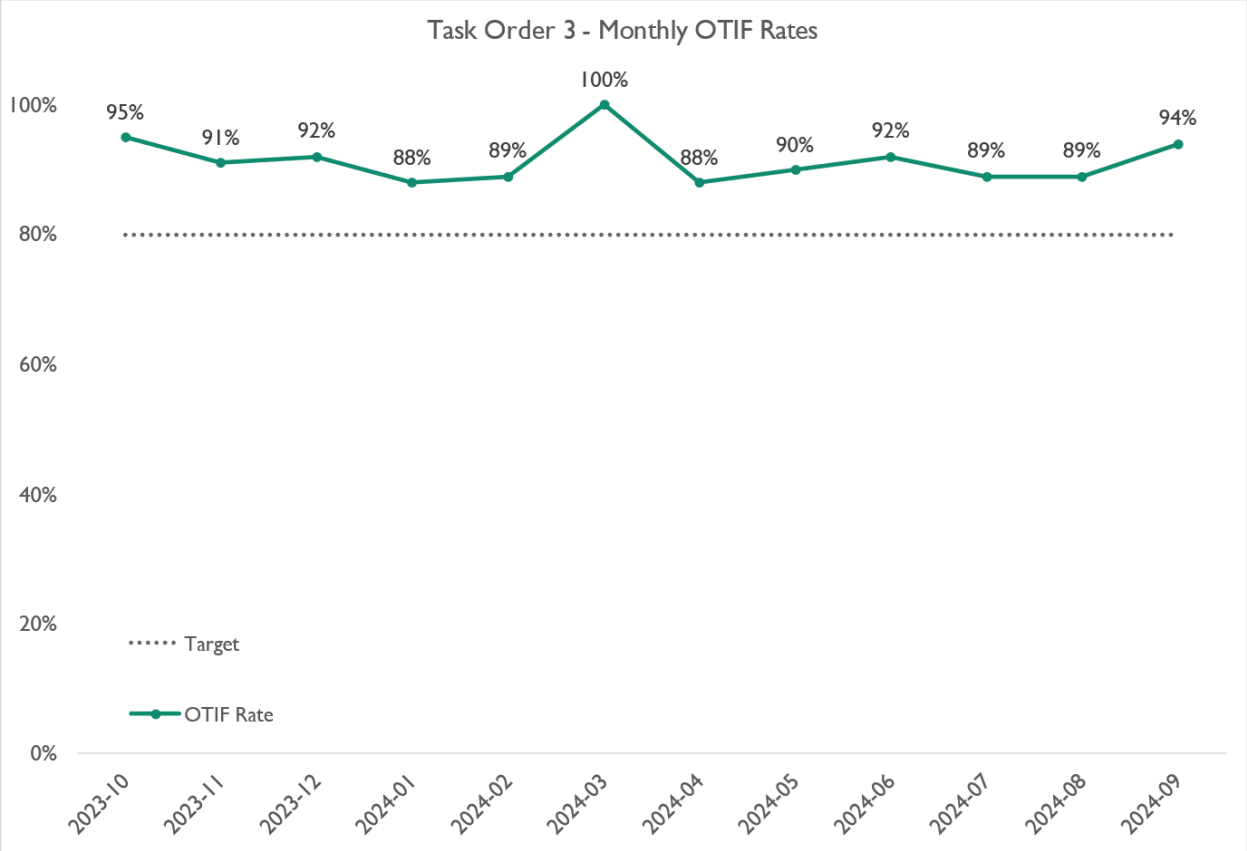


Exhibit 12. FP/RH Commodities, Monthly OTIF



Understanding the demand for implant insertion and removal kits

In Q4, the project surveyed 13 country offices and seven social marketing organizations that ordered implants from GHSC-PSM in the past three years. The survey sought to understand why demand for implant insertion and removal kits is low despite the high demand for implants. Of those contacted for the survey, 11 responded. GHSC-PSM will analyze the results and present them to USAID in FY 2025.

Consolidating stock-keeping units for emergency contraceptives

In Q4, with USAID approval, GHSC-PSM discontinued procurement of two-dose levonorgestrel (0.75 mg) after considering several factors:

- While the two-dose (0.75 mg) levonorgestrel regimen is effective, it can be substituted with a single-dose (1.5 mg) regimen, which reduces the risk of patients missing the second dose.
- Maintaining stock-keeping units for two different dosages in the USAID Catalog divides demand for this already low demand product; discontinuing two-dose levonorgestrel (0.75 mg) consolidates demand for the single-dose levonorgestrel (1.5 mg).
- Registration coverage is adequate for single-dose levonorgestrel (1.5 mg) in the countries where GHSC-PSM has historically shipped emergency contraceptives, indicating that these countries can continue ordering. Additionally, demand for the single-dose regimen was higher than the two-dose.

Disseminating the Contraceptive State of Supply

In Q4, GHSC-PSM updated and disseminated the internal Contraceptive State of Supply to project offices to support supply planning efforts. This quarterly report communicates supply risks and recommended actions to inform country-level supply planning.

Understanding inventory turnover

In Q4, GHSC-PSM developed a "Learning Guide on Facility Inventory Turnover Analysis" to inform countries' last-mile facilities stock management decisions and interventions. The guide describes how to use inventory turnover ratios (ITR) at the last mile, which provide insights into inventory management and operational efficiency over longer timelines—usually one year. Regularly monitoring inventory turnover helps countries optimize stock levels and the frequency and quantity of orders. The guide also provides use cases to assist countries in assessing practices in their last-mile facilities. The guide and its accompanying code helps users independently set up a dashboard with electronic logistics management information system (eLMIS) data, enabling countries to track ITR alongside other last-mile facility KPIs more efficiently. These actions strengthen supply chain management and lead to better health outcomes. In Q1 FY 2025, GHSC-PSM will post the Learning Guide on GitHub and host a webinar with country offices and external audiences.

Publishing articles on USAID efforts on workforce development in Rwanda

GHSC-PSM collaborated with People that Deliver (PtD), Rwanda Ministry of Health, and IntraHealth to develop four case studies on supply chain management in Rwanda. In Q1 FY 2024, the *BioMed Central* (BMC) journal published the first article, "Labor markets for health supply chain management in Rwanda: a qualitative study of stakeholder perspectives." In Q3, the *Global Health Science and Practice* (GHSP) Journal published the second article, "Developing a framework to professionalize health supply chain management." Two additional articles were accepted for publication in FY 2025. The *Humanitarian Logistics Journal* will publish "A holistic approach to comprehensive workforce development in Rwanda," and the *GHSP Journal* will publish "Applying a Theory of Change for Human Resources Development in Public Health Supply Chains in Rwanda."

STRATEGIC ENGAGEMENT

Tracking contraceptive security

GHSC-PSM manages the CSI Survey, which assesses contraceptive access in more than 40 countries. In Q4, the project and USAID continued drafting the 2023 CSI report-–to be published and disseminated in Q1 FY 2025-–to spotlight key findings in topic areas such as leadership, policies, supply chain management, quality control, private-sector involvement, domestic financing, commodity procurement, and the impact of the COVID-19 pandemic in 42 countries. The project updated and promoted the 2023 CSI dashboard, which offers an interactive user experience, displaying indicator data within a global and country-specific context.

Disseminating findings from the CSI Survey research activity

In Q4, GHSC-PSM promoted the project's publication in the *GHSP*"s National Policy Influences of Contraceptive Prevalence and Method Mix Strategy: A Longitudinal Analysis of 59 Low- and Middle-Income Countries, 2010–2021, on World Population Day. The project published two articles highlighting research findings: "Six Key Insights on How National Policies Shape Contraceptive Use and Choices" and "New Evidence Links National Policies to Contraceptive Use in Low and Middle-Income Countries."

Enhancing the visibility of FP/RH supply data

In Q4, GHSC-PSM continued:

- Supporting premium member VAN countries in data reporting and analysis.
- Working with the MOH of Burundi toward premium VAN membership. GHSC-PSM and the RHSC - VAN team have tentatively scheduled a refresher training for MOH staff in FY 2025.
- Managing the Automated Requisition Tracking Management Information System (ARTMIS)-VAN integration, reviewing data quality process checks for timely updates.

The project also participated in:

- VAN Steering Committee meetings, sharing country usage metrics to coordinate concerns and resolve challenges for premium and basic VAN membership countries.

- VAN working group meetings, including data and technical management, data sharing, systems strengthening, super users, and analytics task forces.

COUNTRY SUPPORT

Rwanda maintained its premium VAN membership in FY 2024 and gained improved management and visibility of supply chain data and access to additional analytics. At the request of the MOH and the Rwanda Medical Store (RMS), GHSC-PSM provided financial support for a training conducted by the Global Family Planning VAN control tower analyst for Rwanda. Stakeholders from the MOH, the Rwanda Biomedical Center Maternal, Child and Community Health Division (RBC/MCCH), RMS, UNFPA, CHAI, Society for Family Health (SFH), and GHSC-PSM learned how to use VAN's capacity to increase data visibility, support funding gap analysis, and foster greater country ownership of supply chain data, including data on government-funded, RMS-procured shipments. This should help participants incorporate supply chain data into their decision making, including advocating for increased funding to procure contraceptives.

In **Malawi**, using available supply chain data, the project supported the MOH to forecast consumption at SDPs and identified approximately $9,000 worth of malaria and FP/RH products at risk of loss through expiration. The project then provided financial and technical support to regional commodities logistics officers (RCLOs) to redistribute these commodities to sites where they are more likely to be consumed. The exercise alleviated stock imbalances across facilities, improved commodity security, and increased availability at SDPs by preventing stockouts and expiration. As such, clients continued accessing services without disruption.

In **Guatemala**, the lack of an open electronic logistics management information system (OpenLMIS) at the warehouses of the Ministry of Public Health and Social Assistance (MSPAS) hinders data visibility and timely decision making, and reduces coordination across the supply chain. GHSC-PSM in Q3 and Q4 FY 2024 piloted an OpenLMIS at the warehouse of the National Immunization Program, National Center for Biologicals (CNB) of MSPAS, recording inventory entries, exits, and adjustments while validating data with current physical and digital primary sources. In Q4, following the pilot, GHSC-PSM held three meetings with warehouse management to adapt OpenLMIS for the Central Plant Warehouse of MSPAS. The first phase will focus on HIV/AIDS supplies warehouse and the second phase will encompass the FP supplies warehouse, and subsequently, sub-warehouses will be included at the central level.

GHSC-PSM collaborated with the Administrative and Financial Vice Ministry and central-level departments responsible for logistics management, as well as USAID partners (PROPEL Health), to hold three workshops to strengthen the procurement and management of health supplies for 228 stakeholders[67] from 47 national hospitals and 29 Departmental Health Service Districts (DDRISS). GHSC-PSM helped develop the workshop methodology and establish the structure of working groups,

[67] 76 directors, 76 administrative managers, and 76 logistics officers

composed of key stakeholders by hospital and health area, to identify internal management gaps and ensure coverage of all sites. The workshops provided training and process guidelines, and addressed human resources, supply indicators, budget execution, and procurement modalities.

B4. MATERNAL, NEWBORN, AND CHILD HEALTH

A total of **14 countries[68] received MNCH supply chain strengthening** support **in FY 2024.**

Over the life of the project, GHSC-PSM has delivered a total of nearly **$28.5 million in MNCH commodities, including medicines to community health workers** at the last mile.

Achieved **100 percent on-time delivery** for MNCH products in FY 2024.

Participated in and co-organized **six events** to share MNCH supply chain best practices related to **commodity financing, newborn oxygen equipment, warehousing**, and the use of **advanced data tools** to ensure the availability of MNCH products with global audiences.

GHSC-PSM supports USAID's efforts to prevent child and maternal deaths by increasing access to quality-assured medicines and supplies under the maternal and child health (MCH) task order. The project provides global technical leadership on MNCH commodities and ensures that the global dialogue and initiatives include supply chain management considerations.

This section of the GHSC-PSM report summarizes achievements under the MCH task order objectives in Q4 FY 2024, including the core work contributing to the global dialogue on priority MNCH issues and the performance of the project's global supply chain and country offices. The MCH task order objectives are as follows:

- **Objective 1. Provide international MNCH supply chain leadership and guidance:** GHSC-PSM contributes to the global MNCH commodity and supply chain knowledge base, engages with technical coordination bodies, and promotes international MNCH and supply chain best practices.
- **Objective 2. Support data-informed health supply chain decision making for MNCH commodities**: The project implements and trains staff to use MNCH data collection and analysis tools, advocates for data system investments, and works with countries to demonstrate the value of timely and accurate data for commodity management.

[68] GHSC-PSM provided MNCH technical assistance to 14 countries in FY 2024: AFRICA: Burkina Faso, Ethiopia, Ghana, Guinea, Kenya, Liberia, Malawi, Mali, Mozambique, Nigeria, Rwanda, and Zambia; CARIBBEAN: Haiti ASIA: Pakistan.

- **Objective 3. Improve adherence to globally recognized best practices in MNCH commodity management:** The project develops procurement, storage, and distribution resources and partners with national governments to implement MNCH commodity management best practices.

- **Objective 4. Enhance in-country MNCH supply chain coordination and collaboration:** GHSC-PSM guides national governments as they lead and institutionalize coordination among sub-national partners, programs, and donors involved in MNCH service delivery and commodity selection and management.

- **Objective 5. Conduct ad hoc strategic procurement and delivery to increase the availability of quality-assured MNCH commodities** in project-supported countries.

REFLECTIONS ON FY 2024

In recent years, trends in maternal, newborn and child mortality have plateaued and in some cases rates have increased. The global health community, including USAID, has called for a renewed focus on improving MNCH outcomes and reducing preventable deaths. However, resources to address the leading causes of child and maternal deaths continue to be overlooked and underfunded. GHSC-PSM has an important role in turning this tide, by supporting global and national health supply chains to manage MNCH medicines and supplies. In FY 2024, the project focused on increasing availability, quality, and management of key MNCH commodities by sharing information and tools with countries and partners.

GHSC-PSM and its partners published global resources on three key MNCH topics this fiscal year: financing for MNCH products, warehousing excellence, and the MNCH respiratory ecosystem (focusing on newborn supplies). These resources pull from country experiences and tried-and-true best practices in these realms. The project and partners also sample tested commodities for treatment of hypertensive disorders of pregnancy (HDP) in three project-supported countries (Ghana, Malawi, and Nigeria). This follows findings from a study in Ghana indicating a large portion of HDP products were unregistered and therefore quality could not be guaranteed. As we have learned in the past, unregistered products do not necessarily follow government safety regulations and, for uterotonics like oxytocin, this led to quality issues that made medicines ineffective when used. This Ghana study is meant to shed light on the quality of HDP products and the need for guidance on how to manage them and ensure their quality.

In the realm of newborn health, particularly the respiratory ecosystem for small and sick newborns, GHSC-PSM participated in many fora and policy discussions to emphasize the importance of medicines and technologies to support the interventions needed for appropriate newborn care. The project advised countries and partners of supply chain considerations critical to ensuring appropriate care—including sharing the experiences and realities of newborn care in the countries GHSC-PSM supports. The project also created a tool to estimate newborn and pediatric respiratory equipment needs to procure equipment in countries including DRC, Guinea, Nepal, Nigeria, Paraguay, Papua New Guinea, and Philippines.

Similarly, the project documented the experiences of many project-supported countries in the area of financing MNCH programs and commodities for others to learn from. MNCH is often underfunded, but many of GHSC-PSM's country teams have made strides alongside their government counterparts—learning key lessons along the way—in securing domestic funding to meet the MNCH needs of their citizens. The project collected these learnings in two papers published in FY 2024. Engaging national governments in this way is key to sustaining MNCH services and supplies in the long term.

GHSC-PSM also made progress in data systems for MNCH commodities in FY 2024—expanding the project's data analytics tool catalog and refactoring several tools for use in multiple countries. This catalog has a wealth of information and resources for project-supported countries poised to advance their LMISs and resolve stock challenges using technology solutions. Six countries are currently employing, or preparing to employ, refactored tools.

Finally, while GHSC-PSM does not procure significant quantities of commodities for MNCH, the project did support strategic procurements in seven countries in FY 2024, including emergency essential medicines in DRC and Haiti; therapeutic food for children in Nigeria, sourced through local wholesalers; and child health supplies for community health workers in Guinea. More on these procurements is provided below.

Looking forward to FY 2025, GHSC-PSM seeks to advance its data analytics tool refactoring, dissemination of key MNCH commodity information, and leadership in global maternal and newborn policy discussions, helping countries and partners to reduce maternal and child mortality through well-informed and data-supported MNCH supply chain decisions.

GLOBAL MNCH SUPPLY CHAIN LEADERSHIP AND GUIDANCE

GHSC-PSM contributes to the global MNCH commodity and supply chain knowledge base by sharing best practices and developing resources for policy makers, supply chain workers, and other health supply chain stakeholders. In FY 2024, GHSC-PSM shared its MNCH supply chain expertise and lessons learned in several global fora and through new publications.

Improving financing for maternal health commodities in Ethiopia

In FY 2024, GHSC-PSM documented years-long efforts to improve financing for maternal health (MH) commodities in Ethiopia through a technical assessment of the country's MH commodity landscape. The assessment and subsequent learning products were developed in partnership with the Ethiopian Ministry of Health and Ethiopian Pharmaceutical Supply Service (EPSS). They shed light on the enabling factors and challenges for financing MH commodities and the country's effort to improve MH commodity availability and funding. The assessment revealed impactful collaboration and strategies that have improved MH commodity management, accessibility, and funding.

The project produced several resources from the assessment:

- Technical Report: Improving Financing for Maternal Health Commodities in Ethiopia: Outlines the activities, initiatives, and approaches taken to achieve increased funding for maternal health commodities in Ethiopia. This report reviews communication strategies and the advocacy framework the project applied to increase and secure long-term financial commitment from the government.
- Four-page brief: Highlights key results from this work and summarizes the technical report. The brief also shares key recommendations that other partners can leverage to advocate for commodity funding.
- Webinar: Attended by more than 120 people from 15 countries, including supply chain experts and representatives from USAID/Washington and USAID Missions, other donors, and MOHs. GHSC-PSM staff, an expert consultant who supported the work, and two MOH leaders presented the study findings and held an open dialog with webinar attendees. The presenters shared effective advocacy approaches to achieve increased government funding for maternal health products and highlighted the critical role of supply chain and commodity funding to improve MNCH programs.

Showcasing global lessons for improving MNCH financing

GHSC-PSM also published *No Funding, No Product: Solutions to address insufficient and uncertain funding for select maternal, newborn and child medicines* in FY 2024**.** Despite global progress, many health providers cannot access quality-assured MNCH medicines. Essential medicines such as antibiotics, anesthetics, and anti-anemia medicines are often country-financed and underfunded, making them unavailable to those who need them. GHSC-PSM has supported dozens of governments and countless health system stakeholders to develop strategies and tools to engage, advocate, and monitor allocated funding of MNCH medicines. This report describes the complex challenges of increasing funding for quality essential medicines and country experiences with MNCH product financing to inform other contexts, showcasing learnings from 10 countries: Ethiopia, Ghana, Liberia, Malawi, Mali, Mozambique, Nigeria, Pakistan, Rwanda and Zambia.

Creating the Warehousing Center of Excellence Guide

Following a successful pilot of the GHSC-PSM-designed Center of Excellence (COE) initiative in Ethiopia, the project collected its tenets into a how-to guide for logisticians, warehouse operators, and other public health stakeholders. Under the COE, logisticians prepare supply chain and warehouse management systems for activity-based costing to become more efficient and cost effective. In FY 2024, GHSC-PSM finalized the COE field guide, *Winning the Logistics Game*, and disseminated it through a webinar in Q4. The guide introduces key concepts such as inventory turnover; using throughput to coordinate activities; and receiving best practices. With these concepts in place, the guide provides tools and approaches for achieving excellence. It can be used across health areas and was employed in Zambia's central warehouse to operationalize a Daily Planner for streamlining warehouse activities.

Presenting on respiratory ecosystem equipment including continuous positive airway pressure (CPAP)

In FY 2024, GHSC-PSM co-hosted a webinar with USAID and UNICEF on the breadth of respiratory ecosystem equipment for small and sick newborn care. The webinar was part of a series of presentations coordinated by the Oxygen Alliance, a grassroots organization of biomedical engineers seeking to foster knowledge exchange and share best practices around medical oxygen. Presenters discussed challenges around the availability of medical equipment and oxygen therapies in low- and middle-income countries and shared lessons learned from the assessment GHSC-PSM conducted in Ghana in 2023. Attendees included biomedical engineers, neonatologists, technicians, public health experts, and other clinical staff from various countries.

Presenting at the Global Digital Development Forum 2024

In FY 2024, GHSC-PSM co-organized and moderated a session at the Global Digital Development Forum on digital supply chain solutions and tools to improve health outcomes, including for mothers and children. Presenters discussed proven, scalable, and adaptable solutions to optimize supply chain operations in low- and middle-income countries. Panelists included representatives from the GHSC-PSM, the Zambia MOH; and two private-sector partners: BAO Systems, which supports health logistics platforms such as DHIS, and Kapsule, which supports data collection and analysis tools.

Participating in the Maternal Health Supplies Caucus

As part of its global leadership activities, GHSC-PSM participates in the Reproductive Health Supplies Coalition (RHSC), a global partnership of agencies including donors, international and domestic non-governmental organizations (NGOs), manufacturers, and professional organizations to improve the availability of critical health supplies. In FY 2024, GHSC-PSM held a leadership position in the Maternal Health Supplies Caucus, a subgroup of RHSC, and supported the caucus in launching a tranexamic acid (TXA) working group. The working group coordinates across organizations and stakeholders to increase TXA access and uptake as a now-recommended and affordable means to prevent postpartum hemorrhage (PPH). In FY 2024, the working group gathered existing information and resources related to TXA, and began to identify opportunities for new resources and areas for investment to increase TXA uptake.

SUPPORT FOR DATA-INFORMED DECISION MAKING FOR MNCH COMMODITIES

Collecting and using end-use verification survey data

The end-use verification (EUV) survey assesses commodity availability, storage conditions, and factors that affect commodity availability and quality at SDPs in project-supported countries. EUV data collection is also an opportunity for GHSC-PSM country teams to provide onsite capacity building for SDP staff and MOHs. Through EUV, the project gathers supplemental data on reasons for reported stockouts and cross-checks the accuracy of LMIS data on stock availability trends. In FY 2024, the project rolled out the new EUV community health worker (CHW) modules in nine countries.[69]

The project supported seven countries[70] in collecting MNCH EUV data and submitting reports to USAID/Washington and their respective in-country stakeholders in FY 2024.

Results from the EUV in Liberia. In Q4, Liberia finalized an EUV report highlighting reductions in stockouts and improvements in other key areas supported by GHSC-PSM.

- Oxytocin availability progressively improved, thanks to enhanced storage and management policies that make it readily available in health facilities and county warehouses. As of March 2024, approximately 83 percent of county warehouses managed their oxytocin in operational cold storage units, an improvement from the 71 percent reported in November 2022 in the previous EUV. Additionally, the oxytocin stockout rate saw a meaningful reduction, from 29 percent in November 2022 to 17 percent in this EUV.
- GHSC-PSM has worked to improve data quality in Liberia by focusing on consistent quarterly data entry into the eLMIS at the SDP and county warehouse levels through direct support to warehousing staff. In addition to data entry support, GHSC-PSM also supports staff with requisition and resupply decisions. Since this work began after the November 2022 EUV, the eLMIS reporting rate for the MNCH program has been sustained at 94 percent.
- To ensure full implementation of findings from the FY 2024's EUV report, GHSC-PSM is disseminating the report to key stakeholders throughout the country and featuring results at the national and county-level supply chain technical working groups. This advocacy encourages continued discussion and collaborative efforts toward full realization of the report's recommendations.

Improving data analytics and information systems for MNCH commodity decision making

In FY 2024, GHSC-PSM continued updating its catalog of data analytics tools that supply chain staff use alongside eLMISs to analyze MNCH commodity data and inform commodity management decisions. The catalog, available to GHSC-PSM staff and USG and national partners, describes each tool, its platform,

[69] GHSC-PSM is implementing a new CHW module for the EUV survey in nine countries: Burkina Faso, Burundi, Ethiopia, Liberia, Mali, Nigeria, Sierra Leone, Zambia, and Zimbabwe.

[70] Seven countries received EUV support for MNCH programs in FY 2024: Benin, Burkina Faso, Ethiopia, Ghana, Liberia, Mali, and Nigeria

and the data it requires to function. The catalog is beneficial to project partner countries with nascent eLMISs, providing a blueprint of analytics tools that already exist and have proven effective in supporting critical supply chain decisions. GHSC-PSM also refactors select tools from the catalog, making the tools more widely usable, and helps countries implement these refactored tools in their health and logistics systems. With recent additions to the catalog, 44 unique tools are now available.

The project assisted select countries in deploying refactored data analytics tools to increase visibility throughout the supply chain in Q4, completing the following activities:

- In **Liberia**, helped operationalize and hand over the data extraction and consumption anomaly detection (CAD) tools to the MOH. These tools enable the optimization of stock monitoring for commodities in health facilities and medical stores. The project updated the tools' Python coding that facilitates faster data processing and effective tracking of stock imbalances. The MOH is evaluating the potential benefits of integrating the refactored tools into Liberia's eLMIS, and continuing discussions with the project in FY 2025 about how best to leverage the tools to improve visibility and analysis.
- In **Malawi**, refactored and deployed the CAD tool to streamline stock data for analysis. CAD flags or detects anomalies in consumption for improved commodity management. The project designed the refactored tool to complement the country's eLMIS and overall data ecosystem. GHSC-PSM assessed MNCH commodity availability in selected health facilities to gauge the tool's effectiveness and documented areas of improvement for the supply chain.

ENHANCED IN-COUNTRY MNCH SUPPLY CHAIN COORDINATION AND COLLABORATION

Providing MNCH-funded technical assistance to countries

As noted earlier in this section, GHSC-PSM used MNCH funds to provide technical assistance in 14 countries in FY 2024. Key achievements from these activities are highlighted below.

Integrating oxytocin into the vaccine cold chain in Guinea. GHSC-PSM provides technical assistance to Guinea's MOH to address improper storage of oxytocin, which needs to be kept cold. The project co-created a plan to address challenges, including through a stakeholder workshop on the quality of PPH medicines and the integration of oxytocin into the vaccine cold chain. Following the workshop, the MOH issued a Ministerial directive to store oxytocin in the vaccine cold chain throughout the health system. As a result, Guinea's Directorate of Family Health and Nutrition and National Vaccine Program now have a formal agreement to collaborate on this integration. In Q3 FY 2024, GHSC-PSM worked with national stakeholders to collect data in 65 sampled health facilities in 20 health districts across all administrative regions of the country to evaluate the effectiveness of these measures. The data indicated that oxytocin was stored at nearly 100 percent nationally in the vaccine cold chain, ensuring that it is effective when administered to mothers in any part of the country.

Procuring MNCH products for CHWs in Guinea. Through Ministerial decree, the Guinean government began requiring that health facilities provide CHWs, or Relais Communautaires (RECO),

with commodities to meet public health targets. The 2023 decree establishes a minimum recommended package of RECO commodities, spelling out commodity types and quantities. This package includes several easy-to-administer MNCH products. The project helped the government quantify this need and worked with USAID to donate the necessary commodities to meet health needs at the community level. In FY 2024, GHSC-PSM delivered 32,035 packets of amoxicillin dispersible tablets and 88,096 co-packs of ORS + Zinc**.** National stakeholders, including the CMS (Pharmacie Centrale de Guinée) and the MOH Family Health Division, are developing a distribution strategy in communities throughout the country.

Supporting the MNCH supply chain in Ghana. GHSC-PSM provides a range of support to national actors in Ghana, including Ghana Health Service's Family Health Division (FHD) and Ghana Food and Drug Authority (GFDA). In FY 2024, the project partnered with these agencies to achieve several milestones:

- FHD and GHSC-PSM quantified MNCH commodities, including two newly introduced commodities for treating and preventing postpartum hemorrhage (PPH), carbetocin and tranexamic acid. Approximately 19 priority MNCH commodities were quantified, revealing an annual funding requirement of $4.5M for 2024, $4.6M for 2025, $4.8M for 2026, and $4.9M for 2027. This information will inform USAID/Ghana Mission's strategic investment decisions to improve availability of vital MNCH commodities within priority regions in the coming years.
- GHSC-PSM and FHD finalized a list of conditions to determine health facility needs for newborn oxygen equipment and enumerated those needs for facilities across the country to inform procurement. They used data collected during a project assessment of the newborn oxygen ecosystem that identified significant gaps in equipment needed to ensure newborns receive safe and effective oxygen in Ghana, especially pulse oximeters and CPAP devices. The project will procure approximately $850,000 worth of these devices to support newborns with respiratory conditions in over 350 health facilities.
- GFDA, FHD, and the project completed sample collection for a quality testing study of medicines that manage HDP, including magnesium sulfate injection, aspirin 75 mg tablets and nifedipine tablets.

IMPROVED ADHERENCE TO BEST PRACTICES IN MNCH COMMODITY MANAGEMENT

Quality testing hypertension medicines in Ghana, Malawi, and Nigeria

GHSC-PSM, in collaboration with Monash University, the Burnet Institute, and the USAID Promoting the Quality of Medicines Plus (PQM+) program, developed a quality sampling and testing protocol for several HDP medicines—magnesium sulfate, aspirin, and select antihypertensives—in Ghana, Malawi, and Nigeria. In FY 2024, the project and its partners started using the protocol to evaluate the quality of these HDP medicines in select countries. After receiving approvals from local regulatory agencies, GHSC-PSM collected samples of these medicines across all three study countries. By Q4, researchers at Monash University were testing the quality of the medicines. Following the study, the project will submit its results for publication consideration in a relevant peer-reviewed, open-access journal.

Supporting the newborn health supply chain

In FY 2024, GHSC-PSM worked with partners, including MTaPS, CHAI, and USAID, to create an implementation guide for countries to introduce and scale up caffeine citrate to improve health outcomes for small and sick newborns. The guide will serve as a collection of lessons learned from countries that have successfully introduced and scaled up the use of caffeine citrate. The project will publish and disseminate the guide in FY 2025.

AD HOC STRATEGIC PROCUREMENT TO INCREASE AVAILABILITY OF QUALITY-ASSURED MNCH COMMODITIES

In FY 2024, GHSC-PSM supported the process for **six countries**[71] to procure MNCH essential medicines and consumables and **delivered MNCH commodities** to **DRC, Guinea, Haiti, Mozambique, and Zambia.** Highlights from MNCH deliveries this fiscal year include amoxicillin DT and ORS+Zinc for the Guinea CHW program, emergency essential medicines to DRC, and Ready-to-Use Therapeutic Food (RUTF) in Nigeria.

Strengthening the respiratory ecosystem for mothers, newborns and children with procurement of respiratory equipment

In FY 2024, as part of USAID efforts to leverage "COVID-19 funds to strengthen oxygen ecosystems for maternal, newborn and child health and future pandemic preparedness," GHSC-PSM supported assessments in DRC, Guinea, and Nigeria using project-developed tools to estimate these countries' needs for MNCH respiratory equipment. These estimates were then used to procure the appropriate equipment. .This work will improve the quality of care for newborns and children by strengthening the respiratory ecosystem in these countries. The project supported the procurement of this equipment for countries including DRC, Guinea, Nepal, Nigeria, Paraguay, Papua New Guinea, and Philippines.

[71] GHSC-PSM supported procurement processes of MNCH commodities for six countries in FY 2024: DRC, Guinea, Haiti, Mozambique, Nigeria, and Zambia. This is not inclusive of the ongoing support to countries procuring MNCH respiratory equipment using earmarked COVID-19 funds described later in this section.

PROGRESS BY OBJECTIVE

C1. GLOBAL COMMODITY PROCUREMENT AND LOGISTICS

Delivered 1,261 line-item orders in Q4, worth nearly $148 million. The total value over the life of the project is more than **$5.7 billion**.

Delivered 85 percent of line items on time, based on the defined on-time window.[72] **Delivered 87 percent on time and in full.**

C1a. GLOBAL SUPPLY CHAIN: FOCUSED ON SAFE, RELIABLE, CONTINUOUS SUPPLY

GHSC-PSM's procurement strategy focuses on three primary objectives:

1. Maintain on-time deliveries.
2. Balance price, delivery, and quality to achieve best value.
3. Reduce response/cycle times, lead times, and transaction costs.

REFLECTIONS ON FY 2024

Throughout this fiscal year, GHSC-PSM sustained its commitment to fostering healthy market dynamics, cultivating robust supplier relationships, and advancing high operational effectiveness within the global health supply chain.

A key metric of GHSC-PSM's success is maintaining on-time delivery. Over the last six years (25 consecutive quarters), the project has maintained OTD above the contractual target of 80 percent. In FY 2024, despite numerous global disruptions, including the Red Sea crisis, the project upheld an impressive on-time delivery rate for each quarter across all task orders. This accomplishment reflects

[72] 14 days before or seven days after the agreed delivery date

the strength of GHSC-PSM's integrated supply chain processes, where each project office coordinates detailed, quarterly supply plans that are rigorously reviewed, demand is aggregated, sophisticated sourcing strategies based on global volumes are deployed to achieve best value, and strong partnerships with suppliers and 3PLs ensure essential health commodities reach those in need when they are needed.

Each year, the project revisits its sourcing strategies, not merely replicating past approaches but refining them to align with new insights and USAID's evolving strategic objectives, which includes greater private-sector engagement and sourcing from within Africa. These strategies have shaped markets, yielded high performance, and achieved considerable cost savings. For example, after adjusting viral load savings for inflation and other economic variables, GHSC-PSM's strategic sourcing initiatives have now resulted in over $1 billion in cost savings across all task orders.

During a panel session at the ARV Buyer-Seller Summit in Q1, the project shared valuable insights into its advanced sourcing strategy that incorporates not just price and performance but also other critical factors such as product registration, compliance with GS1 standards, "D-Term" contracts, vendor-stored inventory/vendor-managed solutions, and regional manufacturing. GHSC-PSM's supplier evaluation framework accounts for a range of objectives that support a healthy, diverse market and advance global health goals. This method allows the project to achieve "best value" by weighing all critical, and evolving, factors and establishes a model that other agencies are beginning to recognize as a benchmark in strategic sourcing.

In FY 2024, the project made substantial progress in adapting its sourcing strategies to respond to dynamic situations. This resulted in the agreement to expand vendor-managed solutions to enable suppliers to deliver products directly to lower levels within national supply chains. Procurement of essential medicines from African sources increased significantly from 22 percent to 41 percent of total spend. The project also implemented a "hypercare" program to manage temperature-controlled shipments of CAB-LA from the Belgium RDC in support of PrEP rollout. Additionally, we introduced an "early warning, early action" workstream, using KPI data from viral load suppliers to improve laboratory network performance.

This year also marked the project's first-ever procurement of topical repellents and a logistics pivot to "rescue" malaria products stranded in Benin due to the coup in Niger by organizing a charter flight from Benin to Niamey in Niger. Furthermore, the project expanded its supplier base for oral contraceptives by collaborating with GHSC-QA to qualify three new suppliers.

Building and maintaining effective strategic partnerships with suppliers has been another key focus for GHSC-PSM in FY 2024. GHSC-PSM strives to address supplier issues in a transparent, honest, and collegial manner, working jointly with partners to improve their operations and drive more value. Reflecting on the project's ability to work with suppliers to strengthen their operations and meet stringent performance and quality standards, one major strategic partner said, *"You've pushed us hard over the last few years and made us completely change the way we do business, and we are better for it. Now we are adopting these standards, not just for PEPFAR, but in the way the company does business globally."*

FY 2024 also marked significant progress in digital transformation, especially with the introduction of electronic data interchange using GS1 XML standards. This development, designed to standardize four

key transactions using the GS1 XML format—purchase orders, acknowledgments, despatch advice, and invoicing—was a major achievement that promises to improve communication, reduce human error, and accelerate transactional efficiency with suppliers. By implementing a standardized messaging framework, the project is laying the groundwork for a new industry standard and a global public good.

The project faced new challenges as the integrated nature of the GHSC-PSM supply chain evolved and field offices began closing out. This process highlighted the importance of careful planning for continuity of supply chain functions as new supply chain actors replace the existing partners, particularly given the long lead time between the assumptions made at order placement and the prevailing situation at order delivery. Smooth transition also requires exceptional coordination, as multiple teams within the project collaborated to mitigate the risks associated with field office closures. One key lesson emerging from this experience was the need for comprehensive upstream planning to ensure all the roles and responsibilities of the supply chain actors, from order entry to order receipt, warehousing, and distribution, are fully understood and a robust plan for transitioning those is established.

As the project enters its second year of transition to NextGen partners, GHSC-PSM reflects on its legacy with pride. The project has facilitated a global health supply chain that is unprecedented in its scale, sophistication, and impact. The achievements of the past year are another testament to the dedication and talent of the project's team, the supportive and collaborative environment provided by USAID, and a shared mission of uninterrupted health supply.

GHSC-PSM remains committed to working closely with USAID in the coming year to advance its strategic objectives, including regionalization and private-sector engagement. We also look forward to sharing lessons, new insights, and best practices with the global health community and ensuring a smooth transition to NextGen partners.

MORE HEALTH COMMODITIES THROUGH MARKET DYNAMICS, STRATEGIC SOURCING, AND SUPPLIER MANAGEMENT

GHSC-PSM works across project teams and external stakeholders to understand the markets for the medicines and health commodities it procures. The project develops sourcing strategies, builds strategic relationships with suppliers that shape markets, enhances project performance, and achieves greater value for USAID within each product category. GHSC-PSM conducts market analyses, leads strategy development, employs sourcing best practices, contributes to process improvements, and negotiates and proactively manages contracts with suppliers. The project executes sourcing activities for products under each health area in line with the strategic sourcing calendar and undertakes additional sourcing for products to support USAID's COVID-19 response. See sections B1, B2, B3, B4, and Annex A for details.

Q4 highlights include:

- Presented the PEPFAR global demand forecast for ARVs at the 2024 Joint WHO/UNAIDS and Partners Annual Consultation with pharmaceutical companies, partner organizations, and stakeholders in Geneva.

- Held a virtual ARV supplier pre-bidders conference to highlight GHSC-PSM and USAID strategic priorities incorporated into the COP 24 annual RFP, which was released in Q4. This included an overview of the D-Term, EDI, and VMS initiatives.

- Delivered 918,047 bottles of PrEP to eight countries and 71,700 vials of CAB-LA 600 mg/3 ml to seven PEPFAR countries. (See section B1.)

- Delivered 3.82 million VL/EID tests valued at approximately $40.8 million, saving about $23.2 million compared to 2019 pre-global RFP prices under the terms of the global service-level agreements. (See section B1.)

- Delivered more than 3.13 million TLD 90-count bottles to 10 countries and 180-count bottles to DRC. Advanced the VMS program by completing nine deliveries of over 1.2 million bottles of TLD from VMS warehouses to three countries.[73] (See section B1.)

- Obtained USAID approval to source for amphotericin B (liposomal) eligible manufacturers, and concluded contracting to enable direct procurement. This is an important commodity used for treating cryptococcal meningitis, a leading opportunistic infection among individuals with advanced HIV.

- Conducted 14 business reviews with TO2 suppliers across the LLIN and mRDT commodity groups to discuss suppliers' environmental sustainability efforts, product pipeline updates, and ongoing efforts to expand or establish regional manufacturing in Africa, which support PMI's objective of doubling the volume of procurement from Africa by 2030. (See section B2.)

- Finalized the FY 2025 sourcing volume allocations for pharma prevention, artemisinin-based finished pharma products, and mRDT commodities. (See section B2.)

- Surveyed contraceptive implant recipients to better understand practices for implant removal and the potential need for implant removal kits.

Managing supplier relationships

GHSC-PSM manages supplier relationships through multiple channels, including holding regular discussions on orders, deliveries, logistical challenges, and broader topics such as market conditions, demand forecasts, and country priorities. In addition to scheduled calls to manage ongoing orders, the project conducts routine meetings with suppliers to discuss product updates, production capacity, delivery schedules, and quality issues. Furthermore, supplier performance assessments and order allocation strategies are guided by the project's commodity and supplier risk profiles. In Q4, GHSC-PSM introduced a new TO2 supplier, held regular meetings with six TO3 suppliers, and conducted business reviews with all three TO1 molecular diagnostics suppliers and 14 TO2 suppliers. In FY 2025, the project will conduct business reviews for most TO1 and TO3 suppliers in Q1 and Q2.

[73] Mozambique, Zambia, and Zimbabwe

Regional distribution center operations

In Q4, GHSC-PSM delivered more than $13.1 million worth of commodities to 17 destination countries with an average OTD of 89 percent. While the use of RDCs for TLD was significantly reduced due to increased implementation of D-Term and VMS initiatives, the project leveraged RDCs in FY 2024 to deliver more than 29.3 percent of TLD (90 tablets) to enable MMD. The project also used RDCs to deliver 38.7 percent of TLD in Q4 due to a large order for Nigeria.

In Q4, auditors performed an annual stock count audit at the Belgium RDC and reported an accuracy rate of 100 percent. GHSC-PSM also completed the disposal of damaged and expired products that were stored at the Belgium and Dubai RDCs.

Decentralized procurement

GHSC-PSM continues to pursue its decentralized procurement (DCP) strategy that manages procurement of carefully selected goods and services through 10 country offices. With DCP, the procurement specialist is closer to the recipient and authorized local and international suppliers. DCP allows for efficient coordination and processing of any changes in specifications, quantities, or delivery terms, reducing cycle time and bolstering on-time delivery. Commodities procured under DCP include laboratory commodities, VL and EID, and essential medicines.

In Q4, GHSC-PSM achieved 83 percent OTD for orders managed through the DCP channel. In Mozambique, the project conducted an all-staff refresher training for procurement specialists on the strategies, tools, and processes for sourcing and procuring lab supplies under the centrally established long-term agreements (LTAs). GHSC-PSM staff from seven DCP countries attended. Facilitators included trainers from the DCP team in Kenya and the project headquarters.

The project leveraged its Africa DCP capability in Kenya to support USAID with the procurement of 10 ultra-low temperature freezers and six portable digital X-ray machines for use during the second phase of the Kenya Population-based HIV Impact Assessment (KENPHIA II). The freezers are required for the storage of samples collected during the survey fieldwork, while the portable X-ray machines will be used to conduct chest X-rays for TB screening. KENPHIA II aims to provide up-to-date data on HIV prevalence, incidence, and access to treatment across Kenya. The project expects delivery of these items in Q2 FY 2025.

In Zimbabwe, GHSC-PSM and GHSC-QA continued assessing local vendors for inclusion in USAID's eligible vendor list. The project anticipates completion of this activity in Q1 FY 2025.

Operational Excellence (OpEx)

As part of its commitment to enhancing operational performance, GHSC-PSM explores opportunities for process automation to minimize manual tasks, eliminate redundancies, and reduce cycle time and operational expenses. In FY 2024, the project strengthened existing tools to meet emerging needs and designed new tools to support ongoing operational efficiency. These include several order allocation tools and business applications, such as the Sourcing Assistance Messenger, which helps procurement teams prioritize orders, and the Invoice-to-Pay tool, where suppliers submit invoice packages for review.

In Q4, GHSC-PSM developed or enhanced the following operational cost-reduction initiatives:

- **Invoice-to-Pay (ITP) tool:** Onboarded additional suppliers, with a total of 23 active suppliers as of Q4. Since becoming operational, the project has approved 354 invoices using the ITP tool. GHSC-PSM also developed a complementary ITP dashboard, which uses data from the tool to measure the cycle time for processing invoices and the throughput yield for correct invoice submissions. The project will use the dashboard in FY 2025 to monitor performance and improve payment cycle times.

- **ePackingList (ePL):** Continued to implement the ePL low-tech approach that allows suppliers to send GS1 XML despatch advice messages. By mapping fields in each business-related document to fields in a GS1 standardized message, information can be shared through XML. As of Q4, three active suppliers have collectively sent over 40 despatch advice messages.

- **Electronic Data Interchange (EDI):** Began implementing activities to automate GS1 XML transactions for purchase order (PO) submissions, PO confirmations, despatch advice, and invoice submissions, with a target of eight suppliers submitting these four messages through EDI by the end of FY 2025. Also initiated discussions with four country programs (Haiti, Nigeria, Zambia, and Zimbabwe) to extend receipt of GS1 XML despatch advice messages from suppliers to their CMSs' warehouse management systems, so they can realize the benefits of the automated inventory receipt process. The project also worked with these countries to estimate the costs associated with implementing the EDI for inclusion in their respective FY 2025 work plans.

- **Sourcing Assistance Messenger (SAM):** Continued to improve the reliability and user experience features of SAM, a virtual assistant that helps project procurement teams manage the order lifecycle and maintain an up-to-date performance view of operations. SAM generates alerts and warnings to prompt follow-up, avert delays, and share updates on OTD assessments.

- **Work Order Invoice Processing Tool:** Developed a new tool to support the processing of non-commodity-related invoices. The tool has reduced cycle time for processing these types of invoices by 50 percent (from approximately 1.5 hours to 45 minutes for each batch of invoices) since its launch in Q3.

- **Order allocation tools:** Continued to enhance and support the use of order allocation tools for COVID-19, essential medicines, lab, ARVs, VMMC, and 3HP FDC. In Q4, these automation tools processed over 130 requisition orders (ROs), generated over 860 automated emails for internal and supplier communications,[74] and recommended allocations for more than 230 RO lines.

- **TO3 funding app:** Continued to support use of the app to streamline and track TO3 funding requests and order approvals and eliminate manual tracking. Since its launch in Q3, the project has processed and approved 75 requests using the app.

- **Procurement Order Management System (OMS) enhancements:** Continued to roll out the robotic process automation workflow developed in Q3 to help prepare multi-line purchase orders and significantly reduce manual data entry. As of Q4, the workflow has processed 28 orders across TO1 and TO2. The project also began collecting data to estimate cycle time improvements recorded from this enhancement.

[74] Request for information, intent to award, letter of decline, etc.

GLOBAL STANDARDS

GHSC-PSM operationalizes its procurement requirements for pharmaceuticals, medical devices, sterile kits, laboratory reagents, and LLIN suppliers to adopt standardized product identification and labeling, and exchange product master data leveraging GS1 Standards. These supplier requirements include:

- Identification: Assigning Global Trade Item Numbers (GTINs) that identify trade items and Global Location Numbers that identify business entities and locations.
- Capture: Labeling specified packaging levels with barcodes encoded with GTIN, batch/lot, expiration date, serial shipping container code, and (for pharmaceuticals and LLINs) serial number.
- Share: Exchanging standards-based, descriptive product master data through the GDSN.

In Q4, the project engaged with suppliers and the global health community to advance the adoption of these standards across the GHSC-PSM portfolio, thus laying the groundwork to use these data in global and national supply chain processes and systems. Advancing compliance requires regular engagement with suppliers for new and existing items. In Q4, through this ongoing engagement, the project:

- Collected, validated, and added GTINs for 87 items to the GHSC-PSM catalog.
- Collected master data for 43 items through the GDSN and maintained data on existing items. In Q4 alone, the project sent and received more than 850 messages in the GDSN.

As of the end of Q4, the GHSC-PSM catalog contained a total of 1,347 in-scope items.[75]

Quality assurance

Health commodity quality assurance is a core element of GHSC-PSM processes. In collaboration with GHSC-QA, GHSC-PSM is committed to ensuring that only quality-assured health commodities are procured and distributed. The project streamlines and optimizes QA and QC processes and procedures to address product incidents and failures as they occur, ensuring quality products reach the consumer.

In Q4, the project:

- Coordinated QA activities between suppliers and clients to manage quality incidents. This included expediting product quarantines to ensure patient safety and facilitating QA determinations for product disposition/replacement to avert stockouts.

- Received 36 new quality incidents across HIV/AIDS, FP/RH, and MNCH health areas and completed 30 cumulative incidents, including those from previous quarters, leaving 16 open incidents by the end of Q4.

- Continued to work with GHSC-QA to pilot the inclusion of GHSC-PSM temperature and geo-tracking sensors in project shipments of temperature-controlled products. Implementation will occur in multiple phases, including the pilot phase of 10 specific product shipments, completed

[75] GS1 requirements are confined to in-scope items: actively procured items in the past, and available for procurement in the future.

in Q3, and will proceed across all products/shipments for all task orders as appropriate. This initiative will give GHSC-PSM real-time access to shipment temperature and geo-location data.

- Continued to improve the process for automating the selection of product pick-up locations for HIV and FP/RH commodities to select only project-vetted locations. As of Q4, GHSC-PSM vetted the automation of about 80 pick-up locations—22 in Q4 alone—by integrating ARTMIS into the Ivalua system across TO1, TO3, and TO4.

For QA related to malaria commodities, see section B2. Malaria.

IMPACTS OF GLOBAL CHALLENGES ON FREIGHT AND LOGISTICS

Global challenges

In Q4, GHSC-PSM's logistics challenges continued to be centered around political and economic unrest and the effects of climate change. Houthi attacks on vessels in the Red Sea affected air freight and sea freight (see sections below).

Political unrest continued to shape the global supply chain. Restricted air space in conflict areas led to aircraft routes being diverted, longer transit times, and higher freight costs.

Climate change remained a significant logistical obstacle, particularly in Europe, Asia, and Africa, where extreme weather led to flooding and damage to transportation infrastructure. For example, South Asia experienced a busy Typhoon season, causing widespread damage from China to Thailand, while India experienced both extreme drought and flooding in one of the wettest monsoon seasons of all time. Europe and Africa were also affected by extreme weather events, including more frequent and unseasonable droughts and floods.

Air freight

In Q4, air freight demand rose by 12 percent and outgrew freight capacity, which rose by only 5 percent. Air Freight capacity is expected to continue to grow through FY 2025. Globally, air freight rates increased in Q4, with global rates showing year-over-year inflation for the first time since early 2022. Expectations are for the further elevated rates out of Asia Pacific and Middle East and South Asia regions to remain elevated and continue rising as peak season begins. Red Sea attacks continue to affect capacity as shippers pivot to air freight to avoid longer sailing times and operational uncertainties

Air freight to Africa remains expensive and less dependable due to the airline business landscape.

Ocean freight

While ocean freight rates peaked in Q3, the market showed signs of stabilizing in Q4 as new services were introduced to meet high demand. Pressure on the global ocean supply chain from eight months of continuous Red Sea diversions reached a critical point in Q4. This disruption in service patterns reduced port and terminal productivity, resulting in delays, congestion, and equipment imbalances. Ongoing Houthi attacks remain the primary factor impacting the industry.

Destination challenges

Extremist activity, political unrest, and instability remained a concern, particularly in West Africa and Haiti. Tensions remained high between Ethiopia and Somalia, and DRC and Rwanda. Both regions are in jeopardy of direct conflict.

C1b. PROJECT PERFORMANCE

This section summarizes findings on key indicators of GHSC-PSM global supply chain performance. More detail on these and other indicators is provided in Annex B.

DELIVERY TIMELINESS

GHSC-PSM measures OTD in two ways:

- OTD, the number of on-time deliveries as a percentage of expected deliveries in the period
- OTIF, the number of on-time deliveries as a percentage of all actual deliveries in the period

OTD is a more accurate reflection of recent performance, while OTIF is a lagging indicator, as late orders due in prior periods get delivered.

In Q4, GHSC-PSM OTD was 85 percent and OTIF was 87 percent. This is the 25th consecutive quarter that OTD has been above 80 percent (for monthly OTD and OTIF rates, see Exhibits 13 and 14).

Exhibit 13. October 2023 through September 2024 Monthly Indefinite Delivery Indefinite Quantity (IDIQ) OTD

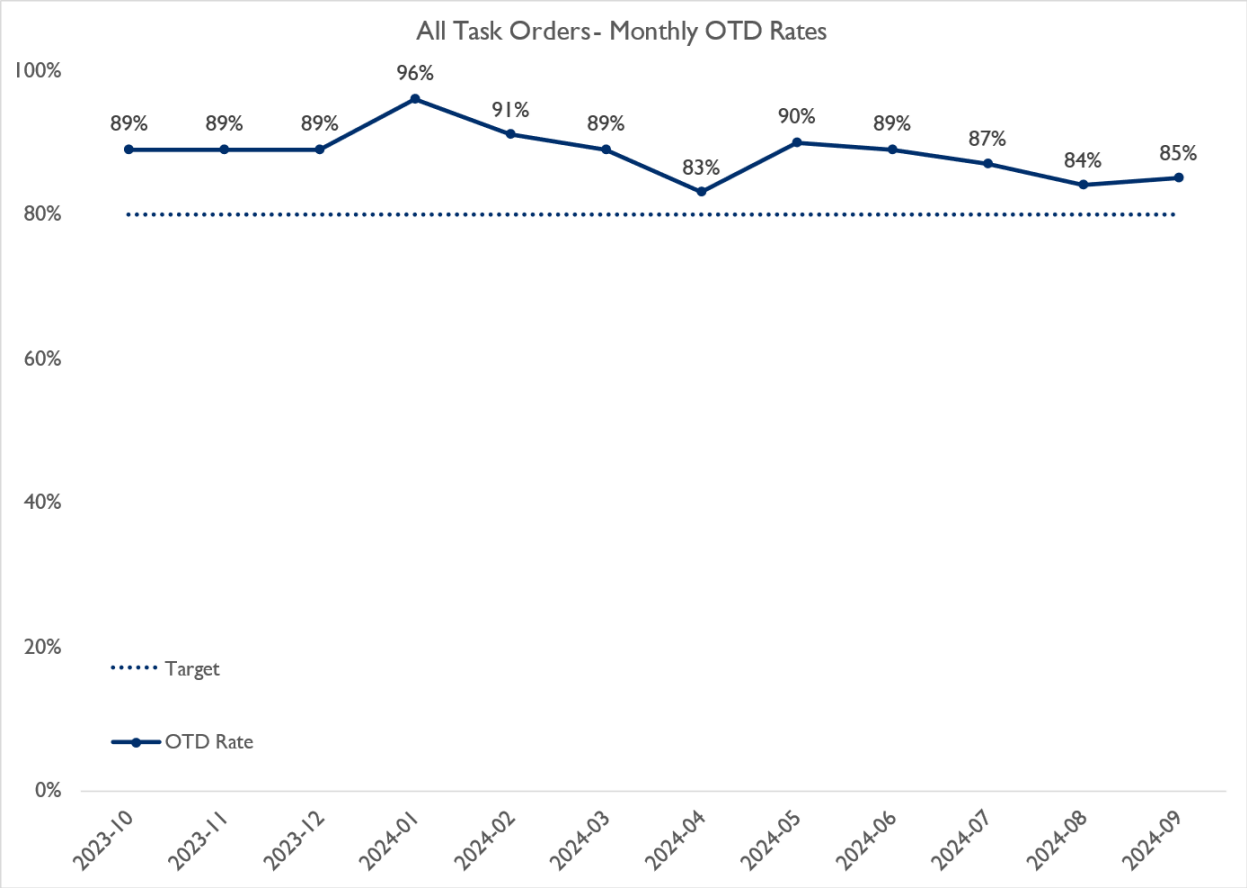
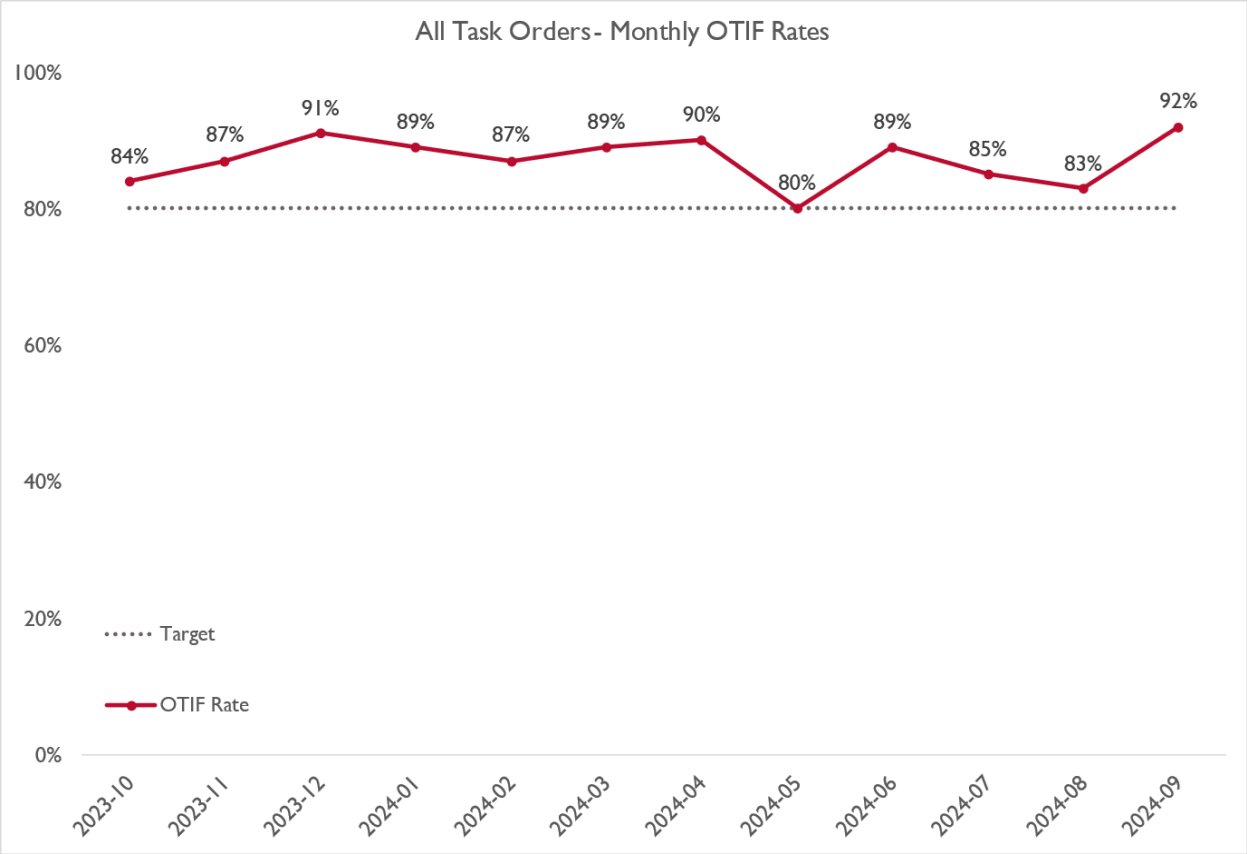


Exhibit 14. October 2023 through September 2024 Monthly IDIQ OTIF

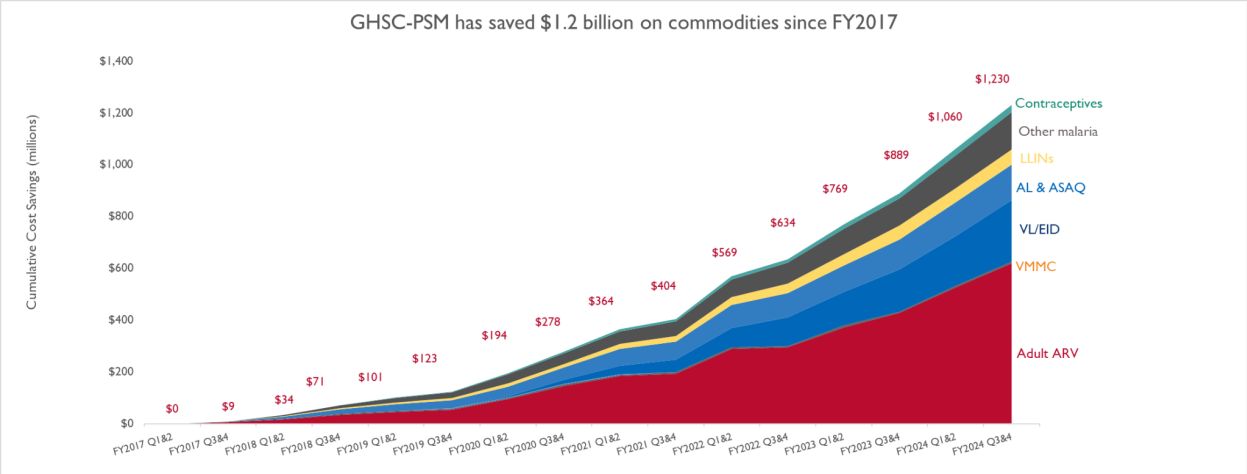


COST SAVINGS ON MEDICINES AND HEALTH COMMODITIES

GHSC-PSM conducts regular and detailed analysis to understand the markets for the medicines and health commodities it procures and to bring this knowledge to supplier negotiations. Through carefully negotiating long-term contracts for major product groups, such as viral load testing, GHSC-PSM has saved $1.2 billion on commodities over the life of the project, as shown in Exhibit 15. In the second half of FY 2024, the project has saved $169 million.

To produce long-term value and sustainability, GHSC-PSM achieved these cost savings while working to create and maintain healthy supply markets in the various commodity categories, so the USG can benefit from a competitive supplier base. Additional savings have also accrued as prices for commodities have risen more slowly than the general rate of inflation. This analysis is provided in each section for each task order.

Exhibit 15. Life-of-Project Savings on Medicines and Health Commodities



COST SAVINGS ON LOGISTICS

Open competition in freight lanes. GHSC-PSM saves money on shipments by managing through a fourth-party logistics model that competes lanes between 3PL shipping companies to improve service and reduce costs. This leads to cost savings on shipping rates versus an alternative approach with limited or no competition for shipping lanes (a simple 3PL approach) through scale and competition. Over the life of the project, GHSC-PSM has saved $50.9 million on shipments.

Exhibit 16. Cost Savings Through Open Competition in Freight Lanes

Task Order	Benefits of Competing Freight Lanes
Task Order 1	$37,825,245
Task Order 2	$11,396,583
Task Order 3	$1,347,846
Task Order 4	$354,374
Grand Total	**$50,924,048**

As of Q3 2019, logistics savings were calculated as the difference between the rates awarded to the selected 3PL and the average of the two most expensive 3PLs. This method provides a comparison for all shipping lanes and simulates the rates that would likely be obtained under a non-competitive, 3PL model. The project uses shipping data and annual 3PL rates for the specific timeframe of the shipment being measured to calculate these cost savings. At times, annual 3PL rates were not available due to market conditions; adjustments[76] were made to past rates to track more accurately these savings with the available information.

Starting November 2023, the project conducted a freight rate card refresh. The November 2023 rates were used to calculate the cost savings for FY 2024.

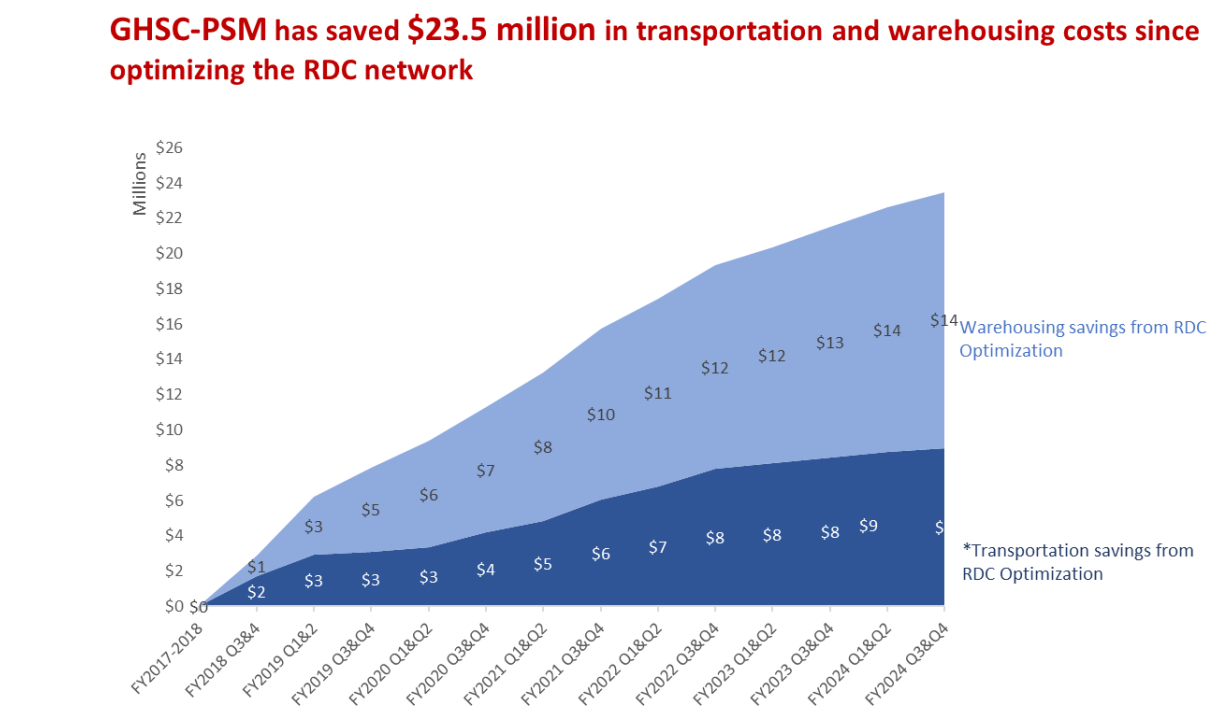
Optimizing the RDC network. GHSC-PSM saves money on logistics by optimizing the project's network of RDCs. Savings are generated through:

- Warehousing savings from lower costs at the project's three RDCs (Dubai, Belgium, and South Africa).
- Transportation savings from shipping costs on actual commodities that moved through the three RDCs, compared to what shipping would have been for those commodities under the previous, five-warehouse model (Ghana, Kenya, Netherlands, Singapore, and South Africa). These savings are in addition to cost savings generated from negotiating lower shipping rates.

GHSC-PSM saved $23.5 million in transportation and warehousing costs since optimizing the RDC network. Exhibit 17 shows cost savings from RDC optimization; the light blue indicates warehouse savings and the dark blue, transportation savings.

Exhibit 17. RDC Optimization Cost Savings

[76] In early Q3 2020, GHSC-PSM recognized that air freight market rates were rising rapidly because of the COVID-19 pandemic. During this time, the project placed a hold on the annual 3PL rate refresh for air shipments and extended ocean rates until the end of November 2020. As a result, the project, in consultation with USAID, decided to manage air shipment pricing under a spot-bid model and review ocean shipments case by case with the expectation that the impact on pricing would be nominal. In December 2020 the project refreshed ocean freight rates and used them to calculate ocean cost savings from December 2020 to the end of Q2 FY 2021. In the Q2 FY 2022 GHSC-PSM IDIQ report, the project, in consultation with USAID, adjusted the FY 2019 rate cards to account for the shift in the market, determined by taking the average of all spot bids acquired per shipment to arrive at a market increase rate per shipment. This rate was then applied to the FY 2019 rates per shipment to adjust the quotes to market values at the time of booking the shipment. Using these adjusted rates, the project calculated final cost savings figures as the difference between the rates awarded to the selected 3PL and the average of the two most-expensive 3PLs, similar to previous years.



Strategic packaging to reduce shipping costs. GHSC-PSM saves money on logistics by reducing the weight and shipping containers needed to transport TLD products. In FY 2019 the project began procuring TLD in carton-less packaging and introduced larger pill counts in TLD bottles. Carton-less is a term global health procurement agents use to refer to ordering and handling pharmaceutical products by the bottle and without the external boxes around each individual bottle. Before FY 2019, GHSC-PSM standardized the TLD pack size to 30-tablet bottles.

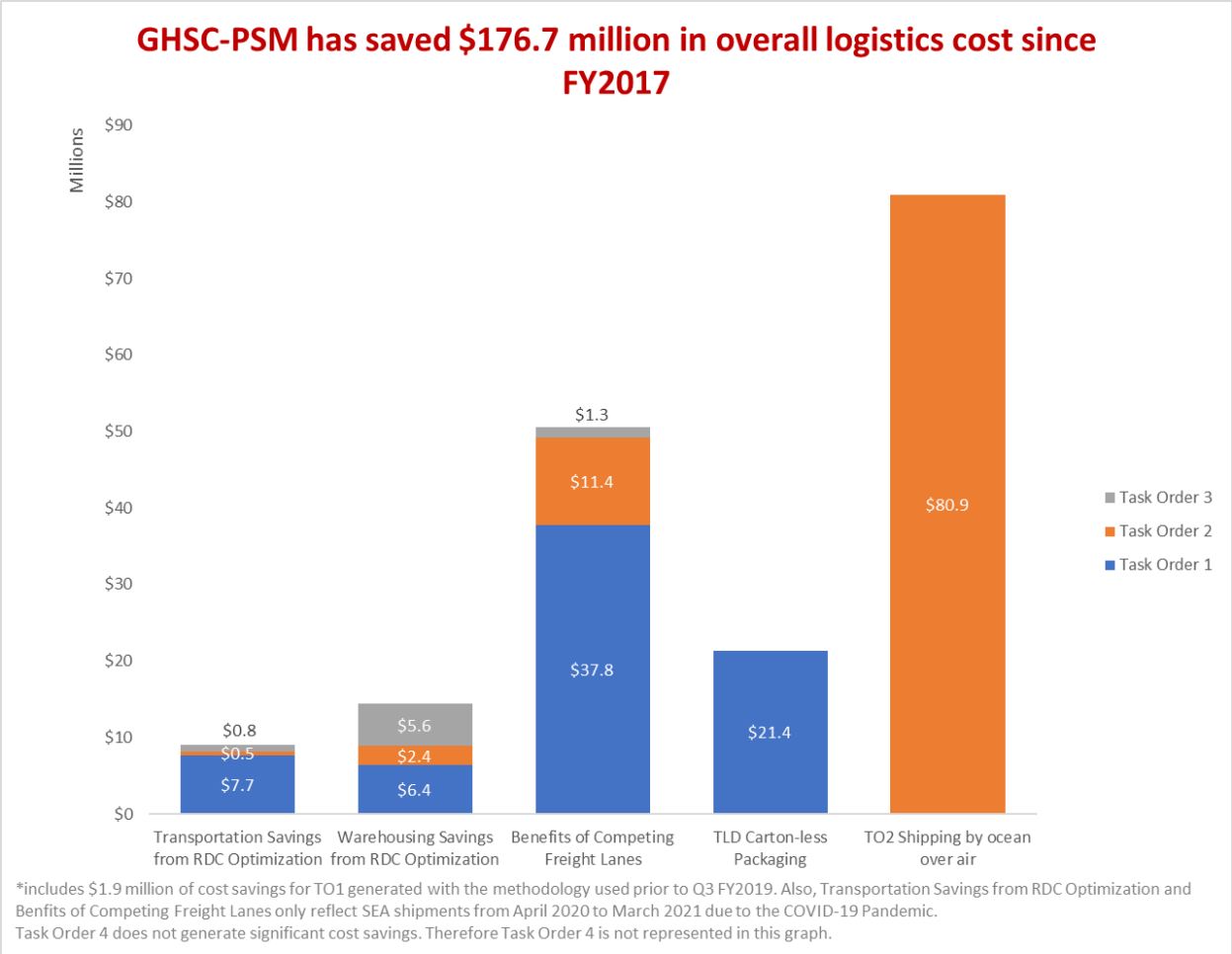
Since FY 2019, GHSC-PSM shifted to procuring 90- and 180-tablet bottles. These changes allow suppliers to fit more total tablets in shipping containers for sea shipments and reduces total shipment weight for air shipments, thus saving $21.4 million in logistics costs for both FCA and D-Term shipments[77].

[77] In Q2 FY2024, GHSC-PSM added the logistic cost saving from D-Term shipments. The methodology for Calculating logistic cost savings for D-Term shipments mirrors the same methodology for tracking FCA shipments. However, the data sources to calculate shipping costs for D-Term shipments come directly from the supplier freight quotes and the Performance Dataset for shipment data whereas the data sources to calculate the shipping costs for FCA shipments come from the 3PL quotes and a shipment report from the Deliver Return team.

Malaria shipping by ocean over air. Since FY 2019, the malaria task order has tracked cost savings from orders shipped by ocean that would have historically been shipped by air. The methodology for tracking these savings is to compare the selected ocean rates quoted by the awarded 3PL against the cheapest of all 3PL air rates quoted in the annual 3PL rate refresh. GHSC-PSM generated $80.9 million in cost savings since FY 2019 by shipping orders by ocean instead of air.

Total cost savings on logistics to date was $176.7 million, which includes $23.5 million in transportation and warehousing costs from optimizing the RDC network, $21.4 million from strategic packaging of TLD, $50.9 million from competing freight lanes, and $80.9 million from TO2 shipping by ocean over air. (See Exhibit 18.)

Exhibit 18. Logistics Cost Savings Breakdown

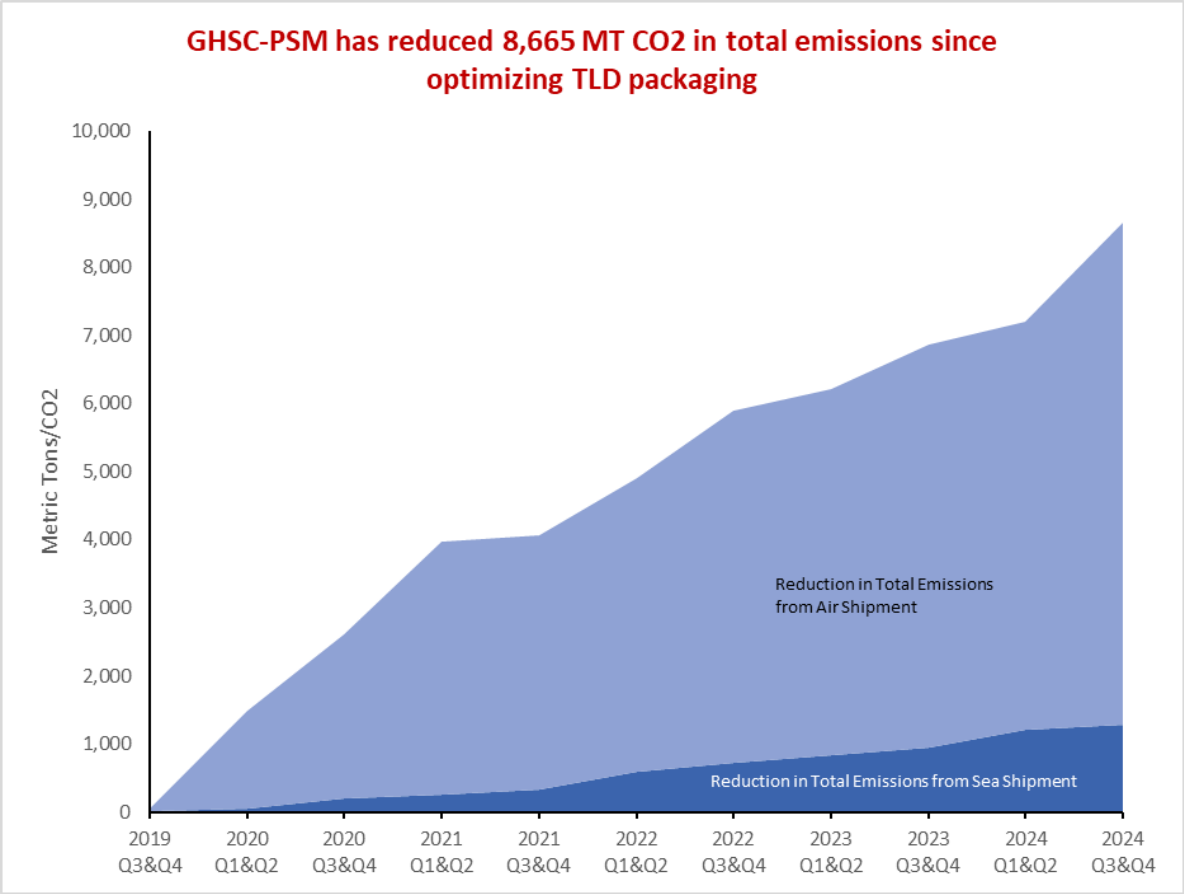


*includes $1.9 million of cost savings for TO1 generated with the methodology used prior to Q3 FY2019. Also, Transportation Savings from RDC Optimization and Benfits of Competing Freight Lanes only reflect SEA shipments from April 2020 to March 2021 due to the COVID-19 Pandemic.
Task Order 4 does not generate significant cost savings. Therefore Task Order 4 is not represented in this graph.

REDUCTION IN CARBON EMISSIONS

Beginning in August 2021, GHSC-PSM focused on reducing carbon emissions on TLD shipments as part of the green initiative. Carbon emission reduction in sea shipments is calculated by comparing the estimated actual containers shipped when using carton-less TLD packaging versus how many containers would have been needed using 30-tablet bottles packaged in cartons. Since Q3 2019, total emissions produced would have been 26,240 metric tons/carbon dioxide (CO2) had the project continued shipping TLD in 30-tablet bottles packaged in cartons. Since the project changed from carton to carton-less packaging and increased pack size to 90 or 180 tablets per bottle, the actual emission was 17,575 metric tons/CO2. Therefore, total emission reduction due to this change was 8,665 metric tons/CO2[78] (the equivalent of 2,062 gasoline-powered passenger vehicles driven for one year). This was an emissions reduction of 33 percent between August 2021 and September 2024.

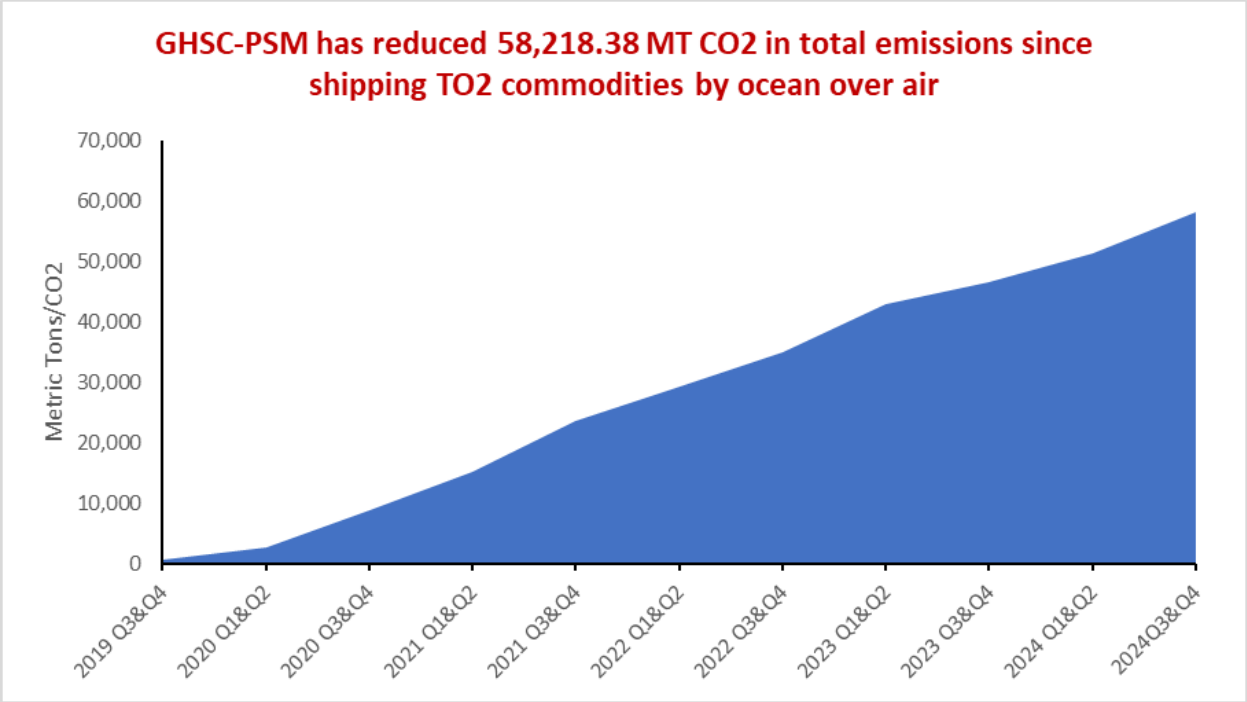
Exhibit 19. Cumulative Total Emission Reductions



[78] Prior to this report, GHSC-PSM only calculated emissions reductions from August 2021 to date and only for FCA shipments. However, the shift in TLD packaging began in Q3 FY2019 and the TLD market has been shifting toward D-Term shipments since Q3 FY 2021. Therefore, in agreement with USAID, GHSC-PSM retroactively calculated the emissions reduction between Q3 FY2019 and Q2 FY 2021 and included the emissions reductions from D-Term shipments as well.

Malaria shipments by ocean over air

Since FY 2019, TO2 has tracked cost savings from orders shipped by ocean that would have historically been shipped by air. GHSC-PSM began tracking the emission reductions from this policy change in FY 2023 and retroactively included the emission reductions since 2019. The methodology for tracking the emission reductions compares actual emissions for malaria commodities shipped by ocean against emissions that would have been exhausted had these shipments been shipped by air. Shipping by sea over air carries an average emissions reduction rate of 85 percent. Total emission reduction due to this change was 58,218.38 metric tons/CO2 (the equivalent of 13,856 gasoline- powered passenger vehicles driven for one year).



C2. SYSTEMS STRENGTHENING TECHNICAL ASSISTANCE

Assisted 48 countries with health supply chain systems strengthening over the life of the project.

Provided **technical feedback on 178 supply plans in Q4** to strengthen national supply planning capabilities.

Facilitated the **adoption of QAT** for management of forecasting and supply planning **in 43 countries** over the life of the project.

GHSC-PSM's strategic goal is for every country to have a locally led health supply chain that is integrated, optimized, accountable, agile, and lean and can sustainably supply quality products to all citizens. To support this goal, headquarters and country-based technical specialists work with country teams to define systems strengthening strategies that are appropriate to the local context and can be realistically achieved. The project emphasizes automated data capture and real-time end-to-end data visibility, most notably through advanced analytics, global standards and traceability, forecasting and supply planning, and management information systems. GHSC-PSM also focuses on private-sector engagement, pharmaceutical-grade infrastructure, and efficient distribution across countries, through laboratory networks, warehousing, and distribution systems strengthening. The project works with country stakeholders to ensure their supply chains are managed by supply chain professionals dedicated to quality improvement through workforce development, leadership, and governance activities. GHSC-PSM also collaborates on strategies to outsource functions to accountable private-sector providers where possible.

REFLECTIONS ON FY 2024

Advancing USAID's goal to place local communities in the lead

GHSC-PSM remains committed to enabling local actors—including the public sector, parastatals, NGOs, and private-sector organizations—to drive improvements in their country's supply chain, from the national level to the last mile. The project strives to achieve this by providing tools to improve efficiency and developing skills to create a pool of supply chain experts in USAID-supported countries. Recognizing the complexity and unique nature of each country's health supply chain, GHSC-PSM customizes its support based on individual country needs. Throughout FY 2024, the project worked with supply chain actors to co-facilitate key activities, ensuring the transfer of knowledge and expertise to help local governments take the lead. This included supporting quantification exercises, the development of locally owned, country-specific supply chain strategies, and strengthening efficiencies in warehousing and distribution. Over time, these efforts have required less technical assistance from the project.

Through advanced analytics, GHSC-PSM created or modified data analytics tools in such a way that allows them to be deployed in any country or context. Examples include the warehouse orchestration tool in Nigeria, the commodity allocation control tool in Niger, the dynamic routing tool in Zambia, and the CAD tool used in Liberia, Malawi, Zambia, and other countries to flag or detect anomalies in consumption data for improved commodity management. Throughout the year, the project continued to focus on enhancing the capabilities of these analytic tools to expand their use and facilitate ease of transfer between countries. The project also published many of these information technology solutions on GitHub—a public site where anyone can download and use open-source software tools.

GHSC-PSM's QAT also continued to play a key role in improving forecasting and supply planning (FASP) across countries. The FASP process involves substantial stakeholder engagement, data analysis, negotiations, and decision making. To streamline this process, GHSC-PSM developed QAT to simplify data visualization and support scenario planning, making it easier for users to independently evaluate the quality of their forecasts or coordinate with partners to make changes. In FY 2024, the project expanded QAT's user base by training local organizations and encouraging its use by key health supply chain partners like the Global Fund, UNICEF, and CHAI. As of Q4, more than 1,000 users were actively using QAT across 43 countries.

Two key priorities in GHSC-PSM's health systems strengthening approach are efficiency and sustainability. To support these priorities, the project continued to equip local partners with the tools and competencies to assess and enhance their warehousing and distribution performance. In Eswatini and Lesotho, GHSC-PSM furthered efforts to transform public-sector central medical stores into financially independent parastatals, positioning them for potential direct support from USAID in the future. The project's activity-based costing/activity-based management (ABC/ABM) methodology helps country governments understand the cost drivers of warehousing operations and build their capacity to drive down costs and improve performance. In FY 2024, GHSC-PSM continued to strengthen capacity for ABC/ABM at the regional medical stores in Ghana, the Joint Medical Stores in Uganda, and the NDSO in Lesotho. Thanks to USAID's support, the NDSO is now regarded as a self-sufficient autonomous parastatal and a benchmark for other countries in Southern Africa.

ADVANCED ANALYTICS

Advanced analytics enables countries to expand the use of existing data to facilitate decision making across the supply chain—from day-to-day operations to high-level strategy. GHSC-PSM primarily facilitates this process by designing analytic tools that leverage existing investments in management information systems to make data available in real-time and meet individual country needs. These tools are repeatable, reusable, and adaptable in various contexts, enabling countries to use them in a way that encourages and improves self-reliance.

In Q4, GHSC-PSM refined data flows and incorporated, expanded, or improved the automation of data analytic tools in Mali, Niger, Nigeria, and Zambia. The project also finalized or updated strategy reports based on analytics research and made recommendations to facilitate data-driven decision making in Ethiopia, Ghana, and Rwanda. Furthermore, the project consolidated and automated data reporting for the TO2 EUV surveys and refined an interactive dashboard and learning guide to encourage the use of inventory turns for monitoring facility stocks for the TO3 workstream.

Below are two Q4 examples that demonstrate how GHSC-PSM works with countries to refine analytic tools and improve supply chain data management:

- In **Zambia**, continued to drive data enhancements and functionality to improve the use of the Dynamic Route Optimization (DRO) tool used in planning last-mile distribution at the central warehouse and four distribution hubs. The project refreshed the data to ensure the latest facility location list was available on the tool and enhanced the tool's functionality to reduce workloads and improve adherence to service level agreements. The most impactful of these enhancements was adding an automated link and QR code of each route that opens the route in Graphhopper (a routing tool similar to Google Maps) allowing for verification of total kilometers, modifications of specific routes taken to incorporate necessary detours, or adding or deleting stops as needed. Furthermore, 3PL drivers can use the QR code to access the routes directly on their mobile devices. Before these enhancements, supply chain personnel at Zambia Medicines and Medical Supply Agency (ZAMMSA) spent many hours manually entering each route onto the website as part of the purchase order process.

- In **Nigeria**, enhanced the shipment planning dashboard (or warehouse orchestration tool) by shifting it from an Excel-based tool that uses data feeds within GHSC-PSM's Sharepoint to a web application that receives data feeds directly from the country's data systems through an API connection. This enhancement is intended to ease the transfer of the tool to local ownership by allowing greater use of the application beyond those with access to the project's Sharepoint. It also resolves issues with computing speed in the country by shifting the computation for the tool to the cloud.

GLOBAL STANDARDS AND TRACEABILITY

GHSC-PSM implements GS1 standards to give trading partners[79] the means to operate using high-quality master data. The project also provides technical assistance to support the adoption of GS1 standards for product identification, location identification, data capture and exchange in USAID-supported countries. Adopting global standards can reduce costs, enhance efficiency, and improve the availability of health commodities in country public health supply chains. This work also advances the adoption of GS1 labeling and data standards in country regulatory guidelines and implementation roadmaps.

More information on global standards implementation within the project can be found in Section C1. Global Supply Chain above and in the Management Information Systems section below.

Improving traceability among trading partners

GHSC-PSM is developing a minimum viable product (MVP) of a Traceability Interoperability Platform for the HIV/AIDS task order. The project designed TIOP as a central hub for trading partners to enable the exchange of serialized data from many global parties to national traceability systems. This MVP is an example of how the global health community of donors and procurement agents can comply with emerging national traceability data sharing regulations.

[79] This includes manufacturers and suppliers, logistics providers, regulatory agencies, medical stores, and health facilities.

In Q4, GHSC-PSM launched the TIOP pilot and shared two documents containing 1,446 supply chain events[80], with a total of 42,275 serial numbers, from an ARV manufacturer to the Nigerian National Traceability System (NTS). The successful launch of the pilot was the result of effective coordination between three systems (manufacturer, TIOP, and NTS) to ensure that the documents passed validation criteria and connections worked seamlessly. As the pilot progressed, the project documented lessons learned and identified opportunities to share them with the global health community. In Q4, GHSC-PSM hosted a webinar and several targeted presentations with several stakeholders, including countries, donors, and implementing partners, to share information on the TIOP design, architecture, lessons learned, and future opportunities.

Promoting efficient product master data management

GHSC-PSM supports the advancement and use of global standards for improved supply chain data visibility and product traceability in USAID partner countries. These activities include standardizing product identification protocols and implementing product master data (PMD) programs, including national product catalogs. As more countries are looking to implement similar programs, there is a need to document lessons learned to inform national strategies for deploying national product master data management programs. To this end, GHSC-PSM worked with USAID, GS1, WHO, and other stakeholders to develop a Master Data Management (MDM) Lessons Learned document that provides countries and implementers with a readily implementable framework of successes, challenges, and lessons learned in deploying MDM programs at the global and national levels. The project published the document in Q4 and hosted a webinar with supported countries to promote its use.

Country Highlights:

In Q4, the project continued to strengthen the adoption of GS1 labeling and data standards in country regulatory frameworks and national traceability strategies.

- In **Burundi**, supported the Burundian Regulatory Authority for Medicines for Human Use and Food (ABREMA) in drafting policy guidelines for the country's national traceability initiative. The project also initiated plans to improve harmonization of the product master data and its interoperability on the Sage™ and Medexis© systems[81].
- In **Ghana**, collaborated with the USAID PQM+ project to assess whether the existing regulatory environment would enable the availability and exchange of the product master data with Ghana FDA who will be the custodian of the National Product Registry.
- In **Rwanda**, worked with the Rwanda FDA to launch the Global Standards and Pharmaceutical Traceability Sub-Technical Working Group. With the project's support, the TWG conducted a five-year review of the national traceability strategy and developed a detailed implementation plan and results framework. Furthermore, the project helped the Rwanda FDA to outline its traceability regulatory compliance monitoring and enforcement framework, which documents the body of work required for the FDA to effectively implement the traceability regulation.

[80] A supply chain event is a specific term used in this messaging standard to describe a supply chain occurrence (eg creation/commissioning, observation, etc.)

[81] Sage™ and Medexis© are end-to-end data visibility software. SAGE is the WMS solution at CAMEBU (the Burundi central medical store) and Medexis is the eLMIS employed by Burundi MOH.

- In **Zambia**, at the request of the Mission, initiated a pilot activity to fast-track traceability implementation at ZAMMSA. The pilot focuses on managing three hundred serialized units (packs) of a single ACT (AL tablets 200mg/120mg) product and involves receiving, storing, and distributing these units from the Lusaka warehouse to three designated healthcare facilities. The scope of the pilot spans from system design, implementation, testing, and user training, to a "go-live" or launch phase. In Q4, the project facilitated the successful deployment of a serialization module in the warehouse management system (WMS) portal to enable it to ingest and capture serialized information (GTIN, batch, expiry, and serial number) present on the product packs. In Q1 FY 2025, the project will expand use of that serialized data by developing and deploying a mobile application for product verification. Additionally, to streamline serialization capability in the WMS, the project supported the implementation of several process adjustments in warehouse internal operations, including refining product master data creation to accommodate the serial number attribute, modifying the goods receiving process to capture serial numbers upon product entry, and optimizing inventory management and packing procedures to ensure accurate serial numbers are tracked.

- In **Zimbabwe**, completed the development of functional and business requirements for an automatic identification and data capture, or AIDC solution, that will be compatible with deployment on the Microsoft Dynamic 365 (MS D365) application. To support the launch of the new product master data management (PMDM), the project updated the data to align with GS1 standards, deployed SOPs, and trained new and existing NatPharm staff on product master data (PMD) and AIDC principles. GHSC-PSM worked with the NatPharm team to finalize a deployment plan for the new product master data system, making sure it meets international GS1 standards. The project also worked with NatPharm's Microsoft Dynamics 365 provider to complete updates and build a tool that brings the new product data into a test system so NatPharm can assess and verify the new features. Furthermore, GHSC-PSM and NatPharm refined the implementation roadmap for an AIDC solution, targeting specific WMS transactions, products, and locations.

FORECASTING AND SUPPLY PLANNING

GHSC-PSM provided FASP technical assistance to 31 countries[82] to integrate FASP capabilities, develop country-led solutions, and improve program managers' ability to maintain enough inventory to meet disease prevention and treatment targets and address client demand. TA included quantification assistance, training, and supply plan monitoring.

Promoting wide adoption of QAT

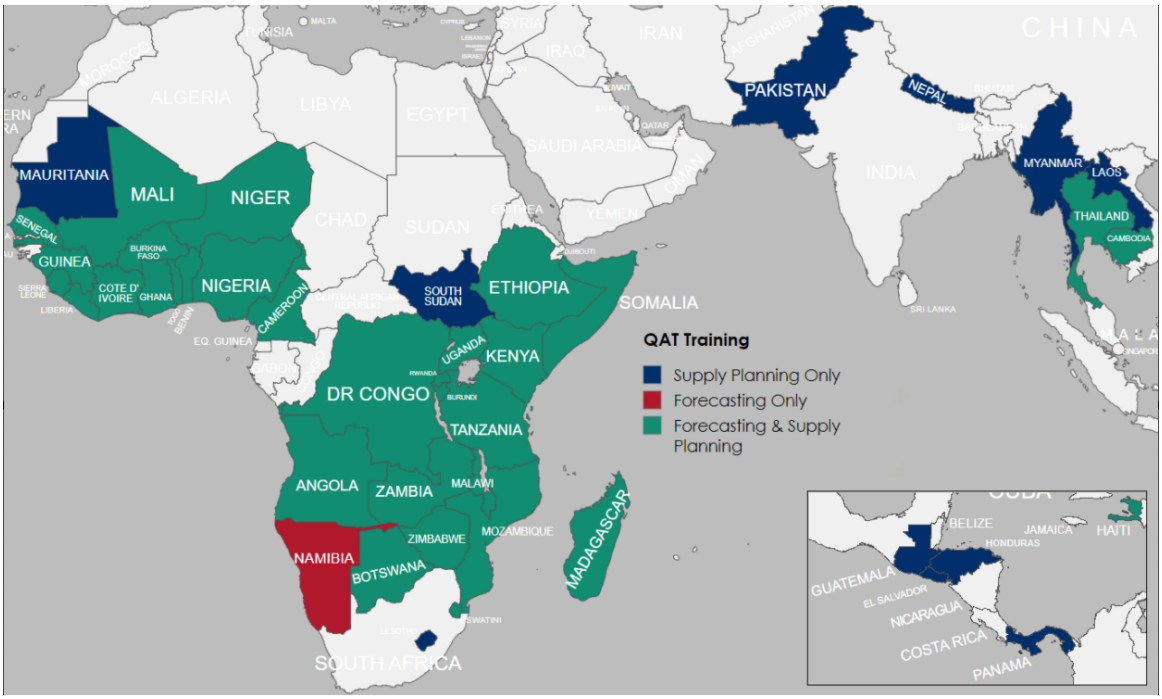
As of Q4, GHSC-PSM has facilitated the adoption of QAT in 43 countries[83] (with 33 countries onboarded onto both the forecasting and supply planning modules). This includes countries reached

[82] Angola, Benin, Botswana, Burkina Faso, Burundi, Cambodia, Côte d'Ivoire, DRC, Eswatini, Ethiopia, Ghana, Guinea, Haiti, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, South Sudan, Tanzania, Togo, Uganda, Zambia, and Zimbabwe.

[83] Angola, Benin, Botswana, Burkina Faso, Burundi, Cambodia, Cameroon, Côte d'Ivoire, DRC, El Salvador (SP only), Eswatini, Ethiopia, Senegal, Ghana, Guatemala (SP only), Guinea, Haiti, Honduras (SP only), Kenya, Laos (SP only), Lesotho (SP only), Liberia, Madagascar, Malawi, Mali, Mauritania (SP only), Mozambique, Myanmar (SP only), Nepal (SP only), Nigeria, Niger,

through GHSC-PSM's collaboration with UNICEF and USAID's Bureau for Humanitarian Assistance. As of Q4, the number of active QAT users worldwide[84] was 1,104.

Exhibit 20. Countries Trained on QAT Forecasting and Supply Planning as of September 30, 2024 (updated in October 2024)

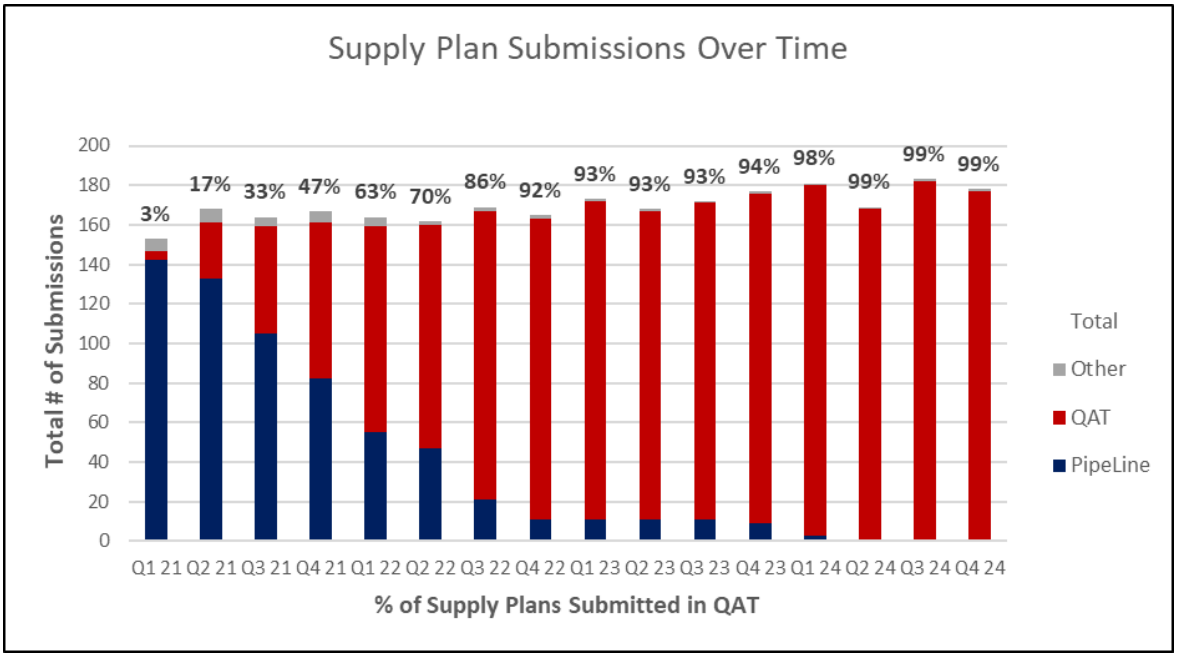


GHSC-PSM continues to support countries' use of QAT for supply planning. The chart below shows the successful transition from the use of PipeLine and other supply planning tools to QAT over time. In Q2, Q3 and Q4 FY 2024, 99 percent of all supply plans submitted were done using QAT compared to the 3 percent in FY 2021.

Panamá (SP only), Rwanda, Sierra Leone, Somalia, South Sudan, Tanzania, Thailand, Togo, Uganda, Zambia, Zimbabwe, Namibia (forecasting only)

[84] Logged on at least once in the last 12 months (since Oct 2023)

Exhibit 21. Supply Plan Submitted in QAT Over Time



Improvements to the tool

To promote its adoption, enhance user experience, and ensure that QAT meets country requirements, GHSC-PSM continues to refine the tool's features and functionality based on user feedback. In Q4, the project tested and released over 70 new change requests designed to enhance the tool's functionality and user experience.

Remote and in-person technical assistance

In Q4, GHSC-PSM provided in-person and remote technical assistance to countries to strengthen capacity for QAT use:

- In **Nigeria**, trained 40 participants from 10 organizations, including the MOH, USAID, CDC, CHAI, and GHSC-PSM on QAT's forecasting module.
- In **Haiti**, provided a refresher training on the QAT forecasting module to 23 participants representing 11 organizations, including USAID and UNFPA. This training preceded the annual quantification exercise for family planning and maternal health commodities. During the workshop, participants evaluated forecast data quality, prepared forecasts for both categories of products, and selected forecasts based on the quality of the data and participants' knowledge of the evolution of the programs. By the end of the workshop, the selected forecasts were combined with inventory and consumption data to plan and schedule shipments to ensure adequate inventory through 2025 for UNFPA, and through 2026 for USAID.
- In **Tanzania**, facilitated the VMMC quantification workshop, with stakeholders from USAID, the National AIDS, STIs and Hepatitis Control Programme, and two USAID implementing

partners (Henry M. Jackson Foundation Medical Research International and the Reaching Impact, Saturation and Epidemic Control, or RISE, project). Participants generated forecasts using consumption-based and service-based methods, and updated supply plans in QAT. This was the first VMMC quantification was done using QAT in Tanzania and, going forward, stakeholders will have visibility into ongoing supply plan updates through the online platform.

- Remote technical assistance:
    - Supported annual quantification exercises in **Eswatini** (HIV and malaria)**, Burundi** (reproductive health), **and Botswana** (HIV).
    - Worked with the Reproductive Health Program in **Guatemala** to collect missing data and correct data quality issues to complete onboarding their reproductive health commodities supply plan in QAT.
    - Continued working with GHSC-FTO project staff in the **DRC** to strengthen their capacity to manage and review provincial supply plans for reproductive health commodities in QAT.
    - Provided remote technical assistance for **Sierra Leone's** first-time use of QAT for their annual malaria quantification. The support included several online meetings with the project in-country team to review forecast trees and address technical questions about using QAT to develop different aspects of their forecast.
    - Worked with **UNICEF** to hold QAT-themed office hours for countries that are using QAT for nutrition commodities.

Planning for QAT transition

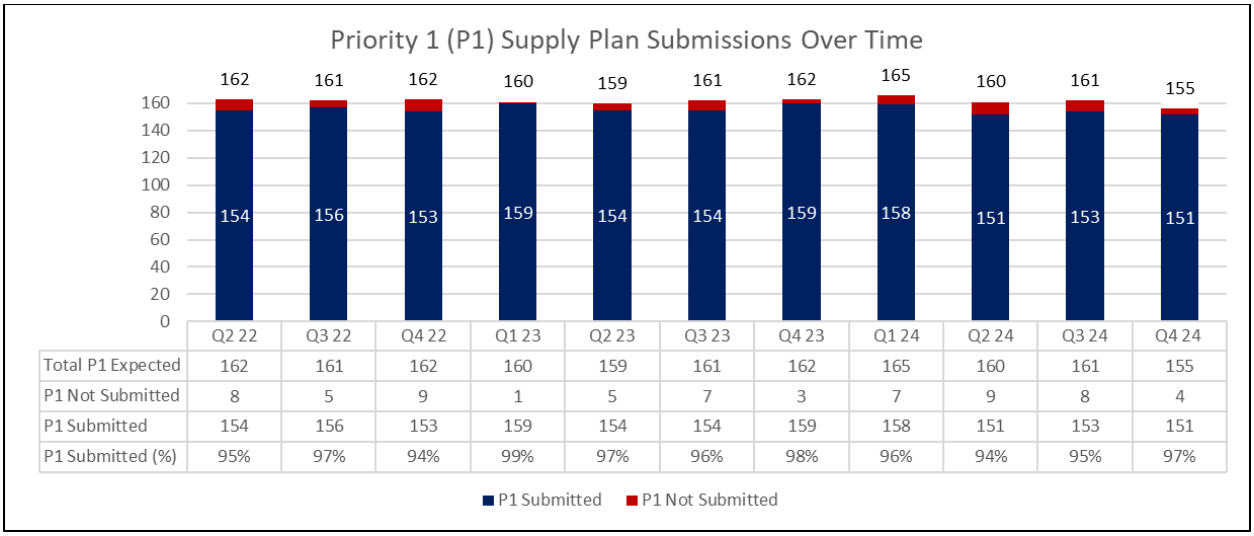
In Q4, GHSC-PSM continued discussions with USAID on transitioning QAT's source code and main application to another implementing partner under the purview of Digital Square, a marketplace for open-source tools. This initiative is critical to ensuring the long-term sustainability of QAT and its smooth transition to NextGen. To this end, GHSC-PSM:

- Worked on a transition plan with USAID after being informed of Digital Square's decision to award the hosting and maintenance contract to a new vendor. The new vendor is expected to finalize contracts with Digital Square in early Q1 of FY 2025. The plan is to complete the transition and handover by Q3.
- Held three meetings with USAID and Digital Square to provide guidance and updates on tasks required to transition responsibilities to the new vendor. GHSC-PSM will continue to work with Digital Square and the new hosting and maintenance vendor over the next three quarters to ensure a smooth handover.

Supply plan submissions

In Q4, the project reviewed 178 supply plans to verify that they complied with data quality, and supply planning and procurement scheduling standards. This included 151 USAID high-priority supply plans from 29 countries.

Exhibit 21. Priority 1 Supply Plan Submissions Over Time



	Q2 22	Q3 22	Q4 22	Q1 23	Q2 23	Q3 23	Q4 23	Q1 24	Q2 24	Q3 24	Q4 24
Total P1 Expected	162	161	162	160	159	161	162	165	160	161	155
P1 Not Submitted	8	5	9	1	5	7	3	7	9	8	4
P1 Submitted	154	156	153	159	154	154	159	158	151	153	151
P1 Submitted (%)	95%	97%	94%	99%	97%	96%	98%	96%	94%	95%	97%

MANAGEMENT INFORMATION SYSTEMS

GHSC-PSM improves data accuracy and quality for management information system (MIS) implementation, including GS1-compliant standardized product data to build master data sets—an important step toward end-to-end data visibility. The project works with countries to evaluate the data captured in information systems (e.g., eLMISs and WMSs) for standardization and to establish methods and plans for managing master data sets across information systems.

In Q4, GHSC-PSM continued to work with **Botswana**, **Burkina Faso**, **Guinea**, **Malawi**, and **Nigeria** to improve data accuracy and reporting by enhancing eLMIS capabilities, rolling out the system to selected facilities, and training health facility staff to use eLMIS for reporting. Although reporting rates have increased in these countries, the progress remains slow. This is due in part to the level of effort required to ensure the readiness of health facilities and obtain approval from relevant authorities. The countries also identified high rates of attrition and the continuous training required for new staff as challenges hindering data quality and reporting rates.

- In **Nigeria**, to aid the future transition of the WMS and eLMIS to the MOH, evaluated the local situation and proposed the development of a supply chain information system (SCIS) strategy which will outline the standard operation and support and maintenance procedures required to establish an interoperable information system architecture that shares data and information across all systems.

- In **Botswana**, supported the development and implementation of an electronic contract supplier relationship management (eCSRM) system to support the CMS in managing and tracking procurement contracts and monitoring the performance of suppliers. The CMS launched the eCSRM in Q4 and began using the tool to capture existing and new contract information and monitor the progress of product delivery. The project set up a weekly status review to support and monitor the system's operation.

- In **Malawi**, successfully transitioned the MIS activity to the USAID Country Health Information Systems and Data Use (CHISU) project. The activities handed over to CHISU include the eLMIS (OpenLMIS), the National Product Catalog tool, and the national traceability strategy. GHSC-PSM also developed a transition checklist outlining detailed actions and timelines to guide and monitor the progress of the transition.

LABORATORY NETWORKS

GHSC-PSM promotes efficient and well-planned laboratory networks and supports quality service delivery by encouraging the visibility and use of project-generated supply chain data for decision making, improvements to network performance, and forecasting and supply planning for laboratory commodities. In FY 2024, the project launched an internal laboratory community of practice to promote communication and knowledge sharing. Since its launch in Q3, 125 members have joined and 81 posts have been shared. Content is centered on the all-inclusive SLA implementation, equipment placements and EPPQ, data use, and using QAT for lab.

In Q4, the project collected and summarized 11 country responses from the gap assessment tool to determine country-specific needs related to implementing the global SLAs, and began using these responses to inform technical assistance offerings and approaches. GHSC-PSM also leveraged routine internal meetings with country laboratory teams to expand in-country capacity to use data to improve laboratory network performance through the SLA KPIs and encourage country adoption of QAT for laboratory forecasting.

Supporting quantification for laboratory commodities

GHSC-PSM continues to look for opportunities to improve the use of QAT for forecasting laboratory commodities and to streamline and standardize national quantification exercises. In Q4, the project:

- Solicited feedback from laboratory stakeholders and provided technical input on change requests for QAT to improve the use of forecasting trees for laboratory commodities.

- Provided in-person technical assistance on using QAT in **Eswatini** for forecasting and supply planning for laboratory commodities during their annual quantification workshop.

Supporting equipment planning and placement and instrument transitions

GHSC-PSM continues to steward the EPPQ by ensuring that all supported countries adhere to its requirements. USAID requires that countries answer 12 EPPQ questions to ensure countries appropriately plan and are prepared before procuring certain laboratory equipment and instruments that come with a warranty, are connected to electricity, and/or require additional maintenance. The project works with country teams and the three global diagnostics manufacturers under the global SLA to

complete the EPPQ before purchasing or placing new equipment. An EPPQ tracker captures the placement of molecular equipment and provides visibility and better coordination across the project for instrument placements. In Q4, the project coordinated with stakeholders in **DRC, Kenya, Mozambique, Tanzania, Togo, and Zambia** to complete the EPPQ and supplemental capacity utilization analysis.

WAREHOUSING AND DISTRIBUTION

GHSC-PSM improves warehousing and distribution systems in over 25 countries. The project aims to move countries' warehousing from a mid-/long-term storage facility strategy to a distribution center model with a focus on reducing order process cycle times. This requires infrastructure and process changes to ensure warehouses can keep up with the increased speed needed for frequent inventory turns. Activities include improving data-driven decision making across the supply chain, optimizing distribution networks, and increasing efficiencies in warehousing and distribution operations.

In Q4, the project continued to promote warehouse inventory variance and cycle count methodology for GHSC-PSM stakeholders by moving from periodic to perpetual inventory control. GHSC-PSM aims to include perpetual inventory counting where the project directly oversees warehouse operations, is renewing contractual agreements with 3PL providers for warehousing services, or supports warehouse operations with other implementing partners or their MOH counterparts (e.g., through a CMS or a parastatal).

Activity-based costing/activity-based management

GHSC-PSM recognizes that warehousing and distribution are part of a larger strategy requiring integrated procurement, transportation, storage, picking and packing, delivery, and other activities to increase velocity, improve orchestration and performance, and lower the risk of expiry and warehouse operational costs. The project supports countries in implementing private sector approaches, such as activity-based costing/activity-based management (ABC/ABM), to capture cost information, assess public sector supply chain costs against private-sector costs, and enable increased efficiency in managing operational costs.

In Q4, GHSC-PSM provided remote technical assistance to **Eswatini, Ghana, Lesotho,** and **Uganda**—all of which are in various stages of ABC/ABM implementation:

- In **Eswatini**, continued supporting the CMS team's implementation of best practices in distribution planning, receiving, storage, picking, inventory control, expiry management, and the use of the 5S[85] methodology. These efficiencies in warehouse operations will serve as a catalyst for the CMS to gradually move toward using ABC/ABM, providing visibility into their costs for managing their supply chain operations. It will also provide a foundation for the CMS to transition to a semi-autonomous and sustainable parastatal. This exercise will continue through Q1. Additionally, GHSC-PSM is supporting warehouse consolidation of lab supplies with the central warehousing facilities. The CMS is in the final stages of relocating its lab warehouse to

[85] 5S is a workplace organization strategy that resets the existing operation by removing non-value-added products, items, or equipment; ensuring all areas are laid out for continuity, and maintaining the streamlined processes and conditions. When followed, the 5S methodology creates a more organized and productive workspace.

the main CMS facility. This move will strengthen warehousing operations and improve outbound deliveries for laboratory commodities.

- In **Ghana**, conducted biweekly meetings with the Ashanti and Eastern regional medical store finance teams and their warehouse and supply managers to discuss their daily planner, monthly labor report, and customization and use of profit and loss (P&L) statements. The project continued mentoring the finance and operations teams to encourage independent review of their P&L statements.

- In **Lesotho**, assisted the National Drug Service Organization in developing a P&L statement for the last six quarters. The P&L statement provides a clear snapshot of the distribution center's financial health over a specific period, allowing stakeholders to assess profitability and identify areas for improvement such as cost control, forecasting and budgeting, operational performance, and distribution costs. Regular reviews of the P&L statements help identify potential financial risks and vulnerabilities. By addressing these risks proactively, warehouses and distribution centers can mitigate financial losses and maintain stability.

- In **Uganda**, provided technical assistance to the Joint Medical Stores (JMS). JMS operates using the ABC/ABM tools in the same way as a commercial operator. Since implementing ABC/ABM in 2018, JMS has reduced operating costs and improved performance and continues to outperform its projections. JMS recorded a 36.2 percent reduction in expenses between July 2021 and September 2024, along with a 35.4 percent decrease in warehousing and distribution fee/cost (a cost saving to USAID). GHSC-PSM now provides minimal technical assistance each quarter to review JMS's quarterly P&L (also called an income statement) and ensure that the lean ABC/ABM guarantees its sustainability.

WORKFORCE DEVELOPMENT

GHSC-PSM strengthens public health supply chains by building sustainable workforces through professionalization, systematic assessments, and approaches to workforce development.

Country-specific workforce development activities

In Q4, GHSC-PSM activities included:

- In **Sierra Leone**, collaborated with the MOH to develop a research protocol for a qualitative study of Sierra Leone's health supply chain management labor market. The research is designed to identify barriers, enablers, and other factors that influence the supply and demand for health supply chain management professionals in the country. In Q4, GHSC-PSM worked with the MOH to analyze the data collected from 23 organizations. The analyzed data generated three common themes summarized as key areas of need:

    - Need for increased awareness of supply chain management (SCM) in the country.
    - Need to increase SCM course offerings by higher institutions of learning in the country.
    - Need for SCM professionalization to define and standardize the required skills and competence for all cadres, and outline the career growth of supply chain personnel in SCM.

- In **Eswatini**, conducted a training of trainers for 16 participants, including regional pharmacists, participants from local training institutions, and the project's regional logistics officers. The training aimed at improving the quality of supportive supervision through the use of adult learning methodology and allowed participants to practice their skills by facilitating classroom-based learning and role-playing a supportive supervision visit.

- In **Rwanda**, published four TO3-funded case study articles with the People that Deliver (PtD), Rwanda Ministry of Health, and IntraHealth on USAID's investments to strengthen supply chain management human resources. See section B3. for details.

END-USE VERIFICATION SURVEY

GHSC-PSM assesses the availability of malaria, FP/RH, and MNCH commodities at health facilities using the EUV survey. In addition to commodity availability estimates, GHSC-PSM country teams collect and analyze data to identify attributes reported to influence commodity availability, including storage conditions, staff capacity, and stock management practices. The project presents findings to USAID Missions and MOHs to facilitate conversations and advance activities to correct identified gaps and improve commodity availability. EUV data collectors also provide on-site capacity building for health facility staff during EUV data collection.

In FY 2023, at the request of USAID and PMI/Washington, GHSC-PSM developed and rolled out a new EUV survey module to capture data from CHWs. By assessing health commodity availability at the community/CHW level and identifying the processes CHWs use to manage these commodities, the EUV survey can now be used to inform improvements, identify gaps, and strengthen the supply chain links between health facilities and communities.

In Q4, GHSC-PSM collected data through the EUV survey in **Burundi**, **Ghana**, and **Nigeria** and collected CHW module data in **Burundi** and **Nigeria**. The project shared draft CHW module reports from **Burundi**, **Mali**, **Sierra Leone**, **Zambia**, and **Zimbabwe** with USAID and PMI/Washington for review.

NATIONAL SUPPLY CHAIN ASSESSMENT

The National Supply Chain Assessment is a comprehensive capability and performance review at all levels of a health supply chain. Assessment results help supply chain stakeholders develop their strategic, operational, and investment plans and monitor activities to achieve their desired outcomes.

In Q4, GHSC-PSM activities included:

- In **Zambia**, conducted a dissemination meeting to present the findings, results, and recommendations from the NSCA for validation and adoption by MOH and stakeholders. The MOH accepted and approved the final assessment report, and the project is now helping the MOH develop a five-year action plan. This plan will ensure that the recommendations from the assessment are prioritized in decision making.

- In **Burundi**, supported the MOH to initiate the development of a national supply chain strategy for 2025 to 2029, as recommended in the 2023 NSCA. GHSC-PSM facilitated a workshop to

review the NSCA findings and worked with stakeholders to define objectives and develop strategic interventions and activities for the five-year plan. These efforts aim to support evidence-based decisions in improving the functionality and performance of the supply chain.

Additionally, in Q4, GHSC-PSM completed a study to identify NSCA contributions to health supply chain planning, strategy, and resource allocation in selected countries that have implemented version 2.0 of the assessment. The study included information gathered through key informant interviews from **Burundi, Ghana**, and **Rwanda**, and was supplemented with document reviews to verify each country's use of NSCA findings and recommendations. The study concluded that stakeholders recognize the value of the NSCA in bringing partners together, identifying supply chain gaps, mobilizing investments, and informing strategic planning. In the long term, the NSCA helps countries improve systems, strengthen stakeholder coordination, and target supply chain investments from both the public and private sectors.

LEARNING AGENDA: SUPPLY CHAIN TECHNICAL INDEPENDENCE INDICATOR

In Q4, GHSC-PSM completed the technical independence indicator technical brief, which highlights the indicator's strengths and weaknesses as reported by various stakeholders, along with recommendations for adaptation. USAID accepted and approved the final version of the brief. The analysis drew from several sources, including Country Director Forum working sessions, the supply chain indicator review project, and the FY 2023 technical independence learning activity. The brief offers concrete, actionable recommendations to enhance the utility and validity of the indicator for future global health supply chain projects.

C2a. PROJECT PERFORMANCE

GHSC-PSM collects and analyzes data on several national supply chain system health indicators to understand the environments in which the project operates and to calibrate our work. These indicators establish priorities for the project's health systems strengthening support and, over time, will enable the project to assess the outcomes of technical assistance. Dashboards with these country-specific indicators are available for GHSC-PSM country offices to explore with in-country stakeholders.

CAPACITY STRENGTHENING

The project uses the number of people trained as a key indicator to understand and identify capacity-building efforts for in-country improvement of supply chain management. In Q4, GHSC-PSM trained 5,568 individuals (2,470 women and 3,098 men). Many trainings were cross-cutting and addressed topics relevant to multiple health areas. By funding source, 89 percent were trained with HIV/AIDS funding; 6 percent with malaria funding; 3 percent with FP/RH funding; and 2 percent with MCH funding.

ENVIRONMENTAL COMPLIANCE

In Q4, the project continued to support countries to operationalize and implement USAID-approved GHSC-PSM compliance instruments, such as the Initial Environmental Examinations, Environmental Mitigation and Monitoring Plan, Waste Management Plan, and the Pesticide Evaluation Report and Safer Use Action Plan—in accordance with USAID's Environmental Procedures (22 CFR 216) and GHSC-PSM's closeout and transition implementation phases. The project provided multi-faceted. one-on-one technical advisory services to global staff, including:

- Review and guidance on technical documents on country activities operationalization and monitoring and evaluation
- Technical guidance on health care waste management, environmental health and safety, and environmental management system standards and certification
- Training and capacity building of project management units and local partners
- Direct technical assistance to project staff

The project worked with country program and risk management teams to guide countries on the disposal of expired and/or unusable health commodities from warehouses, as well as electronic waste generated through unusable office supplies.

C3. GLOBAL COLLABORATION

USAID presented on the importance of GS1 standards and GHSC-PSM's TIOP pilot program at the Francophone Africa GS1 Conference and the GS1 India Conference.

Delivered shipments of dengue lab diagnostics to **Jamaica**, the first-ever procurement of such supplies by GHSC-PSM.

The scale, scope, and complexity of managing a global supply chain require collaboration with international and local partners to ensure the availability of medicines and health commodities. By integrating work across health sectors and sharing information, resources, activities, and capabilities, the project can achieve what it could never accomplish alone. GHSC-PSM's global collaboration efforts focus on coordinating with global donors and stakeholders to develop innovative means for responding to supply chain interruptions.

STRATEGIC ENGAGEMENT

As described throughout this report, GHSC-PSM engages with global players to promote the availability of medicines and commodities. The project does this by providing supply chain expertise and working with partners—locally and globally—to reach more communities, allocate scarce supplies, promote harmonization of standards and practices, and manage commodity stock information as a global good.

In Q4, GHSC-PSM:

- Presented to representatives of the WHO, UNAIDS, the Global Fund, and the International AIDS Society in Geneva on market trends, ARV and VL/EID demand forecasts, and the progress, challenges, and opportunities in engaging the private sector and fostering sustainable regional manufacturing in Africa. (See section B1.)
- Worked closely with the Global Fund to facilitate collaboration on the introduction of pALD, the optimized pediatric HIV treatment. (See section B1.)
- Engaged with the Global Fund on plans to lessen warehousing constraints, reduce budget limitations for in-country distribution, and improve the availability of ARVs through collaboration on the USAID VMS program. (See section B1.)
- Collaborated with the Global Fund, MOHs, and other procurement agents to promote expansion of the all-inclusive SLA concept among non-GHSC-PSM stakeholders and strengthen the capacity of lab stakeholders to implement SLAs within their countries. (See section B1.)
- Received endorsement from the Global Fund on the TraceNet guidelines updated by **the TraceNet TWG**. PMI and the Global Fund had co-convened the TraceNet TWG, which includes global health stakeholders such as the UNICEF, AMF, Innovative Vector Control

Consortium (IVCC), WHO, and several international LLIN manufacturers, in previous quarters to revise the guidelines. (See section B2.)

GHSC-PSM participates in several groups, including the:

- Monthly **Proactive Stock Risk Management (ProStock)** meetings with USAID. GHSC-PSM serves as host. These meetings are a forum for building on the project's HIV/AIDS data collection and analysis, discussing gaps in HIV commodity access, and implementing action plans to address them. (See section B1.)
- **Malaria Pharmaceuticals, mRDT,** and **Vector Control Access Task Forces; LLIN Donor Collaboration** call; and **KSM/API** working group. The project chairs the **LQAG.** (See section B2.)
- **Consensus Planning Group**, coordinating supplier allocations of available supply among multiple procurement agencies and prioritizing needs to ensure fair and reliable access to FP products. (For more details, see section B3.)
- **VAN Steering Committee,** providing input on supply chain data across the FP community. GHSC-PSM is a non-voting member and also participates in regular VAN working groups, including the Data Management, Technical Management, Data Sharing, and Super User and Analytics task forces. (For more details, see section B3.)
- **Newborn TWG** alongside USAID, UNICEF, and WHO experts. This group oversees the **Every Newborn Action Plan**, or ENAP.
- **Maternal Health Supplies Caucus,** a subgroup of RHSC. GHSC-PSM serves as co-chair, supporting the Caucus's newly launched TXA working group to improve access to this critical PPH medicine. (See section B4.)
- The USAID and BMGF-funded **Child Health Task Force.** The project shares and creates resources with and for this group.
- **Verification and Traceability Initiative**, a multi-stakeholder partnership composed of UNICEF, Gavi, BMGF, the Global Fund, USAID, national regulatory authorities in Nigeria and Rwanda, Vital Wave, and the World Bank. (See section C2.)

KNOWLEDGE SHARING

To ensure that MOHs, supply chain managers, donors, and other stakeholders can repurpose program activities and develop locally led solutions, GHSC-PSM documents and shares project activities, technical research, and success stories. Details can be found in sections throughout the report, and through the project's Conference Hub. Below are highlights from Q4:

- Leveraged the ASLM Lab Community of Practice to amplify awareness and the expansion of all-inclusive SLA concepts via a webinar series that will continue to run through FY 2025. (See section B1.)

- Presented on the importance of GS1 standards and GHSC-PSM's TIOP pilot program at the Francophone Africa GS1 Conference and the GS1 India Conference.

- Hosted a webinar on the recently published project guide, *Winning the Logistics Game*, to partners across the globe, sharing key strategies to improve warehouse performance and efficiency. (See section B4.)

- Published the TO3-funded resources Lessons Learned in Product Master Data Management and Human resource planning guidance document for health supply chain information system (see section B3).

COUNTRY COLLABORATION

Q4 highlights of GHSC-PSM in-country collaborations with global partners include:

- In **Burundi**, collaborated with UNFPA and the National Reproductive Health Program to train their staff in the use of QAT. (See section B2.)

- In **Ghana,** collaborated with UNFPA and the Ahafo Regional Health Directorate to provide logistics management training for commodity managers, focusing on malaria and other health commodities, supporting efforts to improve last mile access.(See section B2.)

- Held stock of dapivirine rings in the Dubai RDC to support USAID-funded MOSAIC program activities in **Kenya** and **Zimbabwe,** and the NIH-funded BSRHI research program in **Botswana**. (See section B1.)

COLLABORATION WITH OTHER USAID GHSC PROJECTS

GHSC-PSM is a member of the GHSC program family and interacts regularly with the other GHSC projects:

- Collaborated with **GHSC-QA** to share information, identify mutual challenges and solutions, ensure QA requirements are incorporated into GHSC-PSM systems, and streamline and optimize QA and QC business processes and procedures to rapidly address any incidents and product failures as they occur, ensuring quality products reach the end consumer.

- Collaborated with the GHSC-TA Francophone Task Order (FTO) project on the EUV survey activity, including cross-country EUV data collection and data validation training, French translation and interpretation, CHW module rollout in FTO countries, and EUV survey toolkit maintenance.

- Provided FASP and in-country logistics support to the **GHSC-RTK project**, which undertakes HIV/AIDS RTK procurement and international freight. The project shares data monthly with GHSC-RTK to guide HIV RTK procurement planning and data triangulation and reviews HIV

testing targets against HIV RTK stock in countries with PEPFAR-supported HIV testing programs. (See section B1.)

- Engaged with GHSC-QA on approvals for the updated Plasma Separation Card bundle with a new plastic capillary tube. (See section B1.)

- Collaborated with USAID and GHSC-QA to align on regionalization goals and strategic sourcing opportunities for essential medicines. (See section B1.)

- Collaborated with in-country stakeholders to support procurement and delivery of health commodities through the **non–field office program management unit** (NFO PMU). In countries that have USAID programming for supply chain activities, the NFO team works with those programs, as well as the USAID Mission and counterpart health personnel. For the specific Francophone Task Order (FTO) countries, this collaboration happens almost daily among the NFO PMU, FTO country offices, and FTO headquarters staff. Collaboration is also facilitated by having the managing director of the NFO PMU serve in the role of managing director for the GHSC-TA IDIQ and FTO.

  Highlights from Q4 include the following:

  - Quantified the impact of a change from ACOREP, the national regulatory authority in the DRC. The change had significantly increased the cost of obtaining an import authorization from $12 to 1 percent of the commodity's value, a $660,000 increase in annual costs for GHSC-PSM. Working with GHSC-FTO and the USAID DRC Mission, GHSC-PSM advocated for ACOREP to reconsider the fee increase. GHSC-FTO is collaborating with ACOREP to establish a more reasonable import authorization fee that supports ACOREP's operations while remaining financially feasible for USAID and other international donors organizations.

  - Onboarded the new Procurement and Supply Management Country Lead in Tanzania, provided oversight of the in-country staff hired to support GHSC-PSM in Tanzania activities, and worked with GHSC-TA TZ to review supply plans and place and correct FY 2024 ARTMIS orders.

  - Facilitated the quantification of VMMC and essential medicines for Tanzania for FY 2025–FY 2026. Met with USAID Tanzania team members and implementing partners (IPs) from USAID (RISE) and the Department of Defense (HJFMRI) to assess their current stock, plan and quantify orders for the next two years, and develop an agreed delivery plan for all parties. The project then worked with USAID to place orders for RISE and HJFMRI.

  - Addressed the USAID Tanzania request that GHSC-PSM onboard staff to support FASP and eLMIS activities following the technical transition of GHSC-TA TZ staff. GHSC-PSM has been working with USAID to identify the full scope and funding of these activities and will be engaging FASP and eLMIS consultants starting in Q1 FY 2025.

ANNEX A. COVID-19 RESPONSE

In Q4, the project **delivered 16,629,260 COVID-19 commodities,** including pulse oximeter finger probes, nasal cannulas, gloves, bag valve masks, suction catheter, and flowmeters to **Afghanistan**, **Liberia**, and **Namibia** under American Rescue Plan Act (ARPA).

In Q4, the project **delivered 198,432 respiratory commodities** to **Afghanistan**, **Ethiopia, Mongolia,Papua New Guinea,** and **Rwanda**.

GLOBAL PROCUREMENT AND LOGISTICS

Procuring under COVID-19 ARPA

Under ARPA funding, GHSC-PSM procures cold chain supplies and equipment, bulk liquid oxygen, diagnostic tests, general patient care commodities, laboratory consumables, essential medicines, and personal protective equipment, along with a limited range of critical COVID-19 commodities for countries requiring emergency supplies.

In Q4, GHSC-PSM delivered critical medical supplies and equipment to:

- **Liberia:** 252,500 face masks, and 6,120,000 examination gloves.
- **Namibia:** 1,130,000 examination gloves.
- **Afghanistan:** 100 BG-800 standard reagent kits, 100,000 sheets of radiographic film, 600,000 hypodermic syringes, 34 pipettes, 16 thermal scan cameras, 100 infrared thermometers, 50,000 electrocardiogram (ECG) electrodes, 100 ECG lead wires, 200 nebulizers, 500 pulse oximeters, 450 suction pumps, 10 air-oxygen blenders, 10,200 bag valve masks, 16,500 catheters, 11,000 endotracheal tubes, 1,500 endotracheal tube stylets, 1,000 tracheostomy tube holders, 100,000 nasal cannulas, 12,000 rolls of paper towels, 5,000 liters of hand soap, 5,000,000 alcohol prep pads, 500,000 examination gloves, 160,000 surgical gloves, 7,000 heavy-duty gloves, 5,000 protective suits, 35,000 aprons, 35,000 coveralls, 55,000 surgical gowns, 12,000 barrier gowns, 12,000 surgical scrub pants, 60,000 boot covers, 1,000,050 shoe covers, 1,000,000 bouffant caps, 1,000 protective goggles, 30,000 face shields, 286,000 surgical face masks, and 20,000 N95 face masks.

Procuring, installing, and servicing oxygen-related commodities

Supplemental oxygen is an essential, lifesaving treatment for people infected with COVID-19. As part of its global response to the pandemic, USAID tasked the project with procuring and delivering oxygen

commodities, including pressure swing adsorption plants, vacuum swing adsorption plants, oxygen concentrators and cylinders, and oxygen disaster manifolds, as well as consumable and durable items.

In Q4, GHSC-PSM delivered critical oxygen (O2) supplies and equipment to:

- **Ghana:** 1 complete automatic changeover oxygen manifold.

Procuring oxygen equipment and related supplies, and neonatal respiratory equipment to expand countries' oxygen and respiratory care ecosystems

In Q1 FY 2024, USAID authorized GHSC-PSM to procure oxygen equipment and supplies and neonatal respiratory commodities for 18 GHSC-PSM presence and non-presence countries. In Q3, USAID added 11 additional countries to this activity, increasing the total to 29 countries. GHSC-PSM continues to work with Missions to define the types and quantities of commodities desired from a pre-approved list of 329 items and place orders for delivery.

In Q4, GHSC-PSM delivered critical respiratory supplies and equipment to:

- **Afghanistan:** 80 LTV 2200 O2 hoses, 25 LTV 2200 power supply kits, 10 LTV 2200 power PCB assemblies, two LTV 2200 pressure syringe assemblies, two M2M test lung kits, LTV 2200 calibration syringe assembly, 20 LTV 2200 O2 hoses, 10 LTV 2200 turbine manifold assemblies, two LTV 2200 motor drive calibration tools, 10 M2M patient circuit assemblies, 15 LTV 2200 flow valve assembly kits, two LTV 2200 flow valve insertion tools, 100 LTV 2200 single-cell batteries, and 50 LTV 2200 cordsets.

- **Ethiopia:** 4,600 continuous positive airway pressure masks, 2,100 non-rebreather O2 masks, 5,100 venturi masks, 142,000 nasal cannulas, 18,000 bubble humidifiers, and 25,000 O2 tubes.

- **Mongolia:** Two oxygen flow analyzers, and two electrostatic discharge anti-static mats.

- **Papua New Guinea:** 24 oxygen concentrator flow splitters, 30 oxygen concentrators, 18 high flow oxygen flow meters, and 1,200 nasogastric tube holders.

- **Rwanda:** 25 CPAP machines.

COVID-19 TEST-TO-TREAT PROGRAM

In FY 2022, GHSC-PSM received funding to support the COVID-19 Test-to-Treat Program.[86] In Q4 FY 2024, the project signed two purchase orders for Laos and Nigeria for the procurement of Standard Q COVID-19 Ag Test Kit (Nasal). Additionally, the project successfully signed three simplified purchase agreements with two manufacturers of the COVID-19 Ag Rapid Test Kit (Nasal, NP).

The project also negotiated and issued an agreement with a manufacturer for 10,000 test kits of Panbio COVID-19 Ag Self-Test, for Ukraine to be delivered in Q1 FY 2025.

[86] For Bangladesh, Botswana, Côte d'Ivoire, El Salvador, Ghana, Lesotho, Malawi, Mozambique, Rwanda, and Senegal.

COVID-19 IN-COUNTRY TECHNICAL ASSISTANCE

Below are examples of COVID-19 technical assistance activities the project conducted in Q4.

- In **Angola**, supported the MOH in conducting cold chain supervision across three provinces, 12 municipalities, and 11 health units to ensure the vaccine cold chain is maintained. During the supervision, 33 cold store warehouse logisticians were trained on appropriate cold storage requirements for vaccines. The project provided oversight of vendors in installing solar panels in five remote municipal health units with limited energy supply to ensure the full function of cold chain equipment. The project coordinated waste management supervision across two provinces, 10 municipalities, and 13 health units to monitor waste disposal practices. During the supervision, as a result of the government reassigning previously trained warehouse technicians, the project conducted refresher training for 367 newly hired health technicians on cold storage of vaccines and waste management.
- In **Ethiopia**, monitored COVID-19 vaccine requests and distributions at national and sub-national levels. The project also supported the establishment and functioning of TWGs at the MOH to improve vaccination services across multiple regions. In addition, the project gathered and analyzed data for last-mile delivery (LMD) and cold chain management performance assessments involving selected health facilities, districts, and regional Ethiopian Pharmaceutical Supply Service branches. Key findings from the LMD assessment indicated significant improvements in delivery performance. In Gamo and Wolayita zones, direct delivery of health commodities increased from 34 percent to 99 percent, while in West and East Haraghe zones, delivery rose from 28 percent to 66 percent for health program commodities. Ongoing communication with the MOH ensured coordination of COVID-19 oxygen supply distribution plans. Overall, these initiatives significantly strengthened the health care response at last-mile facilities.
- In **Liberia**, worked with the Liberia Medicines & Health Regulatory Authority (LMHRA) to facilitate the transport and disposal of COVID-19 unusuable medicines and pharmaceutical products (UMPP) and personal protective equipment. This included managing transport logistics, weighing waste for disposal, and facilitating disposal. In partnership with GHSC-PSM, LMHRA disposed of 40 tons of medical waste between July and September 2024. GHSC-PSM will continue to provide ongoing support for LMHRA to transport and dispose of medical waste remaining at the CMS through the end of 2024.
- In **Malawi**, provided technical support to the Expanded Program on Immunization (EPI) department of the MOH in distributing COVID-19 vaccines and related supplies throughout the country. The project also supported EPI in capturing and analyzing vaccine supply chain data using OpenLMIS and, in collaboration with other partners, supported EPI in planning the expansion of OpenLMIS deployment to the facility level. This support included identifying sites and developing training materials and plans. The expansion of OpenLMIS to the facility level will enable EPI to project distribution requirements more accurately, providing an accurate national picture of the stock status. Additionally, GHSC-PSM facilitated the warehousing and distribution of medicine and medical supplies as part of its COVID-19 response. Cargo Management Logistics), a project subcontractor, managed the warehousing and distribution, while the MOH coordinated distribution planning.
- In **Mali**, trained national and regional administrators in Mali on the OPSANTE vaccines eLMIS to pilot the tool at 20 health facilities managing COVID-19 and EPI vaccines, in collaboration with the National Immunization Center (CNI) and Directorate of Pharmacy and Medicines. The project also assisted the CNI and DPM in holding two regional workshops in Kalabancoro and Koulikoro to train the COVID-19 and EPI vaccines managers to use the OSPSANTE vaccines eLMIS to manage daily vaccine transactions. A total of 44 users attended the workshop representing the 20 sites selected for the pilot phase. Following the training, the project

conducted coaching visits to all pilot sites to assist in properly implementing the tool at health facilities.

- In **Botswana,** completed the development and launch of the electronic contract and supplier relationship management (eCSRM) system, an open-source application, which has been customized to meet the needs of CMS. CMS manually manages up to 400 procurement contracts each year, which cover approximately 2,080 line items of health commodities. This manual operation of the procurement operation has been a challenge to maintain efficiency and accuracy. This new system supports contract and procurement operations and is envisaged to alleviate the burden of manual contract management of the suppliers' contracts that CMS executes.

  The project also conducted a three-day workshop to orient 18 clinicians, laboratory, and pharmacy officers from the Botswana Public Health Institute, CMS, and four district health management teams (DHMTs) in the malaria endemic region on the Emergency Supply Chain (ESC) playbook. Leveraging best practices in emergency preparedness and response established during COVID-19, the project supported selected DHMTs to expand use of the ESC playbook to seasonal disease outbreaks, such as malaria and diarrhea, and to prepare in advance for potential Monkeypox outbreaks. Participants also launched the ESC playbook customization to mitigate supply chain–related challenges for the three diseases. This will facilitate the quantification of health care products required for these diseases.

- In **Nigeria**, GHSC-PSM used COVID-19 funding to train COVID-19 PCR test lab staff on the LMIS community modules. The project also held a training of trainers at the University of Lagos Business School. The project delivered information, communications and technology equipment to health agencies and logistics management commodity units across all 36 states and the federal capital territory. Additionally, the project provided the National Food and Drug Control Administration and Control with vaccine traceability training and deployed scanners to improve warehouse management and logistics efficiency, ensuring improved commodity tracking and supply chain management.

Cover photo credit: Anteneh Ayele, Xpozed Network and Anthony Abu | Chemonics

Current Reporting Period

2024-Q4

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

Delivery Impact to Date

Number of ACT treatments delivered

603,826,113

Number of Couple Years Protection delivered

116,170,636

Person-years of ARV treatment delivered

26,576,884

Global Supply Chain M&E Indicator Performance

FY2024 Quarter 4, July - September 2024

OTIF, OTD and Backlog	Cycle Time	Quality Assurance (TO2 only)	Procurement	Total Landed Cost	Registration
Supply Plan and Forecast Error	Supply Plan Submissions	Warehousing	Vendor Performance	Global Advocacy Engagements	GHSC-BI&A Data Sharing

HIV Complete Quarterly Results (TO1)

Malaria Complete Quarterly Results (TO2)

FP/RH Complete Quarterly Results (TO3)

MNCH & Zika Complete Quarterly Results (TO4)

USAID FROM THE AMERICAN PEOPLE

PEPFAR U.S. President's Emergency Plan for AIDS Relief

USAID FROM THE AMERICAN PEOPLE CDC

U.S. President's Malaria Initiative

Delivery Performance

Current Reporting Period

2024-Q4

TO	Analysis
Crosscutting	Overall delivery performance has remained strong this quarter. OTD and OTIF stood at 85 and 87 percent respectively. The backlog increased to 6 percent this quarter, from 5.4 percent of last quarter. Overall delivery volume stood at 1261, the majority consisting of HIV/AIDS products. The number of HIV/AIDS lines stood at 877 which is a decrease from the number of lines of last quarter. There was a noticeable increase in the number of lines under TO1-Covid which stood at 98. Malaria and Family Planning line items also increased this quarter. There were no MNCH lines delivered this quarter.
TO1 - HIV	OTD and OTIF for HIV/AIDS commodities stood at 85 and 87 percent respectively. For OTIF, this was an increase from the previous quarter's 85 percent, and for OTD this was decrease from last quarter's 86 percent. The backlog for HIV/AIDS lines stood at 6.5 percent, which was higher than last quarter's 5.2 percent. In terms of number of lines, laboratory lines had the highest number of backlogged items under HIV/AIDs commodities. Overall, laboratory lines were also the highest number of lines which did not fulfil the criteria of OTIF and OTD, followed by Other Non-Pharma. The delivery volume for HIV/AIDS commodities decreased to 877 lines, a reduction from the 977 of the last quarter.
TO2 - Malaria	OTD and OTIF for Malaria commodities decreased this quarter, but was above the target of 80 percent. OTD and OTIF stood at 83 and 86 percent respectively. The backlog percentage also increased this quarter to 5.6 percent. Under Malaria commodities, laboratory had the highest number of backlogged lines followed by ACTs and Other Non-Pharma. Laboratory, ACT and Other Non-Pharma lines had the highest number of lines which did not fulfil the criteria of OTD and OTIF. For laboratory products, particularly in the month of August, a number of lab lines were late due to the delay in in acquiring some pre-shipment verification for Nigeria. The delivery volume of Malaria commodities increased this quarter to 208 from the 175 of last quarter.
TO3 - FP/RH	For OTD and OTIF for Family Planning commodities, an increase recorded in both the metrics when compared to last quarter. OTD and OTIF stood at 92 and 91 percent respectively. The backlog percentage stood at 1.6 percent, which was slightly higher than the 1.3 percent of last quarter. The volume of Family Planning lines more than doubled this quarter, from 38 in Q3 FY2024 to 78 lines in the present quarter. The largest number of lines which did not fulfil the criteria of OTD and OTIF were under Combined Oral Contraceptives and Implantables.
TO4 - MNCH	There were no deliveries made in this quarter under Maternal and Child health commodities. Backlog remained at 0 percent.

A1a. On-time, In-Full Delivery

Task Order	Total # of Line Items Delivered	OTIF	OTIF Target
TO1 - COVID19	98	85%	80%
TO1 - HIV	877	87%	80%
TO2 - Malaria	208	86%	80%
TO3 - FP/RH	78	91%	80%
Total	**1,261**	**87%**	**80%**

A1b. On-time Delivery

Task Order	Total # of Line Items with ADDs in the quarter	OTD	OTD Target
TO1 - COVID19	95	87%	80%
TO1 - HIV	958	85%	80%
TO2 - Malaria	221	83%	80%
TO3 - FP/RH	75	92%	80%
Total	**1,349**	**85%**	**80%**

A16. Backlog Percentage

Task Order	Total # of line items with ADDs in the last 12 months	Backlog	Backlog target
TO1 - COVID19	179	4.5%	5%
TO1 - HIV	3,818	6.5%	5%
TO2 - Malaria	658	5.6%	5%
TO3 - FP/RH	318	1.6%	5%
TO4 - MNCH	13	0.0%	5%
Total	**4,986**	**6.0%**	**5%**

Delivery Performance

Current Reporting Period

2024-Q4

Task Order	A1a. OTIF rate		A1b. OTD rate		A16. Backlog percentage	
	OTIF	Total # of Line Items Delivered	OTD	Total # of Line Items with ADDs in the quarter	Backlog	Total # of line items with ADDs in the last 12 months
TO1 - COVID19	**85%**	**98**	**87%**	**95**	**4.5%**	**179**
COVID19	85%	98	87%	95	4.5%	179
TO1 - HIV	**87%**	**877**	**85%**	**958**	**6.5%**	**3,818**
(blank)	100%	1	100%	1		
Adult ARV	84%	80	91%	80	3.2%	313
Condoms	89%	35	82%	38	5.4%	130
Food and WASH	0%	2	0%	2	50.0%	4
Laboratory	89%	635	85%	710	7.4%	2,717
Other Non-Pharma	67%	27	63%	32	14.5%	124
Other Pharma	100%	36	95%	38	1.1%	179
Other RTK	60%	15	82%	11	7.7%	39
Pediatric ARV	77%	22	77%	22	5.0%	119
TB HIV	100%	4	100%	4	0.0%	35
Vehicles and Other Equipment					0.0%	4
VMMC	100%	20	100%	20	1.3%	154

Task Order	A1a. OTIF rate		A1b. OTD rate		A16. Backlog percentage	
	OTIF	Total # of Line Items Delivered	OTD	Total # of Line Items with ADDs in the quarter	Backlog	Total # of line items with ADDs in the last 12 months
TO2 - Malaria	**86%**	**208**	**83%**	**221**	**5.6%**	**658**
ACTs	89%	105	90%	102	2.7%	258
Laboratory	69%	13	56%	18	27.1%	59
LLINs	90%	20	90%	21	2.9%	140
mRDTs	73%	30	74%	34	3.4%	58
Other Non-Pharma			14%	7	63.6%	11
Other Pharma	100%	1	100%	1	0.0%	8
Other RTK					0.0%	1
Severe Malaria Meds	92%	25	92%	25	1.5%	66
SMC					0.0%	29
SP	93%	14	100%	13	0.0%	28
TO3 - FP/RH	**91%**	**78**	**92%**	**75**	**1.6%**	**318**
Combined Oral Contraceptives	67%	6	80%	5	0.0%	43
Copper-Bearing Intrauterine Devices	100%	2	100%	2	0.0%	19
Emergency Oral Contraceptives					0.0%	11
Implantable Contraceptives	95%	37	91%	35	1.9%	104
Injectable Contraceptives	100%	21	96%	23	1.1%	88
Other Non-Pharma	88%	8	88%	8	0.0%	18
Other Pharma	100%	1	100%	1	0.0%	1
Progestin Only Pills	100%	1	100%	1	0.0%	31
Standard Days Method	0%	2			66.7%	3
TO4 - MNCH					**0.0%**	**13**
Food and WASH					0.0%	3
Other Pharma					0.0%	10

There were no deliveries of MNCH products during FY2024 Q4.

Data notes

- See "Indicator Details" pages in this report for more information.
- Quarterly indicator targets are effective beginning FY2018 Q4.
- Line items are considered on time if they are delivered between 14 calendar days before and up to 7 calendar days after the agreed delivery date.
- All male and female condom and lubricant deliveries are reported under TO1.

Cycle Time Performance

Current Reporting Period

2024-Q4

A3. Average overall and dwell-adjusted cycle time

Task Order	# of line items delivered	Average Cycle Time	Cycle time target	Average dwell-adjusted cycle time	Dwell-adjusted cycle time target
TO1 - COVID19	97	238	250	238	250
TO1 - HIV	877	252	250	241	250
TO2 - Malaria	208	317	340	302	300
TO3 - FP/RH	78	344		343	
Total	**1260**	**268**		**257**	

A3. Average overall and dwell-adjusted cycle time (TO3 detail)

Task Order	# of line items delivered	Average Cycle Time	Cycle time target	Average dwell-adjusted cycle time	Dwell-adjusted cycle time target
TO3 - FP/RH	**78**	**344**		**343**	
Direct drop fulfillment	47	374	300	373	300
Warehouse fulfillment	31	298	250	297	250

See next page for break downs by process segment, product category, fulfillment channel, and transportation mode

TO	Analysis
TO1 - HIV	End-to-end cycle time for HIV/AIDS products increased to 252 days this quarter from 218 in the previous quarter, just slightly cresting over the target of 250 days. Dwell-adjusted cycle time also increased to 241 days, up from 210 days in the previous quarter but still below the target of 250 days. Increases in the overall average were driven partly by 94 lines delivered to Haiti with an average cycle time of 291 days and also by 94 lines delivered to Tanzania with an average cycle time of 361 days. TB HIV, VMMC, and Other Pharma were the item tracer categories with the highest average cycle times of 319, 318, and 314, respectively. Notable segment changes include the Process PO/DO segment increasing to 85 days this quarter from 52 last quarter. Twenty two percent of lines delivered this quarter had holds applied to them.
TO2 - Malaria	End-to-end cycle time for Malaria products increased this quarter to 317 days, still below the target of 340 days. While dwell-adjusted cycle time stood at 302 days, slightly cresting over the target of 300 days. Delivery volume also increased from 175 lines last quarter to 208 lines this quarter. For the lines delivered this quarter, 42 percent had a hold applied with an average dwell duration of 36 days. The increase in cycle time is primarily driven by 90 lines (accounting for 43 percent of the quarter's delivery volume) delivered to Congo DRC with an average cycle time of 313 days. Item tracer categories with the highest average cycle time this quarter include LLINs, mRDTs, and SP, reporting end to end cycle time averages of 353, 333, and 330, respectively.
TO3 - FP/RH	Average cycle time for family planning products fulfilled through the RDC stood at 298 days. Dwell adjusted cycle time stood at 297 days. RDC delivery volume increased this quarter to 31 lines from 23 in the previous quarter. With such a small delivery volume, outliers have significant impact on overall performance. Notably, 9 lines (representing 29 percent of the RDC delivery volume) were delivered to Congo DRC with an average cycle time of 435 days. Item tracer categories with the highest cycle time were injectable contraceptives and combined oral contraceptives which reported 342 and 286 days, respectively. Direct drop cycle time increased sharply this quarter to 374 days, which is above the target of 300 days. There were 47 lines delivered through direct drop fulfillment this quarter. Notable drivers of the increased cycle time are 12 delivered lines to Congo DRC with an average cycle time of 529 days and 9 delivered lines to Uganda with an average cycle time of 354 days. Item tracer categories with the highest cycle time were implantable contraceptives and other non-pharma which reported 395 and 358 days, respectively.
TO4 - MNCH	No deliveries were carried out this quarter.

Data notes

Data on overall cycle start and end dates are complete for all line items delivered this quarter. However, internal milestone data may not be complete for some line items. In these cases, line items with incomplete data are excluded from the segment averages. For this reason, the sum of all segments may not be equal to the overall average per task order and fulfillment channel, especially in earlier reporting periods.

Overall cycle time is defined as the number of days between when a customer order is submitted to when the shipment is actually delivered to the customer, inclusive of the start/end days and all holds or other dwell times. Dwell-adjusted cycle time is defined as the overall cycle time with all days of measurable dwell time deducted. Dwell is measured using system timestamps for the start and end for a set of acceptable holds, as defined by the GHSC-PSM hold status policy.

Quarterly indicator targets are set for overall and dwell-adjusted cycle times. For all task orders except TO2, the overall and dwell-adjusted targets are the same. Targets are not set for individual segments for any task order.

Cycle Time Performance

Current Reporting Period

2024-Q4

A3. Average overall cycle time by product group, fulfillment channel, and transportation mode (TO1, TO2, and TO3)

Fulfillment Channel	Direct Drop Fulfillment				Warehouse Fulfillment		**Total**
Task Order	Air	Land	Multiple	Sea	Air	Sea	
TO1 - COVID19	**219**			**243**			**238**
COVID19	219			243			**238**
TO1 - HIV	**259**	**194**		**318**	**313**	**168**	**252**
Adult ARV	297	186		315	326		**296**
Condoms	338			288	229	168	**272**
Food and WASH	272						**272**
Laboratory	251	194		265			**237**
Other Non-Pharma	353	180		290			**261**
Other Pharma	274	258		347			**314**
Other RTK	303						**303**
Pediatric ARV	267			365			**294**
TB HIV	316			329			**319**
VMMC		265		328			**319**
TO2 - Malaria	**286**	**387**		**318**	**304**	**292**	**317**
ACTs	201	299		316	304	292	**305**
Laboratory	303			339			**306**
LLINs		445		313			**353**
mRDTs	369			329			**333**
Other Pharma				307			**307**
Severe Malaria Meds				314			**314**
SP	361			325			**330**
TO3 - FP/RH	**297**		**371**	**416**	**228**	**326**	**344**
Combined Oral Contraceptives					271	288	**285**
Copper-Bearing Intrauterine Devices					195		**195**
Implantable Contraceptives	307		371	455	229	264	**369**
Injectable Contraceptives				315		342	**336**
Other Non-Pharma	161			386			**358**
Other Pharma	219						**219**
Progestin Only Pills					249		**249**
Standard Days Method	343						**343**

A3. Average overall cycle time by product group, fulfillment channel, and transportation mode (TO4)

Fulfillment Channel	**Total**
Product Category	
Total	

There were no deliveries of MNCH products during FY2024 Q4.

Data notes

Data on overall cycle start and end dates are complete for all line items delivered this quarter. However, internal milestone data may not be complete for some line items. In these cases, line items with incomplete data are excluded from the segment averages. For this reason, the sum of all segments may not be equal to the overall average per task order and fulfillment channel, especially in earlier reporting periods.

Overall cycle time is defined as the number of days between when a customer order is submitted to when the shipment is actually delivered to the customer, inclusive of the start/end days and all holds or other dwell times. Dwell-adjusted cycle time is defined as the overall cycle time with all days of measurable dwell time deducted. Dwell is measured using system timestamps for the start and end for a set of acceptable holds, as defined by the GHSC-PSM hold status policy.

Quarterly indicator targets are set for overall and dwell-adjusted cycle times. For all task orders except TO2, the overall and dwell-adjusted targets are the same. Targets are not set for individual segments for any task order.

Average cycle times by process segment

Fulfillment channel	Clarify and Source	USAID Approval	Process PO/DO	Manufacture/Prepare and Pick Up Order	Manufacture	Pick Up	Deliver
Direct drop fulfillment	**68**	**3**	**69**		**58**	**42**	**50**
TO1 - COVID19	48	3	23		53	44	65
TO1 - HIV	61	3	83		60	37	26
TO2 - Malaria		2	20		53	47	90
TO3 - FP/RH		2	103		71	52	80
Warehouse fulfillment	**89**	**6**	**94**	**48**	**8**	**40**	**56**
TO1 - HIV	47	10	155	43	7	36	28
TO2 - Malaria		1	1	43	7	36	53
TO3 - FP/RH		5	93	53	9	44	72
Total	**69**	**3**	**70**	**94**			**50**

Quality Assurance Performance (TO2 only)

Current Reporting Period

2024-Q4

A2. QA processes completed within required lead times

Task Order	Total # of QA processes completed	% QA Processes On Time	A2 Target
TO2 - Malaria	**70**	**93%**	**85%**
ACTs	18	89%	85%
LLINs	21	100%	85%
mRDTs	16	81%	85%
Other Pharma	0		85%
Severe Malaria Meds	13	100%	85%
SMC	0		85%
SP	2	100%	85%

A13. Out-of-specification percentage

Task Order	Total # of batches tested	Out-of-specification percentage	A13 Target
TO2 - Malaria	**239**	**0.0%**	**1%**
ACTs	46	0.0%	1%
LLINs	50	0.0%	1%
mRDTs	61	0.0%	1%
Other Pharma	0		1%
Severe Malaria Meds	76	0.0%	1%
SMC	0		1%
SP	6	0.0%	1%

Data notes

All QA activities for TO2 are conducted by GHSC-PSM. All QA activities for TO1, TO3, and TO4 are managed by the USAID GHSC-QA contract. GHSC-QA may be contacted for data related to these TOs.

Exceptional procedures outside of routine QA testing and clearance are excluded from indicator A2. This includes consignments requiring QA investigations, method transfers, non-PMI procurements, post-shipment quality control, and LLIN shipments requiring witnessing of loading and/or sealing of goods.

Quarterly indicator targets are effective beginning FY2018 Q4.

A15. QA investigation report submission (Q2 & Q4 only)

Task Order	# of reports due	Report submissions	A15 Target
TO2 - Malaria	**1**	**100%**	**90%**
ACTs	0		90%
LLINs	0		90%
mRDTs	0		90%
Other Pharma	0		90%
Severe Malaria Meds	1	100%	90%
SMC	0		90%
SP	0		90%

Ref	Analysis
A02	A total of 93 percent of QA/QC processes were completed within required lead times. This was an increase from the 87 percent of last quarter.
A13	No batch was rejected for Out of Specification this quarter.
A15	The one investigation report due was submitted on time.

Warehouse Performance

Current Reporting Period

2024-Q4

A4. Inventory turns

Task Order	Inventory turns	Inventory Turns Target
TO1 - HIV	1.9	3.0
TO2 - Malaria	0.8	2.0
TO3 - FP/RH	4.9	2.0

Data notes

Average inventory balance (A4 and C7a denominator) is calculated using the ending balance at the close of each month.
Quarterly indicator targets are effective beginning FY2018 Q4. Per the project M&E plan, no targets are required for product loss indicators (C7a and C7b).
Task Order 1 inventory includes all condoms. GHSC-PSM does not hold any inventory for Task Order 4.

Ref	Task Order	Analysis
A04	TO1 - HIV	The inventory turnover rate for FY 2024 was 1.96, falling below the target of 3. This was primarily influenced by the inventory turnover rate for ARVs, which stood at 1.92 and continues to represent the largest share of HIV-related inventory. The project, aligned with strategic sourcing strategies, has shifted the approach to using RDCs primarily for TLD. Over the year, TLD stored at the RDCs was utilized mainly for emergency purposes or to support countries facing specific challenges, such as Nigeria's constraints on storage space and importation. As such, measuring RDC performance by inventory turnover is less applicable, as the RDCs serve as a strategic reserve rather than a commercial distribution system. For condoms, a lower-value HIV/AIDS product, inventory turnover was slower. Given their longer shelf life compared to ARVs, condoms can be stored for extended periods, contributing to a lower inventory turnover rate.
A04	TO2 - Malaria	The ACT stockpile achieved 3.34 inventory turns this year, surpassing the target of 2 and rising from the 2.02 recorded in FY 2023. In FY 2024, the overall inventory turnover rate for malaria products is 0.8, largely due to the SMC rate of 0.4. SMCs comprise 87 percent of the average inventory balance for malaria products. Similar to HIV products, SMCs are maintained in an emergency stockpile, serving as a strategic reserve rather than a commercial distribution system. Stock set to expire in late 2025, has been offered to multiple countries but declined, further restricting movement of the oldest inventory.
A04	TO3 - FP/RH	The inventory turnover rate for family planning products reached 4.9 this year, exceeding the target of 2 and showing an increase from 2.7 in FY 2023. Key products contributing to this high turnover included injectable contraceptives, which achieved 9.14 turns in FY24 Q4, implantable contraceptives at 4.61 turns this quarter, and copper-bearing IUDs with 9.03 turns. Additionally, all other family planning products, including combined oral contraceptives and progestin-only pills, also surpassed the target turnover rate of 2.

Warehouse Performance and Product Losses

Current Reporting Period

2024-Q4

C7a and C7b. Product loss due to expiry, theft, damage and other causes while in GHSC-PSM control

Task Order	Country	Type of Loss	Product Group	Loss Value	Loss Denominator	% Loss
TO1 - HIV	RDC	Expiry	NA	$0	$6,654,448	0.00%
TO2 - Malaria	RDC	Expiry	NA	$0	$2,514,529	0.00%
TO3 - FP/RH	RDC	Expiry	NA	$0	$5,367,447	0.00%

A8. Shelf life remaining

Task Order	Inventory Balance	% Shelf Life Remaining	Shelf life target
TO1 - HIV	$2,844,892	79%	70%
TO2 - Malaria	$2,433,182	54%	70%
TO3 - FP/RH	$5,942,988	83%	80%
Total	**$11,221,063**	**72%**	

Data notes

Average inventory balance (A4 and C7a denominator) is calculated using the ending balance at the close of each month.
Expired inventory is excluded from shelf life calculations (A8). It is reported under product loss.
Quarterly indicator targets are effective beginning FY2018 Q4. Per the project M&E plan, no targets are required for product loss indicators (C7a and C7b).
Task Order 1 inventory includes all condoms. GHSC-PSM does not hold any inventory for Task Order 4.

Ref	Task Order	Analysis
A08	TO1 - HIV	The average weighted shelf life remaining for HIV-related products rose to 79 percent, surpassing the 70 percent target and reflecting an improvement from previous quarters. With the exception of three items—ARV dapivirine ring, Nirmacom-Nirmatrelvir tablets + Ritonavir tablets, and Zidovudine oral solution, which together account for 5 percent of the total value of HIV products—the remaining shelf life for all other products met or exceeded 77 percent.
C07a	TO1 - HIV	There were no expiries of HIV/AIDS products in GHSC-PSM's RDC inventory this quarter.
C07b	TO2 - Malaria	Confirmed loss incidents within the global supply chain typically include product damage that occurred in transit to the destination. Most of these losses are typical for a supply chain of this size and represented a minimal proportion of the total value of product delivered in the quarters the losses took place. In DRC there was a theft which took place of LLIN bales, efforts are being made to get a police report from the limited local police.
A08	TO2 - Malaria	In FY24 Q4, the average weighted shelf life remaining for malaria products fell to 54 percent, primarily due to the Amodiaquine 153 mg + SP 500/25 mg Dispersible Tablets, which also had a 54 percent remaining shelf life. This product represents 98 percent of the total value of malaria products for this period and is mainly procured as an emergency stockpile. Despite efforts to allocate products with shorter shelf lives to countries, challenges arose this quarter. The project, along with USAID are aware that these country rejections are heightening the risk of product expiry while in stored in the RDC.
C07a	TO2 - Malaria	There were no expiries of malaria products in GHSC-PSM's RDC inventory this quarter.
A08	TO3 - FP/RH	In FY24 Q4, the average weighted shelf life remaining for family planning products increased to 83 percent, surpassing the target of 80 percent. Last quarter, the remaining shelf life fell short of this target, primarily due to MPA-IM having a shelf life of 69 percent. Orders placed this quarter have improved MPA-IM's shelf life, bringing the product up to 83 percent remaining.
C07a	TO3 - FP/RH	There were no expiries of family planning products in GHSC-PSM's RDC inventory this quarter.

Procurement Performance

Current Reporting Period

2024-Q4

A10. Framework contract percentage

Task Order	Procurement total	Framework contract percentage	Framework contract target
TO1 - COVID19	$1,855,849	68%	90%
TO1 - HIV	$115,339,306	96%	90%
TO2 - Malaria	$46,086,329	99%	95%
TO3 - FP/RH	$7,116,632	100%	95%
TO4 - MNCH	$1,568,896	0%	85%
Total	**$171,967,012**	**96%**	**NA**

A10. Product-level detail

Task Order	Framework contract percentage	Procurement total
TO1 - COVID19	**68%**	**$1,855,849**
COVID19	68%	$1,855,849
TO1 - HIV	**96%**	**$115,339,306**
Adult ARV	100%	$48,003,587
Condoms	100%	$4,228,804
Food and WASH	100%	$306,215
Laboratory	93%	$46,996,113
Other Non-Pharma	82%	$504,860
Other Pharma	100%	$3,120,821
Other RTK	35%	$1,037,619
Pediatric ARV	100%	$5,761,192
TB HIV	100%	$4,931,345
VMMC	100%	$448,750
TO2 - Malaria	**99%**	**$46,086,329**
ACTs	100%	$2,304,222
Laboratory	100%	$439,950
LLINs	99%	$32,273,275
mRDTs	100%	$5,639,099
Other Pharma	100%	$7,485
Severe Malaria Meds	100%	$3,042,856
SMC	100%	$1,938,793
SP	100%	$440,650

A10. Product-level detail

Task Order	Framework contract percentage	Procurement total
TO3 - FP/RH	**100%**	**$7,116,632**
Copper-Bearing Intrauterine Devices	100%	$24,300
Implantable Contraceptives	100%	$4,278,084
Injectable Contraceptives	100%	$2,546,372
Other Non-Pharma	100%	$181,476
Progestin Only Pills	100%	$86,400
TO4 - MNCH	**0%**	**$1,568,896**
Food and WASH	0%	$1,568,896

Task Order	Analysis
TO1 - HIV	The use of framework contracts for HIV/AIDS procurements remained at 96 percent, unchanged from the previous quarter. Item tracer categories that did not have 100 percent framework contract utilization were Laboratory at 93 percent, Other Non-Pharma at 82 percent, and other RTK at 35 percent.
TO2 - Malaria	Malaria procurements continued to remain above the target of framework contract percentage, with a value of 99 percent. This is a slight decrease from 100 percent in the previous quarter. LLINs were the only item tracer category to not have 100 percent framework contract utilization, which stood at 99 percent for the quarter.
TO3 - FP/RH	Family planning continues to procure all items under framework contracts, per the sourcing strategy for these commodities. The indicator remains at 100 percent.
TO4 - MNCH	MNCH procurements this quarter were entirely done outside of framework contracts, decreasing from 100 percent in the previous quarter to zero percent this quarter. MNCH procurements can be highly variable, as can be seen in the performance trends. Procurements this quarter included commodities in the Food and WASH item tracer category.

Data notes

Procurement totals are equal to the total value of all line items procured from vendors each period. This includes Purchase Orders and warehouse Replenishment Orders. Distribution Orders released from the RDCs to countries are not counted, as these quantities are already included when the items are first purchased as Replenishment Orders.

Framework contracts include indefinite delivery, indefinite quantity contracts (IDIQs), blanket purchase agreements (BPAs), and basic ordering agreements (BOAs). Non-framework contracts include firm fixed price and fixed unit price subcontracts, simplified purchase agreements, and other types of one-off purchase orders.

Commodities are considered "purchased" if the "PO Released for Fulfillment Date" in ARTMIS falls within the reporting period.

Registration Waivers

A7. Temporary registration waiver percentage

Task Order	Temporary registration waiver percentage	Total # of line items delivered
TO2 - Malaria	**9.6%**	**208**
ACTs	4.8%	105
mRDTs	0.0%	30
Severe Malaria Meds	8.0%	25
LLINs	25.0%	20
SP	21.4%	14
Laboratory	30.8%	13
Other Pharma	100.0%	1
TO3 - FP/RH	**15.4%**	**78**
Implantable Contraceptives	5.4%	37
Injectable Contraceptives	9.5%	21
Other Non-Pharma	50.0%	8
Combined Oral Contraceptives	66.7%	6
Copper-Bearing Intrauterine Devices	0.0%	2
Standard Days Method	0.0%	2
Other Pharma	0.0%	1
Progestin Only Pills	0.0%	1
Total	**11.2%**	**286**

Task Order	Analysis
TO2 - Malaria	The project utilized registration waivers for 9.6 percent of line items for malaria products in FY 2024 Q4, a significant decrease compared to 20.6 percent last quarter (FY 2024 Q3). Waivers were acquired for ACTs, laboratory, LLINs, mRDTs, other pharma, severe malaria medicines (SMC) and SP categories for deliveries made to Cote d'Ivoire, Ethiopia, Liberia, Madagascar, Mali, Rwanda, Senegal, and Zimbabwe. The proportion of line items that required a waiver compared to total line items for a given tracer category was highest for other pharma (100 percent) and laboratory (30.8 percent) commodities. Very few ACT suppliers are registered in Senegal due to processing delays and these delays persist each quarter.
TO3 - FP/RH	The project utilized registration waivers for 15.4 percent of line items for family planning products in FY 2024 Q4, a significant increase compared to 5.3 percent last quarter (FY 2024 Q3). Waivers were acquired for combined oral contraceptives (COCs), implantable contraceptives, injectable contraceptives, and other non-pharma categories for deliveries made to Bangladesh, Burundi, Haiti, Mozambique, and Uganda. The proportion of line items that required a waiver compared to total line items for a given tracer category was highest for COCs (66.7 percent) and other non-pharma (50 percent) commodities. Haiti does not currently have a regulatory body and COCs were sole sourced in FY 2024 Q4 since there was only one eligible supplier to source from.

Supply Plan Submissions

Current Reporting Period

2024-Q4

B6. Quarterly supply plan submission rate to GHSC-PSM HQ

Product Group	# of supply plans required	Supply plan submission rate	Submission target
ARVs	22	100%	95%
Condoms	20	100%	95%
FP commodities	20	100%	95%
Lab (HIV diagnostics)	15	93%	93%
Malaria commodities	23	91%	91%
RTKs	20	100%	95%
TPT	14	100%	93%
VMMC	5	100%	80%
Total	**139**		

Task Order	Analysis
TO1 - HIV	All countries submitted all required ARVs, Condoms, RTKs, VMMC, and TPT supply plans. One Lab (HIV diagnostics) supply plan from Côte d'Ivoire was not submitted.
TO2 - Malaria	Supply plan submissions for Malaria commodities stood at 91 percent this quarter, with missing submissions from Sierra Leone and DRC.
TO3 - FP/RH	Supply plan submissions for Family Planning products and Condoms were 100 percent this quarter.
TO4 - MNCH	Supply plan submissions for MNCH products stood at 88 percent this quarter, with a submission missing from DRC.

Supply Plan and Forecast Performance

Current Reporting Period

2024-Q4

A6a. Supply plan error - HIV Products

Product Category	Supply plan/ forecast error	Supply plan/ forecast bias	4-quarter error	Annual APE Target	4-quarter bias
Adult ARV	5%	-5%	5%	22%	5%
Condoms	13%	13%	4%	30%	-4%
Laboratory	53%	53%	13%	25%	-13%
Pediatric ARV	29%	-29%	1%	25%	-1%

A6a. Supply plan error - Malaria products

Product Category	Supply plan/ forecast error	Supply plan/ forecast bias	4-quarter error	Annual APE Target	4-quarter bias
ACTs	20%	20%	13%	35%	13%
mRDTs	75%	-75%	3%	25%	-3%

A6b. Forecast error - Family Planning products

Product Category	Supply plan/ forecast error	Supply plan/ forecast bias	4-quarter error	Annual APE Target	4-quarter bias
Combined Oral Contraceptives	11%	11%	37%	25%	-37%
Copper-bearing Intrauterine Devices	0%	0%	23%	30%	-23%
Implantable Contraceptives	1%	-1%	9%	25%	9%
Injectable Contraceptives	3%	-3%	18%	22%	18%
Progestin Only Pills	3%	-3%	11%	25%	-11%

Task Order	Analysis
TO1 - HIV	Supply plan error for adult ARVs decreased to 5 percent this quarter. The rolling four quarter metric also decreased to 5 percent this quarter. This error was a result of the difference between Tanzania's and Zambia's supply plans and actual orders. A total of 204,000 units of ABC/3TC were planned for Tanzania, but the orders didn't materialize. An additional amount of 105, 000 units were planned for Zambia, but these orders also did not materialize. For pediatric ARVs, the supply plan error increased slightly to 29 percent, principally due to a planned order for Kenya of 180 units which did not materialize.
TO1 - HIV	Supply plan error for laboratory commodities increased to 53 percent. The roling four quarter metric stood at 13 percent. Ordered units exceeded planned quantities for the quarter by a noticeable margin. Significant differences were found under the Molecular category of lab products, whereby Tanzania, Nigeria and Mozambique planned for no products but the total ordered units from those countries were approximately 12,000 units. Under the Other Lab products category, there was no plan for order for Tanzania but the order ended up being of 19,336 units. Zambia was another which planned for approximately 10,000 units but the total order was approximately 27,000 units.
TO1 - HIV	The forecast error for condoms reduced to 13 percent, from 41 percent in the previous quarter. Currently the rolling four quarter metric stands at 4 percent. The final ordered amount was higher than the forecasted amount by more than 8 million units. There was an order placed for Ukraine for approximately 11.5 million units for lubricants with a short lead time (<90 days). Usually orders from the country are for approximately 2 million units. For female and male condoms, the performance was relatively strong.
TO2 - Malaria	For AL, the supply plan error increased to 36 percent, with a rolling four quarter error at 23 percent. Two countries, Mozambique and Benin, had placed orders totaling approximately 3 million units which were not in their respective supply plans. There were other orders from Uganda comprising almost 900,000 units which were ordered, but these commodities were not in the supply plans for both these countries. For ASAQ, the supply plan error increased significantly to 249 percent with a four-quarter rolling metric of 45 percent. Both the requested and planned quantities were smaller this quarter compared to the last few quarters. Smaller denominators and a widening gap between requested and planned quantities drive increases in the error margin. The ASAQ forecasted quantity was less than the actual ordered amount. Angola had forecasted 1.6 million units which never materialized into an order. The supply plan error for mRDT increased to 75 percent this quarter with a four-quarter rolling metric at 3 percent. The primary driver of this increase can be attributed to an order planned of 8 million units in the supply plan of Burkina Faso which did not materialize into an actual order.
TO3 - FP/RH	There was a decrease in the forecast error for many family planning commodities. The forecast error for implantable contraceptives and copper-bearing intrauterine devices stood at 1 percent and 0 percent, respectively. For combined oral contraceptives, the forecast error reduced to 11 percent with a rolling four quarter metric at 37 percent. The planned amount was greater than ordered amount. There was an order placed for Benin for 403,000 units which did not materialize. For injectables, the forecast error reduced to 3 percent with a rolling four quarter metric at 18 percent. The total ordered quantity was slightly lower than the planned amount. For progestin-only pills, the forecast error increased slightly to 3 percent, with the forecasted amount being slightly higher than the ordered amount. The rolling four quarter metric stood at 11 percent.

Total Landed Cost

Current Reporting Period

2024-Q4

Task Order	Analysis
TO2 - Malaria	GHSC-PSM's total landed cost indicator is equal to the sum of all costs associated with commodity delivery, divided by the total value of commodities delivered. It is reported semiannually, for a rolling 12-month period, and provides a high-level sense of the project's relative operations and direct logistics costs but may lack precision for several reasons: 1) Commodity cost savings may cause the denominator to decrease, even if volume stays the same. This may have the effect of increasing total landed cost as a percentage, even if costs in the numerator remain the same. 2) Logistics costs for items shipped under C and D Incoterms are built into the commodity cost charged by the supplier. They cannot be separated out and assigned to the numerator. 3) Costs in the numerator represent invoices paid, per the project monthly financial statement, while commodity costs are based on items delivered. Numerator costs may therefore be delayed compared to delivery activity represented by the denominator. Data for the current period shows total landed costs increasing slightly, to 23.8 percent. Expenditures in drop ship freight decreased from the previous period, but only slightly, and the delivery total for this period decreased a larger percentage. Total landed cost including headquarters operations expenditures also showed an increase, to 28.2 percent, again due to the change in delivery total this period. Comparing the amounts of both cost categories, freight and logistics costs almost 10 times the amount for HQ, so likely any changes in the freight and logistics category will be reflected in the overall scoring, so an increase in total landed cost this term is expected, when comparing the rate of decrease of the freight and logistics costs to the rate of decrease of the delivery total.
TO1 - HIV	GHSC-PSM's total landed cost indicator is equal to the sum of all costs associated with commodity delivery, divided by the total value of commodities delivered. It is reported semiannually, for a rolling 12-month period, and provides a high-level sense of the project's relative operations and direct logistics costs but may lack precision for several reasons: 1) Commodity cost savings may cause the denominator to decrease, even if volume stays the same. This may have the effect of increasing total landed cost as a percentage, even if costs in the numerator remain the same. 2) Logistics costs for items shipped under C and D Incoterms are built into the commodity cost charged by the supplier. They cannot be separated out and assigned to the numerator. 3) Costs in the numerator represent invoices paid, per the project monthly financial statement, while commodity costs are based on items delivered. Numerator costs may therefore be delayed compared to delivery activity represented by the denominator. This period, freight and logistics costs as a percentage of dollar value delivered for HIV commodities decreased to 4.3 percent. The value of commodities delivered increased slightly in comparison to the previous period, and the freight and logistics costs decreased dramatically. The cost for HQ operations this quarter remained relatively consistent, and when factored in, the total landed cost has decreased to 11.1 percent. Headquarters expenditures have decreased slightly, but not at the same rate as the dramatic decrease in the cost of freight and logistics, or the slight increase in the delivery value, which can explain the overall percentage decrease for the total landed cost.

A5. Total Landed Costs

Task Order	Total Landed Cost (Freight and Logistics)	TLC Target	Delivery Total	Total Landed Cost (Freight, Logistics, and HQ Operations)
TO1 - HIV	4.3%	10%	$426,467,988	11.1%
TO2 - Malaria	23.8%	20%	$173,542,566	28.2%
TO3 - FP/RH	19.9%	22%	$50,575,306	28.7%
TO4 - MNCH	120.5%	16%	$1,985,583	149.6%
Total	**11.0%**	**15%**	**$652,571,443**	**17.4%**

A5. Cost Breakdown

Cost Type	TO1 - HIV	TO2 - Malaria	TO3 - FP/RH	TO4 - MNCH	**Total**
Freight and Logistics	**$18,225,972**	**$41,222,602**	**$10,063,792**	**$2,392,667**	**$71,905,033**
Country-specific Logistics Costs	$629,528	$370,659	($88,941)	$9,342	**$920,588**
Demurrage	$119,335	$514,517	$189,603	$5,760	**$829,215**
Drop Ship Freight	$14,200,372	$37,766,517	$5,587,434	$2,375,465	**$59,929,788**
Inbound Freight	$311,336	$97,112	$131,317	$0	**$539,765**
Insurance	$1,462,393	$756,062	$256,600	$0	**$2,475,055**
Loss	$138,139	$5,564	$1,573	$0	**$145,276**
Outbound Freight	$439,480	$393,307	$3,792,501	$0	**$4,625,288**
Quality Control	$6,484	$811,165	$1,446	$0	**$819,095**
Security	$31,127	$412,800	$1,400	$2,100	**$447,427**
Warehousing	$887,778	$94,899	$190,859	$0	**$1,173,536**
HQ Operations	**$28,951,131**	**$7,734,412**	**$4,455,422**	**$578,074**	**$41,719,039**
Forecasting and Supply Planning	$1,674,812	$428,584	$595,411	$37	**$2,698,844**
GS1	$2,081,098	$461,968	$58,803	$44,242	**$2,646,111**
MIS	$4,057,179	$667,441	$792,696	$102,720	**$5,620,036**
Monitoring and Evaluation	$5,487,066	$1,437,996	$800,023	$173,306	**$7,898,391**
Procurement	$13,738,105	$4,510,480	$1,927,241	$229,267	**$20,405,093**
Warehousing and Distribution	$1,912,871	$227,943	$281,248	$28,502	**$2,450,564**
Total	**$47,177,103**	**$48,957,014**	**$14,519,214**	**$2,970,741**	**$113,624,072**

Data notes

GHSC-PSM's total landed cost indicator is equal to the sum of all costs associated with commodity delivery, divided by the total value of commodities delivered. It is reported semiannually, for a rolling 12-month period. It provides a high-level sense of the project's relative operations and direct logistics costs, but it may lack precision for several reasons: 1) Commodity cost savings may cause the denominator to decrease, even if volume stays the same. This may have the effect of increasing total landed cost as percentage, even if costs in the numerator remain the same. 2) Logistics costs for items shipped under C and D Incoterms are built into the commodity cost charged by the supplier. They cannot be separated out and assigned to the numerator. 3) Costs in the numerator represent invoices paid, per the project monthly financial statement, while commodity costs are based on items delivered. Numerator costs may therefore be delayed compared to delivery activity represented by the denominator.

Total Landed Cost

Current Reporting Period: 2024-Q4

A5. Total Landed Costs

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Inbound Freight	$311,336	$97,112	$131,317	$0	**$539,765**
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Loss	$138,139	$5,564	$1,573	$0	**$145,276**
Outbound Freight	$439,480	$393,307	$3,792,501	$0	**$4,625,288**
Quality Control	$6,484	$811,165	$1,446	$0	**$819,095**
Security	$31,127	$412,800	$1,400	$2,100	**$447,427**
Warehousing	$887,778	$94,899	$190,859	$0	**$1,173,536**
HQ Operations	**$28,951,131**	**$7,734,412**	**$4,455,422**	**$578,074**	**$41,719,039**
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Total	**$47,177,103**	**$48,957,014**	**$14,519,214**	**$2,970,741**	**$113,624,072**

Task Order	Analysis
TO3 - FP/RH	GHSC-PSM's total landed cost indicator is equal to the sum of all costs associated with commodity delivery, divided by the total value of commodities delivered. It is reported semiannually, for a rolling 12-month period, and provides a high-level sense of the project's relative operations and direct logistics costs but may lack precision for several reasons: 1) Commodity cost savings may cause the denominator to decrease, even if volume stays the same. This may have the effect of increasing total landed cost as a percentage, even if costs in the numerator remain the same. 2) Logistics costs for items shipped under C and D Incoterms are built into the commodity cost charged by the supplier. They cannot be separated out and assigned to the numerator. 3) Costs in the numerator represent invoices paid, per the project monthly financial statement, while commodity costs are based on items delivered. Numerator costs may therefore be delayed compared to delivery activity represented by the denominator. This period, freight and logistics costs as a percentage of family planning commodities delivered increased to 19.9 percent. When factoring in the cost of HQ operations, the total landed cost result is 28.7 percent, also an increase from last term. There was an increase in the cost of drop ship freight and outbound freight this period. While the delivery total did increase this term, it did not increase at the same rate as the increase in costs for freight and logistics, and an increase in total landed cost is expected.
TO4 - MNCH	GHSC-PSM's total landed cost indicator is equal to the sum of all costs associated with commodity delivery, divided by the total value of commodities delivered. It is reported semiannually, for a rolling 12-month period, and provides a high-level sense of the project's relative operations and direct logistics costs but may lack precision for several reasons: 1) Commodity cost savings may cause the denominator to decrease, even if volume stays the same. This may have the effect of increasing total landed cost as a percentage, even if costs in the numerator remain the same. 2) Logistics costs for items shipped under C and D Incoterms are built into the commodity cost charged by the supplier. They cannot be separated out and assigned to the numerator. 3) Costs in the numerator represent invoices paid, per the project monthly financial statement, while commodity costs are based on items delivered. Numerator costs may therefore be delayed compared to delivery activity represented by the denominator. Data for the current period shows that freight and logistics costs as a percentage of MNCH commodities delivered increased to 120.5 percent. Expenditures in freight and logistics categories have remained consistent with last period, while the delivery total has dramatically decreased, almost halved. Because of this proportional shift, an increase in total landed cost is expected. Total landed cost with headquarters operations expenses included also increased this period, to 149.6 percent, mainly because the freight and logistics costs are so relatively high, even though HQ operations costs decreased. MNCH product procurement changes greatly from term to term, so the variability of this indicator is expected.

Data notes

GHSC-PSM's total landed cost indicator is equal to the sum of all costs associated with commodity delivery, divided by the total value of commodities delivered. It is reported semiannually, for a rolling 12-month period. It provides a high-level sense of the project's relative operations and direct logistics costs, but it may lack precision for several reasons: 1) Commodity cost savings may cause the denominator to decrease, even if volume stays the same. This may have the effect of increasing total landed cost as percentage, even if costs in the numerator remain the same. 2) Logistics costs for items shipped under C and D Incoterms are built into the commodity cost charged by the supplier. They cannot be separated out and assigned to the numerator. 3) Costs in the numerator represent invoices paid, per the project monthly financial statement, while commodity costs are based on items delivered. Numerator costs may therefore be delayed compared to delivery activity represented by the denominator.

Vendor Performance

Current Reporting Period

2024-Q4

A14a-c. Average vendor rating score

Vendor Type	Average vendor rating
Commodity Supplier	73%
Freight Forwarder	89%
QA Lab	95%

14b. QA Lab Vendor Scorecard Components, Weighting, and Scores

Component Name	Indicator Name	Indicator Score	Indicator Weight (Overall)	Overall Weighted Score
1 - Reliability (Timeliness of Service)	Does the lab provide on-time provision of completed test reports?	94%	48%	45%
2 - Responsiveness	Does the lab provide prompt response after receipt of GHSC-PSM request for testing	95%	15%	14%
3 - Completeness of Documentation	Frequency of modification to Certificates of Analysis (CoA)	98%	18%	17%
4 - Invoice Accuracy	Submitted invoices for routing testing adhere to set IDIQ pricing	100%	10%	10%
5 - Service	Adherence to other terms and conditions, not related to reliability, responsiveness, completeness, and cost (Qualitative)	88%	10%	9%
Total			**100%**	**95%**

Analysis

This quarter, the average performance rating for freight forwarder vendors increased to 89.4 percent, marking an improvement from last quarter's 87 percent average for third-party logistics (3PL) providers. The most significant increase was observed in on-time performance, which rose by 1.7 percent. This improvement can be largely attributed to the Deliver/Return team's proactive and attentive management approach, including new bi-weekly calls to monitor milestones and timelines closely. Enhanced invoicing accuracy sub-indicator scores showed improvement, likely supported by the project's detailed invoicing guidelines and regular weekly check-ins.

The vendor performance score for FY24 Q4's lab services saw an increase to 95 percent, an improvement over last quarter's 94 percent. Reliability and Invoice Accuracy both saw an improvement in scores, with Invoice Accuracy returning to a score of 100 percent this quarter. Responsiveness and Completeness of Documentation saw slight decreases in their scores, from 99 percent to 95 percent and from 100 percent to 98 percent, respectively, though these scores still remain high. Service maintained its improved score from last quarter, of 88 percent, a 10 percentage point increase from Q2.

Supplier on-time performance increased by 2 percent, reaching 73 percent in FY24 Q4, reflecting steady performance over the last three quarters. The reported 73 percent is expected to see slight improvement as data reviews with suppliers continue during quarterly business review meetings, and acceptable rationale for GAD changes or delays are logged in the system, consistent with timelines from past quarters.

Data notes

Components and indicators for the 3PL scorecard have changed over time. Version 1 of the scorecard was in effect up to FY2018 Q2. Version 2 was in effect from FY2018 Q3 until FY2022 Q4. Version 3 took effect in FY2023 Q1. See the M&E plan for full details of scorecarde changes over time.

Per the GHSC-PSM M&E plan, targets are not required for vendor performance indicators.

Global Advocacy Engagements

Current Reporting Period

2024-Q4

HIV/AIDS

4

Name of Engagement	Description
African Society of Laboratory Medicine (ASLM) HIV/AIDS Lab Webinar Series	The GHSC-PSM HIV/AIDS lab team collaborated with the African Society of Laboratory Medicine (ASLM) on a series of webinars demystifying all-inclusive service-level agreements (SLAs). The webinars are presented to ASLM's Lab Community of Practice (CoP), including clinical teams, frontline lab workers, and representatives from ministries of health, donor agencies, and manufacturers. Virtual webinar sessions took place August 15, 2024 and October 3, 2024.
International AIDS Summit (IAS)	The GHSC-PSM HQ HIV/AIDS Task Order Director attended the International AIDS Summit (IAS) in Munich, Germany from July 21-24, 2024. As the world's largest conference on HIV and AIDS, this was a unique opportunity for a representative from the GHSC-PSM project to meet with PEPFAR and USAID counterparts and interact with scientists, policymakers, health care professionals, funders and people living with HIV.
Introducing pediatric abacavir/lamivudine/dolutegravir (pALD)	GHSC-PSM continues to work closely with the PEPFAR Pediatric Treatment Workstream, the Global Fund, and ARV manufacturers to collaborate on introducing and scaling pediatric abacavir/lamivudine/dolutegravir (pALD), helping countries prepare for the drawdown of legacy regimens and the uptake of pALD.
Joint WHO/UNAIDS and Partners Annual Consultation with Pharmaceutical Companies, Partner Organizations, and Stakeholders	GHSC-PSM staff participated in discussions with the World Health Organization (WHO) and UNAIDS during a joint WHO/UNAIDS and partners annual consultation with pharmaceutical companies, partner organizations, and stakeholders in Geneva, Switzerland in September 2024. The consultation was a forum for valuable insights into market trends, ARV demand forecasts, and the progress, challenges, and opportunities in engaging the private sector and fostering sustainable regional manufacturing in Africa. This year's meetings at the WHO brought together innovators and market experts from USAID, PEPFAR, the Global Fund, Unitaid, United Nations agencies, and the International AIDS Society, as well as civil society actors and NGOs.

Global Advocacy Engagements

Current Reporting Period

2024-Q4

Family Planning and Reproductive Health

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Name of Engagement	Description
Consensus Planning Group (CPG) Exceptions Management (EM) and Global Market (GM) Group Meetings	The Consensus Planning Group (CPG) consists of two sub-groups: the Exceptions Management (EM) Group and the Global Market (GM) Group. The CPG seeks to ensure better global-level coordination between institutional procurers of family planning commodities for the public sector and key supply chain partners by sharing data provided by countries and from global sources that make it possible to coordinate shipments and allocate resources appropriate within and among countries. The EM Group focuses on country-specific analysis and discussions while the GM Group focuses on global-level discussions affecting all countries in the market. GHSC-PSM regularly participates in monthly CPG EM and GM meetings alongside USAID, UNFPA, RHSC, CHAI, JSI and WAHO. During meetings from July - September 2024, the focus has been around the process change for scaling down the coordination and allocation of 1-rod implants, as the community no longer faces a supply constraint, as well as additional coordination around Pfizer's DMPA-IM product Depo Provera with low remaining shelf life.
FP2030 Supply Chain and Stockout Measurement Working Group	The GHSC-PSM Senior Technical Advisor attended the virtual FP2030 Supply Chain and Stockout Measurement working group meeting on August 27, 2024 alongside representatives from FP2030, RHSC, UNFPA, UNC, Avenir Health, EngenderHealth, Guttmacher, Gates Foundation and USAID. The objective of this first convening was to discuss the current state of stockout measurement and revisit the stockout indicators that were recommended back in 2015. During the meeting, representatives determined a process for reviewing current challenges to stockout measurement data and indicators, and determined that new recommendations are needed.
Global Family Planning Visibility and Analytics Network (GFPVAN) Technical Working Group and Steering Committee Meetings	GHSC-PSM participated in the Global Family Planning Visibility and Analytics Network (GFPVAN) technical working group virtual meetings monthly from April - September 2024. During these meetings, the project promoted the benefits of premium membership and operations of the VAN Control Planning Analyst teams. The project also supported country data on commodity orders and inventory for procurement and shipment tracking purposes, and monitored each country's usage of the VAN to coordinate with premium and basic countries to ensure issues were resolved. Additionally, the GHSC-PSM MIS Technical Lead attended a family planning quantification meeting in Burundi in June 2024 to understand the operations of leveraging the GFPVAN tool for quantification and supply planning.
Healthy Markets Community of Practice (HMCoP) Meetings	GHSC-PSM attended the Healthy Markets Community of Practice meeting in August 2024, which focused on the family planning and sexual reproductive health market in Zambia. The session included presentations from Zambia Accessible Markets for Health (ZamHealth), Planned Parenthood of Zambia, Marie Stopes Zambia, World Vasectomy Day, Pharmaceutical Society of Zambia, and Zenysis Technologies, with concluding remarks by USAID/Zambia.
Hormonal Intrauterine Device (IUD) Steering Committee and Hormonal IUD Access Group Meetings	GHSC-PSM continues to be an active member of the Hormonal IUD Steering Committee and Hormonal IUD Access Group. GHSC-PSM participated in Hormonal IUD Market Stewardship Group meetings in May and September 2024 with the goal of coordinating with global stakeholders to facilitate the introduction and scale-up of hormonal IUDs in priority countries.

Global Advocacy Engagements

Current Reporting Period

2024-Q4

Family Planning and Reproductive Health

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Name of Engagement	Description
Webinar on Product Master Data Management (PMDM) Lessons Learned	On September 18, 2024, GHSC-PSM disseminated the lessons learned in product master data management (PMDM) during a webinar which explored how to prepare, plan and implement PMDM in the context of the National Product Catalog (NPC), including key lessons around data structures, product master data attributes, and enabling environment NPC deployments. The lessons learned focused on the foundations of standards-based product master data, and other supporting tools that help countries prepare for the deployment of PMDM programs based on low-middle income country context. During this hour-long session, participants gained a deeper understanding of some of the lessons learned from countries that have deployed such programs, and ideas on how to plan and execute PMDM in their environment.
Webinar on the Dispatch Optimizer Tool in Zambia	On June 27, 2024, GHSC-PSM hosted a virtual webinar on using an open-source Dispatch Optimizer Tool in Zambia. To effectively manage last-mile distribution at the Zambia Medicines and Medical Supplies Agency (ZAMMSA), the cloud-based Dispatch Optimizer Tool uses data from the warehouse management system and logistics management information system at ZAMMSA, combined with digital road network data, to create optimal routes for all orders. Following the presentation, a hands-on demo walked participants through the data elements and steps required to use the tool in their organizations. There were 92 participants representing various organizations, and the webinar received positive feedback.

Global Advocacy Engagements

Current Reporting Period

2024-Q4

Crosscutting

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Name of Engagement	Description
Association of Supply Chain Management (ASCM) Conference	During the Association of Supply Chain Management (ASCM) conference in Austin, Texas (USA) on September 10, 2024, GHSC-PSM staff participated in a panel entitled "Unlocking investment opportunities in Africa to increase resilience of regional and global supply chains." The ASCM conference is a premier supply chain industry leadership event, connecting high-level executives and emerging supply chain leaders in North America to discuss the latest industry knowledge.
PharmaConnect Africa Conference	At the PharmaConnect Africa conference in Lusaka, Zambia on August 21, 2024, the GHSC-PSM Zambia country director participated in a panel on innovation in supply chain and product development alongside representatives from the Global Fund and the Africa Resource Center. The PharmaConnect Africa conference brings together players in the pharmaceutical and health care industry in Africa to network and shape policies that contribute to the shared goal of improving access to quality, safe and efficacious medicines and health products for all Africans.

Complete Quarterly Results (TO1)

Reporting Period

2024-Q4

A1a. OTIF rate / A1b. OTD rate / A16. Backlog percentage / A10. Framework contracting

Task Order	OTIF	Total # of Line Items Delivered	OTD	Total # of Line Items with ADDs in the quarter	Backlog	Total # of line items with ADDs in the last 12 months	Framework contract percentage	Procurement total
TO1 - COVID19	**85%**	**98**	**87%**	**95**	**4.5%**	**179**	**68%**	**$1,855,849**
COVID19	85%	98	87%	95	4.5%	179	68%	$1,855,849
TO1 - HIV	**87%**	**877**	**85%**	**958**	**6.5%**	**3,818**	**96%**	**$115,339,306**
(blank)	100%	1	100%	1				
Adult ARV	84%	80	91%	80	3.2%	313	100%	$48,003,587
Condoms	89%	35	82%	38	5.4%	130	100%	$4,228,804
Food and WASH	0%	2	0%	2	50.0%	4	100%	$306,215
Laboratory	89%	635	85%	710	7.4%	2,717	93%	$46,996,113
Other Non-Pharma	67%	27	63%	32	14.5%	124	82%	$504,860
Other Pharma	100%	36	95%	38	1.1%	179	100%	$3,120,821
Other RTK	60%	15	82%	11	7.7%	39	35%	$1,037,619
Pediatric ARV	77%	22	77%	22	5.0%	119	100%	$5,761,192
TB HIV	100%	4	100%	4	0.0%	35	100%	$4,931,345
Vehicles and Other Equipment					0.0%	4		
VMMC	100%	20	100%	20	1.3%	154	100%	$448,750
Total	**87%**	**975**	**85%**	**1,053**	**6.5%**	**3,997**	**96%**	**$117,195,154**

A3. Cycle time (average)

Fulfillment Channel	Direct Drop Fulfillment			Warehouse Fulfillment		**Total**
Task Order	Air	Land	Sea	Air	Sea	
TO1 - COVID19	**219**		**243**			**238**
COVID19	219		243			**238**
TO1 - HIV	**259**	**194**	**318**	**313**	**168**	**252**
Adult ARV	297	186	315	326		**296**
Condoms	338		288	229	168	**272**
Food and WASH	272					**272**
Laboratory	251	194	265			**237**
Other Non-Pharma	353	180	290			**261**
Other Pharma	274	258	347			**314**
Other RTK	303					**303**
Pediatric ARV	267		365			**294**
TB HIV	316		329			**319**
VMMC		265	328			**319**
Total	**258**	**194**	**285**	**313**	**168**	**251**

A6a and A6b. Absolute percent supply plan or forecast error

A6 Indicator	Supply plan/ forecast error	Supply plan/ forecast bias	4-quarter error	4-quarter bias
A6a - Supply plan error				
Adult ARV	5%	-5%	5%	5%
Laboratory	53%	53%	13%	-13%
Pediatric ARV	29%	-29%	1%	-1%
A6b - Forecast Error				
Condoms	13%	13%	4%	-4%

A8. Shelf life remaining

% Shelf Life Remaining	Inventory Balance
79%	$2,844,892

C7a and C7b. Product loss due to expiry, theft, damage, and other cau...

Country	Type of Loss	Product Group	Loss Value	Loss Denominator	% Loss
RDC	Expiry	NA	$0	$6,654,448	0.00%

B6. Quarterly supply plan submissions

Product Group	Supply plan submission rate	# of supply plans required
ARVs	100%	22
Condoms	100%	20
Lab (HIV diagnostics)	93%	15
RTKs	100%	20
VMMC	100%	5

A4. Inventory turns

Inventory turns	Inventory Turns Target
1.9	3.0

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	73%
Freight Forwarder	89%

Complete Quarterly Results (TO2)

Reporting Period

2024-Q4

	A1a. OTIF rate		A1b. OTD rate		A16. Backlog		A7. Waiver percentage	A10. Framework contracting			A2. QA processes on time		A13 Out-of-spec		A15. QA reports
Task Order	OTIF	Total # of Line Items Delivered	OTD	Total # of Line Items with ADDs in the quarter	Backlog	Total # of line items with ADDs in the last 12 months	Temporary registration waiver percentage	Total # of line items delivered	Framework contract percentage	Procurement total	% QA Processes On Time	Total # of QA processes completed	Out-of-specification percentage	Total # of batches tested	Report submissions	# of reports due
TO2 - Malaria	**86%**	**208**	**83%**	**221**	**5.6%**	**658**	**9.6%**	**208**	**99%**	**$46,086,329**	**93%**	**70**	**0.0%**	**239**	**100%**	**1**
ACTs	89%	105	90%	102	2.7%	258	4.8%	105	100%	$2,304,222	89%	18	0.0%	46		0
Laboratory	69%	13	56%	18	27.1%	59	30.8%	13	100%	$439,950						
LLINs	90%	20	90%	21	2.9%	140	25.0%	20	99%	$32,273,275	100%	21	0.0%	50		0
mRDTs	73%	30	74%	34	3.4%	58	0.0%	30	100%	$5,639,099	81%	16	0.0%	61		0
Other Non-Pharma			14%	7	63.6%	11										
Other Pharma	100%	1	100%	1	0.0%	8	100.0%	1	100%	$7,485		0		0		0
Other RTK					0.0%	1										
Severe Malaria Meds	92%	25	92%	25	1.5%	66	8.0%	25	100%	$3,042,856	100%	13	0.0%	76	100%	1
SMC					0.0%	29			100%	$1,938,793		0		0		0
SP	93%	14	100%	13	0.0%	28	21.4%	14	100%	$440,650	100%	2	0.0%	6		0
Total	**86%**	**208**	**83%**	**221**	**5.6%**	**658**	**9.6%**	**208**	**99%**	**$46,086,329**	**93%**	**70**	**0.0%**	**239**	**100%**	**1**

A6a. Absolute percent supply plan error

A6 Indicator	Supply plan/ forecast error	Supply plan/ forecast bias	4-quarter error	4-quarter bias
A6a - Supply plan error				
ACTs	20%	20%	13%	13%
mRDTs	75%	-75%	3%	-3%

A4. Inventory turns

Inventory turns	Inventory Turns Target
0.8	2.0

A3. Cycle time (average)

Fulfillment Channel	Direct Drop Fulfillment			Warehouse Fulfillment		Total
Task Order	Air	Land	Sea	Air	Sea	
TO2 - Malaria	**286**	**387**	**318**	**304**	**292**	**317**
ACTs	201	299	316	304	292	**305**
Laboratory	303		339			**306**
LLINs		445	313			**353**
mRDTs	369		329			**333**
Other Pharma			307			**307**
Severe Malaria Meds			314			**314**
SP	361		325			**330**
Total	**286**	**387**	**318**	**304**	**292**	**317**

B6. Quarterly supply plan submissions

Product Group	Supply plan submission rate	# of supply plans required
Malaria commodities	91%	23

A8. Shelf life remaining

% Shelf Life Remaining	Inventory Balance
54%	$2,433,182

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	73%
Freight Forwarder	89%

C7a and C7b. Product loss due to expiry, theft, damage, and other causes

Country	Type of Loss	Product Group	Loss Value	Loss Denominator	% Loss
RDC	Expiry	NA	$0	$2,514,529	0.00%

A14. Average vendor rating - QA labs

Average vendor rating
95%

Complete Quarterly Results (TO3)

Reporting Period

2024-Q4

A1a. OTIF rate A1b. OTD rate A16. Backlog percentage A10. Framework contracting

Task Order	OTIF	Total # of Line Items Delivered	OTD	Total # of Line Items with ADDs in the quarter	Backlog	Total # of line items with ADDs in the last 12 months	Framework contract percentage	Procurement total
TO3 - FP/RH	**91%**	**78**	**92%**	**75**	**1.6%**	**318**	**100%**	**$7,116,632**
Combined Oral Contraceptives	67%	6	80%	5	0.0%	43		
Copper-Bearing Intrauterine Devices	100%	2	100%	2	0.0%	19	100%	$24,300
Emergency Oral Contraceptives					0.0%	11		
Implantable Contraceptives	95%	37	91%	35	1.9%	104	100%	$4,278,084
Injectable Contraceptives	100%	21	96%	23	1.1%	88	100%	$2,546,372
Other Non-Pharma	88%	8	88%	8	0.0%	18	100%	$181,476
Other Pharma	100%	1	100%	1	0.0%	1		
Progestin Only Pills	100%	1	100%	1	0.0%	31	100%	$86,400
Standard Days Method	0%	2			66.7%	3		
Total	**91%**	**78**	**92%**	**75**	**1.6%**	**318**	**100%**	**$7,116,632**

A7. Temporary Waiver Percentage

Task Order	Temporary registration waiver percentage	Total # of line items delivered
TO3 - FP/RH	**15.4%**	**78**
Combined Oral Contraceptives	66.7%	6
Other Non-Pharma	50.0%	8
Injectable Contraceptives	9.5%	21
Implantable Contraceptives	5.4%	37
Copper-Bearing Intrauterine Devices	0.0%	2
Other Pharma	0.0%	1
Progestin Only Pills	0.0%	1
Standard Days Method	0.0%	2
Total	**15.4%**	**78**

A3. Cycle time (average)

Fulfillment Channel	Direct Drop Fulfillment			Warehouse Fulfillment		**Total**
Task Order	Air	Multiple	Sea	Air	Sea	
TO3 - FP/RH	**297**	**371**	**416**	**228**	**326**	**344**
Combined Oral Contraceptives				271	288	**285**
Copper-Bearing Intrauterine Devices				195		**195**
Implantable Contraceptives	307	371	455	229	264	**369**
Injectable Contraceptives			315		342	**336**
Other Non-Pharma	161		386			**358**
Other Pharma	219					**219**
Progestin Only Pills				249		**249**
Standard Days Method	343					**343**
Total	**297**	**371**	**416**	**228**	**326**	**344**

A4. Inventory turns

Inventory turns	Inventory Turns Target
4.9	2.0

C7a and C7b. Product loss due to expiry, theft, damage, and other causes

Country	Type of Loss	Product Group	Loss Value	Loss Denominator	% Loss
RDC	Expiry	NA	$0	$5,367,447	0.00%

A6b. Absolute percent forecast error

A6 Indicator	Supply plan/ forecast error	Supply plan/ forecast bias	4-quarter error	4-quarter bias
A6b - Forecast Error				
Combined Oral Contraceptives	11%	11%	37%	-37%
Condoms	13%	13%	4%	-4%
Copper-bearing Intrauterine Devices	0%	0%	23%	-23%
Implantable Contraceptives	1%	-1%	9%	9%
Injectable Contraceptives	3%	-3%	18%	18%
Progestin Only Pills	3%	-3%	11%	-11%

B6. Quarterly supply plan submissions

Product Group	Supply plan submission rate	# of supply plans required
Condoms	100%	20
FP commodities	100%	20

A8. Shelf life remaining

% Shelf Life Remaining	Inventory Balance
83%	$5,942,988

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	73%
Freight Forwarder	89%

Complete Quarterly Results (TO4)

Reporting Period

2024-Q4

	A1a. OTIF rate		A1b. OTD rate		A16. Backlog perentage		A10. Framework contracting
Task Order	OTIF	Total # of Line Items Delivered	OTD	Total # of Line Items with ADDs in the quarter	Backlog	Total # of line items with ADDs in the last 12 months	Framework contract percentage	Procurement total
TO4 - MNCH					**0.0%**	**13**	**0%**	**$1,568,896**
Food and WASH					0.0%	3	0%	$1,568,896
Other Pharma					0.0%	10		
Total					**0.0%**	**13**	**0%**	**$1,568,896**

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	73%
Freight Forwarder	89%

A3. Cycle time (average)

Task Order	Total
Total	

There were no deliveries of MNCH products during FY2024 Q4.

Indicator Details

Check out the GHSC-PSM IDIQ M&E Plan for complete details on all our indicators.

Delivery Indicators

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
A01a	On Time, In Full Delivery (OTIF) - Percentage of line items delivered on time and in full, within the minimum delivery window (within -14/+7 calendar days of the agreed delivery date (ADD))	Number of line items delivered to the recipient on time and in full during the quarter	Total number of line items delivered to the recipient during the quarter	ARTMIS	Quarterly	Lines items are considered on-time and in-full if the full ordered quantity of the line item is delivered to the recipient within the -14/+7 day delivery window. If the line item is partially delivered within the window, it may be considered on-time but not in-full.
A01b	On Time Delivery (OTD) — Percentage of line items delivered on time, within the minimum delivery window (within -14/+7 calendar days of the agreed delivery date (ADD))	Number of line items with an ADD during the quarter that were delivered to the recipient on time	Total number of line items with an ADD during the quarter	ARTMIS	Quarterly	
A16	Percentage of backlogged line items	Number of line items with an ADD on or before the reporting period end date, within a rolling 12-month period, that have not been cancelled or put on hold and that are currently undelivered and late	Total number of line items with an ADD on or before the reporting period end date, within a rolling 12-month period, that have not been cancelled or put on hold	ARTMIS	Quarterly	

Cycle time Indicators

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
A03a	Cycle time (average)	Sum of cycle time for all line items delivered during the quarter	Count of all line items delivered during the quarter	ARTMIS	Quarterly	Overall cycle time is defined as the number of days between when a customer order is submitted to when the shipment is actually delivered to the customer, inclusive of the start/end days and all holds or other dwell times.
A03b	Dwell-adjusted cycle time (average)	Sum of cycle time for all line items delivered during the quarter, excluding all defined inactive dwell periods from the overall cycle time	The count of all line items delivered during the quarter	ARTMIS	Quarterly	Dwell-adjusted cycle time is defined as the overall cycle time minus the sum of all dwell durations for all holds placed on the line item during its fulfillment.

Indicator Details

Check out the GHSC-PSM IDIQ M&E Plan for complete details on all our indicators.

Quality Assurance Indicators

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
A02	Percentage of QA processes completed within the total estimated QA lead times (on-time completion rate for QA processes)	Number of consignments complying with the pre-established QA lead times during the quarter	Total number of consignments requiring QA processes that were cleared for shipment during the quarter	QA Database	Quarterly	Consignment is defined as a shipment of commodities, including one or more line items. QA process transactions are managed at the consignment level, regardless of the number of line items in the consignment.
A13	Percentage of batches of product for which the final result is showing nonconformity (out of specification percentage)	Total number of batches of product showing nonconformity during the quarter	Total number of batches tested during the quarter	QA Database	Quarterly	
A14b	Average vendor rating score - QA lab services	Sum of all key vendor ratings.	Number of key vendors from whom GHSC-PSM procured lab testing services during the quarter	QA scorecard	Quarterly	All vendors are equally weighted in the overall score, regardless of procurement volume from each vendor.
A15	Percentage of quality assurance Investigation reports submitted within 30 calendar days of outcome determination (QA investigation report submission)	Number of QA investigation reports submitted to PMI within 30 days of outcome determination	Total number of QA investigation reports due during the reporting period	QA Database, email submissions	Semiannual	

Procurement Indicators

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
A07	Percentage of line items imported using a temporary registration waiver (temporary waiver percentage)	Number of line items that were imported using a temporary registration waiver	Total number of line items delivered to the recipient during the quarter	Supplier registration bidding documentation	Quarterly	
A10	Percentage of product procured using a framework contract (framework contract percentage)	Value of product purchased through framework contracts during the quarter	Total value of commodities purchased during the quarter	ARTMIS	Quarterly	

Indicator Details

Check out the GHSC-PSM IDIQ M&E Plan for complete details on all our indicators.

Forecast and Supply Planning Indicators

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
A06a	Absolute percent supply plan error, with variants annual absolute percent error and supply plan bias	Absolute value of the differences between the actual quantities with requested delivery dates during the quarter minus the quantities planned for delivery according to country supply plans	Sum of the actual quantities with requested delivery dates during the quarter	ARTMIS, Country Supply Plans	Quarterly	Supply plan error is currently calculated for adult and pediatric ARVs, HIV lab products, ACTs, and malaria rapid diagnostic tests. Planned quantities are drawn from an aggregation of country supply plans submitted in the prior quarter, including only the quantities that are forecasted to be procured through GHSC-PSM. Actual quantities are derived based on the requested delivery dates for products included in customer ROs submitted to ARTMIS.
A06b	Absolute percent forecast error, with variants annual absolute percent error and forecast bias	Absolute value of the differences between the actual quantities with requested delivery dates during the quarter minus the quantities planned for delivery according to the global demand forecast	Sum of the actual quantities with requested delivery dates during the quarter	ARTMIS, Country Supply Plans, PPMR, other sources	Quarterly	Forecast error is currently calculated for condoms and contraceptives. Forecasted or planned quantities are drawn from the GHSC-PSM global demand forecasts for each product, which are based on an aggregation of country supply plans submitted in the prior quarter and additional inputs, such as country order history, data from coordinated planning groups, and global market dynamics indicators. Actual quantities are derived based on the requested delivery dates for products included in customer ROs submitted to ARTMIS.

Warehouse Indicators

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
A04	Inventory turns (average number of times inventory cycles through GHSC-PSM controlled global facilities)	Total ex-works cost of goods distributed from GHSC-PSM-controlled global inventory stocks (in USD) within the fiscal year	Average monthly inventory balance (in USD)	Inventory extract	Annual	
A08	Average percentage of shelf life remaining for warehoused commodities, weighted by the value of each commodity's stock (product at risk percentage)	Percentage of shelf life remaining at the end of the quarter, weighted by value of commodities, summed across all products	Total value of commodities, summed across all products, at the end of the quarter	Inventory extract	Quarterly	Shelf life requirements vary by country and by product.

Indicator Details

Check out the GHSC-PSM IDIQ M&E Plan for complete details on all our indicators.

3PL and Commodity Vendor Indicators

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
A14a	Average vendor rating score - Commodity suppliers	Sum of all key vendor ratings	Number of key vendors from whom GHSC-PSM procured products/commodities during the quarter	ARTMIS	Quarterly	Scorecards are compiled on one-month lag, i.e. Q1 data represents vendor performance from Sept-Nov. Supplier OTIF is currently reported for high value and/or high risk suppliers. Only suppliers for which one or more order line items were fulfilled in this reporting period were included. All vendors are equally weighted in the overall score, regardless of procurement volume from each vendor.
A14c	Average vendor rating score - Freight forwarders	Sum of all key vendor ratings	Number of key vendors from whom GHSC-PSM procured freight forwarding services during the quarter	3PL scorecard	Quarterly	To allow complete data collection, freight forwarder scorecards are conducted on a one-month lag (i.e. Q1 data represents performance from Sept-Nov, rather than Oct-Dec). Overall score is weighted by delivery volume, such that vendors who deliver a greater number of shipments will have a relatively greater impact on the result.

Product Loss Indicators

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
C07a	Percentage of product lost due to expiry while under GHSC-PSM control (product loss percentage)	Total value of product lost due to expiry during the quarter	Average inventory balance (in USD) during the quarter	Inventory reports	Quarterly	Expiries from the Regional Distribution Centers (RDCS) are presented in the GSC section of this report. Expiries that occur in warehouses that GHSC-PSM manages in countries are reported in the country-specific sections of this report.
C07b	Percentage of product lost due to theft, damage, or other causes, while under GHSC-PSM control (product loss percentage)	Total value of product lost due to theft, damage, or other causes during the quarter	For losses in transit: Total value (in USD) of product delivered during the quarter For losses in storage: Average inventory balance (in USD) during the quarter	GHSC-PSM Continual Improvement system reports	Quarterly	Product losses due to incidents are reported only after the actual value of the loss has been determined, which may be later than the quarter in which the incident took place or was first reported to GHSC-PSM Continual Improvement.

Indicator Details

Check out the GHSC-PSM IDIQ M&E Plan for complete details on all our indicators.

GHSC-BI&A Data Sharing Indicators

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
C04	Percentage of required files submitted to GHSC-BI&A in the reporting period	Number of required files submitted to BI&A during the quarter	Total number of files required for submission to BI&A during the quarter	GHSC-BI&A File Submission dashboard	Quarterly	Data requirements, including file types, data elements, submission formats, and frequency, are governed by the BI&A Information Specification for Implementing Partners (the "Infospec"). Exceptions may be specified by USAID.
C05	Percentage of required files timely submitted to GHSC-BI&A in the reporting period.	Number of required files timely submitted to BI&A during the quarter	Total number of files required for submission to BI&A during the quarter	GHSC-BI&A File Submission dashboard	Quarterly	Data requirements, including file types, data elements, submission formats, and frequency, are governed by the BI&A Information Specification for Implementing Partners (the "Infospec"). Exceptions may be specified by USAID.
C06	Average percent variance between GHSC-PSM ARTMIS and GHSC-BI&A calculations of key supply chain indicators for Task Order 1	Absolute value of GHSC-BI&A Order Performance indicator value minus GHSC-PSM ARTMIS dashboard indicator value	GHSC-PSM ARTMIS indicator value	ARTMIS, GHSC-BI&A Order Performance dashboard	Quarterly	The two indicators used to asses this variance are: 1) on-time delivery, 2) count of order lines with ADDs in the current period

Indicator Details

Check out the GHSC-PSM IDIQ M&E Plan for complete details on all our indicators.

Total Landed Cost

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
A05	Total Landed Cost (as a percentage of total value of commodities delivered to recipients)	Sum of all freight and logistics costs (in USD) paid by GHSC-PSM during the reporting period	Sum of the value of all commodities delivered to recipients during the reporting period	ARTMIS, Monthly Financial Statement	Semiannual	The project will also report a variant of this indicator that includes all HQ supply chain operations costs in the numerator. Quality assurance costs will be excluded from all task orders, as QA costs are not paid by GHSC-PSM for all task orders. A version of the indicator including QA costs will be reported for Task Order 2 only.

Global Advocacy Engagments

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
C08	Number of global advocacy engagements in support of improved availability of essential health commodities	Number of global advocacy engagements in support of improved availability of essential health commodities	NA	Project work plans, narrative reports	Semiannual	

Indicator Details

Check out the GHSC-PSM IDIQ M&E Plan for complete details on all our indicators.

Delivery Impact Indicators

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
NA	Number of ACT treatments delivered	Sum of ACT treatments delivered to countries, where a treatment is equal to one blister strip		ARTMIS	Quarterly	Includes malaria treatments delivered over the life of the project, with "full dose" based on WHO-recommended treatment guidelines. Specific medicines counted are limited to those used only for treatments, and not primarily as prophylaxis. Specifically, it includes Artemether/Lumefantrine, Artesunate/Amodiaquine, and Artenimol/Piperaquine formulas.
NA	Number of Couple Years Protection delivered	Total of contraceptive method units delivered to countries, multiplied by the couple-years protection conversion factors per method, summed across all contraceptive methods delivered.		ARTMIS and USAID/MEASURE CYP conversion factors	Quarterly	CYP is a standard indicator calculated by multiplying the quantity of each contraceptive method distributed by a conversion factor to yield an estimate of the duration of contraceptive protection provided per unit of that method. The CYP for each method is then summed for all methods to obtain a total CYP figure. CYP conversion factors are based on how a method is used, failure rates, wastage, and how many units of the method are typically needed to provide one year of contraceptive protection for a couple. The calculation takes into account that some methods, e.g., condoms and oral contraceptives, may be used incorrectly and then discarded, or that intrauterine devices (IUDs) and implants may be removed before their life span is realized. This GHSC-PSM measure includes all condoms, IUDs, and hormone (oral, injectable, and implantable) contraceptives delivered over the life of the project, with the conversion factor provided by USAID/MEASURE (see https://www.usaid.gov/what- we-do/global-health/family-planning/couple-years-protection-cyp for details).
NA	Person-years of ARV treatment delivered	Sum of the monthly treatment units of adult first-line ARV treatments delivered to countries , divided by 12		ARTMIS	Quarterly	This report only includes Adult Efavirenz/Lamivudine/Tenofovir (TLE, Nevirapine/Lamivudine/Zidovudine (NLZ), and Dolutegravir/Lamivudine/Tenofovir (TLD). Doses for calculating treatments are based on World Health Organization (WHO)-recommended guidelines. The calculation of patient-years allows GHSC-PSM to monitor effectiveness and efficiency by a standard unit.