USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM
Procurement and Supply Management

FISCAL YEAR 2024

QUARTERLY REPORT | QUARTER 3

APRIL 1, 2024 TO JUNE 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

QUARTERLY REPORT

April 1, 2024 to June 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 Arbola Inc., Axios International Inc., 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
AL	artemether-lumefantrine

AMF	Against Malaria Foundation
API	active pharmaceutical ingredient
ARPA	American Rescue Plan Act
ARTMIS	Automated Requisition Tracking Management Information System
ARV	antiretroviral
ASLM	African Society for Laboratory Medicine
ASU	artesunate
AVR	automatic voltage regulator
BMGF	Bill & Melinda Gates Foundation
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
COESP	Public Health Emergency Operations Center
COVID-19	novel coronavirus
CPAP	continuous positive airway pressure
CS	contraceptive security
CSI	Contraceptive Security Indicator
DAP	delivered at place
DCP	decentralized procurement
DDP	delivery duty paid

DHIS2	District Health Information System2
DNO	diagnostic network optimization
DRC	Democratic Republic of the Congo
DT	dispersible tablet
DTG	dolutegravir
EDI	electronic data interchange
EDD	estimated delivery date
EE	Enabling Environment
EID	early infant diagnosis
eLMIS	electronic logistics management information system
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
FDC	fixed-dose combination
Fe	ferrous fumarate
FP/RH	family planning/reproductive health
FTO	Francophone Task Order
FY	fiscal year
GAD	goods availability date

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
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
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
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
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
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

T/C	tungsten carbide
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
VCT	Vector Control Team
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

WFD	workforce development
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 3 (Q3) 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 over **20.9 million patient years of tenofovir/lamivudine/dolutegravir (TLD) treatment**
- Delivered over **584 million antimalarials to treat malaria infections**
- Delivered contraceptives to country FP programs to provide an estimated potential **111 million couple-years** of protection
- Delivered a total of **$28 million in MNCH commodities**
- Supported **48 countries** with technical assistance

Q3 PERFORMANCE AND PROGRESS HIGHLIGHTS

TRANSITION PLANNING FOR NEXTGEN

GHSC-PSM continues to progress in deploying transformative supply chain solutions while laying a strong foundation for a successful transition to the USAID Next Generation Global Health Supply Chain (NextGen) projects and other follow-on mechanisms. Preparing for this transition remains a focus in FY 2024.

In Q3, GHSC-PSM headquarters, country offices that are closing, and their Missions planned the transition of in-country procurement support functions to alternative local mechanisms, to ensure the continuity of commodity deliveries even as country staff roll off the project. Learning from these early

experiences, the project developed and launched new processes and resources, including the Project Office Closeout - Order Management dashboard and a Responsible, Accountable, Consulted, and Informed, or RACI, matrix template. GHSC-PSM also launched the Data Sharing Task Team to streamline conversations on transition data sharing and drafted a data-sharing agreement template to facilitate sharing with incoming NextGen partners. The project also worked with USAID colleagues to review GHSC-PSM's standard operating procedures (SOPs) and resources held on the GHSC website to plan for their handover, decommission, or disposition during the transition.

GLOBAL SUPPLY CHAIN PERFORMANCE

Section C1 describes GHSC-PSM's global supply chain procurement and logistics activities and achievements. Below are highlights of the project's global supply chain performance in Q3.

Delivered $170 million in drugs, diagnostics, and health commodities in Q3 and over $5.55 **billion over the life of the project.**

Achieved on-time delivery (OTD)[1] of 87 percent and on time, in full (OTIF) of 87 percent in Q3.

Additional delivery results, including OTIF, are discussed in each health area section.

Exhibit 1. Monthly Indefinite Delivery, Indefinite Quantity (IDIQ) OTD

[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.

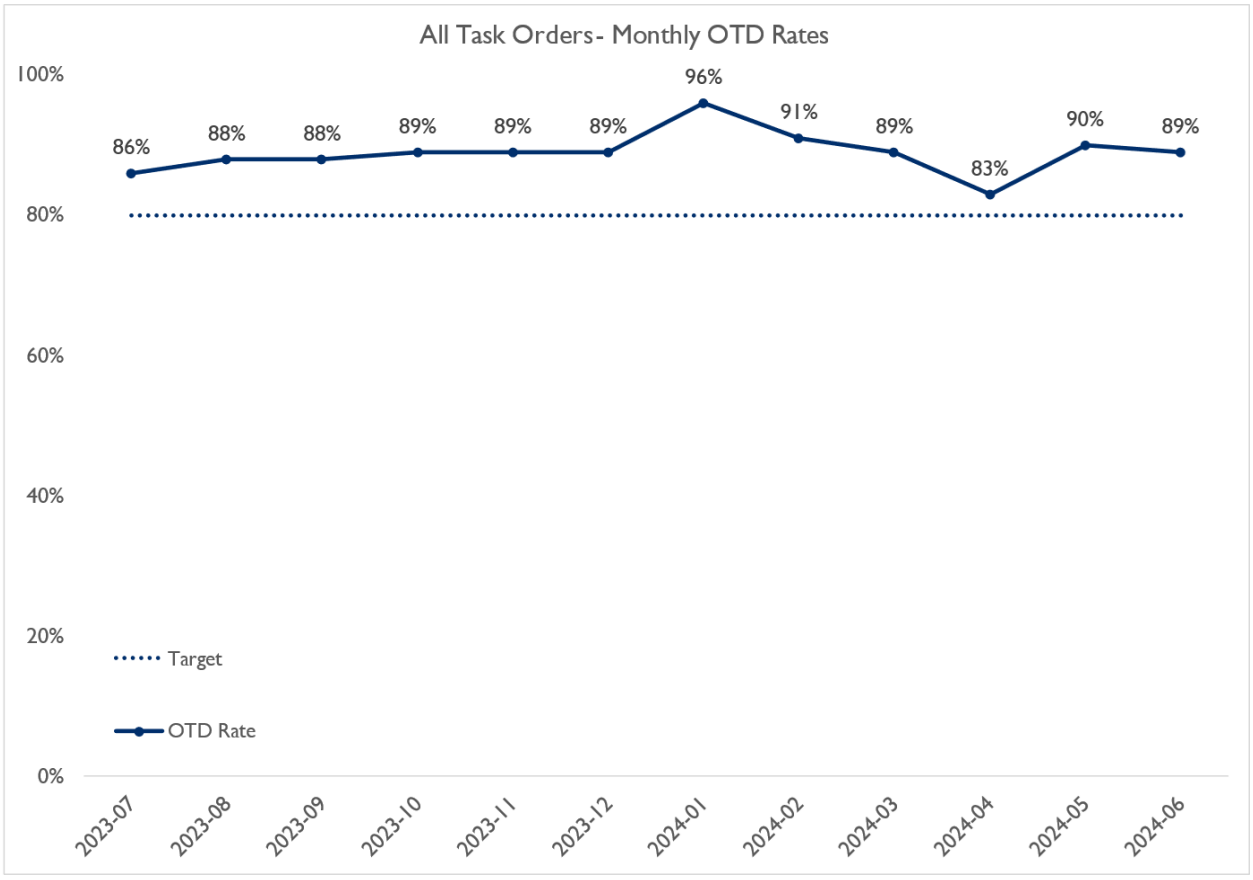
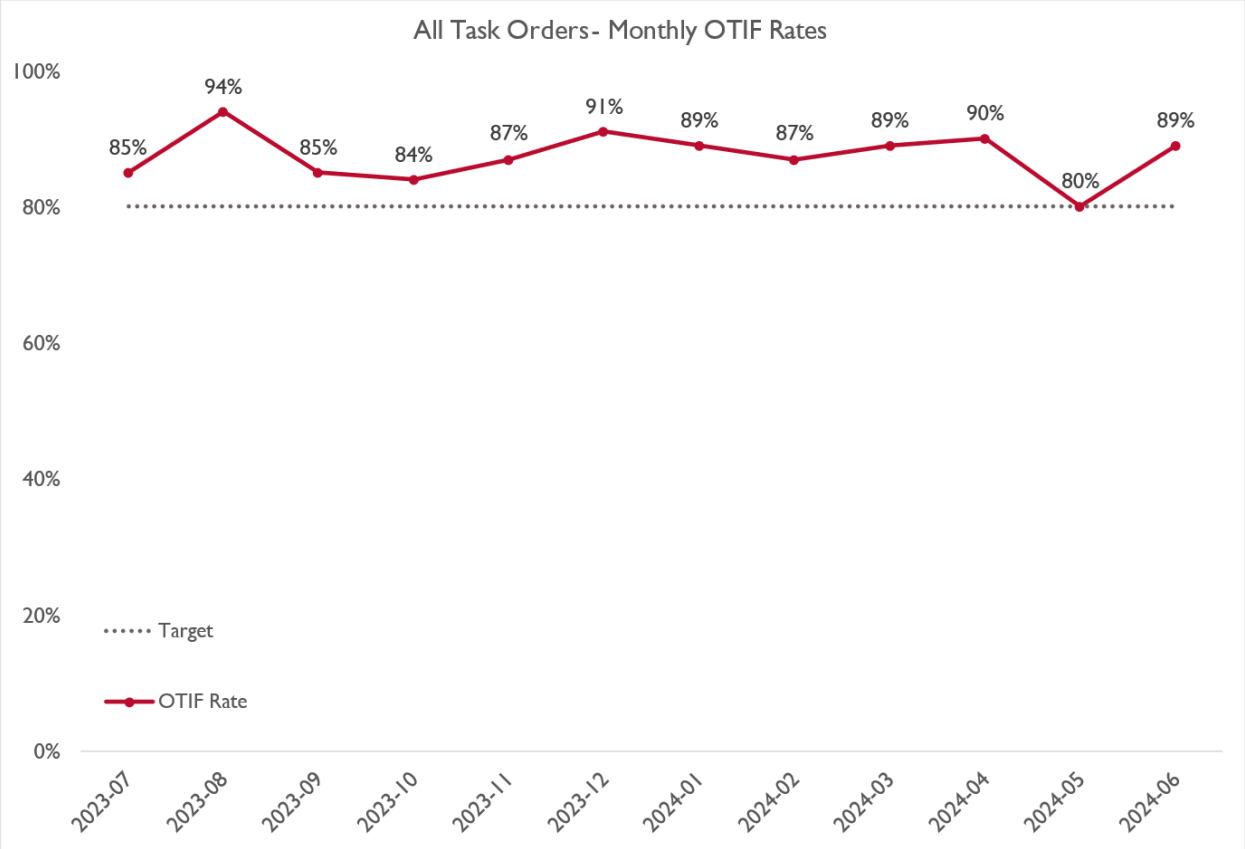

All Task Orders- Monthly OTD Rates
100%
80%
60%
40%
20%
0%
86%
88%
88%
89%
89%
89%
96%
91%
89%
83%
90%
89%
Target
OTD Rate
2023-07
2023-08
2023-09
2023-10
2023-11
2023-12
2024-01
2024-02
2024-03
2024-04
2024-05
2024-06

Exhibit 2. Monthly IDIQ OTIF



GHSC-PSM routinely conducts root-cause analyses of late deliveries to refine procurement and supply chain processes and continuously improve performance.

In Q3, air and ocean freight challenges persisted, with airlines adjusting schedules and aircraft types to meet demand. Rebel attacks on the Red Sea continued to affect air freight capacity as ocean shipping companies pivoted to air freight to avoid potential threats. Low river levels caused by drought in the Panama Canal hampered container operations due to the reduced number of vessels allowed through the canal. GHSC-PSM continues to assess these challenges and develop proactive strategies to address them.

To promote operational efficiency of procurement activities, the project continued to refine and enhance the use of tools such as the electronic packing list, invoice-to-pay tool, andSsourcing Assistance Messenger. See section C.1 for more details.

HEALTH AREAS

GHSC-PSM provides procurement services and technical assistance to strengthen supply chains and promote global collaboration for HIV/AIDS, malaria, FP/RH, MNCH, and emerging health threat programs. Below are highlights of project achievements in Q3 FY 2024.

HIV/AIDS

GHSC-PSM has **delivered enough antiretroviral therapy to provide 25.8 million patient years of HIV treatment over the life of the project.**

This includes over **20.9 million patient years of TLD treatment delivered over the life of the project.**

GHSC-PSM achieved **a treatment cost of under $40 per patient per year** for inventory pre-positioned in Southern Africa through the vendor-managed solutions (VMS) program.

In Q3, 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 HIV/AIDS prevention, treatment, and testing viral loads at all levels; implementing 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.

Key activities GHSC-PSM undertook as part of the HIV/AIDS task order in Q3 included:

Achieving OTD and OTIF. Achieved OTD and OTIF above the target of 80 percent (86 percent OTD and 85 percent OTIF).

Delivering pre-exposure prophylaxis. Delivered 1,740,405 bottles of pre-exposure prophylaxis (PrEP) to ten countries,[2] 35,100 vials of long-acting cabotegravir (CAB-LA) 600 mg/3 ml to four PEPFAR-supported countries,[3] 66,300 vials of CAB-LA 600 mg/3 ml to the Belgium regional distribution center (RDC), and 3,552 dapivirine rings to Kenya.

[2] Colombia, Malawi, Mozambique, Nigeria, Panama, Papua New Guinea, Tanzania, Togo, Zambia, and Zimbabwe.

[3] Eswatini (4,725 vials), Malawi (5,400 vials), Zambia (20,250 vials), and Zimbabwe (4,725 vials).

Delivering condoms. Delivered more than 63.2 million male condoms, 617,000 female condoms, and 10.2 million sachets of personal lubricant to 13 countries.[4] The project published the Annual Comprehensive Agency Report on Condoms and Lubricants for FY 2023.

Delivering voluntary medical male circumcision (VMMC) kits. Delivered 43,545 VMMC kits to Tanzania and Zimbabwe.[5]

Increasing private–sector involvement in antiretroviral delivery. In Q3 FY 2024, by value, 81 percent of antiretroviral (ARV) orders placed were under the modified delivered at place (DAP) and delivery duty paid (DDP) Incoterms ($139 million of $172 million).

Providing TLD and multi-month dispensing. Delivered 3.34 million TLD 90-count bottles to seven countries[6] and more than 165,000 180-count bottles to four countries.[7]

Advancing the vendor-managed solutions program. Delivered over two million bottles of TLD from VMS warehouses to four countries.[8] The project estimates it will meet the demand of 5.5 million bottles of TLD 90 through the VMS program in FY 2024.

Introducing pediatric abacavir/lamivudine/dolutegravir. Delivered a second shipment of abacavir/lamivudine/dolutegravir (pALD): 20,365 packs of 180-count pALD tablets to Zambia.

Implementing viral load/early infant diagnosis awards. Delivered 4.62 million viral load/early infant diagnosis (VL/EID) tests, saving approximately $15.4 million.[9] Cumulative savings on all orders for GHSC-PSM and other PEPFAR buyers since 2020 are more than $164 million.[10]

Expanding all-inclusive service-level agreements (SLAs). Hosted a workshop in Ethiopia that promoted the expansion of all-inclusive SLAs in all PEPFAR-supported countries.

Procuring viral load and laboratory supplies. Delivered laboratory supplies to 22 countries.[11]

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[4] Angola, Burkina Faso, Cameroon, Côte d'Ivoire, Eswatini, Ethiopia, Haiti, Malawi, Mali, Mozambique, Tajikistan, Togo, and Uganda.

[5] VMMC kits included 28,045 single-use essential consumables kits delivered to Tanzania and 15,500 reusable instruments for dorsal slit kits delivered to Zimbabwe.

[6] Eswatini, Mozambique, Nigeria, Tanzania, Ukraine, Zambia, and Zimbabwe.

[7] Benin, Burkina Faso, Côte d'Ivoire, and DRC.

[8] Eswatini, Mozambique, Zambia, and Zimbabwe.

[9] Compared to 2019 pre-global request for proposal (RFP) prices under the terms of the global service-level agreements

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

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

Piloting sharing ARV serial numbers through the Traceability Interoperability Platform (TIOP). Designed a pilot hub to share serialized data and demonstrate sourcing, exchange, and management of serialized event data. The project plans to launch the hub in Q4.

For more information, see section B1: HIV/AIDS.

MALARIA

Over the life of the project, GHSC-PSM **delivered more than $1.33 billion** in malaria medicines and commodities to 31 countries.

In Q3, GHSC-PSM delivered **23 million malaria treatments,** and **584 million malaria treatments over the life of the project.**

In Q3, GHSC-PSM **delivered 6.8 million** long-lasting insecticide-treated nets (LLINs) to nine countries and nearly **326 million LLINs** over the life of the project, potentially protecting nearly **652 million people**.

In Q3 FY 2024, the project engaged suppliers to expand market capacity for malaria commodities, promoted activities to reduce or mitigate stock risks, and fostered the quality of malaria commodities. Goals GHSC-PSM met for the malaria program in Q3 include:

Achieving OTD and OTIF. Continued to achieve OTD and OTIF at or above the target of 80 percent (94 percent OTD and 90 percent OTIF).

Engaging suppliers. Conducted 15 business review meetings with suppliers across commodity groups to exchange updates and discuss supplier performance, product pipelines, manufacturing facilities and capacity, and manufacturing expansion plans in Africa.

Implementing quality assurance (QA) strategies and innovations. Completed one method transfer, adding SP—an important new product—from an African manufacturer, furthering USAID's regionalization agenda. The project participated in net durability and value-based procurement discussions with several partners. GHSC-PSM initiated discussions with an LLIN manufacturer that compared active ingredient content results from various laboratories as part of the next steps of an out-

of-specification (OOS) investigation. The project also completed quality reviews of two products, making them eligible for procurement, and added four products to the eligible products list[12].

Adopting standard-based identification, barcoding, and data sharing. Produced the Recommended Identification, Capture, and Master Data Sharing Specifications for LLINs through the TraceNet Technical Working Group and shared this document with the Global Fund, PMI, and United Nations Children's Fund (UNICEF) for endorsement.

Identifying successful supply chain workforce development (WFD) activities. Prepared a joint report on the Malawi and Zambia assessments to identify the most successful and challenging WFD methods.

Testing an inventory management modeling tool for low-malaria-endemic settings. In Cambodia, implemented the inventory management modeling tool using the country's malaria cases data for 2023, and drafted a technical brief. The project applied the tool to revise the 2025 malaria quantification with the National Center for Parasitology, Etymology, and Malaria Control.

Producing technical resources. Drafted the technical brief, "Ensuring rational use of malaria medicines through drug use evaluation," describing the findings of drug use evaluations conducted in three hospitals in **Ethiopia,** to be published in Q4.

For more information, see Sections B2, Malaria and C3, Global Collaboration.

FP/RH

Over the life of the project, GHSC-PSM has delivered contraceptives to country FP programs estimated to **provide a potential 111 million couple-years of protection**.

This includes **4.6 million couple years of protection** in Q3.

In Q3 FY 2024, the project used FP/RH funds to document and share project-supported research, expand contraceptive choice, participate in global dialogues, support initiatives to increase supply chain visibility, improve stakeholder collaboration, expand access to data tools that increase supply chain visibility, and engage social marketing organizations, among other activities. Other FP/RH goals GHSC-PSM reached in Q3 include:

[12] One LLIN, one mRDT and two pharmaceuticals

Achieving OTD and OTIF. Delivered 89 percent of FP/RH commodities on time and 89 percent on time and in full in Q3.

Sharing best practices and lessons learned. Shared the second iteration of the Transition Order Supply Plan (TOSP) report with USAID, indicating that 83 percent of 35 countries met requirements through Q2 FY 2025 for supply plan visibility, 34 percent for anticipated funders for each planned shipment, and 83 percent of documented monthly consumption.

Enhancing the visibility of FP/RH supply data. Improved FP/RH supply data visibility through the Global Family Planning Visibility and Analytics Network (VAN) platform and processes. The project presented an overview of the VAN to the Burundi Ministry of Health (MOH), who expressed an interest in Premium VAN membership.

Tracking contraceptive security. Published findings from 12 years of Contraceptive Security Indicator (CSI) surveys on policy drivers of contraceptive prevalence and private-sector method-mix strategies in *Global Health Science and Practice*. Submitted the 2023 CSI report's first draft and published the 2023 CSI dashboard, enhancing user experience with global and country-specific indicator data.

Supporting social marketing engagement activities. Collaborated with social marketing organizations to gain visibility into their product needs and to encourage the distribution of unbranded products to mitigate supply chain disruptions while working with suppliers to accommodate branding requirements.

For more information, see section B3: Family Planning and Reproductive Health.

MNCH

GHSC-PSM **published one global MNCH supply chain resource** and contributed MNCH supply chain expertise and lessons learned to **five global events** in Q3.

GHSC-PSM has procured over **$28.8 million in MNCH drugs and commodities** over the life of the project.

In Q3 FY 2024, GHSC-PSM collected and shared new MNCH supply chain information and data, including strategies for MNCH commodity financing, newborn equipment and supplies, as well as commodity quality and availability for hypertensive disorders of pregnancy (HDP) and postpartum hemorrhage (PPH). The project provided tailored support to countries to procure MNCH

commodities, adjust MNCH supply chain policies and operations, and improve MNCH supply chain data analysis. Specific MNCH activities in Q3 include:

Achieving on-time delivery. The project achieved 100 percent OTD for MNCH products. In Nigeria, the project delivered Ready-to-use Therapeutic Food to several states. In Guinea, the project delivered amoxicillin, oral rehydration salts, and zinc—essential community health worker products.

Procuring MNCH commodities. GHSC-PSM supported the procurement process for MNCH commodities in six countries, including newborn supplies and equipment for Haiti, Mozambique, and Zambia.

Providing global technical leadership. GHSC-PSM co-chaired the Maternal Health Supplies Caucus and played a leadership role in the Caucus's new tranexamic acid working group, which aims to increase the availability of this critical PPH medicine. The project published How Improving Ethiopian Financing of Maternal Health Commodities Improved Medicine Availability. GHSC-PSM helped organize five global MNCH events to share supply chain knowledge, commodity financing, newborn respiratory equipment, and data analytics tools for improved commodity management.

Supporting data-informed MNCH decision making. GHSC-PSM helped Ethiopia, Ghana, and Liberia collect end-use verification (EUV) survey data for MNCH programs and submitted reports on these data to USAID. Survey results in Ethiopia indicated an impressive zero percent stockout rate of oxytocin at service delivery points (SDPs) and warehouse levels, and significant improvements in oxytocin cold storage following the project's information sharing on proper oxytocin management. The project continued implementing advanced analytics tools in select countries, including operationalizing the Consumption Anomaly Detection Tool in Liberia and Malawi. The project assessed the impact of this tool on MNCH commodity availability in Malawi; results will be available in Q4.

Increasing MNCH supply chain coordination and collaboration. In FY24, GHSC-PSM provided MNCH supply chain support to 14 countries. In Q3, Ghana, this resulted in a four-year budget projection for priority MNCH commodities to inform procurement for key regions of the country and quantified needs for newborn oxygen equipment, which the project will procure in Q4.

Facilitating adherence to MNCH best practices. Developed an implementation guide for caffeine citrate for newborn health with USAID; Medicines, Technologies, and Pharmaceutical Services (MTaPS) project; and Clinton Health Access Initiative (CHAI). GHSC-PSM and partners also collected sample HDP medicines in Ghana, Malawi, and Nigeria to test their quality.

For more information, see section B4: Maternal, Newborn and Child Health.

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. The project currently manages 29 offices at the country or regional level, supplemented by headquarters-based experts; these offices provide wide-ranging technical assistance to strengthen national health supply chains.

Q3 FY 2024 Country highlights:

- In **Rwanda**, GHSC-PSM developed a Network Design Optimization tool to assist RMS Ltd. to analyze storage and distribution capacity. The project recommended design options for a new set of hubs and central warehouses with optimal sizes and capabilities.

- In **Burundi, Ghana,** and **Zambia,** GHSC-PSM advanced global standards implementation to support traceability through targeted activities such as national traceability strategy development and implementation, product master data management strategy, and serialized inventory management.

- In **Côte d'Ivoire, Guatemala, Liberia, Senegal,** and **Sierra Leone,** the project trained participants from the MOH and partner staff to strengthen capacity in forecasting and supply planning using the Quantification Analytics Tool (QAT). (See section C2.)

- In **Eswatini, Ghana, Lesotho,** and **Uganda,** GHSC-PSM provided remote technical assistance to strengthen the implementation of activity-based costing/activity-based management (ABC/ABM). The project continued working with the Eswatini Central Medical Stores to implement a workplace organizational strategy in the commodity dispatch section of the warehouse. This organizational strategy, also known as the 5S methodology, is a set of principles to improve workplace efficiency.

For more information, see section C2: Systems Strengthening and Technical Assistance.

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 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 family planning.
- USAID's maternal and child health (MCH[13]) 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 3 below.)

A2. ABOUT THIS REPORT

We are pleased to present our performance report for the third quarter (Q3) fiscal year 2024 (FY 2024) (April 1, 2024, through June 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.

[13] 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.

- 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.
- Annex B provides **performance indicators** for April 1, 2024, through June 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 3. Countries for Which GHSC-PSM Procured Commodities (proc.) or Provided TA over the life of the project (does not include COVID-19 procurements)[14]

	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 Panama	●	●
Republic of South Sudan	●	●	Republic of Paraguay	●	
United Republic of Tanzania	●	●	Republic of Peru	●	
Togolese Republic	●		Federation of Saint Kitts and Nevis	●	
Republic of Uganda	●	●	Saint Lucia	●	
Republic of Zambia	●	●	Saint Vincent and the Grenadines	●	
Republic of Zimbabwe	●	●	Republic of Suriname	●	●
EUROPE & EURASIA:			Republic of Trinidad and Tobago	●	
Republic of Kazakhstan	●		MIDDLE EAST:		
Kyrgyz Republic	●	●	Hashemite Kingdom of Jordan	●	
Republic of Tajikistan	●	●	Republic of Yemen	●	
Ukraine	●				

[14]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 Q3 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 **25.8 million patient years of HIV treatment over the life of the project**, including over **921 thousand patient years of treatment in Q3**.

As of Q3, GHSC-PSM has delivered **98.5 million bottles of tenofovir/lamivudine/dolutegravir (TLD)**[15] to 34 countries,[16] which provided over **20.9 million patient years of treatment**.

Multi-month bottle counts of TLD first-line treatment accounted for **100 percent of all quantities delivered** in Q3. Patients saved **an estimated 7.5 million trips** to the pharmacy in Q3 and **more than 153 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 Q3, **29 countries**[17] procured HIV/AIDS medicines and commodities through GHSC-PSM**.**

A total 26 countries[18] **received health supply chain systems strengthening** from GHSC-PSM with HIV/AIDS funding in FY 2024.

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

[16] 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

[17] GHSC-PSM procured HIV/AIDS commodities for the following countries: AFRICA: Angola, Benin, Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, DRC, Eswatini, Ethiopia, Kenya, Liberia,Malawi, Mali, Mozambique, Namibia, Nigeria,Rwanda, Tanzania, Togo, Uganda, Zambia, and Zimbabwe. CENTRAL/SOUTH AMERICA: Colombia, Guatemala, Honduras, Panama, CARIBBEAN: Haiti, Jamaica; EUROPE & EURASIA: Ukraine

[18] 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 viral load 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 appropriately procure and distribute ARVs and diagnostics, 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.

DELIVERIES

In Q3, GHSC-PSM delivered over $109 million in HIV commodities to countries and over $3.84 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 4. In Q3, OTD was 86 percent. GHSC-PSM's on-time, in-full (OTIF) rate (Exhibit 5) 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 85 percent in Q3. See Annex A for further details.

Exhibit 4. Monthly HIV Commodities OTD

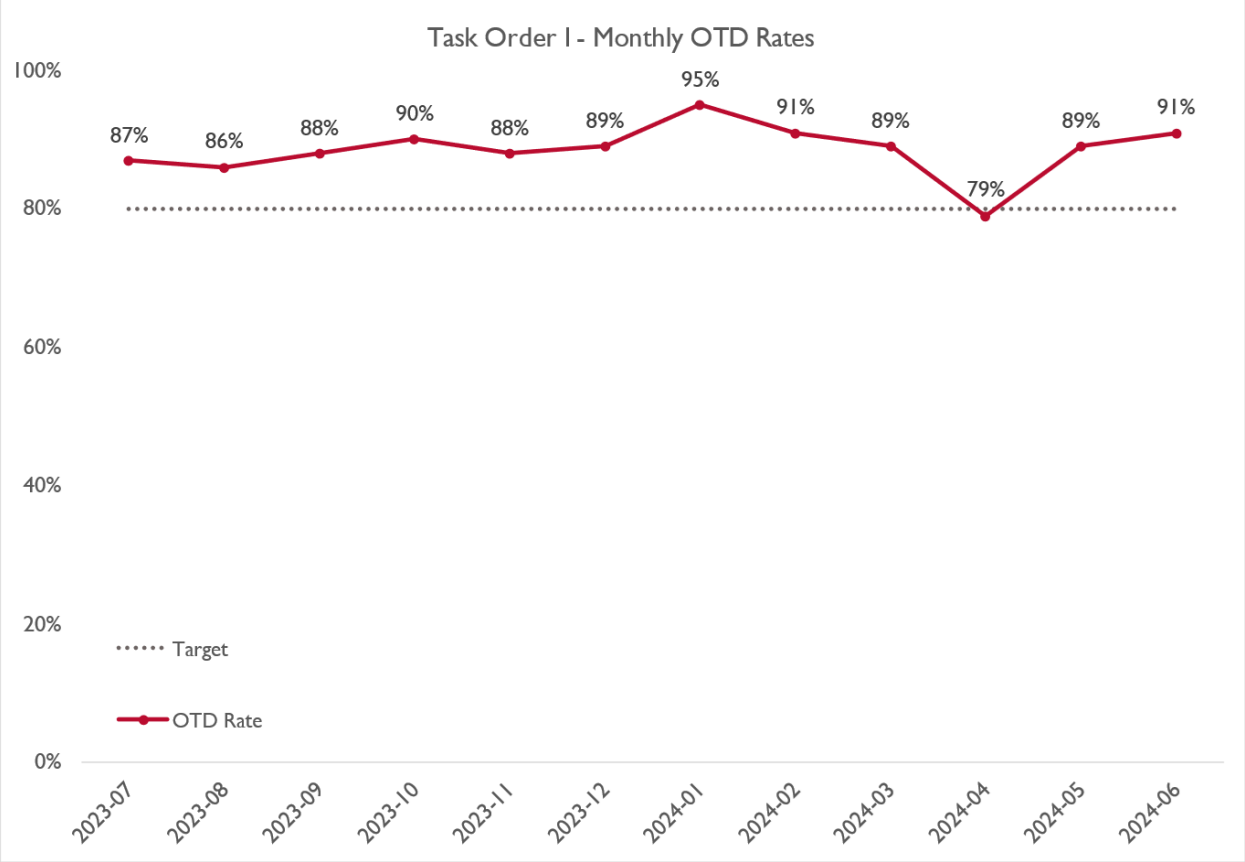
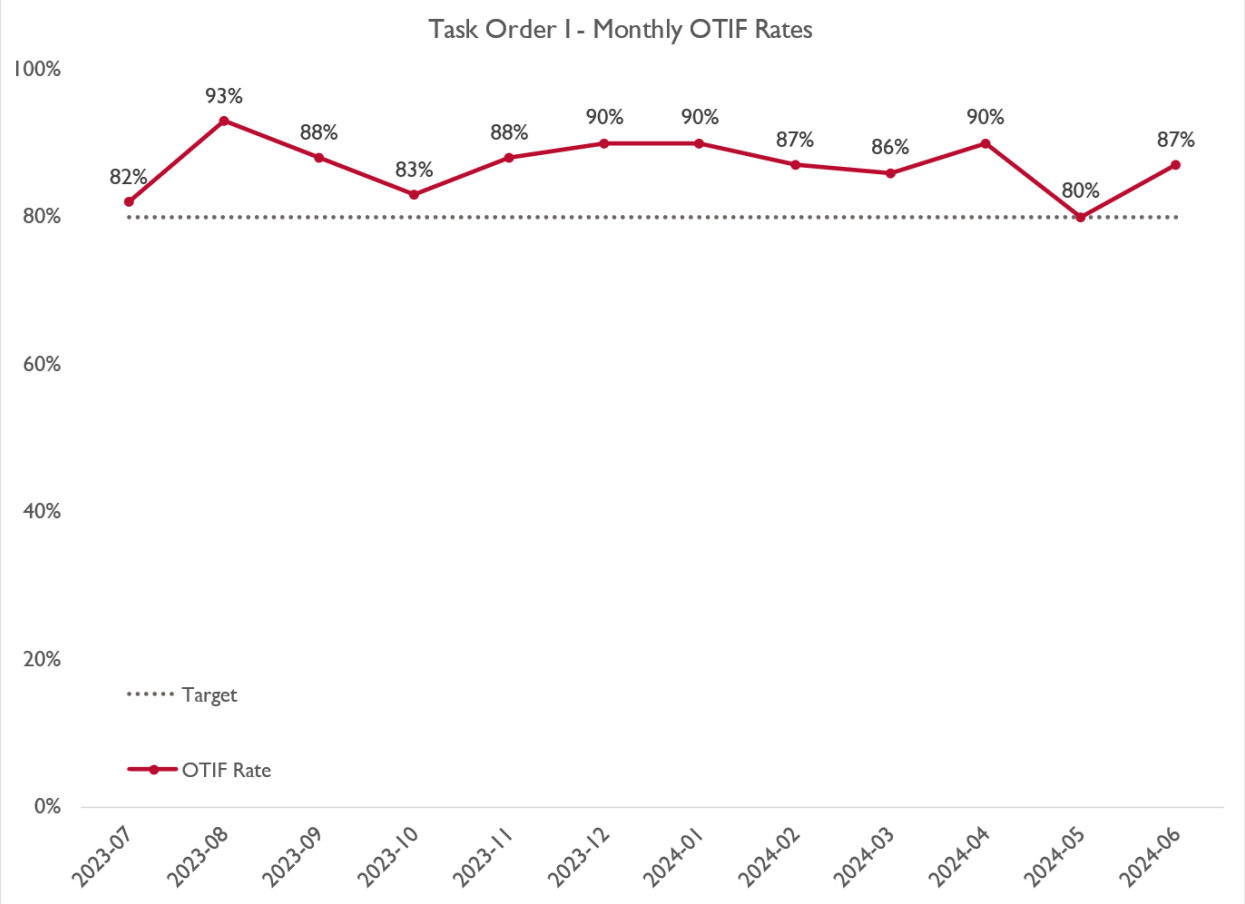


Exhibit 5. Monthly HIV Commodities, OTIF



SUPPORTING PEPFAR's HIV/AIDS AGENDA

Pre-exposure prophylaxis

Daily oral pre-exposure prophylaxis (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 Q3, GHSC-PSM delivered 1,740,405 bottles of PrEP products to ten countries.[19] Among those deliveries, the project worked with the supplier to deliver 105,984 bottles of TE to Zambia three weeks early to avoid a stockout. The project also expedited a second shipment of the same quantity that was originally planned for delivery in Q1 FY 2025. This shipment is now scheduled for delivery in Q4 FY 2024 to replace a delayed Global Fund order.

[19] Colombia, Malawi, Mozambique, Nigeria, Panama, Papua New Guinea, Tanzania, Togo, Zambia, and Zimbabwe.

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 under development, such as the long-acting injectable PrEP product long-acting cabotegravir (CAB-LA).

In Q3, the Bureau of Global Health Security and Diplomacy and USAID identified 12 priority countries for the introduction of CAB-LA for PrEP in FY 2024 to expand the choice of PrEP products in PEPFAR countries.[20] CAB-LA is registered in five of these 11 countries,[21] is pending registration in three others,[22] and will require registration waivers in the final three countries.[23] GHSC-PSM is working with stakeholders in each country to ensure the product can be imported with little to no delay.

In Q3, GHSC-PSM completed deliveries of 35,100 vials of CAB-LA 600 mg/3 ml to four PEPFAR countries[24] from stock that was pre-positioned in the Belgium regional distribution center (RDC) in Q2 and delivered another 66,300 vials of CAB-LA 600 mg/3 ml to the Belgium RDC. Also in Q3, the project processed new requisition orders of CAB-LA to be delivered to 11 countries in Q4.[25]

GHSC-PSM is collecting demand data from Malawi, Zambia, and Zimbabwe, where CAB-LA has been delivered. GHSC-PSM will use insights from these data 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. GHSC-PSM aims to ensure that clients using CAB-LA can continue treatment without disruption.

In Q3, the project continued to support the USAID Maximizing Options to Advance Informed Choice for HIV Prevention (MOSAIC) program. The project delivered 3,552 dapivirine rings to Kenya and continues to hold stock of the ring in its Dubai RDC to support MOSAIC programs in Kenya and Zimbabwe.

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 4.2 billion condoms (almost 4 billion male condoms and 60 million female condoms, plus personal lubricants) to 61 countries.

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

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

[22] Mozambique, Namibia, and Rwanda.

[23] Eswatini, Ethiopia, and Lesotho.

[24] Eswatini (4,725 vials), Malawi (5,400 vials), Zambia (20,250 vials), and Zimbabwe (4,725 vials).

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

In Q3, GHSC-PSM delivered more than 63.2 million male condoms, 617,000 female condoms, and 10.5 million sachets of personal lubricant to 13 countries.[26] The deliveries included 250,000 sachets of personal lubricants to Haiti. The product had been redirected and stored at a port in Jamaica, awaiting the security situation in Haiti to improve. The project also delivered an emergency order of 6.7 million no-logo condoms to Ethiopia.

In Q3, 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.

PEPFAR countries began placing condom orders again following the clearance of the annual congressional funding notice for the FY 2024 Condom Fund in early Q2. Facing a backlog of orders, GHSC-PSM devised a prioritization plan and coordinated with the RDC and suppliers who hold stock as part of the project's made-to-stock strategy. In Q3, the project processed and released 34 purchase orders for 14 countries. Since FY 2024 funding was made available in Q2, GHSC-PSM has issued 87 purchase orders valued at nearly $13 million (two-thirds of FY 2024 funding for condoms and lubricants).

Voluntary medical male circumcision kits

Male circumcision is cost-effective and reduces female-to-male sexual transmission of HIV by 60 percent. The World Health Organization (WHO) and Joint United Nations Programme on HIV and AIDS (UNAIDS) support voluntary medical male circumcision (VMMC) scale-up in 14 priority countries in sub-Saharan Africa with a high burden of HIV and low male circumcision prevalence. GHSC-PSM has delivered VMMC kits to 11 VMMC priority countries since the start of the project.[27] In Q3, GHSC-PSM delivered 43,545 VMMC kits to Tanzania and Zimbabwe.[28]

The Shang Ring device offers an alternative method of male circumcision. In Q3, GHSC-PSM began discussions with the Shang Ring device manufacturer to explore various volume discount opportunities. GHSC-PSM plans to conduct a sourcing event in Q4 to solicit prices and volume-based options for FY 2025.

In Q3, GHSC-PSM participated in the 2024 USAID Global Health Supply Chain Program-Quality Assurance (GHSC-QA)-led audits of five VMMC kit manufacturers in China.[29] During this visit, GHSC-

[26] Angola, Burkina Faso, Cameroon, Côte d'ivoire, Eswatini, Ethiopia, Haiti, Malawi, Mali, Mozambique,, Tajikistan, Togo, and Uganda.
[27] Botswana, Eswatini, Ethiopia, Malawi, Mozambique, Namibia, Rwanda, South Africa, Tanzania, Uganda, and Zimbabwe.
[28] VMMC kits delivered were as follows: 28,045 single-use essential consumables kits were delivered to Tanzania and 15,500 reusable instruments for dorsal slit kits were delivered to Zimbabwe.
[29] Two VMMC kit kitting facilities, two VMMC kit sterilizing facilities, and one device manufacturer

PSM presented the supplier with a comprehensive analysis of procurement trends, future demand, and other information, including the project's overarching VMMC programmatic goals.

The visit's main objective was a quality assurance audit; however, GHSC-PSM also discussed the impact of manufacturers' production activities on their ability to meet client needs, emphasizing the importance of maintaining the on-time availability of products. A key aspect of the GHSC-QA audit was evaluating how effectively the supplier manages customer feedback, complaints, and non-conformance issues. This aligns with GHSC-PSM's commitment to continuous improvement. The insights gained from these audits were instrumental in refining GHSC-PSM's VMMC procurement strategies and enhancing the overall quality of VMMC products supplied, ensuring they meet the highest safety standards required by USAID and receiving countries.

Essential medicines

In Q3, GHSC-PSM hosted an in-person meeting with a supplier to review their quarterly performance and discuss several topics. These included strategies for maintaining high performance and exploring more local sourcing options; the impact of registration costs on the supplier's ability to expand or maintain product registrations in specific countries; and the project's regionalization strategy.

On the strategic sourcing side, GHSC-PSM met with USAID and GHSC-QA to align on future opportunities related to regionalization goals, i.e., to source more products from African sources.[30] The project also conducted market dynamics research to support any future strategy shifts in this area.

To further improve the availability of essential medicines, GHSC-PSM addressed the challenge of cryptococcal meningitis, a leading opportunistic infection among people with advanced HIV. Recent WHO guidelines recommend amphotericin B (liposomal) in combination with flucytosine for treating cryptococcal disease, and most low- and middle-income countries have adopted these guidelines.

In Q3, GHSC-PSM advanced contract negotiations with the manufacturer of amphotericin B liposomal. This direct procurement strategy aims to secure market access pricing, ensuring product availability at reduced costs for PEPFAR-supported countries. Concurrently, the project identified an alternative source for interim product requests to ensure near-term product availability.

GHSC-PSM prepared for a Q4 local wholesaler procurement activity in Zimbabwe. This activity is crucial to support Zimbabwe—a PEPFAR partner country with stringent registration requirements—by conducting a landscape analysis to identify potential local sources, manufacturers and wholesalers for essential medicines. GHSC-PSM collaborates with GHSC-QA to ensure that identified sources meet required quality standards and can be considered for procurement once eligible.

[30] Wholesalers and manufacturers

Tuberculosis preventive treatment

As the leading cause of morbidity among PLHIV, tuberculosis (TB) causes over a third of all AIDS-related deaths. The 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 Q3, the project placed a procurement of 3HP 300 mg/300 mg fixed-dose combination (FDC) tablets on hold after USAID approved the letter of recommendation issued by GHSC-QA. The procurement hold will be in place until GHSC-QA resolves the investigation. Until then, there is only one eligible supplier for 3HP FDC, creating potential supply constraints. GHSC-PSM worked with PEPFAR-supported countries to process 3HP FDC orders as early as possible to avoid potential delays.

In Q3, GHSC-PSM delivered 46,127 36-count packs of 3HP 300 mg/300 mg FDC tablets.[31]

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.[32] In addition to 3HP, other TPT regimens include:

1. one month of daily rifapentine plus isoniazid (1HP);
2. three months of daily isoniazid and rifampicin (3HR); and
3. four months of daily rifampicin (4R).

GHSC-PSM supports PEPFAR countries in procuring isoniazid, rifapentine, and isoniazid/rifampicin co-formulated formulations to support the implementation of various TPT regimens when the demand arises and for unique sub-patient populations. In Q3, GHSC-PSM delivered five orders to three countries.[33]

[31] 2,500 packs to Burundi, 13,500 packs to DRC, 19,743 to Zambia, and 10,384 to Zimbabwe

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

[33] 1) 947 packs and 1,000 packs of isoniazid 100 mg dispersible tablet, 10x10 strip-pack tablets to Burundi and Zimbabwe; 2) 4,250 packs of isoniazid 300 mg tablet, 24x28 blister-pack tablets to Angola; 3) 6,827 packs of rifapentine 150 mg film-coated tablet, 8x3 blister-pack tablets to Burundi; and 5) 2,300 packs of rifapentine 300 mg film-coated tablet, 10x10 strip-pack tablets to Burundi.

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 the 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 Q3, the project reported three 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 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 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.

GHSC-PSM continued to target nine D-Term priority high-volume ARV countries.[34] In Q3, the project issued 59 percent of purchase order lines under D-Terms (61 of 103). This raised the percentage of orders placed under D-Terms in FY 2024 to 55 percent (149 of 270).[35] By value, 81 percent of ARV orders placed in FY 2024 through Q3 were under modified DAP and DDP Incoterms ($135 million of $168 million). D-Term suppliers delivered 69 orders to eight D-Term countries under modified DAP and modified DDP Incoterms in Q3.[36]

[34] 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.

[35] 149 of 265

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

Supplying TLD

Over the life of the project, GHSC-PSM has delivered more than **98.5 million bottles of TLD**[37] to **34 countries**.

This is enough to provide over **20.9 million patient years of TLD treatment**.

As of Q3, GHSC-PSM has delivered over **66 million 90-count bottles of TLD to** 31 countries.

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 98 million bottles of TLD, including more than 66 million 90-count bottles, 28 million 30-count bottles, and 4 million 180-count bottles.

In Q3, GHSC-PSM delivered 3.3 million TLD 90-count bottles to 7 countries[38] and more than 165,000 180-count bottles to Benin, Burkina Faso, Côte d'Ivoire, and Democratic Republic of the Congo (DRC).

Multi-month bottle counts of TLD first-line treatment accounted for 100 percent of all quantities delivered in Q3. Patients saved an estimated 7.5 million trips to the pharmacy in Q3 and more than 153 million trips over the life of the project. MMD saves patients time and money and gives clinicians more time with other patients in need.

In FY 2023, 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 seven business days.

In Q3, the project fulfilled 94 percent of TLD orders through this annual allocation procurement approach or from vendor-managed solution (VMS) warehouses in South Africa, achieving a significant milestone by reducing the need to pre-position TLD at the RDCs.

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

[38] Eswatini, Mozambique, Nigeria, Tanzania, Ukraine, Zambia, Zimbabwe.

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. Under the VMS program, GHSC-PSM achieved a treatment cost of under $40 per patient per year, a five percent price reduction, for inventory pre-positioned in Southern Africa by the supplier.

In Q3, the three VMS supply partners delivered more than two million bottles of TLD from VMS warehouses to Eswatini, Mozambique, Zambia, and Zimbabwe. GHSC-PSM issued its first VMS order to an intermediary warehouse in Mozambique (Chimoio). This aligns with the project's work plan objective for downstream VMS deliveries that bypass Central Medical Stores. GHSC-PSM expects to meet an estimated demand of 5.5 million bottles of TLD 90 through the VMS program in FY 2024.

In Q3, GHSC-PSM completed a baseline assessment report summarizing Mozambique's healthcare landscape, identifying key challenges and bottlenecks in the TLD supply chain. The assessment identified significant capacity constraints in regional warehouses and funding limitations for in-country distribution that add complexity to planned distribution routes. In Q4, GHSC-PSM will hold a sourcing event to explore opportunities to support the three regional and central warehouses by delivering directly from VMS warehouses to 15 intermediate and provincial warehouses in Mozambique.

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 Q3, GHSC-PSM delivered 219,747 bottles of DTG 10 mg valued at $956,435 to five countries.[39] These deliveries assist countries in maintaining children living with HIV on DTG-based regimens.

[39] Benin, Cameroon, Nigeria, Tanzania, and Ukraine.

The next step in pediatric treatment optimization is introducing a more convenient DTG-based formulation for CLHIV. In Q3, GHSC-PSM continued working 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 country program readiness for the drawdown of DTG-10 and ABC/3TC and the uptake of pALD. In Q3, the project shared this assessment with the PEPFAR Pediatric Treatment Workstream and the Global Fund to collaborate on introducing pALD.

In Q3, GHSC-PSM delivered its second shipment of pALD, 20,365 packs of 180-count pALD tablets to Zambia. The project also ordered 4,671 packs of 180-count tablets for Zambia, with delivery expected in Q4. A Q2 order of 20,304 packs of 180-count tablets for Zimbabwe, scheduled for delivery in Q3, was delayed due to a U.S. Food and Drug Administration audit of the manufacturing site, with delivery scheduled for Q4.

"We are happy to receive the new form of ARVs for children. This is a significant milestone in the

In Q3, GHSC-PSM issued master orders[40] for two low-volume pediatric products, nevirapine oral suspension (OS) and zidovudine OS. The project issued a master order for 30,000 100 ml bottles of

[40] 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.

nevirapine 10 mg/ml OS, for which GHSC-PSM plans to issue an allocation order for Mozambique in Q4. GHSC-PSM issued an additional master order for 12,000 240 ml bottles of zidovudine 10 mg/ml solution w/syringe, from which the project plans to issue an allocation order to supply 5,132 bottles to Nigeria and ship 6,838 bottles to RDC Dubai in Q4 to meet future demand from countries.

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 toward achieving this goal in Q3, including the capacity strengthening workshop in Ethiopia to promote the expansion of all-inclusive service-level agreements (SLAs) in all PEPFAR-supported countries.

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 request for proposal (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.

Maintain the gains of the global pricing and SLAs for all PEPFAR-funded procurements.

Preliminary data analysis shows that in Q3, GHSC-PSM delivered 4.62 million viral load (VL)/early infant diagnosis (EID) tests valued at approximately $49.6 million, saving approximately $15.4 million under the terms of the global SLAs.[41]

Life of project savings on VL/EID tests delivered by GHSC-PSM since 2020 was more than $148 million.[42] Cumulative savings on all VL/EID tests delivered for GHSC-PSM and other PEPFAR buyers since 2020 were more than $164 million.[43] This represents significant cost savings, averaging $2–3 savings per test in Q3.

[41] Compared to 2019 pre-global RFP prices

[42] Compared to the pre-RFP prices

[43] 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.

GHSC-PSM's key performance indicator (KPI) data collection and performance management process with global VL manufacturers continued in 21 countries.[44] In addition to KPI management training, GHSC-PSM supports countries' management of the KPI reporting process. The project holds monthly calls with one of the global VL suppliers, focusing on testing failure rates and quarterly business reviews of the 10 standardized KPIs with all the global VL suppliers.

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 technical working group, including the Ministry of Health (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 Q3, GHSC-PSM made progress toward integrating performance data from all manufacturers into the project's automated test reporting system. The project and manufacturers met weekly to determine the data and content of the manufacturers' report and tested data transfer between the manufacturer's reporting system and GHSC-PSM's database.

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 Q3, GHSC-PSM continued bi-weekly EWEA deep-dive presentations to the USAID laboratory and data teams 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 Q3, the project has conducted deep dives for 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

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

immediately following the execution of the updated global SLAs with the three VL suppliers.[45] 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 Q3, the project held a workshop in Ethiopia to assist non-GHSC-PSM actors in 10 Wave-2 countries with setting up, contracting, and implementing the all-inclusive reagent rental model with global diagnostic equipment manufacturers. GHSC-PSM presented modules on change management, the SLA implementation approach, pricing, key elements of supply chain management, KPI management, VIPMA, vendor-managed inventory (VMI), and instrument placement. Participants included representatives from 10 countries, USAID, the Centers for Disease Control and Prevention (CDC), the African Society for Laboratory Medicine (ASLM), the Ethiopian MOH, and PEPFAR implementing partners. 74 participants represented 24 organizations. By the end of the workshop, participants reported confidence in the steps required to implement all-inclusive SLAs in their countries. They appreciated the importance of having a signed VIPMA and embraced the strategic approach to add VMI to their diagnostic procurement.

Ensure a smooth and continuous supply chain to minimize expiries and stockouts for PEPFAR SLAs. In Q3, GHSC-PSM delivered laboratory supplies to 22 countries.[46]

In Q2, the project received a request to supply reagents and consumables for a newly installed instrument in Cameroon. The procurement was on hold while GHSC-PSM transitioned responsibility for in-country distribution of the consumables and frozen reagents to another party selected by the USAID Mission. In Q3, USAID instructed the project to proceed, and GHSC-PSM worked with the manufacturer to fulfill the request.

In El Salvador, the project works directly with the manufacturer rather than with local agents in-country. In Q3, the manufacturer included temperature monitoring devices with the delivery of lab commodities, and discussions continue between the project and the manufacturer about including these devices in future shipments to ensure the integrity of orders.

[45] 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.
[46] Angola, Burkina Faso, Burundi, Cameroon, DRC, Côte d'Ivoire, Eswatini, El Salvador, Ethiopia, Haiti, Honduras, Jamaica, Kenya, Malawi, Mozambique, Nigeria, Tanzania, Togo, Uganda, Ukraine, Zambia, and Zimbabwe.

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 in the Laboratory Networks section of C2: Systems Strengthening Technical Assistance.

Accurate FASP is critical to a successful supply chain. In Q3, GHSC-PSM provided 32 countries[47] 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, and supply plan reviews. As of Q3, more than 10 countries use QAT to forecast VL and EID commodities.

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 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 Q3, GHSC-PSM:

- In **Nigeria,** the VMI pilot activity with a global VL supplier continued. GHSC-PSM, PEPFAR, and the Nigerian Ministry of Health Laboratory Units are partnering with the supplier to co-create and implement a VMI approach, which will gradually transfer inventory management 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

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

humanitarian programs, leveraging market-based approaches to accelerate countries' progress on the development trajectory. In Q3, the manufacturer resupplied three laboratories.

- In **Mozambique,** the project delayed extending the VMI pilot to two additional laboratories while stakeholders, including the MOH and PEPFAR, conducted a joint review of the scope of work (SOW) and addressed all challenges encountered in the first phase of the pilot. The project expects a modified SOW to be completed and added to the Basic Ordering Agreement for modification in Q4.

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.

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, HIV RTKs, and VL/EID tests.

In Q3, GHSC-PSM reported monthly on 24 unique commodity stockout risks across 13 countries. The most common causes of stockout risks were product expiry, late order placement of host government–funded orders, late delivery of host government-funded orders, late order placement of Global Fund–funded orders, and actual product consumption higher than forecast. The products most commonly reported as at risk of stockout were VL/EID tests (10 risks), adult ARVs (five risks), pediatric ARVs (five risks), and HIV RTKs (three risks).

In Q3, the project resolved 13 commodity stockout risks. The most common resolutions were deliveries funded by USAID (six) or deliveries funded by host governments (four). 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 Q3, 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 this reporting period, the total compliance scores by area for the 653 TO1-specific task order items in-scope were:

- Identify [Global Trade Item Number/Global Location Number (GTIN/GLN) collection]: 91 percent.
- Capture (standards-compliant barcoding on labels): 74 percent.
- Share [Global Data Synchronization Network (GDSN) data synchronization]: 77 percent.

Traceability Interoperability Platform

In Q3, GHSC-PSM continued developing the Traceability Interoperability Platform (TIOP), a semi-centralized architecture to enable the exchange of serialized traceability data between suppliers, country-national regulatory authorities, and procurement agents. The TIOP pilot is being implemented among 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 Q3, GHSC-PSM:

In **Botswana**, organized an ARV quantification workshop that convened key partners, stakeholders, and members of the national Technical Working Group for Integrated HIV Products Costing and Forecasting. Despite Botswana's achievement of 95-98-98 on the UNAIDS targets for HIV epidemic control, there is a gap in technical capacity for modeling ARV transitions. Stakeholders revised the transition plan to a dual therapy ARV regimen (lamivudine and dolutegravir) and the introduction of pALD. Participants prepared an updated five-year forecast and a 24-month supply plan and shared them with the Central Medical Store (CMS). These updated forecasts will inform ARV procurement plans. The technical support will avert stockouts of ARVs and build quantification capacity within the MOH, helping to sustain Botswana's gains in the epidemic control of HIV.

In **Burundi**, implemented a diagnostic network optimization (DNO) approach to ensure equitable access to HIV testing and other diagnostic services nationwide. This approach includes redistributing equipment to areas where it can be used more effectively and enhancing training for laboratory staff. The process is spearheaded by several DNO champions for laboratory efficiency, including Virginie Nahishakize of the Burundian MOH. *"Our work with USAID on DNO will transform laboratory management and organization in Burundi by ensuring an equitable distribution of testing equipment across the country, eliminating the underutilization of certain machines, decreasing the turnaround time for results, and reducing transportation costs."* Full story available here.

In **Eswatini**, collaborated with the MOH, PEPFAR, andGlobal Fund to develop the CAB-LA for PrEP implementation plan and supported PEPFAR and Global Fund to forecast demand for the long-acting injectable PrEP. PEPFAR approved an initial order of 53,673 vials for Eswatini, and the project delivered the first tranche of 4,725 vials. Eswatini was one of four PEPFAR countries to receive delivery of CAB-LA in Q3 and is one of nine countries scheduled for CAB-LA deliveries in Q4.

In Ghana, contributed to disease testing efficiencies. Six tuberculosis testing sites in the Western North Region transport and test VL and EID samples for the Bono Region, a region more than 240 km away. This system was costly, time-consuming, and led to lost results. GHSC-PSM and the Ghana Health Service piloted Expanded HIV GeneXpert multi-disease testing, using the six TB GeneXpert devices in the region to test for HIV VL and EID. The pilot improves the accessibility and efficiency of HIV testing services by establishing an effective and integrated diagnostic system that would contribute to the country's HIV goals of ensuring that 95 percent of clients on antiretrovirals achieve viral suppression. In Q3, over 40 days the pilot tested 1,318 samples; 52 percent were HIV VL samples; 42 percent, TB sputum tests; and 6 percent, EID tests. On average, the turnaround time for results decreased significantly from 60 days to seven days.

In **Jamaica,** delivered equipment and supplies valued at $250,000 to Jamaica's National Laboratory Services to assist with testing related to the recent dengue fever outbreak. Speaking at the handover event on behalf of USAID/Jamaica, Dr. Andrea Brooks Hanson said the donation will help to save lives. Dr. Marlene Tapper, director of the National Laboratory Services, praised the timeliness of USAID's contribution and highlighted the strength of Jamaica's international partnerships and shared commitment to improving public health. The Jamaica Gleaner published an article on USAID's contribution following the handover event.

In **Nigeria**, continued to contribute to expanding laboratory services. Sex workers living with HIV are among the hard-to-reach key populations in HIV case management. They are often reluctant to visit health facilities for routine VL tests for fear of discrimination and stigma. Laboratory services are a key component of a comprehensive health system, providing essential diagnostic services so patients receive appropriate medical care. With support from USAID, GHSC-PSM plays a leading role in helping countries expand and transform their laboratory services to be more cost-effective, efficient, and responsive to patient needs. The Nigerian Federal Ministry of Health established community-based one-stop shops to scale up HIV prevention, treatment, and care for key populations. These one-stop shops cater to more than 79,000 recipients of care across 56 locations and are designed to meet people where they are. *"Instead of waiting for them to come to us, we move to the streets to counsel them, give them antiretroviral therapy, and collect their specimens for viral load testing,"* says Joffrey Okoeguale, the laboratory focal person at one of the community one-stop shops in Abuja. Read 24-year-old Theresa's story.

In **Uganda**, worked with the MOH and USAID Mission to alleviate an impending stockout of DTG 50. The project identified the available stock of DTG 50 in Zambia as the quickest option to avert the anticipated stockout in Uganda. Coordination among ministries of health, USAID, and the project led to the success of this operation. In Q3, Uganda received the delivery, followed by immediate distribution to health facilities. The MOH in Uganda expressed gratitude to the MOH in Zambia through a letter acknowledging the DTG donation and pledging continued cooperation and collaboration between the two countries.

B2. MALARIA

Delivered more than **584 million** artemisinin-based combination therapies (ACTs) to treat **malaria infections over the life of the project**, including **23 million** in Q3 FY 2024.

A total 23 countries[48] received health systems strengthening support with malaria funding in FY 2024.

GHSC-PSM delivered malaria medicines and commodities to 26 countries in Q3 and 31 countries over the life of the project.

Delivered enough long-lasting insecticide-treated nets (LLINs) to provide **protection from malaria for over 13 million people in Q3 and nearly 652 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 Q3 f FY 2024 demonstrate the commitment of GHSC-PSM and USAID to this vital mission of eliminating malaria and saving lives.

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 Q3, GHSC-PSM conducted 15 business review meetings with malaria rapid diagnostic test (mRDT) and LLIN suppliers. In the meetings, the project and suppliers exchanged updates and discussed supplier

[48] 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.

performance, product pipelines, manufacturing facilities and capacity, and plans to establish or expand regional manufacturing in Africa as per PMI priorities.

In Q3, GHSC-PSM placed orders for more than half of its final volume allocation for the dual AI LLINs with suppliers, and all remaining orders are to be placed in Q4.

Procurement and delivery

In Q3, GHSC-PSM procured malaria commodities, with a total value of $61.3 million, for 24 countries.[49]

In Q3, GHSC-PSM delivered malaria commodities worth more than $44 million to 26 countries.

On-time and on-time in full delivery

The timeliness of GHSC-PSM deliveries remained consistent for standard OTD and OTIF. In Q3, the OTD rate for malaria commodities was 94 percent (see Exhibit 6). The OTIF rate in Q3 was 90 percent (see Exhibit 7).

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

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

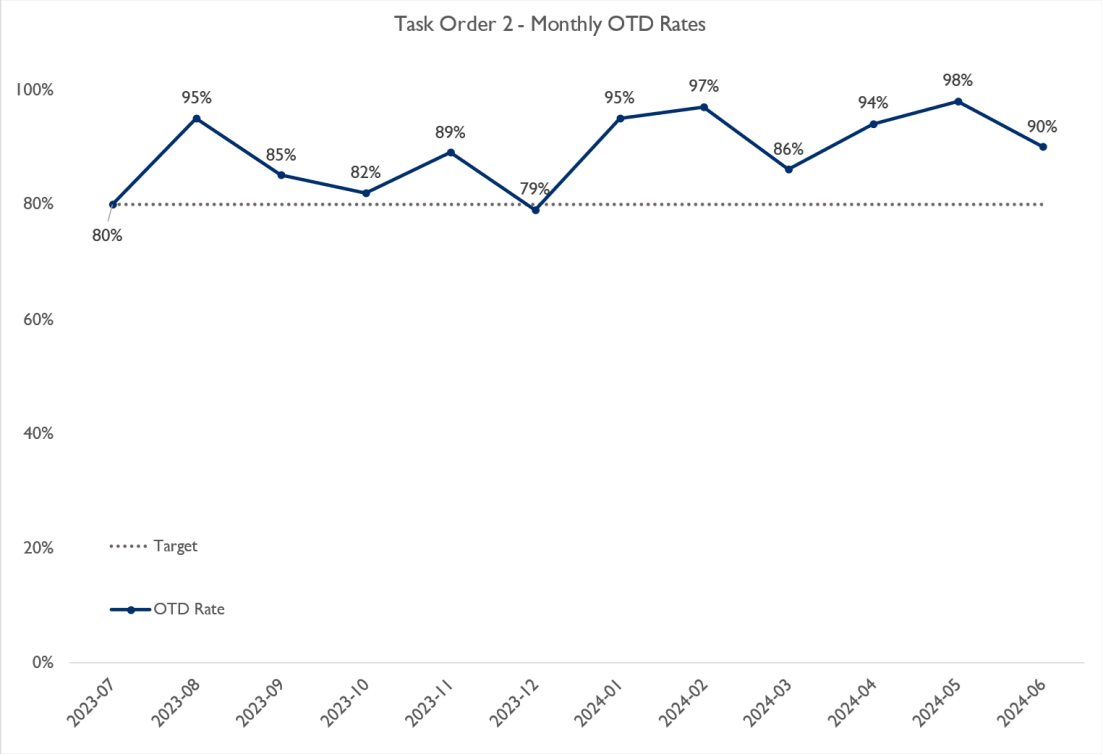
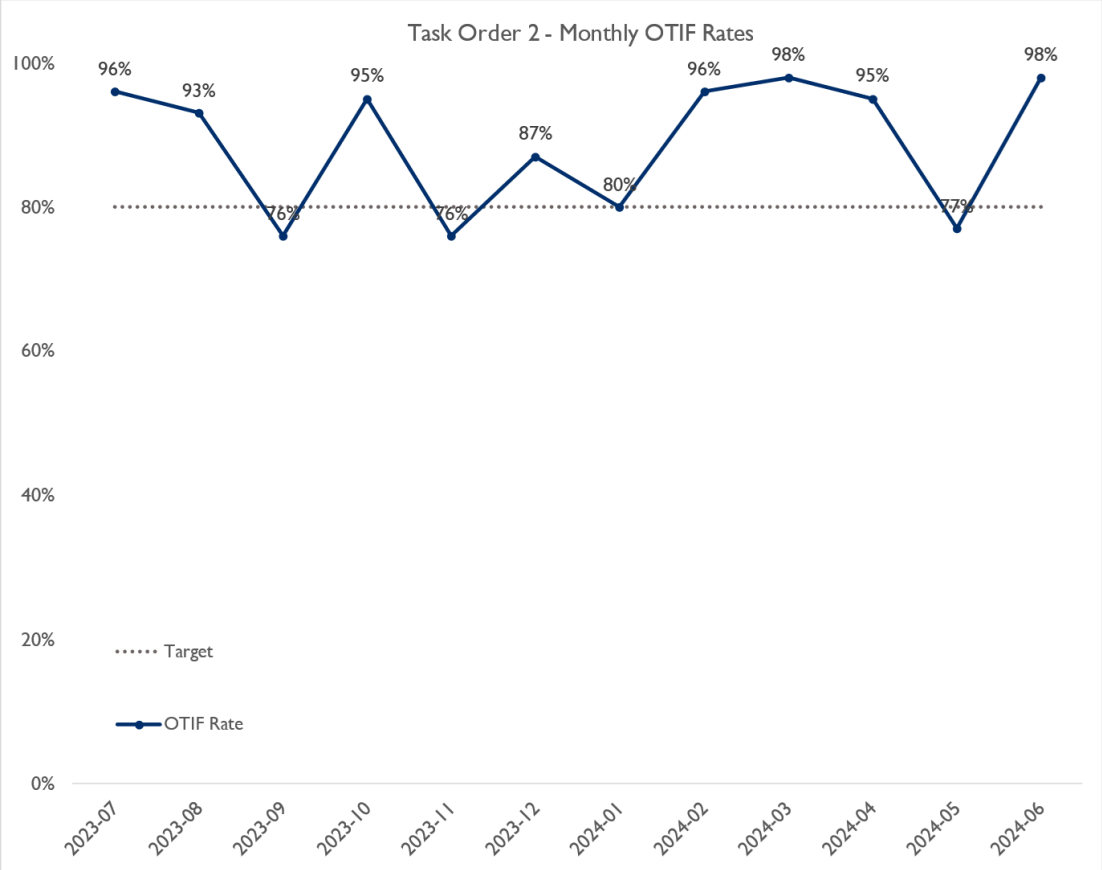


Exhibit 7. Monthly On-Time, In-Full Rates for Malaria Commodities



GLOBAL SOURCING COLLABORATION

GHSC-PSM participates in the Malaria Pharmaceuticals (Pharma) Task Force,[50] mRDT Task Force,[51] Vector Control Access Task Force,[52] and LLIN Donor Collaboration meetings.[53] These groups are valuable forums for exchanging information on market risks and improving collaboration across the global malaria community.

In Q3, members of the Malaria Pharma Task Force and the KSM/API working group shared the following updates:

[50] 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.

[51] 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.

[52] 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.

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

- **CHAI** shared that Imperial College London is developing an ACT volume and budget scenario analysis, estimated to be completed by the end of calendar year 2024. This long-term forecast will include a radical cure update incorporating tafenoquine to combat the *Plasmodium vivax* parasite.

  CHAI is conducting an additional deep dive with Impact Malaria on demand forecasting that is expected to be available in Q4, and will enable users to see the budgetary impact of different ACT treatment uses, considering artemisinin resistance and treatment failure rates.

- **Gates Foundation and MedAccess** are developing volume guarantees to bring generic artesunate/pyronaridine to the market in 2026. PATH, CHAI, MMV, and Medicines for All Institute (M4ALL) are contributing to the market and technical preparatory analysis on supply availability. Gates Foundation continues to support the development of semi-synthetic artemisinin and artesunate and non-artemisinin-based drugs in the long-term. M4ALL is lowering the cost of pyronaridine API and working with MMV to ensure that the information is transferred to manufacturers.

- Surveys conducted by **PATH** indicated that most API and artemisinin-based suppliers can incorporate semi-synthetic artemisinin into their finished products. Respondents shared that their main challenge was the requirement for procurers to provide a blended price considering the use of both semi-synthetic artemisinin and vegetal artemisinin, as opposed to their preference for two separate prices for those with vegetal artemisinin and semi-synthetic artemisinin.

- An existing ACT supplier informed stakeholders of its ability to produce semi-synthetic artemisinin at a competitive price. The company is currently looking for strategic partners to proceed.

- WHO shared that sulfadoxine/pyrimethamine (SP) and sulfadoxine-pyrimethamine + amodiaquine (SPAQ) dispersible tablets, SP hard tablets, and 120 mg injectable artesunate became pre-qualified during Q3.

In Q3, Solvoz and IDA Foundation presented a study to the members of the mRDT Task Force, on downstream and upstream sustainability of mRDTs with WHO pre-qualification (PQ). The downstream study focused on how mRDT waste is treated to assess the product's end of life management and possible health, social, and environmental impact. The upstream study assessed current material compositions of the components of mRDTs with WHO PQ. Key concerns from both studies were shared, along with feedback from mRDT suppliers on the implications of changing any of the mRDT

components to further sustainability efforts. The feedback related to price and the timeline for submitting changes and receiving WHO PQ approval.

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 Q3, the project responded to the following challenges and updated PMI:

- An ACT supplier experienced a three-month delay in goods availability dates (GADs) for Senegal. To mitigate the impact of the supplier's delay, the project split the orders to ship a portion by air and the remainder by ocean.
- An mRDT supplier experienced GAD delays on an order to Sierra Leone due to an issue with its packaging component supplier. GHSC-PSM mitigated this issue by sourcing from an alternative supplier.
- There are severe global supply constraints related to chlorfenapyr dual AI nets. GHSC-PSM is working with PMI and LLIN suppliers to prioritize orders.

RAPID FULFILLMENT STRATEGY

The project uses a strategy where the RDC stockpile and vendor-stored inventory (VSI) work in tandem as critical mechanisms to fulfill a) "emergency" and b) "urgent" orders for AL.[54] The RDC maintains stock that is quality control (QC) 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 alignment with the FY 2024 work plan, GHSC-PSM applies the VSI strategy for AL to avoid stockouts. In Q3, GHSC-PSM used VSI to fulfill two urgent orders of AL 20/120 mg hard tablets for Côte d'Ivoire and Mozambique. In addition, GHSC-PSM fulfilled two emergency orders through the RDC stockpile of AL 20/120 mg dispersible tablets and AL 20/120 mg hard tablets to Côte d'Ivoire and Mozambique.

[54] 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.

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 rapidly moves these commodities by leveraging 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.

In Q2, GHSC-PSM procured SPAQ to address unforeseen demand across all countries for the FY 2025 seasonal malaria chemoprevention campaigns. The SPAQ was delivered to the Belgium RDC in Q3.

QUALITY ASSURANCE

Collaboration

GHSC-PSM plays a leadership role among global stakeholders in the LLIN QA space as the LLINs Quality Assurance Group (LQAG) chair. In Q3, the LQAG discussed LLIN stability, shelf life, storage, and transportation and submitted questions to the WHO Vector Control Team (VCT) to better understand data generation requirements and their application to new and existing WHO PQ nets in the updated WHO PQ guidelines. Responses from the WHO VCT indicated that additional data are required to further define requirements for stability, shelf life, storage, and transportation.

In Q3, the project also participated in a discussion with CHA; Innovation to Impact (I2I), and PMI on net durability and value-based procurement. CHAI and I2I proposed that global procurers such as PMI use value-based procurement based on net durability and include the resistance to damage (RD) score for net allocation activities, because data suggest a correlation between a net's physical durability and the RD score. The project offered support in implementing and monitoring the RD score if PMI decides to explore this initiative.

In Q3, the project received responses from suppliers regarding inquiries about their initiatives to assess and mitigate the risk of nitrosamine impurity in their finished pharmaceutical products. Supplier responses included activities such as reviewing their manufacturing processes and raw materials to finished product testing, determining the risk of nitrosamine impurity in their malaria pharmaceutical products, and monitoring nitrosamine levels if present. The project met with the Global Fund to discuss findings and noted discrepancies in responses for further follow-up.

Implementing strategies and innovations

The project continues to actively participate in market-shaping activities. In Q3, the project was consulted to provide feedback to the WHO on the content of their paper, "Collaborative Procedure between the WHO and National Regulatory Authorities in the Assessment and Accelerated Registration of WHO-Prequalified vector control products." This initiative is to streamline and expedite

the registration process of WHO prequalified nets with national regulatory authorities, thereby improving accessibility to new and innovative products.

FOSTERING QUALITY IN MALARIA PRODUCTS

Malaria LLIN products

In Q3, as part of the next steps of an out-of-specification (OOS) investigation, the project initiated discussions with an LLIN manufacturer to compare active ingredient content results obtained from various laboratories. This effort was in response to a supplier's concern that GHSC-PSM's third-party AI content results trended lower than the supplier's certificate of analysis, and to determine the appropriate testing laboratory for the new batches of LLINs replacing the rejected OOS batches. GHSC-PSM worked with the supplier to delineate a protocol for comparative piperonyl butoxide (PBO) AI content testing and completed the testing at two of the supplier's laboratories and two of GHSC-PSM's third-party laboratories. Testing results from all four laboratories showed no significant difference in PBO AI content. GHSC-PSM notified the supplier that with no evidence to amend the testing of the supplier's product, testing can continue at the designated primary laboratory for the product. The project proceeded with testing replacement batches at the primary laboratory. The tests yielded passing results, and the project accepted the batches.

Malaria pharmaceutical products

In Q3, GHSC-PSM completed an OOS investigation on the particle size of artesunate (ASU) powder for the ASU injectable 60 mg product. GHSC-PSM's third-party analytical testing laboratory initially reported that the ASU powder in three kit batches of ASU injectable 60 mg had a particle size ≥10 µm greater than the 6,000 maximum per vial. The OOS impacted three orders, two that were in transit to the recipient country and one that was at the supplier. The project placed a hold on the order's shipment at the supplier and notified the recipient countries to quarantine the product upon arrival to retrieve additional samples for confirmatory testing. GHSC-PSM sent the samples to its third-party laboratory and the testing was replicated five times on additional samples during phase II of the investigation, all with passing results. The laboratory reported the root cause of the initial OOS as inconclusive, and the project recommended the batches be accepted based on phase II testing results.

mRDT products

In Q3, GHSC-PSM aggregated storage stability data for mRDTs in its portfolio in response to a request from PMI to inform recipient countries about mRDT storage requirements. The data indicated that most mRDTs in the project portfolio require storage conditions of 40 degrees Celsius or below, and a few require a temperature of 45 degrees Celsius or below. The data also indicated that about half of the suppliers had completed stability studies beyond the listed shelf life of the product, which is a positive indication that mRDTs may continue to perform beyond the expiration date listed on the product.

PROMOTING SUPPLY CHAIN MARKET HEALTH

In Q3, GHSC-PSM completed method transfers for SPAQ to increase the number of products in the project portfolio that have established test methods with third-party laboratories to perform routine testing and guarantee the quality, safety, and efficacy of the products procured.

PRODUCT REVIEW FOR ELIGIBILITY

In Q3, GHSC-PSM supported access to quality-assured products by completing quality reviews for two 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.

In addition to performing reviews for new products to be added to the list of eligible products, the project continued to review and update information for existing products. In Q3, GHSC-PSM reviewed and updated shelf life information, the randomized testing schedule, and the new packaging site for existing pharmaceutical products. The project also added two seasonal malaria chemoprevention products to the list of eligible pharmaceuticals following the successful completion of method transfers.

GHSC-PSM added a new LLIN product to the eligible products list and reviewed and added a new manufacturing site for dual AI LLINs.

The project also reviewed and added one new mRDT product, Pf/Pv, to the eligible products list, and updated the QA/QC requirement for an existing product based on updates to the products' Expert Review Panel for Diagnostics status.

Exhibit 8. New Products Added to the Restricted Commodity Waiver List in Q3

Product category	**Product subcategory**	**Product detail**
mRDTs	Pf/Pf/Pv	Bioline Malaria (Pf/Pf/Pv), 25 single-test kit and 25 test kit

LLINs	LLIN	PBO-pyrethroid net

Key performance indicators

In Q3, GHSC-PSM:

- Completed 87 percent of quality assurance/quality control processes within the required lead times, above the target of 85 percent.
- Identified OOS findings in zero percent of batches tested in Q3, thus meeting the target of max one percent.
- Generated cost savings of $198,514 as a result of using randomized testing instead of testing all batches.

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

In Q3, GHSC-PSM continued implementing identification, barcoding, anddata-sharing requirements for procured malaria products, creating an enabling environment for data exchange and visibility. By the end of this reporting period, the total compliance scores by area for the 243 malaria task order items in-scope[55] were:

- Identify (GTIN/GLN collection): 99 percent.
- Capture (standards-compliant barcoding on labels): 95 percent.
- Share GDSN data synchronization: 87 percent.

Revised TraceNet guidelines

The TraceNet Technical Working Group, co-convened by PMI and the Global Fund,is composed of global health stakeholders including manufacturers, procurement agents, donors, implementing partners, and select donor-funded country programs. In Q3, GHSC-PSM produced the final revised TraceNet guidelines developed through the TraceNet Technical Working Group and submitted them to the Global Fund, PMI, and United Nations Children's Fund (UNICEF) for endorsement. Notable changes to the guidelines include updated guidance on LLIN release date, an extension of the serial shipping

[55] Subject to requirements, actively procured in the past, and available for procurement in the future.

container code's lifespan 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.

For additional highlights and milestones related to these standards in Q3, 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 26 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 (GSC) team at headquarters, in Q3, GHSC-PSM:

- In **Liberia**, took the following actions:
    - mRDTs: Requested a shipment before the expected delivery date to meet the in-country distribution schedule. The order's estimated delivery date (EDD) is in early Q4.
    - AL 6x2 and AL 6x3: Requested shipments expedited to prevent stockouts.
- In **Niger**: Expedited a shipment of ASU injectables to prevent a stockout.
- In **Madagascar**: Expedited shipments of ASU injectables and mRDTs shipments to prevent a stockout. The order was shipped by ocean, and the EDD is in late Q4.
- In **Malawi**: Responded to a request to expedite 76,000 of the 300,000 kits of mRDTs by air (EDD early Q4) to prevent a stockout and ship the rest by ocean (EDD late Q4).
- In **Senegal**: Responded to a request to expedite a portion of an mRDT order by splitting 60,000 mRDT kits to ship 32,784 kits by air and 27,216 kits by ocean. The project expects the air shipment to be delivered in early Q4, and the ocean shipment to be delivered in mid-Q4.
- In **Zambia**: Switched an mRDT order from ocean to air to be delivered in early Q4 to prevent a stockout.

[56] Burma has ended TO2 activities; Thailand and Laos have closed the field offices.

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. To address this, 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 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 Q3, GHSC-PSM shared the tool with the Cambodia office, demonstrated its utility using Cambodia's malaria cases data for 2023, and drafted a technical brief. At the end of Q3, the project began assisting the National Center for Parasitology, Entomology and Malaria Control in revising its malaria commodity quantification. GHSC-PSM applied the tool and the projected case data for 2025 to analyze service delivery point (SDP) stockpile options for malaria treatment for the quantification and will prepare a revised technical brief in early Q4.

STOCKOUT REDUCTION STRATEGY SURVEY

PMI initiated the Stockout Reduction Strategy for SDPsin its partner countries in 2020 as a global effort designed to optimize its investments and significantly reduce stockout rates at SDPs. In FY 2021, GHSC-PSM worked with PMI to develop a Stockout Reduction Strategy playbook that guides implementation. The project began implementing PMI's stockout reduction initiative in 21 countries.[57] These countries set their stockout baseline (2021) and targets for ACTs, mRDTs, and SP; developed investment plans; and have implemented them through their work plans since FY 2022. During the first half of FY 2024, the project surveyed the 21 countries to assess the effectiveness of their stockout reduction investment plans and shared survey results with PMI for review. In Q3, GHSC-PSM presented the summarized results and a case study to PMI, such as:

- An average of 79 percent of country investment plan activities were implemented (ranging from 40 to 100 percent).
- Most countries implemented the following activities: workforce development (90 percent), information systems (90 percent), and collaboration or coordination (48 percent).

[57] Angola, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Ethiopia, Ghana, Guinea, Liberia, Malawi, Mali, Mozambique, Niger, Nigeria, Rwanda, Sierra Leone, Thailand, Uganda, Zambia, and Zimbabwe.

- Most countries attributed the successful implementation of investment plans to financing (67 percent), collaboration (67 percent), and forecasting and supply planning (62 percent).
- Most challenges cited were in workforce capacity (67 percent), finance (52 percent, mainly related to government funding), and distribution (48 percent).
- Most recommendations focused on strengthening workforce capacities (71 percent), information systems (57 percent), and finance (57 percent).

A comparison of the data from the monitoring and evaluation (M&E) records against the countries' stockout reduction targets at the end of Q4 FY 2023 showed that 47 percent of countries achieved their target stockout rates for ACTs, 55 percent of countries for mRDTs, and 53 percent of countries for SP.

WORKFORCE DEVELOPMENT QUALITATIVE ASSESSMENT

In FY 2021, USAID funded country data collection to understand the scope of its financial investments in workforce development (WFD) between FY 2017 and FY 2020. With these data, USAID aimed to identify the most successful and challenging WFD methods. In FY 2023, GHSC-PSM completed a WFD assessment in Malawi and submitted a report to PMI in Q1 FY 2024. Also in Q1 FY 2024, the project applied learnings from Malawi to adjust the data collection process of a WFD assessment conducted in Zambia. The findings from Zambia were similar to those from Malawi: the preferred WFD activities are in-person and hands-on training, supportive supervision, and mentoring. GHSC-PSM shared a joint report on the assessments in Malawi and Zambia with PMI, which compared findings and provided a summary of recommendations. In Q2, the project responded to PMI comments and submitted an updated version, along with a slide deck, with a summary of findings and recommendations, to PMI. In Q3, PMI approved the report and closed this activity.

MALARIA COMMODITY ACCOUNTABILITY INITIATIVE

In Q3, GHSC-PSM continued developing the Malaria Commodity Accountability 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.

LLIN DELIVERY AND DISTRIBUTION SUPPORT

In Q3, GHSC-PSM delivered over 6.8 million LLINs to 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 Q3, the project delivered LLINs to nine countries[58] (see Exhibit 9) to prepare or launch LLIN distribution campaigns.

Exhibit 9. Quantity of LLINs Delivered to Countries in Q3 FY 2024

Country	Number of LLINs delivered
Cambodia	167,200
Cote d'Ivoire	1,684,179
Kenya	250,000
Laos	30,000
Madagascar	1,720,000
Malawi	240,400
Myanmar/Burma	356,500
Tanzania	2,305,290
Thailand	100,000
	6,853,569

In Q3, GHSC-PSM supported the following LLIN distribution activities:

- In **Niger**, delivered LLINs to Dosso and Tahoua for Q3 from the Malaria Operational Plan (MOP) 2022 allocation. Due to border closures and related restrictions imposed on last-mile delivery activities following the recent political transition, LLIN distribution was significantly impacted, and GHSC-PSM could deliver only to these regions in April. No distributions were made in May and June. With all orders coming in by air due to the border closure with Benin, an order on the MOP 2024 of 100,000 LLINs was canceled as recommended by the PMI team in Niamey, considering the air freight costs versus the value of commodities.

  GHSC-PSM continues to collaborate with PMI on addressing this situation to mitigate the effects of the restrictions and ensure that LLINs reach the intended recipients. LLIN distribution will resume in Q4 after the two-month interruption. Niger has a significant shortage of routine LLINs, particularly dual AI LLINs needed in the Dosso region. To address this, the National Malaria Control Program (NMCP) has been deploying PBO nets in Dosso, which, although less effective than dual AI nets, have provided a temporary solution to the shortage. Meanwhile, Tahoua, which uses single-pyrethroid LLINs, is facing fewer stockouts.

- In **Zambia,** delivered the remaining LLINs (1,364 bales of 40 nets) from the 2023 mass campaign to selected districts and facilities in the Eastern Province and health facilities that did

[58] Cambodia, Cote d'Ivoire, Kenya, Laos, Madagascar, Malawi, Myanmar/Burma, Tanzania, Thailand.

not receive their nets according to National Malaria Elimination Centre allotments during the last campaign effort.

- In **Rwanda**, supported the Malaria & Other Parasitic Diseases Division (MOPDD) of the Rwanda Biomedical Center with the phase I PBO net distribution from Rwanda Medical Supply (RMS) Ltd. to district hospitals and health centers. The activity was a part of routine and mass campaign distributions. In total, the project distributed 442,150 nets in10 districts.[59] Six district coordinators attended a central-level meeting to ensure a smooth campaign. GHSC-PSM and MOPDD staff provided them training on logistics considerations—for example, cost planning to successfully run the campaign to cover LLIN transportation to the campaign sites, allowances for staff involved, such as district hospital coordinators, heads of health centers, and campaign coordinators, per diem for community health workers and security guards, etc.—and the reporting process. The MOPDD mandated the district coordinators to organize a district-level meeting to train health center heads and coordinators using the training materials provided by the project, and they promptly conducted this training to ensure site readiness for the campaign. Of the total number of nets dispatched from RMS, 239,119 nets were distributed to the populations of Kigeme and Kaduha as per the MOPDD request. Thanks to this exercise, 311,104 households, 67,681 expecting mothers, and 66,331 children visiting health centers for immunization will receive protection against malaria.

COUNTRY SUPPORT

In FY 2024, GHSC-PSM worked to strengthen supply chain systems for malaria medicines and commodities in 23 countries.[60] Some highlights from this quarter include:

- In **Guinea**, the project facilitated informed decision making and overall supply chain improvement by working with national health authorities[61] and implementing partners (Catholic Relief Services, USAID/RTI Notre Santé Project) to strengthen logistics data management in health facilities. Through this monthly activity, stakeholders review logistics data (completeness and timeliness of reports and program stockout rates) from each health district to identify strengths and areas for improvement to inform supply chain strategies. GHSC-PSM regional technical advisors analyze the data and use it to make recommendations on data quality improvements to each district's management team to ensure implementation. For instance, the

[59] Gakenke, Gasabo, Karongi, Kicukiro, Muhanga, Nyagatare,Nyamagabe, Nyarugenge, Rulindo, and Rutsiro

[60] 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.

[61] National Directorate of Pharmacy and Medicines, NMCP, Regional Inspectorates of Health, District Health Directorates, and Unit of Management and Coordination of Projects.

technical support of the regional technical advisors contributed to satisfactory rates of NMCP report completion (100 percent) and timeliness (100 percent, an increase from 49 percent in 2018) in Kindia. This performance was maintained throughout the quarter with close monitoring during reporting periods.

- In **Malawi**, at the end of Q3, the project worked with the NMCP to facilitate the Malaria and Commodity Accountability Review Meeting with funding from the Global Fund. Participants included staff from the Directorate of Health and Social Services, district medical officers, district malaria coordinators, and district pharmacy in-charges from 28 districts in the country. The Mission also participated in the meeting. Participants highlighted significant challenges and opportunities in malaria control in Malawi, emphasizing effective commodity management, accurate reporting, and coordinated efforts to eliminate malaria in the country.

  As outcomes of this meeting, the districts committed to:

  - Ensure accurate and timely reporting of malaria cases and commodity use.
  - Ensure facilities adhere to stock transfer protocols and documentation guidelines.
  - Implement immediate discrepancy reduction measures to address stock management challenges.

  NMCP also committed to:

  - Provide ongoing support and training to districts and facilities.
  - Continue monitoring and evaluating adherence to protocols.
  - Enhance communication channels and feedback loops.
  - Continue collaboration and communication to address identified challenges.

- In **Niger**, PMI through GHSC-PSM funded LMIS training for district-level staff, including 33 participants from the Regional Directorate of Public Health Population and Social Affairs, districts, NMCP, Directorate of Pharmacy, Laboratory Services and Traditional Medicine, Director General of Public Health, PMI/GHSC-PSM, and PMI/Country Health Information Systems and Data Use. The training focused on strengthening the capacity of district stock managers and district malaria focal points on the revised 2022 LMIS guidelines as part of the requirements for electronics logistics management information system (eLMIS) implementation. The training aimed to reinforce understanding of roles and responsibilities in logistics data management, input availability monitoring, completeness control, and quality assurance requirements. It also focused on strengthening leadership and quality control skills to ensure data accuracy and consistency in DHIS2, while clarifying the management framework between

districts and health facilities. The training also sought to develop a roadmap for improving district performance in LMIS data management, identifying current challenges, and defining key indicators and priority actions.

- In Rwanda, GHSC-PSM responded to RMS Ltd.'s request to provide technical support to review its strategic plan (2021–2026) and refined and strategized its strategic pillars to maximize their effectiveness. These new pillars revolve around the core outcomes of access, price, and quality. GHSC-PSM analyzed existing performance reports, customer satisfaction survey reports, and other M&E data. Based on this analysis, the GHSC-PSM team reviewing the RMS strategic plan is drafting the following documents to be shared with RMS:

    1. A concise Bridged Plan/Executive Summary outlining where RMS is now and its future direction.
    2. An M&E framework (log frame highlighting the theory of change) with clearly defined KPIs and measurable outcomes.
    3. Comprehensive strategic documents outlining RMS roadmap for the years ahead plus associated costing.

B3. FAMILY PLANNING AND REPRODUCTIVE HEALTH

As of Q3, GHSC-PSM has delivered contraceptives to country FP programs estimated to provide a potential **111 million couple-years of protection**, including **4.6 million in Q3.**

Delivered FP/RH commodities[62] to 21 countries[63] in Q3 and provided **health supply chain systems-strengthening support** to **19 countries[64] in FY 2024** with FP/RH funding.

Continued timely fulfillment of USAID-supported countries' orders, **achieving 89 percent OTD in Q3**.

Published findings from 12 years of Contraceptive Security Indicator (CSI) surveys on policy drivers of contraceptive prevalence and private-sector method-mix strategy in ***Global Health Science and Practice***.

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.

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

63 GHSC-PSM delivered FP/RH commodities to the following countries: Afghanistan, Bangladesh, Benin, Burkina Faso, Burundi, Côte d'Ivoire, Ethiopia, Ghana, Haiti, Kenya, Liberia, Madagascar, Malawi, Mali, Mozambique, Nepal, Rwanda, Senegal, Tanzania, Togo, and Uganda.

64 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.

ADDRESSING FP/RH PRIORITIES

Global Supply Chain

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

GHSC-PSM continued stocking commonly procured items in its RDC to enable quick order fulfillment and mitigate potential supply constraints. When determining what FP/RH commodities to stock in the RDC, the project considers forecasted volume and prioritizes products with relatively high shelf life to reduce the risk of expiry. GHSC-PSM also takes into account broad country registration to increase the likelihood of recipient country acceptance.

Procurement of one-rod implantable contraceptives, a high-demand, sole-source product, faced production delays in the first half of FY 2024 that affected Q3 deliveries and will likely impact Q4 deliveries. GHSC-PSM is collaborating with the Consensus Planning Group to coordinate supplier allocations of available supply among multiple procurement agencies and prioritize needs while ensuring fair and reliable access to the product.

Digital Supply Chain

The Digital Supply Chain Technical Priority Area (TPA) seeks to strengthen country supply chains by moving them beyond an era characterized by siloed supply chain information systems with limited data visibility, and significant quality and use issues into a modern era characterized by scalable, flexible, and integrated. In Q3, GHSC-PSM continued to provide Global Family Planning Visibility and Analytics Network (VAN) support to countries for increased data visibility. GHSC-PSM also drafted lessons learned in the Product Master Data Management and Supply Chain Information Systems Maturity Model, or SCISSM, tool. Further details on each of these activities are included below.

Enabling Environment

The Enabling Environment (EE) TPA seeks to strengthen leadership, management, and governance for FP/RH supply chains while increasing investments and accountability by national governments and supporting national FP policies, financing, and guidelines that improve FP/RH commodity security. In Q3, GHSC-PSM led the CSI activity and the CSI survey research to support these EE objectives. In addition, GHSC-PSM finalized the local manufacturing roadmap to support the EE focus area of engagement with

the private sector for contraceptive security. Further details on each of these activities are included below.

Last-mile Workforce Development

GHSC-PSM annually offers USAID personnel the opportunity to take two courses: the Introduction to Supply Chain Management course and the Emerging Trends in Supply Chain Management. Although three courses were planned for delivery in FY 2024, the intro course in Pretoria was canceled due to insufficient USAID staff registering on USAID University.[65] Registered participants were encouraged to transfer to the Q3 FY 2024 course in DC. Further details on the course are later in this section.

Achieving OTD and OTIF

Timeliness of GHSC-PSM deliveries remained strong in Q3 for FP/RH commodities at 89 percent OTD. OTIF numbers also remained strong at 89 percent.

Exhibit 10. FP/RH Commodities, Monthly OTD

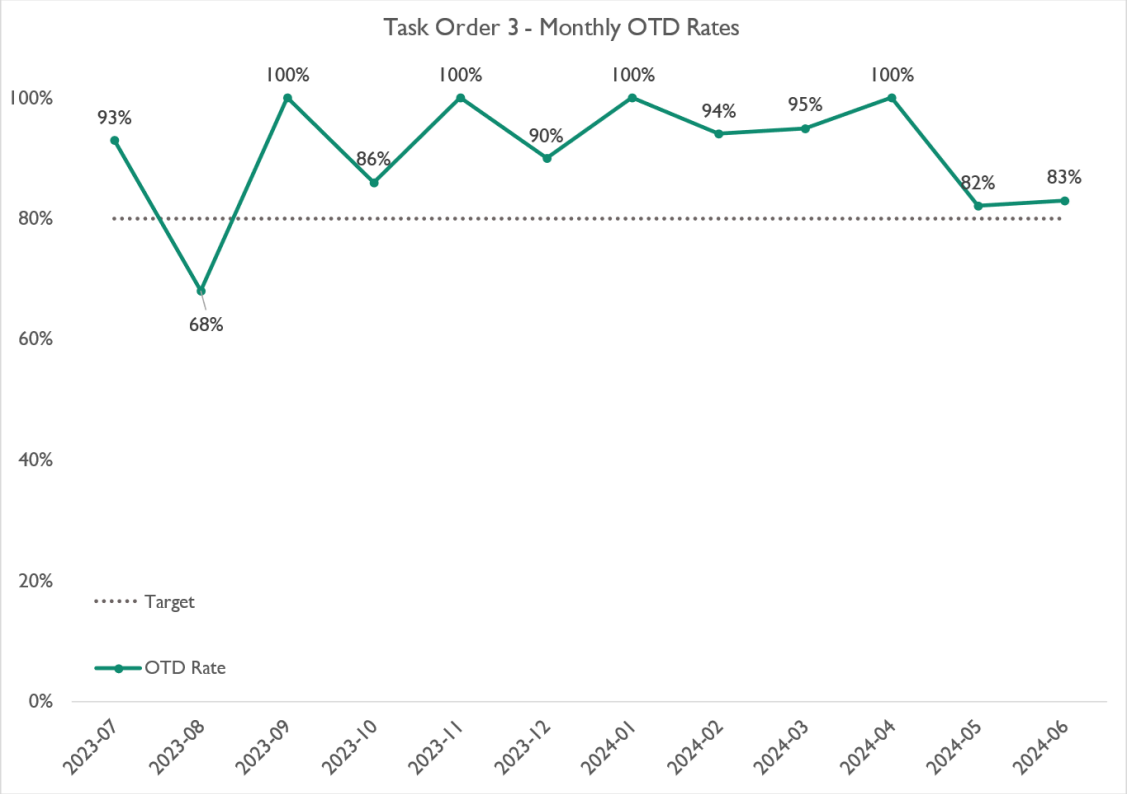
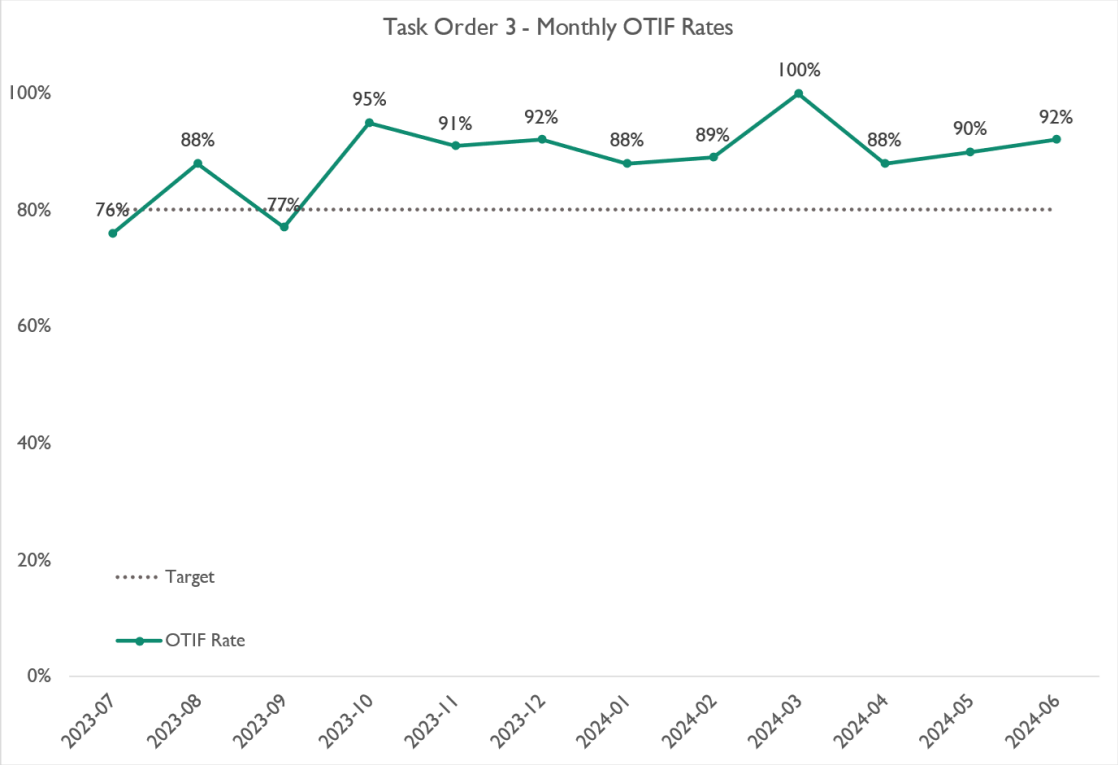


Exhibit 11. FP/RH Commodities, Monthly OTIF

[65] Nine of a required 15 minimum


Task Order 3 - Monthly OTIF Rates
100%
80%
60%
40%
20%
0%
76%
88%
77%
95%
91%
92%
88%
89%
100%
88%
90%
92%
Target
OTIF Rate
2023-07
2023-08
2023-09
2023-10
2023-11
2023-12
2024-01
2024-02
2024-03
2024-04
2024-05
2024-06

Supporting the movement toward local manufacturing of injectable contraceptives in sub-Saharan Africa

To support diversifying the geographic supply to mitigate future supply risks and enhance contraceptive security in sub-Saharan Africa (SSA), GHSC-PSM assessed the potential of SSA-based manufacturers for hormonal contraceptives. In Q3, the project addressed USAID comments and finalized the local manufacturing implementation roadmap. The Roadmap for the manufacture of injectable contraceptives in sub-Saharan Africa outlines the steps needed to promote the manufacture of medroxyprogesterone acetate intramuscular (MPA-IM), one of the most popular contraceptives used by women in SSA. The document summarizes an assessment of the economics of establishing an MPA-IM manufacturing facility in SSA and provides recommendations to overcome key challenges in setting up such a facility.

Overview of contraceptive and condom shipments

In Q3, GHSC-PSM published the FY 2023 Overview of Contraceptive and Condom Shipments Report summarizing the delivered quantities and value of contraceptives and FP-funded condoms supported by USAID. In FY 2023, USAID provided FP/RH commodities through Missions to 23 countries in Africa, Asia, Latin America and the Caribbean, and the Middle East. There were no shipments to Europe or Eurasia as in previous years. Overall, the total delivered value for contraceptives and condoms increased by 13 percent to $60.8 million compared to FY 2022. Injectables and implants made up the majority of delivered value at 67 percent. Implants accounted for the highest-value commodity delivered at 39 percent of the global total value, overtaking injectables, which were the highest in FY 2022.

Understanding the demand for implant insertion and removal kits

As of Q3, only Ethiopia and Uganda have ordered implant insertion and removal kits. In Q3, GHSC-PSM developed a survey to explore the reasons behind the low demand for implant insertion and removal kits despite the high demand for implants. In Q4, the project will administer the survey to country offices and social marketing organizations that ordered implants from GHSC-PSM in the past three years.

Recommendation to consolidate stock-keeping units for emergency contraceptives

In Q3, GHSC-PSM recommended discontinuing levonorgestrel 0.75 mg in the USAID Catalog. This recommendation considered several factors. First, while single-dose (1.5 mg) and two-dose (0.75 mg) levonorgestrel regimens are both effective, the single-dose regimen can be substituted for the two-dose regimen, reducing the risk of missing the second dose. Second, maintaining both stock-keeping units in the USAID Catalog divides the already low demand; discontinuing levonorgestrel 0.75 mg will consolidate demand for levonorgestrel 1.5 mg. Lastly, there is adequate registration coverage for levonorgestrel 1.5 mg in the countries where GHSC-PSM has historically shipped emergency contraceptives, indicating that these countries will likely continue ordering.

Introduction to SCM and Emerging Trends in SCM courses

In Q3, GHSC-PSM delivered two of the three USAID training courses planned for FY 2024. The project conducted face-to-face training courses on Introduction to Supply Chain Management (SCM) and Emerging Trends in SCM in Washington, D.C. The Introduction to SCM course initially scheduled for early Q3 in Pretoria was canceled due to insufficient USAID staff registering at USAID University (nine of the required minimum of 15), prompting registered participants to transfer to the training course in Washington, D.C.

The Introduction course had 26 USAID participants, and the Emerging Trends course included 20 USAID staff. The training used simulation exercises, lectures, and panel discussions to deliver 32 sessions: 17 for the Introduction course and 15 for the Emerging Trends course through external and internal lecturers. USAID and GHSC-PSM staff served as internal lecturers, while external lecturers came from VillageReach, Project Last Mile, Open Contracting, Management Sciences for Health, and Salient Advisory. Both courses received positive daily feedback from participants.

Transition Order Supply Plan

The project continued to manage and mitigate the risk of supply chain disruptions for the Transition Order Supply Plan (TOSP) activity in preparing for the transition to the Next Generation (NextGen) Integrated Procurement Service Agent, which will include FP/RH products.

In Q3, GHSC-PSM submitted the second iteration of the TOSP report to USAID. The analysis found that 83 percent of the 35 countries/programs within the TOSP scope met requirement 1, ensuring visibility of the supply plan until March 2025; 34 percent met requirement 2, identifying anticipated funders for each planned shipment until March 2025; and 83 percent met requirement 3, documenting actual monthly consumption until March 2025. The analysis highlighted total need (cost and quantity) by country and commodity based on the second iteration of TOSP submissions.

Supporting social marketing engagement activities

In Q3, GHSC-PSM engages with social marketing organizations (SMOs) to gain visibility into their product needs and overall landscape. Given the constraints around overbranding due to supplier restrictions, the project is encouraging some SMOs in countries like Benin and Senegal to consider distributing unbranded products to mitigate product stockouts. Additionally, GHSC-PSM continues to work with suppliers to accommodate the unique branding requirements of social marketing.

STRATEGIC ENGAGEMENT

Webinar on the use of Dispatch Optimizer Tool in Zambia

In Q3, GHSC-PSM hosted a webinar on using an open-source Dispatch Optimizer Tool in Zambia. The webinar attracted 92 participants representing various organizations and received positive feedback. Used to effectively manage last-mile distribution at Zambia Medicines and Medical Supplies Agency (ZAMMSA), the tool is a cloud-based solution that 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.

Digital tools for community health workers (CHWs)

In Q3, GHSC-PSM collaborated with donors, government representatives, implementing partners, and private-sector digital companies, leveraging collective expertise and experience to develop a technical brief on Digital Tools for CHWs. Led by VillageReach, this document provides guidance on developing and implementing digital tools to improve supply chain data visibility at the community level, particularly for CHWs.

Tracking contraceptive security

GHSC-PSM manages the CSI survey, which assesses contraceptive access in more than 40 countries. In Q3, the project submitted the first draft of the 2023 CSI report, consolidating and organizing qualitative and quantitative data into a detailed narrative and series of graphics to highlight key findings in topic areas such as country-specific leadership, policies, supply chain management, quality control, private-sector involvement, domestic financing, commodity procurement, and the impact of the COVID-19 pandemic. The project also published the 2023 CSI dashboard, which offers an enhanced user experience over the previous dashboard, displaying indicator data within a global and country-specific context.

In Q4, the project will publish the 2023 CSI report and begin disseminating the results to a larger USAID audience and other implementing partners. The project aims to enhance the global knowledge base

regarding the range of FP policies and approaches, enable environments to reduce the unmet need for FP, and increase access to and use of contraceptives.

Disseminating findings from the CSI survey research activity

In Q3, GHSC-PSM 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. Using 12 years of data from the CSI survey, GHSC-PSM investigated whether national policies correlate with the modern contraceptive prevalence rate (mCPR) or an expanded method mix strategy in the private sector. The analysis identified 11 policies that are predictors of increased mCPR or expanded private-sector method-mix strategies in one or more gross national income groups (low- or middle-income countries).

GHSC-PSM promoted the findings on social media (LinkedIn and X) and other internal and Chemonics channels. In Q4, the project will disseminate the findings through communications pieces aimed at a broad audience of FP program practitioners, advocates, funders, and others across multiple sectors.

Enhancing the visibility of FP/RH supply data

In Q3, the project:

- Continued supporting GHSC-PSM Premium Member VAN countries in data reporting and analysis.
- Presented an overview of the VAN tool to the MOH and Mission in Burundi. The MOH, previously unaware of the tool, its operations, and Premium membership benefits, expressed interest in becoming a Premium member and has started collaborating with GHSC-PSM and the Mission to explore the requirements to join. The project led the FP quantification exercise in Burundi.
- Continued to manage the Automated Requisition Tracking Management Information System (ARTMIS)-VAN integration, conducting regular reviews and data quality process checks to ensure timely updates.
- Participated in the VAN Steering Committee meetings and shared country usage metrics for the VAN to coordinate concerns and resolve challenges for Premium and Basic membership countries.
- Participated in regular VAN working group meetings, including data management, technical management, data sharing, systems strengthening, super users, and analytics task forces.

Providing guidance for digital health supply chain information systems

Since 2019, the project has leveraged the Supply Chain Information System Maturity Model (SCISMM) as a rapid assessment tool to evaluate the functionality and operation of information systems. In Q3, GHSC-PSM continued developing a lessons-learned document on SCISMM for public reference, slated for completion in Q4. Additionally, GHSC-PSM will document lessons learned on Product Master Data Management for dissemination in Q4.

COUNTRY SUPPORT

In **Guatemala**, the Ministry of Public Health and Social Assistance (MSPAS) lacked adequate planning and supply management tools. Reliance on MS Excel led to difficulties visualizing data over time, frequent formula errors, poor traceability of batch and expiration dates, time-consuming processes, a lack of real-time data, and issues aligning estimation with planning information.

To address these challenges, GHSC-PSM introduced the QAT, which was selected for its compatibility with existing logistics management systems and ability to handle complex data more efficiently than MS Excel. In Q3, the project trained 20 participants, including 17 from MSPAS and three from GHSC-PSM, equipping them with the skills to use QAT effectively for improved supply planning and management.

The next steps involve implementing QAT in MSPAS operations at the central level, focusing on centralized purchasing. This implementation aims to optimize product planning and purchasing, enable real-time inventory tracking, facilitate information exchange, enhance decision making, and reduce operational costs. GHSC-PSM will continue to support MSPAS throughout this process, ensuring the effective use of QAT to strengthen supply chain management and health service delivery.

Mali faces significant challenges in maintaining a consistent supply of contraceptives, particularly in regions affected by security. Despite efforts such as launching FP campaigns and deploying mobile teams to remote and hard-to-reach areas, frequent stockouts remain a significant obstacle.

In response, GHSC-PSM provides adequate quantities of contraceptives to meet the needs of health facilities nationwide, including those in northern regions with security challenges.

In Q3, GHSC-PSM conducted its sixth round of community contraceptive distribution, supplying enough for at least six months to nearly 300 community health centers, including 38 in northern regions affected by security issues. This distribution aimed to improve contraceptive availability and mitigate supply chain disruptions.

The project will undertake post-intervention follow-up activities to ensure the continued availability of contraceptives and maintain oversight and accountability. These include traceability monitoring and data reporting to the National Health Commodity Dashboard, Outil de Suivi des Produits de Santé, or OSPSANTE.

B4. MATERNAL, NEWBORN, AND CHILD HEALTH

A total of **14 countries[66] received MNCH supply chain strengthening** support **in FY 2024.**

Over the life of the project, GHSC-PSM has delivered a total of nearly **$28.3 million in MNCH commodities.**

Participated in and co-organized **five online events** to share MNCH supply chain best practices, including **commodity financing** 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 Q3 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.
- **Objective 3. Improve adherence to globally recognized best practices in MNCH commodity management:** The project develops procurement, storage, and distribution

[66] 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.

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.

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 Q3, 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

Following GHSC-PSM's efforts alongside the Ethiopian MOH and Pharmaceutical Supply Service to improve maternal health (MH) financing and availability since 2018, the project published several resources and hosted a webinar in Q3 to share its successful strategies.

- **Published a four-page brief** highlighting the key results from this work and summarizing a larger study conducted by the project to evaluate the work. It showcases the collaboration and strategies that have improved MH commodity management, availability, and funding.
- **Hosted a webinar** in partnership with the Ethiopian MOH to further disseminate these strategies, giving webinar attendees a chance to ask questions and discuss the work with those who conducted it. Presenters included GHSC-PSM staff, an expert consultant, and two MOH leaders—Dr. Alemayehu Hunduma, lead MNCH executive officer, and Zemzem Mohammed, national MH program coordinator. Presenters sought to increase global awareness of effective advocacy approaches to achieve increased government funding of MNCH and highlight the critical role of supply chain and commodity funding to improve MNCH programs. More than 120 people from over 15 countries participated, including supply chain experts and representatives from USAID/Washington and USAID Missions, other donors, and MOHs.

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

In Q3, 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 WHO National Oxygen Scale-Up Framework Meeting

In Q3, the project presented a poster at the WHO National Oxygen Scale-Up Framework Meeting, *The Road to Oxygen Access* in Dakar, Senegal. Meeting objectives included 1) exploring and reaching a consensus on the necessary components for national oxygen scale-up efforts and 2) creating a template outlining the components that countries can adapt to the local context. The poster covered information from GHSC-PSM's Assessment of the Newborn Respiratory Ecosystem from Public Health Facilities in the Northern and Upper West Regions in Ghana, including findings on CPAP provision, electricity supply for neonatal units at health facilities, inventory and forecasting of consumables at neonatal units, stock tracking of medical equipment and supplies, and maintenance of medical devices. A broad range of decision makers, implementers, and advocates for oxygen joined in-person and virtually, allowing for meaningful international knowledge exchange. Participants included representatives from 63 WHO member states, other UN agencies, NGOs, donors, and academic experts.

Presenting at Global Digital Development Forum 2024

In Q3, 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 GHSC-PSM partner Peter Lukonde, chief pharmacist at Zambia Ministry of Health; GHSC-PSM staff members Eileen Patten, GHSC-PSM advanced analytics lead, and Tamah Kamlem, GHSC-PSM MCH senior technical advisor; and two private-sector partners, Sarah Searle, director at BAO Systems, and David Chen, co-founder of Kapsule.

GHSC-PSM was invited in Q3 to present these digital tools to the African Supply Chain Excellence Awards committee. The project was recognized for this work and designated a finalist in the 2024 competition.

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. GHSC-PSM holds 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 in Q1. The working group coordinates across organizations and stakeholders to increase TXA access and uptake. In Q3, after the presentation of the project-conducted landscaping exercise to gather existing information and resources related to TXA, the working group held discussions 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 on-site capacity building for SDP staff and MOHs. Through EUV, the project gathers supplemental data on reported stockout reasons and cross-checks the accuracy of LMIS data on stock availability trends. In Q3, the project continued to roll out the new EUV community health worker (CHW) modules in 11 countries.[67]

In Q3, the project supported Ethiopia, Ghana, and Liberia in collecting EUV data and submitting reports to USAID/Washington and their respective in-country stakeholders.

Results from the EUV in Ethiopia. In Q3, Ethiopia submitted an EUV report highlighting reductions in stockouts and improvements in other key areas supported by GHSC-PSM.

- Improved financing for maternal health commodity procurement was crucial in ensuring an adequate and consistent supply of oxytocin, magnesium sulfate, and ferrous sulfate. The EUV survey found zero percent stockout for oxytocin 10 international units (IU) at the SDP and regional warehouse levels, compared to a 5 percent stockout reported at the SDP level in Q2. Joint advocacy efforts of GHSC-PSM and the Ethiopian MOH to secure domestic financing for maternal health correlate with significant improvements in MNCH commodity availability (see case study).

[67] GHSC-PSM is implementing a new CHW module for the EUV survey in 11 countries: Burkina Faso, Burundi, DRC, Ethiopia, Liberia, Mali, Nigeria, Sierra Leone, Togo, Zambia, and Zimbabwe.

- GHSC-PSM helped the MOH develop an implementation guide for integrating oxytocin into the Expanded Programme on Immunization (EPI) cold chain system, to ensure continuous cold chain storage of oxytocin. Through ongoing advocacy efforts, nearly all usable oxytocin was reported to be stored in the cold chain (99 percent at the SDP level, 100 percent at the regional warehouse level), with 63 percent of warehouses storing oxytocin specifically in an EPI refrigerator.

Improving data analytics and information systems for MNCH commodity decision making

In Q3, 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, 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' code 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.

In Q3, the project helped select countries to deploy refactored data analytics tools to increase visibility throughout the supply chain. This included support to **Malawi**, where GHSC-PSM refactored and deployed the consumption anomaly detection (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. The project will share results with the MOH in Q4 and evaluate next steps in deploying the tool to support the eLMIS.

GHSC-PSM organized two training sessions for users of the CAD tool in Liberia in Q3 and updated the code to expand the tool's analytic capabilities. The project engaged the Liberia MOH to facilitate transfer of the tool and plan additional training sessions for users at central and county levels.

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 in Q3 are highlighted below.

Procuring MNCH products for CHWs in Guinea. Guinea required health facilities to provide CHWs, Relais Communautaires (RECO), with commodities to meet public health targets. The government passed a ministerial decree to establish 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 Q3, GHSC-PSM delivered **32,035 packets** of **amoxicillin** dispersible tablets and **88,096 co-packs** of **ORS + Zinc**. National stakeholders, including the central medical store (Pharmacie Centrale de Guinée) and the MOH Family Health Division are developing a distribution strategy in communities throughout the country. Additional shipments are expected in Q4.

Supporting 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 (FDA). In Q3, 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. These results 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 breathing devices for newborn care in Ghana, especially for pulse oximeters and CPAP devices. The project will procure about $850,000 worth of these devices to support newborn care at over 350 health facilities.
- FDA, 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. The project and its partners now use the protocol to evaluate the quality of these HDP medicines in select countries. After receiving the appropriate approvals from local regulatory agencies, GHSC-PSM collected samples of these medicines across all three study countries in Q3. In Q4, the samples will be quality tested by Monash University, and share the results with all study participants. 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 Q3, GHSC-PSM worked with partners, including the Medicines, Technologies, and Pharmaceutical Services (MTaPS) project; 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.

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

GHSC-PSM supported the process for six countries[68] to procure MNCH essential medicines and consumables and **delivered MNCH commodities** to **Guinea and Zambia.** In Q3, this included **amoxicillin DT** and **ORS+Zinc** for the **Guinea** community health worker program and **Ready-to-Use Therapeutic Food (RUTF)** in **Nigeria**. GHSC-PSM delivered a total of 4,202,400 sachets of RUTF to state warehouses in Nigeria as follows: 1,210,950 to Bauchi; 1,780,500 to Kebbi; and 1,210,950 to Sokoto. The project also delivered 32,035 amoxicillin dispersible tablets 250 mg and 88,096 packages of ORS 20.5 g/l + Zinc 20 mg dispersible tablets in Guinea.

Supporting the procurement of newborn and pediatric oxygen

In Q3, as part of USAID efforts to leverage "COVID-19 funds to strengthen oxygen ecosystems for maternal and newborn health and future pandemic preparedness," GHSC-PSM supported assessments in DRC, Guinea, and Nigeria using project-developed tools to estimate their needs for newborn and pediatric medical equipment and determine what the project could procure to meet those needs. This work will improve the quality of care for newborns and children by strengthening the respiratory

[68] GHSC-PSM supported procurement processes of MNCH commodities for six countries in Q3 FY 2024: DRC, Guinea, Haiti, Mozambique, Nigeria, and Zambia.

ecosystem in these countries. In Q3, the project led the procurement of this equipment for Paraguay, Papua New Guinea, Philippines, and Nepal.

PROGRESS BY OBJECTIVE

C1. GLOBAL COMMODITY PROCUREMENT AND LOGISTICS

Delivered 977 line-item orders in Q3, worth nearly $171 million. The total value over the life of the project is over **$5.56 billion**.

Delivered 87 percent of line items on time, based on the defined on-time window.[69] **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 the best value.
3. Reduce response/cycle times, lead times, and transaction costs.

The project focuses on the performance and management of overall commodity and supply chain costs through the following initiatives:

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

[69] 14 days before or seven days after the agreed delivery date

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.

Q3 highlights include:

- Delivered 1,294,163 bottles of PrEP products to nine countries and 35,100 vials of CAB-LA 600 mg/3 ml to four PEPFAR countries. (See section B1.)
- Completed four deliveries of dolutegravir 50 mg and emtricitabine/tenofovir disoproxil fumarate 200/300 mg to Aid For AIDS, AIDS Healthcare Foundation, and RedSomos in Colombia to support Venezuelan refugees living with HIV in the country. (See section B1.)
- Delivered 4.26 million VL/EID tests valued at approximately $49.6 million, saving approximately $15.4 million compared to 2019 pre-global RFP prices under the terms of the global service-level agreements. (See section B1.)
- Delivered more than 3.3 million TLD 90-count bottles to seven countries and more than 165,000 180-count bottles to four countries.[70] Advanced the vendor-managed solutions program by delivering 2 million bottles of TLD from VMS warehouses to three countries.[71] (See section B1.)
- Met with a supplier in China, alongside USAID and GHSC-QA, to audit two VMMC kit facilities. The project also met with a VMMC device manufacturer to discuss strategic cost-reduction opportunities. (See section B1.)
- Conducted 15 business reviews with TO2 suppliers across the LLIN and rapid diagnostic test 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.)
- Conducted scenario analyses by modeling various volume shifts within the ACT portfolio to address growing drug resistance concerns and reduced lumefantrine efficacy. These results, combined with supply availability, may inform future demand and cost implications. (See section B2.)

[70] Benin, Burkina Faso, Côte d'Ivoire, and DRC

[71] Mozambique, Zambia, and Zimbabwe

- Fulfilled two urgent orders of AL 20/120 mg hard tablets, through vendor-stored inventory, and two emergency orders of AL 20/120 mg dispersible tablets and AL 20/120 mg hard tablets, through the RDC stockpile, for Cote d'Ivoire and Mozambique. (See section B2.)

- Issued one order of RUTF, one order of ready-to-use supplementary food, and two orders of therapeutic milk for Ethiopia. GHSC-PSM expects delivery in Q4. GHSC-PSM also obtained an Automated Directives System (ADS)312[72] waiver approval to procure a therapeutic complex of minerals and vitamin powder for reconstitution for Tanzania. The project expects delivery in early FY 2025. (See section B4.)

Managing supplier relationships

GHSC-PSM prioritizes building relationships with suppliers and maintains continued dialogue with suppliers on market conditions, procurement, and logistical challenges. The project also provides feedback on demand forecasts and country priorities. In addition to scheduled calls to manage ongoing orders, the project has routine meetings with suppliers for product updates, production capacity, delivery schedules, and quality issues. The project's commodity and supplier risk profiles inform supplier performance assessments and order allocation strategies. In Q3, the project conducted business reviews with 13 TO1 suppliers, 14 TO2 suppliers, and nine TO3 suppliers.

Regional distribution center operations

In Q3, GHSC-PSM leveraged the Belgium and Dubai RDCs to deliver commodities (excluding TLD) valued at over $7.3 million to 23 destination countries. All RDCs achieved 100 percent on inbound and outbound performance (for receipt, packing, and export document creation, respectively). The project also contracted services to perform a stock count audit at the Belgium RDC, which is anticipated to take place in early Q4.

The United Arab Emirates regulatory authority approved that GHSC-PSM destroy a second tranche of expired products at the Dubai RDC. The project also obtained in-transit consent from 10 countries. Final disposal is planned in Q4.

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

[72] ADS312: Chapter 312 of USAID's Automated Directives System. ADS312 waivers are required for products that are not part of USAID's approved list of products to procure (eligible commodities).

terms, reducing cycle time and bolstering on-time delivery. Commodities procured under DCP include laboratory commodities, VL, and EID and essential medicines.

In Q3, GHSC-PSM achieved 85 percent OTD for orders managed through the DCP channel. In Kenya, the project leveraged its Africa DCP capability to begin local procurement of chemical reference standard commodities[73] for the National Quality Laboratories Limited in Kenya. The project expects delivery in Q4.

In Tanzania, GHSC-PSM delivered 50,880 human papillomavirus (HPV) test kits as part of the Q2 order of 169,440 tests for the HPV testing program. The project plans to deliver the remaining test kits in Q4. In Zimbabwe, GHSC-PSM and GHSC-QA assessed 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 the project's continual improvement processes, GHSC-PSM strengthens existing tools to meet emerging needs and designs new tools to support efficiency in operations. The project evaluates opportunities for machine learning, artificial intelligence, and robotic process automation to reduce manual intervention and redundancies and decrease cycle time and operational expenses.

In Q3, GHSC-PSM developed, launched, or enhanced the following operational cost-reduction initiatives:

- **Invoice-to-pay (ITP) tool:** Granted access to additional suppliers for the ITP tool and transitioned more suppliers to sole use of the tool. Since becoming operational, the project has approved over 150 invoices using the ITP tool.
- **Electronic data interchange (EDI):** Continue to implement GS1 standardized EDI for order-to-cash processes using GS1 XML messages/transactions[74] that incorporate GS1 standardized identifiers.[75] In Q3, the project signed a service agreement with a third-party EDI vendor and held a business process workshop with stakeholders to begin analyzing potential impacts and standard operating procedure (SOP) changes that may be needed. To prepare for this automation, the project mapped purchase order data to the GS1 XML, updated dispatch advice materials from ePackingList providers, and defined the data set for the invoice message.
- **ePackingList (ePL):** Designed an ePL to reduce manual data entry and the back-and-forth emails and phone calls with suppliers and 3PLs. In Q3, the project prepared ePL suppliers for the transition to sending the GS1 XML dispatch advice by electronic data interchange. EDI provides a high-tech approach to sharing the dispatch advice message. During the transition phase, the ePL environment will remain live, but the project will not add any new suppliers.

[73] Chemical Reference Standard materials are used for pharmaceutical quality control analysis.

[74] Order, order confirmation, dispatch advice, and invoice

[75] GTIN, GLN, and serial shipping container code (SSCC)

GHSC-PSM is also exploring opportunities to integrate OpEx best practices into warehouse operations in countries. In Q3, the project continued analysis to explore how to use the GS1 XML dispatch advice data and the low-tech approach for ePL to improve operational efficiency in country warehouses.

- **Electronic Proof of Delivery (ePOD):** Continue to develop an approach that enables 3PLs to leverage the data provided by suppliers in the GS1 XML dispatch advice in their own ePOD systems to automate and simplify the process for documenting deliveries. The proof of concept is still in its early days, and the project receives dispatches from only two suppliers. In Q3, GHSC-PSM prepared for another round of testing with the selected 3PL provider and will continue testing for an additional two shipping rounds to demonstrate the use case of the ePOD in the field.

- **Sourcing Assistance Messenger (SAM):** Continued to improve the reliability and user experience features of SAM, a virtual assistant that helps procurement teams manage the order lifecycle and maintain an up-to-date performance view of operations. It generates alerts and warnings to prompt follow-up, avert delays, and enable updates on OTD assessments. The project added a feature for users to monitor master order data, track order status, and identify the location of available stocks for purchase or distribution orders.

- **Order allocation tools:** Continued to enhance and support the use of order allocation tools for COVID-19, essential medicines,lLab, ARVs, VMMC, and 3HP FDC. In Q3, these automation tools processed over 160 requisition orders (ROs), generated over 480 emails for internal and supplier communications,[76] and recommended allocations for more than 200 RO lines.

- **Data visibility dashboards:** Developed three new tools to enhance order visibility:
    - Deliver/Return Performance Report Scorecard
    - Project Office Close-Out – Order Monitoring Dashboard
    - Essential Medicines Allocation Tool Dashboard

- **Procurement Order Management System (OMS) Enhancements:** Developed a robotic process automation workflow to help prepare multi-line purchase orders and significantly reduce data entry. The project piloted this workflow in Q3 to process 20 TO2 orders. GHSC-PSM plans to test this workflow across the project's health areas and gather feedback for a potential OMS application programming interface that can further scale automated data entry.

- **TO3 funding app:** Launched a new application to streamline and track TO3 funding requests and order approvals and eliminate manual tracking. In Q3, the project processed and approved 11 requests using the app.

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

GLOBAL STANDARDS

GHSC-PSM operationalizes its supplier procurement requirements to standardize the adoption of product identification, labeling, and exchange product master data leveraging GS1.[77]These requirements include:

- *Identification:* Assigning 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, SSCC, and (for pharmaceuticals and LLINs) serial number.
- *Share:* Exchanging standards-based, descriptive product master data through the GDSN.

The project engages with suppliers and the global health community to advance these standards across the GHSC-PSM portfolio, laying the groundwork for using these data in global and national supply chain systems. The project promotes compliance through regular supplier engagement for all products. In Q3, the project:

- Collected, validated, and added GTINs for 98 items to the GHSC-PSM catalog.
- Collected master data for 56 items through the GDSN and maintained data on existing items. In Q3 alone, the project sent and received more than 419 messages in the GDSN.

As of Q3, the GHSC-PSM catalog had a total of 1,312 in-scope items.[78]

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 Q3, the project:

[77] For pharmaceuticals, medical devices, sterile kits, laboratory reagents, and LLINsuppliers.

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

- 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 31 new incidents across HIV/AIDS, FP/RH, and MNCH health areas and completed 31 cumulative incidents, including those from previous quarters, leaving 18 open incidents by the end of Q3.
- Worked 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 through multiple phases, including the pilot phase of 10 specific product shipments, completed in Q3, and will proceed across all products/shipments. This initiative will give GHSC-PSM real-time access to shipment temperature and geo-location data. The project also developed a *Procedure for Shipment of GHSC-PSM-Distributed Products* SOP detailing the shipment and storage requirements and processes for the temperature and geo-tracking sensors in GHSC-PSM's temperature-controlled and non-temperature-controlled shipments.
- Automated the selection of product pick-up locations for HIV, malaria, and FP/RH commodities to select only project-vetted locations. The project vetted the automation of 60 pick-up locations—35 in Q3 alone—by integrating ARTMIS into the Ivalua system across TO1, TO3, and TO4. GHSC-PSM began training staff on a new SOP for managing supplier pick-up locations.

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

IMPACTS OF GLOBAL CHALLENGES ON FREIGHT AND LOGISTICS

Global challenges

In Q3, GHSC-PSM's logistics challenges centered around political and economic unrest and the effects of climate change. Houthi attacks on vessels in the Red Sea continued to affect air freight and sea freight (see sections below).

Climate change remained a significant logistical obstacle, particularly in Europe and through the Panama Canal. In Europe, low water levels in common waterways means containers cannot move by barge, making trucks the only alternative. With more cargo moving by truck, costs increase and truck availability decreases, thus hampering trucking and container operations in Europe.

The drought in Panama has decreased the water level in Gatún Lake, which feeds the Panama Canal. This has forced authorities to reduce the number of ships allowed to transit the Canal, slowed marine traffic in the area, and tied up shipping capacity, leading to congestion and delays.

Air freight

In Q3, air freight capacity rose nine percent as widebody cargo capacity increased in Northeast Asia. Global air cargo demand also increased, driven by global maritime shipping disruptions. Red Sea attacks continue to affect air freight capacity as shippers pivot to air freight to avoid longer sailing times and operational uncertainties. Even though the increase in demand outpaced the increase in capacity, overall global capacity remained steady, and global airfreight rates are rising. Airlines continued to focus their routes on popular destinations, often adjusting to demand by switching to various and smaller aircraft types. Although overall airline scheduling is rebounding, the limited capacity for already underserved locations remains a concern, as fewer freighter aircrafts serve these routes.

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

Ocean freight

In Q3, shipping lines added more ships to their fleets to mitigate the effects of the ongoing conflict in the Red Sea. This action led to a rise in overall shipping capacity but with longer transit times. Shipping companies continued to cancel sailings and bypass ports, resulting in bookings with increased costs, longer itineraries, frequent booking revisions, and transshipment delays, primarily in response to the Red Sea crisis.

The increase in capacity (ships on the water) and the disruption in timetables due to the detour around Africa also led to increased port congestion. By the end of Q3, global port congestion reached an 18-month high, with nearly nine percent of the global container fleet waiting at anchor to load or unload. Another consequence of the Red Sea crisis was a shortage of empty containers, as containers stay on ships longer because of longer transit times and port congestion. The overall effect is longer transit times and higher costs across all sectors of the ocean freight market.

Destination challenges

In Q3, extremist activity, political unrest, and instability remained a concern, particularly in West Africa and Haiti. In Haiti, security remained tenuous, but by the end of Q3, supply chain services resumed for air and ocean freight. In addition, tensions continued within Ethiopia and between the DRC and Rwanda, affecting GHSC-PSM shipments on domestic flights into DRC.

Overall, the supply chain is at risk from the continued effects of climate change, civil and economic unrest, terrorism, and the Ukraine and Israel-Hamas conflicts.

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 Q3, GHSC-PSM OTD was 87 percent and OTIF 87 percent. This is the 24th consecutive quarter that OTD has been above 80 percent (for monthly OTD and OTIF rates, see Exhibits 12 and 13).

Exhibit 12. April 2023 through June 2024 Monthly Indefinite Delivery Indefinite Quantity (IDIQ) OTD

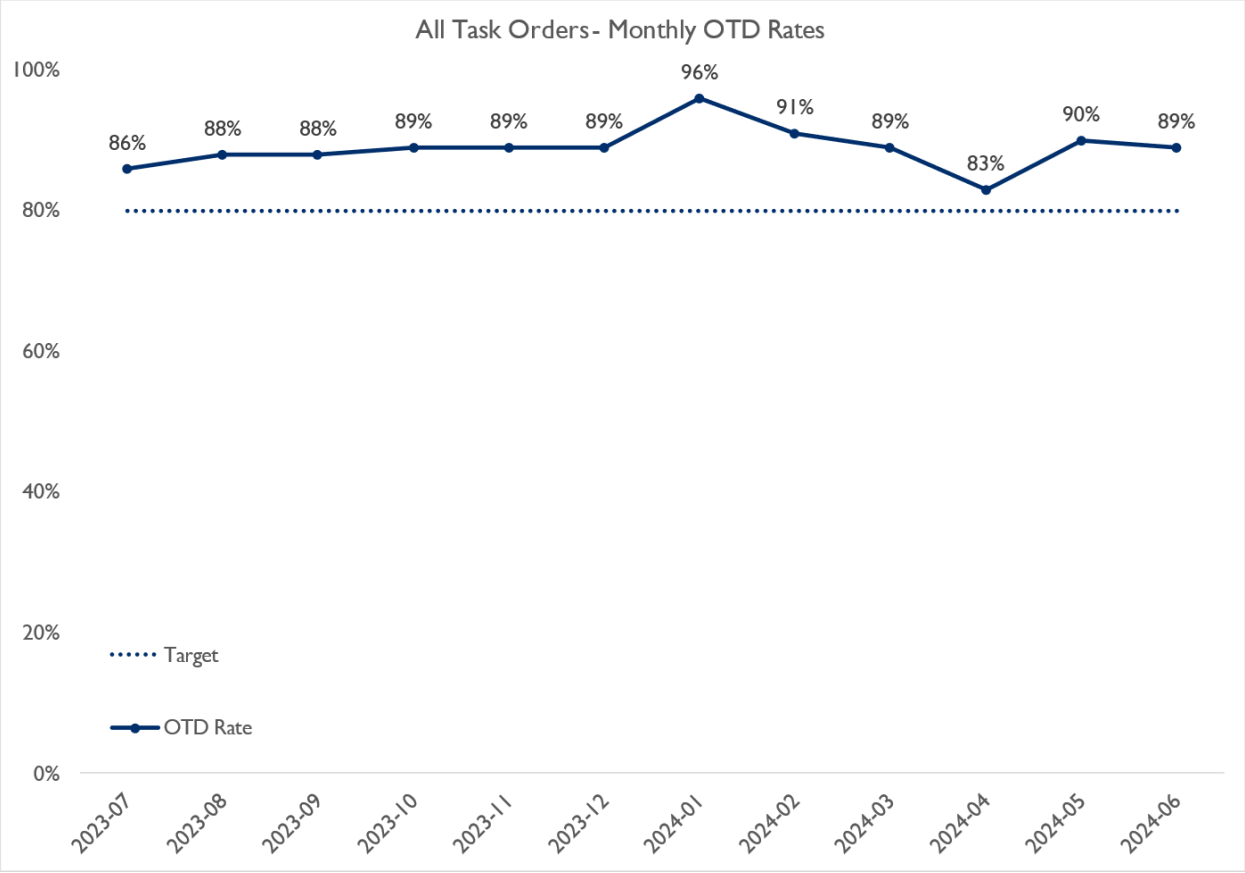
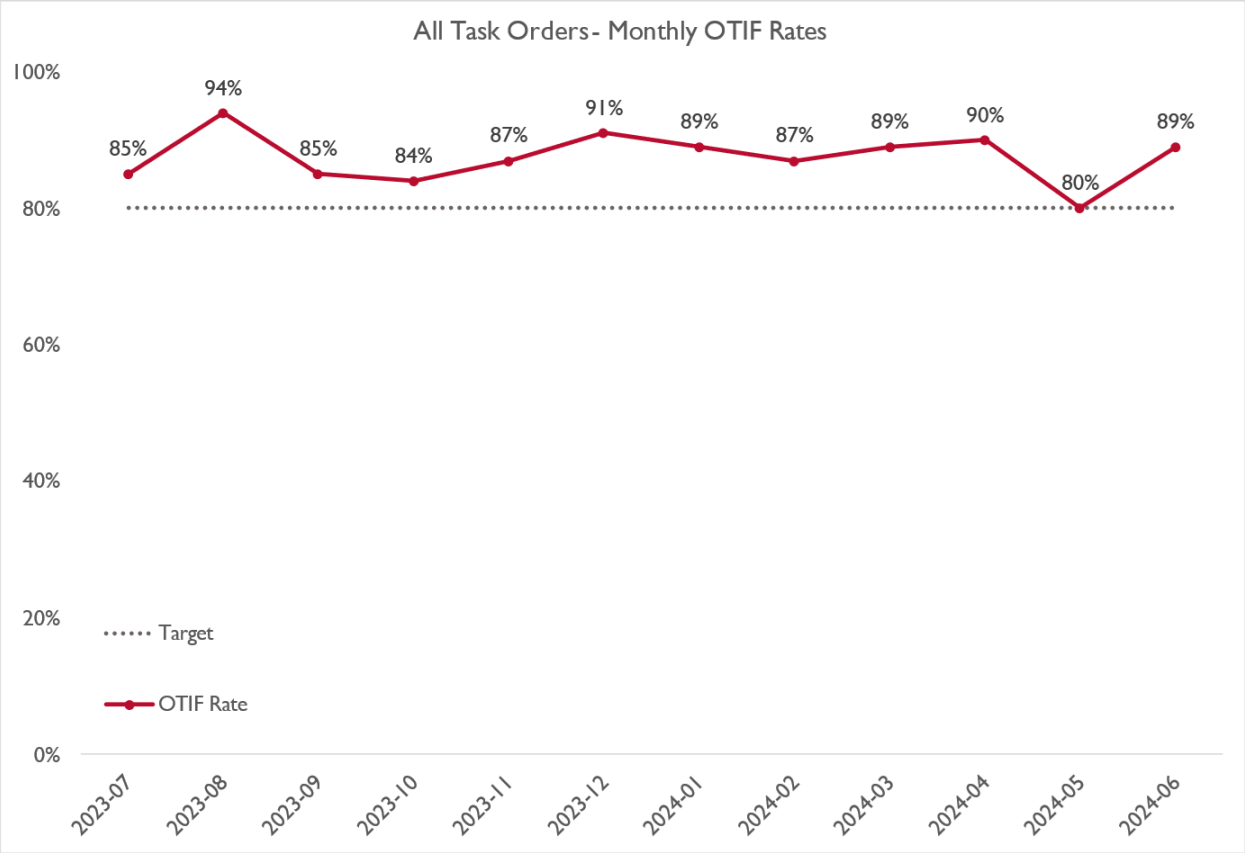


Exhibit 13. April 2023 through June 2024 Monthly IDIQ OTIF



C2. SYSTEMS STRENGTHENING TECHNICAL ASSISTANCE

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

Provided **technical feedback on 171 supply plans in Q3** to strengthen national supply planning capabilities.

Facilitated the **adoption of QAT** for management of forecasting and supply planning **in 44 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.

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 FY 2024, GHSC-PSM is focused on enhancing the capabilities of analytic tools, facilitating ease of transfer between countries, and removing bottlenecks to expand their use. The project makes country-

specific adjustments to data inputs or modeling approaches to ensure sustained operational use and to widen accessibility to the tools and analytic approaches, including with the community on Github—a public site where anyone can download and use open-source software tools. In Q3, the project refined data flows and incorporated, expanded, or improved the automation of data analytic tools in Mali, Niger, Nigeria, Rwanda, and Zambia.

Below are two Q3 examples that demonstrate how GHSC-PSM works with countries to refine analytic tools and improve supply chain data management:

- In **Rwanda**, conducted a Network Design Optimization analysis using the open-source Google ORTools Python to streamline delivery operations and ensure maximum resource use for RMS Ltd. This activity followed a 2022 National Supply Chain Assessment (NSCA) that showed last-mile distribution challenges for health commodities and medical equipment. The NSCA findings showed a consistent trend of unplanned orders across all facility types surveyed—with RMS Ltd. branches delivering 56 percent of orders in full. The project and RMS Ltd. organized an NDO stakeholder's workshop. The workshop analyzed RMS Ltd.'s storage and distribution capacity and recommended design options for a new set of hubs and central warehouses with optimal sizes and capabilities. A key outcome was the consolidation of 30 district pharmacies into a smaller number of regional hubs. The final report is due in Q4 and will include the NDO analysis and recommendations on transforming RMS Ltd.'s supply chain to optimize distribution networks, respond to its customer needs, and deliver commodities to the last mile.

- In **Nigeria**, GHSC-PSM evaluated the 2024 Long-Haul Delivery (LHD) Price Refresh RFP bids using an optimization model built with Excel's OpenSolver. This model awards lanes across three service types based on 3PL KPIs, prices, and market share constraints. GHSC-PSM will use this information to award LHD lanes to 3PLs through late FY 2025. The project updated the Excel tool and dashboard to streamline the process and improve usability for future procurement assessments.

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, and data 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 advances the adoption of GS1 labeling and data standards in country regulatory guidelines and implementation roadmaps.

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

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

GHSC-PSM is developing a minimum viable product (MVP) for a TIOP for the HIV/AIDS task order. The project designed the TIOP as a central hub for trading partners to comply with evolving regulatory requirements for traceability reporting to national repositories. The TIOP should demonstrate the benefits of a semi-centralized architecture that can exchange serialized traceability data between suppliers, country regulatory authorities, and procurement agents.

In Q3, GHSC-PSM completed the functional and technical design, the configuration of the TIOP MVP architecture, onboarding documents for suppliers and recipient countries, SOPs for data exchange, and a source code repository on GitHub in Q4. The project completed a due diligence analysis of available open-source tools that can exchange serialized data using the GS1 Electronic Product Code Information Services (EPCIS) standard and selected tools that meet the primary use case's requirements. The project held a series of working sessions with global community partners[80] to finalize tools, message schemas, and EPCIS data standard components for the MVP . In Q4, GHSC-PSM plans to pilot this tool between an ARV manufacturer and a USAID-supported country.

Country highlights in Q3 include:

- In **Burundi,** following the Burundian Regulatory Authority for Medicines for Human Use and Food (ABREMA)'s formal endorsement of the country's national traceability strategy, developed governance frameworks and an implementation plan for the rollout of the traceability initiative. The project also provided advisory services focused on strengthening the regulatory system to enable traceability to ABREMA.

- In **Ghana**, facilitated a workshop hosted by the MOH to establish an approach for managing the country's product master data[81] and establish processes for scalable and sustainable product master data management. Stakeholders at the workshop[82] agreed that a standards-based common structure for product master data was critical to control commodity identification and management, and increase efficiencies in downstream supply chain functions. The project shared a technical report with the MOH to recommend next steps.

- In **Zambia**, developed a concept note that the USAID Mission requested for a narrow-scope pilot to fast-track ZAMMSA traceability implementation by demonstrating serialized inventory management. The proposed pilot includes a module to capture serialized information[83] in the expert warehouse management system portal. GHSC-PSM continued to clean product master

[80] Partners include suppliers, GS1 Global Fund, and UNICEF

[81] This includes governance, data architecture, policy, and the system capability required to standardize trade item identification (i.e., GTIN where applicable) to capture serialized information.

[82] Including the Ghana FDA, WHO, and private-sector partners.

[83] GTIN, batch, expiry, and serial number.

data in PCMT, the product catalog management tool, and provided technical support on the automatic identification and data capture, or AIDC, solution.

In Q3, GHSC-PSM finalized the Master Data Management (MDM) Lessons Learned document to capture serialized information. The document incorporates feedback from USAID, GS1, WHO, and community stakeholders. The MDM document, funded by TO3, provides a framework for successful implementation, challenges, and lessons learned while deploying MDM programs globally and nationally. The project presented the draft MDM to the global health community at the Digital Health Supply Chain technical working group (TWG) meeting co-hosted by USAID and WHO.

FORECASTING AND SUPPLY PLANNING

GHSC-PSM provided FASP technical assistance to 32 countries[84] 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

QAT is a cloud-based software for in-country stakeholders designed to optimize commodity procurement and delivery schedules, monitor product stock status, and share data with external platforms and stakeholders. With an enhanced user interface, greater analytical capabilities, and automated data exchange, this tool enables program managers to easily build multiple forecasts for comparison and selection, optimize commodity procurement and delivery schedules, monitor product stock status, and share data with external platforms and key stakeholders.

As of Q3, GHSC-PSM has facilitated the adoption of QAT in 44 countries (with 35 countries onboarded onto the forecasting module). This includes countries reached through GHSC-PSM's collaboration with UNICEF and USAID's Bureau for Humanitarian Assistance. As of Q3, the number of active QAT users worldwide[85] was 1,177, not counting inactive country and global-level users that have been removed.

In Q3, GHSC-PSM provided in-person and remote technical assistance to strengthen capacity for QAT use:

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

[85] Logged on at least once since Q3 FY 2023

- In **Senegal**, trained 21 participants from various organizations[86] on QAT's forecasting module. The MOH finalized a family planning commodities forecast using the QAT module 2 and, along with the NMCP and social marketing programs, submitted final versions of commodity supply plans using the QAT.

- In **Côte d'Ivoire**, trained 43 participants on the QAT forecasting module.[87] The National AIDS Control Program (NACP) completed ARV and condom forecasts using QAT module 2, while the MOH, National TB Program, multiple laboratory programs, National Family Planning Program, and NACP submitted final versions of their supply plans on the QAT.

- In **Sierra Leone**, trained 26 participants from NMCP, NACP, the Country Health Program, the Department of Public Safety, national laboratory programs, district health management teams, hospitals, and GHSC-PSM in Sierra Leone. The five-day workshop covered all the functionalities of the QAT forecasting module.

- In **Liberia**, trained 12 participants on all the functionalities of the forecasting module. Participants included staff of the MOH, NACP, United Nations Population Fund (UNFPA), World Food Program, and GHSC-PSM in Liberia.

- In **Guatemala**, trained 20 participants representing the following government departments and health programs: Programa Nacional de Salud Reproductiva (PNSR); Programa Nacional de Inmunizaciones; Programa de Seguridad Alimentaria y Nutricional; Departamento de Asistencia Técnica en Medicamentos, Equipos Clínicos y Afines (DATMECA); Departamento de Asistencia Técnica en Medicamentos, Equipos Clínicos, Biológicos y Afines (DATMECBA). Participants also included GHSC-PSM staff from Guatemala and Panamá offices.

- Remote technical assistance:

    - Supported **Burundi** with the quantification of malaria and family planning commodities and provided technical assistance in troubleshooting and analyzing locally derived assumptions for their forecasts.

    - Supported **Cameroon**'s HIV commodities quantification and provided ad-hoc support and troubleshooting, including liaising with developers to report urgent bugs that could impede quantification progress, activating/creating accounts for participants, reviewing

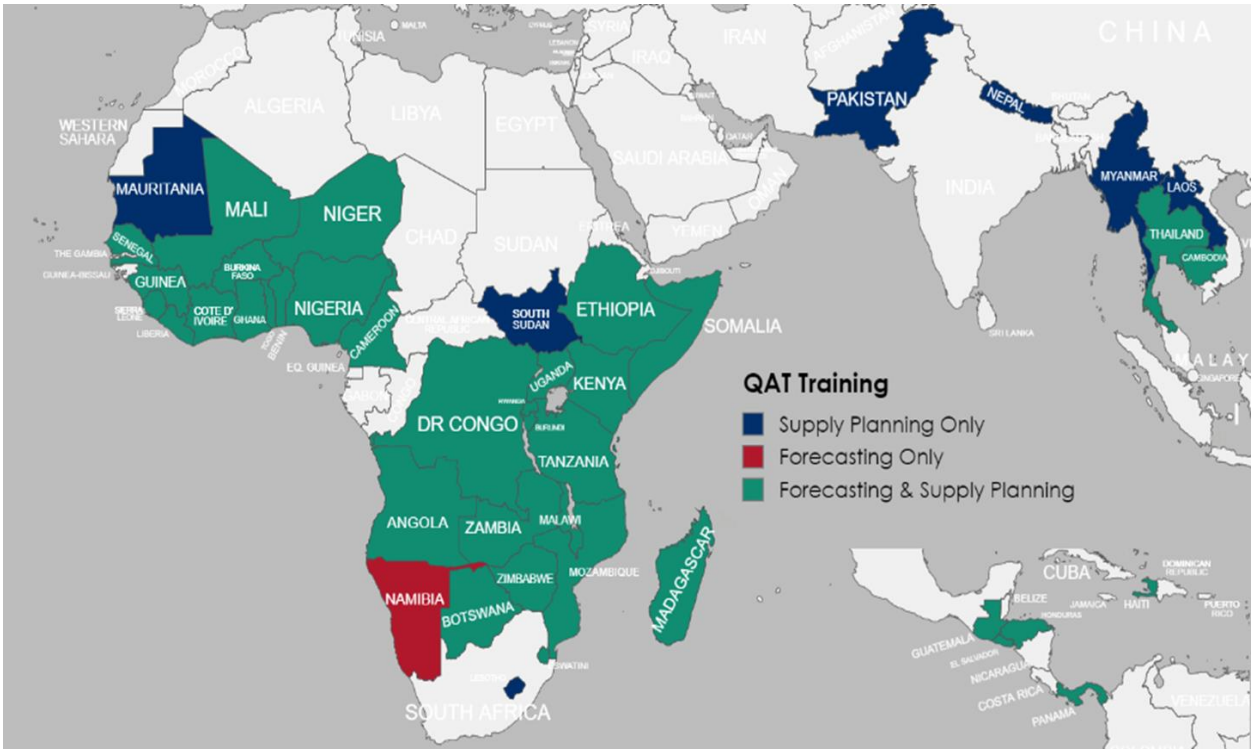
[86] Including the MOH, NMCP, General Health Directorate, FHI360, the Pharmaceutical Regulatory Authority, Maternal and Children Health Directorate, a social marketing organization (ADEMAS), the Central Medical Store (Pharmacie Nationale d'Approvisionnement), National HIV Program, African Resource Center), USAID, PMI, and the USAID Building a Resilient Health System (BRHS) project.

[87] Participants included staff from: NMCP, the Directorate of Pharmaceutical Activities, (NACP, Direction de l'Informatique et de l'Information Sanitaire, National TB Program, Santé Espoir Vie, National Council for Blood Transfusion, National Nutrition Program, National Cancer Control Program, National Maternal and Child Health Program, JHPIEGO, Nouvelle Pharmacie de la Santé Publique, Local Health Supplies Procurement and Logistics Activity project, Africare Resource Centre, RetroCI Laboratory, and the International Rescue Committee.

the forecasting trees in QAT and providing feedback, and converting some assumptions into QAT forecasting outputs.

- Supported **Botswana**'s bi-annual HIV quantification workshop by reviewing specific QAT functionalities, creating and assigning new users to QAT programs, and assisting with preparation for the next workshop in early FY 2024.

Exhibit 14. Countries Trained on QAT Forecasting and Supply Planning as of June 30, 2024 (updated in July 2024)



Planning for QAT transition

In Q3, 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:

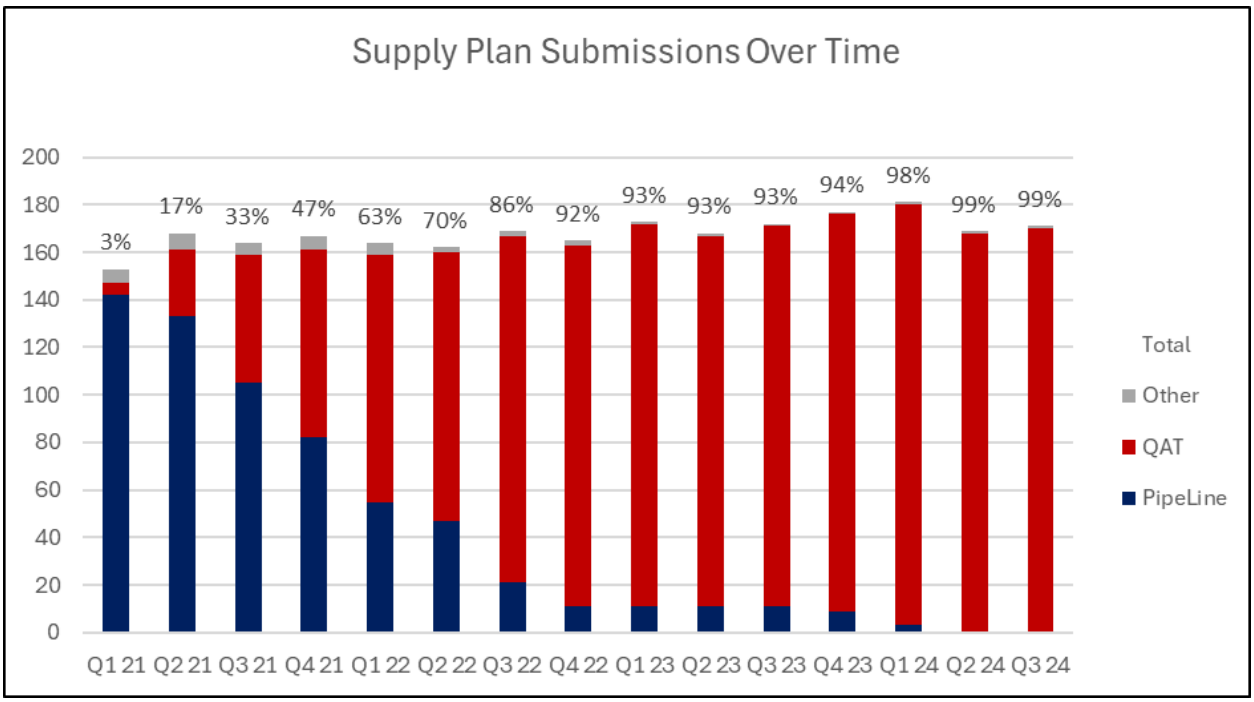
- Submitted an application to the Digital Public Goods Alliance and received approval after 1.5 months. This is a major milestone for QAT as a product, as it is now listed in the Digital Public Goods registry.
- Developed code review acceptance criteria and contributor rules. This document will serve as a guide for any potential contributors to QAT's open-source code.

- Held three meetings with USAID and Digital Square to provide guidance and updates on the progress of the activities above.

Using QAT for supply planning

GHSC-PSM supports countries' use of QAT for supply planning. In Q3, the project reviewed 171 supply plans to verify that they complied with data quality, supply planning, and procurement scheduling standards. This included 146 USAID high-priority supply plans from 28 countries.

Exhibit 15. QAT Supply Plan Submissions Over Time



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 warehouse management systems) for standardization and to establish methods and plans for managing master data sets across information systems.

In Q3, GHSC-PSM continued to work with Botswana, Burkina Faso, Kenya, and Malawi 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 is slow. This is due in part to the level of effort required to finalize contract agreements, 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 **Kenya**, GHSC-PSM supported two workshops hosted by the MOH to create a standard products list and develop a draft LMIS Guide that outlines the requirements needed for digital MIS solutions to be compliant with the MOH's ICT guidelines. The project submitted recommendations for the NPC to the Mission to support the continuity of digital health activities in Kenya following the close out of the Afya Ugavi project.

In Q3, GHSC-PSM observed increasing interest by ministries of health in implementing an interoperable digital health system for healthcare and supply chain operations. An interoperable digital health platform leverages the Open Health Information Exchange (OpenHIE) framework and allows each country to harmonize and share data across the health supply chain. To support this activity in Burundi and Nigeria, GHSC-PSM initiated discussions about the SCISMM assessment and scheduled an introductory webinar on SCISMM for Q4.

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 Q3, the project launched an internal laboratory community of practice to promote communication and knowledge sharing. Since its launch, 125 members have joined, and 39 posts have been shared. Content is centered on the all-inclusive SLAs implementation, equipment placements and EPPQ, and data use. The project continues to collect country responses to the gap assessment tool to determine country-specific needs related to implementing the global SLAs, including KPI management and an early warning-early action process, which will be used to inform technical assistance offerings and approaches. GHSC-PSM leveraged routine internal meetings held 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 diagnostic network optimization

Throughout past periods of performance, GHSC-PSM has led DNO activities to improve diagnostic networks through a stakeholder-driven process. The project worked with stakeholders to develop optimization scenarios aligned with specific country objectives, which were modeled using DNO. Following USAID guidance, GHSC-PSM's DNO work is winding down, and ad hoc requests are being supported as they arise.

Burundi, **Ghana**, and **Togo** will implement their operational plans throughout FY 2024 in alignment with the recommendations from their recently completed DNO workshops. In Q3, GHSC-PSM

provided analytical support using OptiDx to address questions raised by stakeholders and update the DNO models.

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 Q3, the project:

- Solicited feedback from laboratory stakeholders on change requests for QAT to improve the use of forecasting trees for laboratory commodities.
- Facilitated the laboratory quantification workshop in **Angola** through remote and in-person technical assistance.
- Provided remote technical assistance to **Eswatini and Mali** on using QAT for forecasting and supply planning for laboratory commodities.

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 they appropriately plan and are prepared before procuring certain laboratory equipment and instrumentation 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 Q3, the project coordinated with stakeholders in **DRC, Kenya, Togo, Tanzania, 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 Q3, 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 Q3, GHSC-PSM provided remote technical assistance to **Eswatini, Ghana, Lesotho,** and **Uganda**—all of which are in various stages of ABC/ABM implementation:

- 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. GHSC-PSM's goal is to have both regions maintaining and operating their own P&Ls by the end of Q4.

- 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[88] 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 Q4.

- In **Lesotho**, assisted the National Drug Service Organization in developing a P&L statement for the last five 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

[88] 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.

potential financial risks and vulnerabilities. By addressing these risks proactively, warehouses and distribution centers can mitigate financial losses and maintain stability.

- In **Uganda**, the Joint Medical Stores (JMS) operates using the 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 own projections. 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.

Review of inventory parameters in Zimbabwe

In Zimbabwe, GHSC-PSM facilitated a logistics system redesign workshop to review inventory control parameters. Forty participants representing the Ministry of Health and Child Care-Directorate of Pharmacy Services (MOHCC-DPS), Department of Laboratory Services), UNFPA, United Nations Development Programme, UNICEF, Global Fund, and FHI-360 attended the workshop. The key recommendation following the workshop and site visits to several warehouses and hospitals was the need for NatPharm to increase its processing speed and use the e-LMIS for re-ordering to reduce lead time and stock-holding levels. The project developed and shared a technical report that addresses the reduction of max-min stock levels.

Temperature Mapping in Liberia

In Q3, GHSC-PSM conducted a temperature mapping exercise in Liberia. This included training stakeholders, including the CMS, EPI, and UNICEF, on the mapping protocol, installing 111 data loggers at the CMS, mapping tests and data collection from SenseAnywhere data loggers, and training warehouse operators on the revised temperature monitoring SOPs.

WORKFORCE DEVELOPMENT

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

Strengthening capacity for supply chain management

GHSC-PSM offers USAID personnel courses to introduce them to supply chain management. In Q3, GHSC-PSM trained 26 participants from USAID Missions and USAID/Washington, including several Career Candidate Corps participants, on the Introduction to Supply Chain Management course. The project also trained 20 participants (including several who had attended the introductory course) from Missions and Washington on the Emerging Trends in Supply Chain Management course. Both courses used simulation exercises, lectures, and panel discussions to deliver 32 sessions. Lecturers included staff from USAID, GHSC-PSM, VillageReach, Project Last Mile, Open Contracting, Management Science for Health, and Salient Advisory. Both courses received positive feedback from participants.

Country-specific workforce development activities

- In **Sierra Leone**, GHSC-PSM 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 Sierra Leone. GHSC-PSM and the MOH collected data from 25 stakeholders from 23 organizations in Q3. Findings from this research will inform the pursuit of SCM professionalization, workload analysis for job placement, and updates to the SCM curriculum in institutions offering SCM courses in the country.

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 a new EUV survey module to capture data from CHWs. In Q1 FY 2024, the project rolled out the module to EUV countries. 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 Q3, GHSC-PSM collected data through the EUV survey in **Ghana**, **Mali**, **Niger**, **Nigeria**, **Sierra Leone**, **Zambia**, and **Zimbabwe** and collected CHW module data in **Mali**, **Nigeria**, **Sierra Leone**, **Zambia**, and **Zimbabwe**. The project shared draft CHW module reports from Ethiopia and Liberia 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 Q3, GHSC-PSM supported the implementation of the NSCA in Lesotho and Zambia and carried out the following related activities:

- In **Lesotho**, assisted in finalizing the NSCA report by inc
- orporating feedback from the MOH and other supply chain stakeholders.
- In **Zambia**, validated data from fieldwork carried out in Q2, conducted data analysis, and prepared a comprehensive draft report with findings and recommendations. This draft is currently under review by the MOH, the USAID Mission, and other key supply chain stakeholders. Results of this review will inform the final report, to be presented in Zambia at a dissemination meeting in Q4.

In Q2, GHSC-PSM initiated an activity 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. In Q3, the project identified three countries, developed data collection tools, and began a series of interviews with key informants. By applying a case study approach, GHSC-PSM will identify successful practices, build confidence in the tool, and provide USAID with recommendations for revising the NSCA tool or its related guidance.

Additionally, in Q3, GHSC-PSM organized a learning event to advise project directors, program managers, and country directors of the methodology and its benefits. This event introduced the tool, identified potential candidates, and shared insights on how the NSCA supports strategic planning.

LEARNING AGENDA: SUPPLY CHAIN TECHNICAL INDEPENDENCE INDICATOR

GHSC-PSM completed work on the technical independence indicator learning activity, which presents the indicator's strengths and weaknesses as reported by a range of stakeholders and recommendations for adaptation. The analysis drew from multiple examinations of the indicator, including the Country Director's Forum working sessions, the supply chain indicator review project, and the FY 2023 technical independence learning activity. In Q3, the project submitted a draft technical brief to USAID that provides concrete, actionable recommendations to improve 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 number of people trained is an indicator on which the project focuses its capacity-building resources and identifies areas for improvement related to supply chain outcomes. In Q3, GHSC-PSM trained 2,579 individuals (968 women and 1,611 men). Many trainings were cross-cutting and addressed topics relevant to multiple health areas. By funding source, 53 percent were trained with HIV/AIDS funding; 28 percent with malaria funding; 11 percent with FP/RH funding; and 8 percent with MCH funding.

ENVIRONMENTAL COMPLIANCE

In Q3, in accordance with USAID's Environmental Procedures (22 CFR 216) and GHSC-PSM's closeout and transition implementation phases, the project continued to support countries to operationalize and implement USAID-approved GHSC-PSM compliance instruments—the Initial Environmental Examinations, Environmental Mitigation and Monitoring Plan, Waste Management Plan, and the Pesticide Evaluation Report and Safer Use Action Plan. This support included providing multi-faceted one-on-one technical advisory services to global staff, such as reviewing and providing guidance on technical documents on country activities operationalization and monitoring and evaluation, technical guidance and advisory on healthcare waste management, training and capacity building of project management units and local partners, and direct technical assistance to project staff. The project worked with country program and risk management teams to provide guidance to countries on disposing of expired commodities and unusable items from warehouses.

C3. GLOBAL COLLABORATION

USAID presented a poster showcasing GHSC-PSM's TIOP pilot program at the **SAPICS Conference** in South Africa.

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 Q3, GHSC-PSM:

- 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 availability of ARVs through collaboration on the USAID VMS program. (See section B1.)
- Re-convened, along with PMI, **the TraceNet TWG**, which includes global health stakeholders such as the Global Fund, UNICEF, AMF, Innovative Vector Control Consortium (IVCC), WHO, and several international LLIN manufacturers, and hosted a series of topical meetings to solicit input in revising the TraceNet 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 our Conference Hub. Below are highlights from Q3:

- Hosted a capacity strengthening workshop in Ethiopia with representatives from 10 countries, USAID, CDC, ASLM, the Ethiopian MOH, and PEPFAR implementing partners to promote the expansion of all-inclusive SLAs in all PEPFAR-supported countries. (See section B1.)
- USAID presented a poster showcasing GHSC-PSM's TIOP pilot program at the SAPICS Conference in South Africa.
- Submitted an abstract to the Global Digital Health Forum proposing a panel presentation on leveraging serialization to position patient safety at the center of a connected, secure, and open global supply network.
- Hosted a global webinar on increasing financing for MNCH commodities in Ethiopia and published a related resource, How Improving Ethiopian Financing of Maternal Health Commodities Improved Medicine Availability.
- Co-hosted a webinar with USAID and UNICEF on the breadth of respiratory ecosystem equipment for the care of small and sick newborns.
- Presented MNCH and data analytic tool insights on a panel at the Global Digital Development Forum 2024 (See section B4.)
- Presented a poster on evaluating newborn oxygen needs in Ghana at WHO's National Oxygen Scale-Up Framework Meeting, *The Road to Oxygen Access,* held in Dakar, Senegal.
- Delivered Introduction to SCM and Emerging Trends in SCM training courses to USAID staff in Washington, D.C., with internal trainers from USAID and GHSC-PSM and external trainers from VillageReach, Project Last Mile, Open Contracting, Management Sciences for Health, and Salient Advisory. (See section B3.)

COUNTRY COLLABORATION

Q3 highlights of GHSC-PSM in-country collaborations with global partners include:

- In **Mozambique**, conducted consultations with the Global Fund, Mozambique Central Medical Store leadership, and the U.S. Commercial Services representative in support of the VMS strategy. (See section B1.)

- In **Eswatini**, collaborated with the MOH, PEPFAR and the Global Fund to develop the CAB-LA implementation plan and supported PEPFAR and the Global Fund to forecast demand for this PrEP product.

- Documented lessons from the CSI survey in five countries (Burkina Faso, Ghana, Kenya, Nigeria, and Rwanda) related to FP policy changes, drivers, outcomes, and implementation progress. In Q3, the project:
    - Submitted first drafts of case studies on logistics coordination in **Ghana** and **Rwanda** for Mission approval.
    - Submitted a first-draft case study on expanding FP methods and access in **Nigeria** for Mission approval.
    - Conducted a kick-off meeting in **Burkina Faso** to inform a case study on private-sector engagement in FP service provision pending the Mission's approval.

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.

- Provided FASP as well as 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.)

- Participated in the GHSC-QA-led audits of five VMMC kit manufacturers in China. (See section B1.)

- Met with USAID and GHSC-QA to align on strategic sourcing opportunities related to the project's regionalization goals. (See section B1.)

- Through the **non–field office program management unit** (NFO PMU), collaborated with in-country stakeholders to support procurement and delivery of health commodities. 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 Q3 include the following:

    - Delivered commodities worth $713,000 as USAID increased support to **Ukraine** with a COP 23 obligation of $12 million. On February 27, 2024, the MOH of Ukraine made an urgent request for delivery of DTG 10 mg with an agreed delivery date of July 5, 2024, due to risk of stockout. GHSC-PSM worked tirelessly to secure product and shipping details. The project overcame hurdles ranging from securing product early to locking down flights to Warsaw, and then trucking the product into Ukraine. These DTG 10 mg deliveries were received by the project's in-country warehouse and logistics partner, 100% Life, on April 5, 2024, thus avoiding an imminent stockout and potential interruption in treatment.

      At the end of Q3, 100% Life notified GHSC-PSM that warehousing, and logistics costs had increased exponentially due to challenges, including lack of truck drivers for deliveries, regulation changes, and increased costs of holding commodities. The local costs had doubled and, in some cases, more than tripled, thus putting immense pressure on in-country supply chain assistance budgets. GHSC-PSM worked with USAID Ukraine to analyze the impact and share a justification to increase the in-country logistics budget. USAID then approved the increased budget, offering in-country partners much-needed support.

    - Delivered the project's first prefabricated containers, which will serve as a pharmaceutical dispensary at select MOH sites in **Jamaica**. The units, comprising storage and dispensary facilities, are fabricated from 20' and 40' shipping certified wind and watertight containers. Each unit comes equipped with workstations, countertops, overhead cabinets, and full electrical. The subcontractor, in coordination with GHSC-PSM, conducted thorough site assessments to ensure proper location, site preparation, and environmental risk management. These installations will significantly improve storage capacity at the facilities, enhancing the accessibility and security of health commodities and services.

    - Delivered two out of three shipments of dengue lab diagnostics, the first-ever procurement of such supplies by GHSC-PSM. These diagnostics are crucial in responding to a significant increase in dengue cases in **Jamaica**. The timely arrival of

these shipments demonstrates the project's ability to address urgent public health needs. The third and final shipment is expected to arrive in Q4.

OTHER GLOBAL COLLABORATION

In Q3, the project:

- Held stock of dapivirine rings in the Dubai RDC to support MOSAIC program activities in **Kenya** and **Zimbabwe**. (See section B1.)
- Collaborated with USAID's Frontier Health Markets Engage Project to share FP and market health learnings and identify opportunities for collaboration.

ANNEX A. COVID-19 RESPONSE

In Q3, the project **delivered 15,910 COVID-19 commodities,** including stethoscopes, patient stretchers, scales, and Standard COVID-19 Ag test kits, to Pakistan and Afghanistan with American Rescue Plan Act (ARPA) funding.

In Q3, the project **delivered 2,176 treatment courses of generic nirmatrelvir + ritonavir and 6,720 treatment courses of generic of molnupiravir** to Ukraine.

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 Q3, GHSC-PSM delivered critical medical supplies and equipment to:

- **Pakistan:** 180 stethoscopes, 120 infant radiant warmers, 240 suction machines, 120 lab refrigerators, 120 infusion pumps, 120 physiological monitors, 120 IV drip stands, 120 medical examination tables, 5,420 scales, 120 biohazard waste containers, 210 autoclave sterilizers, 210 delivery tables, 90 blood pressure apparatuses, 120 neonatal phototherapy units, 120 nebulizers, 120 patient stretchers, 120 medical carts, 120 scalpels, 480 clinical use trays, 120 scalpels, 1,440 forceps, 5,000 scissors, 240 langenbeck retractor shot blades, 360 tungsten carbide (T/C) mosquito forceps, 360 T/C scissors, and 120 T/C mayo hegar needle holders.
- **Afghanistan:** 1,000 standard quality COVID-19 test kits

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 (PSA) plants, vacuum swing adsorption plants, oxygen concentrators and cylinders, and oxygen disaster manifolds, as well as consumable and durable items.

In Q3, the in-country service provider for the PSA plants that GHSC-PSM supplied to Tajikistan completed site visits at three recipient hospital sites. Their purpose was to determine the most appropriate location and design for plant rooms that will eventually house automatic voltage regulators

(AVRs). Installation of the AVRs will ensure that the hospital PSA plants receive stable and reliable electric power. The project conducted site visits in collaboration with the USAID-funded Meeting Targets and Maintaining Epidemic Control, or EpiC, project, which will ultimately be responsible for plant room construction. When the plant rooms are finalized, GHSC-PSM, through the PSA manufacturer's in-country service provider, will complete the installation of the AVRs and certification of the entire system, hospital PSA plants, in collaboration with Tajikistan's State Supervision of Safe Work in Industry body.

Procuring respiratory equipment and related commodities to expand countries' respiratory ecosystems

In Q3, GHSC-PSM received initial budget calculations from 11 of 19 countries, indicating desired quantities and types of respiratory equipment and related commodities. GHSC-PSM worked with these Missions to define commodity and freight estimates and began processing requisition orders to procure commodities, newborns, and children.

COVID-19 TEST-TO-TREAT PROGRAM

In FY 2022, GHSC-PSM received funding to support the COVID-19 Test-to-Treat Program.[89] In Q3 the project:

- Delivered 2,176 treatment courses of generic nirmatrelvir + ritonavir and 6,720 treatment courses of generic molnupiravir to **Ukraine**.
- Delivered 1,000 Standard Q COVID-19 test kits to **Afghanistan**.

COVID-19 IN-COUNTRY TECHNICAL ASSISTANCE

Below are examples of COVID-19 technical assistance activities the project conducted in Q3.

- In **Angola,** supported the MOH in hosting the Causality Committee to compile the final Adverse Events Following Immunizations (AEFI) report for submission to the Minister of Health. GHSC-PSM conducted monthly monitoring of the AEFIson DHIS2. The project equipped MOH fleets to distribute 14,088 COVID-19 vaccines across 10 provinces and their municipalities. The project supervised cold chain in three provinces, 12 municipalities, and 12 health units to ensure maintenence of the vaccine cold chain. The GHSC-PSM COVID-19 team conducted on-the-job training for 42 logisticians during supervision. The project conducted waste management supervision across three provinces, 12 municipalities, and 17 health units to monitor waste disposal practices. During the supervision, GHSC-PSM COVID-19 staff trained 202 health technicians on developed tools due to the government changing out previously trained technicians.

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

- In **El Salvador,** donated equipment for the crisis room, including furniture, a video wall, a communications system, laptops, printers, and telephones to the Public Health Emergency Operations Center (COESP) on behalf of USAID. On April 11, the COESP was inaugurated in the presence of Health Minister Francisco Alabí and USAID-El Salvador Mission Director Chris Cushing. The COESP will protect the population's health and provide a coordinated, timely, and effective response to emergencies at the local, regional, and national levels.

- In **Ghana,** coordinated distribution of 1 million COVID-19 vaccine doses to all 16 regional cold rooms to support the national vaccination campaign. The project also procured and installed 40 vaccine refrigerators and 50 temperature data loggers, boosting cold chain storage capacity by approximately 8,000 liters. GHSC-PSM evaluated vaccine waste management practices and recommended improvements in waste generation, segregation, collection, storage, transportation, treatment, and staff training to improve waste management.

- In **Honduras**, collaborated with the General Directorate of Human Resources Development at the MOH to strengthen their personnel's technical capacity. The project identified potential organizations to deliver certification or diploma courses and met with these groups to identify knowledge gaps and training needs for MOH staff in the oxygen supply chain. This work led to drafting an Inter Institutional Framework Agreement between the MOH, the Central American Technological University, the National Institute of Professional Training, and the Association of Biomedical Engineers of Honduras to strengthen the network of health services, continuing education, and shared lessons learned experience in biomedicine. GHSC-PSM supported an agreement signing ceremony on June 5, 2024, in Tegucigalpa with representatives from these institutions.

- In **Liberia**, supported the MOH in conducting a humidity and temperature mapping exercise at the MOH CMS in the township of Caldwell as per the COVID CN18 approved work plan. The mapping exercise assessed temperature and humidity conditions at the CMS as per international best practices and in compliance with WHO guidelines for managing pharmaceutical commodities. This was the first temperature mapping exercise completed at the CMS to ensure that the warehouse, which stores public-sector pharmaceuticals and medical supplies, meets the requirement of a steady temperature of 30±2°C under dynamic conditions in accordance with the International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH) stability requirements for products in a Zone IV location, which Liberia falls under.

  By the end of the mapping exercise, 111 calibrated temperature sensors with an accuracy of ±0.5°C or better in the range of [30±2] °C and [5±2] °C were installed by a GHSC-PSM vendor at the CMS. As of Q3, CMS staff have monitored the CMS temperature and humidity through a web-based temperature monitoring system that provides real-time monitoring data.

  In Q3, GHSC-PSM received USAID approval to subcontract with the Liberia Medicines Health Regulatory Authority for the appropriate disposal of unusable medical and pharmaceutical

products within the public health supply chain system. Disposal of unusable products such as expired or damaged is expected to begin and be completed in Q4.

Cover photo credit: Anteneh Ayele, Xpozed Network and AnthonyAbu | Chemonics, GHSC-PSM

Current Reporting Period

2024-Q3

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

Delivery Impact to Date

Number of ACT treatments delivered

584,874,032

Number of Couple Years Protection delivered

111,034,489

Person-years of ARV treatment delivered

25,805,823

Global Supply Chain M&E Indicator Performance

FY2023 Quarter 3, April - June 2023

Delivery (OTIF, OTD and Backlog)	Cycle Time	Quality Assurance (TO2 only)	Procurement	Registration
Supply Plan Error	Forecast Error	Supply Plan Submissions	Warehousing	Vendor Performance

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

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

Delivery Performance

Current Reporting Period

2024-Q3

TO	Analysis
Crosscutting	Overall delivery performance remained strong this quarter. The OTD and OTIF percentage stood at 87 percent this quarter. Delivery volume increased this quarter, lines increased under HIV/AIDs, Malaria and Maternal Health products. The most notable increase was under HIV/AIDS and Malaria products, with HIV lines increasing from 815 to 977 lines and Malaria lines increasing from 117 to 175 lines. There was a decrease in the lines under Family Planning. The overall backlog percentage recorded an increase this quarter to 5.4 percent. The increase was mostly due to some Covid lines. For the majority of the backlogged Covid lines, the delay was due to a change in the waiver process, which required an approval letter for shipment. Due to a technical challenge with information systems communicating proof of delivery information, backlog data was finalized 2 days later than normal. USAID was notified of issue and adjustment of protocol prior to reporting..
TO1 - HIV	Overall delivery performance for HIV/AIDS products was strong with a dip in OTD and OTIF percentage from last quarter. Both OTD and OTIF fell this quarter to 86 percent and 85 percent respectively. The backlog percentage stood at 5.2 percent, slightly higher than 4 percent of the last quarter. In terms of number of lines, products under Laboratory and Other Non-Pharma had the highest number of lines which did not meet OTIF and OTD criteria. Under OTIF, there were a few Adult ARV lines which were late. Even with late lines, the OTD for Laboratory and Other Non-Pharma lines stood at 86 percent. The delivery volume also increased this quarter to 977 lines delivered. Due to a technical challenge with information systems communicating proof of delivery information, backlog data was finalized 2 days later than normal. USAID was notified of issue and adjustment of protocol prior to reporting.
TO2 - Malaria	Overall delivery performance for Malaria products remained strong this quarter. OTIF stood at 90 percent while OTD percentage increased to 94 percent this quarter. There was a noticeable increase in the delivery volume of this quarter, from 117 lines last quarter to 175 lines delivered in this quarter. The backlog percentage also reduced this quarter to 2.4 percent, well below the target of 5 percent. ACTs and LLINs product groups had the highest number of delivered lines this quarter. Due to a technical challenge with information systems communicating proof of delivery information, backlog data was finalized 2 days later than normal. USAID was notified of issue and adjustment of protocol prior to reporting.
TO3 - FP/RH	Overall delivery performance for Family Planning products remained strong this quarter with both OTD and OTIF at 89 percent. There was a noticeable decrease in the backlog percentage to 1.3 percent this quarter, as compared to the 4.2 percent of last quarter. There were line items under Implantables, Combined Oral Contraceptives and Standard Days Method which were late under OTD and OTIF. The delivery volume reduced this quarter to 38 delivered lines this quarter. Due to a technical challenge with information systems communicating proof of delivery information, backlog data was finalized 2 days later than normal. USAID was notified of issue and adjustment of protocol prior to reporting.
TO4 - MNCH	Overall delivery performance for Maternal health products remained strong this quarter, with 100 percent OTD and OTIF. The backlog reduced to 0 percent this quarter, with a delivery volume of 5 lines consisting of Food & Wash & Other Pharma lines. Due to a technical challenge with information systems communicating proof of delivery information, backlog data was finalized 2 days later than normal. USAID was notified of issue and adjustment of protocol prior to reporting.

A1a. On-time, In-Full Delivery

Task Order	Total # of Line Items Delivered	OTIF	OTIF Target
TO1 - COVID19	53	96%	80%
TO1 - HIV	977	85%	80%
TO2 - Malaria	175	90%	80%
TO3 - FP/RH	38	89%	80%
TO4 - MNCH	5	100%	80%
Total	**1,248**	**87%**	**80%**

A1b. On-time Delivery

Task Order	Total # of Line Items with ADDs in the quarter	OTD	OTD Target
TO1 - COVID19	64	83%	80%
TO1 - HIV	988	86%	80%
TO2 - Malaria	175	94%	80%
TO3 - FP/RH	36	89%	80%
TO4 - MNCH	5	100%	80%
Total	**1,268**	**87%**	**80%**

A16. Backlog Percentage

Task Order	Total # of line items with ADDs in the last 12 months	Backlog	Backlog target
TO1 - COVID19	149	33.6%	5%
TO1 - HIV	3,668	5.2%	5%
TO2 - Malaria	654	2.4%	5%
TO3 - FP/RH	298	1.3%	5%
TO4 - MNCH	89	0.0%	5%
Total	**4,858**	**5.4%**	**5%**

Delivery Performance

Current Reporting Period

2024-Q3

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	**96%**	**53**	**83%**	**64**	**33.6%**	**149**
COVID19	96%	53	83%	64	33.6%	149
TO1 - HIV	**85%**	**977**	**86%**	**988**	**5.2%**	**3,668**
Adult ARV	83%	76	87%	76	3.4%	291
Condoms	76%	33	92%	26	0.8%	130
Food and WASH			0%	2	100.0%	2
Laboratory	86%	749	87%	753	5.9%	2,557
Other Non-Pharma	52%	25	54%	24	7.1%	127
Other Pharma	100%	28	100%	28	0.0%	188
Other RTK	86%	7	43%	14	23.7%	38
Pediatric ARV	95%	37	84%	43	5.0%	139
TB HIV	100%	11	100%	11	0.0%	40
Vehicles and Other Equipment					0.0%	3
VMMC	100%	11	100%	11	0.0%	153
TO2 - Malaria	**90%**	**175**	**94%**	**175**	**2.4%**	**654**
ACTs	92%	74	96%	73	0.8%	238
Laboratory	92%	13	81%	16	7.0%	57
LLINs	91%	33	94%	31	2.3%	172
mRDTs	70%	10	89%	9	8.3%	48
Other Non-Pharma	100%	1	100%	1	0.0%	5
Other Pharma	100%	2	100%	2	0.0%	12
Other RTK	100%	1	100%	1	0.0%	2
Severe Malaria Meds	71%	17	87%	15	1.5%	65
SMC	100%	19	100%	21	0.0%	32
SP	100%	5	100%	6	4.3%	23

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
TO3 - FP/RH	**89%**	**38**	**89%**	**36**	**1.3%**	**298**
Combined Oral Contraceptives	100%	2	67%	3	2.1%	47
Copper-Bearing Intrauterine Devices	100%	1	100%	1	0.0%	21
Emergency Oral Contraceptives					0.0%	11
Implantable Contraceptives	85%	13	91%	11	1.3%	75
Injectable Contraceptives	94%	17	100%	15	0.0%	89
Other Non-Pharma	50%	2	100%	1	0.0%	15
Progestin Only Pills	100%	2	100%	2	0.0%	34
Standard Days Method	100%	1	33%	3	33.3%	6
TO4 - MNCH	**100%**	**5**	**100%**	**5**	**0.0%**	**89**
Food and WASH	100%	2	100%	2	0.0%	3
Other Non-Pharma					0.0%	10
Other Pharma	100%	3	100%	3	0.0%	76

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-Q3

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	53	162	250	162	250
TO1 - HIV	976	218	250	210	250
TO2 - Malaria	175	293	340	280	300
TO3 - FP/RH	38	250		249	
TO4 - MNCH	5	300	350	296	350
Total	**1247**	**227**		**219**	

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	**38**	**250**		**249**	
Direct drop fulfillment	15	249	300	249	300
Warehouse fulfillment	23	250	250	249	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 reduced to 218 days with dwell-adjusted cycle time at 210 days. Both these numbers fall below the target of 250 days. There was an increase in delivery volume this quarter to 977 line items. Holds were placed on 25 percent of the line items with an average dwell-duration of 31 days. Lines under Laboratory and Adult ARV tracer category were the highest in number. Laboratory lines which accounted for 70 percent of the lines in this quarter experienced and average cycle time of 201 days, bringing down the overall average.
TO2 - Malaria	End-to-end cycle time for Malaria products decreased slightly this quarter to 293 days with the dwell-adjusted cycle time at 280 days. Both these numbers were below the target. The delivery volume also increased this quarter to 175 line items. Holds were placed on 37 percent of the line items with an average dwell-duration of 34 days. There were a number of lines to Côte d'Ivoire, which accounted for 15 percent of the total and had an average cycle time of 404 days. The cycle time for a number of LLIN lines for Côte d'Ivoire were elongated due to requested delivery dates being pushed. Another set of lines for Myanmar had a cycle time of 509 days, the LLIN lines were elongated due to an unpredictable waiver process due to some instability within the country. The ACT lines were 39 percent of the total with an average cycle time of 269 days.
TO3 - FP/RH	Average cycle time for family planning products fulfilled through RDC stood at 250 days with the dwell-adjusted cycle time of 249 days. The number of warehouse fulfilment lines (RDC) which were delivered this quarter (23) were almost half the line which were delivered last quarter (45) through this method. Due to a limited number of lines, outliers had a higher impact on the average. There was two lines from Senegal and Mali which had an average cycle time of more than 600 days. The Senegal line was under Injectables and had an unusually long cycle time (652 days) as it was placed in 2022 with a requested delivery date May of 2024. The Mali line under Implatnables had a cycle time of 603 days, whereby the order was placed in 2022 but funding was made available by October 2023. Injectables and Implantables usually contribute to the largest numbers of lines, the average cycle time for both these groups was 269 days. Direct drop cycle time dropped even further this quarter to 249 days, with a dwell-adjusted cycle time being the same as average cycle time. There were 15 lines fulfilled through the direct drop method this quarter. There were five lines under Implantables which had an average cycle time of 337 days.
TO4 - MNCH	End-to-End cycle time for Maternal health commodities stood at 300 days with a dwell-adjusted cycle time of 296 days, both figures were below the target. There were a total of 5 lines delivered; 3 lines of Other Pharma and 2 lines of Food and Wash. The average cycle time for Food and Wash lines stood at 322 while it was 285 for Other Pharma.

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-Q3

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	Sea	Air	Sea	
TO1 - COVID19	**203**	**137**	**192**	**47**		**162**
COVID19	203	137	192	47		**162**
TO1 - HIV	**207**	**216**	**308**	**112**	**273**	**218**
Adult ARV	295	246	309	83		**275**
Condoms	188		308	187	267	**279**
Laboratory	197	216	241			**201**
Other Non-Pharma	326	186	267			**267**
Other Pharma	258	142	366			**327**
Other RTK	234					**234**
Pediatric ARV	225		302	81	308	**247**
TB HIV	262			165		**253**
VMMC			263			**263**
TO2 - Malaria	**278**	**323**	**305**		**198**	**293**
ACTs	317	408	258		224	**269**
Laboratory	263	249	266			**258**
LLINs		333	419			**411**
mRDTs	270		293			**284**
Other Non-Pharma	217					**217**
Other Pharma	304					**304**
Other RTK	122					**122**
Severe Malaria Meds	234		294			**276**
SMC	248		242		168	**220**
SP	349		305			**340**
TO3 - FP/RH	**304**	**162**	**237**	**261**	**238**	**250**
Combined Oral Contraceptives			217	143		**180**
Copper-Bearing Intrauterine Devices				88		**88**
Implantable Contraceptives	371		287	284	260	**295**
Injectable Contraceptives	166	162	236	328	220	**249**
Other Non-Pharma		162	163			**163**
Progestin Only Pills				203		**203**
Standard Days Method	240					**240**

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

Fulfillment Channel	Direct Drop Fulfillment			Total
Product Category	Air	Land	Sea	
Food and WASH		322		**322**
Other Pharma	269		293	**285**
Total	**269**	**322**	**293**	**300**

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	**61**	**2**	**47**		**69**	**46**	**40**
TO1 - COVID19	23	0	21		71	26	48
TO1 - HIV	58	2	53		69	43	29
TO2 - Malaria		4	19		69	59	69
TO3 - FP/RH		4	31		68	33	62
TO4 - MNCH	107	19	99		85	34	57
Warehouse fulfillment	**71**	**11**	**30**	**39**	**7**	**33**	**56**
TO1 - COVID19	4	3	1	31	12	19	7
TO1 - HIV	85	2	10	37	5	32	42
TO2 - Malaria		2	24	42	11	31	81
TO3 - FP/RH		23	50	39	5	35	57
Total	**61**	**3**	**46**	**98**			**41**

Quality Assurance Performance (TO2 only)

Current Reporting Period

2024-Q3

A2. QA processes completed within required lead times

Task Order	Total # of QA processes completed	% QA Processes On Time	A2 Target
TO2 - Malaria	**70**	**87%**	**85%**
ACTs	17	71%	85%
LLINs	7	100%	85%
mRDTs	19	100%	85%
Other Pharma	0		85%
Severe Malaria Meds	18	94%	85%
SMC	1	0%	85%
SP	8	75%	85%

A13. Out-of-specification percentage

Task Order	Total # of batches tested	Out-of-specification percentage	A13 Target
TO2 - Malaria	**247**	**0.0%**	**1%**
ACTs	66	0.0%	1%
LLINs	28	0.0%	1%
mRDTs	53	0.0%	1%
Other Pharma	0		1%
Severe Malaria Meds	62	0.0%	1%
SMC	12	0.0%	1%
SP	26	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			
ACTs			
LLINs			
mRDTs			
Other Non-Pharma			
Other Pharma			
Other RTK			
Severe Malaria Meds			
SMC			
SP			

Ref	Analysis
A02	A total of 87 percent of QA/QC processes were completed within the required lead time. While this was a decrease from 92 percent last quarter, the target of 85 percent was still met. There was a lower result for ACTs this quarter due to a large volume order from previous quarters which delayed the start up by the lap of this quarter's ACT orders. Two SP orders and one SMC order also had delays by the lab due to issues such as early delivery, an analytical issue, and a delayed delivery of lab material. GHSC-PSM is communicating with labs on their performances, and RFPs for labs have been issued to expand the pharmaceutical labs network.
A13	No batch was rejected for Out of Specification this quarter.

Warehouse Performance and Product Losses

Current Reporting Period

2024-Q3

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
TO3 - FP/RH	Mozambique	Damage	Injectable Contraceptives	$277,440	$1,906,108	14.56%
TO2 - Malaria	RDC	Damage	Malaria Pharmaceuticals	$4,650	$972,442	0.48%
TO1 - HIV	Tanzania	Damage	Other Non-pharma	$195,270	$26,772,553	0.73%
TO1 - HIV	Tanzania	Damage	VMMC	$550	$26,772,553	0.00%
TO1 - HIV	RDC	Expiry	NA	$0	$3,285,648	0.00%
TO2 - Malaria	RDC	Expiry	NA	$0	$2,420,822	0.00%
TO3 - FP/RH	RDC	Expiry	NA	$0	$5,458,533	0.00%

A8. Shelf life remaining

Task Order	Inventory Balance	% Shelf Life Remaining	Shelf life target
TO1 - HIV	$3,841,739	71%	70%
TO2 - Malaria	$542,905	76%	70%
TO3 - FP/RH	$4,511,999	77%	80%
Total	**$8,896,643**	**75%**	

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	In FY24 Q3, HIV-related products maintained an average shelf life of 71 percent, exceeding the 70 percent target, but seeing a slight decrease from previous quarters. Apart from four items--COVID-Molnupiravir, ARV dapivirine ring, Nirmacom-Nirmatrelvir tablets + Ritonavir tablets, and Zidovudine oral solution--which constitute a combined 7 percent of the total value of HIV products, the remaining shelf life for all other products exceeded 60 percent. PREP had a shelf life remaining of 68 percent, and Nevirapine suspension had a shelf life remaining of 69 percent. All other products were able to meet the target of 70 percent shelf life remaining or above. TLD, the product with the highest total value in the warehouses, had a shelf life remaining of 77 percent this quarter.
A08	TO2 - Malaria	In FY24 Q3, the average weighted shelf life remaining for malaria products increased to 76 percent, above the target of 70 percent. Last quarter, the shelf life remaining failed to reach this target, but orders placed this quarter have expedited product movement. Every malaria tracer product had a shelf life remaining of over 70 percent in Q3.
A08	TO3 - FP/RH	The average weighted shelf life remaining for family planning products decreased to 77 percent in FY24 Q3, falling just below the target of 80 percent. All products except MPA-IM had a 75 percent shelf life remaining or higher, with MPA-IM having a shelf life remaining of 69 percent.
C07a	TO3 - FP/RH	There were no expiries of family planning products in GHSC-PSM's RDC inventory this quarter.
C07a	TO1 - HIV	There were no expiries of HIV/AIDS products in GHSC-PSM's RDC inventory this quarter.
C07a	TO2 - Malaria	There were no expiries of malaria products in GHSC-PSM's RDC inventory this quarter.
C07b	Crosscutting	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 this quarter, there is reporting of losses which took place in previous quarters from FY 2024 Q2. There were losses in Tanzania and Mozambique in that period. For Mozambique, damage was discovered with the shipment post-delivery This shipment has been delivered, the 3PL had communicated the discovery of a gas leak in one of the containers. The 3PL had been instructed to provide the temperature reading for this order, and the FO team quarantined the concerned container. Claims have been submitted with the 3 PL and the global insurance entity.

Procurement Performance

Current Reporting Period

2024-Q3

A10. Framework contract percentage

Task Order	Procurement total	Framework contract percentage	Framework contract target
TO1 - COVID19	$840,113	100%	90%
TO1 - HIV	$125,122,989	96%	90%
TO2 - Malaria	$61,393,950	100%	95%
TO3 - FP/RH	$4,990,102	100%	95%
TO4 - MNCH	$583,873	100%	85%
Total	**$192,931,028**	**98%**	**NA**

A10. Product-level detail

Task Order	Framework contract percentage	Procurement total
TO1 - COVID19	**100%**	**$840,113**
COVID19	100%	$840,113
TO1 - HIV	**96%**	**$125,122,989**
Adult ARV	100%	$67,457,371
Condoms	100%	$4,614,196
Food and WASH	100%	$73,044
Laboratory	92%	$46,946,708
Other Non-Pharma	99%	$1,344,751
Other Pharma	100%	$314,095
Other RTK	9%	$848,650
Pediatric ARV	100%	$1,199,267
TB HIV	100%	$119,895
VMMC	100%	$2,205,010
TO2 - Malaria	**100%**	**$61,393,950**
ACTs	100%	$6,416,320
Laboratory	100%	$75,780
LLINs	100%	$39,073,724
mRDTs	100%	$9,485,010
Other Non-Pharma	100%	$2,051
Other Pharma	100%	$15,035
Other RTK	100%	$245
Severe Malaria Meds	100%	$5,143,396
SP	100%	$1,182,389

A10. Product-level detail

Task Order	Framework contract percentage	Procurement total
TO3 - FP/RH	**100%**	**$4,990,102**
Combined Oral Contraceptives	100%	$510,163
Implantable Contraceptives	100%	$1,915,494
Injectable Contraceptives	100%	$2,546,655
Other Non-Pharma	100%	$6,170
Other Pharma	100%	$11,620
TO4 - MNCH	**100%**	**$583,873**
Laboratory	100%	$177,873
Other Pharma	100%	$406,000

Task Order Analysis

Task Order	Analysis
TO1 - HIV	The use of framework contracts for HIV/AIDS procurements increased to 96 percent. Item tracer categories that did not have 100 percent framework contract utilization were Laboratory at 92 percent, Other Non-Pharma at 99 percent, and other RTK at 9 percent.
TO2 - Malaria	Malaria procurements continued to remain above the target of framework contract percentage, with a value of 100 percent. This is an increase from 96 percent in the previous 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 under framework contracts, increasing from zero percent in the previous quarter to 100 percent this quarter. MNCH procurements can be highly variable which is evident in the performance trends. Procurements this quarter included Laboratory commodities and Other Pharma

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	**20.6%**	**175**
ACTs	10.8%	74
LLINs	0.0%	33
SMC	42.1%	19
Severe Malaria Meds	47.1%	17
Laboratory	46.2%	13
mRDTs	0.0%	10
SP	80.0%	5
Other Pharma	100.0%	2
Other Non-Pharma	0.0%	1
Other RTK	0.0%	1
TO3 - FP/RH	**5.3%**	**38**
Injectable Contraceptives	11.8%	17
Implantable Contraceptives	0.0%	13
Combined Oral Contraceptives	0.0%	2
Other Non-Pharma	0.0%	2
Progestin Only Pills	0.0%	2
Copper-Bearing Intrauterine Devices	0.0%	1
Standard Days Method	0.0%	1
Total	**17.8%**	**213**

Task Order	Analysis
TO3 - FP/RH	The project utilized registration waivers for 5.3 percent of line items, a decrease from the 10.2 percent of items from last quarter. Waivers were acquired for the Injectable category.
TO2 - Malaria	The project utilized waivers for 20.6 percent of line items for Malaria products. Waivers were predominantly acquired for Severe Malaria Medicines, SMC and ACT category. For the ACT lines, deliveries to Angola, Burundi, Senegal and Cambodia were supported by an unregistered supplier. Under Severe Malaria Medicines, the majority lines were for Mozambique and Niger whereby the supplier's registration had expired.

Supply Plan Submissions

Current Reporting Period

2024-Q3

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	22	100%	95%
FP commodities	22	95%	95%
Lab (HIV diagnostics)	16	94%	93%
Malaria commodities	25	92%	93%
RTKs	20	100%	95%
TPT	15	100%	93%
VMMC	5	100%	80%
Total	**147**		

Task Order	Analysis
TO1 - HIV	Submission rates for HIV supply plans were strong this quarter with 100 percent submission for ARVs, RTKs, TPT, VMMC and Condoms. Lab stood at 94 percent, with a supply plan from Cote d'Ivoire not submitted in this quarter.
TO2 - Malaria	Supply plan submission for Malaria commodities stood at 92 percent this quarter, with missing submissions from Uganda and DRC.
TO3 - FP/RH	Supply plan for Family Planning commodites stood at 95 percent this quarter while there was 100 percent submission under Condoms. One supply plan from DRC was not submitted this quarter.
TO4 - MNCH	Supply plan for MCH commodites was 100 percent this quarter.

Supply Plan and Forecast Performance

Current Reporting Period

2024-Q3

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	33%	33%	6%	22%	-6%
Condoms	41%	-41%	19%	30%	-19%
Laboratory	32%	32%	25%	25%	-25%
Pediatric ARV	27%	-27%	6%	25%	6%

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	3%	3%	22%	35%	-22%
mRDTs	16%	16%	16%	25%	-16%

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	61%	-61%	47%	25%	-47%
Copper-bearing Intrauterine Devices	3%	3%	19%	30%	-19%
Implantable Contraceptives	0%	0%	7%	25%	7%
Injectable Contraceptives	29%	29%	21%	22%	21%
Progestin Only Pills	0%	0%	9%	25%	-9%

Task Order	Analysis
TO1 - HIV	Supply plan error for Adult ARVs increased to 33 percent this quarter. The rolling four quarter error decreased to just 6 percent. Ordered units exceeding planned units for the period can be attributed to Zambia ordering 1.3M units more than planned of TLD 90 and PreP and Zimbabwe ordering 500K more units than planned for TLD 90ct, PreP, and ABC/3TC 600/300). Pediatric ARV single quarter supply plan error increased to 27 percent. While the rolling four quarter error decreased to just 6 percent. The single quarter deviation can be attributed to Cameroon, which planned a pediatric ARV order for 120,000 units that did not materialize this quarter.
TO1 - HIV	Supply plan error for laboratory commodities decreased slightly to 32 percent. The roling four quarter metric stood at 25 percent. Ordered units exceeded planned quantities for the quarter. Notable deviations include unplanned consumables orders Nigeria and Mozambique and an unplanned CD4 order for Zambia. Other orders in the quarter exceeded planned quantities including an EID order for Zambia and a consumables order for Tanzania. VL ordered units also exceeded planned units by approximately 4,000 units.
TO1 - HIV	The single quarter forecast error for condoms increased to 41 percent, with the rolling-four quarter metric also increasing to 19 percent. The final ordered amounted was roughly 15 million units lower than the forecasted quantity. An order for Haiti with a short order lead time was reduced by almost 15 million units, accounting for the discrepancy.
TO2 - Malaria	For AL, the supply plan error decreased to just 4 percent, with the rolling four-quarter error at 8 percent. ASAQ also experienced a decrease to 79 percent, with the rolling four-quarter error standing at 169 percent. The large deviation for ASAQ can be attributed to Angola reducing orders in April and June by almost half their original quantity. As AL is ordered much more frequently then ASAQ, it heavily impacts the overall ACT category performance. This quarter ACTs stood at 3 percent for the single quarter and 22 percent for the rolling four quarter metric. The supply plan error for mRDTs increased to 16 percent, with the rolling four quarter metric standing at 16 percent as well. Orders placed that were not included in supply plans from Kenya for 6 million units, Senegal for 2 million units, and Uganda for 1 million units all contributed to the reported value.
TO3 - FP/RH	The forecast error for contraceptives increased for some family planning commodities during the quarter. The forecast error for combined oral contraceptives increased to 61 percent for the single quarter and the rolling four quarter metric increased to 47 percent. Notable deviations that can be attributed to this increase is an order placed for Madagascar was reduced by 2.5 million units with a short order lead time. Injectable contraceptives experienced a decrease to 29 percent with the rolling four quarter metric standing at 21 percent. The observed performance can be attributed mostly to an unplanned order for 1 million units with short order lead time for Nepal . There was overall strong performance for implantable contraceptives, copper bearing IUDs, and progestin only pills with each commodity category reporting a forecast accuracy of 0.2 percent, 2.65 percent, and 0 percent, respectively. This strong performance can be attributed to low order volumes with little fluctuation in existing orders.

Vendor Performance

Current Reporting Period

2024-Q3

A14a-c. Average vendor rating score

Vendor Type	Average vendor rating
Commodity Supplier	71%
Freight Forwarder	87%
QA Lab	94%

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?	92%	48%	44%
2 - Responsiveness	Does the lab provide prompt response after receipt of GHSC-PSM request for testing	99%	15%	15%
3 - Completeness of Documentation	Frequency of modification to Certificates of Analysis (CoA)	100%	18%	18%
4 - Invoice Accuracy	Submitted invoices for routing testing adhere to set IDIQ pricing	95%	10%	10%
5 - Service	Adherence to other terms and conditions, not related to reliability, responsiveness, completeness, and cost (Qualitative)	88%	10%	9%
Total			**100%**	**94%**

Analysis

This quarter's average freight forwarder vendor rating shows an 87 percent average performance for third-party logistics (3PL), slightly down from last quarter's 89 percent. Performance across metrics such as responsiveness, non-compliance report (NCR), spot quote turnaround, EDI status and ETA dest port accuracy/reliability remained consistent with the high performance observed in the current and previous quarter. However, the customer service overall metric decreased slightly this quarter to 8.3 percent from the previous 8.9 percent. This can be attributed to a specific 3PL's performance decline. To address this, the Deliver/Return team has set up biweekly calls with the 3PL team to ensure accountability and identify potential problem areas. On-time performance also decreased slightly by 1 percent from FY24 Q2 to FY24 Q3, likely due to challenges in the Red Sea which has affected sail schedules.

The vendor performance score for FY24 Q3's lab services saw an increase to 94 percent, and improvement upon last quarter's 91 percent. All of the component scores except for invoice accuracy saw a marked improvement of at least 3 percentage points, with service seeing an improvement of 10 percentage points. Invoice accuracy saw a slight dip due to one vendor charging less than one dollar different than what was agreed upon on an order, likely due to a rounding error.

In FY24 Q3, the supplier OTP increased to 71 percent, up from 69 percent in FY24 Q2. The team is working with suppliers to emphasize the importance of providing timely and sufficient documentation, as delays hinder our ability to update the scores promptly, which can inaccurately suggest worse performance than it actually is.

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.

Complete Quarterly Results (TO1)

Reporting Period

2024-Q3

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	**96%**	**53**	**83%**	**64**	**33.6%**	**149**	**100%**	**$840,113**
COVID19	96%	53	83%	64	33.6%	149	100%	$840,113
TO1 - HIV	**85%**	**977**	**86%**	**988**	**5.2%**	**3,668**	**96%**	**$125,122,989**
Adult ARV	83%	76	87%	76	3.4%	291	100%	$67,457,371
Condoms	76%	33	92%	26	0.8%	130	100%	$4,614,196
Food and WASH			0%	2	100.0%	2	100%	$73,044
Laboratory	86%	749	87%	753	5.9%	2,557	92%	$46,946,708
Other Non-Pharma	52%	25	54%	24	7.1%	127	99%	$1,344,751
Other Pharma	100%	28	100%	28	0.0%	188	100%	$314,095
Other RTK	86%	7	43%	14	23.7%	38	9%	$848,650
Pediatric ARV	95%	37	84%	43	5.0%	139	100%	$1,199,267
TB HIV	100%	11	100%	11	0.0%	40	100%	$119,895
Vehicles and Other Equipment					0.0%	3		
VMMC	100%	11	100%	11	0.0%	153	100%	$2,205,010
Total	**86%**	**1,030**	**86%**	**1,052**	**6.3%**	**3,817**	**96%**	**$125,963,102**

A3. Cycle time (average)

Fulfillment Channel	Direct Drop Fulfillment			Warehouse Fulfillment		**Total**
Task Order	Air	Land	Sea	Air	Sea	
TO1 - COVID19	**203**	**137**	**192**	**47**		**162**
COVID19	203	137	192	47		**162**
TO1 - HIV	**207**	**216**	**308**	**112**	**273**	**218**
Adult ARV	295	246	309	83		**275**
Condoms	188		308	187	267	**279**
Laboratory	197	216	241			**201**
Other Non-Pharma	326	186	267			**267**
Other Pharma	258	142	366			**327**
Other RTK	234					**234**
Pediatric ARV	225		302	81	308	**247**
TB HIV	262			165		**253**
VMMC			263			**263**
Total	**207**	**206**	**284**	**101**	**273**	**215**

A8. Shelf life remaining

% Shelf Life Remaining	Inventory Balance
71%	$3,841,739

B6. Quarterly supply plan submissions

Product Group	Supply plan submission rate	# of supply plans required
ARVs	100%	22
Condoms	100%	22
Lab (HIV diagnostics)	94%	16
RTKs	100%	20
VMMC	100%	5

A6a and A6b. Absolute percent supply plan or forecast ...

A6 Indicator	Supply plan/ forecast error	Supply plan/ forecast bias	4-quarter error	4-quarter bias
A6a - Supply plan error				
Adult ARV	33%	33%	6%	-6%
Laboratory	32%	32%	25%	-25%
Pediatric ARV	27%	-27%	6%	6%
A6b - Forecast Error				
Condoms	41%	-41%	19%	-19%

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

Country	Type of Loss	Product Group	Loss Value	Loss Denominator	% Loss
Tanzania	Damage	Other Non-pharma	$195,270	$26,772,553	0.73%
Tanzania	Damage	VMMC	$550	$26,772,553	0.00%
RDC	Expiry	NA	$0	$3,285,648	0.00%

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	71%
Freight Forwarder	87%

Complete Quarterly Results (TO2)

Reporting Period

2024-Q3

	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	**90%**	**175**	**94%**	**175**	**2.4%**	**654**	**20.6%**	**175**	**100%**	**$61,393,950**	**87%**	**70**	**0.0%**	**247**		
ACTs	92%	74	96%	73	0.8%	238	10.8%	74	100%	$6,416,320	71%	17	0.0%	66		
Laboratory	92%	13	81%	16	7.0%	57	46.2%	13	100%	$75,780						
LLINs	91%	33	94%	31	2.3%	172	0.0%	33	100%	$39,073,724	100%	7	0.0%	28		
mRDTs	70%	10	89%	9	8.3%	48	0.0%	10	100%	$9,485,010	100%	19	0.0%	53		
Other Non-Pharma	100%	1	100%	1	0.0%	5	0.0%	1	100%	$2,051						
Other Pharma	100%	2	100%	2	0.0%	12	100.0%	2	100%	$15,035		0		0		
Other RTK	100%	1	100%	1	0.0%	2	0.0%	1	100%	$245						
Severe Malaria Meds	71%	17	87%	15	1.5%	65	47.1%	17	100%	$5,143,396	94%	18	0.0%	62		
SMC	100%	19	100%	21	0.0%	32	42.1%	19			0%	1	0.0%	12		
SP	100%	5	100%	6	4.3%	23	80.0%	5	100%	$1,182,389	75%	8	0.0%	26		
Total	**90%**	**175**	**94%**	**175**	**2.4%**	**654**	**20.6%**	**175**	**100%**	**$61,393,950**	**87%**	**70**	**0.0%**	**247**		

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	3%	3%	22%	-22%
mRDTs	16%	16%	16%	-16%

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	Damage	Malaria Pharmaceuticals	$4,650	$972,442	0.48%
RDC	Expiry	NA	$0	$2,420,822	0.00%

A8. Shelf life remaining

% Shelf Life Remaining	Inventory Balance
76%	$542,905

A3. Cycle time (average)

Fulfillment Channel	Direct Drop Fulfillment			Warehouse Fulfillment	**Total**
Task Order	Air	Land	Sea	Sea	
TO2 - Malaria	**278**	**323**	**305**	**198**	**293**
ACTs	317	408	258	224	**269**
Laboratory	263	249	266		**258**
LLINs		333	419		**411**
mRDTs	270		293		**284**
Other Non-Pharma	217				**217**
Other Pharma	304				**304**
Other RTK	122				**122**
Severe Malaria Meds	234		294		**276**
SMC	248		242	168	**220**
SP	349		305		**340**
Total	**278**	**323**	**305**	**198**	**293**

B6. Quarterly supply plan submissions

Product Group	Supply plan submission rate	# of supply plans required
Malaria commodities	92%	25

A14. Average vendor rating - QA labs

Average vendor rating
94%

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	71%
Freight Forwarder	87%

Complete Quarterly Results (TO3)

Reporting Period

2024-Q3

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	**89%**	**38**	**89%**	**36**	**1.3%**	**298**	**100%**	**$4,990,102**
Combined Oral Contraceptives	100%	2	67%	3	2.1%	47	100%	$510,163
Copper-Bearing Intrauterine Devices	100%	1	100%	1	0.0%	21		
Emergency Oral Contraceptives					0.0%	11		
Implantable Contraceptives	85%	13	91%	11	1.3%	75	100%	$1,915,494
Injectable Contraceptives	94%	17	100%	15	0.0%	89	100%	$2,546,655
Other Non-Pharma	50%	2	100%	1	0.0%	15	100%	$6,170
Other Pharma							100%	$11,620
Progestin Only Pills	100%	2	100%	2	0.0%	34		
Standard Days Method	100%	1	33%	3	33.3%	6		
Total	**89%**	**38**	**89%**	**36**	**1.3%**	**298**	**100%**	**$4,990,102**

A7. Temporary Waiver Percentage

Task Order	Temporary registration waiver percentage	Total # of line items delivered
TO3 - FP/RH	**5.3%**	**38**
Injectable Contraceptives	11.8%	17
Combined Oral Contraceptives	0.0%	2
Copper-Bearing Intrauterine Devices	0.0%	1
Implantable Contraceptives	0.0%	13
Other Non-Pharma	0.0%	2
Progestin Only Pills	0.0%	2
Standard Days Method	0.0%	1
Total	**5.3%**	**38**

A3. Cycle time (average)

Fulfillment Channel	Direct Drop Fulfillment			Warehouse Fulfillment		**Total**
Task Order	Air	Land	Sea	Air	Sea	
TO3 - FP/RH	**304**	**162**	**237**	**261**	**238**	**250**
Combined Oral Contraceptives			217	143		**180**
Copper-Bearing Intrauterine Devices				88		**88**
Implantable Contraceptives	371		287	284	260	**295**
Injectable Contraceptives	166	162	236	328	220	**249**
Other Non-Pharma		162	163			**163**
Progestin Only Pills				203		**203**
Standard Days Method	240					**240**
Total	**304**	**162**	**237**	**261**	**238**	**250**

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

Country	Type of Loss	Product Group	Loss Value	Loss Denominator	% Loss
Mozambique	Damage	Injectable Contraceptives	$277,440	$1,906,108	14.56%
RDC	Expiry	NA	$0	$5,458,533	0.00%

B6. Quarterly supply plan submissions

Product Group	Supply plan submission rate	# of supply plans required
Condoms	100%	22
FP commodities	95%	22

A8. Shelf life remaining

% Shelf Life Remaining	Inventory Balance
77%	$4,511,999

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	61%	-61%	47%	-47%
Condoms	41%	-41%	19%	-19%
Copper-bearing Intrauterine Devices	3%	3%	19%	-19%
Implantable Contraceptives	0%	0%	7%	7%
Injectable Contraceptives	29%	29%	21%	21%
Progestin Only Pills	0%	0%	9%	-9%

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	71%
Freight Forwarder	87%

Complete Quarterly Results (TO4)

Reporting Period

2024-Q3

	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	**100%**	**5**	**100%**	**5**	**0.0%**	**89**	**100%**	**$583,873**
Food and WASH	100%	2	100%	2	0.0%	3		
Laboratory							100%	$177,873
Other Non-Pharma					0.0%	10		
Other Pharma	100%	3	100%	3	0.0%	76	100%	$406,000
Total	**100%**	**5**	**100%**	**5**	**0.0%**	**89**	**100%**	**$583,873**

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	71%
Freight Forwarder	87%

A3. Cycle time (average)

Task Order	Direct Drop Fulfillment	Total
TO4 - MNCH	**300**	**300**
Food and WASH	322	**322**
Other Pharma	285	**285**
Total	**300**	**300**

There were no deliveries of MNCH products during FY2024 Q2.

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.

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.