USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM
Procurement and Supply Management

FISCAL YEAR 2024

QUARTERLY REPORT | QUARTER 2

JANUARY 1, 2024 TO MARCH 31, 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

FISCAL YEAR 2024

QUARTERLY REPORT

January 1, 2024 to March 31, 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.

GHSC-PSM is implemented by Chemonics International, 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
ABM	activity-based management
ACT	artemisinin-based combination therapy
ABC/3TC	abacavir/lamivudine
AHD	advanced HIV disease
AI	active ingredient
AIDC	automatic identification and data capture

AL	artemether-lumefantrine
AMF	Against Malaria Foundation
API	active pharmaceutical ingredient
ARC	Africa Resource Center
ARPA	American Rescue Plan Act
ART	antiretroviral therapy
ARTMIS	Automated Requisition Tracking Management Information System
ARV	antiretroviral
ASTMH	American Society of Tropical Medicine and Hygiene
BMGF	Bill & Melinda Gates Foundation
CAB-LA	long-acting cabotegravir
CAD	Consumption Anomaly Detection
CAPA	corrective and preventive action

CC5	Commodity Council 5
CDC	Centers for Disease Control and Prevention
CHAI	Clinton Health Access Initiative
CHW	community health worker
CMAM	Mozambique central medical store
CMS	Central Medical Store
COESP	Public Health Emergency Operations Center
COVID-19	novel coronavirus
CPD	continuous professional development
CS	contraceptive security
CSI	Contraceptive Security Indicators
DAP	delivered at place
DCP	decentralized procurement

DDP	delivery duty paid
DHMT	district health management team
DNO	diagnostic network optimization
DOT	Dispatch Optimizer Tool
DRC	Democratic Republic of the Congo
DT	dispersible tablet
DTG	dolutegravir
DUE	Drug Use Evaluation
ECOWAS	Economic Community of West African States
E4H	Evidence for Health
EID	early infant diagnosis
eLMIS	electronic logistics management information system

EPI	Expanded Programme on Immunization
ePOD	Electronic Proof of Delivery
EPI	Expanded Programme on Immunization
ePL	ePackingList
EPPQ	equipment planning and placement questionnaire
EUV	end-use verification
EWEA	early warning, early action
FASP	forecasting and supply planning
FCA	Free Carrier
FDC	fixed-dose combination
Fe	ferrous fumarate
FP/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
GMM	General Membership Meeting
GNI	gross national income
GSC	global supply chain
GOK	Government of Kenya
GTIN	Global Trade Item Number

HDP	hypertensive disorders of pregnancy
HQ	headquarters
iCCM	integrated community case management
IDIQ	indefinite delivery, indefinite quantity
ITP	invoice-to-pay
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
MIS	management information system
MMD	multi-month dispensing

MMV	Medicines for Malaria Venture
MNCH	maternal, newborn, and child health
MOH	Ministry of Health
MOHSS	Ministry of Health and Social Development
MOSAIC	Maximizing Options to Advance Informed Choice for HIV Prevention
mRDT	malaria rapid diagnostic test
MSD	Medical Stores Department
MSF	Médecins Sans Frontières
MTaPS	Medicines, Technologies and Pharmaceutical Services
NFO PMU	non-field office program management unit
NMCP	National Malaria Control Program
NPC	National Product Catalog
NQCL	National Quality Control Lab

NSCA	National Supply Chain Assessment
OC	oral contraceptive
OOS	out-of-specification
OTD	on-time delivery
OTIF	on time, in full
pALD	pediatric abacavir/lamivudine/dolutegravir
PASMO	Pan American Social Marketing Organization
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

PPB	Pharmacy and Poisons Board
PPE	personal protective equipment
PPH	postpartum hemorrhage
PPMRm	Procurement Planning and Monitoring Report for malaria
PrEP	pre-exposure prophylaxis
PSA	pressure swing absorption
Q	quarter
PtD	People that Deliver
QA	quality assurance
QAT	Quantification Analytics Tool
QC	quality control
RCE	Regional Center of Excellence
RDC	regional distribution center

RDD	requested delivery date
RDT	rapid diagnostic test
RFP	request for proposal
RHD	Regional Health Directorate
RHSC	Reproductive Health Supplies Coalition
RO	requisition order
RTK	rapid test kit
SAM	Sourcing Assistance Messenger
SC	subcutaneous
SCIS	supply chain information system
SCISMM	supply chain information system maturity model
SCM	supply chain management
SDP	service delivery point

SLA	service-level agreement
SMO	social marketing organization
SOP	standard operating procedure
SP	sulfadoxine-pyrimethamine
SPAQ	sulphadoxine-pyrimethamine + amodiaquine
TA	technical assistance
TB	tuberculosis
TE	tenofovir/emtricitabine
TL	tenofovir/lamivudine
TLD	tenofovir/lamivudine/dolutegravir
TO	task order
TOSP	Transition Order Supply Plan
TPT	TB preventive treatment

TWG	technical working group
TXA	tranexamic acid
UNAIDS	Joint United Nations Programme on HIV and AIDS
UNICEF	United Nations Children's Fund
UNZA	University of Zambia
USAID	United States Agency for International Development
USFDA	U.S. Food and Drug Administration
USG	U.S. Government
VAN	Global Family Planning Visibility and Analytics Network
VIPMA	vendor and instrument performance management agreement
VL	viral load
VMI	vendor-managed inventory
VMMC	voluntary medical male circumcision

VMS	vendor-managed solutions
VSI	vendor-stored inventory
WFD	workforce development
WHO	World Health Organization

EXECUTIVE SUMMARY

The USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project, funded by the U.S. Agency for International Development (USAID), is pleased to present this report summarizing our work and performance for quarter 2 (Q2) 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 **20 million patient years of tenofovir/lamivudine/dolutegravir (TLD) treatment**
- Delivered **559 million antimalarials to treat malaria infections**
- Delivered contraceptives to country FP programs to provide an estimated potential **106 million couple-years** of protection
- Delivered a total of **$28 million in MNCH commodities**
- Supported **47 countries** with technical assistance
- Achieved commodity cost savings across all product areas of **$1 billion**
- Achieved **$164.6 million** in savings on warehousing, strategic packaging, and logistics
- Reduced carbon emission by **58,875 metric tons/CO2** through strategic packaging and optimizing shipment mode

Q2 PERFORMANCE AND PROGRESS HIGHLIGHTS

TRANSITION PLANNING FOR NEXTGEN

GHSC-PSM continues to make 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 Q2, GHSC-PSM submitted a high-level transition plan, a pre-transition deliverable that details the project's transition approach and a proposed process for detailed transition planning to happen as

NextGen and follow-on projects are launched. GHSC-PSM continued its joint transition-focused working groups with USAID and finalized global supply chain–related transition deliverable requirements, discussed order management near the end of the period of performance, and reviewed the project's headquarters (HQ)- and country-level data assets, intellectual property inventories, and disposition guidance. The project HQ and country offices held regular meetings to prepare for office closeout and advise on transition-related activities, such as post-project office procurement support and information asset disposition. GHSC-PSM is applying lessons from early country office closures to develop and continuously adapt transition resources and processes. This quarter, GHSC-PSM also began discussions with the NextGen Supply Chain Control Tower team on an approach to integrate GHSC-PSM master data into the Control Tower.

GLOBAL SUPPLY CHAIN PERFORMANCE

Section C1 describes GHSC-PSM's global supply chain procurement and logistics activities and achievements. Highlights of the project's global supply chain performance in Q2 are below.

Delivered nearly $164 million in drugs, diagnostics, and health commodities in Q2 and over $5.38 **billion** to date.

Achieved on-time delivery (OTD)[1] of 92 percent and on time, in full (OTIF) of 88 percent in Q2.

Achieved $1 billion savings on medicines and health commodities to date

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.

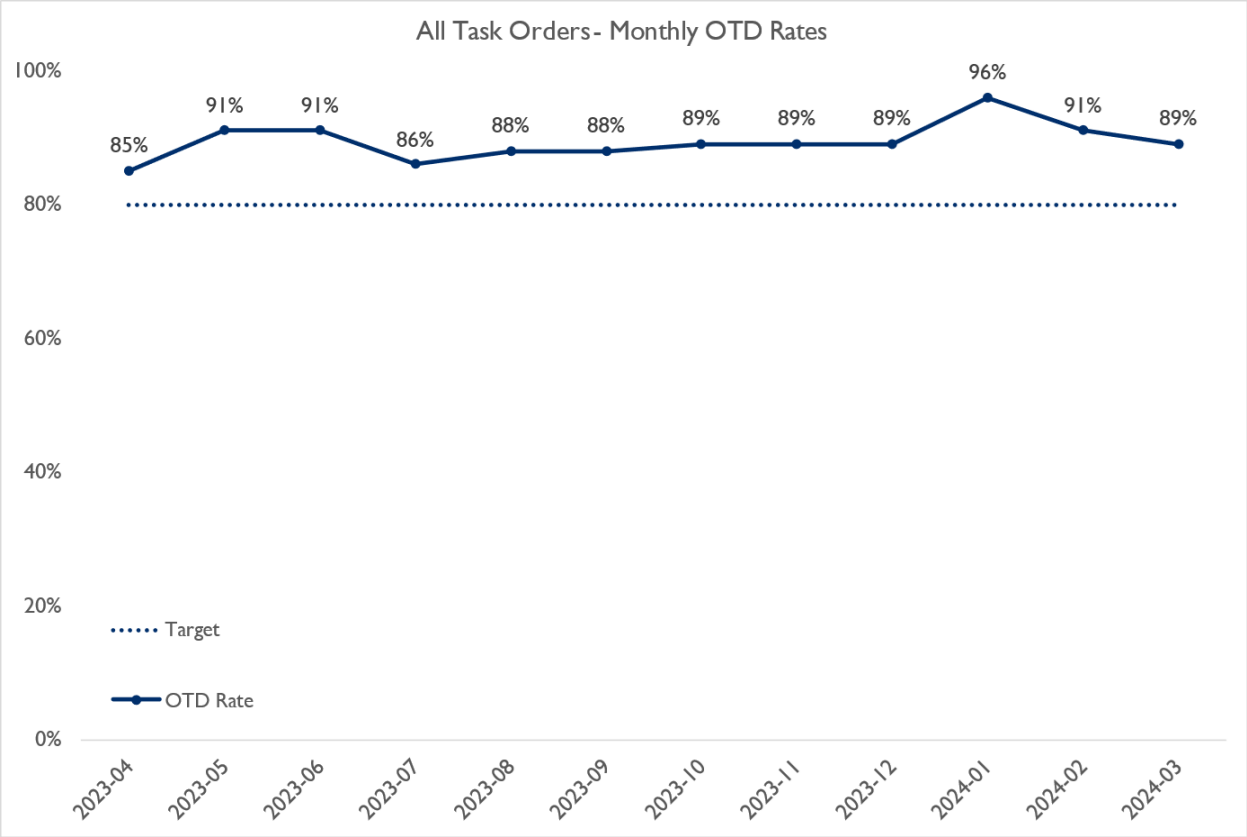
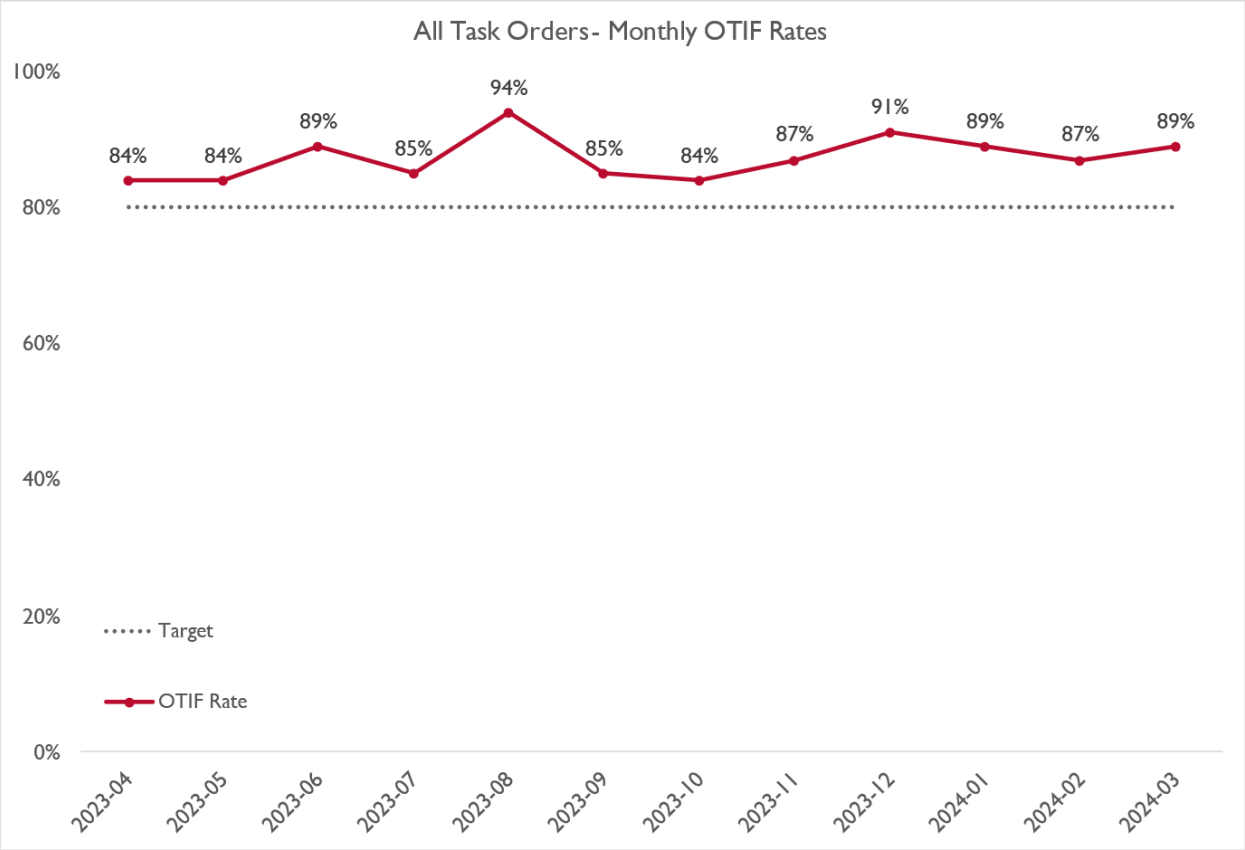

All Task Orders- Monthly OTD Rates
100%
80%
60%
40%
20%
0%
85%
91%
91%
86%
88%
88%
89%
89%
89%
96%
91%
89%
Target
OTD Rate
2023-04
2023-05
2023-06
2023-07
2023-08
2023-09
2023-10
2023-11
2023-12
2024-01
2024-02
2024-03

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 the first half of FY 2024, challenges with air and ocean freight persisted, with airlines adjusting schedules and aircraft types to meet demand. Rebel attacks on the Red Sea also affected air freight capacity as ocean shipping companies pivoted to air freight to avoid potential threats. In Niger, the Economic Community of West African States (ECOWAS) lifted the embargo, but the land borders with some ECOWAS countries remain closed. Low river levels caused by drought in the Panama Canal hampered container operations due to reduced number of vessels allowed through the canal. GHSC-PSM continues to assess these challenges and develop proactive strategies to address them.

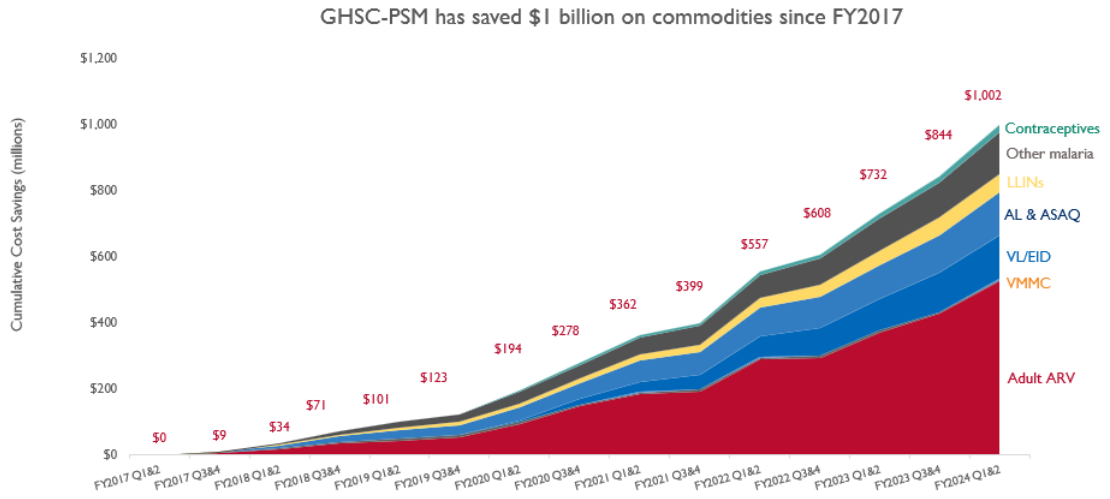
To promote operational efficiency of procurement activities, the project continued to refine and enhance the use of tools such as the electronic packing list, invoice-to-pay tool, and sourcing assistance messenger. See section C.1 for more details.

COST SAVINGS ON MEDICINES AND HEALTH COMMODITIES

GHSC-PSM conducts regular and detailed analysis to understand the markets for the medicines and health commodities it procures and to bring this knowledge to supplier negotiations. Through carefully negotiating long-term contracts for major product groups, such as viral load testing, GHSC-PSM has saved

$1 billion on commodities over the life of the project, as shown in Exhibit 3. In the first half of FY 2024, the project has saved $270 million.

Exhibit 3. Life of Project Savings on Medicines and Health Commodities



To produce long-term value and sustainability, GHSC-PSM achieved these cost savings while working to create and maintain healthy supply markets in the various commodity categories, so the U.S. Government (USG) can benefit from a competitive supplier base. Additional savings have also accrued as prices for commodities have risen more slowly than the general rate of inflation.[2] This analysis is provided in Section C1b.

COST SAVINGS ON LOGISTICS

GHSC-PSM saved $12.2 million on logistics from Q1 through Q2 FY 2024 and $164.6 million over the life of the project. Cost savings are realized through:

- Open competition in freight lanes
- Optimization of the regional distribution center (RDC) network
- Strategic packing to reduce shipping costs
- Shipping of malaria commodities by ocean over air

See section C1b. Global Supply Chain for details.

[2] Inflation data is provided by the U.S. Bureau of Labor Statistics Consumer Price Index as the most accurate proxy. From the outset, inflation was included in these calculations to control for price changes occurring due to inflation and to keep focus on changes in price due to strategic sourcing efforts by GHSC-PSM or overall market shifts. The combination of near-historic general inflation in the last few years coupled with falling actual prices of these products has had a synergistic effect, leading to additional savings. Inflation has been included in the calculations for all product categories except for the VL/EID laboratory commodities.

HEALTH AREAS.

GHSC-PSM provides procurement services and technical assistance to strengthen supply chains and promote global collaboration for HIV/AIDS, malaria, family planning/reproductive health (FP/RH), MNCH, and emerging health threat programs. Below are highlights of project achievements in Q2 FY 2024.

HIV/AIDS

GHSC-PSM has **delivered enough antiretroviral therapy to provide nearly 24.9 million patient years of HIV treatment to date.**

This includes **20 million patient years of TLD treatment delivered to date.**

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 Q2, the project used HIV/AIDS funds in supporting 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 Q2 included:

Achieving OTD and OTIF. Achieved OTD and OTIF above the target of 80 percent (92 percent OTD and 88 percent OTIF).

Delivering pre-exposure prophylaxis. Delivered 803,185 bottles of pre-exposure prophylaxis (PrEP) products to eight countries,[3] completed the first deliveries of cabotegravir long acting (CAB-LA) to four PEPFAR countries,[4] pre-positioned another 50,625 vials of CAB-LA 600 mg/3 ml at the Belgium RDC, and delivered 3,600 dapivirine rings to Uganda.

Delivering condoms. Delivered more than 56.6 million male condoms, 350,000 female condoms, and 4.8 million sachets of personal lubricant to 14 countries.[5]

Delivering voluntary medical male circumcision kits. Delivered 491,000 voluntary medical male circumcision (VMMC) kits to Tanzania and Uganda plus 118 200-unit packs of Shang Ring devices to Tanzania and Zimbabwe.

[3] Colombia, DRC, Guatemala, Haiti, Malawi, Mozambique, Tanzania, and Vietnam.
[4] Malawi (5,400 vials), Ukraine (1,350 vials), Zambia (14,540 vials), and Zimbabwe (4,050 vials).
[5] Afghanistan, Burkina Faso, Cameroon, DRC, Eswatini, Ghana, Malawi, Mali, Rwanda, Senegal, Tanzania, Togo, Uganda, and Zimbabwe.

Increasing private–sector involvement in antiretroviral delivery. In Q2, 94 percent of ARV orders delivered to the nine D-Term priority countries were under modified delivered at place (DAP) or delivery duty paid (DDP) Incoterms (60 of 64).[6]

Providing TLD and multi-month dispensing. Delivered more than 5.8 million TLD 90-count bottles to 11 countries[7] and more than 204,000 180-count bottles to Burkina Faso, Haiti, Togo, and Zambia.

Advancing the vendor-managed solutions program. Delivered more than 2.3 million bottles of TLD from vendor-managed solutions (VMS) warehouses to Angola, Mozambique, Zambia, and Zimbabwe. The project is estimated to meet a demand of 5.5 million bottles of TLD 90 through the VMS program in FY 2024.

Introducing pediatric abacavir/lamivudine/dolutegravir. Delivered the first shipment of pediatric abacavir/lamivudine/dolutegravir (pALD): 15,599 packs of 180-count pALD tablets to Zambia.

Implementing viral load/early infant diagnosis awards. Delivered 1.3 million viral load/early infant diagnosis (VL/EID) tests, saving approximately $8.13 million compared to 2019 pre-global request for proposal (RFP) prices under the terms of the global service-level agreements. Cumulative savings on all orders for GHSC-PSM and other PEPFAR buyers since 2020 are more than $205 million.[8]

Procuring viral load and laboratory supplies. Delivered laboratory supplies to 22 countries. [9]

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

MALARIA

Over the life of the project, GHSC-PSM **delivered more than $1.29 billion** in malaria medicines and commodities to 31 countries.

In Q2, GHSC-PSM delivered **12 million malaria treatments** and **559 million treatments over the life of the project.**

In Q2, GHSC-PSM **delivered 7 million** long-lasting insecticide-treated nets (LLINs) to 11 countries and **319 million LLINs** over the life of the project, potentially protecting **638 million people**.

In Q2 FY 2024, the project used malaria funds to engage suppliers and expand market capacity for malaria commodities, promoted activities to reduce or mitigate stock risks, and fostered the quality of malaria commodities. Other goals GHSC-PSM met for the malaria program in Q2 included:

[6] Eswatini, Haiti, Kenya, Mozambique, Nigeria, Tanzania, Uganda, Zambia, and Zimbabwe.
[7] Angola, Benin, Burundi, DRC, Haiti, Kenya, Tanzania, Togo, Ukraine, Zambia and Zimbabwe.
[8] Includes cost savings on VL/EID reagents globally plus savings on the service and maintenance of laboratory equipment in the six Wave-1 countries: procurements by GHSC-PSM, as well as other PEPFAR buyers who can benefit from the global agreements.
[9] Angola, Benin, Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, DRC, Eswatini, Ethiopia, Haiti, Kenya, Malawi, Mali, Mozambique, Nigeria, Philippines, Tanzania, Togo, Uganda, Ukraine, Zambia, and Zimbabwe.

Achieving OTD and OTIF. Continued to achieve OTD and OTIF at or above the target of 80 percent (92 percent OTD and 91 percent OTIF).

Engaging suppliers. Conducted 13 business review meetings with suppliers across commodity groups to exchange updates and discuss supplier performance, product pipelines, and plans to expand manufacturing in Africa. The project determined the final volume allocation for the dual active ingredient (AI) LLINs for the tender issued in Q1.

Implementing quality assurance (QA) strategies and innovations. Completed two method transfers, one of which was an Africa-based manufacturer, in line with USAID's goal of increasing procurement in the African region.

The project reviewed a LLIN packaging stability study report on bale vs. individual packaging drafted by one of its LLIN suppliers. GHSC-PSM then shared a summary with PMI to inform discussions on whether LLIN quality is impacted by the type of packaging. The project supported access to quality-assured products by completing reviews for three products (one LLIN and two pharmaceuticals), making them eligible for procurement.

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

Adopting standard-based identification, barcoding, and data sharing. Worked with PMI to re-convene the TraceNet technical working group (TWG) and hosted a series of topical meetings to solicit industry input in revising the Recommended Identification, Capture, and Master Data Sharing Specifications for Long Lasting Insecticidal Nets Guidelines. The topical discussion addressed identification and capture standards; barcode quality, placement, and scannability; and operationalization of GS1 standards in the LLIN industry. The TWG developed use cases for leveraging GS1 standards for improved LLIN visibility, inventory management, and data exchange.

Identifying successful supply chain workforce development (WFD) activities. Edited the joint report for the assessment of WFD activities in Malawi and Zambia after receiving PMI's feedback and submitted the new version. The project also produced a slide deck to summarize the findings and recommendations from the assessment in Zambia and submitted it to PMI.

Testing an inventory management modeling tool for low-malaria-endemic settings. Introduced new modifications in the tool to reduce manual data entry for stakeholders while improving targeted data analysis tools to further identify associated accountability issues.

Producing technical resources. Partnered with PMI, Global Fund, USAID, and the Child Health Task Force to organize a webinar on "*Institutionalizing Supply Chains for Community Case Management,*" hosted by the Child Health Task Force. The project participated on the speaker panel and presented the advocacy paper Effective Community-Level Supply Chains for iCCM and Malaria. The webinar presentations and discussions focused on strengthening community-level supply chains.

For more information, see section B2, Malaria.

FP/RH

Over the life of the project, GHSC-PSM has delivered contraceptives to country FP programs estimated to **provide a potential 106 million couple-years of protection**.

This includes **1.9 million couple years of protection** in Q2.

In Q2, 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 improve supply chain visibility, and engage social marketing organizations, among other activities. Other FP/RH goals GHSC-PSM reached in Q2 include:

Achieving OTD and OTIF. Delivered 97 percent of FP/RH commodities on time and 92 percent on time and in full in Q2.

Sharing best practices and lessons learned. Shared the first iteration of the Transition Order Supply Plan (TOSP) report with USAID, indicating that 83 percent of 35 countries/programs met requirements for supply plan visibility until March 2025, 37 percent met requirements for anticipated funders for each planned shipment until March 2025 and 80 percent met requirements of documenting monthly consumption until March 2025. This information is critical as the project prepares for the NextGen transition.

Engaging strategically. Presented five abstracts on reproductive health and supply chain management at the People that Deliver (PtD) Global Indaba in Bangkok, Thailand.

Enhancing the visibility of FP/RH supply data. Continued to improve FP/RH supply data visibility through the Global Family Planning Visibility and Analytics Network (VAN) platform and processes and coordinated with USAID and Reproductive Health Supplies Coalition (RHSC) to review Kenya's readiness for premium VAN membership.

Tracking contraceptive security. Collaborated with USAID on the validation phase of the 2023 Contraceptive Security Indicators (CSI) survey across 42 countries, consolidating data for integration into the CSI dashboard and Harmonized CS Indicators Dataset. GHSC-PSM also analyzed 12 years of CSI surveys and submitted findings to *Global Health Science and Practice* for peer-reviewed publication.

Supporting social marketing engagement activities. Collaborated with social marketing organizations to identify alternative products and mitigate supply chain disruptions, ensuring continued access to injectable contraceptives.

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

MNCH

GHSC-PSM **published three global MNCH supply chain resources** in Q2.

The project also **trained 400 health professionals** to manage the restored health supply chain in Tigray, Ethiopia, leading to **95 percent availability of key MNCH medicines**, as reported in Q2.

GHSC-PSM has procured over **$28.3 million in MNCH drugs and commodities** over the life of the project.

In Q2, GHSC-PSM collected and shared new MNCH supply chain information and data, including on warehousing excellence, strategies for MNCH commodity financing, newborn equipment and supplies, and commodity quality and availability for two areas of pregnancy risk: 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 supply chain data analysis capabilities for MNCH. Specific MNCH activities in Q2 include:

Achieving on-time delivery. No deliveries of MNCH products were made in Q2.

Procuring MNCH commodities. Supported procurement of MNCH commodities to six countries in Q2, including select essential medicines that were in critically short supply in DRC, amoxicillin dispersible tablets (DT) for the community health worker program in Guinea, Ready-to-Use Therapeutic Food in Nigeria, as well as procurements in Haiti, Mozambique, and Zambia.

Providing global technical leadership. Co-chaired the Maternal Health Supplies Caucus and played a leadership role in the Caucus's new tranexamic acid (TXA) working group, aiming to increase availability of this critical PPH medicine. Published three major MNCH supply chain resources: (1) a guide for warehousing excellence, *How to Operate the Center of Excellence: Winning the Logistics Game*; (2) a compendium of lessons learned from countries to improve financing of MNCH commodities, *No Funding, No Product: Solutions to Address the Challenges of Insufficient and Uncertain Funding for Select Maternal, Newborn, and Child Medicines*; and (3) an in-depth case study of Ethiopia's successful strategies to increase local financing of MNCH, *Improving Financing for Maternal Health Commodities in Ethiopia*.

Supporting data-informed MNCH decision making. Helped Mali collect end-use verification (EUV) survey data for MNCH programs and submit reports on these data to USAID in Q2. Survey results indicated an impressive 100 percent availability of oxytocin 10 IU and improvements in on-time logistics reporting. GHSC-PSM also continued to implement advanced analytics tools in select countries, including launching the refactored Consumption Anomaly Detection tool in Malawi. The project assessed the impact of this tool on MNCH commodity availability in Q2 (results available in Q3).

Increasing MNCH supply chain coordination and collaboration. Provided MNCH supply chain support to 14 countries in Q2. In Rwanda, this led to training health commodity safety specialists to use the National Product Catalog mobile application so they can verify the origin and quality of MNCH products. The project also trained health professionals in Tigray, Ethiopia, to manage the recently restored

health supply chain, which had been devastated by the ongoing political turmoil in that region. This support has led to 95 percent availability of MNCH tracer commodities in project-supported facilities in Q2.

Facilitating adherence to MNCH best practices. Began working with USAID, Medicines, Technologies, and Pharmaceutical Services (MTaPS), and Clinton Health Access Initiative (CHAI) in Q2 to create an implementation guide for caffeine citrate for newborn health. The project and partners also received approvals from Ghana FDA to sample HDP medicines and test their quality in Q2.

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.

Country highlights:

- In **Zambia**, developed an assessment tool that allows the Zambia Medicines Regulatory Authority (ZAMRA) to survey the local supplier market and ensure that local manufacturers, wholesalers, and distributors comply with traceability regulations.

- In **Côte d'Ivoire, Nigeria,** and **Senegal,** provided in-person training to strengthen capacity in forecasting and supply planning using the Quantification Analytics Tool (QAT). Participants included staff from ministries of health and supply chain implementing partners. (See section C2.)

- In **Mali, Niger,** and **Nigeria,** refined and/or repurposed analytic tools for improved supply chain data management and use. These tools improve efficiencies in warehouse management and are designed within each country's context while ensuring that the tools are repeatable, reusable, and adaptable so countries can repurpose them in a way that encourages and improves self-reliance.

- In **Eswatini,** supported the Central Medical Stores (CMS) in implementing a workplace organizational strategy in the commodity dispatch section of the warehouse as the CMS prepares to become a semi-independent entity. This organizational strategy, also known as the 5S methodology, is a set of principles used 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 to 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[10]) 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 4 below).

A2. ABOUT THIS REPORT

We are pleased to present our performance report for the second quarter (Q2) fiscal year 2024 (FY 2024) (January 1, 2024 through March 31, 2024). GHSC-PSM is a matrixed project that integrates work across two axes: health areas and technical objectives. Accordingly, the report is organized as follows:

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

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

- Annex B provides **performance indicators** for January 1, 2024 through March 31, 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 efforts each day to help people around the world live healthier lives.

Exhibit 4. Countries for Which GHSC-PSM Procured Commodities (proc.) or Provided Technical Assistance (TA) Over the Life of the Project (does not include COVID-19 procurements)[11]

	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	●				

[11]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 Q2 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 **24.9 million patient years of HIV treatment over the life of the project**, including over **1.5 million patient years of treatment in Q2**.

To date, GHSC-PSM has delivered nearly **95 million bottles of tenofovir/lamivudine/dolutegravir (TLD)**[12] to 34 countries[13], which provided over **20 million patient years of treatment**.

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

Multi-month bottle counts of TLD first-line treatment accounted for **100 percent of all quantities delivered** in Q2. Patients saved **an estimated 12.8 million trips** to the pharmacy in Q2 and **more than 145 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 Q2, **30 countries**[14] procured HIV/AIDS medicines and commodities through GHSC-PSM**.**

26 countries[15] **received health supply chain systems strengthening** from GHSC-PSM with HIV/AIDS funding in FY 2024.

[12] This total figure for TLD delivery includes 5.9 million 90-count bottles and 204 thousand180-count bottles. For more information, see Section B1. HIV/AIDS, TLD, and multi-month dispensing.
[13] 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
[14]GHSC-PSM procured HIV/AIDS commodities for the following countries: AFRICA: Angola, Benin, Burkina Faso, Burundi, Cameroon, DRC, Côte d'Ivoire, Eswatini, Ethiopia, Kenya, Lesotho, Malawi, Mali, Mozambique, Namibia, Nigeria, Sierra Leone, Tanzania, Togo, Uganda, Zambia, and Zimbabwe. CENTRAL/SOUTH AMERICA: Colombia, El Salvador, Honduras, CARIBBEAN: Haiti, Jamaica; EUROPE & EURASIA: Tajikistan, Ukraine; ASIA: Vietnam.
[15]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 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.

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

Procurement

GHSC-PSM has procured more than $3.69 billion in HIV commodities over the life of the project, with more than $209 million procured in the first half of FY 2024. Adult ARVs made up 50 percent of all procurements by value in the first half of FY 2024.

Savings from strategic sourcing of HIV commodities

GHSC-PSM's strategic sourcing activities generated significant cost savings[16] for PEPFAR and the countries served by its HIV programs. As shown in Exhibit 5, GHSC-PSM has saved $665 million on core HIV commodities over the life of the project compared to baseline prices, including over $114 million in the first half of FY 2024.

Life of project savings for GHSC-PSM consists of $525 million for adult ARVs, $133 million for VL/EID, and the remaining $7 million for VMMC and condoms. In the first half of FY 2024, adult ARVs accounted for $97 million in savings and VL/EID accounted for $14 million in savings.

[16] The weighted average baseline cost of products (when first procured) is assessed against the average weighted cost of the product in the current review period.
For increased accuracy, laboratory commodities cost savings are calculated using "savings per test," not per saleable unit, and does not include accounting for inflation.
Inflation data is provided by the U.S. Bureau of Labor Statistics Consumer Price Index as the most accurate proxy. From the outset, inflation was included in these calculations to control for price changes occurring due to inflation and to keep focus on changes in price due to strategic sourcing efforts by GHSC-PSM or overall market shifts. The combination of near-historic general inflation in the last few years coupled with falling actual prices of these products has had a synergistic effect, leading to additional savings. Inflation has been included in the calculations for all product categories except for the VL/EID laboratory commodities.
D-Term TLD orders had previously been excluded from commodity cost savings commodity costs and freight and logistics costs as they had been bundled under D-Term contracts. Recently, GHSC-PSM isolated the D-Term TLD commodity costs using the Free Carrier (FCA) Incoterm price and integrated them into the commodity cost savings calculations.

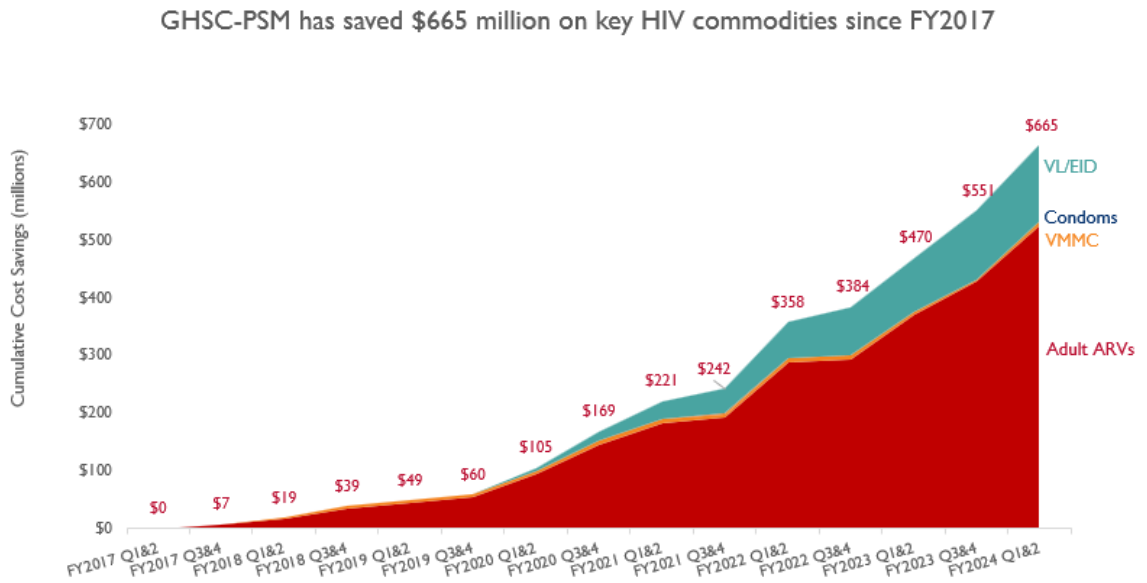
Condoms accounted for about $9,000 in cost savings in the first half of FY 2024 ($217,000 over the life of the project), while VMMC cost savings also accounted for just over $6,000,000. In the first half of FY 2024, cost savings for VMMC slowed.

Starting in FY 2024, the project adjusted the commodity cost savings calculation for HIV products to capture historical TLD D-series Incoterm procurement savings in the adult ARV category.[17] The D-Term orders updates to commodity cost savings impact historical figures starting in the second half of FY 2020, and led to a total addition of $205 million extra cost savings attributed to just D-Term orders from FY 2020 through the first half of FY 2024.

GHSC-PSM D-Term strategy's ultimate goal is to create a sustainable pathway for downstream product management through the increased engagement of the private sector.

The majority of PEPFAR-supported countries ordered TLD with requested delivery dates (RDD) well into 2024, as their stock volumes were more than adequate, due to the end of the Global Fund grant cycle. This PO-postponement strategy strengthened GHSC-PSM purchasing power for FY 2024 and resulted in significant cost savings for PEPFAR-supported countries. A detailed summary of the strategy will be available in Q3.

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



[17] D-Term TLD orders had previously been excluded from commodity cost savings commodity costs and freight and logistics costs, as they had been bundled under D-Term contracts. Recently, GHSC-PSM isolated the D-Term TLD commodity costs using the Free Carrier (FCA) Incoterm price and integrated them into the commodity cost savings calculations.

DELIVERIES

In Q2, GHSC-PSM delivered over $116 million in HIV commodities to countries, and over $3.72 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 6. In Q2, OTD was 92 percent. GHSC-PSM's on-time, in-full (OTIF) rate 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 88 percent in Q2. See Annex A for further details.

Exhibit 6. HIV Commodities OTD

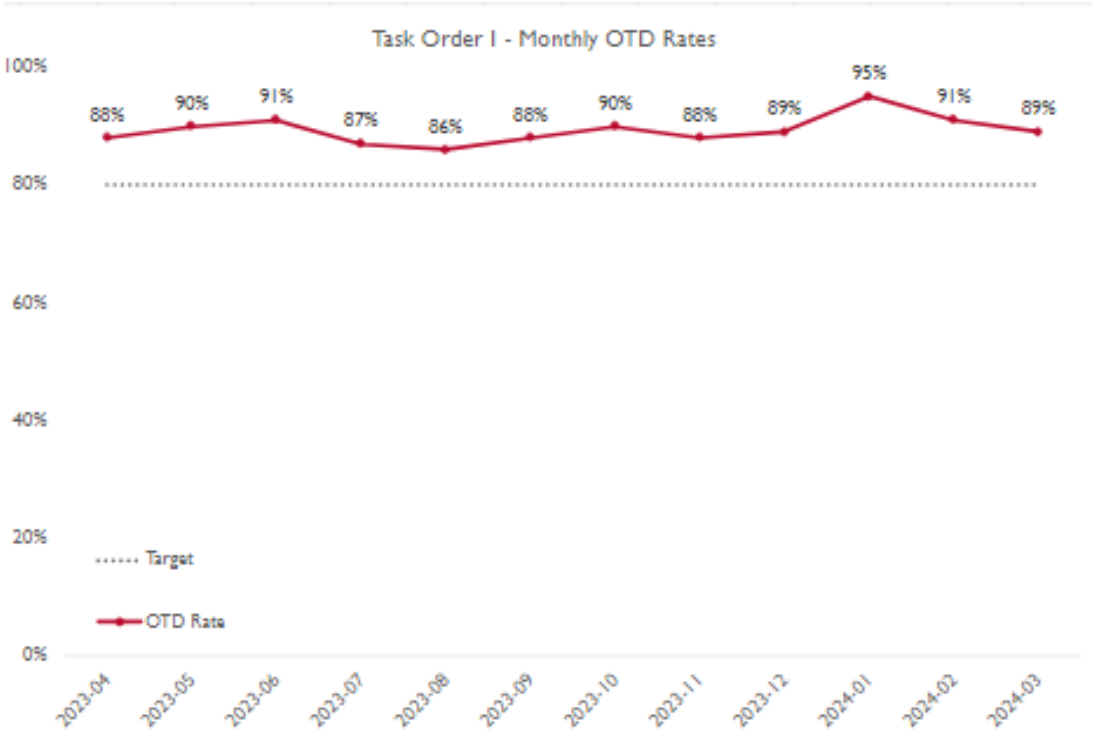
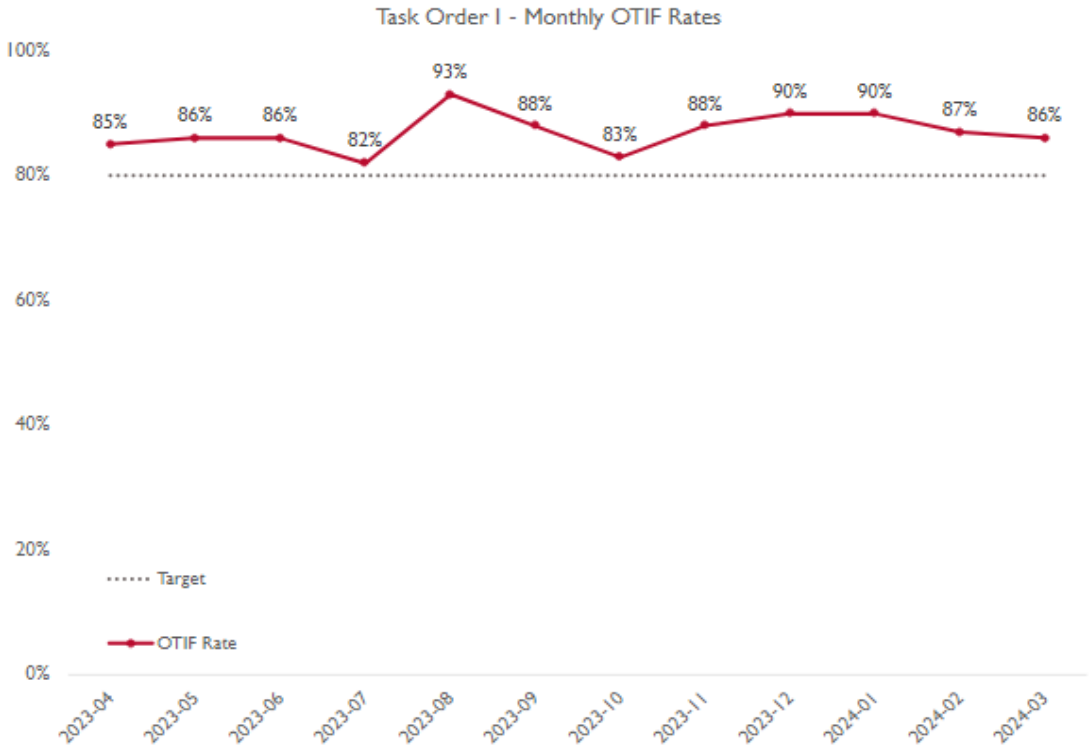


Exhibit 7. HIV Commodities, OTIF



SUPPORTING PEPFAR's HIV/AIDS AGENDA

Pre-exposure prophylaxis

Daily oral PrEP using the antiretroviral medicines tenofovir/emtricitabine (TE) or tenofovir/lamivudine (TL) dramatically reduces the risk of HIV infection in people who use it as directed. In Q2, GHSC-PSM delivered 986,576 bottles of PrEP products to eight countries.[18]

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 CAB-LA.

This was important in Q2, as the Bureau of Global Health Security and Diplomacy and USAID identified eleven priority countries for the introduction of CAB-LA in FY 2024 to expand the choice of PrEP products in PEPFAR countries.[19] CAB-LA is registered in five of these eleven countries and is pending registration in three others. GHSC-PSM is working with stakeholders in each country to ensure the product can be imported with little to no delay.

[18] Colombia, DRC, Guatemala, Haiti, Malawi, Mozambique, Tanzania, and Vietnam.
[19] Botswana, Eswatini, Lesotho, Malawi, Namibia, Nigeria, Mozambique, Rwanda, Ukraine, Zambia, and Zimbabwe.

In Q2, GHSC-PSM completed the first deliveries of CAB-LA 600 mg/3 ml to four PEPFAR countries[20] Furthermore, GHSC-PSM successfully pre-positioned another 50,625 vials of CAB-LA 600 mg/3 ml at the Belgium RDC. These vials are earmarked for delivery to Malawi, Nigeria, Eswatini, Zambia, and Zimbabwe in Q3.

To further support USAID's interest in introducing CAB-LA in 11 countries, GHSC-PSM initiated planning to systematically collect demand data from Malawi, Zambia, and Zimbabwe, where CAB-LA has been delivered. By understanding the number of patients injected with CAB-LA (consumption data), stock-on-hand data at the central and facility levels, and forecast data on product rollout, GHSC-PSM will advise USAID on how best to allocate vials of CAB-LA to targeted PEPFAR countries. This 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 Q2, the project continued to support the USAID Maximizing Options to Advance Informed Choice for HIV Prevention (MOSAIC) program. The project delivered 3,600 dapivirine rings to Uganda and continues to hold stock of the ring in its Dubai RDC to support MOSAIC programs in Lesotho, 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 3.9 billion male condoms and 59.9 million female condoms to 61 countries.

In Q2, GHSC-PSM delivered more than 56.6 million male condoms, 350,000 female condoms, and 4.8 million sachets of personal lubricant to 14 countries.[21] This included an emergency order of 810,000 no-logo male condoms and 250,000 female condoms to Cameroon and multiple shipments of condoms to Afghanistan.

The project navigated lane changes for orders to Mozambique caused by the Red Sea crisis. Lastly, GHSC-PSM circumvented risks in Haiti by holding stock with a supplier in India and temporarily diverting personal lubricants to a port in Jamaica. GHSC-PSM expects to deliver the Mozambique and Haiti shipments in Q3.

PEPFAR countries began placing orders again after the annual congressional funding notice for the FY 2024 Condom Fund was cleared in early Q2. Facing a backlog of orders, GHSC-PSM devised a prioritization plan and coordinated closely with the RDC team and suppliers who hold stock as part of the project's made-to-stock strategy. In Q2, the project processed and released 53 purchase orders valued at more than $4.4 million.

Thirteen PEPFAR countries funded by the Condom Fund aimed to place all of their FY 2024 orders for condoms and personal lubricants, seeking to optimize their fixed budgets.[22] GHSC-PSM provided these countries with product cost analyses and freight data to help maximize budget utilization. The project also

[20] Malawi (5,400 vials), Ukraine (1,350 vials), Zambia (14,540 vials), and Zimbabwe (4,050 vials).
[21] Afghanistan, Burkina Faso, Cameroon, DRC, Eswatini, Ghana, Malawi, Mali, Rwanda, Senegal, Tanzania, Togo, Uganda, and Zimbabwe.
[22] Burkina Faso, Cameroon, DRC, Ethiopia, Haiti, Lesotho, Malawi, Mali, Namibia, Nigeria, Rwanda, Sierra Leone, and Zambia.

assisted Mali, Namibia, Senegal, and Sierra Leone in consolidating shipments of orders for both condoms and personal lubricants into the same containers to maximize cost savings.

With FY 2024 orders processed in Q2, GHSC-PSM was able to implement new advanced order strategies established in Q1. 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. This allows GHSC-PSM to place orders early while retaining the flexibility to determine the destination of the order at a later date. Placing advanced orders is highly beneficial for smaller countries that cannot meet minimum order quantities. It also benefits manufacturers that require orders large enough to justify booking production. In Q2, the project issued its first master order for 4.1 million sachets of personal lubricant and later placed five purchase orders against the initial advanced master order, sending the personal lubricants to Cameroon, Liberia, Malawi, Mali, and Sierra Leone.

Another strategy the project implemented in Q2 was to spread male condom orders across each of the four eligible suppliers, ensuring the project uses available production capacity quarterly. An allocation tool helps ensure each supplier is allocated business and receives a maximum order of 9 million condoms. GHSC-PSM now also requires countries to split orders exceeding 30 million condoms into multiple orders with staggered delivery dates to mitigate risk and offset in-country storage constraints.

VMMC 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 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.[23] In Q2, GHSC-PSM delivered 491,226 VMMC kits to Tanzania and Uganda.[24]

The Shang Ring device offers an alternative method of male circumcision, leading to a rise in demand for the device. GHSC-PSM seeks to reduce lead time and price for the device and continued discussions with USAID on the development of a sourcing strategy for the Shang Ring device. . In Q2, GHSC-PSM delivered 118 200-unit packs of Shang Ring devices to Tanzania and Zimbabwe, both VMMC-priority countries. .

To support USAID Global Health Supply Chain Program-Quality Assurance (GHSC-QA)-led audits of VMMC kit manufacturers planned for Q3, GHSC-PSM created an analysis of procurement trends and future demand. The project will participate in the audits of two VMMC kit manufacturers and meet with one VMMC device manufacturer located in China.

Essential medicines

In Q2, GHSC-PSM completed the annual essential medicines sourcing event. The project received proposals from GHSC-QA eligible wholesalers, evaluated their bids, and executed long-term fixed-price contracts. Within the bids received, there was an increased number of African manufacturers, sourced through wholesalers, one of the key objectives for the procurement strategy. Additionally, the bids

[23] Botswana, Eswatini, Ethiopia, Malawi, Mozambique, Namibia, Rwanda, South Africa, Tanzania, Uganda, and Zimbabwe.
[24] VMMC kits delivered were 483,003 single-use essential consumables kits and 8,223 reusable instruments for dorsal slit kits.

received included submissions from two new wholesalers based on the African continent, specifically Mozambique and Malawi. To support the execution of the strategy, GHSC-PSM developed a Power App™-based allocation tool to improve the automation of order solicitation, evaluation, and award stages.

Additionally, after the finalization of long-term fixed-price contracts, GHSC-PSM hosted one-on-one business reviews with suppliers to provide feedback on their bids and review any key changes in the award annex language.

Among people living with advanced HIV, cryptococcal meningitis is one of the most dangerous opportunistic infections and significantly contributes to illness, disability, and mortality. Recent guidelines from the WHO recommend amphotericin B (liposomal) in combination with flucytosine for treating cryptococcal disease. Most low- and middle-income countries have adopted these WHO guidelines. However, access to these life saving medications remains scarce in many countries.

In line with GHSC-PSM's goal to ensure the availability of quality-assured advanced HIV disease (AHD) commodities, GHSC-PSM continued contract negotiations in Q2 with the manufacturer of amphotericin B liposomal, a critical AHD commodity. This strategy of procuring directly from the manufacturer will enable the project to purchase the commodity at market access pricing, ensuring product availability at a reduced price for PEPFAR-supported countries. Simultaneously, while contract negotiations continued with the manufacturer to ensure no supply disruption, the project identified an alternate source to fulfill the interim requirements for these PEPFAR-supported countries.

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 Q2, GHSC-PSM delivered 10,000 36-count packs of 3HP 300 mg/300 mg fixed-dose combination (FDC) tablets to DRC.

Other TPT regimens endorsed by WHO. In 2020, WHO released consolidated, updated guidance on tuberculosis preventive treatment (Module 1: Prevention) and endorsed using four shorter regimens.[25] In addition to 3HP, other TPT regimens include 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/rifapentine co-formulated formulations to support the implementation of various TPT regimens when the demand arises and for unique sub-patient populations. In Q2, GHSC-PSM delivered three orders of 3HR 75/50 mg dispersible tablets to three separate destinations in DRC (8,000 84-count packs).

WHO recommends considering vitamin B6 (pyridoxine) co-administration to PLHIV receiving isoniazid to prevent peripheral neuropathy. PEPFAR supports the inclusion of vitamin B6 in isoniazid-containing TPT

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

regimens. In Q2, GHSC-PSM delivered 3,197 50-count packs of Vitamin B6 (Pyridoxine) 50 mg tablets to Burundi and 5,000 1,000-count packs of Vitamin B6 (Pyridoxine) 25 mg tablets to Zimbabwe.

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 reviews HIV testing targets against HIV RTK stock in countries with PEPFAR-supported HIV testing programs. In Q2, the project reported eight 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 delivered 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 pays most of the delivery charges to the destination country. 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 VAT.

GHSC-PSM continued to target nine D-Term priority high-volume ARV countries: Eswatini, Haiti, Kenya, Mozambique, Nigeria, Tanzania, Uganda, Zambia, and Zimbabwe[26]. In Q2, the project issued 60 percent (48 of 81) of purchase order lines under D-Terms. This raised the percentage of FY 2024 orders placed to date under D-Terms to 51 percent. High volumes of purchase orders placed for FCA-only eligible countries such as Namibia (five orders) and Ukraine (23 orders) have kept metrics below the 60 percent target, but larger D-Term-eligible countries like Nigeria, Tanzania, and Zambia are yet to place the majority of their orders. The project also delivered 59 of 79 orders (75 percent) to eight of these priority countries under modified DAP and modified DDP Incoterms in Q2.[27]

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

Supplying TLD

Over the life of the project, GHSC-PSM has delivered more than **94.9 million bottles of TLD**[28] to **34 countries**.

This is enough to provide over **20 million patient years of TLD treatment**.

As of Q2, GHSC-PSM has delivered over **62.6 million 90-count bottles of TLD to** 31 countries.

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

TLD and MMD

To achieve HIV treatment goals, GHSC-PSM supports PEPFAR-supported countries' transition to TLD, the preferred first-line ARV. MMD of TLD is a high priority in the global fight against HIV. The project supplies TLD in bottles of 30, 90, and 180 tablets. Over the life of the project, GHSC-PSM has delivered 95 million bottles of TLD, including more than 62.8 million 90-count bottles, 28 million 30-count bottles, and 4 million 180-count bottles.

In Q2, GHSC-PSM delivered nearly 5.9 million TLD 90-count bottles to 12 countries[29] and more than 204,000 180-count bottles to Burkina Faso, Haiti, Togo, and Zambia.

Multi-month bottle counts of TLD first-line treatment accounted for 100 percent of all quantities delivered in Q2. Patients saved an estimated 12.8 million trips to the pharmacy in Q2 and more than 145 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 Q1 and Q2 of FY 2024, the project fulfilled 100 percent of TLD orders either through this annual allocation procurement approach or from VMS warehouses in South Africa, achieving a significant milestone by reducing the project's dependence on pre-positioning TLD at the South Africa RDC.

Although the RDC did not plan to maintain buffer stock of TLD in Q2, the availability of storage space has proven valuable to PEPFAR countries. GHSC-PSM diverted nearly 525,000 90-count bottles of TLD ordered for Nigeria to the Dubai RDC while the country worked to renew permits for duty-free imports.

[28] This total figure for TLD delivery includes 62.8 million 90-count bottles, 28 million 30-count bottles, and 4 million 180-count bottles.
[29] Angola, Benin, Burundi, DRC, Haiti, Kenya, Nigeria, Tanzania, Togo, Ukraine, Zambia, and Zimbabwe.

The project is also programming TLD demand for Haiti through the RDC in preparation for delivery when the security situation allows.

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 Q2, GHSC-PSM delivered more than 2.3 million bottles of TLD from VMS warehouses to Angola, Mozambique, Zambia, and Zimbabwe. The project is expected to meet an estimated demand of 5.5 million bottles of TLD 90 through the VMS program in FY 2024.

In Q2, the project conducted multiple stakeholder engagements in support of the VMS strategy in Mozambique. These consultations brought together insights from a diverse group of stakeholders, including GHSC-PSM, the Global Fund, Mozambique Central Medical Store (CMAM) leadership, the US Commercial Services representative in Mozambique, and the representative from the Africa Resource Center (ARC) in South Africa. These interactions provided a comprehensive understanding of Mozambique's healthcare landscape, revealing the challenges and opportunities within the supply chain. The insights GHSC-PSM gained will inform a comprehensive baseline assessment report that includes recommendations to address implementation challenges facing the VMS program.

Optimizing pediatric ARV treatment

Over the life of the project, GHSC-PSM has delivered 3.9 million bottles of DTG 10 mg to 26 countries. GHSC-PSM continues to support countries towards treatment optimization with the first delivery of pediatric ABC/3TC/DTG (pALD) in Q2, specifically, 15,599 packs of 180-count pALD tablets to Zambia.

Pediatric ARVs

GHSC-PSM has been working 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 dolutegravir (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 Q2, GHSC-PSM delivered 251,214 bottles of DTG 10 mg valued at $1,107,795 to six countries.[30] These deliveries assist countries in maintaining patients on DTG-based regimens.

[30] DRC, Haiti, Kenya, Nigeria, Togo, and Zimbabwe.

The next step in the journey to pediatric treatment optimization is the introduction of a more convenient DTG-based formulation for CLHIV. In Q2, 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 expected 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 Q2, the project shared this assessment with the PEPFAR Pediatric Treatment Workstream and the Global Fund to facilitate global collaboration on the introduction of pALD.

GHSC-PSM delivered its first shipment of pALD in Q2. The project delivered 15,599 packs of 180-count pALD tablets to Zambia and issued a purchase order to a supplier to procure 20,304 packs of 180-count tablets for Zimbabwe, with delivery expected in Q3.

In Q2, GHSC-PSM issued master orders for two low-volume pediatric products, nevirapine OS and zidovudine OS. By aggregating future demand for these products, the ARV team placed a master order, allowing the project to divert certain quantities directly to the country instead of through an RDC. In Q2, the project issued two orders for 30,000 bottles of nevirapine 10 mg/ml oral suspension, 100 ml, and an additional master order for 12,000 bottles of zidovudine 10 mg/ml solution w/syringe, 240 ml.

SUPPORTING THE THIRD 95: VIRAL LOAD TESTING

In partnership with USAID, GHSC-PSM delivers high-quality results in the laboratory supply chain. In Q2, the project finalized a "laboratory results framework" to ensure ongoing alignment and accountability with USAID for the remainder of the GHSC-PSM contract. 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 made toward achieving this goal.

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

USAID's strategy, through GHSC-PSM, was to leverage the scale of the U.S. Government's total investment in HIV testing, conduct a global strategic sourcing activity, and make the manufacturing companies partners in optimizing laboratory testing services. In 2019, GHSC-PSM began working with the two primary laboratory equipment manufacturers and one new entrant to reform the viral load (VL) and early infant diagnosis (EID) testing market. Improving price transparency and service performance and building a healthy supplier market was key to the project's efforts to transform laboratory testing and provide cost-effective and efficient services for better health outcomes.

In 2019, GHSC-PSM released a global RFP, which had two main features. First, the project pooled the procurement of testing reagents and lab consumables across all PEPFAR countries, requiring manufacturers to bid a price based on total global volumes rather than a country-by-country price. Second, the global RFP was a major step in the transition from laboratory commodity procurement to a service-centered model based on all-inclusive pricing per test that includes instrument lease and service and maintenance by requesting all-inclusive pricing for the six largest PEPFAR-supported countries, known as the Wave-1

countries.[31] These service-level agreements (SLAs) shifted the risk and responsibilities of long-term ownership and maintenance of expensive viral load testing instruments to the manufacturers while improving access to more reliable testing services.

GHSC-PSM also created a well-defined market with full transparency where suppliers have access to forecasted supply plans from almost every country covered by the all-inclusive agreement. Furthermore, GHSC-PSM is dedicated to purchasing committed volumes each year on behalf of the six largest PEPFAR-supported countries in return for lower, more transparent pricing and service commitments from suppliers.

In FY 2023, GHSC-PSM concluded the Wave-2 RFP process by executing updated global SLAs with three global diagnostics manufacturers to contractually document new all-inclusive pricing and service terms for 48 Wave-2 PEPFAR-supported countries.

Maintain the gains of the global pricing and SLAs for all PEPFAR-funded procurements. Preliminary data analysis shows that in Q2, GHSC-PSM delivered 1.3 million VL/early infant diagnosis (EID) tests valued at approximately $16.7 million. Life of project savings on orders delivered by GHSC-PSM since 2020 are more than $133 million compared to the pre-RFP prices.

GHSC-PSM's key performance indicator (KPI) data collection and management process with global VL manufacturers continues in 21 Wave-1 and Wave-2 countries.[32] In addition to KPI management training, GHSC-PSM supports countries' management of the KPI reporting process. The project holds monthly calls with global VL suppliers, focusing on testing failure rates and quarterly business reviews focused on the ten standardized KPIs. In Q2, the supplier held webinars for GHSC-PSM and lab stakeholders to improve their understanding of machine performance data.

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

In Q2, GHSC-PSM made notable progress toward integrating performance data from all manufacturers into the project's automated test reporting system. The project and manufacturer met weekly to collaboratively determine the data and content of the manufacturer's report and tested data transfer between the manufacturer's reporting system and GHSC-PSM's database.

Progress continued in integrating another manufacturer's machines in Ethiopia into the automated reporting system. The manufacturer conducted site visits at GHSC-PSM-supported labs to assess the

[31] The original six Wave-1 countries were Kenya, Mozambique, Nigeria, Tanzania, Uganda, and Zambia.
[32] Angola, Benin, Burkina Faso, Burundi, Cameroon,Côte d'Ivoire, DRC, Eswatini, Ethiopia, Haiti, Kenya, Lesotho, Mali, Mozambique, Nigeria, Rwanda, Tanzania, Togo, Uganda, Zambia, and Zimbabwe.

locations' connectivity needs and determine the best tool for connecting these machines. Per the contractual timeline, full connectivity is expected in Q3.

Implement an early warning–early action process and procedures for proactive "whole of lab" performance management in PEPFAR-supported countries. 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 Q2, GHSC-PSM began making bi-weekly EWEA deep dive presentations to the USAID laboratory and data teams that focus on KPI results and instrument performance. Countries were grouped 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.

- Level One: Countries where full reporting is available and deep dives can be performed. These countries have a signed VIPMA and a project country office.
- Level Two: Countries with limited data availability where partial TA is provided. These countries have not signed a VIPMA, but a project country office exists.
- Level Three: Countries without a signed VIPMA or a project country office.

Advocate for the expansion of all-inclusive SLAs in all PEPFAR-supported countries. GHSC-PSM launched all-inclusive service-level pricing in PEPFAR-supported Wave-2 countries in FY 2023 immediately following the execution of the updated global SLAs with the three VL suppliers.[33] 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 Q2, GHSC-PSM began coordinating with USAID and Centers for Disease Control and Prevention (CDC) on a multi-day technical assistance and capacity-building workshop to be held in Q3. The workshop will assist non-GHSC-PSM actors in 10 Wave-2 countries with setting up, contracting for, and implementing the all-inclusive reagent rental model with global manufacturers of diagnostic equipment. This includes representatives from MOHs, Global Fund principal recipients of grants, and other PEPFAR implementing partners. The project used the data collection survey shared in Q1 to select the first cohort of participants.

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

Ensure a smooth and continuous supply chain to minimize expiries and stockouts for PEPFAR SLAs.

In Q2, GHSC-PSM delivered laboratory supplies to 22 countries.[34]

The project continued working with the instrument manufacturer, reagent supplier, and lab partners to prepare for the delivery and installation of the new COBAS 5800 instruments in **Eswatini**. The project facilitated coordination between the supplier and the lab in importing the instruments and worked with the supplier to ensure delivery of reagents and consumables, and the new instruments were installed and operational in Q2.

In Q2, GHSC-QA reviewed the Plasma Separation Card Bundle which now includes a different capillary tube. The manufacturer is finalizing updated instructions for use and is training recipients on how to use the new capillary tube. GHSC-PSM will review orders on a case-by-case basis until GHSC-QA approves the updated bundle for eligibility in Q3.

GHSC-PSM worked with the **Cameroon** MOH on an issue related to the product shelf life of quantitative amplification reagents and consumables for m2000 platforms. Cameroon required that products have 75 percent of shelf life remaining upon final delivery. Due to time needed for quality control, supplier shipping, waivers, and distribution to the final destination, these products did not meet this requirement. The project worked with the manufacturer to alleviate MOH concerns. The manufacturer provided a letter guaranteeing that items that expired before consumption would be replaced. GHSC-PSM delivered the shipment on time in Q2.

In Q2, the project communicated with countries experiencing delays following the procurement of a specific brand of TB rapid diagnostic test (RDT). The manufacturer experienced a technical issue with the supply of a critical raw material, reducing its capacity. Increased production is expected in Q3.

In Q2, problems with the supply of Genexpert HIV-1/VL Assay cartridges continued, leading to only high-priority orders receiving a partial allocation. The manufacturer expects to resolve the issue in Q3.

The same manufacturer launched a new version (XC) of the cartridges. In Q2, the GeneXpert HIV-1 Qual cartridge received WHO pre-qualification, while pre-qualification for the VL XC cartridges is pending.

GHSC-PSM signed a long-term agreement with a supplier of CD4 test kits, who recently increased the product's total shelf life from 12 to 18 months. With this framework agreement, the project can issue purchase orders instead of stand-alone contracts for each procurement. This will accelerate the procurement process.

In Q2, GHSC-PSM refreshed prices with pre-selected wholesalers for laboratory supplies under the current procurement strategy. The project will revisit this strategy and pre-selection of suppliers in Q3 and Q4 FY 2024, with a particular emphasis on local manufacturing.

[34]Angola, Benin, Burkina Faso, Burundi, Cameroon, DRC, Côte d'Ivoire, Eswatini, Ethiopia, Haiti, Kenya, Malawi, Mali, Mozambique, Nigeria, Philippines, 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 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.

Accurate FASP is key to a successful supply chain. In Q2, GHSC-PSM provided 32 countries[35] with FASP technical assistance. This technical assistance 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 capacity to forecast lab commodities in QAT through country-tailored support, remote training, lab quantification workshops, and supply plan reviews. As of Q2, 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 (VMI) 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 risk, concerning the number of commodities and timing of supplies to specified locations to the supplier.

In Q2, GHSC-PSM:

- In **Nigeria,** started a VMI pilot activity with a global VL supplier. Over six months, GHSC-PSM, PEPFAR, and the Nigerian Ministry of Health Laboratory Units will partner 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 humanitarian programs, leveraging market-based approaches to accelerate countries' progress on the development trajectory.
- In **Mozambique,** put on hold an extension of the VMI pilot to two additional laboratories. In Q3, relevant stakeholders, including the MOH and PEPFAR, will conduct a joint review of the pilot. After this review, the MOH is expected to approve the extension.

Harness private-sector engagement in PEPFAR-supported countries with known suppliers for long-term sustainability options. In Q2, GHSC-PSM held strategy discussions with two global VL manufacturers on further engaging the private-sector laboratory networks in Africa for HIV VL/EID testing. The suppliers shared their experience participating in public-private partnerships in several African

[35] 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.

countries and their perspective on the efficiencies and benefits that private-sector laboratories offer to donor-funded HIV testing programs. GHSC-PSM and the suppliers will jointly explore opportunities in this area and conduct more research, with further guidance from USAID and CDC.

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 on 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 Q2, GHSC-PSM reported monthly on 28 unique commodity stockout risks across 13 countries. The most common causes of stockout risks were product expiry, funding gaps, late delivery (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 adult ARVs (16 risks), VL/EID (13 risks), pediatric ARVs (nine risks), and HIV RTKs (eight risks).

The project reported that 13 commodity stockout risks were resolved in Q2, with the most common resolutions being deliveries by host governments (five), PEPFAR (four), or the Global Fund (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.

COUNTRY SUPPORT

The HIV/AIDS task order funded supply chain systems strengthening activities in 26 countries in FY 2024.

In **Botswana**, along with the Central Medical Stores, the Botswana Medicines Regulatory Authority and pharmacy lecturers at the Institute of Health Sciences co-facilitated a five-day health commodities logistics management workshop for final-year pharmacy technology students. Sixteen graduating students completed the training before their deployment to health facilities.

In **El Salvador**, provided TA to the MOH to identify gaps and solutions to improve access to PrEP, particularly for key populations. The project supported quantification and forecasting workshops to determine the demand for PrEP. Building on a Q1 pilot at the VICITS (STI and HIV Sentinel Surveillance Clinic) in San Salvador, in Q2, the prevention strategy was expanded to 12 clinics. GHSC-PSM provided TA and coordinated supply chain management meetings among the MOH, the Global Fund, the Pan American Social Marketing Organization (PASMO), and other implementing partners to support the MOH's goal of expanding the program to 25 clinics by the end of FY 2024.

Also in **El Salvador**, supported MOH plans to decentralize HIV care and treatment and improve access to lifesaving ARVs by opening 10 new clinics in the national hospital network. GHSC-PSM coordinated with the National Health Program (STI/HIV unit) on an ARV supply chain workshop for health care workers in five clinics in San Miguel, the country's third most populous city in the country's eastern region. Attendees were trained on logistics management information system (LMIS) and storage best practices to ensure increased visibility of inventories and consumption levels at each facility and improve forecasting and supply planning. The project developed literature to reinforce compliance with these practices among pharmacy and warehouse staff.

In **Guatemala**, delivered more than 12,000 bottles of PrEP to the PASMO on behalf of USAID. This delivery provides prevention coverage for more than 500 people and supports PASMO's implementation of PEPFAR's HIV prevention strategy.

In **Haiti**, despite the armed conflict, arranged to transport lifesaving ARVs from Port-au-Prince to intermediary ports in Gonaive and Miragoane by truck, with World Food Programme (WFP)-funded barges facilitating safe sea transport amid threats from gangs. This required extraordinary bravery from the third-party transporters' drivers. Additionally, some health facilities directly retrieved products from the warehouse, where exceptional management from project staff ensured seamless operations. By the end of Q2, almost all 270 health centers had received vital supplies valued at US$2,072,273. Ongoing coordination between GHSC-PSM and other donors will ensure all centers are reached in early Q3. GHSC-PSM also dispatched 15,025 kg of Global Fund products worth $640,660 to support World Vision’s distribution needs. Despite the crisis, GHSC-PSM and global partners dispatched a total of 85,595 kg of essential products valued at $2,712,933, highlighting the power of collective action.

In **Malawi**, delivered 5,400 vials of the long-acting injectable PrEP CAB-LA to the Malawi MOH on behalf of USAID. This injectable PrEP will help protect key populations, such as sex workers, adolescent girls, and men with same-sex partners, which UNAIDS identifies as bearing the highest burden of the epidemic. Dr. Rose Nyirenda, Director of HIV/AIDS in the MOH, announced that the injection will be piloted in six health facilities in Blantyre and Lilongwe. The Government of Malawi continues to register notable progress in reducing HIV infections and AIDS-related deaths. According to the National Strategic Plan for HIV and AIDS, Revised and Extended Strategy for 2023–2027, AIDS-related deaths have reduced by half from 23,000 in 2010 to 13,000 in 2019. UNAIDS points out that key populations in urban areas continue to bear the highest burden of the epidemic.

Also in **Malawi**, provided quarterly supportive supervision training to the Department of HIV and AIDS (DHA) staff in facilities across the country as part of the MOH's health systems strengthening and capacity-building activities. During these sessions, joint GHSC-PSM and MOH supportive supervision teams conducted stock-taking exercises and checked compliance with storage best practices. Most private clinics face challenges in adhering to storage best practices as they lack trained pharmacy personnel and rely on other staff to fill the void. GHSC-PSM and the MOH provided mentorship to pharmacy managers and other staff to improve health commodity management and supply chain data recording and reporting. The supportive supervision teams provided feedback on areas of concern to facility staff and advised on corrective actions to enhance commodity security at service delivery points.

B2. MALARIA

Delivered more than **559 million** artemisinin-based combination therapies (ACTs) to treat **malaria infections over the life of the project**, including **12 million** in Q2 FY 2024.

23 countries[36] received health systems strengthening support with malaria funding in FY 2024.

GHSC-PSM delivered malaria medicines and commodities to 26 countries in Q2 and 31 countries over the life of the project.

Delivered enough long-lasting insecticide-treated nets (LLINs) to provide **protection from malaria for over 14 million people in Q2 and 638 million people over the life of the project**.

GHSC-PSM's work supports and accelerates the achievement of the five focus areas outlined in 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 progress made in these areas during Q2 of FY 2024 demonstrates GHSC-PSM and USAID's dedication to this vital mission as we relentlessly work toward eliminating malaria and saving lives.

COST SAVINGS ON MALARIA COMMODITIES

GHSC-PSM's strategic sourcing activities generated significant cost savings[37] for malaria products and the countries served by its malaria programs. Commodity cost savings on core malaria products have reached

[36] 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 Madagascar and Tanzania in FY 2024.

[37] Commodity cost savings are calculated using a comparison of the weighted average baseline cost of products when they were first procured to an average weighted cost of the product in the current review period, adjusted for inflation as determined by the Consumer Price Index. From the outset, inflation was included in these calculations to control for price changes occurring due to inflation and to keep focus on changes in price due to strategic sourcing efforts by GHSC-PSM or overall market shifts. The combination of near-historic general inflation in the last few years coupled with falling actual prices of these products has had a synergistic effect, leading to additional savings. Inflation has been included in the calculations for all malaria product categories.

$312 million over the life of the project, including $39 million in savings the first half of FY 2024, as shown in Exhibit 8.

The new FY 2024 GHSC-PSM tender reflected AL price reductions driven by the lower price of the API. AL 6x4 saw the most significant price cut, leading to cost savings in the first half of FY 2024 of just under $5 million. In total, all AL products saw a cost savings in the first half of FY 2024 of just under $15 million.

The ASAQ market has remained relatively consistent and will likely not change in the future. ASAQ products are in low demand and nearing the end of their product life cycle, meaning new suppliers are unlikely to enter the market and alter the cost per product. ASAQ products saw a cost savings of just over $1 million in the first half of FY 2024. Over the life of the project, the ACTs category (both AL and ASAQ products) saw cost savings of more than $129 million.

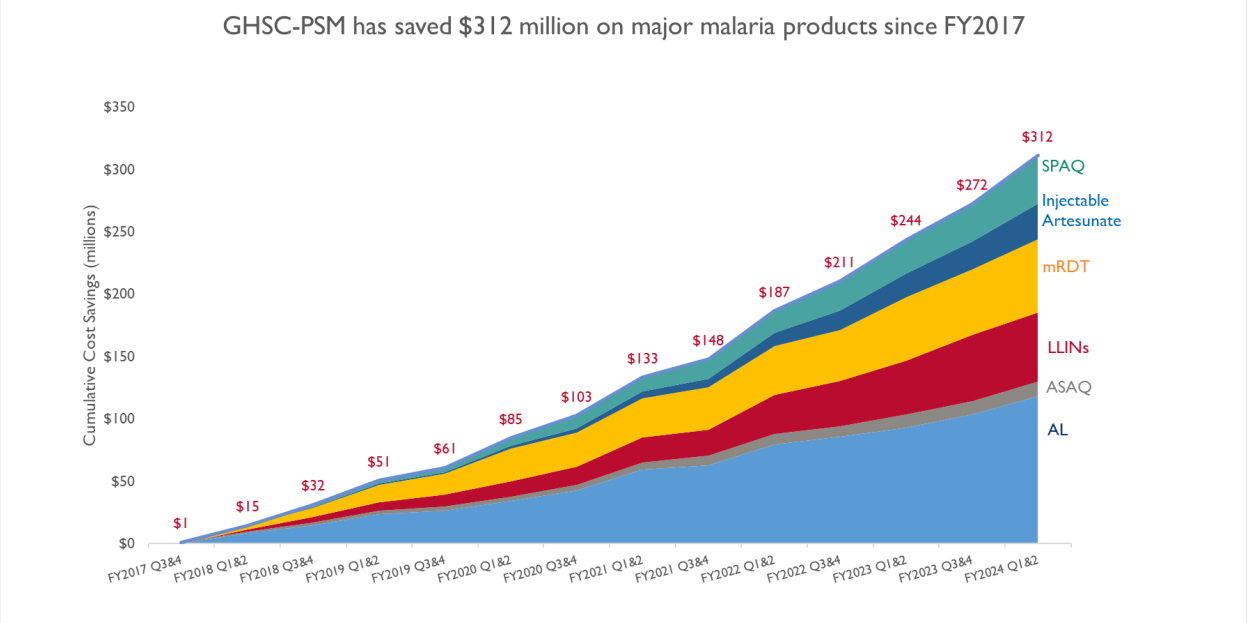
LLINs saw a slowing of growth in cost savings in the first half of FY 2024. Piperonyl butoxide (PBO) 170cm and single pyrethroid 170cm net types accounted for about one third and two thirds of procurements, respectively. However, overall LLIN procurement was lower than usual in the first half of FY 2024, due to delays in countries receiving funding allocations from PMI. GHSC-PSM expects to see a jump in procurement in the next half of FY 2024 when the delayed orders are released. The cost for PBO 170cm and for single pyrethroid 170cm net types decreased in the first half of FY 2024. The dual active ingredient (AI) net market has welcomed more competition, with additional vendors and an increase in demand. Starting in the second half of FY 2024, GHSC-PSM will procure dual AI nets as this formulation is more effective against mosquito populations that have become increasingly resistant to pyrethroid insecticides. GHSC-PSM renegotiated net prices with vendors and secured lower pricing for the dual AI nets. Collectively, the project accumulated more than $2 million in cost savings on LLINs in the first half of FY 2024, amounting to more than $55 million over the life of the project.

GHSC-PSM renegotiated the price of mRDTs at the start of FY 2024 in a market with increased competition, and therefore saw a significant price decrease. Procurement more than doubled in the first half of FY 2024 compared to the second half of FY 2023, and the life of project cost savings saw a jump of more than $6 million.

Nearly all procurements for injectable artesunate (severe malaria medicines) went to the one vendor in the first half of FY 2024 who has the shortest lead times and best response rate of all suppliers. This mid-priced supplier is preferred due to its production capacity. The overall cost for injectable artesunate increased slightly due to a higher proportion of procurements going to this provider, but still fell well below the baseline cost, contributing to a life of project savings of over $28 million.

Sulphadoxine-pyrimethamine + amodiaquine (SPAQ) saw similar growth in cost savings in the first half of FY 2024 (more than $8 million), primarily due to intentional diversification of providers, contributing to life of project cost savings for SPAQ of $39 million.

Exhibit 8. Life-of-Project Savings on Malaria Commodities



COMMODITY SOURCING, PROCUREMENT, AND DELIVERY

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

STRATEGIC SOURCING AND SUPPLIER RELATIONSHIP MANAGEMENT

In Q2, GHSC-PSM conducted 13 business review meetings with suppliers across the various commodity groups (LLINs, mRDTs, and pharmaceuticals). In the meetings, the project and suppliers exchanged updates and discussed supplier performance, product pipelines, and plans to expand manufacturing in Africa.

In Q2, GHSC-PSM determined the final volume allocation for the dual AI LLINs for the tender issued in Q1. The project is seeking PMI allocation approval.

Procurement and delivery

In Q2, GHSC-PSM procured malaria commodities, with a total value of $38.5 million, for 24 countries.[38]

In Q2, GHSC-PSM delivered malaria commodities worth more than $40 million to 26 countries.

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

On-time and on-time in full delivery

The timeliness of GHSC-PSM deliveries remained consistent for standard OTD and OTIF. In Q2, the OTD rate for malaria commodities was 92 percent (see Exhibit 9). The OTIF rate in Q2 was 91 percent.

Exhibit 9. Monthly On-Time Delivery Rates for Malaria Commodities

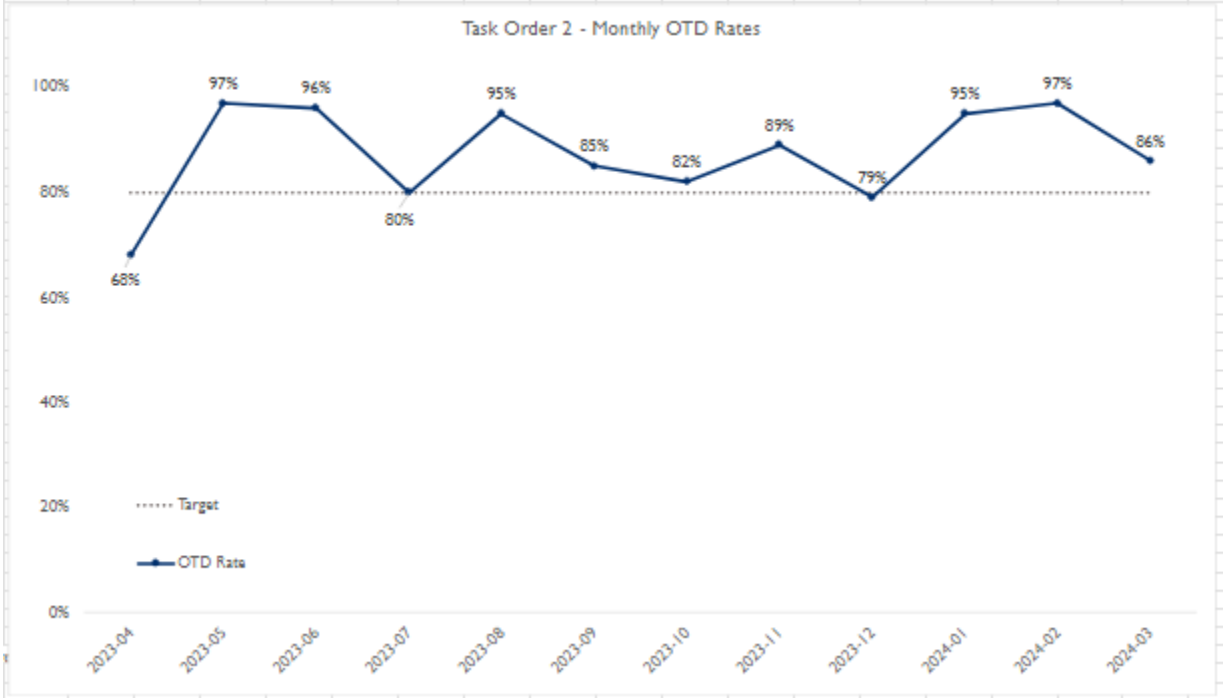
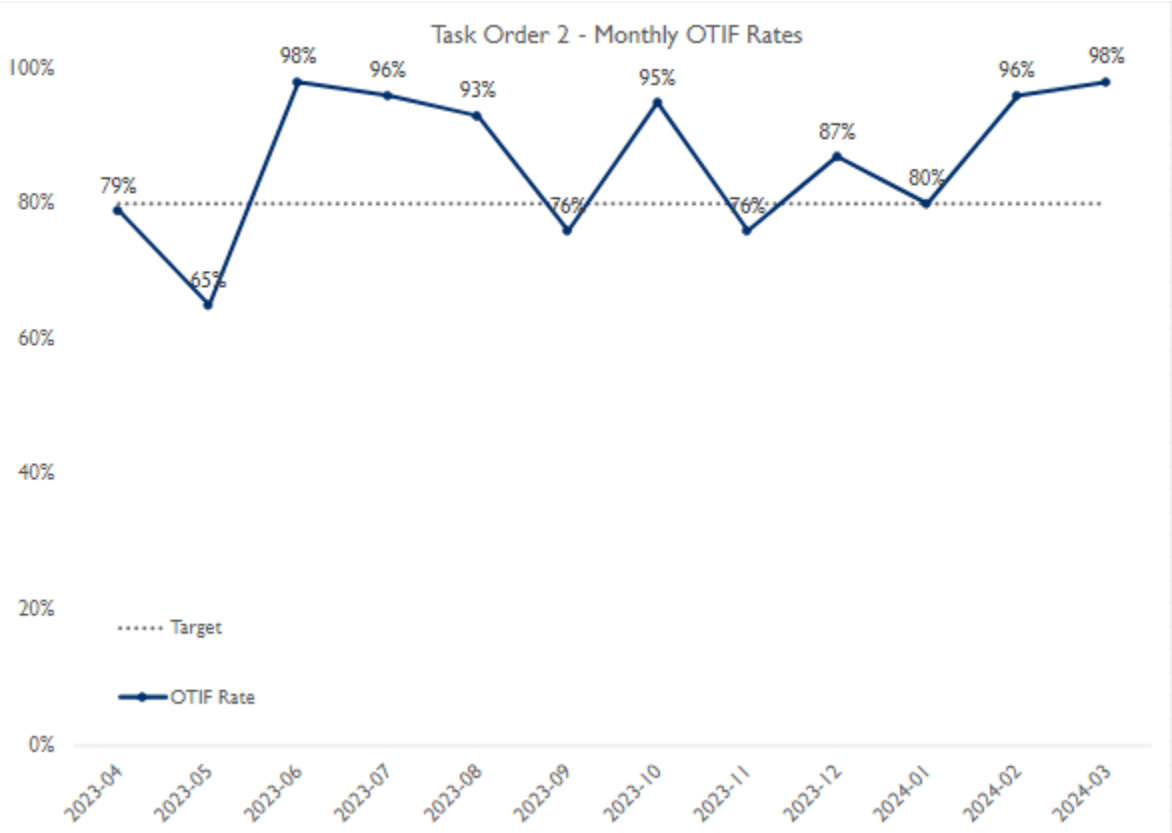


Exhibit 10. On-Time, In-Full Rates for Malaria Commodities



GLOBAL SOURCING COLLABORATION

GHSC-PSM participates in the Malaria Pharmaceuticals (Pharma) Task Force,[39] mRDT Task Force,[40] Vector Control Access Task Force,[41] and LLIN Donor Collaboration meetings.[42] These groups are a valuable forum for exchanging information on market risks and improving collaboration across the global malaria community. They are supplemented by one-off working sessions and communications to discuss acute risks, issues, and opportunities.

[39] 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.

[40] 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.

[41] 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.

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

In Q2, members of the Malaria Pharma Task Force and the KSM/API working group shared the following updates:

- In **Niger**, border closures and political insecurity made getting commodities into the country a challenge. The situation eased in Q2 as GHSC-PSM transitioned orders to air.

- Global procurers confirmed working with only one of the two prequalified suppliers of rectal artesunate, as the other supplier requires a higher minimum ordering quantity that could not be met and conducts fewer production runs.

- A KSM/API member reported that the Global Family Planning Visibility and Analytics Network (VAN) coordinating mechanism used to facilitate the reallocation of stock could be leveraged for malaria.

- PATH reported that the sole manufacturer of semi-synthetic artemisinin reduced the cost of KSMs, but not as low as the current pricing of vegetal artemisinin. Historically, the price of vegetal artemisinin has been volatile, reinforcing the need for the global community to consider incentives and mechanisms that encourage the uptake/use of semi-synthetic artemisinin.

- CHAI continued its work on an antimalarial resistance mitigation strategy, which became available through the RBM Partnership to End Malaria Global Malaria Dashboard in Q2.

Two Pharma Task Force members are collaborating with manufacturers to lower the cost of pyronaridine API production. The goal is to make pyronaridine, a primary cost driver in the finished formulation of artesunate pyronaridine, achieve price parity with existing ACTs, broaden the existing supplier base beyond a single source, and research the use of pyronaridine in other finished formulation combinations to combat multidrug resistance.

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 Q2, the project responded to the following challenges and updated PMI:

- A wholesaler reported a potential API shortage, which could impact the production and lead times for sulfadoxine-pyrimethamine. GHSC-PSM continues to monitor the situation and will use secondary suppliers if needed.

- An ACT supplier experienced a three-month delay in goods availability dates (GADs) due to an internal equipment issue. To mitigate the impact of the supplier's delay, GHSC-PSM was able to prepone GADs with another ACT supplier to prevent stockouts in Angola.

RAPID FULFILLMENT STRATEGY

The project uses a strategy where the regional distribution center (RDC) stockpile and vendor-stored inventory (VSI) work in tandem as critical mechanisms to fulfill a) "emergency" and b) "urgent" orders for

AL.[43] The RDC has 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 uses the VSI strategy for AL to avoid stockouts. In Q2, GHSC-PSM used VSI to fulfill four urgent orders of AL 20/120 mg hard tablets for the Democratic Republic of the Congo (DRC), Ethiopia, Niger, and Nigeria. In addition, GHSC-PSM fulfilled three emergency orders through the RDC stockpile of AL 20/120 mg dispersible tablets and AL 20/120 mg hard tablets to the DRC, Ethiopia, and Niger.

The project has a rapid replenishment strategy in place for SPAQ, whereby SPAQ is stockpiled at the Belgium RDC for rapid replenishment of 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 (SMC) campaigns. The SPAQ is scheduled for delivery to the Belgium RDC in Q3.

QUALITY ASSURANCE

Collaborating

GHSC-PSM plays a leadership role among global stakeholders in the LLIN QA space as the LLINs Quality Assurance Group (LQAG) chair. In Q2, the LQAG discussed post-market information gathering initiatives and its goals for the calendar year 2024, including joint supplier visits and reviews and managing environmental impact through net manufacturing waste reduction.

In Q2, a new senior quality assurance advisor joined the PMI Malaria Division. The project oriented the new PMI team member to GHSC-PSM's quality assurance/quality control (QA/QC) strategies and processes to facilitate an understanding of the project's roles and responsibilities.

Implementing strategies and innovations

In Q2, the project completed two method transfers, one of which was for a product from an Africa-based manufacturer, in line with USAID's goal of increasing procurement in the African region.

[43] Task Order 2 (TO2) Emergency order definition: Orders with less than 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 reviewed reports on an LLIN supplier's stability study that compared LLINs that were packaged in individual bags and then packed in bales to LLINs packed in bales without individual packaging. The project provided PMI with a summary of the reports to inform discussions on whether packaging type impacts LLIN quality. The supplier is writing the protocol for real-time stability studies that will take packaging into account.

Following an incident on the project wherein GHSC-PSM procured products that had been held by the manufacturer in poor environmental conditions, the project implemented processes to review all supplier locations, and ensure that they meet the appropriate storage conditions for the products held at these locations.

FOSTERING QUALITY IN MALARIA PRODUCTS

Malaria LLIN products

In Q2, GHSC-PSM completed an investigation into an out-of-specification (OOS) in PBO AI content for LLINs. PBO serves a critical role as a synergist in enhancing the potency against AI resistance. The PBO AI content specification is 10 g/kg ± 25 percent. The project initiated the OOS investigation after the GHSC-PSM's third-party QC testing laboratory reported below-specification results for the PBO AI content for four out of 11 batches tested for an order. The project reviewed the test results and methodology. GHSC-PSM then requested a retest following standard operating procedures (SOPs), performed additional tests at a secondary lab, and conducted a comprehensive review of all testing data. The results confirmed three of the four initial OOS. The project determined that PBO AI content OOS had a risk of impacting the efficacy of the LLINs and recommended rejecting and replacing the three OOS batches. PMI concurred.

In Q2, the project initiated discussions with an LLIN manufacturer to compare and determine whether AI content results obtained from various laboratories, third-party project laboratories, and supplier laboratories varied significantly. GHSC-PSM is working with the supplier to delineate a protocol for testing.

Malaria pharmaceutical products

In Q2, GHSC-PSM initiated an OOS investigation on the particle size of artesunate (ASU) powder for the ASU injectable 60 mg. GHSC-PSM's third-party testing laboratory 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 particles maximum per vial. The OOS impacted three orders, two in transit to the recipient country and one at the supplier. The project placed a hold on the shipment at the supplier and notified the recipient countries to quarantine the product upon arrival so that additional samples could be retrieved for confirmatory testing. GHSC-PSM sent the retrieved samples to a third-party testing lab. The project will make a recommendation to PMI in Q3 based on the findings of the confirmatory test to ensure that products procured by the project meet quality, efficacy, and safety standards.

In Q2 the project inquired with suppliers about the initiatives and activities they have undertaken to assess and mitigate the risk of nitrosamine impurity in their finished pharmaceutical products. Various questions were sent to the supplier and their responses are being gathered and reviewed.

mRDT products

In Q2, following discussions with WHO and suppliers, GHSC-PSM shared a field safety notice (FSN) to all recipient countries of a particular supplier's mRDTs. The project reported product quality complaints of false positives and erroneous results reported by recipient countries to WHO and the supplier. GHSC-PSM investigated the complaints and determined common trends and found that most complaints were from countries that received the supplier's brand of mRDTs for the first time. In collaboration with WHO and the supplier, the project determined that a primary root cause was the improper use of the mRDT kit components due to unfamiliarity with the brand and the sample collection tool, which was a pipette. Other brands of mRDTs familiar to countries used an inverted cup for sample collection. Additionally, instructions for use differed between brands of mRDTs. The project engaged with WHO and the supplier to determine the corrective and preventative actions (CAPAs). As an interim step of the corrective action, the supplier provided an FSN that contains further instructions for use to the project. The project provided feedback to WHO and the supplier before the finalization of the FSN, which included WHO approval, and distributed the final FSN to all the impacted countries. The supplier submitted a request to change its kit components to the WHO asking to swap the pipette for inverted cup for sample collection based on information derived from the complaints. The project is monitoring the progress of the change request.

Other mRDT suppliers also shared information on change requests submitted to WHO for kit components based on complaints and feedback that the project has provided to them. This feedback loop between the project and suppliers is promoting continuous improvement, helping to shape the mRDT market, and driving the access to more user-friendly mRDT products.

PROMOTING SUPPLY CHAIN MARKET HEALTH

In Q2, GHSC-PSM completed a method transfer for SPAQ and a method update for AL products to establish test methods with third-party laboratories for performing routine testing, guaranteeing the quality, safety, and efficacy of the products procured.

The project inquired about the LLIN packaging stability studies performed by one of its LLIN suppliers and discussed future stability studies based on a request from PMI (also referenced under Quality Assurance on page 64). GHSC-PSM shared the supplier's feedback with PMI and followed up with the supplier to obtain further information on future stability studies. The information derived from stability studies is critical in the supply chain environment and will inform product storage and handling processes to ensure that product quality, efficacy, and safety is maintained.

PRODUCT REVIEW FOR ELIGIBILITY

In Q2, GHSC-PSM completed eligibility reviews of three products (see Exhibit 11) and facilitated the addition of products to the Restricted Commodity Waiver list governed by USAID Automated Directives System 312, making the product eligible for procurement. The reviews included the new product dossiers, reports, and certification documents.

Exhibit 11. New Products Added to the Restricted Commodity Waiver List in Q2

Product category	Product subcategory	Product detail
Pharmaceuticals	Sulfadoxine-pyrimethamine (SP)	SP tablets 500/25 mg
Pharmaceuticals	ACT	Dihydroartemisinin/piperaquine hard tablets 40 mg/320 mg
LLINs	LLIN	Single insecticide (deltamethrin)

Key performance indicators

GHSC-PSM:

- Completed 92 percent of quality assurance/quality control processes within the required lead times in Q2, above the target of 85 percent.
- Identified OOS findings in 1.3 percent of batches tested in Q2, just above the target of 1 percent.
- Completed 100 percent of investigation reports on time.
- Generated cost savings of $209,015.36 as a result of using randomized testing in Q2 instead of testing all batches.

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

In Q2, GHSC-PSM continued implementing identification, barcoding, and data 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[44] were:

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

- Identify [Global Trade Item Number/Global Location Number (GTIN/GLN) collection]: 99 percent.
- Capture (standards-compliant barcoding on labels): 94 percent.
- Share [Global Data Synchronization Network (GDSN) data synchronization]: 91 percent.

Revised TraceNet guidelines

Co-convened by PMI and the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund), the TraceNet technical working group (TWG) includes representatives from manufacturers, procurement agents, donors and implementing partners.

The TraceNet TWG initially convened in 2019 and launched the TraceNet guidelines for Standards-based LLIN Identification, Labeling, and Data Exchange. In Q2 FY 2024, GHSC-PSM and PMI re-convened the TraceNet TWG and hosted a series of topical meetings to solicit industry input in revising the guidelines. The TWG community includes global health stakeholders such as the Global Fund, United Nations Children's Fund (UNICEF), AMF, Innovative Vector Control Consortium (IVCC), WHO, and several international LLIN manufacturers. The discussion addressed identification and capture standards, barcode quality, placement, scannability, and operationalization of GS1 standards in the LLIN industry. The TWG developed use cases for leveraging GS1 standards for improved LLIN visibility, inventory management, and data exchange as part of the operationalization discussion. GHSC-PSM used feedback from the meeting series and documented review periods to update the joint guideline recommendations. The project will share the revised guidelines with stakeholders for endorsement and publication in Q3.

For additional highlights and milestones related to these standards in Q2, 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 29 countries 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, GHSC-PSM completed the following activities in Q2:

- In **Ghana,** advocated with the National Malaria Elimination Program to expedite a Global Fund order and prevent a stockout of artesunate injectable 30 mg.

- In **Mali**, GHSC-PSM requested to expedite an order for injectable artesunate 30 mg. However, the supplier could not advance the GAD for this order by more than a few days due to capacity constraints. The project flagged the order for expedited logistics procedures, with delivery scheduled in Q3. In Q2, there was no stockout of this commodity.

- In **Niger**, expedited shipment delivery of AL 6x2 to prevent a stockout.

- In **Senegal**, split an injectable artesunate order to ship 450,000 vials via air to avoid stockout risk, while the remaining 1,199,825 vials will go via sea.
- In **Uganda**, initiated expedited shipments to prevent a potential stockout of AL 6x1.

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 Q1, 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. Between Q1 and Q2 FY 2024, GHSC-PSM edited the tool based on country feedback. In Q2, the project shared the tool with the Cambodia office and will discuss their feedback with the Advanced Analytics team in Q3.

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 this data, USAID aimed to identify the most successful and challenging WFD methods. In FY 2023, the project completed a workforce development assessment in Malawi and submitted a report to PMI in Q1 of FY 2024. Assessment participant recommendations included prioritizing supportive supervision, mentorship, and coaching; providing in-person and hands-on training; integrating monitoring, evaluation, and follow-up visits; and recruiting competent and experienced trainers for WFD activities. 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. The project shared with PMI a joint report on the assessments in Malawi and Zambia, 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.

MALARIA COMMODITY ACCOUNTABILITY INITIATIVE

In Q2, 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 LMIS and the number of malaria services reported in District Health Information System 2 (DHIS2). The tool provides stakeholders with the data needed to conduct root-cause analysis and determine interventions to improve accountability for malaria commodities. The project modified the tool in Q2 to reduce manual data entry for stakeholders and further improve targeted data analysis tools to identify associated accountability issues. 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 by promoting efficiencies.

LLIN DELIVERY AND DISTRIBUTION SUPPORT

In Q2, GHSC-PSM delivered over 7 million LLINs to countries for distribution as a malaria prevention measure (Exhibit 12). 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 support 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 Q2, the project delivered LLINs to 11 countries[45] (see Exhibit 12) to prepare or launch LLIN distribution campaigns.

Exhibit 12. Quantity of LLINs Delivered to Countries in Q2 FY 2024

Country	Number of LLINs delivered
Benin	835000
Congo DRC	671550
Côte d'Ivoire	1605500
Ethiopia	50000
Ghana	561062
Kenya	1039000
Liberia	100000
Malawi	366071
Niger	100000
Nigeria	1166400
Tanzania	814406
	7,308,989

In Q2, GHSC-PSM supported LLIN distribution activities:

- In **Burundi**, the project finalized the transfer of GHSC-PSM-procured LLIN stock from Population Services International (PSI)—GHSC-PSM's partner for LLIN management—where it was stored, to the Central Medical Store in Burundi (CAMEBU). CAMEBU has long been responsible for the warehousing and distribution of PMI-donated malaria and family planning commodities, while GHSC-PSM has managed LLINs since the beginning of the project. The large volume and weight of LLINs and the requirements for separate storage and distribution complicated their integration into CAMEBU.The project provided direct support in building CAMEBU's capacity to receive and warehouse the nets. In addition to the LLINs transferred in Q1 FY 2024 (374,958), in Q2, the project transferred 920,669 LLINs, amounting to a total of 1,295,627 LLINs transferred in the first half of FY 2024.

  This transfer of ownership, which supports the country's progress toward technical independence, resulted in CAMEBU leading the LLIN distribution in late Q2. GHSC-PSM worked closely with CAMEBU to manage the distribution. Based on the stock on hand per district as of Q2, the National Integrated Malaria Control Programme (PNILP) developed a distribution plan, and shared

[45] Benin, Côte d'Ivoire, DRC, Ethiopia, Ghana, Kenya, Liberia, Malawi, Niger, Nigeria, and Tanzania.

it with CAMEBU. The distribution plan indicated the type and quantity of LLINs that each district should have. Based on this plan, CAMEBU shared a schedule and circuit to follow to distribute LLINs to districts. CAMEBU delivered 208,000 LLINs to 48 districts for routine distribution through antenatal care and immunization services.

- In **Ethiopia**, the project distributed almost all of the LLINs procured in FY 2023, with a small portion that has not yet been distributed all the way to the final destination due to security issues, logistical constraints, weather (the rainy season led to some key roads being impassable) and local capacity. GHSC-PSM worked with the Assosa Branch to deliver 664 bales (33,200 pieces) of LLINs to the Benishangul-Gumuz regional health bureau (RHB) warehouse for two woredas in Kemashi zone: 24,200 pieces for Mijiga woreda and 9,000 pieces for Dambe woreda. The project encouraged regional and district health managers to use locally available transportation and facilitated LLIN transport by assigning supervisors and providing remote technical support. GHSC-PSM also assisted four woredas in the Kamashi zone of the Benishangul-Gumuz region (Kamashi woreda, Kamashi town, Dambe, and Zaye) in distributing 37,750 LLINs to health posts and households, of which 35,535 LLINs have been delivered to15,135 households..

- In **Zambia,** the project worked with key stakeholders[46] to deliver the 2023-2024 mass campaign LLINs to all health facilities in six provinces as approved by the National Malaria Elimination Centre (NMEC). During the campaign, GHSC-PSM digitally monitored the three third-party distribution companies and the warehousing vendor using electronic proof of delivery (ePOD). This ensured timely progress monitoring, which facilitated easy corrections where mistakes were noted. It further proved to be cost-effective, as it ensured real-time solutions to the identified delivery errors. As of Q2, more than 1,330 bales of 40 LLINs remained held by the 3PL that the project contracted for warehousing. NMEC requested that the project deliver the remaining nets to the Western and Northwestern provinces. The project worked to finalize a contract extension with the 3PL to take on this additional task.

COUNTRY SUPPORT

In FY 2024, GHSC-PSM worked to strengthen supply chain systems for malaria medicines and commodities in 23 countries.[47] Some highlights from this quarter include:

- In **Ethiopia**, GHSC-PSM printed and distributed 450 copies of the Drug Use Evaluation (DUE) compendium and 500 copies of the DUE study guide to nine RHBs, two city administrations, and nine hospitals. The DUE compendium and study guide will help health facilities conduct DUE studies on selected public health programs, including malaria medicines.

- In **Mali**, GHSC-PSM's innovative approach has transformed the distribution of antimalarial drugs in the challenging terrains of the Koulikoro and Kayes regions. By leveraging GPS technology and the i-gotU mobile application, the project collects and uses detailed data on health facilities and road

[46] PMI, CDC, USAID, AMF, Global Fund, Churches Health Association of Zambia (CHAZ), Evidence for Health (E4H), Evolve, and PAMO Plus.
[47] In FY2024, 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 Madagascar and Tanzania in FY 2024.

networks. This data-driven method facilitates the optimization of delivery routes through the Dispatch Optimizer Tool (DOT), which uses open data and algorithms to streamline logistics. The results are conclusive. The baseline results indicated 17,069 km traveled, whereas the new optimized system reduced this to 6,505 km. This represents a 62 percent reduction in distance traveled. The baselines also indicated 145 deliveries (dispatches), whereas the new optimized system reduced the number of deliveries to 38 (dispatches). This represents a 74 percent reduction in the number of deliveries. Fuel consumption dropped by 76 percent, from 3,320 before the new system, to 803 liters. In addition, vehicle utilization efficiency increased from 37 to 75 percent.

- In **Niger**, the project migrated the WhatsApp campaign management for dashboard distribution and other digital engagement activities (such as automated data entry reminders sent via WhatsApp, offers to automatically email a copy of the dashboard to users, etc.) to the RESPOND.IO platform. The project had previously developed simplified dashboards that provide decision makers with key analytics to quickly assess inventory status at the facility level, triggering questions to understand the root cause of an out-of-stock situation or decision making (e.g., make decisions to prioritize the use of specific batches of products that are nearing expiration or to transfer excess inventory to a nearby facility that is out of stock). These dashboards are shared via an on-demand, conversational WhatsApp chatbot that allows anyone to access a specific healthcare facility's dashboard. The previous platform was MESSAGEBIRD; however, RESPOND.IO provides greater flexibility for personalization and use of variables in workflows. Contact information such as name, title, role, work location, facility type, and custom tags can now be defined and used to personalize and better target messages. GHSC-PSM is working with a consultant specializing in digital engagement to take advantage of this promising strategy. With the introduction of RESPOND.IO, the platform engagement rates[48] have increased from around 10 to 50 percent, indicating that half of the users in the Dosso and Tahoua regions actively engage with the data provided.

[48] Engagement with the platform by the target users (stakeholders), such as health facility staff, MoH officials, supply chain managers, donors, etc.

B3. FAMILY PLANNING AND REPRODUCTIVE HEALTH

To date, GHSC-PSM has delivered contraceptives to country FP programs estimated to provide a potential **106 million couple-years of protection**, including **1.9 million in Q2.**

Delivered FP/RH commodities[49] to 14 countries[50] in Q2, and provided **health supply chain systems-strengthening support** to **19 countries[51] in FY 2024** with FP/RH funding.

Continued timely fulfillment of USAID-supported countries' orders, **achieving 97 percent OTD** in Q2.

Held Commodity Council 5 (CC5) meetings with GHSC-QA and USAID with the goal of developing commodity-centric supplier strategies to mitigate risks. The session covered market updates for injectables, implants, oral contraceptives, intrauterine devices, and Standard Days Method.

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 the global supply, increase financing, and introduce new FP/RH commodities.

COST SAVINGS ON CONTRACEPTIVES

GHSC-PSM's strategic sourcing activities generated significant cost savings[52] for FP/RH products and the countries and people served by its FP programs. Commodity cost savings on core FP/RH products has

[49] Per USAID guidance, all condom procurements are counted under the HIV/AIDS task order.
[50] GHSC-PSM delivered FP/RH commodities to the following countries: Angola, Bangladesh, Burkina Faso, DRC, Côte d'Ivoire, Ghana, Madagascar, Malawi, Mali, Mozambique, Rwanda, Senegal, Togo, and Uganda.
[51] 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.

[52] Commodity cost savings are calculated by comparing the weighted average baseline cost of products when they were first procured to an average weighted cost of the product in the current review period, adjusted for inflation as determined by the Consumer Price Index. From the outset, inflation was included in these calculations to control for price changes occurring due to inflation and to keep focus on changes in price due to strategic sourcing efforts by GHSC-PSM or overall market shifts. The combination of near-historic general inflation in the last few years coupled with falling actual prices of these products has had a

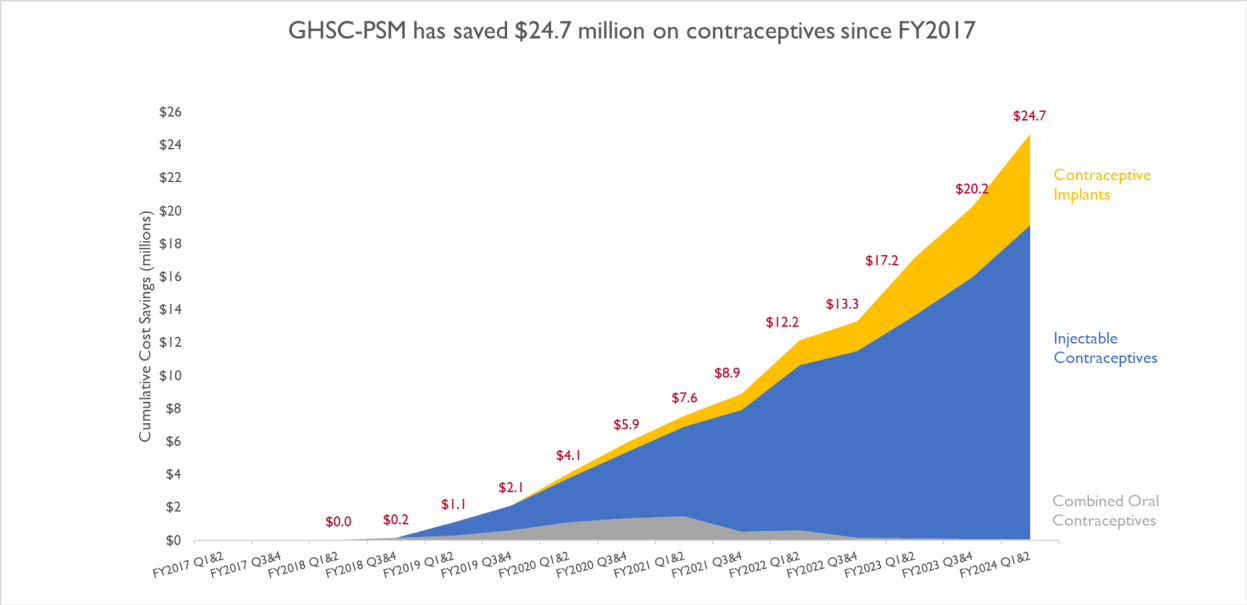
reached more than $24 million over the life of the project, including approximately $4.5 million in savings during the first half of FY 2024, as shown in Exhibit 13. The greatest cost saving drivers were MPA-IM injectable contraceptives, having accumulated nearly $19 million in cost savings over the life of the project.

MPA-IM suppliers have increased country registrations allowing GHSC-PSM greater allocation flexibility. GHSC-PSM's ability to purchase MPA-IM from lower-cost suppliers generated a savings of over $3 million in the first half of FY 2024.

Contraceptive implants, the second-largest savings driver for FP/RH products, also saw a rise in cost savings in the first half of FY 2024. GHSC-PSM incorporates only the two-rod implants in the cost savings calculation. The price of two-rod implants fell well below the baseline price, and procurement nearly doubled, leading to a savings of more than $1 million. Over the life of the project, GHSC-PSM has saved a total of $5.5 million on implantable contraceptives. Two-rod implantable contraceptives come in various lengths of efficacy: three-year and five-year. Some countries prefer the lower-cost three-year implant, while others prefer the higher-cost five-year implant. Country preference for a specific efficacy dictates the supplier, which in turn impacts the cost per product.

Combined oral contraceptives saw a price increase this term, due to an increased reliance on the higher-cost supplier. Reliance on the higher-cost supplier is expected to continue for the rest of FY 2024.

Exhibit 13. Life of Project Savings on Contraceptives



ADDRESSING FP/RH PRIORITIES

Discussing commodity strategies during CC5

synergistic effect, leading to additional savings. Inflation has been included in the calculations for all contraceptive product categories.

In Q2, GHSC-PSM held a CC5 meeting with participants from GHSC-QA and USAID to develop commodity-centric supplier strategies and mitigate risks. The meeting covered market updates for injectables, implants, oral contraceptives, intrauterine devices, and standard days method.

Securing reliable supply of commodities

GHSC-PSM maintains its commitment to achieving commodity security by using multiple supply chain strategies, including maintaining "made to stock," where certain goods are produced and stocked in advance to meet anticipated future demand. GHSC-PSM also employs a coordinated ordering approach, which is particularly effective when global demand for certain commodities significantly exceeds available supply.

Implementing a rapid fulfillment strategy

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

Managing ongoing supply shortages

Procurement of one-rod implantable contraceptives, a high-demand sole-source product, faced challenges in Q2 due to ongoing supply shortages, which are expected to persist throughout FY 2024. GHSC-PSM continues to collaborate 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.

Achieving OTD and OTIF

Timeliness of GHSC-PSM deliveries remained extremely strong in Q2 for FP/RH commodities at 97 percent OTD. OTIF numbers remained strong at 92 percent.

Exhibit 14. FP/RH Commodities, OTD

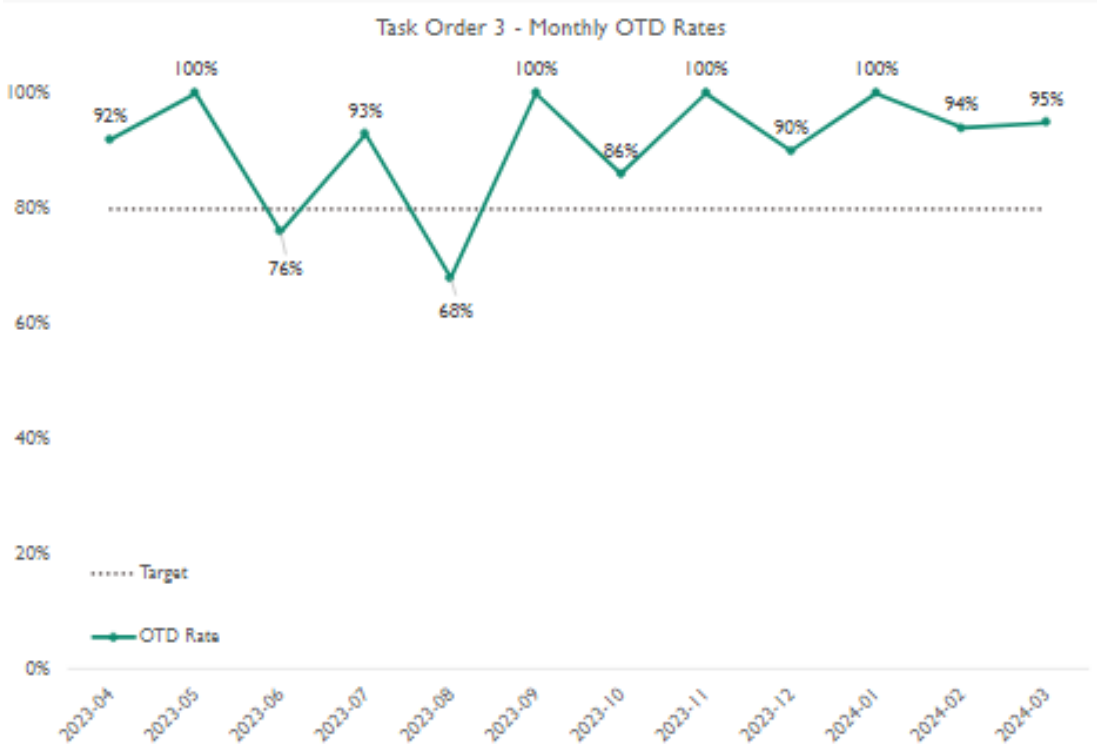
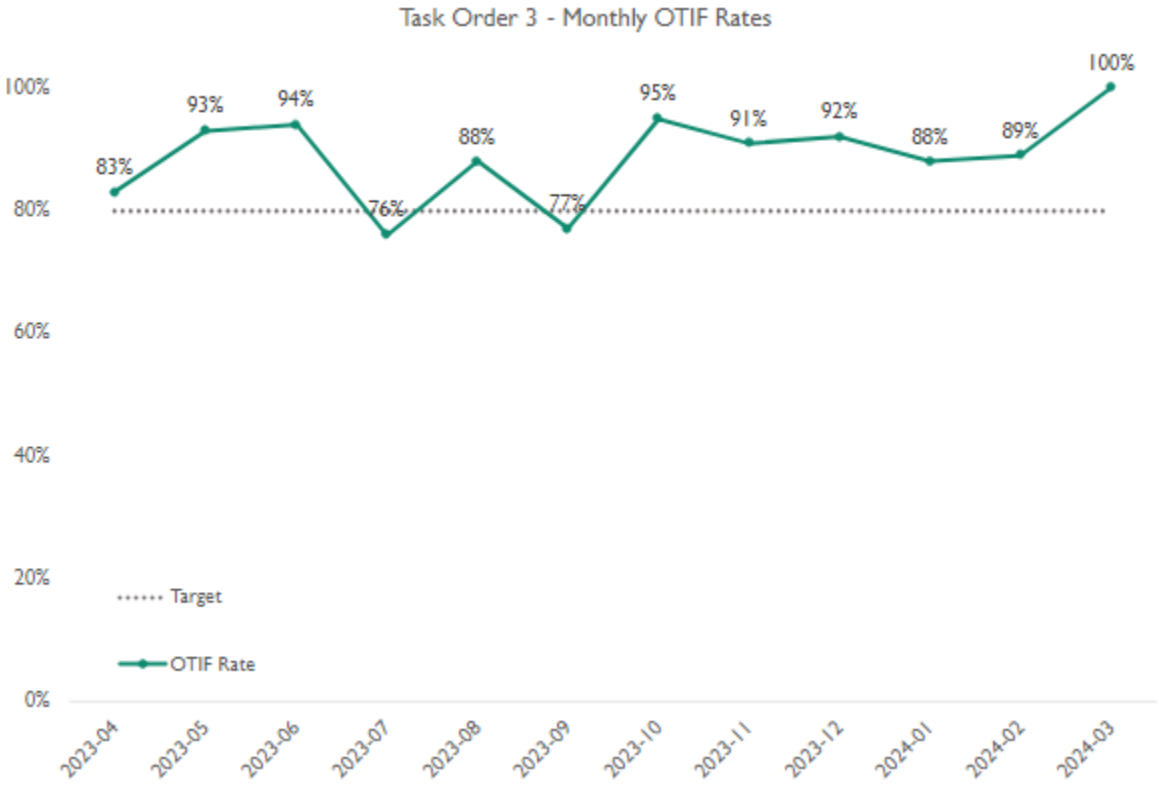


Exhibit 15. FP/RH Commodities, OTIF



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

To support diversifying the geographic supply of hormonal contraceptive manufacturing to mitigate future supply risks and enhance contraceptive security in sub-Saharan Africa, GHSC-PSM assessed the potential of sub-Saharan Africa–based manufacturers for hormonal contraceptives. Following the revision of the local manufacturing implementation roadmap in Q1, GHSC-PSM presented the draft roadmap at the USAID Topical Tuesday to gather feedback and finalize the document. GHSC-PSM met with USAID Commodities Security and Logistics Division leadership and members of the Reproductive Health Supplies Coalition (RHSC) to discuss next steps in advancing local manufacturing of injectable contraceptives. In Q3, GHSC-PSM plans to finalize the roadmap that was presented for disseminating through the GHSC-PSM website.

Transition Order Supply Plan

In Q2, the project continued to manage and mitigate risk to supply chain disruptions for the Transition Order Supply Plan (TOSP) activity, in preparation for the transition to the NextGen Integrated Procurement Service Agent, which will include FP/RH products.

In Q2, GHSC-PSM submitted the first 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; 37 percent met requirement 2, identifying anticipated funders for each planned shipment until March 2025; and 80 percent met requirement 3, documenting actual monthly consumption until March 2025. The report also highlighted the countries/programs that need further escalation to meet TOSP requirements. In Q3, GHSC-PSM will share results from the second iteration of the TOSP activity with USAID and determine next steps.

Supporting social marketing engagement activities

In Q2, GHSC-PSM engaged social marketing organizations (SMOs) with the TOSP submissions, including requests for missing data and clarifications following the initial review of the supply plans. This initiative has improved data visibility that will enhance the project's demand and supply planning.

Additionally, GHSC-PSM engaged with SMOs to identify alternative products to fill supply gaps resulting from a temporary disruption in the supply base for injectable contraceptives. As a result, all SMOs accepted an alternative product to mitigate disruptions in the short term. Alternative product refers to another injectable that the SMO is willing to distribute outside their standard product, which may or may not be eligible for overbranding. Currently, some SMOs are distributing unbranded injectables.

This supply constraint also impacted the overbranding climate, as the previous supplier had accepted overbranding. GHSC-PSM quickly identified an alternate product for an SMO with a current order that requires overbranding and promptly initiated overbranding discussions with the product's supplier, coordinating requirements between the supplier and SMO and obtaining marketing authorization from the supplier for the SMO allowing overbranding.

STRATEGIC ENGAGEMENT

Knowledge Sharing at the People that Deliver Global Indaba

In Q2, GHSC-PSM presented five reproductive health and cross-cutting supply chain topics at the People that Deliver (PtD) Global Indaba in Bangkok, Thailand. Further information can be found in section C3. Global Collaboration.

Tracking contraceptive security

GHSC-PSM manages the Contraceptive Security Indicators (CSI) survey, which assesses access to a wide range of affordable, high-quality contraceptives in more than 40 countries. In Q2, the project collaborated with USAID on validation of the 2023 survey, consolidating and organizing data for integration into the CSI dashboard, landing page, and the Harmonized CSI Dataset.

Validation involved extensive consultations with MOHs through in-country data collectors and secondary checks against internal data sources. The project conducted multiple rounds of data validation across all 42 countries to ensure the quality of contraceptive security data. The validated survey topics included country-specific leadership, policies, supply chain management, quality control, private sector involvement, domestic financing, commodity procurement, and the impact of the COVID-19 pandemic.

In Q3, GHSC-PSM will aggregate and analyze the data while refining the layout of the CSI dashboard and landing page to enhance user experience.

By conducting the survey and disseminating results, GHSC-PSM will contribute to the global knowledge base regarding the range of FP policies, approaches, and enabling environments to reduce the unmet need for FP, and increase access to and use of contraceptives.

Disseminating findings from the CSI Survey research activity

Previously, GHSC-PSM developed a harmonized dataset by aggregating nine rounds of CSI Survey data collected from 2010 to 2021. Using this aggregated dataset, the project investigated two largely unexplored research questions: 1) do national policies assessed through the CS survey correlate with increased modern contraceptive prevalence rate (mCPR)? and 2) do any of these policies correlate with an expanded method-mix?[53] To answer these questions, the project developed a set of mathematical models to test the hypothesis, applying regression techniques to data from all 59 countries in the final dataset. To determine whether economic factors contribute to (or mask) policies' effects, countries were segmented by gross national income (GNI) into separate models (low- and middle-income). GHSC-PSM identified 11 policies[54] that are predictors of increased mCPR or expanded private sector method-mix strategies in one or more GNI groups. The project highlighted two policies for the initial dissemination phase in Q1 FY 2024: increasing government share of spending on contraceptives and using an LMIS to manage contraceptive commodity data. These findings have immediate relevance for countries striving to increase mCPR, thus improving their populations' overall health and economic well-being by incorporating consequential policies related to the global health supply chain.

GHSC-PSM submitted its findings to Global Health Science and Practice, a peer-reviewed academic journal. In Q2, responding to reviewer feedback, the project revised the manuscript and resubmitted it to the journal.

Enhancing the visibility of FP/RH supply data

In Q2 the project:

- Continued supporting GHSC-PSM Premium Member VAN countries in data reporting and analysis. The project provided an orientation to the Kenya Ministry of Health (MOH), which expressed an interest in becoming a Premium Member. GHSC-PSM provided an orientation to Premium membership and explained activities required to become a Premium Member. The activities included presenting the scope of Premium membership to the Kenya Mission, obtaining support and acceptance from the USAID VAN team and RHSC, confirming with MOH where funding for membership would come from and coordinating with Afya Ugavi and RHSC to define roles and responsibilities.
- 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 countries. Participated

[53] A strategy intended to increase mCPR by broadening the contraceptive choices available to women.
[54] The 11 policies include: contraceptive security (CS) committee has legal status, CS committee meeting frequency, government's share of spending on contraceptives, private sector method mix strategy (i.e., number of methods offered), made an FP2020 commitment, number of methods on the national essential medicines list, use of an LMIS to manage FP commodities, FP client charges are covered by health insurance (public sector), clients are charged for FP commodities in the public sector (negatively correlated with mCPR), clients are charged for FP services in the public sector (negatively correlated with mCPR, positively correlated with method mix strategy), duties are charged on FP commodities in the private sector (negatively correlated with mCPR).

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

In Q2, GHSC-PSM, with support from PtD, published a Human Resource (HR) planning guide for implementing the health supply chain information system (SCIS). This guide recommends that country governments and implementing partners improve human resource capabilities to manage SCIS implementations. It also emphasizes the importance of effectively using digital tools while aligning human resources' skills amidst fast-evolving technology.

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 Q2, GHSC-PSM began compiling a lessons learned document on SCISMM for public reference, slated for completion in Q3.

COUNTRY SUPPORT

Improving FP logistics in Malawi with the Consumption Detection Anomaly tool

Since 2018, **Malawi** has faced persistent stockouts of family planning commodities despite receiving adequate funding. Inadequate reporting at health facilities and limited staff capacity in supply chain management led to discrepancies in stock records, inaccuracies in units of issue, selective reporting, and data inconsistencies—all of which hindered effective stock management.

In response to these challenges, GHSC-PSM piloted the Consumption Anomaly Detection (CAD) tool within the electronic logistics management information system (OpenLMIS). This tool uses statistical process control methods to analyze consumption data and detect anomalies. It achieves this by setting and recalculating monthly upper and lower limits based on the most recent stock status data. The CAD tool requires at least 24 months of data, allowing for a comprehensive analysis to effectively identify potential anomalies over time.

In Q2, the project piloted the CAD tool in eight health facilities located in two health zones: South East and South West. The pilot identified several key factors contributing to stockouts of FP commodities, including low order fill rates by the Central Medical Store Trust (CMST), poor data quality from certain facilities, delayed procurement by councils for commodities, out of stock at CMST, and unexpected increases in demand.

Currently, the CAD tool is managed by GHSC-PSM in collaboration with the MOH's Reproductive Health Directorate (RHD) and supported by the MOH's Management Information System team. Regional Commodity Logistics Officers are crucial to this process, as they investigate and resolve issues identified by the tool. The CAD tool has proven highly effective in identifying and addressing anomalies, enabling targeted support for facilities to improve their stock management practices.

GHSC-PSM will support RCLOs in operating the CAD tool and sharing the results with the RHD and Health Technical Support Services within the MOH. This process will facilitate follow-up interventions and necessary policy decisions.

Revising the National Family Planning Guide in Guatemala

In **Guatemala**, GHSC-PSM recognized the need to establish efficient data collection and tracking systems for logistics activities. These systems are essential to assess the effectiveness of the *National Family Planning Guide* within health services and promptly address any logistical issues that arise.

In FY 2024, the Ministry of Public Health and Social Assistance (MSPAS) initiated a revision of the National Family Planning Guide, which was last released in 2018. This revision aims to align the guide with current practices and incorporate updated work guidelines to better support family planning initiatives across health services. A key aspect of this revision was updating the existing chapter on the logistics management of family planning methods. Technical teams from various MSPAS departments and implementing partners worked together to draft the updated chapter titled, "General Guidelines for Logistics Management of Family Planning Methods."

In Q2, GHSC-PSM facilitated a workshop to review and validate the content of this logistics management chapter. The workshop convened 15 participants, including representatives from FP organizations such as the Guatemalan Social Security Institute (IGSS), the Family Welfare Association in Guatemala (APROFAM), and Alas de Guatemala. This collaboration ensured that all key stakeholders thoroughly reviewed and endorsed the logistics chapter.

The revised document will support the management of FP methods, benefiting stakeholders across Guatemala. To ensure effective implementation of the revised guide, MSPAS will actively monitor health services for compliance with the new guidelines.

Validating the logistics monitoring tool in Guatemala

In Q2, GHSC-PSM in Guatemala conducted its first field visit to coordinate activities with the Directorate of Integrated Health Services Networks (DDRISS) of Santa Cruz del Quiché. The aim was to introduce specific project objectives, including improving supply chain performance and expanding access to essential FP products. This collaboration involved the Department of Technical Assistance in Medicines, Biologicals, and Related (DATMECBA) team from DDRISS, MSPAS. The visit also aimed to validate the project's logistics monitoring tool through a pilot exercise, which included inspections of warehouses at DDRISS and a health center in Chichén, Quiché. Developed by GHSC-PSM per MSPAS regulations, the tool underwent a thorough joint review with DATMECBA of DDRISS before the pilot. Findings from the pilot included gaps in compliance with logistical guidelines regulated by MSPAS, infrastructure limitations affecting compliance with Good Storage Practices, as well as deficiencies in human resources' capacity to fulfill logistical functions and meet the requisite profile for warehouse management, with a compliance rate of 64

percent observed in the two facilities visited. Looking ahead, GHSC-PSM will collaborate with MSPAS to use the validated logistics monitoring tool during ongoing monitoring visits to other health facilities in prioritized USAID districts. These monitoring visits will help to reinforce compliance with MSPAS guidelines by providing on-site assistance to strengthen logistical knowledge among healthcare personnel, aligning with current regulations and standards.

B4. MATERNAL, NEWBORN, AND CHILD HEALTH

A total of **14 countries[55] received MNCH supply chain strengthening** support **in FY 2024.**

Over the life of the project, GHSC-PSM has delivered a total of **$28 million in MNCH commodities.**

Published **three global MNCH supply chain resources in Q2** aimed at improving warehousing operations and the availability and quality of, and funding for, key MNCH medicines and equipment (including the national policies that impact funding, quality and availability).

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 Q2 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.

[55] GHSC-PSM provided MNCH technical assistance to 14 countries in FY 2024: AFRICA: Burkina Faso, Ethiopia, Ghana, Guinea, Kenya (TO5), Liberia, Malawi, Mali, Mozambique, Nigeria, Rwanda, and Zambia; CARIBBEAN: Haiti ASIA: Pakistan.

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

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

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

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 Q2, GHSC-PSM published numerous MNCH supply chain resources.

Developing new MNCH supply chain resources

How to Operate the Center of Excellence: Winning the Logistics Game : GHSC-PSM developed this warehousing Center of Excellence resource to support supply chain managers and logisticians in overcoming constraints, eliminating excess travel and labor, and enabling different warehouse teams to work and complete their tasks simultaneously rather than waiting for other teams to finish–ultimately reducing warehouse order cycle times.

Improving Financing for Maternal Health Commodities in Ethiopia : GHSC-PSM drafted this case study in partnership with the Ethiopian Ministry of Health and Ethiopian Pharmaceutical Supply Service (EPSS). It sheds light on the funding landscape for maternal health (MH) commodities and the country's effort to improve MH commodity availability and funding. It showcases the impactful collaboration and strategies that have improved MH commodity management, accessibility, and funding.

No Funding, No Product: Solutions to Address the Challenges of Insufficient and Uncertain Funding for Select Maternal, Newborn, and Child Medicines : This compendium documents experiences and lessons learned in increasing financing for MNCH medicines across the areas of 1) maximizing the use of accurate, complete, and timely data 2) coordination, transparency, and accountability, and 3) prioritization and advocacy to increase the availability of MNCH commodities.

Releasing other MNCH supply chain publications

In Q2, the project published a blog emphasizing the key considerations for MNCH supply chain actors, including for national governments and development partners, to enable safe childbirth—thus reducing maternal mortality—for women all over the world. This blog was published on International Day of Maternal Health and Rights.

GHSC-PSM also released **two videos** this quarter documenting its work to improve cold storage of oxytocin in Nepal, through the eyes of a Nepali health worker, and in Guinea, where the project held a PPH medicines workshop and successfully advocated to the government to require oxytocin in be stored in the vaccine cold chain.

SUPPORT FOR DATA-INFORMED DECISION MAKING FOR MNCH COMMODITIES

Collecting and using end-use verification survey data

The EUV survey assesses commodity availability, storage conditions, and factors that affect commodity availability and quality at service delivery points (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 qualitative data on stockout reasons and cross-checks the accuracy of LMIS data on stock availability trends. In Q2, the project also began rolling out the first EUV community health worker (CHW) modules in 11 countries[56].

In Q2, the project provided support in Mali to collect EUV data and submit EUV reports to USAID/Washington and their respective in-country stakeholders.

Results from the EUV in Mali. In Q2, Mali's EUV report demonstrated progress and some areas for improvement in data reporting and commodity storage and availability for MNCH commodities.

- With GHSC-PSM support, local monitoring committees improved their logistics data reporting rate to 96 percent, with 91 percent of data reported on time.
- **Oxytocin 10 IU was available in 100 percent of SDPs** surveyed during this EUV round, up from 98 percent during the previous EUV round. Despite this impressive level of availability, **only 74 percent of the usable oxytocin was stored in working cold storage** at the SDP level. GHSC-PSM will continue to work with stock managers at the health center and district levels to ensure that the quality of oxytocin available to patients across Mali is maintained by promoting storage within the cold chain.
- GHSC-PSM has reported some interest within Mali in increasing the use of amoxicillin DT to treat childhood pneumonia. To accomplish this, the project recommended that the MOH, donors, and partners prioritize the dissemination of updated national standard treatment guidelines to all healthcare providers to promote shifting from amoxicillin suspension to dispersible tablets, which has many benefits such as better shelf life, ease of shipment and storage, cost efficiency, heat-stability and greater dosage accuracy.

Improving data analytics and information systems for MNCH commodity decision making

In Q2, 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

[56] GHSC-PSM is supporting use of 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.

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 Q2, the project helped select countries to deploy refactored data analytics tools to increase visibility throughout the supply chain. This includes support to **Malawi**, where GHSC-PSM refactored and deployed the CAD tool to streamline stock data for analysis. CAD flags or detects anomalies in consumption for improved commodity management. The project designed the refactored tool to complement the country's eLMIS and overall data ecosystem. Following CAD deployment, GHSC-PSM conducted an assessment in Q2 of MNCH commodity availability in selected health facilities to gauge the tool's effectiveness. Results will be analyzed and shared in Q3.

ENHANCED IN-COUNTRY MNCH SUPPLY CHAIN COORDINATION AND COLLABORATION

Participating in the Maternal Health Supplies Caucus

As part of its global leadership activities, GHSC-PSM participates in the RHSC, a global partnership of agencies including donors, international and domestic 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 to launch a tranexamic acid (TXA) working group in Q1. The working group coordinates across organizations and stakeholders to increase access and uptake of TXA. In Q2, the project conducted a landscaping exercise to gather existing information and resources related to TXA. Results will be presented to the TXA working group in Q3 to discuss opportunities for new resources and areas for investment to increase TXA uptake.

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 this quarter are highlighted below.

GS1 training and data collection in Rwanda. Since 2019, Rwanda's MOH has partnered with GHSC-PSM to introduce and implement Global Standards for health product traceability to improve product quality for patients, such as mothers and children. The key activities from this work have included:

- Held a workshop to disseminate and discuss the National Vision and Strategy for Pharmaceutical Traceability leveraging GS1 standards.
- Launched the National Product Catalog (NPC) in 2021 as a single source of harmonized health products master data including Global Trade Item Numbers (GTINs).
- Developed a mobile application for the NPC to facilitate product verification and build more capabilities around traceability.
- Worked with Rwanda FDA in 2023 to enhance the NPC mobile application (app) by integrating it with the global Traceability and Verification System (TRVST), so that application users could quickly validate and verify the authenticity of vaccines and other health commodities.

In Q2 FY 2024, Rwanda FDA and GHSC-PSM trained inspectors and professionals responsible for safety surveillance to use the NPC app. The app allows them to verify the authenticity of health commodities, ensuring their safety–including commodities that are just entering the country and those already on the Rwandan market. Participants were trained to download, install, and use the application and all its functionalities; sample products from Rwanda FDA warehouses were used to practice scanning the 2D barcodes, and determine if their quality could be verified by the NPC app. At this stage, only GS1 products are being verified to ensure the NPC data is comprehensive. In the next stage of rollout, the app will be used to detect potential fraudulent products on the market. GHSC-PSM also collected GTINs from three private pharmaceutical wholesalers in Kigali in Q2. With the previously collected master data, 3,427 trade items and 1,663 GTINs are currently in the NPC.

Ethiopia Tigray restoration plan leads to 95 percent availability of MNCH commodities. Much of the health supply chain system in Tigray Regional State was upended due to physical destruction and looting during the ongoing political conflict, hindering resupply efforts to major warehouses in the region, including the Mekelle and Shire EPSS hubs. The conflict has made coordinating efforts to restore the supply chain difficult. To address this challenge, keeping in mind the limited resources available, GHSC-PSM devised a consolidated supply chain restoration plan. The project worked with the Ethiopian government to design technical assistance activities based on the results of health facility assessments—these assessments helped determine the levels of damage. Recovery activities supported by GHSC-PSM included distributing 205 supply chain recording and reporting tools to health facilities, re-training over 400 health professionals, and providing direct site-level support to 40 health facilities. The project also provided technical assistance to optimize warehouse operations and enhance electronic warehouse management practices.

These activities significantly improved supply chain restoration and performance at health facilities and the Mekelle and Shire hubs. The reporting rate for health program commodities saw substantial increases by Q2, reaching 86.5 and 92 percent in Mekelle and Shire EPSS hubs, respectively, compared to effectively **no reporting** at the height of the conflict. Tracer medicine availability in GHSC-PSM-supported health facilities showed marked improvement for HIV, malaria, family planning, MNCH, and tuberculosis commodities—these products were mostly **inaccessible** throughout the conflict. The improvements have led to **95 percent availability of MNCH commodities** by the end of Q2.

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 magnesium sulfate, aspirin, and select antihypertensives in Malawi and Nigeria, which manage hypertensive

disorders of pregnancy (HDP). The project and its partners will use the protocol to evaluate the quality of these HDP medicines in select countries. In Q2, the project received approvals from the Ghana Food and Drug Administration to sample and test HDP products in Ghana, to occur in Q3. Following the study, the project will submit its results for consideration to be published in a relevant peer-reviewed, open-access journal.

Supporting the newborn health supply chain

GHSC-PSM began working with partners in Q2, 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[57] to procure MNCH essential medicines and consumables in Q2, including **Ready-to-Use Therapeutic Food** in **Nigeria**, select **essential medicines** that were in critically short supply in **DRC**, and **amoxicillin DT** for the community health worker program in **Guinea.**

Supporting the procurement of newborn and pediatric oxygen

Also in Q2, 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 began assessments in several countries, using project-developed tools to estimate their needs for newborn and pediatric medical equipment, and determine what could be procured to meet those needs. This work is expected to improve the quality of care for newborns and children by strengthening the respiratory ecosystem in these countries.

[57] GHSC-PSM supported procurement processes of MNCH commodities for six countries in Q2 FY 2024: DRC, Guinea, Haiti, Mozambique, Nigeria, and Zambia.

PROGRESS BY OBJECTIVE

C1. GLOBAL COMMODITY PROCUREMENT AND LOGISTICS

Delivered 1,000 line-item orders in Q2, with a value of nearly $164 million. Total value over the life of the project is over **$5.38 billion**.

Delivered 92 percent of line items on time, based on the defined on-time window (within the period 14 days before or seven days after the agreed delivery date). **Delivered 88 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 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.

Q2 highlights include:

- Delivered 986,576 bottles of PrEP products to eight countries and completed the first deliveries of CAB-LA 600 mg/3 ml to four PEPFAR countries (See section B1.)
- Delivered 1.3 million VL/EID tests, saving approximately $133 million over the life of project when comparing prices to 2019 pre-global request for proposal (RFP) prices under the terms of the global service-level agreements (See section B1.)
- Delivered more than 5.8 million TLD 90-count bottles to eleven countries and more than 204,000 180-count bottles to Burkina Faso, Haiti, Togo, and Zambia. Advanced the vendor-managed solutions program by delivering 2.3 million bottles of TLD from VMS warehouses to Angola, Mozambique, Zambia, and Zimbabwe. (See section B1.)
- Delivered the first orders of the Shang Ring device to Tanzania, increasing the number of countries to four, including Malawi, Uganda and Zimbabwe. (See section B1.)
- Conducted 13 business reviews with TO2 suppliers across various commodity groups (LLINs, mRDTs, and pharmaceuticals), to discuss suppliers' efforts in expanding and establishing regional manufacturing in Africa, and support PMI's objective of doubling the volume of procurement from Africa by 2030. (See section B2.)
- Fulfilled four urgent orders of AL 20/120 mg hard tablets for DRC, Ethiopia, Niger, and Nigeria through vendor stored inventory. (See section B2.)
- Successfully delivered malaria commodities worth more than $3 million to Niger via air freight. Due to the coup d'etat, border closures and political insecurity in Niger, delivering commodities via ocean and truck into Niger was a challenge in Q1.(See section B2.)
- Modified stocking strategy for Medroxyprogesterone Acetate intramuscular injectable contraceptives to reduce costs (See section B3.)
- Established a basic order agreement with four prequalified suppliers of ready-to-use therapeutic food in anticipation of FY 2024 procurement needs. (See section B4.)

Managing supplier relationships

GHSC-PSM prioritizes building relationships with suppliers by encouraging dialogue on market conditions, procurement and logistical challenges, and providing feedback on demand forecasts and country priorities. In addition to scheduled calls to manage ongoing orders, the project conducts routine business meetings with suppliers to keep up to date on products, production capacities, delivery schedules, and quality matters, while commodity and supplier risk profiles inform supplier performance assessments and order allocation strategies. In Q2, the project conducted business reviews with fourteen TO1 suppliers, ten TO2 suppliers, and seven TO3 suppliers.

Regional distribution center operations

In Q2, GHSC-PSM leveraged the three RDCs to deliver commodities (excluding TLD) valued at over $5.1 million to 19 countries. The project also launched the RFP for services to perform a stock count audit at the Belgium RDC, which is anticipated to take place in early Q4. GHSC-PSM also completed all UAE regulatory applications required to destroy a second tranche of expired products at the Dubai RDC projected to take place in Q4.

Decentralized procurement

In Q2, GHSC-PSM achieved 89 percent OTD for orders managed through the decentralized procurement (DCP) channel. In line with the project's strategy to maintain DCP capability in Africa, in Q2, the team in Kenya continued to procure laboratory commodities for **Kenya** and **Tanzania**.

In Kenya, GHSC-PSM began local procurement of non-medical commodities for the USAID-supported oxygen program in four counties. In Tanzania, the project ordered test kits (35,500 tests) for use on VL testing equipment for the new VL testing platform. Further, the project ordered 169,440 tests for the newly implemented HPV testing program. Delivery is expected in Q3 and Q4.

Operational excellence

In Q2, GHSC-PSM developed, launched, and enhanced the following operational cost-reduction initiatives:

- **Invoice-to-pay (ITP) tool:** Expanded the number of suppliers with access to the ITP tool. The project transitioned three suppliers to sole use of the ITP after they had submitted 30 invoices through the tool and completed the onboarding process. The ITP is designed to significantly reduce operational costs and lead time in processing invoices.

- **ePackingList (ePL):** Completed onboarding and testing with three out of four ARV suppliers. The ePL is now live on the OpEx Azure Data Store and Nexus and includes a Despatch Advice PDF Report in OpEx to be used by regional distribution centers and for onboarding, auditing, and in pilot countries. The e-packing list is designed to increase efficiency by reducing manual data entry and back and forth emails and phone calls with suppliers and 3PLs. The project initiated discussions with countries to explore how the ePL can be used to support country operations. Zambia and Uganda agreed to a pilot to use either the PDF Report or XML message component of the ePL.

- **Electronic Data Interchange (EDI):** Launched the EDI initiative with USAID and internal stakeholders and conducted an initial outreach to eight suppliers. GHSC-PSM aims to automate the data exchange of four standardized transactions (order, order confirmation, despatch advice, and invoice) that incorporate GS1 standardized identifiers (GTIN, GLN, and serial shipping container code or SSCC). GHSC-PSM ecosystem (ARTMIS, InforNexus, and D365) and health commodity supplier transactional data will flow through EDI to support D-Term order management and enhance operational efficiency. The project also initiated contract negotiations with a third-party software as a service (SaaS) provider, selected through a competitive RFP process, to improve the speed and accuracy of exchanging information with supply partners.

- **Electronic Proof of Delivery (ePOD):** Completed design of the XML message that 3PLs will use to send ePOD data to GHSC-PSM and tested the operational infrastructure with a selected 3PL.

This involved GHSC-PSM sending GS1 XML despatch advice, the 3PL processing and extracting the data, generating and sending an ePOD message to GHSC-PSM, and the project processing and extracting data from the ePOD message received. The project completed the ePOD proof of concept for two air shipments in Q2.

- **Sourcing Assistance Messenger (SAM):** Enhanced SAM's features to improve user experience, refine performance management, and add alternative methods to extract data. SAM works as a virtual assistant to help procurement teams collaboratively manage the order lifecycle and maintain an up-to-date performance view of operations. It generates alerts and warnings to prompt follow-up to avert delays and enables the procurement team to provide comments and update OTD assessments.

- **Order allocation tools:** Launched a new allocation tool covering essential medicines. The project also enhanced order allocation tools for COVID, VMMC, and isoniazid and rifapentine (3HP) FDC commodity groups. In Q2, these automation tools collectively processed over 117 requisition orders (ROs), generated over 750 emails for internal and supplier communications (request for information, intent to award, letter of decline, etc.), and recommended allocations for more than 280 RO lines.

GLOBAL STANDARDS

GHSC-PSM operationalizes its procurement requirements for pharmaceuticals, medical devices, sterile kits, laboratory reagents, and LLIN suppliers to adopt standardized product identification and labeling and exchange product master data leveraging GS1. These supplier 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, serial shipping container code (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 the adoption of these standards across the GHSC-PSM portfolio, thus laying the groundwork for using these data in global and national supply chain processes and systems. The project advances compliance through regular engagement with suppliers for all items. In Q2, the project:

- Collected, validated, and added GTINs for 90 items to the GHSC-PSM catalog.
- Collected master data for 65 items through the GDSN, maintained data on all items in the catalog and sent and received more than 1,430 messages in the GDSN.
- 63 percent of in-scope items were compliant with the Capture Serialized requirement

As of Q2, the GHSC-PSM catalog had a total of 1,270 in-scope items[58].

Quality assurance

GHSC-PSM streamlines and optimizes QA and quality control (QC) business processes and procedures to rapidly address product incidents and failures as they occur, ensuring quality products reach the consumer. Highlights in Q2 include:

- Facilitated collaboration of QA activities between GHSC-PSM's suppliers and clients to manage quality incidents by expediting product quarantines to ensure patient safety and facilitating QA determination for product disposition/replacement to avert stockouts.
- Received 29 new incidents across HIV/AIDS, FP/RH, and MNCH health areas and completed 28 cumulative incidents (including those from previous quarters), leaving about 18 open incidents as of the end of Q2.
- Worked with the USAID Transition Working Group and GHSC-QA to prepare for the smooth transfer of QA-related data, documentation, processes, and activities to applicable NextGen procurement service agents and/or Qualifying, Testing, and Issuing project partners.
- Worked with relevant GHSC-QA to pilot the inclusion of GHSC-PSM–provided temperature and geo-tracking devices (sensors) in project shipments of temperature-controlled products. This initiative will give GHSC-PSM real-time access to temperature and geo-location data for shipments.
- Collaborated with GHSC-QA to implement a corrective and preventive action (CAPA) activity related to holding suppliers responsible for compliance against good storage and good distribution practices during product shipment or storage at the pick-up location while the product is in their custody. The project worked with GHSC-QA to automate the selection of product pick-up locations for HIV, malaria, and FP/RH commodities so that only vetted locations can be selected.

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

IMPACTS OF GLOBAL CHALLENGES ON FREIGHT AND LOGISTICS

Global challenges

In Q2, the Economic Community of West African States (ECOWAS) lifted the embargo on Niger. However, Niger kept the land borders with some ECOWAS countries closed, limiting viable ocean shipping routes into Niger.

The impact of the Houthi attacks on vessels in the Red Sea continued to affect both airfreight and sea freight (see sections below).

Climate change remained a significant logistical obstacle, particularly in Europe and through the Panama Canal, where drought has caused low river levels. In Europe, low water levels in common waterways

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

means containers cannot move by barge, leaving trucks as the only alternative. With more cargo moving by truck, cost increases 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, forcing the authorities to reduce the number of ships allowed to transit the Canal. This event has slowed marine traffic in the area and tied up shipping capacity, leading to congestion and delays.

Air freight

In Q2, air freight capacity decreased slightly even though international widebody capacity rose by one percent. Red Sea attacks affected air freight capacity as shippers pivoted to air freight to avoid longer sailing times and operational uncertainties. This increased the demand for air freight and decreased the available capacity, creating backlogs, especially with shipments originating from India. GHSC-PSM anticipates that these challenges will only have a short-term impact on air exports from India as ship lines adjust to the new norm of routing around Africa and due to the high cost of air freight.

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 Q2, shipping companies continued to cancel sailings and bypass ports, resulting in bookings with increased costs, longer itineraries, infrequent booking revisions, and transshipment delays, primarily in response to the Red Sea crisis. Drought across Europe and Latin America prompted shipping companies to levy additional fees on affected itineraries.

Houthi attacks escalated on merchant vessels transiting the Red Sea and Gulf of Aden. In response, ship lines rerouted vessels around Africa, imposed surcharges, and adjusted sailing schedules. Re-routing via Southern Africa resulted in longer transit times of two to four additional weeks and caused a drop in the project's use of U.S. flag vessels from 98 percent to 63 percent. Fuel shortages, increased fuel surcharges, and capacity constraints due to International Maritime Organization regulations on emissions persisted. These events are negatively impacting ocean shipping costs and lead times.

Destination challenges

In Q2, extremist activity, political unrest, and instability remained a concern, particularly in West Africa and Haiti. In Haiti, security was tenuous, and the Port au Prince ocean port was overrun by armed gangs, leading to a complete shutdown of port and airport activities. GHSC-PSM has put shipments en route to Haiti on hold while exploring alternative routing options. Shipments that have not been picked up remain with the suppliers. In addition, tensions continued in Ethiopia, DRC, and Rwanda, affecting GHSC-PSM shipments on domestic flights into DRC.

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 Q2, GHSC-PSM OTD was 92 percent and OTIF 88 percent. This is the 23rd consecutive quarter that OTD has been above 80 percent (see Exhibits 16 and 17).

Exhibit 16. April 2023 through March 2024 Monthly IDIQ OTD

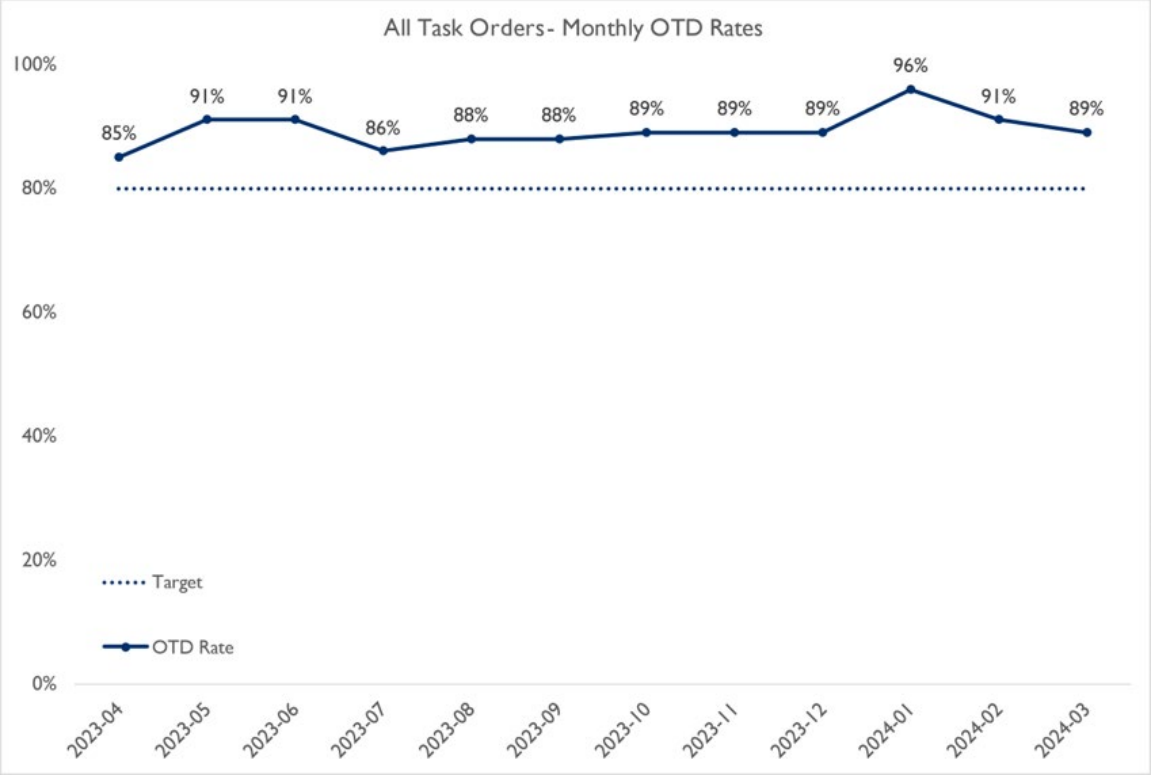
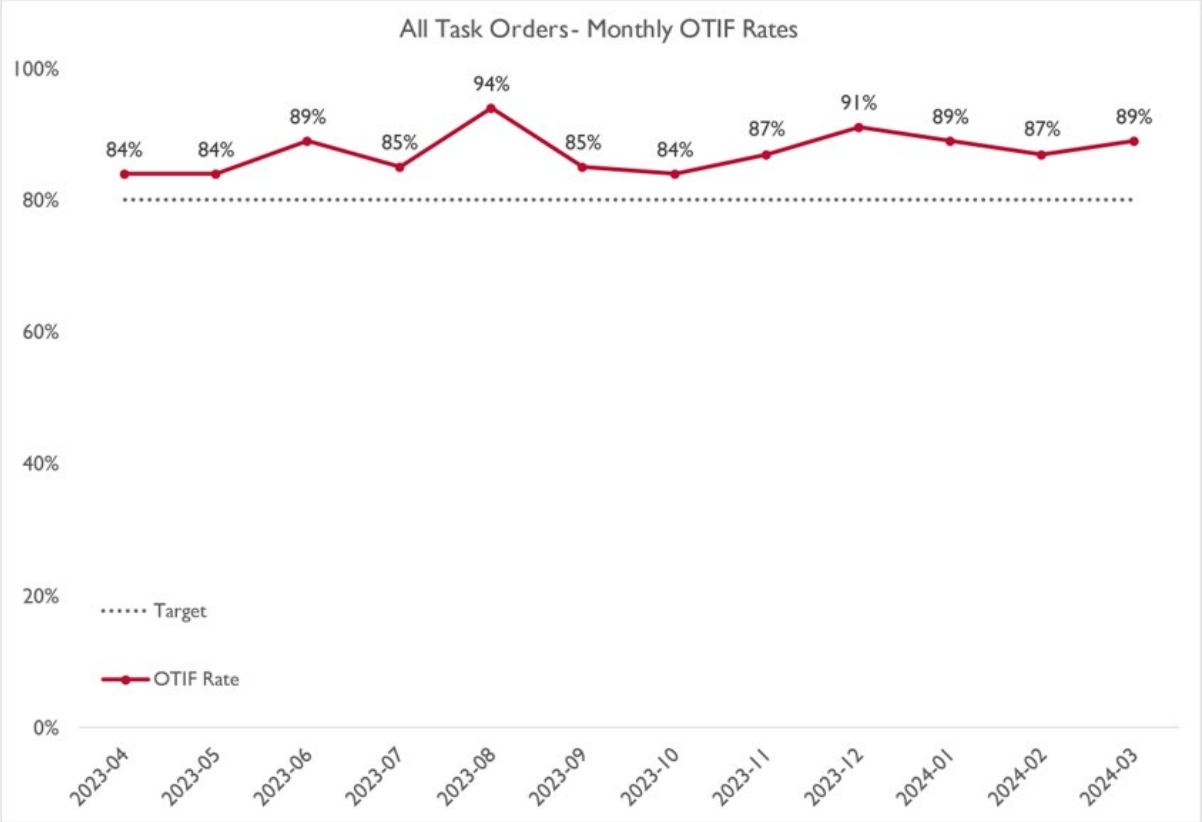


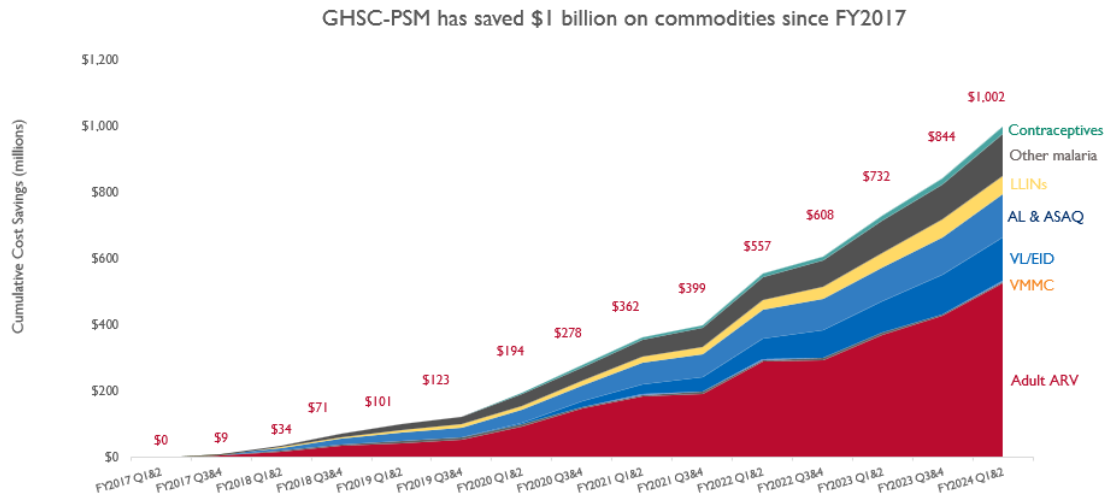
Exhibit 17. April 2023 through March 2024 Monthly IDIQ OTIF



COST SAVINGS ON MEDICINES AND HEALTH COMMODITIES

GHSC-PSM conducts regular and detailed analysis to understand the markets for the medicines and health commodities it procures and to bring this knowledge to supplier negotiations. Through careful negotiation of long-term contracts with suppliers for major product groups, the project saved $1 billion on commodities over the life of the project, as shown in Exhibit 18. FY 2024 saw the inclusion of D-term ARV orders in this calculation for the first time.

Exhibit 18. Life-of-Project Savings on Medicines and Health Commodities



To produce long-term value and sustainability, GHSC-PSM achieved these cost savings while working to ensure suppliers maintain their interest in the market and expanding the number of suppliers in many commodity categories, so the USG can benefit from a competitive supplier base. Additional savings have also accrued, as prices for these commodities have risen more slowly than the general rate of inflation.

COST SAVINGS ON LOGISTICS

Open competition in freight lanes. GHSC-PSM saves money on shipments by managing through a fourth-party logistics model that competes lanes between 3PL shipping companies to improve service and reduce costs. This leads to cost savings on shipping rates versus an alternative approach with limited or no competition for shipping lanes (a simple 3PL approach) through scale and competition. Over the life of the project, GHSC-PSM has saved $50 million on shipments.

Exhibit 19. Cost Savings Through Open Competition in Freight Lanes

Task Order	Benefits of Competing Freight Lanes
Task Order 1	$37,463,311
Task Order 2	$10,926,428
Task Order 3	$1,279,117
Task Order 4	$341,675
Grand Total	**$50,010,532**

As of Q3 2019, logistics savings were calculated as the difference between the rates awarded to the selected 3PL and the average of the two most expensive 3PLs. This method provides a comparison for all shipping lanes and simulates the rates that would likely be obtained under a non-competitive, 3PL model. The project uses shipping data and annual 3PL rates for the specific timeframe of the shipment being measured to calculate these cost savings. At times, annual 3PL rates were not available due to market conditions; adjustments[59] were made to past rates to track more accurately these savings with the available information.

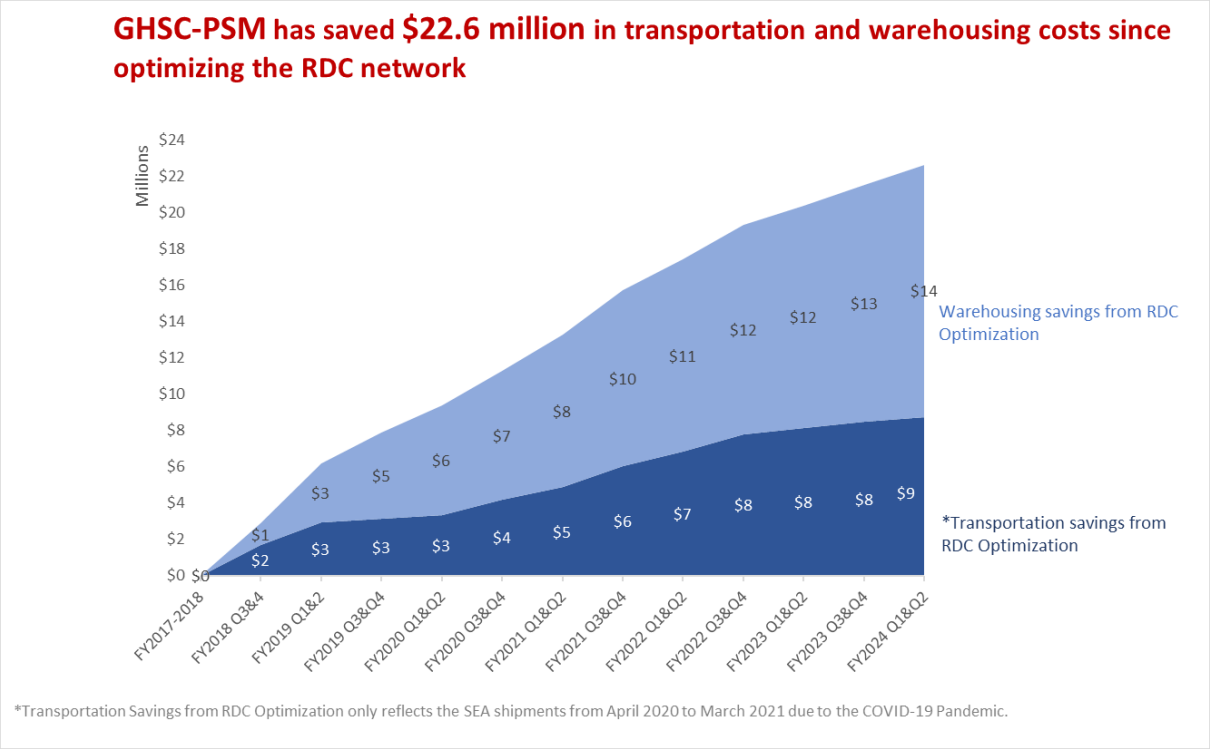
Starting November 2023, the project conducted a freight rate card refresh. The November 2023 rates were used to calculate the cost savings for Q1 and Q2 FY 2024.

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

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

GHSC-PSM saved $22.6 million in transportation and warehousing costs since optimizing the RDC network. Exhibit 20 shows cost savings from RDC optimization; the light blue indicates warehouse savings and the dark blue, transportation savings.

Exhibit 20. RDC Optimization Cost Savings



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

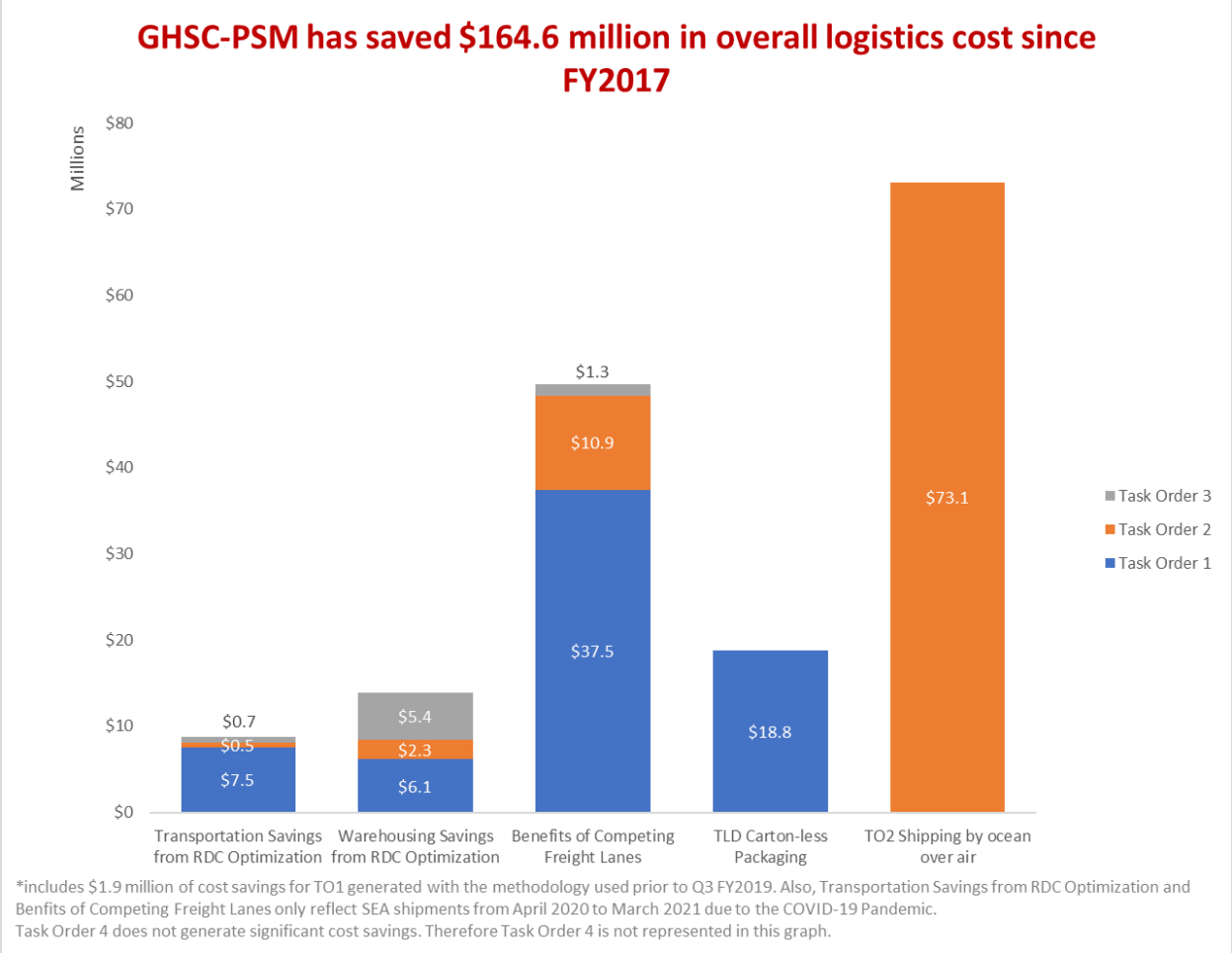
Since FY 2019, GHSC-PSM shifted to procuring 90- and 180-tablet bottles. These changes reduce weight for air shipping, and allow suppliers to fit more total tablets in shipping containers for sea shipping, thus reducing the total number of shipping containers needed and saving $18.8 million in logistics cost.

In Q2 FY2024, GHSC-PSM added the logistic cost saving from D-Term shipments. The methodology for calculating logistic cost savings for D-Term shipments mirrors the same methodology for tracking FCA shipments. However, the data sources to calculate shipping costs for D-Term shipments come directly from the supplier freight quotes and the Performance Dataset for shipment data whereas the data sources to calculate the shipping costs for FCA shipments come from the 3PL quotes and a shipment report from the Deliver Return team. The savings from D-Term shipments total $7.8 million and include shipments between Q3 FY2021 to Q2 FY2024.

Malaria shipping by ocean over air. Since FY 2019, the malaria task order has tracked cost savings from orders shipped by ocean that would have historically been shipped by air. The methodology for tracking these savings is to compare the selected ocean rates quoted by the awarded 3PL against the cheapest of all 3PL air rates quoted in the annual 3PL rate refresh. GHSC-PSM generated $73.1 million in cost savings since FY 2019 by shipping orders by ocean instead of air.

Total cost savings on logistics to date was $164.6 million, which includes $22.6 million in transportation and warehousing costs from optimizing the RDC network, $18.8 million from strategic packaging of TLD, $50.0 million from competing freight lanes, and $73.1 million from TO2 shipping by ocean over air. (See Exhibit 21.)

Exhibit 21. Logistics Cost Savings Breakdown



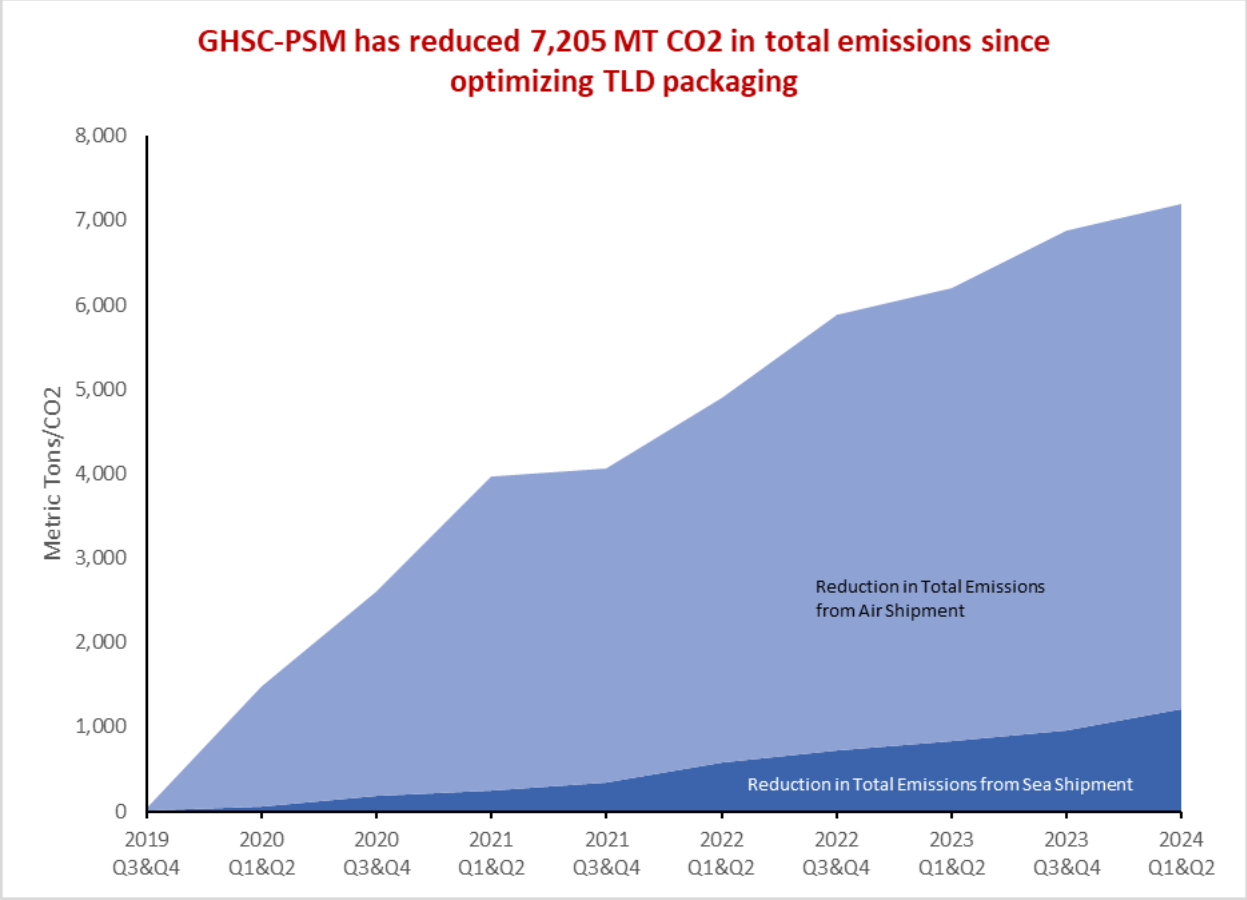
*includes $1.9 million of cost savings for TO1 generated with the methodology used prior to Q3 FY2019. Also, Transportation Savings from RDC Optimization and Benfits of Competing Freight Lanes only reflect SEA shipments from April 2020 to March 2021 due to the COVID-19 Pandemic.
Task Order 4 does not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

REDUCTION IN CARBON EMISSIONS

Beginning in August 2021, GHSC-PSM focused on reducing carbon emissions on TLD shipments as part of the green initiative. Carbon emission reduction in sea shipments is calculated by comparing the estimated actual containers shipped when using carton-less TLD packaging versus how many containers would have been needed using 30-tablet bottles packaged in cartons. Since Q3 FY2019, total emissions produced would have been 10,600 metric tons/carbon dioxide (CO2) had the project continued shipping TLD in packs of 30-tablet bottles packaged in cartons. Since the project changed from carton to carton-less packaging and increased pack size to 90- or 180-tablets per bottle, the actual emission was 7,366 metric tons/CO2. Therefore, total emission reduction due to this change was 3,234 metric tons/CO2 (the equivalent of 770 gasoline-powered passenger vehicles driven for one year). This was an emission reduction of 31 percent between August 2021 and March 2024.

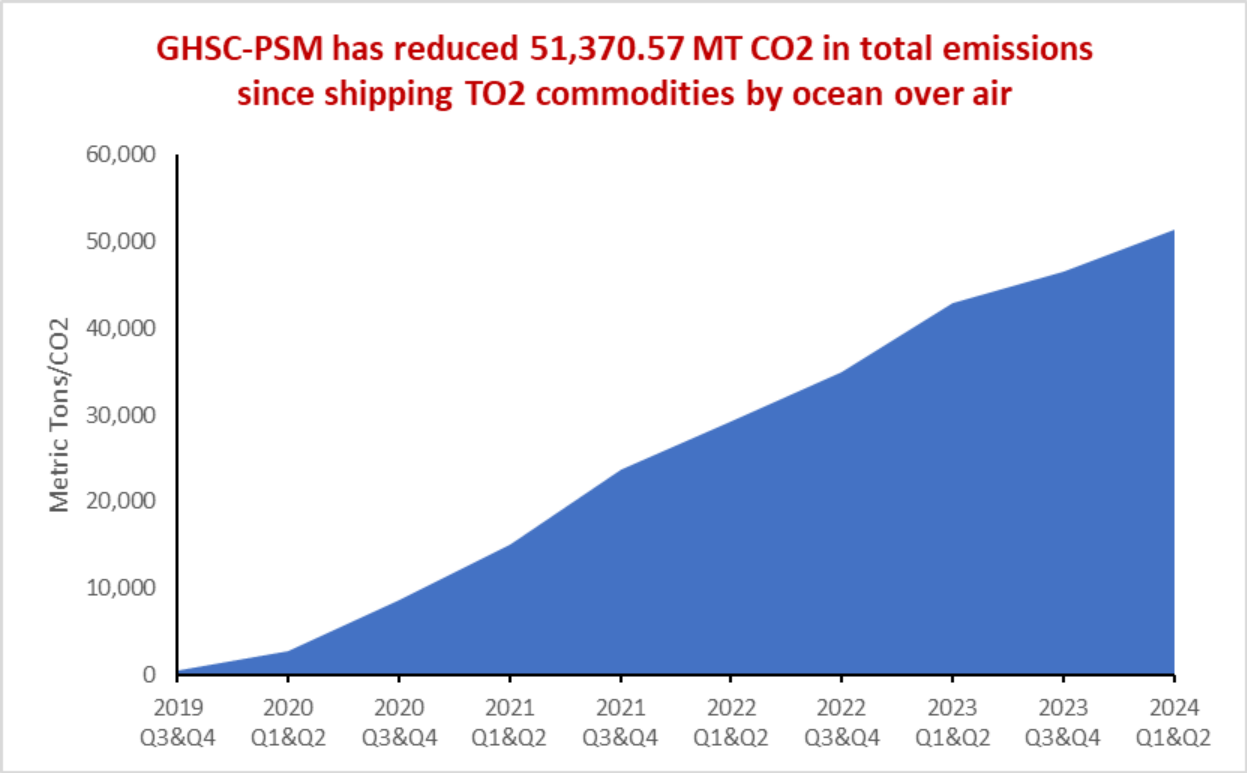
Prior to this report, GHSC-PSM only calculated emissions reductions from August 2021 to date and only for FCA shipments. However, the shift in TLD packaging began in Q3 FY2019 and the TLD market has been shifting toward D-Term shipments since Q3 FY2021. Therefore, in agreement with USAID, GHSC-PSM has retroactively calculated the emissions reduction between Q3 FY2019 and Q2 FY2021 and has included the emissions reductions from D-Term shipments as well.

Exhibit 22. Cumulative Total Emission Reductions



Malaria shipments by ocean over air

Since FY 2019, TO2 has tracked cost savings from orders shipped by ocean that would have historically been shipped by air. GHSC-PSM began tracking the emission reductions from this policy change in FY 2023 and retroactively included the emission reductions since 2019. The methodology for tracking the emission reductions compares actual emissions for malaria commodities shipped by ocean against emissions that would have been exhausted had these shipments been shipped by air. Shipping by sea over air carries an average emissions reduction rate of 85 percent. Total emission reduction due to this change was 51,370.57 metric tons/CO2 (the equivalent of 12,226 gasoline- powered passenger vehicles driven for one year).


GHSC-PSM has reduced 51,370.57 MT CO2 in total emissions since shipping TO2 commodities by ocean over air
Metric Tons/CO2
60,000
50,000
40,000
30,000
20,000
10,000
0
2019 Q3&Q4
2020 Q1&Q2
2020 Q3&Q4
2021 Q1&Q2
2021 Q3&Q4
2022 Q1&Q2
2022 Q3&Q4
2023 Q1&Q2
2023 Q3&Q4
2024 Q1&Q2

C2. SYSTEMS STRENGTHENING TECHNICAL ASSISTANCE

Assisted 47 countries with health supply chain systems strengthening over the life of the project.

Provided **technical feedback on 166 supply plans in Q2** to strengthen national supply planning capabilities.

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

GHSC-PSM's strategic goal is for every country to have a locally led health supply chain that is integrated, optimized, accountable, agile, and lean and can sustainably supply quality products to all citizens. To support this goal, headquarter, 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 the use of these tools. 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 Q2, the project refined data flows and incorporated, expanded, or improved the automation of data analytic tools in Mali, Niger, Nigeria, and Zambia.

Below are examples highlighting some key success stories from Q2 that indicate how GHSC-PSM worked with countries to refine analytic tools for improved supply chain data management and use.

- In **Mali**, refined the Dispatch Optimizer Tool (DOT) and completed a website for the Ministry of Health and Social Development (MOHSS) to visualize geographic and health facility information using global information system and survey data. The MOHSS will use the DOT and Mali Survey Data website to inform the pilot of last mile distribution in two regions. The project plans to release both tools to the government in Q3.

- In **Niger,** developed an open-source web application with a user-friendly interface and automation to streamline planning of monthly TO2 commodity distribution to health facilities based on available commodities in the warehouse, prior months' inventory levels, and average monthly consumption. The previous process was Excel-based, partially manual, and error-prone, while the automated application is easier to use by in-country stakeholders, including district or regional health administrators.

- In **Nigeria**, handed over the Warehouse Orchestration Tool (formerly the Shipment Planning Tool) to the country office. This Excel-based data processing pipeline gives warehouses visibility into incoming shipments, allowing for quick decisions about where shipments should go based on projected storage space availability. By automating data pulls from shipment trackers and the warehouse management system (WMS), this tool's dashboards visualize historical warehouse pallet volume and a three-month projection for the Abuja and Lagos warehouses, providing visibility into capacity levels to aid planning and decision making.

GLOBAL STANDARDS AND TRACEABILITY

GHSC-PSM is working to implement GS1 standards to give trading partners—including manufacturers and suppliers, logistics providers, regulatory agencies, medical stores, and health facilities—the means to operate using the same 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 enable countries to reduce costs, enhance efficiency, and improve the availability of health commodities in their public health supply chains. This work also advances the adoption of GS1 labeling and data standards in-country regulatory guidelines and implementation roadmaps.

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

In Q2, GHSC-PSM prepared to pilot a **Traceability Interoperability Platform (TIOP)** minimum viable product (MVP) for the HIV/AIDS task order. As pharmaceutical serialization gains momentum in USAID-supported countries, the project designed TIOP to serve as a central point of access that allows trading partners to comply with evolving national traceability data-sharing regulations. As designed, TIOP will be equipped with a directory of parties (with essential location and contact attributes for identifying relevant trading partners), a product catalog featuring key attributes for product identification and association with brand owners/manufacturers, a set of application programming interfaces to facilitate data exchange with national traceability systems and, a temporary Electronic Product Code Information Services (EPCIS) repository dedicated to storing data for USAID-procured commodities during the pilot phase.

GHSC-PSM used an opt-in engagement strategy to select two ARV suppliers to pilot TIOP and initiated plans to pilot the platform in Nigeria and Zambia. In Q2, the project completed key deliverables for initiating the pilot, including developing documents that define the objectives, primary use case, and parameters of success for TIOP, functional and technical requirements, and initial solution architecture.

Country highlights in Q2 include:

- **In Ghana**, reviewed and provided technical inputs to the Ghana Food and Drugs Authority (FDA) draft Guidelines on Implementation of Identification, Data Capture, and Data Sharing for Traceability of Pharmaceutical Products. The FDA published the guidelines on the agency's website for one month to allow comments from stakeholders and the general public before final adoption by the FDA. Once adopted, the guidelines will become enforceable for GS1-based identification, labeling, and data exchange for all pharmaceutical products distributed on the Ghana market. GHSC-PSM also developed discovery frameworks for implementing a National Product Registry, which will serve as a source of truth for product master data in Ghana.

- In **Kenya**, provided technical support to the Kenya Pharmacy and Poisons Board (PPB) on the Product Master Registry to standardize data in alignment with GS1 standards. GHSC-PSM continued working with PPB to advocate for the adoption of GS1 Global Standards in the development of a product master data list. The outcome of this engagement will be a recommended product master data file that is aligned with GS1 standards and harmonizes existing item identifiers and priority attributes being used across the health sector by various stakeholders, including the Kenya Medical Supplies Authority (KEMSA) and the Mission for Essential Drug Supplies (MEDS). GHSC-PSM (both country and HQ teams) are working collaboratively on messaging around the potential risk of rework, vendor lock-in, trickle down cost from proprietary labels etc. that may result from the lack of adoption of GS1 Standards. A multi-pronged approach to advocate and educate includes reaching out to GS1 Kenya to support this messaging through their engagement. The project will also reach out to Global Fund to raise this risk.

- In **Zambia**, developed a Private Market Assessment (PMA) matrix for the Zambia Medicines Regulatory Authority (ZAMRA) to survey the local supplier market and gather information related to Zambia's pharmaceutical traceability initiative. Once implemented, the PMA will inform a tailored approach for engaging and ensuring local manufacturers, wholesalers, and distributors comply with the published traceability regulations. GHSC-PSM also developed a framework for implementing batch-level national traceability and shared it with the MOH and USAID. The project is actively monitoring the socialization of the framework's requirements in-country.

- In **Uganda**, reinitiated implementation of the automatic identification and data capture (AIDC) solution to support barcode scanning for warehouse operations management of all pharmaceutical products at Joint Medical Stores (JMS). GHSC-PSM provided technical support to JMS in resolving process flow issues encountered with receiving international shipments while deploying Phase 1[60]

[60] GHSC-PSM is facilitating the integration of AIDC barcode technology into JMS's operating procedures to support product identification and monitor the flow of products from receipt to dispatch from the warehouse. The project split the overall design into two phases of development and deployment. Phase 1 includes facilitating barcode scanning for all transactions covering purchase orders, inventory inquiry, change inventory part location, label printing, and all functions of the product master data. Additional technical support in this phase includes providing barcode scanning and printing devices, guidance on enhancements to

and will continue in Q3 to update the design of the receiving process, including the data collection process, to ensure improved efficiency. In Phase 2, GHSC-PSM will support deploying GS1 for picking, packing, and shipment transactions.

Also, in Q2, GHSC-PSM developed a **Master Data Management (MDM) Lessons Learned document** that provides a readily implementable framework of what has worked, key challenges, and lessons from deploying MDM programs. The document includes lessons taken from system deployments, data hierarchy management, data stewardship (policy enforcement), data governance (policy setting), and use cases that MDM implementations satisfy, i.e., how a country's governance maturity, enabling environment, and regulatory structure impact the successful deployment of MDM. It also includes references to implementing MDM programs in Malawi, Rwanda, Zambia, and Zimbabwe. The document is currently under review by key stakeholders and is expected to be published in Q3.

FORECASTING AND SUPPLY PLANNING

GHSC-PSM provided FASP technical assistance to 32 countries[61] 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

To date, GHSC-PSM has facilitated adoption of QAT in 43 countries (with 32 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 Q2, the number of active QAT users worldwide[62] was 1,296, not counting inactive country and global-level users that were removed.

In Q2, GHSC-PSM provided in-person and remote technical assistance to strengthen capacity for QAT[63] use:

- In **Senegal**, facilitated a training on QAT's supply planning module for 21 participants from various organizations, including the Ministry of Health, National Malaria Control Program (NMCP), General Health Directorate, FHI360, the Pharmaceutical Regulatory Authority, the Maternal and Children Health Directorate, a social marketing organization (ADEMAS), the Central Medical

the JMS warehouse management system and the Industrial and Financial Systems software (IFS 9.0), facilitating personnel training and other processes required for rollout.

[61] 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.
[62] Logged on at least once since Q1 FY 2023
[63] 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.

Store (Pharmacie Nationale d'Approvisionnement), the National HIV Program, ARC, USAID, PMI, and the USAID Building a Resilient Health System (BRHS) project.

- In **Côte d'Ivoire**, trained 40 participants on the QAT supply planning module. Participants were from the following organizations: NMCP, Directorate of Pharmaceutical Activities, National HIV Programs, 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 International Rescue Committee.

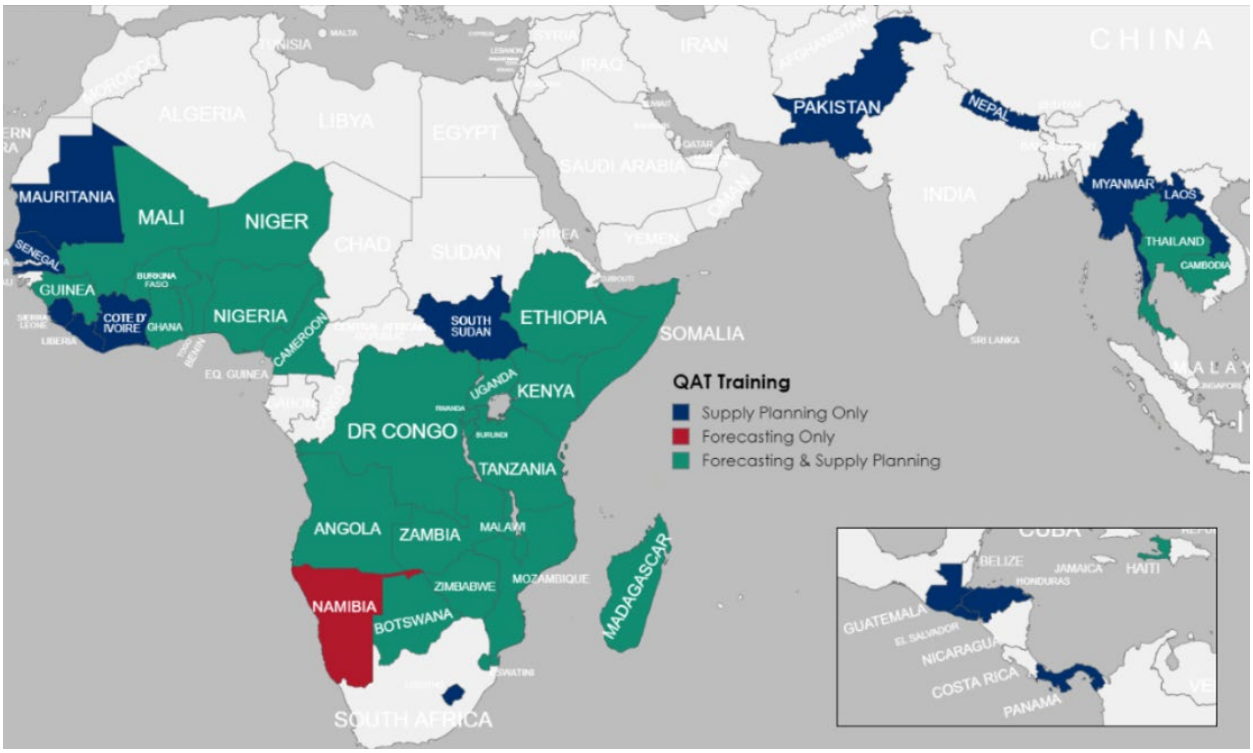
- In **Nigeria**, collaborated with the country office to train 34 participants from GHSC-PSM, the Ministry of Health, National AIDS and STDs Control Programme; National Product Supply Chain Management Programme, National Agency for the Control of AIDS, the Department of Food and Drug Services, USAID/Nigeria, CDC Nigeria, CHAI Nigeria, FHI360 Nigeria, AIDS Healthcare Foundation, and Institute of Human Virology Nigeria.

- Remote technical assistance:

    - Supported **Burundi** with quantification of HIV commodities, including ARVs, opportunistic infection commodities (OIs), TB preventive therapy (TPT), laboratory supplies, and rapid test kits, and provided detailed analysis on locally derived assumptions and reasonableness of their forecasts, technical advice, and technology troubleshooting.

    - In **Angola**, provided technical input on the quantification of malaria commodities.

Exhibit 23: Countries Trained on QAT Forecasting and Supply Planning as of March 31, 2024, (updated in April 2024)



Planning for QAT transition

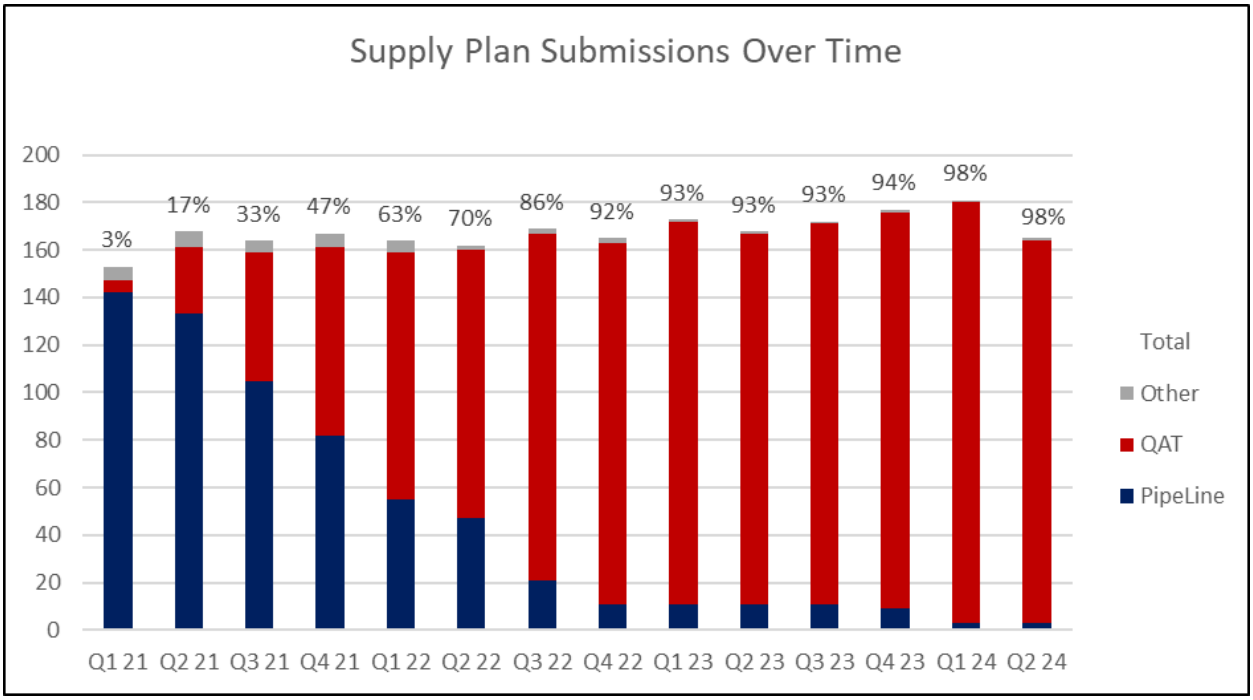
In Q2, GHSC-PSM continued discussions with USAID on transitioning QAT's source code and main application to another implementing partner under the purview of Digital Square, a marketplace for open source tools. This initiative is critical to ensuring the long-term sustainability of QAT and its smooth transition to NextGen. To this end, GHSC-PSM:

- Completed internal requirements to submit the application for QAT to become a Digital Public Good, which is a prerequisite to transferring any open source codes to Digital Square.
- Selected a URL for the QAT wiki—a website that will be developed in the coming months to store all pertinent information relating to QAT (technical documentation, training materials, etc.)
- Conducted two 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 Q2, the project reviewed 166 supply plans to verify that they complied with data quality, supply planning, and procurement scheduling standards. This included 147 USAID high-priority supply plans from 29 countries.

Exhibit 24. 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 Q2, GHSC-PSM worked with Burkina Faso, Haiti, Malawi, and Mozambique to improve data accuracy and reporting by enhancing the capabilities of eLMIS, 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.

To address the challenges of countries having numerous information systems implemented by multiple donors and operating in silos, GHSC-PSM worked with the MOHs in Malawi, Kenya, Mozambique, and Rwanda, to create a standard data interoperability platform in each country. This platform leverages the Open Health Information Exchange (OpenHIE) framework and will allow countries to harmonize and share data across the health supply chain.

The project also provided technical support to Kenya and Namibia to initiate digital health ecosystem projects in each country. The objective of the project is to integrate and streamline health information systems to better share information, track patient treatments, and monitor all supply chain operations in the health system. The MOH in both countries envisage a long-term journey for this project; one that would require financing and technical assistance from donors.

Promoting the USAID Digital Strategy Initiative for Public Health

In Q2, GHSC-PSM continued to update the supply chain information data mapping process flow and MIS landscape diagrams for all countries the project works in with feedback from USAID. An information and data mapping process flow document summarizes health commodity information, including funding sources and associated programs, FASP and procurement processes of each donor, and distribution flow in the country. An MIS landscape document, funded by the malaria task order, depicts the information systems implemented and the country's interoperability structure. The project shared updates to these documents with PMI in Q2 for review.

Additionally, GHSC-PSM supported Botswana in drafting a strategy for developing an electronic Contract Supplier Relationship Management (eCSRM) tool to manage the Central Medical Store (CMS) procurement contract process. The project developed a human resource (HR) planning guidance for implementing health supply chain information systems and presented the document at the Global Indaba conference in March 2024.

Strengthening MIS-related acquisition in compliance with the Federal Acquisition Regulation (FAR)

GHSC-PSM supports MIS-related acquisitions across countries, including developing RFPs, evaluating proposals, reviewing and negotiating contract agreements, and monitoring vendor performance throughout the project life cycle. In Q2, the project and the contract management unit of the CMS in Botswana defined functional requirements, developed an RFP, evaluated technical and cost proposals, and selected a vendor for a supplier performance management system. GHSC-PSM also provided similar support to the Rwandan MOH for eLMIS and warehouse management system implementation, and to Angola and Malawi for eLMIS enhancement.

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 Q2, the project launched an internal laboratory community of practice to encourage collaboration across the project. The project also developed a 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. The project leveraged routine meetings held with country laboratory teams to expand in-country capacity to use data to improve laboratory network performance and encourage country adoption of QAT for laboratory forecasting.

Supporting diagnostic network optimization

Throughout past periods of performance, GHSC-PSM has led diagnostic network optimization **(**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. The scenarios improved visibility into network performance and created

opportunities to optimize laboratory equipment placement and multi-disease integrated testing to increase testing coverage and reduce costs. After an intensive data collection and collation process, the project used two tools: 1) OptiDx™ and 2) supplemental interactive maps developed using the Python Library Folium™. The project uses interactive maps to validate data and inform scenarios by visualizing networks, including locations of health facilities, laboratories, and hubs, referral linkages, distances between facilities, testing volumes, instrument capacity, utilization, and testing demand by administrative area. Excel-based model outputs and interactive maps helped stakeholders review the scenarios and develop an operational plan that considered how the proposed changes to the lab network affect budget, operations, human resources, and logistics, providing an implementation roadmap to realize the future state of the network. 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 Q2, 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 Q2, the project:

- Solicited feedback from laboratory stakeholders on change requests for QAT to improve the use of forecasting trees for laboratory commodities.
- Provided remote technical assistance to **Cameroon, Eswatini,** and **Uganda** 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 equipment planning and placement questionnaire (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 Q2, the project coordinated with stakeholders in **Cameroon, DRC, Mali, Mozambique, Tanzania, Zambia,** and **Zimbabwe** 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 Q2, the project began implementing a policy to promote warehouse inventory variance and cycle count methodology for GHSC-PSM stakeholders by moving from periodic to perpetual inventory control. The policy applies to all activities where the project directly oversees warehouse operations, has contractual agreements with a 3PL provider 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 Q2, 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 (RMS) 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 its quarterly reviews of P&L statements with both regional RMSs while mentoring each RMS's finance and operations team to conduct these reviews independently. The project's analysis of P&L statements has provided visibility into costs related to managing supply chain operations and encouraged RMS staff ownership of their supply chain operations. GHSC-PSM's goal is to have both regions maintaining and operating their own P&Ls by the end of Q3.

- In **Eswatini**, continued supporting the CMS team's implementation of best practices in distribution planning, receiving, storage, picking, inventory control, expiry management, and the 5S[64] methodology. These and other performance benchmarks will allow the CMS to adopt a fee-for-service model and provide operators with guidance for follow-on ABC/ABM, thus providing a foundation for the Eswatini CMS to transition to a semi-autonomous and sustainable parastatal. This exercise will continue through Q4.

- In **Lesotho**, assisted the NDSO 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 potential financial risks and vulnerabilities. By

[64] 5S is a workplace organization strategy that resets the existing operation by removing non-value-added products, items, or equipment, layout of all areas for continuity, and maintaining the streamlined processes and conditions. When followed, the 5S methodology creates a more organized and productive workspace.

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 fashion as a commercial operator. Since implementing ABC/ABM in 2018, JMS has reduced their operating costs and improved performance,and continues to outperform their 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 their sustainability. The project expects that JMS will soon attain technical independence and no longer require assistance.

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 Q2, USAID/Washington evaluated the number of registered participants for the Introduction to Supply Chain Management course scheduled to be held at the beginning of Q3 and decided to cancel the course offering due to an insufficient number of registered participants required (only 9 out of a minimum 15 USAID staff were registered). The Introduction to Supply Chain Management and the Emerging Trends in Supply Chain Management courses are now scheduled to be held in person in late Q3.

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. In Q2, the MOH ethics committee approved the protocol and GHSC-PSM began data collection. Findings from this research will inform the pursuit of supply chain management (SCM) professionalization, workload analysis for job placement, and updates to the SCM curriculum in institutions offering SCM courses in the country.
- In **Ethiopia**, GHSC-PSM collaborated with the MOH, Ethiopian Pharmaceutical and Supply Service (EPSS), and the Ethiopian Food and Drug Administration (EFDA) to develop or refine supply chain courses and training modules that align with the Ministry's guidelines for standardizing in-service training for supply chain professionals. Some of the courses or training modules developed include:
    - A national Adverse Events Following Immunization (AEFI) training, developed with EFDA.
    - Pharmaceuticals Inventory Management (PIM) and Pharmaceutical Procurement Management trainings, developed with EPSS.
    - Modules for a pharmaceutical supply chain course, a pharmaceutical and medical device management course, and a pharmacy service mentorship training.

Six of the courses GHSC-PSM developed with the MOH, EPSS, and EFDA have been accredited for continuous professional development (CPD) by the MOH Department of Human Resource Development and Improvement. This ensures compliance with in-service training guidelines and facilitates the transition of these courses to national and regional CPD centers, contributing to sustained capacity-building for health supply chain management in Ethiopia.

- In **Zambia,** along with the MOH and other stakeholders, GHSC-PSM collaborated with the University of Zambia (UNZA) to introduce a Postgraduate Diploma (PgD) and Master of Science (MSc) in health supply chain management. The project introduced these programs in response to a comprehensive assessment of Zambia's health supply chain management competency conducted in 2019, which identified a need for professionalization. The PgD and MSc programs aim to equip health care professionals with advanced skills in supply chain logistics, procurement, inventory management, and healthcare-specific quality assurance. UNZA launched both programs in Q2 and enrolled 18 applicants. By nurturing a cadre of professionals versed in the intricacies of health supply chain management, this initiative aims to create a skilled workforce that will implement best practices, streamline processes, and ensure a more efficient and resilient healthcare supply chain.

END-USE VERIFICATION SURVEY

GHSC-PSM assesses the availability of malaria, FP/RH, and MNCH commodities at health facilities using the End-Use Verification (EUV) survey. During EUV survey implementation, GHSC-PSM country teams collect and analyze data on commodity availability and attributes that contribute to commodity availability, including storage conditions, staff capacity, and stock management. The project presents findings to Missions and MOHs and helps facilitate conversations and activities to 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 the CHW module of the EUV survey. In Q1 FY 2024, the project rolled the module out to EUV countries. By assessing health commodity availability at the community/CHW level and identifying the processes used by CHWs to manage these commodities, the EUV survey can now include recommendations to inform improvements, identify gaps, and strengthen the supply chain links between health facilities and communities.

In Q2, GHSC-PSM implemented the EUV survey in **Angola**, **Ethiopia**, and **Liberia** and collected CHW module data in **Ethiopia** and **Liberia**. The project finalized the CHW module report template and shared draft reports from the Zambia pilot, Burkina Faso, and Mali with USAID and PMI/Washington for review.

NATIONAL SUPPLY CHAIN ASSESSMENT

The National Supply Chain Assessment (NSCA) 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 their desired outcomes.

In Q2, GHSC-PSM supported implementation of the NSCA in Lesotho and Zambia:

- In **Lesotho,** supported data analysis and report writing for the NSCA final report and provided technical assistance to USAID staff to disseminate findings and recommendations from the NSCA to the MOH and supply chain stakeholders.

- **In Zambia,** provided technical assistance to the MOH and development partners to begin fieldwork for the NSCA. Activities included conducting a comprehensive supply chain mapping and SWOT analysis, training of more than 70 enumerators for data collection, collecting data from 200 facilities, and interviewing key supply chain actors and central-level entities such as the MOH, the Zambia Medicines and Medical Supplies Agency, the Churches Health Association of Zambia (CHAZ), and ZAMRA. The results from the NSCA are expected to provide the Government of Zambia with a comprehensive understanding of the capability and performance of the national public health supply chain and inform critical decision making for corrective actions and necessary investments.

GHSC-PSM also initiated a learning activity in Q2 to understand how the NSCA has contributed to health supply chain planning, strategy and resource allocations in different countries. The learning activity will apply a case study approach in two to three countries that previously implemented the NSCA to guide future implementations, encourage additional implementation, and assist USAID in planning the future of the NSCA. USAID has reviewed the scope of work for this learning activity, and implementation is expected to be completed by the end of FY 2024.

LEARNING AGENDA: SUPPLY CHAIN TECHNICAL INDEPENDENCE INDICATOR

GHSC-PSM continues to work on the technical independence indicator learning activity, which is focused on reporting on the indicator's strengths and weaknesses and recommendations for adaptation. The analysis will draw from the different examinations of the indicator to date, including the Country Director's Forum working sessions, the supply chain indicator review project, and the FY 2023 technical independence learning activity. GHSC-PSM expects to share the technical brief with USAID by the end of Q3.

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 Q2, GHSC-PSM trained 3,050 individuals (1,175 women and 1,875 men). Many trainings were cross-cutting and addressed topics

relevant to multiple health areas. By funding source, 28 percent were trained with HIV/AIDS funding; 52 percent with malaria funding; 13 percent with FP/RH funding; and 7 percent with MCH funding.

ENVIRONMENTAL COMPLIANCE

In Q2, 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.

GHSC-PSM submitted the FY 2023 Environmental Mitigation and Monitoring Report to USAID in Q2. The project also worked with country program and risk management teams to close out waste disposal and provided guidance to countries on disposing of expired commodities and unusable items from warehouses.

C3. GLOBAL COLLABORATION

In Q2, prepared two abstracts for submission to the **American Society of Tropical Medicine and Hygiene (ASTMH)** conference.

Delivered **eight presentations** at the **People that Deliver 2024 Global Indaba** in Q2.

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 Q2, GHSC-PSM:

- Briefed the congressional delegation led by Senator Patty Murray (D-WA) that visited Angola. Ladi Stephen, the project's country director, played a central role in welcoming five senators and their teams and introducing them to the project's contribution to supporting PEPFAR in the country. *"Talented implementing partners like GHSC-PSM are essential to our success because of your hard work and dedication. We appreciate your effort. Please extend our regards to all the GHSC-PSM team members who directly or indirectly contributed to the success of this visit."* - USAID/Angola Country

Representative William Butterfield.

GHSC-PSM Country Director Ladi Stephen introduces the Hon. Minister of Health

- Partnered with PMI, Global Fund, USAID, and the Child Health Task Force to deliver a webinar on *Institutionalizing Supply Chains for Community Case Management.'* (See section B2.)

- Re-convened, along with PMI, the TraceNet TWG, which includes global health stakeholders such as the Global Fund, UNICEF, AMF, 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; chair 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.)

- **Systems Strengthening Working Group (SSWG),** participating in the monthly **RHSC Advocacy and Accountability Working Group's (AAWG)** call to provide a progress update on the intersection between climate change and supply chain. The SSWG elected a new chair following GHSC-PSM's two-year tenure as chair. SSWG plans to hold handover meetings in Q3 to ensure a smooth transition to the incoming chair.

- **VAN Steering Committee** (GHSC-PSM is a non-voting member), providing input on supply chain data across the FP community. Also participate 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), helped launch the Caucus's first–ever TXA working group to improve access to this critical PPH medicine. (See section B4.)

- The USAID and BMGF-funded **Child Health Task Force** where 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 Q2:

- Presented one poster, delivered four breakout sessions and participated in three panels at the **People that Deliver 2024 Global Indaba.**

- Submitted two malaria-focused abstracts to the **ASTMH Annual Meeting 2024**.

- Published a new guide for warehousing excellence, *How to Operate the Center of Excellence: Winning the Logistics Game* in Q2.

- Published two MNCH commodity financing resources in Q2, including a global compendium and an in-depth case study of Ethiopian strategies to improve local financing of MNCH products.

- Partnered with PMI, Global Fund, USAID, and the Child Health Task Force to organize a **webinar on "Institutionalizing Supply Chains for Community Case Management,"** hosted by the **Newborn and Child Health Commodities sub-group** of the **Child Health Task Force**. The

project presented the advocacy paper Effective Community-Level Supply Chains for iCCM and Malaria (published in Q4, FY 2023), and participated on a panel. The webinar focused on strengthening community-level supply chains, as these represent a particularly challenging component of community health delivery that must be optimized to improve community health worker programs. The webinar drew over 600 registrants and 263 participants, including staff from key organizations in the development sector.

- Began coordinating with USAID and CDC a multi-day technical assistance and capacity-building workshop to be held in Q3. The workshop will prepare non-GHSC-PSM actors, including representatives from MOHs, Global Fund principal recipients of grants, and other PEPFAR implementing partners, to implement the all-inclusive service-level agreements with their VL/EID suppliers. (See section B1.)

COUNTRY COLLABORATION

Q2 highlights of GHSC-PSM country collaboration include the following:

- In **El Salvador**, provided TA and coordinated supply chain management meetings between the MOH, the Global Fund, PASMO, and other implementing partners to support the MOH's goal of expanding the HIV prevention program. (See section B1.)

- In **Haiti**, along with global partners, including WFP and World Vision, dispatched a total 85,595 kg of essential products valued at more than $2.7 million highlighting the power of collective action. (See section B1.)

- In **Mozambique**, conducted consultations with the Global Fund, CMAM leadership, the U.S. Commercial Services representative in Mozambique, and the representative from ARC in South Africa in support of the VMS strategy. (See section B1.)

COLLABORATION WITH OTHER USAID GHSC PROJECTS

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

- Collaborates 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.

- Provides 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.)

- Through the **non-field office program management unit** (NFO PMU), collaborates with in-country stakeholders to support the successful 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 Q2 include:
    - In **Ukraine,** expedited order deliveries. Commodity funds continued to increase as USAID steps up to support the people of Ukraine. COP23 has a budget of USD12.1 million, an almost doubling of COP21 funding. Given the fluid situation on the ground in Ukraine due to the ongoing conflict, in-country needs and urgent order deliveries remain the norm of everyday activities. GHSC-PSM-NFO supported the delivery of USD 2,773,117 million in commodities in Q2 along with additionally processing requisition orders in the amount of USD 6,726,124 million. The Ukraine Mission reached out to GHSC-PSM with an urgent/emergency request to deliver DTG 10 mg as the country was looking at a stockout by the end of Q2 2024. GHSC-PSM acted quickly to explore options on the earliest possible delivery—from requesting to reallocate product from Nigeria to finding on-hand product at the manufacturer. This order was expedited and delivered to Ukraine 58 days from the moment the Ukraine Mission identified the need to deliver the commodity to Kyiv.

      In addition, at the request of USAID, the project shifted the consignee to the relevant branch of the Ukrainian MOH to facilitate the time-sensitive delivery of CAB-LA. This required introducing a completely new documentation and customs waiver process during a time of war. The Ukrainian MOH, USAID, and other in-country stakeholders convened, to collect the required information and proceed with a fast, successful delivery in record time.

    - In **Vietnam**, completed the delivery of critical supplies of PrEP. Because the project no longer has a field presence in Vietnam, GHSC-PSM worked to maintain and retool existing agreements with local stakeholders to navigate the complex and lengthy waiver, market authorization, and customs clearance process. The timeline was pressed with the annual Lunar New Year holidays shutting down many government offices just as efforts to expedite the shipment came to fruition. However, the teamwork and lessons learned from the past deliveries and working with Vietnam proved to be very effective in completing the delivery without incident.

    - In **Tanzania**, conducted its regular management trip. During the trip, the PMU director met with partners from the Zanzibar Chief Pharmacist's Office and vertical programs, Zanzibar Medical Store, Zanzibar Food and Drug Administration, as well as Tanzania Chief Pharmacist's Office, Medical Stores Department, Diagnostic Services Department, head of

programs, and USAID implementing partners. The visit was an opportunity to discuss the project's successes and challenges in commodity importation, as well as barriers to priorities like the vendor instrument performance management agreement.

OTHER GLOBAL COLLABORATION

In Q2, the project:

- Delivered 3,600 dapivirine rings to **Uganda** and continues to hold stock of the ring in its Dubai RDC to support USAID MOSAIC program activities in **Lesotho**, **Kenya**, and **Zimbabwe**. (See section B1.)

- Collaborated with PtD to develop a Human Resource (HR) planning guide, providing recommendations to country governments and implementing partners to improve HR capabilities for managing supply chain information system (SCIS) implementations. (See section B3.)

ANNEX A. COVID-19 RESPONSE

In Q2, the project **delivered 504,000 COVID-19 commodities,** including pulse oximeters, hypodermic needles, and COVID-19 rapid tests, to three countries[65] approved for American Rescue Plan Act (ARPA) funding.

In Q2, the project **delivered 1,664 treatment courses of generic nirmatrelvir + ritonavir** to two countries.[66]

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. The project establishes a virtual stockpile of COVID-19 commodities and provides related technical assistance.

In Q2, GHSC-PSM delivered critical medical supplies and equipment to:

- **Malawi:** 400 pulse oximeters
- **Angola:** 453,600 hypodermic needles (donated by the U.S. Department of Health and Human Services)
- **Afghanistan:** 50,000 COVID-19 rapid tests

Procuring and installing 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.

Activities in Q2 included:

- In **Botswana**, ended contractual negotiations with the awarded GHSC-QA–qualified supplier for bulk liquid oxygen equipment at three hospitals in Francistown and Masunga. The supplier failed to accept the inclusion of a mandatory federal acquisition regulation clause into the contract. GHSC-PSM then pivoted to establish a project charter with the Mission and MOH to provision PSA plants at two hospitals in Kasane and Masunga for meeting oxygen needs during each hospital's normal

[65] Malawi, Angola, and Afghanistan
[66] Malawi and Lesotho

and peak consumption periods. The MOH is completing a technical questionnaire for RFP development. GHSC-PSM will source the PSAs in Q3; equipment will be delivered and installed after the Ministry of Health and Wellness completes the required site infrastructure readiness work.

Procuring respiratory equipment and related commodities

In Q1 FY 2024, USAID reprogrammed $11.6 million of funds previously allocated to procure ventilators, associated consumables, and durables to now procure oxygen commodities and equipment for 19 countries⇇—6 GHSC-PSM presence countries and 13 non-presence countries. GHSC-PSM country offices, Missions, and, for non-presence countries, in-country implementing partners, are identifying commodities to support neonatal oxygen needs. The project developed work plans for USAID approval in Q2. GHSC-PSM developed a budget calculator for recipient countries to quantify commodities and help country offices and MOHs select products from a list of available neonatal oxygen commodities and indicate desired quantities while remaining within their ceilings for this funding.

In collaboration with USAID's Office of Maternal, Child Health, and Nutrition, GHSC-PSM defined product specifications and quality standards for a number of neonatal health commodities. This will inform recipient country procurement using the reprogrammed funding. USAID issued a technical directive memo authorizing the procurement of these unique products. These neonatal oxygen commodities will expand countries' respiratory ecosystems and improve the overall quality of care for 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.[67] In Q2:

- The Dubai RDC delivered two orders of generic nirmatrelvir + ritonavir to **Malawi** and **Lesotho**. GHSC-PSM also reallocated the 1,152 and 1,024 treatment courses of generic nirmatrelvir + ritonavir originally destined for **Senegal** and **Lesotho** for delivery to **Ukraine** in Q3. The project will deliver the remaining 2,432 treatment courses at the Dubai RDC in FY 2024 after receipt of country product registration confirmation and import duty waivers.

- GHSC-PSM reallocated the 5,088, 1,056, and 576 treatment courses of generic molnipiravir originally destined for **Côte d'Ivoire**, **Ghana**, and **Mozambique** for delivery to **Ukraine** in Q3. This final order will deplete the remaining stock of generic molnupiravir pre-positioned at the Dubai RDC.

COVID-19 IN-COUNTRY TECHNICAL ASSISTANCE

Below are examples of COVID-19 technical assistance activities the project conducted in Q2.

- In **Angola**, GHSC-PSM:
    - Collaborated with the Angola MOH in hosting the Causality Committee meeting to review and classify four severe adverse effects following immunization (AEFI) cases
    - Conducted monthly reporting and monitoring of the AEFIs on DHIS-2. Equipped government fleets to distribute 132,266 COVID-19 vaccines across 13 provinces and their municipalities

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

    - Supervised cold chain management in 13 municipalities across four provinces to ensure the cold chain was maintained by MOH logisticians, and on-the-job training was conducted for 12 logisticians
    - Supervised waste management processes in two provinces and trained 29 health units on tools and best practices for monitoring waste disposal

- In **Botswana**, the CMS and health facilities—especially at the last mile—experienced storage capacity constraints for health commodities. This challenge was exacerbated by the COVID-19 pandemic, as additional storage was needed for personal protective equipment (PPE) and cold chain items. GHSC-PSM leased a warehouse for the Kgatleng district health management team (DHMT) to store strategic stock of PPE. When the 14-month lease period elapsed in Q2, the project supported the Kgatleng DHMT with a seamless transition process for warehouse takeover.

  Following the project's assessment of 17 DHMTs and the CMS' capacity to dispose of vaccine waste in an environmentally friendly manner, GHSC-PSM subcontracted a local vendor to sort, weigh, containerize, load, transport, and destroy COVID-19 vaccine waste from identified sites. In Q2, the project destroyed an additional 172 kg from 13 DHMTs and collected 1,572 kg from the CMS for destruction in Q3.

- In **Burkina Faso**, GHSC-PSM and the Data Fi project integrated the COVID-19 Vaccines Stock Management Tool into the country's eLMIS application for online vaccine inventory management. This integration is part of developing the electronic data collection platform of the MOH Expanded Programme on Immunization (EPI) department. The project provided technical and financial support to the EPI department in co-facilitating a training of trainers for 29 staff members at the central, regional, and district levels on the eLMIS. The project piloted the eLMIS in two districts: Nanoro in the Centre-West region and Dande in the Hauts Bassins region. GHSC-PSM will roll out the eLMIS to additional districts in Q3 and Q4.

- In **El Salvador**, GHSC-PSM equipped the Public Health Emergency Operations Center (COESP) with computer equipment, furniture, and an electrical plant. The COESP is planned to open in Q3 FY 2024. The project and MOH quality team finalized the initial phase of the Inventory and Warehouse System encompassing modules for user parametrization, warehouses, medicine reception, medical supplies, and vaccines Key users of the MOH supply chain were trained in these modules.

  The project also launched a pilot program for last-mile transportation in the country's Eastern and Western regions. This initiative compares the logistical cost and availability of drugs at health facilities in both t regions. In the Eastern region, the project provides trucks for last-mile distribution, while the MOH fleet is used in the Western region. The project manages both fleets and monitors routes by GPS, collecting data and suggesting improvements in routing while also developing tools for freight costing. With the outsourced fleet in the Eastern region, availability has increased 3 percent, and delivery times have dropped from two and a half months to one and a half months.

- In **Mali**, GHSC-PSM supported the National Center of Immunization in upgrading the national eLMIS'dashboard for health commodities. GHSC-PSM integrated an inventory management and dispensing module for COVID-19 vaccines and other immunizations. The upgraded eLMIS contributes to more efficiently managing these commodities to maximize availability and minimize

waste. The project presented the eLMIS to the national logistics committee in Q1 FY 2024 to collect their feedback before the user acceptance test that will be conducted in Q3 FY 2024.

- In **Kenya**, Afya Ugavi:
    - Provided procurement support to the National Quality Control Lab (NQCL) for servicing and calibrating analytical equipment. The project procured WIFI data loggers on behalf of NQCL to address environmental monitoring gaps raised by the WHO Prequalification team. Afya Ugavi conducted the required training of personnel in using the data loggers. The project also procured services for calibrating NQCL's Agilent HPLC equipment, in advance of the WHO follow-up audit this year.
    - Facilitated a four-day workshop for NQCL lab testing staff members on monitoring and evaluating performance indicators, including the indicators, guidelines, and SOPs.

- In **Lesotho,** GHSC-PSM is the exclusive supply chain implementing partner for COVID-19 technical support to the Government of Lesotho. The project supports the national level by updating the Informed Push, an inventory control system that calculates the required quantity of new COVID-19 supplies at the facility level. Regional GHSC-PSM LMIS coordinators provide monthly supportive supervision to all 207 sites in the 10 PEPFAR districts. During the annual national quantification exercise in Q1 FY 2024, the project assisted the Government of Lesotho with supply planning and forecasting COVID-19 commodities. These combined efforts have contributed to uninterrupted access to essential COVID-19 commodities in Lesotho since Q1 FY 2022.

  GHSC-PSM and USAID drafted a National Supply Chain Assessment (NSCA) report based on the exercise conducted in FY 2023. The NSCA aims to evaluate Lesotho's supply chain performance in developing strategic, operational, and investment plans in line with USAID's goal to create sustainable health systems. The NSCA evaluated COVID-19 commodity stock to understand the country's ability to absorb a sudden increase in commodity stock, such as for emergency response. The report notes that regional support from government district level officers positively impacted commodity visibility, including the integration of COVID-19 commodities. Integration allowed for requisition orders to be placed more quickly from the site level and communicated to the district health management teams who would share that information with central medical stores.

- In **Malawi**, GHSC-PSM supported the MOH's EPI in planning and distributing 650,050 doses of COVID-19 vaccines in Q2 for vaccination campaigns across the country. GHSC-PSM assisted the MOH in ensuring that all reporting sites capture quality and timely data in OpenLMIS (a web-based electronic health commodity reporting system). The data will inform national-level resupply decisions. Leveraging GHSC-PSM's COVID-19 vaccine experience, the project coordinates monthly vaccine oversight meetings discussing all in-stock vaccines and those in the pipeline.

- In **Nigeria**, the project has distributed over 89 million COVID-19 vaccine doses nationally since Q4 FY 2021, with approximately 690,000 doses allocated to states and about 55 million doses distributed at the state to local government area levels.

  In Q2, the project contracted 3PLs to distribute 206,225 doses of COVID-19 vaccines in eight states. The project also managed the return of 25,715 used vaccine vials and 71,496 expired J&J vaccine vials to the state cold stores. When the vials were returned to the state cold stores, the

State Primary Health Care Development Agency retrieved and handled their waste management for the used and expired vials.

The government of Nigeria leveraged 3PL support to distribute 332,900 doses of routine immunization vaccines in addition to the COVID-19 vaccines that were also distributed.

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Current Reporting Period

2024-Q2

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

Delivery Impact to Date

Number of ACT treatments delivered

559,479,767

Number of Couple Years Protection delivered

106,390,661

Person-years of ARV treatment delivered

24,884,383

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 CDC

Delivery Performance

Current Reporting Period

2024-Q2

TO	Analysis
Crosscutting	Overall delivery performance for the project has remained strong this quarter. OTD registered an increase from 89 percent in the previous quarter to 92 percent in this quarter. Accordingly, OTIF also registered a slight increase, rising from 87 percent in the previous quarter to 88 percent in this quarter. Delivery volumes did fall this quarter with most of the decrease being attributable to HIV/AIDS falling to 815 lines from 938 in the previous quarter. FP/RH did also drop from 139 lines in the previous quarter to just 59 lines this quarter. Malaria delivery volume stayed largely consistent, with just a minor drop from 122 lines in the previous quarter to 117 this quarter. MNCH made no deliveries in Q2FY2024. Overall backlog decreased this quarter, bringing performance back in line with the target. Overall backlog decreased from 6.1 percent in the previous quarter to 3.9 percent this quarter.
TO1 - HIV	Overall delivery performance for HIV/AIDS remains strong this quarter. OTD increased from 89 percent in the previous quarter to 92 percent this quarter. OTIF also registered a slight increase to 88 percent as compared to 87 percent in the previous quarter. Laboratory products and VMMC had the most significant impact on delivery performance. While VMMC only had 110 lines delivered this quarter, it did register 100 percent OTD and OTIF. Laboratory products with 463 lines delivered in the quarter, had the largest single impact, registering 92 percent OTD and 85 percent OTIF. Overall backlog performance improved this quarter, with a decrease in the backlog from 7.6 percent in the previous quarter to 4 percent in the current quarter.
TO2 - Malaria	Overall delivery performance for malaria continues to be strong. OTD registered an increase from 87 percent in the previous quarter to 92 percent this quarter. OTIF also experienced an increase accordingly, with performance increasing to 91 percent from 86 percent in the previous quarter. Delivery volumes remained mostly consistent, with a small decrease to 117 lines delivered in the quarter as compared to 122 lines in the previous quarter. SMC, mDRTs, and Other Pharma all registered 100 percent OTD this quarter, accounting for the increased performance overall. The backlog increased this quarter from 1.7 percent in the previous quarter to 3.3 percent this quarter. Performance on this indicator continues to be in line with the target.
TO3 - FP/RH	Overall delivery performance remained strong for FP/RH products during the period. OTIF remained consistent this quarter at 92 percent. OTD registered an increase from 93 percent in the previous quarter to 97 percent in this quarter. Item tracer categories contributing to the strong performance include combined oral contraceptives, emergency oral contraceptives, copper-bearing intrauterine devices, progestin-only pills, and other non-pharma (all with 100 percent OTIF and OTD for the period). Implantable and injectable contraceptives were the categories with delivery peformance below 100 percent. Overall delivery volume has significantly decreased this quarter, dropping from 139 lines in the previous quarter to 59 lines this quarter. This quarter's delivery volume is more in line with historical quarterly delivery volumes for FP/RH. The backlog increased this quarter from 0.9 percent in quarter 1 to 4.2 percent in the current quarter. Though the backlog has had a marked increase, performance continues to remain under the target.
TO4 - MNCH	During the quarter, there were no deliveries for MNCH. TO4 backlog increased this quarter to 2.3 percent from 1.2 percent in the previous quarter. Backlog performance continues to be strong and well under the target.

A1a. On-time, In-Full Delivery

Task Order	Total # of Line Items Delivered	OTIF	OTIF Target
TO1 - COVID19	9	89%	80%
TO1 - HIV	815	88%	80%
TO2 - Malaria	117	91%	80%
TO3 - FP/RH	59	92%	80%
Total	**1,000**	**88%**	**80%**

A1b. On-time Delivery

Task Order	Total # of Line Items with ADDs in the quarter	OTD	OTD Target
TO1 - COVID19	8	75%	80%
TO1 - HIV	780	92%	80%
TO2 - Malaria	120	92%	80%
TO3 - FP/RH	58	97%	80%
Total	**966**	**92%**	**80%**

A16. Backlog Percentage

Task Order	Total # of line items with ADDs in the last 12 months	Backlog	Backlog target
TO1 - COVID19	90	3.3%	5%
TO1 - HIV	3,533	4.0%	5%
TO2 - Malaria	614	3.3%	5%
TO3 - FP/RH	331	4.2%	5%
TO4 - MNCH	87	2.3%	5%
Total	**4,655**	**3.9%**	**5%**

Delivery Performance

Current Reporting Period

2024-Q2

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	**89%**	**9**	**75%**	**8**	**3.3%**	**90**
COVID19	89%	9	75%	8	3.3%	90
TO1 - HIV	**88%**	**815**	**92%**	**780**	**4.0%**	**3,533**
Adult ARV	82%	91	86%	88	7.2%	292
Condoms	96%	27	88%	32	2.2%	138
Food and WASH					100.0%	1
Laboratory	85%	463	93%	424	3.9%	2,343
Other Non-Pharma	85%	20	68%	25	7.9%	165
Other Pharma	98%	56	97%	59	3.0%	232
Other RTK	55%	11	75%	8	14.7%	34
Pediatric ARV	87%	30	93%	27	0.8%	128
TB HIV	100%	6	100%	6	0.0%	41
Vehicles and Other Equipment	100%	1	100%	1	0.0%	3
VMMC	100%	110	100%	110	0.0%	156
TO2 - Malaria	**91%**	**117**	**92%**	**120**	**3.3%**	**614**
ACTs	95%	38	87%	45	3.9%	228
Laboratory	83%	6	71%	7	2.2%	46
LLINs	82%	28	100%	24	2.6%	153
mRDTs	71%	7	100%	5	0.0%	47
Other Non-Pharma					0.0%	5
Other Pharma	100%	4	100%	4	0.0%	11
Other RTK					0.0%	1
Severe Malaria Meds	95%	19	91%	22	4.3%	70
SMC	100%	10	100%	8	8.0%	25
SP	100%	5	100%	5	3.6%	28

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	**92%**	**59**	**97%**	**58**	**4.2%**	**331**
Combined Oral Contraceptives	100%	17	100%	16	0.0%	49
Copper-Bearing Intrauterine Devices	100%	4	100%	4	0.0%	23
Emergency Oral Contraceptives	100%	1	100%	1	0.0%	12
Implantable Contraceptives	91%	11	85%	13	14.3%	91
Injectable Contraceptives	64%	11	100%	8	1.1%	88
Laboratory					0.0%	2
Other Non-Pharma	100%	1	100%	2	0.0%	23
Progestin Only Pills	100%	14	100%	14	0.0%	37
Standard Days Method					0.0%	6
TO4 - MNCH					**2.3%**	**87**
Food and WASH					66.7%	3
Laboratory					0.0%	1
Other Non-Pharma					0.0%	10
Other Pharma					0.0%	73

There were no deliveries of MNCH products during FY2024 Q2.

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-Q2

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	9	130	250	130	250
TO1 - HIV	815	248	250	243	250
TO2 - Malaria	117	296	340	279	300
TO3 - FP/RH	59	242		236	
Total	**1000**	**252**		**245**	

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	**59**	**242**		**236**	
Direct drop fulfillment	14	336	300	318	300
Warehouse fulfillment	45	213	250	211	250

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

TO	Analysis
TO1 - HIV	End-end-end cycle time for HIV/AIDS products reduced to 248 days this quarter, below the target for 250 days with a dwell-adjusted cycle time at 243 days. There were 151 lines for Tanzania which had an average cycle time of 295 days and 98 lines for Congo DRC which had a cycle time of 370 days. The two sets of lines pushed the average cycle time up this quarter. Other lines for Togo (25 in total) and Kenya (39 lines) had a cycle time of more than 320 days. Amongst product groups, Other Pharma had 56 lines which had an average cycle time of 398 days. For segment time, Manufacture and Process PO/DO time reduced to 67 and 68 days respectively. Only 9 percent of line items had holds applied to them.
TO2 - Malaria	End-to-end cycle time for Malaria products reduced to 296 days, below the target of 340 days, with a dwell-adjusted cycle time of 279 days. Amongst countries, Nigeria and Niger had 13 and 16 lines respectively with an average cycle time of 393 and 309 days. Both these two groups combined had a cycle time weight of almost 30 percent. Like the past few quarters, LLINs and ACTs had a longer list of lines under them than other products. Under LLIN, 28 lines had an average cycle time of 405 days. The LLIN lines were spread across Côte d'Ivoire, Kenya, Tanzania amongst others. Though there only 6 lines under Laboratory, the average cycle time for those lines stood at 419 days. With segment-specific data, there were reductions in the Sourcing and Planning and the Deliver segment.
TO3 - FP/RH	Average cycle time for family planning products fulfilled through the RDC reduced significantly this quarter to 213 days, with the dwell-adjusted time being 211 days. The number of warehouse fulfillment lines (RDC) were fewer in number as compared to last quarter, they stood at 45 as compared to 98 lines of last quarter. There were four lines for Mozambique which had an average cycle time of 278 days. Amongst product groups, there were six lines under Injectables which had an average cycle time of more than 250, four of them were for Mozambique. Direct drop cycle time stood above the target of 300 days, at 336 days with a dwell-adjusted cycle time of 318 days. There were 14 lines fulfilled through direct drop this quarter. There were two lines for Mozambique under this fulfilment method which had an average cycle time of 637 days. There were two lines for each Madagascar and Mali which had a cycle time of more than 500 days. There were five lines for Implantables which had an average cycle time of 450 days, three lines under Implantables were for Madagasrcar and Mozambique and the other two for Togo. Both funding and production issues elongated the cycle time for Mozambique lines. Majority of the orders were placed in April (2023) but the funding was not available till July which led to a later delivery The funding was carried out through loans which were made available in July.
TO4 - MNCH	No deliveries were carried out this quarter.

Data notes

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

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

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

Cycle Time Performance

Current Reporting Period

2024-Q2

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

Fulfillment Channel / Task Order	Direct Drop Fulfillment Air	Direct Drop Fulfillment Land	Direct Drop Fulfillment Sea	Warehouse Fulfillment Air	Warehouse Fulfillment Sea	Total
TO1 - COVID19	**146**			**74**		**130**
COVID19	146			74		**130**
TO1 - HIV	**244**	**198**	**351**	**102**	**266**	**248**
Adult ARV	226	254	306	54		**255**
Condoms			275	171	282	**258**
Laboratory	267	187	381			**245**
Other Non-Pharma	334	189	252			**250**
Other Pharma	262	116	475			**398**
Other RTK	296					**296**
Pediatric ARV	242	259	342	48	156	**233**
TB HIV	223					**223**
Vehicles and Other Equipment		1100				**1100**
VMMC	160		241			**173**
TO2 - Malaria	**247**	**463**	**316**	**172**		**296**
ACTs	206		259	172		**225**
Laboratory	520		218			**419**
LLINs		463	395			**405**
mRDTs	262		374			**358**
Other Pharma	255		327			**273**
Severe Malaria Meds	220		259			**238**
SMC			238			**238**
SP			337			**337**
TO3 - FP/RH	**336**	**103**	**452**	**181**	**228**	**242**
Combined Oral Contraceptives	135		540	171	228	**238**
Copper-Bearing Intrauterine Devices				157		**157**
Emergency Oral Contraceptives	112					**112**
Implantable Contraceptives	453			212		**322**
Injectable Contraceptives	174	103	422		256	**280**
Other Non-Pharma		103				**103**
Progestin Only Pills				155	213	**201**

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

Product Category	Fulfillment Channel **Total**
Total	

There were no deliveries of MNCH products during FY2024 Q2.

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	**59**	**3**	**63**		**67**	**51**	**45**
TO1 - COVID19	41	7	33		22	37	15
TO1 - HIV	54	3	69		68	51	39
TO2 - Malaria		6	16		65	53	72
TO3 - FP/RH		2	104		43	29	38
Warehouse fulfillment	**59**	**7**	**27**	**40**	**10**	**30**	**61**
TO1 - COVID19	29	0	4	36	6	30	5
TO1 - HIV	50	4	33	40	6	33	40
TO2 - Malaria		55	6	37	6	32	14
TO3 - FP/RH		7	26	40	13	28	75
Total	**59**	**4**	**60**	**96**			**47**

Quality Assurance Performance (TO2 only)

Current Reporting Period

2024-Q2

A2. QA processes completed within required lead times

Task Order	Total # of QA processes completed	% QA Processes On Time	A2 Target
TO2 - Malaria	**86**	**92%**	**85%**
ACTs	44	89%	85%
LLINs	13	100%	85%
mRDTs	5	100%	85%
Other Pharma	3	100%	85%
Severe Malaria Meds	9	100%	85%
SMC	10	80%	85%
SP	2	100%	85%

A13. Out-of-specification percentage

Task Order	Total # of batches tested	Out-of-specification percentage	A13 Target
TO2 - Malaria	**240**	**1.3%**	**1%**
ACTs	81	0.0%	1%
LLINs	33	9.1%	1%
mRDTs	14	0.0%	1%
Other Pharma	0		1%
Severe Malaria Meds	44	0.0%	1%
SMC	68	0.0%	1%
SP	0		1%

Data notes

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

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

Quarterly indicator targets are effective beginning FY2018 Q4.

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

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

Ref	Analysis
A02	A total of 92 percent of QA/QC processes were completed within required lead times. This was a decrease from 94 percent last quarter. Only a few SMC and ACT issues impacted the overall quality assurance score. The target was met.
A13	The percent of batches out of specification this quarter saw an increase to 1.3 percent, just above the target. The total score was impacted by one incident from one manufacturer due to rejection of three out of a total of 33 batches of LLINs. The three LLIN batches showed non-conformity on the piperonyl butoxide (PBO) content for the PBO nets. PMI approved the replacement of these three batches.
A14b	The vendor performance score for this period's lab services remained consistent at 91 percent. The service score decreased from 84 percent to 78 percent, but the completeness score improved from 94 percent to 97 percent. Reliability, which is the largest factor in vendor scoring, remained consistent, with a slight decrease to 87 percent from last quarter's 88 percent. Responsiveness saw a slight decrease as well, from 98 percent to 96 percent, and invoice accuracy remained 100 percent. Reliability and responsiveness carry the most weight and therefore their consistency and increases also kept the overall score consistent.
A15	There was only one investigation during FY24 Q2, and it was submitted on time. The investigation was for LLINs.

Warehouse Performance and Product Losses

Current Reporting Period

2024-Q2

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

Task Order	Country	Type of Loss	Product Group	Loss Value	Loss Denominator	% Loss
TO1 - HIV	Cameroon	Damage	Condoms	$3,000	$125,000	2.40%
TO1 - HIV	Kenya	Damage	Laboratory Consumables	$2,657	$8,069,876	0.03%
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	78%	70%
TO2 - Malaria	$2,191,019	65%	70%
TO3 - FP/RH	$4,511,999	84%	80%
Total	**$10,544,757**	**76%**	

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 Q2, HIV-related products maintained an average shelf life of 78 percent, exceeding the 70 percent target. Apart from four items, COVID-Molnupiravir, ARV dapivirine ring, Nirmacom-Nirmatrelvir tablets + Ritonavir tablets and Zidovudine oral solution which constitute a combined 4 percent of the total value of HIV products the remaining shelf life for all other products exceeded 70 percent.
A08	TO2 - Malaria	In FY24 Q2, the average weighted shelf life remaining for malaria products fell to 65 percent due to slow demand and reduced stock turnover. However, with anticipated orders, this is expected to improve soon. The procurement team is prioritizing RDC stocks over direct drop to expedite product movement.
A08	TO3 - FP/RH	The average weighted shelf life remaining for family planning products increased to 84 percent in FY24 Q2, with all products exceeding the 80 percent target.
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. There were no reported losses this quarter in non-field office countries. The losses in countries with a field office prescence were very small proportionally, less than 3 percent in one case, and less than 1 percent in the others.

Procurement Performance

Current Reporting Period

2024-Q2

A10. Framework contract percentage

Task Order	Procurement total	Framework contract percentage	Framework contract target
TO1 - COVID19	$2,276,885	100%	90%
TO1 - HIV	$120,570,327	92%	90%
TO2 - Malaria	$38,540,105	96%	95%
TO3 - FP/RH	$13,758,361	100%	95%
TO4 - MNCH	$635,264	0%	85%
Total	**$175,780,942**	**93%**	**NA**

A10. Product-level detail

Task Order	Framework contract percentage	Procurement total
TO1 - COVID19	**100%**	**$2,276,885**
COVID19	100%	$2,276,885
TO1 - HIV	**92%**	**$120,570,327**
Adult ARV	92%	$60,598,244
Condoms	100%	$3,582,840
Laboratory	91%	$50,686,638
Other Non-Pharma	75%	$211,020
Other Pharma	100%	$269,818
Other RTK	44%	$261,351
Pediatric ARV	100%	$2,446,993
TB HIV	100%	$866,605
VMMC	100%	$1,646,818
TO2 - Malaria	**96%**	**$38,540,105**
ACTs	100%	$5,137,927
Laboratory	100%	$166,563
LLINs	91%	$17,591,353
mRDTs	100%	$10,325,758
Other Non-Pharma	82%	$18,210
Other Pharma	100%	$8,332
Severe Malaria Meds	100%	$3,324,619
SMC	100%	$304,100
SP	100%	$1,663,244

A10. Product-level detail

Task Order	Framework contract percentage	Procurement total
TO3 - FP/RH	**100%**	**$13,758,361**
Combined Oral Contraceptives	100%	$1,530,245
Implantable Contraceptives	100%	$5,239,204
Injectable Contraceptives	100%	$6,739,280
Other Non-Pharma	100%	$249,632
TO4 - MNCH	**0%**	**$635,264**
Food and WASH	0%	$635,264

Task Order	Analysis
TO1 - HIV	The use of framework contracts for HIV/AIDS procurement decreased slightly this quarter to 92 percent from 96 percent in the previous quarter. This decease was attributable to the Adult ARV, Other Non-Pharma and Other RTK product categories, which utilized framework contracts this quarter for 92 percent, 75 percent and 45 percent of procurements, respectively. All other product categories remained at 100 percent, except for Laboratory, which was at 91 percent for the quarter.
TO2 - Malaria	Malaria procurements continued to remain about the target of framework contract percentage, with a value of 96 percent. This is a slight decrease from 98 percent in the previous quarter. The two categories driving this decrease were Other Non-Pharma and LLINs, which registered values of 82 percent and 91 percent utilization of framework contracts, respectively.
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 were entirely conducted not utilizing any framework contracts this quarter. The indicator stands at 0 percent. MNCH procurements can be highly variable and potentially emergent needs. There was only one line procured for TO4 this quarter, for Ready-to-Use Therapeutic Food (RUTF) for Nigeria.

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	**21.4%**	**117**
ACTs	10.5%	38
LLINs	3.6%	28
Severe Malaria Meds	42.1%	19
SMC	0.0%	10
mRDTs	42.9%	7
Laboratory	100.0%	6
SP	0.0%	5
Other Pharma	75.0%	4
TO3 - FP/RH	**10.2%**	**59**
Combined Oral Contraceptives	5.9%	17
Progestin Only Pills	0.0%	14
Implantable Contraceptives	45.5%	11
Injectable Contraceptives	0.0%	11
Copper-Bearing Intrauterine Devices	0.0%	4
Emergency Oral Contraceptives	0.0%	1
Other Non-Pharma	0.0%	1
Total	**17.6%**	**176**

Task Order	Analysis
TO3 - FP/RH	The project utilized registration waivers for 10.2 percent of items, an increase from the 7 percent of items from last quarter. The majority of waivers were utilized for Implantables followed by Combined Oral Contraceptives for Mali, Mozambique, Bangladesh and Uganda. The registrations for Mali and Mozambique have been submitted.
TO2 - Malaria	The project utilized registration waivers for 21.4 percent of line items this quarter. While waivers were spread across most commodity groups, the maximum numbers of waivers were acquired in the Severe Malaria Medicines, Laboratory, ACTs and Other Pharma commodity groups. Countries for which registration waivers were acquired were Guinea (for Laboratory products), Cameroon, Thailand, Cambodia amongst others. For Severe Malaria Medicines, there were certain supplier constraints issues which led to reliance on one manufacturer. Due to expiry of certain waivers in Cameroon for Severe Malaria Medicines, waivers were sought in the country. For Laboratory products there were certain line items for Nigeria which are included in the National Agency for Food and Drug Administration list which made them eligible for a waiver.

Supply Plan Submissions

Current Reporting Period: 2024-Q2

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

Product Group	# of supply plans required	Supply plan submission rate	Submission target
ARVs	21	95%	94%
Condoms	21	100%	94%
FP commodities	21	100%	94%
Lab (HIV diagnostics)	17	94%	92%
Malaria commodities	25	92%	95%
RTKs	21	90%	93%
TPT	15	93%	92%
VMMC	5	100%	80%
Total	**146**		

Task Order	Analysis
TO1 - HIV	Submission rates for HIV supply plans was strong this quarter with 100 percent submission for Condoms and VMMC. Lab , TPTs, RTKs and ARVs saw a slight decrease in supply plan submission, but the only countries missing submissions were countries in which GHSC-PSM does not have a field office presence - the supply plan for ARVs and TPTs from Cote d'Ivoire were not submitted this quarter.
TO2 - Malaria	All except two supply plans were submitted this quarter for malaria products. The countries missing the supply plans were Sierra Leone and Madagascar. With a submission rate of 92 percent, this falls just below the target of 95 percent.
TO3 - FP/RH	Supply plan submissions for family planning commodities and condoms was strong this quarter, with 100 percent of supply plans submitted.
TO4 - MNCH	Supply plan submissions for maternal, newborn, and child health commodities was strong with a 100 percent submission rate.

Supply Plan and Forecast Performance

Current Reporting Period

2024-Q2

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	18%	-18%	17%	22%	-17%
Condoms	27%	27%	14%	30%	-14%
Laboratory	33%	-33%	27%	25%	-27%
Pediatric ARV	8%	-8%	14%	25%	14%

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	18%	18%	29%	35%	-29%
mRDTs	7%	7%	24%	25%	-24%

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	0%	0%	29%	25%	-29%
Copper-bearing Intrauterine Devices	0%	0%	6%	30%	-6%
Implantable Contraceptives	10%	10%	8%	25%	8%
Injectable Contraceptives	68%	68%	12%	22%	12%
Progestin Only Pills	3%	3%	2%	25%	2%

Task Order	Analysis
TO1 - HIV	Supply plan error for Adult ARVs increased to 18 percent this quarter. The rolling- four quarter increased to 17 percent. Last quarter's result of 1 percent supply plan error was unusual, this quarter's increase is in line with historical performance. This error was a result of the difference between Nigeria's and Zambia's supply plans and actual orders. There was a planned quantity of 512,000 units of TLD 90 which were anticipated for Nigeria, but the orders didn't materialize. There was an additional planned amount of 215, 000 units for Zambia, but the orders did not materialize either. For pediatric ARVs, the error reduced this quarter to 8 percent from the 50 percent of last quarter.There was a slight difference between the planned and ordered amount, of approximately 42,000 units. This quantity was planned for Zambia, but the order could not be finalized before the end of the quarter. Due to the low requested quantity of Pediatric ARV (less than 1 million) in most quarters, the error varies between high (>25%) or less than (<10%).
TO1 - HIV	The forecast error for condoms was reduced to 27 percent, with a rolling-four quarter metric to 14 percent. While noticeable, this was still a decrease from the 81 percent forecast error from last quarter. The final ordered amount was higher than the forecasted amount by more than 8 million units. There was an order placed for Senegal for approximately 8 million units with a short lead time (<90 days). For female condoms, there were orders which were placed for Cameroon and Senegal with a short lead time, which accounted for the positive forecast error.
TO1 - HIV	There was a significant decrease in the supply plan error for lab commodities to 33 percent, and the rolling four-quarter metric stood at 27 percent. The planned amount based on the supply plans was higher than the ordered amount. The maximum number of units which did not materialize into actual orders, were under Other lab products. There were 21,775 units of lab consumables planned for Mozambique, but the resultant ordered units stood at 220. Under VL lab products, there were 4,880 units planned for Zambia which did not convert into actual orders. Under EID products, there was a difference of more than 1500 and 1000 units for Tanzania and Zambia respectively, between the final planned and requested figures.
TO2 - Malaria	For AL, the supply plan error increased to 41 percent, with a rolling-four quarter error at 16 percent. There was a very large order from the DRC comprising of more than 2.5 million units which was not in the supply plans. Also, there were orders from Senegal and Zimbabwe with more than 30, 000 units and more than 300,000 units respectively, which were ordered but there was no accounting of these commodities in the supply plans of either country. The supply plan for ASAQ increased to 111 % with a four-quarter rolling metric of 146 percent. Both requested and planned quantities are smaller under ASAQ as compared to the last few quarters. As denominators decrease, even small differences in requested versus planned commodities can lead to a higher error margin. ASAQ experienced the opposite trend as compared to AL. Angola ordered only half the units which it had forecasted in the supply plan, there was a difference of more than 2 million units between the requested and ordered amount. The supply plan error for mRDT decreased to 7 percent this quarter with a four-quarter rolling metric at 24 percent. The amount ordered for Malawi ended up being more than half what was included in the supply plan which led to a difference of more than 3 million units
TO3 - FP/RH	During the period, there was a decrease in the forecast error for some family planning commodities. The forecast error for Combined Oral Contraceptives and Copper bearing Intrauterine devices stood at 0 percent for both. Progestin only Pills registered a forecast error of 3 percent. For Implantables, the forecast error stood at 10 percent with a rolling-four quarter metric at 8 percent. The planned amount was less than the amount ordered. There was an order placed for Madagascar with insufficient lead time. For Injectables, the forecast error increased to 68 percent with a rolling-four quarter metric at 12 percent. The total ordered quantity was higher than the planned amount. The difference emanated from MPA-IM orders from Bangladesh for 1.65 million units, Madagascar for 1.7 million units and Mali for 294, 000 units. There was another order for MPA-SC which was placed for Malawi, amounting to 900,000 units. For Bangladesh and Madagascar the orders were placed through Social Marketing Organizations (SMOs), whereby the final quantities were shared too late with insufficient lead time which prevented forecasting for those orders

Total Landed Cost

Current Reporting Period

2024-Q2

Task Order	Analysis
TO2 - Malaria	GHSC-PSM's total landed cost indicator is equal to the sum of all costs associated with commodity delivery, divided by the total value of commodities delivered. It is reported semiannually, for a rolling 12-month period, and provides a high-level sense of the project's relative operations and direct logistics costs but may lack precision for several reasons: 1) Commodity cost savings may cause the denominator to decrease, even if volume stays the same. This may have the effect of increasing total landed cost as a percentage, even if costs in the numerator remain the same. 2) Logistics costs for items shipped under C and D Incoterms are built into the commodity cost charged by the supplier. They cannot be separated out and assigned to the numerator. 3) Costs in the numerator represent invoices paid, per the project monthly financial statement, while commodity costs are based on items delivered. Numerator costs may therefore be delayed compared to delivery activity represented by the denominator. Data for the current period shows total landed costs increasing slightly, to 22.8 percent. Expenditures in drop ship freight increased from the previous period. Total landed cost including headquarters operations expenditures also showed an increase, to 27 percent. Comparing the amounts of both cost categories, freight and logistics costs almost 10 times the amount for HQ, so likely any changes in the freight and logistics category will be reflected in the overall scoring.
TO1 - HIV	GHSC-PSM's total landed cost indicator is equal to the sum of all costs associated with commodity delivery, divided by the total value of commodities delivered. It is reported semiannually, for a rolling 12-month period, and provides a high-level sense of the project's relative operations and direct logistics costs but may lack precision for several reasons: 1) Commodity cost savings may cause the denominator to decrease, even if volume stays the same. This may have the effect of increasing total landed cost as a percentage, even if costs in the numerator remain the same. 2) Logistics costs for items shipped under C and D Incoterms are built into the commodity cost charged by the supplier. They cannot be separated out and assigned to the numerator. 3) Costs in the numerator represent invoices paid, per the project monthly financial statement, while commodity costs are based on items delivered. Numerator costs may therefore be delayed compared to delivery activity represented by the denominator. This period, freight and logistics costs as a percentage of dollar value delivered for HIV commodities decreased to 7.1 percent. The value of commodities delivered increased in comparison to the previous quarter, and the freight and logistics costs decreased. The cost for HQ operations this quarter increased, and when factored in, the total landed cost has decreased slightly to 14.3 percent. Headquarters expenditures have increased slightly, but not at the same rate as the decrease in the cost of freight and logistics, or the increase in the delivery value, which can explain the percentage decrease for the total landed cost when HQ costs are included.

A5. Total Landed Costs

Task Order	Total Landed Cost (Freight and Logistics)	TLC Target	Delivery Total	Total Landed Cost (Freight, Logistics, and HQ Operations)
TO1 - HIV	7.1%	10%	$408,020,701	14.3%
TO2 - Malaria	22.8%	20%	$185,252,057	27.0%
TO3 - FP/RH	15.5%	22%	$46,062,780	27.3%
TO4 - MNCH	69.9%	16%	$3,486,743	90.9%
Total	**12.6%**	**15%**	**$642,822,281**	**19.3%**

A5. Cost Breakdown

Cost Type	TO1 - HIV	TO2 - Malaria	TO3 - FP/RH	TO4 - MNCH	**Total**
Freight and Logistics	**$28,972,914**	**$42,156,370**	**$7,122,533**	**$2,435,653**	**$80,687,470**
Country-specific Logistics Costs	$900,111	$350,773	$878,601	$9,984	**$2,139,469**
Demurrage	$183,605	$452,039	$82,189	$6,330	**$724,163**
Drop Ship Freight	$22,887,866	$38,436,344	$2,951,599	$2,407,064	**$66,682,873**
Inbound Freight	$485,414	$260,078	($61,302)	$0	**$684,190**
Insurance	$1,054,476	$286,373	$61,984	$10,175	**$1,413,008**
Loss	$119,069	$5,566	$3,611	$0	**$128,246**
Outbound Freight	$2,417,796	$212,365	$3,035,095	$0	**$5,665,256**
Quality Control	$11,390	$1,617,628	$1,332	$0	**$1,630,350**
Security	$88,512	$453,987	$1,050	$2,100	**$545,649**
Warehousing	$824,675	$81,217	$168,374	$0	**$1,074,266**
HQ Operations	**$29,323,096**	**$7,950,194**	**$5,436,091**	**$733,920**	**$43,443,301**
Forecasting and Supply Planning	$1,678,589	$534,585	$591,010	($64)	**$2,804,120**
GS1	$1,647,197	$626,011	$43,309	$47,647	**$2,364,164**
MIS	$4,224,600	$718,904	$1,577,236	$106,235	**$6,626,975**
Monitoring and Evaluation	$5,373,787	$1,499,892	$792,727	$159,928	**$7,826,334**
Procurement	$14,206,884	$4,349,875	$2,170,056	$393,319	**$21,120,134**
Warehousing and Distribution	$2,192,039	$220,927	$261,753	$26,855	**$2,701,574**
Total	**$58,296,010**	**$50,106,564**	**$12,558,624**	**$3,169,573**	**$124,130,771**

Data notes

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

Current Reporting Period

2024-Q2

Total Landed Cost

A5. Total Landed Costs

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Drop Ship Freight	$22,887,866	$38,436,344	$2,951,599	$2,407,064	**$66,682,873**
Inbound Freight	$485,414	$260,078	($61,302)	$0	**$684,190**
Insurance	$1,054,476	$286,373	$61,984	$10,175	**$1,413,008**
Loss	$119,069	$5,566	$3,611	$0	**$128,246**
Outbound Freight	$2,417,796	$212,365	$3,035,095	$0	**$5,665,256**
Quality Control	$11,390	$1,617,628	$1,332	$0	**$1,630,350**
Security	$88,512	$453,987	$1,050	$2,100	**$545,649**
Warehousing	$824,675	$81,217	$168,374	$0	**$1,074,266**
HQ Operations	**$29,323,096**	**$7,950,194**	**$5,436,091**	**$733,920**	**$43,443,301**
Forecasting and Supply Planning	$1,678,589	$534,585	$591,010	($64)	**$2,804,120**
GS1	$1,647,197	$626,011	$43,309	$47,647	**$2,364,164**
MIS	$4,224,600	$718,904	$1,577,236	$106,235	**$6,626,975**
Monitoring and Evaluation	$5,373,787	$1,499,892	$792,727	$159,928	**$7,826,334**
Procurement	$14,206,884	$4,349,875	$2,170,056	$393,319	**$21,120,134**
Warehousing and Distribution	$2,192,039	$220,927	$261,753	$26,855	**$2,701,574**
Total	**$58,296,010**	**$50,106,564**	**$12,558,624**	**$3,169,573**	**$124,130,771**

Task Order	Analysis
TO3 - FP/RH	GHSC-PSM's total landed cost indicator is equal to the sum of all costs associated with commodity delivery, divided by the total value of commodities delivered. It is reported semiannually, for a rolling 12-month period, and provides a high-level sense of the project's relative operations and direct logistics costs but may lack precision for several reasons: 1) Commodity cost savings may cause the denominator to decrease, even if volume stays the same. This may have the effect of increasing total landed cost as a percentage, even if costs in the numerator remain the same. 2) Logistics costs for items shipped under C and D Incoterms are built into the commodity cost charged by the supplier. They cannot be separated out and assigned to the numerator. 3) Costs in the numerator represent invoices paid, per the project monthly financial statement, while commodity costs are based on items delivered. Numerator costs may therefore be delayed compared to delivery activity represented by the denominator This period, freight and logistics costs as a percentage of family planning commoditied delivered increased to 15.5 percent, remaining relatively consistent with last term's 15.4 percent. However, when factoring in the cost of HQ operations, the total landed costs result is 27.3 percent, an increase from last term. The two drivers for these increases are 1) a decrease in delivery totals, which impacts the proportion of total landed cost, and 2) an increase in HQ operations costs, specifically in MIS.
TO4 - MNCH	GHSC-PSM's total landed cost indicator is equal to the sum of all costs associated with commodity delivery, divided by the total value of commodities delivered. It is reported semiannually, for a rolling 12-month period, and provides a high-level sense of the project's relative operations and direct logistics costs but may lack precision for several reasons: 1) Commodity cost savings may cause the denominator to decrease, even if volume stays the same. This may have the effect of increasing total landed cost as a percentage, even if costs in the numerator remain the same. 2) Logistics costs for items shipped under C and D Incoterms are built into the commodity cost charged by the supplier. They cannot be separated out and assigned to the numerator. 3) Costs in the numerator represent invoices paid, per the project monthly financial statement, while commodity costs are based on items delivered. Numerator costs may therefore be delayed compared to delivery activity represented by the denominator. Data for the current period shows that freight and logistics costs as a percentage of MNCH commodities delivered increased to 69.9 percent. Expenditures in freight and logistics categories have increased dramatically, specifically in the drop ship freight category. The total delivery value was unable to keep pace with the increase in costs, especially considering there were no MNCH deliveries in FY24 Q2, and an increase in total landed cost is expected. Total landed cost with headquarters operations expenses included also increased this period, to 90.9 percent, mainly because the freight and logistics costs increased so dramatically, even though HQ operations costs did not. MNCH product procurement changes greatly from term to term, so the variability of this indicator is expected.

Data notes

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

Vendor Performance

Current Reporting Period

2024-Q2

A14a-c. Average vendor rating score

Vendor Type	Average vendor rating
Commodity Supplier	69%
Freight Forwarder	89%
QA Lab	91%

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?	87%	48%	41%
2 - Responsiveness	Does the lab provide prompt response after receipt of GHSC-PSM request for testing	96%	15%	14%
3 - Completeness of Documentation	Frequency of modification to Certificates of Analysis (CoA)	97%	18%	17%
4 - Invoice Accuracy	Submitted invoices for routing testing adhere to set IDIQ pricing	100%	10%	10%
5 - Service	Adherence to other terms and conditions, not related to reliability, responsiveness, completeness, and cost (Qualitative)	78%	10%	8%
Total			**100%**	**91%**

Analysis

This quarter's average freight forwarder vendor rating shows an 89 percent average performance for third-party logistics (3PL), slightly up from last quarter's 86 percent. Performance across metrics such as EDI status, booking timeliness, spot quote turnaround, responsiveness, and non-compliance report remained consistent with the high performance observed in the previous quarter. However, the timeliness sub-indicator within the invoicing accuracy component decreased to 37 percent this quarter from its previous 39 percent. It is expected that this metric will improve in subsequent quarters as data reviews continue and rate refresh from 3PLs improves.

The vendor performance score for this period's lab services remained consistent at 91 percent. The service score decreased from 84 percent to 78 percent, but the completeness score improved from 94 percent to 97 percent. Reliability, which is the largest factor in vendor scoring, remained consistent, with a slight decrease to 87 percent from last quarter's 88 percent. Responsiveness saw a slight decrease as well, from 98 percent to 96 percent, and invoice accuracy remained 100 percent. Reliability and responsiveness carry the most weight and therefore their consistency and increases also kept the overall score consistent.

In FY24 Q2, the supplier OTP increased to 69 percent, up from 61 percent in FY24 Q1. The Q2 score reflects an updated calculation logic for D-Term orders' SDD timeliness, to which some of the increase over Q1 is attributed. TO3, ARVs, and essential medicine suppliers are maintaining or improving their performance compared to previous quarters. However, TO2 supplier performance has declined. Incorrect or delayed shipping documents remain a leading cause of late orders, highlighting the need for more timely documentation of updated or revised GADs to improve overall scores.

Data notes

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

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

Global Advocacy Engagements

Current Reporting Period

2024-Q2

HIV/AIDS

2

Name of Engagement	Description
International Conference on AIDS and STIs in Africa (ICASA)	During the International Conference on AIDS and STIs in Africa (ICASA) in Harare, Zimbabwe (December 4-9, 2023), GHSC-PSM Afya Ugavi, represented by a Kenya Ministry of Health staff member, presented an abstract on strengthening inventory management and stock visibility of HIV supply at the last mile, including achievements, challenges, and lessons from Makueni county, Kenya. GHSC-PSM project offices in Malawi and Nigeria shared two posters on enhancing the capacity of the Malawi Ministry of Health's responsiveness to HIV/AIDS through on-the-job training and supportive supervision, and adult antiretroviral therapy optimization and multi-month dispensing scale-up in Nigeria toward achieving HIV epidemic control.
African Society for Laboratory Medicine (ASLM) Conference	During the African Society for Laboratory Medicine (ASLM) conference in Cape Town, South Africa (December 12-15, 2023), GHSC-PSM staff participated in a satellite session hosted by USAID, the Global Fund and PEPFAR entitled "Empowering Progress: Improving Viral Load/Early Infant Diagnosis Capabilities & Expanding All-Inclusive Service Level Agreements under PEPFAR." The GHSC-PSM Ghana and Nigeria project office teams and GHSC-PSM HQ health systems strengthening advanced analytics team presented three abstracts during the poster exhibition.

Global Advocacy Engagements

Current Reporting Period

2024-Q2

Malaria

4

Name of Engagement	Description
American Society of Tropical Medicine and Hygiene Conference	During the American Society of Tropical Medicine and Hygiene conference in Chicago, Illinois (USA) from October 18-22, 2023, GHSC-PSM delivered six poster presentations. Staff from the GHSC-PSM project offices in Ghana, Kenya, Nigeria, Malawi and Zambia presented studies on increasing access to malaria commodities, improving malaria commodity accountability and traceability, multifaceted interventions for uninterrupted malaria commodities, and enhancing malaria supply chain data quality and visibility using an automated consumption anomaly detection tool.
Workshop: African Pharmaceutical Manufacturers – Pathways of Cooperation	Immediately following the 2023 ARV Buyer-Seller Summit, the Medicines for Malaria Venture (MMV) and the German Development Cooperation (GIZ) co-hosted a workshop in Maputo, Mozambique from November 1- 2, 2023 entitled "African Pharmaceutical Manufacturers -- Pathways to Cooperation" to discuss pathways toward increasing local production of quality approved pharmaceuticals on the African continent. The absence of a strong manufacturing base in Africa is a cause for concern, as highlighted by supply bottlenecks during the COVID-19 pandemic, which underscored the importance of diversifying the production of pharmaceuticals and building a manufacturing base closer to demand. Representatives from the GHSC-PSM HQ HIV/AIDS Task Order and Malaria Task Order presented on the U.S. government quality assurance eligibility/procurement processes alongside USAID colleagues.
Child Health Task Force Webinar on "Institutionalizing Supply Chains for Community Case Management"	On January 23, 2024, the GHSC-PSM HQ Malaria Task Order Director served as a presenter and panelist at the Child Health Task Force webinar on institutionalizing supply chains for community case management. The webinar was hosted by the Newborn and Child Health Commodities Sub-group with support from USAID, the President's Malaria Initiative (PMI), the Global Fund and GHSC-PSM. Other members of the Malaria Task Order team attended the webinar and participated in the planning process. Webinar presentations and discussions focused on strengthening community-level supply chains, a particularly challenging component of community health delivery that must be optimized to improve community health worker programs.
Alliance for Malaria Prevention (AMP) Annual Malaria Partners Meeting and Campaign Digitalization Meeting	The aim of the Alliance for Malaria Prevention (AMP) annual malaria partners meeting and campaign digitalization meeting in Nairobi, Kenya (February 19-22, 2024) was to facilitate the exchange of experiences and present research findings to foster collaboration among stakeholders to address obstacles to achieving and sustaining widespread access to and usage of insecticide-treated bed nets (ITNs). During the meeting, the GHSC-PSM HQ Malaria Task Order Director and Vector Control Specialist participated in discussions on ITN distribution through campaigns and continuous distribution channels focused on sharing experiences and innovations toward optimizing ITN access and use. Other members of the Malaria Task Order team met with other partners including the Global Fund, Imperial College of London, and the President's Malaria Initiative (PMI) resident advisor in Nairobi. The Malaria Task Order team discussed TraceNet activities with the AMP and PMI, as well as plans for GHSC-PSM to present TraceNet at one of the AMP weekly meetings.

Global Advocacy Engagements

Current Reporting Period

2024-Q2

Family Planning and Reproductive Health

5

Name of Engagement	Description
Consensus Planning Group (CPG) Markets Group Meetings	The Consensus Planning Group (CPG) consists of two sub-groups: the Exceptions Management (EM) Group and the Global Market (GM) Group. The GM Group covers CPG tasks that have a market-level impact. These include prioritization of constrained products within available supply (one-rod implant and MPA-SC, for example), support for a healthy family planning market, new family planning product introductions in alignment with GFPVAN terms of use, and review and discussion of market-level demand forecasts produced by the CPG/GFPVAN to align on outputs and methodology (limited to contraceptive implants as of now). Participants from CHAI, JSI, RHSC, UNFPA, USAID, and GHSC-PSM met monthly from October 2023 to March 2024 to achieve the above.
Contraceptive Security (CS) Indicators Research Dissemination	In November 2023, USAID and GHSC-PSM held a panel discussion on findings from the project's analysis of national policies that influence the modern contraceptive prevalence rate (mCPR) and the contraceptive methods on offer in the private sector (method mix strategy) in 59 low- and middle-income countries. The analysis was based on data collected via the Contraceptive Security Indicators (CSI) Survey between 2010 and 2021. The discussions focused on the implications of the findings for USAID investments and prioritization of technical assistance. Several partner organizations were in attendance, including RHSC, UNFPA, CHAI, and FP2030.
Global Family Planning Visibility and Analytics Network (GFPVAN) Technical Working Group and Steering Committee Meetings	GHSC-PSM participated in the Global Family Planning Visibility and Analytics Network (GFPVAN) technical working group virtual meetings on January 17, January 18, and March 28, 2024. GHSC-PSM also attended the GFPVAN steering committee meetings virtually on January 30, February 1, and February 5, 2024. During these meetings, the project supported country data on commodity orders and inventory for procurement and shipment tracking purposes, monitored each country's usage of the VAN to coordinate with premium and basic countries to ensure issues, concerns and challenges were resolved, and worked with premium countries to identify the responsible entities for membership payments for year 1 and year 2. The GHSC-PSM HQ Family Planning Task Order Director and GHSC-PSM HQ health systems strengthening MIS lead represented the project during the technical working group and steering committee meetings every month.
Hormonal Intrauterine Device (IUD) Steering Committee and Hormonal IUD Access Group Meetings	GHSC-PSM continues to be an active member of the Hormonal IUD Steering Committee and Hormonal IUD Access Group. GHSC-PSM participated in meetings involving the Hormonal IUD Ops Group in January 2024, the Hormonal IUD Steering Committee in November 2023 and February 2024, and Hormonal IUD Technical/Supply Side Workstream in March 2024 with the goal of coordinating with global stakeholders to facilitate the introduction and scale-up of hormonal IUDs in priority countries.
Healthy Markets Community of Practice (HMCoP) Meetings	GHSC-PSM attended Healthy Markets Community of Practice (HMCoP) meetings in October 2023 and January 2024, which covered recent market findings in Kenya. GHSC-PSM heard speakers from Kenya's Ministry of Health, FHM Engage, Bayer, research organizations, and other nonprofit organizations working in the country. Most presentations focused on recent family planning market findings and trends in Kenya, while some focused on expanding access to sexual and reproductive health interventions among key populations.

Global Advocacy Engagements

Current Reporting Period

2024-Q2

Maternal, Newborn, and Child Health

3

Name of Engagement	Description
Child Health Task Force Meetings	GHSC-PSM regularly participates in the Child Health Task Force, Commodity Sub-Group Meetings. The Task Force regularly holds webinars and general meetings to optimize coordination among global and national supply chain partners to improve the availability of medicines for children. GHSC-PSM participated in the launch of the Child Survival Action (CSA) initiative and related resources. The CSA initiative is a renewed call to all partners—national governments, civic and traditional leaders, communities, and regional and global stakeholders—to end preventable child deaths.
Maternal Health Supplies (MHS) Caucus	As part of its global leadership efforts, GHSC-PSM participates in the Reproductive Health Supplies Coalition (RHSC), a global partnership of agencies that brings together donors, international and domestic NGOs, manufacturers, and professional organizations to improve the availability of critical health supplies. GHSC-PSM participates in the Maternal Health Supplies (MHS) Caucus, a subgroup within the RHSC that provides a forum for maternal health communities to develop an understanding of maternal health supply-related challenges and solutions. The MHS caucus holds webinars monthly and has general meetings every quarter.
Technical Convening on Prioritizing WHO-recommended Maternal and Newborn Health Commodities	From October 30 to November 1, 2023 in Geneva, Switzerland, GHSC-PSM participated in the Technical Convening on Prioritizing WHO-recommended Maternal and Newborn Health Commodities. The purpose of this meeting was to build consensus on the final list of commodities and discuss the contents of future implementation guidance. GHSC-PSM will continue to work with this group to review the list of maternal and newborn health commodities prioritized for scale-up and provide feedback on the final implementation guidance.

Global Advocacy Engagements

Current Reporting Period

2024-Q2

Crosscutting

5

Name of Engagement	Description
Information and Communications Technology for Development (ICT4D) Conference	At the Information and Communications Technology for Development (ICT4D) Conference in Accra, Ghana (March 18-21, 2024), members of the GHSC-PSM Ghana project office team participated in a discussion on leveraging advanced data analytics and visualization for advocacy and supply chain decision-making. They also participated in a panel, moderated by the GHSC-PSM Nigeria country director, on mass digital health campaigns and their role in strengthening health systems.
Global Health Supply Chain (GHSC) Summit	During the Global Health Supply Chain (GHSC) Summit in Nairobi, Kenya (November 14-16, 2023), GHSC-PSM teams from HQ and the Zambia, Kenya, Burkina Faso, Niger and Rwanda project offices delivered five presentations and two panel sessions on the theme of the summit, "The Journey to Self-Reliance: Sustainable and Resilient Supply Chains for Equitable Access to Healthcare."
Humanitarian Health and Logistics Conference	During the Humanitarian Health and Logistics (HHL) Conference in Nairobi, Kenya (November 21-22, 2023), the GHSC-PSM HQ Malaria Task Order Director moderated a panel session on matching demand with local supply, which started with a presentation on the project's work strengthening health supply chains from the regional to country level. The GHSC-PSM Afya Ugavi chief of party led a short breakout session on strengthening health supply chains.
Reproductive Health Supplies Coalition (RHSC) General Membership Meeting	The GHSC-PSM HQ Family Planning and Reproductive Health Task Order Director facilitated a panel discussion on the Reproductive Health Supplies Coalition (RHSC) Strategy Redesign Advisory Group at the RHSC general membership meeting held in Accra, Ghana from October 16-20, 2023. The GHSC-PSM Malawi project office team presented on leveraging technology for supply chain resilience in Malawi's family planning and reproductive health commodity management, and a member of the GHSC-PSM HQ CLEAR M&E team presented on protecting access to contraceptives during the COVID-19 pandemic: an assessment of contraceptive security and supply chain resilience. The GHSC-PSM HQ Maternal, Newborn, and Child Health Task Order Deputy Director participated in the Maternal Health Supplies Caucus (MHSC) general membership meeting.
People that Deliver (PtD) Global Indaba Conference	The People that Deliver (PtD) Global Indaba is the sole global conference centered on the future of the supply chain management workforce. During the PtD Global Indaba conference in Bangkok, Thailand (March 6-8, 2024) GHSC-PSM was featured in a total of eight presentations, posters, and panels with participants from GHSC-PSM HQ and the GHSC-PSM Rwanda project office. Presentations covered the following topics: a workforce management framework for implementing digital supply chain information system, the quality management improvement approach, the technical independence indicator: sustainability measurement as a catalyst for garnering political support for HR capacity development, practical approaches to professionalizing the health supply chain workforce, and workforce training in product traceability.

Complete Quarterly Results (TO1)

Reporting Period

2024-Q2

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	**89%**	**9**	**75%**	**8**	**3.3%**	**90**	**100%**	**$2,276,885**
COVID19	89%	9	75%	8	3.3%	90	100%	$2,276,885
TO1 - HIV	**88%**	**815**	**92%**	**780**	**4.0%**	**3,533**	**92%**	**$120,570,327**
Adult ARV	82%	91	86%	88	7.2%	292	92%	$60,598,244
Condoms	96%	27	88%	32	2.2%	138	100%	$3,582,840
Food and WASH					100.0%	1		
Laboratory	85%	463	93%	424	3.9%	2,343	91%	$50,686,638
Other Non-Pharma	85%	20	68%	25	7.9%	165	75%	$211,020
Other Pharma	98%	56	97%	59	3.0%	232	100%	$269,818
Other RTK	55%	11	75%	8	14.7%	34	44%	$261,351
Pediatric ARV	87%	30	93%	27	0.8%	128	100%	$2,446,993
TB HIV	100%	6	100%	6	0.0%	41	100%	$866,605
Vehicles and Other Equipment	100%	1	100%	1	0.0%	3		
VMMC	100%	110	100%	110	0.0%	156	100%	$1,646,818
Total	**88%**	**824**	**92%**	**788**	**4.0%**	**3,623**	**92%**	**$122,847,212**

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	18%	-18%	17%	-17%
Laboratory	33%	-33%	27%	-27%
Pediatric ARV	8%	-8%	14%	14%
A6b - Forecast Error				
Condoms	27%	27%	14%	-14%

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

Country	Type of Loss	Product Group	Loss Value	Loss Denominator	% Loss
Cameroon	Damage	Condoms	$3,000	$125,000	2.40%
Kenya	Damage	Laboratory Consumables	$2,657	$8,069,876	0.03%
RDC	Expiry	NA	$0	$3,285,648	0.00%

A3. Cycle time (average)

Fulfillment Channel	Direct Drop Fulfillment			Warehouse Fulfillment		**Total**
Task Order	Air	Land	Sea	Air	Sea	
TO1 - COVID19	**146**			**74**		**130**
COVID19	146			74		**130**
TO1 - HIV	**244**	**198**	**351**	**102**	**266**	**248**
Adult ARV	226	254	306	54		**255**
Condoms			275	171	282	**258**
Laboratory	267	187	381			**245**
Other Non-Pharma	334	189	252			**250**
Other Pharma	262	116	475			**398**
Other RTK	296					**296**
Pediatric ARV	242	259	342	48	156	**233**
TB HIV	223					**223**
Vehicles and Other Equipment		1100				**1100**
VMMC	160		241			**173**
Total	**243**	**198**	**351**	**98**	**266**	**247**

A8. Shelf life remaining

% Shelf Life Remaining	Inventory Balance
78%	$3,841,739

B6. Quarterly supply plan submissions

Product Group	Supply plan submission rate	# of supply plans required
ARVs	95%	21
Condoms	100%	21
Lab (HIV diagnostics)	94%	17
RTKs	90%	21
VMMC	100%	5

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	69%
Freight Forwarder	89%

Complete Quarterly Results (TO2)

Reporting Period

2024-Q2

	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	**91%**	**117**	**92%**	**120**	**3.3%**	**614**	**21.4%**	**117**	**96%**	**$38,540,105**	**92%**	**86**	**1.3%**	**240**	**100%**	**1**
ACTs	95%	38	87%	45	3.9%	228	10.5%	38	100%	$5,137,927	89%	44	0.0%	81		0
Laboratory	83%	6	71%	7	2.2%	46	100.0%	6	100%	$166,563						
LLINs	82%	28	100%	24	2.6%	153	3.6%	28	91%	$17,591,353	100%	13	9.1%	33	100%	1
mRDTs	71%	7	100%	5	0.0%	47	42.9%	7	100%	$10,325,758	100%	5	0.0%	14		0
Other Non-Pharma					0.0%	5			82%	$18,210						
Other Pharma	100%	4	100%	4	0.0%	11	75.0%	4	100%	$8,332	100%	3		0		0
Other RTK					0.0%	1										
Severe Malaria Meds	95%	19	91%	22	4.3%	70	42.1%	19	100%	$3,324,619	100%	9	0.0%	44		0
SMC	100%	10	100%	8	8.0%	25	0.0%	10	100%	$304,100	80%	10	0.0%	68		0
SP	100%	5	100%	5	3.6%	28	0.0%	5	100%	$1,663,244	100%	2		0		0
Total	**91%**	**117**	**92%**	**120**	**3.3%**	**614**	**21.4%**	**117**	**96%**	**$38,540,105**	**92%**	**86**	**1.3%**	**240**	**100%**	**1**

A3. Cycle time (average)

Fulfillment Channel	Direct Drop Fulfillment			Warehouse Fulfillment	**Total**
Task Order	Air	Land	Sea	Air	
TO2 - Malaria	**247**	**463**	**316**	**172**	**296**
ACTs	206		259	172	**225**
Laboratory	520		218		**419**
LLINs		463	395		**405**
mRDTs	262		374		**358**
Other Pharma	255		327		**273**
Severe Malaria Meds	220		259		**238**
SMC			238		**238**
SP			337		**337**
Total	**247**	**463**	**316**	**172**	**296**

B6. Quarterly supply plan submissions

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

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	18%	18%	29%	-29%
mRDTs	7%	7%	24%	-24%

A8. Shelf life remaining

% Shelf Life Remaining	Inventory Balance
65%	$2,191,019

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	69%
Freight Forwarder	89%

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

Country	Type of Loss	Product Group	Loss Value	Loss Denominator	% Loss
RDC	Expiry	NA	$0	$2,420,822	0.00%

A14. Average vendor rating - QA labs

Average vendor rating
91%

Complete Quarterly Results (TO3)

Reporting Period

2024-Q2

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	**92%**	**59**	**97%**	**58**	**4.2%**	**331**	**100%**	**$13,758,361**
Combined Oral Contraceptives	100%	17	100%	16	0.0%	49	100%	$1,530,245
Copper-Bearing Intrauterine Devices	100%	4	100%	4	0.0%	23		
Emergency Oral Contraceptives	100%	1	100%	1	0.0%	12		
Implantable Contraceptives	91%	11	85%	13	14.3%	91	100%	$5,239,204
Injectable Contraceptives	64%	11	100%	8	1.1%	88	100%	$6,739,280
Laboratory					0.0%	2		
Other Non-Pharma	100%	1	100%	2	0.0%	23	100%	$249,632
Progestin Only Pills	100%	14	100%	14	0.0%	37		
Standard Days Method					0.0%	6		
Total	**92%**	**59**	**97%**	**58**	**4.2%**	**331**	**100%**	**$13,758,361**

A7. Temporary Waiver Percentage

Task Order	Temporary registration waiver percentage	Total # of line items delivered
TO3 - FP/RH	**10.2%**	**59**
Implantable Contraceptives	45.5%	11
Combined Oral Contraceptives	5.9%	17
Copper-Bearing Intrauterine Devices	0.0%	4
Emergency Oral Contraceptives	0.0%	1
Injectable Contraceptives	0.0%	11
Other Non-Pharma	0.0%	1
Progestin Only Pills	0.0%	14
Total	**10.2%**	**59**

A3. Cycle time (average)

Fulfillment Channel	Direct Drop Fulfillment			Warehouse Fulfillment		**Total**
Task Order	Air	Land	Sea	Air	Sea	
TO3 - FP/RH	**336**	**103**	**452**	**181**	**228**	**242**
Combined Oral Contraceptives	135		540	171	228	**238**
Copper-Bearing Intrauterine Devices				157		**157**
Emergency Oral Contraceptives	112					**112**
Implantable Contraceptives	453			212		**322**
Injectable Contraceptives	174	103	422		256	**280**
Other Non-Pharma		103				**103**
Progestin Only Pills				155	213	**201**
Total	**336**	**103**	**452**	**181**	**228**	**242**

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

Country	Type of Loss	Product Group	Loss Value	Loss Denominator	% Loss
RDC	Expiry	NA	$0	$5,458,533	0.00%

A6b. Absolute percent forecast error

A6 Indicator	Supply plan/ forecast error	Supply plan/ forecast bias	4-quarter error	4-quarter bias
A6b - Forecast Error				
Combined Oral Contraceptives	0%	0%	29%	-29%
Condoms	27%	27%	14%	-14%
Copper-bearing Intrauterine Devices	0%	0%	6%	-6%
Implantable Contraceptives	10%	10%	8%	8%
Injectable Contraceptives	68%	68%	12%	12%
Progestin Only Pills	3%	3%	2%	2%

B6. Quarterly supply plan submissions

Product Group	Supply plan submission rate	# of supply plans required
Condoms	100%	21
FP commodities	100%	21

A8. Shelf life remaining

% Shelf Life Remaining	Inventory Balance
84%	$4,511,999

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	69%
Freight Forwarder	89%

Complete Quarterly Results (TO4)

Reporting Period

2024-Q2

	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					**2.3%**	**87**	**0%**	**$635,264**
Food and WASH					66.7%	3	0%	$635,264
Laboratory					0.0%	1		
Other Non-Pharma					0.0%	10		
Other Pharma					0.0%	73		
Total					**2.3%**	**87**	**0%**	**$635,264**

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	69%
Freight Forwarder	89%

A3. Cycle time (average)

Task Order	Total
Total	

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.

Total Landed Cost

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

Global Advocacy Engagments

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

Indicator Details

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

Delivery Impact Indicators

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