

USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM
Procurement and Supply Management



FISCAL YEAR 2019

ANNUAL REPORT

October 1, 2018 to September 30, 2019

HIV samples are transported by motor bike in Nigeria. *Photo credit: Anthony Abu/GHSC-PSM*



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

The U.S. Agency for International Development (USAID) funds the Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project is 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 drugs, diagnostics, and health commodities to save lives and create a healthier future for all. The project purchases and delivers medicines, diagnostics, and health commodities; offers comprehensive technical assistance to strengthen national supply chain systems; and provides global supply-chain leadership.

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

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Acronyms

3HP	isoniazid and rifapentine combination treatment for tuberculosis
3PL	third-party logistics
4PL	fourth-party logistics
ACT	artemisinin-based combination therapy
ADVISER	AIDS Data Visibility, Evaluation and Reporting
API	active pharmaceutical ingredient
ART	anti-retroviral therapy
ARV	anti-retroviral
ASAQ	artesunate and amodiaquine
CAMEG	Central Purchasing of Essential Drugs
CARhs	Coordinated Assistance for Reproductive Health Supplies
CAPAs	corrective and preventive actions
CHAI	Clinton Health Access Initiative
CHW	community health workers
COP	Country Operational Plan
CS	Contraceptive Security
CSP	Coordinated Supply Planning
DMPA-IM	depot medroxyprogesterone acetate intramuscular
DHA-PPQ	dihydroartemisinin/diperaquine
DPML	Department of Pharmacy, Medicines and Laboratories Burundi
DRC	Democratic Republic of the Congo
DQA	data quality audit
EID	early infant diagnosis
eLMIS	electronic logistics management information system
ePOD	electronic proof of delivery
FLAT	First-Line ARV Transition
FLARE	First-Line ARV Reporting and Evaluation
FMOH	Federal Ministry of Health (Ethiopia)
FDA	Food and Drug Administration
FP/RH	family planning/reproductive health
FY	fiscal year
GDSN	Global Data Synchronization Network
GHSC-PSM	Global Health Supply Chain Program-Procurement and Supply Management project
GHSC-QA	Global Health Supply Chain Program-Quality Assurance project
GHSC-RTK	Global Health Supply Chain Program-Rapid Test Kit project
GLN	Global Location Number
Global FP VAN	Global Family Planning Visibility and Analytics Network
GTIN	Global Trade Item Number

GSI	Global Standards One
IPT	isoniazid prevention therapy
IUD	intrauterine device
JMS	Joint Medical Stores (Uganda)
KPI	key performance indicator
LLIN	long-lasting insecticide-treated net
LMIS	logistics management information system
LZN	lamivudine/zidovudine/nevirapine
MCH	maternal and child health
MMD	multi-month dispensing
MNCH	maternal, newborn, and child health
MOH	Ministry of Health
OTD	on-time delivery
OTIF	on-time in-full delivery
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PLHIV	people living with HIV
PMI	U.S. President's Malaria Initiative
PPH	Post-Partum Hemorrhage
PPMR	Procurement Planning and Monitoring Report
PPMRm	Procurement Planning and Monitoring Report-malaria
PrEP	pre-exposure prophylaxis
PSI	Population Services International
Q	quarter
QAMS	quality assurance management system
QC	quality control
QMS	quality management system
RDT	rapid diagnostic test
RHSC	Reproductive Health Supplies Coalition
RTK	rapid test kit
SMC	seasonal malaria chemoprevention
SOP	standard operating procedures
SP	sulfadoxine/ pyrimethamine
SPAQ	sulphadoxine-pyrimethamine + amodiaquine
SSWG	Systems Strengthening Working Group
TA	technical assistance
TB	tuberculosis
TLD	tenofovir, lamivudine, dolutegravir
TMA	Total Market Approach
TPT	TB preventive therapy
TransIT	transportation information tool




UAV	unmanned aerial vehicle
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VMMC	voluntary medical male circumcision
WAHO	West African Health Organization
WHO	World Health Organization

Executive Summary

The 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 to summarize its work and performance for Fiscal Year 2019 (FY 2019), with a special focus on Quarter 4 (Q4). We describe here our work in providing life-saving medicines, diagnostics, and health commodities and building efficient, reliable, and cost-effective supply-chains for delivering the drugs and health supplies needed for the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), the U.S. President’s Malaria Initiative (PMI), USAID’s programs in voluntary family planning/reproductive health (FP/RH), and the Agency’s program in maternal and child health (MCH), which equitably share the cost of the project.

Performance of the Global Supply-Chain

Section C1 describes GHSC-PSM’s global supply-chain, procurement, and logistics activities and achievements. Highlights of the performance of our global supply-chain appear below.

	Procured almost \$544 million in drugs, diagnostics, and health commodities in FY 2019, and almost \$2.1 billion to date. ¹
	Delivered almost \$699 million in drugs, diagnostics, and health commodities in FY 2019, and \$1.8 billion to date.
	Achieved on-time delivery² (OTD) of 92 percent and on-time, in-full delivery (OTIF) of 85 percent for the year. (See Exhibit 1.) The backlog of late orders dropped to 0.3 percent.

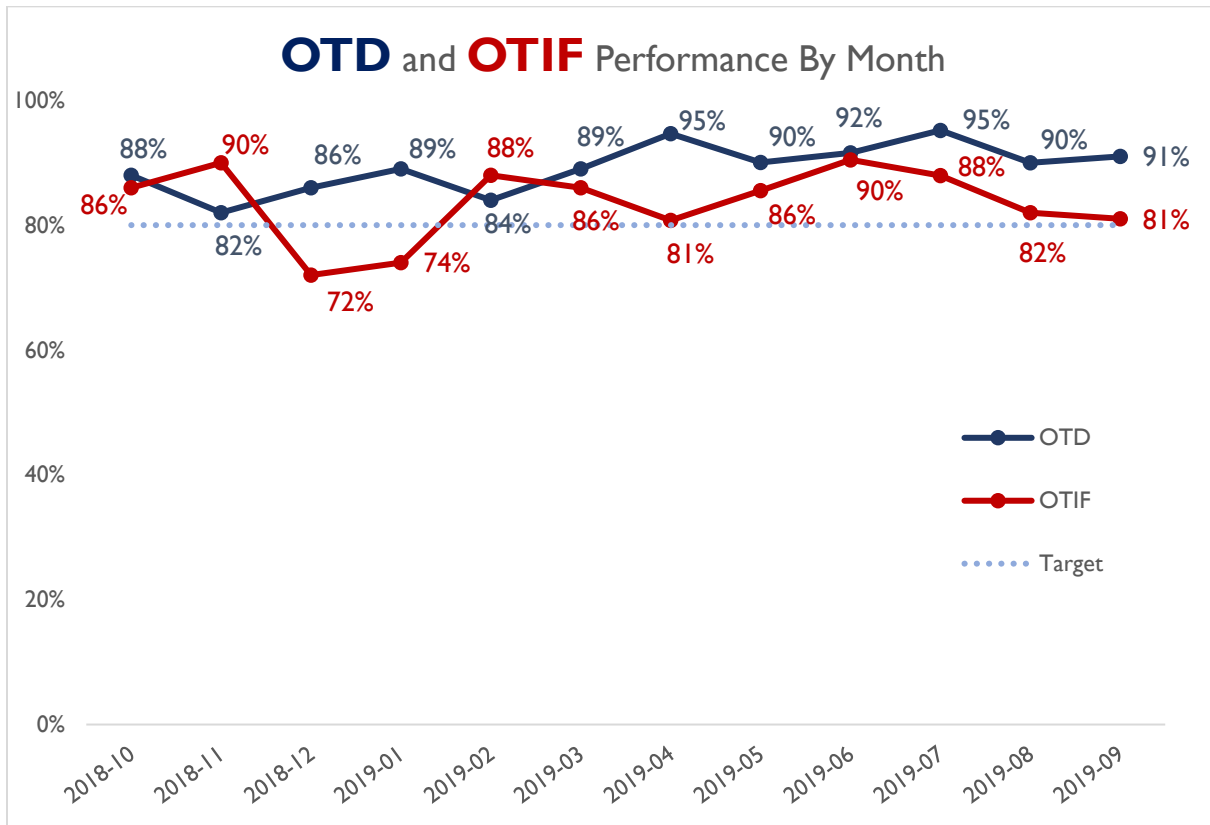
Delivery Performance

OTD and OTIF rates exceeded the contract’s 80-percent quarterly target each quarter for the last five quarters. GHSC-PSM continued to conduct root-cause analysis of late deliveries and to refine procurement and supply-chain processes to improve performance continuously.

¹ Procurement totals throughout this report refer to the contract value of commodity (only) at the time of order placement. For financial accounting on actual amounts paid to date (including, commodity, freight, insurance, etc.), please refer to project financial statements.

² 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 delivery date.

Exhibit I. OTD and OTIF in FY 2019, By Month



Value to the U.S. Taxpayer and the U.S. Government’s International Health Programs

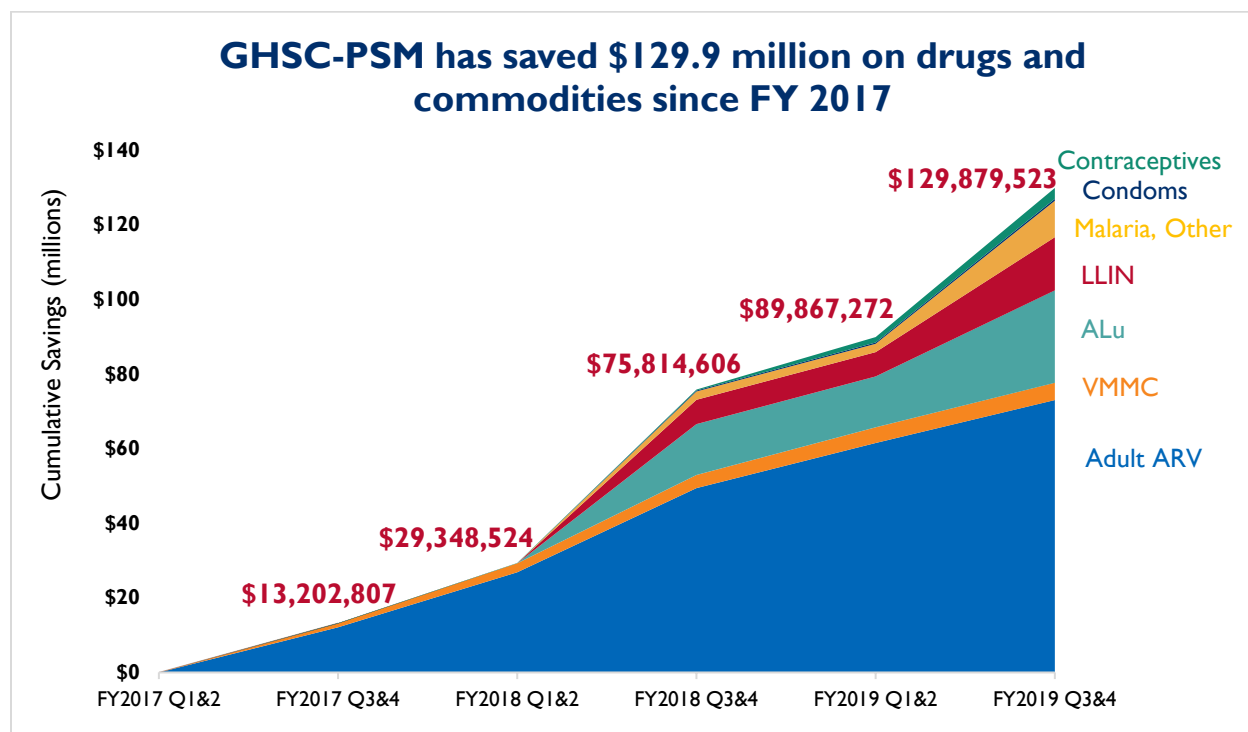
GHSC-PSM worked to achieve best value for the U.S. taxpayer by improving implementation approaches that result in lower costs.

Cost-savings on medicines and health commodities

GHSC-PSM conducted detailed analysis to understand the markets for the medicines and health commodities we procured and brought this knowledge to negotiations with suppliers. Through careful negotiation of long-term contracts with suppliers, for major product groups alone, the project has saved \$130 million over the life of the project, including \$54 million in FY 2019, as shown in Exhibit 2³.

³ Cost-savings are calculated based on orders placed in the period. Cost-savings values in those periods may be updated to reflect any subsequent changes to those orders.

Exhibit 2. 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 will maintain their interest in the market, while expanding the number of suppliers in many commodity categories so the U.S. Government can benefit from a competitive supplier base. More information on this analysis appears in Section C1b.

Cost-savings on logistics

GHSC-PSM saved money on logistics (see Exhibits 3 and 4) through optimizing the project’s network of regional distribution centers. This effort generated:

- Warehousing savings from lower costs at the project’s three regional distribution centers; and
- Transportation savings from shipping costs on actual commodities that moved through the three regional distribution centers, compared to what shipping would have cost for those commodities under the previous, five-warehouse model.

The project also saved money on freight by implementing a fourth-party logistics (4PL) model, whereby we competed all lanes and actively managed five third-party logistics (3PLs) that service our almost 6,000 lanes. The scale of the opportunity attracted many qualified freight-forwarders, and the competition drove down prices. More information on this analysis appears in Section C1b.

Total cost-savings on logistics to date were \$19.4 million, which includes \$7.9 million in transportation and warehousing costs from optimizing the regional distribution center network.

Exhibit 3. GHSC-PSM Savings on Logistics

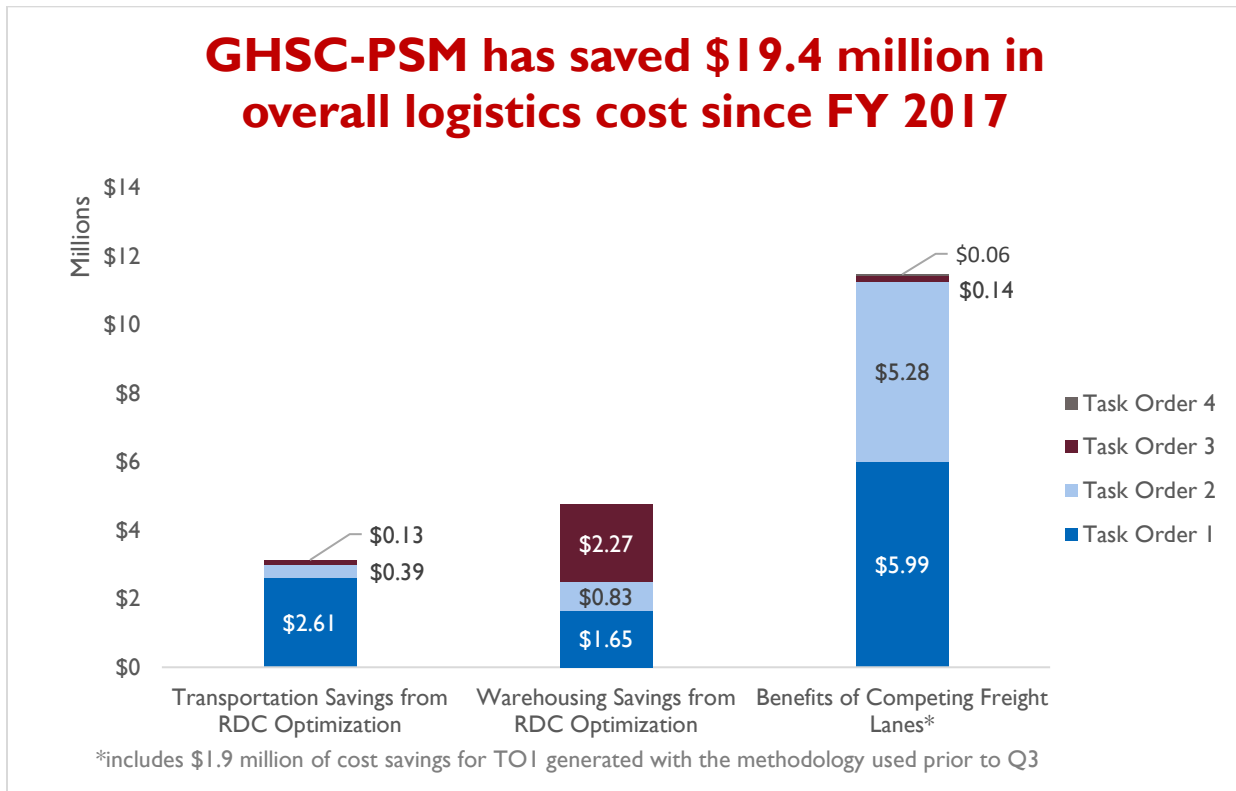
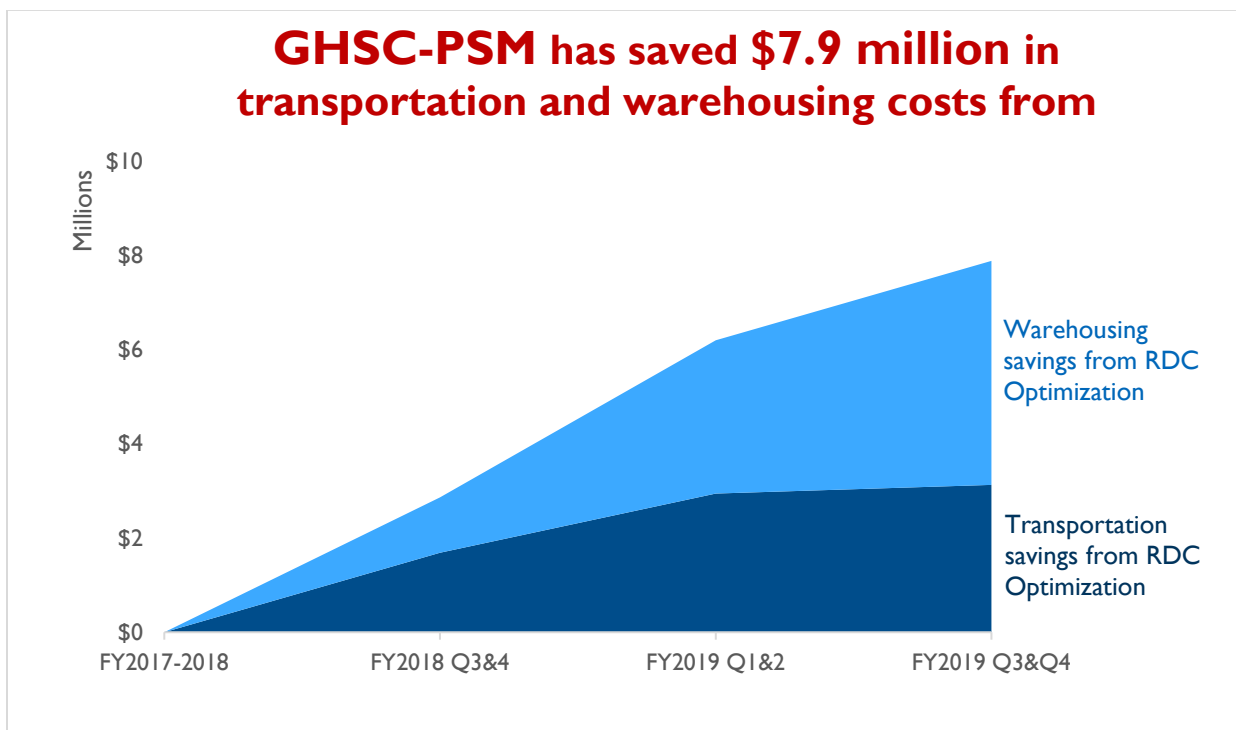


Exhibit 4: Cost-Savings in Warehousing and Transportation Costs.



Health Areas

GHSC-PSM provided procurement, assistance to strengthen supply-chains, and global collaboration support, for the U.S. Government's programs for HIV/AIDS, malaria, FP/RH, MCH, and emerging health threats. Summarized below are the annual results for each programmatic area; additional details on annual and quarterly activities and achievements appear in Section B.

Support for PEPFAR

In FY 2019, GHSC-PSM:

- Procured \$363 million in HIV products, including \$203.7 million in anti-retrovirals (ARVs);
- Saved more than \$25 million in the procurement of products for HIV;
- Achieved 91 percent OTD and 83 percent OTIF; and
- Procured products for HIV for programs in 40 countries and worked to strengthen supply-chain systems in 32.

Using insights into production costs and other detailed market information, GHSC-PSM negotiated favorable, but market-sustaining, prices for a variety of HIV medicines and commodities. Actual savings on procurement of major HIV commodities to date total \$78 million.

Over the year, GHSC-PSM was instrumental in helping HIV-treatment programs make the transition to tenofovir, lamivudine, dolutegravir (TLD). By the beginning of FY 2019, the project had delivered six million packs of TLD to programs in nine countries; by the end of FY 2019, we had delivered 24.4 million bottles to programs in 17 countries. The project also closely monitored the availability of TLD for patient treatment. By July 2019, 86 percent of sites in seven priority countries reported they had TLD stock on their shelves. The project also has shifted to providing 90-count bottles of TLD, in place of 30-count bottles.

In addition to scale, the project continued to achieve cost-savings, in part by adding three new TLD suppliers and conducting quarterly sourcing events, which has driven down the cost of this life-saving medicine from \$73 to \$65 per patient per year.

The project worked with USAID to develop a short-term strategy to procure isoniazid for preventive therapy (TPT) for tuberculosis. With procurements pre-funded by USAID, the project bought a large order of isoniazid directly from a manufacturer to support the scale-up of TPT in FY 2020, and worked with the Global Health Supply-Chain Program-Quality-Assurance (GHSC-QA) contract (implemented by FHI-360) to ensure the product met QA requirements.

GHSC-PSM's efforts to address global shortages of pediatric ARVs included modeling supply-and-demand scenarios and regularly engaging suppliers of the preferred formulations, to understand and support their timelines for obtaining approval of their products by the U.S. Food and Drug Administration within the U.S. Department of Health and Human Services (HHS).



GHSC-PSM has delivered enough anti-retroviral therapy (ART) to provide more than **6.7 million patient-years of HIV treatment to date.**

This includes almost **three million patient-years of treatment in FY 2019.**

To support the scale-up of viral-load monitoring, the project issued a global request for proposals that reflected the project's reagent-rental approach. This will improve the accountability of suppliers for the performance of their tests and reduce cycle time.

Additional detail on GHSC-PSM's support for PEPFAR's priorities appears in Section B1.

Support for PMI

GHSC-PSM contributed to PMI's efforts to reduce deaths from malaria and decrease morbidity from the disease by providing drugs and commodities to prevent and treat malaria. (See box.) Our work to support PMI's malaria program appears in Section B2. To summarize, in FY 2019, GHSC-PSM:

- Procured \$134.4 million in malaria products (e.g., long-lasting insecticide-treated nets [LLINs], artemisinin-based combination therapy [ACTs], rapid diagnostic tests [RDTs], severe malaria medicines, and other pharmaceuticals);
- Saved more than \$25 million in the procurement of malaria products, mainly as a result of strategic sourcing initiatives in FY 2018 and early FY 2019, which focused on diversifying the supplier base for key commodities and locking in fixed and tiered pricing;
- Achieved 97 percent OTD and 91 percent OTIF; and
- Procured malaria products for programs in 30 countries, and worked to strengthen supply-chain systems in 25 countries⁴



GHSC-PSM has delivered enough anti-malarials to **treat 206.2 million infections to date.**

This includes **treatment for almost 82 million infections in FY 2019.**

The project had important achievements in sourcing and procurement strategies in FY 2019, including successfully implementing supplier allocations and fixed-priced, long-term agreements for artemisinin-based finished products, RDTs, SP, and LLINs to improve supply-chain efficiencies, and contracting with new suppliers to expand the availability of dual-active ingredient LLINs to combat resistance.

GHSC-PSM successfully implemented a new pre-positioning strategy for sulphadoxine-pyrimethamine + amodiaquine (SPAQ) to support seasonal campaigns to deliver malaria chemoprevention (SMC), which delivered 23 million doses of SPAQ to programs in eight countries on time, enough to prevent infection in 5.8 million children.

The project managed the in-country transportation of more than 12.5 million LLINs in FY 2019.

⁴ The number of countries for which GHSC-PSM provided procurement support or technical assistance to strengthen supply chain systems for malaria programming includes Kenya, which is funded by USAID/Kenya.

Support for Voluntary FP/RH

GHSC-PSM's support for USAID's programs in voluntary FP/RH achieved several major milestones in FY 2019:

- Procured \$39.8 million worth of FP/RH products;
- Achieved 94 percent OTD and 85 percent OTIF;
- Saved the RH global community close to \$2.4 million on product procurements; and
- Procured products for voluntary FP/RH programs for programs in 25 countries and worked to strengthen supply-chain systems in 20⁵.

In FY 2019, in accordance with the project's approach to strategic sourcing, GHSC-PSM expanded our supplier base, including by adding three sources of generic products, so USAID now has multiple producers for all FP/RH commodities. The project also achieved a minimum supply commitment for one of the major FP products that is experiencing a global shortage.

To facilitate availability even further, GHSC-PSM collaborated with the United Nations Population Fund (UNFPA) to capture and manage registration data on FP products.

Global collaboration continued to be an area of significant accomplishment for the project. We worked closely with USAID to update the *Family-Planning/Reproductive Health Global Collaboration Strategic Framework* and work plan. This included the endorsement of our ongoing, significant involvement in the Global Family-Planning Visibility and Analytics Network (Global FP VAN). By year end, the project was sharing 100 percent of data from FP/RH commodity-supply plans and data from orders and shipments with the Global FP VAN.

GHSC-PSM's work to support USAID's FP/RH program appears in Section B3.

Support for MNCH

GHSC-PSM worked to prevent child and maternal deaths by increasing access to quality-assured medicines for maternal, newborn, and child health (MNCH), and by providing global technical leadership on the management of MNCH drugs and commodities. GHSC-PSM's work to support USAID's MCH program appears in Section B4.

GHSC-PSM's work "to engage global stakeholders around assuring the quality of oxytocin culminated in a joint statement by the World Health Organization (WHO), the United Nations Children's Fund (UNICEF), and the United Nations Population Fund (UNFPA). (See box.) The project worked to translate that global vision into improvements on the ground, for example, by helping the Government of Ghana launch a multi-faceted approach to tackling serious problems with the quality of oxytocin there.



GHSC-PSM has delivered enough contraceptives to provide **55.3 million couple-years of protection to date.**

This includes **almost 19 million couple years of protection in FY 2019.**



In March, the WHO, UNICEF and UNFPA announced the release of a joint statement on the need to procure quality-assured oxytocin and maintain it in the cold-chain throughout the supply chain

⁵ The number of countries for which GHSC-PSM provided procurement support or technical assistance to strengthen supply chain systems for FP/RH programming includes Kenya, funded by USAID/Kenya.

The project expanded the push for greater quality to other uterotonics by contributing to a guidance document and co-leading a meeting on the topic in West Africa.

The project also worked to improve the availability of information on MNCH drugs and commodities, which often are procured locally and not tracked in countries' logistics management-information systems (LMIS) via addition of a new module to the End-Use Verification (EUV) survey. EUV teams collected data by using the new MNCH module in seven countries this year.

The project also worked to understand the barriers faced by private sector wholesalers and distributors to providing quality-assured MNCH products.

In terms of the procurement and delivery of drugs and commodities for MNCH, in FY 2019 GHSC-PSM:

- Procured \$4.1 million worth of MNCH products;
- Achieved 91 percent OTD and 89 percent OTIF; and
- Funded the procurement of MNCH products for programs in nine countries, and the strengthening of supply-chain systems in 16⁶.

Support for Combating Other Infectious Diseases

In FY 2019, GHSC-PSM provided condoms, mosquito repellent, and/or technical assistance to **reduce the** spread of Zika in 14 countries. This included procuring \$5.3 million in mosquito repellent for use by pregnant women to prevent infection with the virus. The project also helped governments in countries throughout Latin America and the Caribbean consider their needs for supply-chain planning in the event of another infectious-disease emergency. GHSC-PSM's work to support USAID's investments to combat emerging health threats appears in Section B5.

Strengthening Health Institutions

As described in Section C2, GHSC-PSM helped strengthen supply-chain systems through our 34 country and regional field offices, supported by headquarters-based experts. In most countries, several of USAID's health programs provide funding to improve supply-chains, with assistance that generally benefits all health areas.⁷ The project provided substantial support for forecasting and supply-planning, LMIS, warehousing and distribution, strategic planning, the development of the supply-chain workforce, governance, financing, and adoption of global standards. With this support, the project helped partners:

- Use data to improve the performance of supply-chains;
- Engage both local and international private-sector entities to achieve sustainability and improve performance; and

⁶ The number of countries for which GHSC-PSM provided technical assistance for supply chain systems for MCH programming includes Kenya, funded by USAID/Kenya.

⁷ The USAID Bureau for Global Health spreads the costs of technical assistance and activities to strengthen supply-chain systems proportionally across health elements (i.e., HIV, malaria, FP/RH, and MCH). The Bureau reviews the cost-sharing formulas annually for each office to verify that each health area's share of the total cost for technical assistance remains equitable. Systems-strengthening efforts associated with activities specific to a given health element (e.g., distribution of LLINs for malaria or the scale-up of viral load testing for HIV) are supported entirely by the relevant office or program.

- Advance health supply-chains along the Journey to Self-Reliance.

Global Collaboration

As described in Section C3, throughout FY 2019, GHSC-PSM collaborated regularly with donors and decision-makers such as the WHO; the Global Fund to Fight AIDS, Tuberculosis, and Malaria (the Global Fund); the Clinton Health Access Initiative (CHAI); UNFPA; the Reproductive-Health Supplies Coalition; and others. Our strategic-engagement activities helped the global health community:

- Take procurement and supply-chain issues into consideration in health programs;
- Align on procurement and supply-chain approaches;
- Promote the quality of drugs and other products;
- Address immediate risks to global supply;
- Promote long-term market health and sustainable supply; and
- Share information to promote the availability of drugs, diagnostics, and commodities.

The pages that follow provide additional detail on strides taken by GHSC-PSM this quarter, and in FY 2019 as a whole, to ensure the continuous availability of drugs, diagnostics, and health commodities to the people who need them around the world.

INTRODUCTION

A1. Background

The USAID GHSC-PSM project works to ensure uninterrupted supplies of quality medicines, diagnostics, and other health 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:

- The U.S. President's Emergency Plan for AIDS Relief to help reach the Joint United Nations Programme on HIV/AIDS' global 90-90-90 HIV/AIDS testing, treatment and viral load suppression targets.
- The U.S. President's Malaria Initiative to reduce malaria deaths and substantially decrease malaria morbidity, toward the long-term goal of elimination.
- USAID's Family Planning and Reproductive Health program to ensure that key reproductive health commodities are available for safe and reliable voluntary family planning.
- USAID's maternal and child health program to prevent child and maternal deaths.
- Other public health threats as they emerge, with support for Zika at this time.

The project procures and delivers medicines and other health commodities, offers comprehensive technical assistance (TA) to strengthen national supply-chain systems, and provides global supply-chain leadership to ensure that life-saving health supplies reach those most in need. In FY 2019, the project procured commodities or provided TA to 61 countries (see Exhibit 4).

A2. About This Report

We are pleased to present this project performance report for FY 2019 (October 1, 2018, through September 30, 2019), with a special focus on Q4 (July 1 through September 30, 2019). 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, and other public health threats.
- Section C describes activities under each of the **three main technical objectives** (global commodity procurement and logistics, systems strengthening, and global collaboration), including key indicator results for those objectives.
- Annex A provides **performance and context indicators** for FY 2019, including quarterly, semi-annual, and annual indicators.

Given the size and complexity of GHSC-PSM, this report summarizes our primary efforts and achievements this year and 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 or Provided TA in FY 2019

	Proc.	TA		Proc.	TA
AFRICA:			ASIA:		
Republic of Angola	●	●	Islamic Republic of Afghanistan	●	
Republic of Benin	●		People's Democratic Republic of Bangladesh	●	
Republic of Botswana	●	●	Kingdom of Cambodia	●	●
Burkina Faso	●	●	Republic of Indonesia		●
Republic of Burundi	●	●	Republic of Kazakhstan	●	
Republic of Cameroon	●	●	Kyrgyz Republic	●	
Republic of Côte d'Ivoire	●		Lao People's Democratic Republic	●	
Democratic Republic of the Congo (DRC)	●		Republic of the Union of Myanmar	●	●
Federal Democratic Republic of Ethiopia	●	●	Federal Democratic Republic of Nepal	●	●
Republic of Ghana	●	●	Islamic Republic of Pakistan		●
Republic of Guinea	●	●	Independent State of Papua New Guinea	●	
Republic of Kenya	●	●	Republic of Tajikistan	●	
Kingdom of Lesotho	●	●	Kingdom of Thailand	●	●
Republic of Liberia	●	●	Socialist Republic of Viet Nam	●	●
Republic of Madagascar	●	●	LATIN AMERICA & CARIBBEAN:		
Republic of Malawi	●	●	Barbados		●
Republic of Mali	●	●	Dominican Republic	●	●
Islamic Republic of Mauritania	●		Republic of Ecuador	●	
Republic of Mozambique	●	●	Republic of El Salvador	●	●
Republic of Namibia	●	●	Republic of Guatemala		●
Republic of the Niger	●	●	Republic of Haiti	●	●
Federal Republic of Nigeria	●	●	Republic of Honduras	●	●
Republic of Rwanda	●	●	Jamaica	●	●
Republic of Senegal	●	●	Republic of Panama	●	●
Republic of Sierra Leone	●	●	Republic of Paraguay	●	
Republic of South Africa	●		Republic of Peru	●	
Republic of South Sudan	●	●	Republic of Suriname	●	●
Kingdom of Swaziland (eSwatini)	●	●	OTHER:		
United Republic of Tanzania	●		Ukraine	●	
Republic of Togo	●		Republic of Yemen	●	
Republic of Uganda	●	●			
Republic of Zambia	●	●			
Republic of Zimbabwe	●	●			

PROGRESS BY HEALTH AREA

In this section, we summarize GHSC-PSM's support over FY 2019 and Q4 for HIV/AIDS, malaria, FP/RH, MNCH, and other public health threats.

BI. HIV/AIDS



GHSC-PSM has delivered enough ARVs to provide **6.8 million patient-years of HIV treatment over the life of the project**, including **491,000 patient-years of treatment this quarter**.



To date, GHSC-PSM had delivered more than **24.4 million bottles of TLD** to countries, which would provide more than **2.2 million patient-years of treatment**. In this quarter, the project delivered 815,000 90-count bottles of TLD to six countries.



Procured HIV/AIDS commodities for 40 countries and **provided health supply-chain systems strengthening to 32 countries** with HIV/AIDS funding this year.



GHSC-PSM monitors HIV/AIDS commodities in **65 warehouses in 18 PEPFAR countries** and **11,538 health facilities** in 12 PEPFAR countries.



This year, 16 countries procured **6 million viral load tests** to support scale-up of patient viral load testing.

GHSC-PSM supports PEPFAR's goal of controlling the HIV/AIDS epidemic by procuring and delivering medicines, diagnostics and other health commodities⁸ to prevent infection and treat people living with HIV (PLHIV), including scaling up viral-load testing to monitor treatment efficacy for PLHIV. GHSC-PSM is also implementing data visibility initiatives that support appropriate procurement and distribution of ARVs to link patients with the necessary commodities.

⁸ GHSC-PSM procured commodities for the following countries: AFRICA: Angola, Botswana, Burkina Faso, Burundi, Cameroon, Côte d'Ivoire, DRC, Ethiopia, Ghana, Lesotho, Malawi, Mali, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, South Africa, South Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe; LATIN AMERICA AND THE CARIBBEAN (LAC): Dominican Republic, Haiti, Jamaica, Panama, Peru, Suriname; ASIA: Burma, Nepal, Papua New Guinea, Vietnam; EUROPE AND EURASIA (EE): Kazakhstan, Kyrgyzstan, Tajikistan, Ukraine.

Procurement

GHSC-PSM procures a variety of preventive, diagnostic and treatment commodities for PEPFAR programs. Our procurements in FY 2019 and over the life of the project are summarized in Exhibit 5. GHSC-PSM has procured more than \$1.4 billion in HIV commodities over the life of the project. Almost half of all procurements were for adult ARVs in FY 2019.

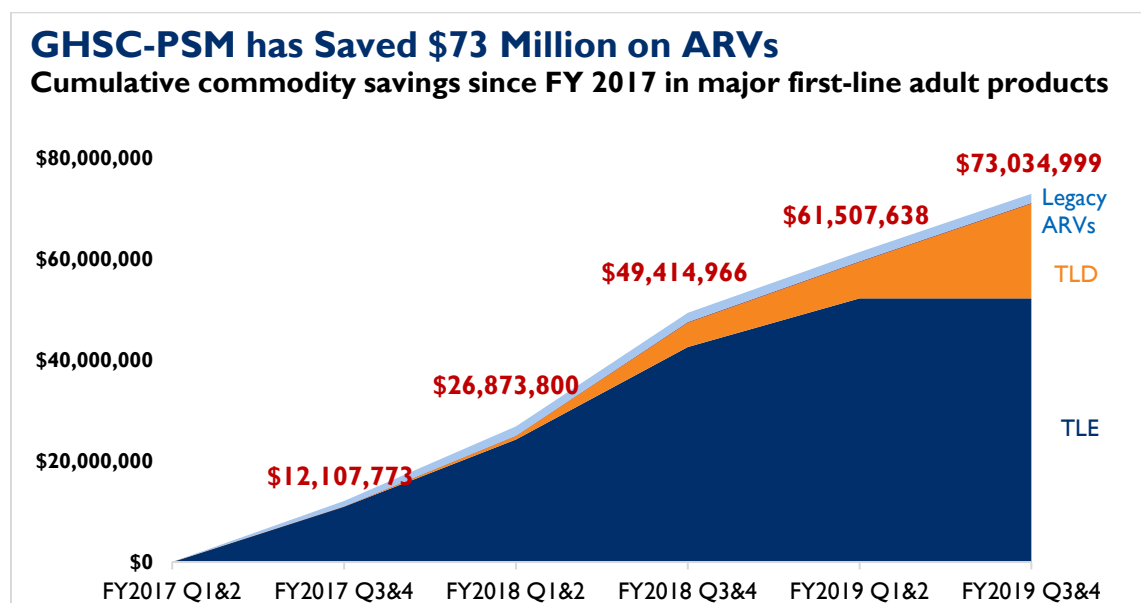
Exhibit 5. GHSC-PSM Procurements of HIV Commodities

ITEM	FY 2019	Life of Project
Adult ARVs	\$172,635,256	\$816,040,333
Laboratory	\$112,307,685	\$374,276,059
Pediatric ARVs	\$31,080,860	\$63,699,577
Condoms	\$19,136,642	\$61,908,440
Other pharmaceutical products	\$11,903,377	\$37,876,696
Voluntary medical male circumcision (VMMC) kits	\$7,850,670	\$52,608,754
Other nonpharmaceutical products	\$4,360,930	\$18,103,283
HIV tuberculosis (TB)	\$3,085,000	\$8,364,029
Other rapid test kits (RTKs)	\$521,274	\$2,760,731
Vehicles and other equipment	\$114,554	\$2,299,980
HIV RTKs	\$44,475	\$337,362
Food, water, sanitation and hygiene	\$0	\$5,826,170
TOTAL	\$363,040,722	\$1,444,101,414

Cost Savings from Strategic Sourcing of HIV Commodities

GHSC-PSM's strategic sourcing activities generated significant cost savings for PEPFAR and the countries and people served by its HIV programs. As shown in Exhibit 6, for adult first-line ARVs alone, GHSC-PSM saved \$73 million over the life of the contract compared to established baseline prices, including \$23.6 million in FY 2019. This fiscal year, the project shifted its strategy to seek new prices from its ARV vendors on a quarterly rather than annual basis. The project is therefore able to secure better prices more frequently than in previous years. Additionally, GHSC-PSM has increased its procurement of 90-count bottles of TLD, in support of multi-month dispensing (MMD) approaches rolling out across many PEPFAR countries this year. The average per-tablet price in 90-count packaging was about 3% lower than the 30-count bottles this year, driving cost-savings as more TLD volume shifts in this direction.

Exhibit 6. Life-of-Project Cost Savings From GHSC-PSM Procurement of ARVs

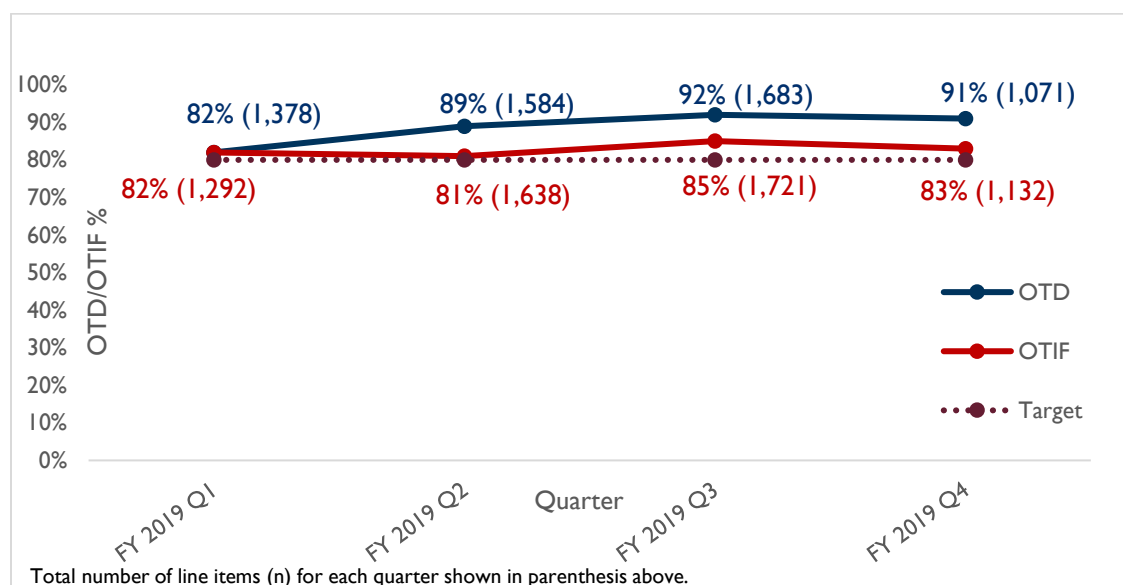


Legacy ARVs include LNZ (lamivudine/nevirapine/zidovudine). TLE = tenofovir/lamivudine/efavirenz; TLD = tenofovir/lamivudine/dolutegravir

Deliveries

GHSC-PSM delivered \$479.7 million in HIV commodities to countries in FY 2019. Timeliness of GHSC-PSM deliveries was very strong over the reporting period, as shown in Exhibit 7.

Exhibit 7. HIV Commodities, OTD and OTIF⁹



⁹ OTD is based on Agreed Delivery Data and OTIF is based on Actual Delivery Data

Supporting PEPFAR’s HIV Prevention Agenda

Pre-exposure prophylaxis (PrEP)

GHSC-PSM supports scale-up of prevention initiatives like PrEP under special initiatives such as PEPFAR’s Determined, Resilient, Empowered, AIDS-free, Mentored and Safe Partnership for adolescent girls and young women as well as for other key populations. In FY 2019, which aligns with the Country Operational Plan (COP) 18 period, GHSC-PSM delivered 1.9 million bottles of PrEP to 16 countries.

GHSC-PSM is procuring the kits for a “V” for PrEP pilot in Zimbabwe and should start delivering the kits for the pilot before the end of 2019.

Condoms

In FY 2019, GHSC-PSM successfully negotiated additional capacity from existing suppliers to mitigate constrained supply. This need became critical when one of the project’s strategic male condom suppliers became ineligible to supply product to the project in 2019. Onboarding an additional male condom supplier increased production capacity available to the project by 240 million condoms per year. We continue to coordinate with our supplier base to evenly distribute orders, avoid capacity constraints, and deliver within requested delivery dates.

VMMC kits

In FY 2019, the project worked with USAID to rationalize the number of VMMC product offerings, reducing them from nine to three. During Q4, GHSC-PSM issued a new request for quotes to establish ceiling prices with four VMMC suppliers. The request includes vendor-stocked inventory options, which could support more direct-drop shipments, reduce lead-time and cut costs.

HIV/TB Preventive Therapy

To reduce the risk of active tuberculosis (TB), WHO recommends TPT for PLHIV. Options include either 6 to 12 months of isoniazid prevention therapy (IPT), 6 to 9 months of daily Q-TIB (fixed-dose combination of isoniazid, B6 and cotrimoxazole), or three months of weekly isoniazid and rifapentine in a co-formulated treatment (3HP).

GHSC-PSM started supporting this new commodity category in anticipation of TPT scale-up. With USAID, the project developed a short-term strategy to procure isoniazid direct from manufacturers. GHSC-PSM carried out market analysis on isoniazid manufacturers and isoniazid active pharmaceutical ingredient (API) manufacturers to inform procurement decisions. USAID pre-funded and approved large procurements direct from isoniazid manufacturers to support TPT scale-up during FY 2020. GHSC-PSM worked alongside GHSC-QA project, in coordination with USAID, to make priority products eligible under QA requirements to support this strategy.

In Q4, GHSC-PSM awarded \$1.7 million in contracts to five isoniazid manufacturers approved by WHO and/or USAID to supply eight priority countries. These contracts will cover up to 50 percent of the

Commodities Procured for HIV/AIDS Programs

- Adult and pediatric ARVs
- Large-count ARV bottles for MMD
- TPT
- Viral load reagents
- PrEP
- Diagnostics
- Essential medicines
- Injectable anesthetics
- Laboratory reagents
- Male and female condoms
- Personal lubricants
- Voluntary medical male circumcision (VMMC) kits

COP19 USAID patient target for TPT. The project also expanded bulk ordering of isoniazid 100 mg tablets and vitamin B6.

Supporting the First 95: Testing

In support of RTK availability to reach the first 95 (HIV diagnosis), GHSC-PSM provides forecasting and supply planning as well as in-country logistics support to the Global Health Supply Chain Program-Rapid Test Kit (GHSC-RTK) project (implemented by Remote Medical International). The project also promotes better management of RTK orders and deliveries through the regional- and central-level stock data we collect through the Warehouse AIDS Data Visibility, Evaluation and Reporting (ADVISER) initiative. GHSC-PSM shares these data with GHSC-RTK monthly to guide RTK procurement planning. GHSC-PSM is also supporting data triangulation exercises, reviewing HIV testing targets against RTK stock in countries with PEPFAR-supported HIV testing programs.

Supporting the Second 95: Treatment

TLD transition

To help achieve HIV treatment goals, GHSC-PSM continued to support PEPFAR countries' planned transition to TLD, the preferred first-line ARV. The project delivered TLD to 17 countries¹⁰ this year.

GHSC-PSM communicated regularly with country counterparts and suppliers to balance country demand with manufacturing capacity. The project achieved 91 percent on-time delivery of TLD through the regional distribution centers this year.

Competition Drives Down Price of TLD

With the addition of three new suppliers of TLD, the cost of the medicine has **dropped from \$73 to \$65 per patient per year**, an 11 percent reduction.

GHSC-PSM moved from annual to quarterly sourcing events for TLD to allow newly Food and Drug Administration (FDA) -approved suppliers to participate in the tendering process. This increased the number of bidders from two at the start of FY 2019 to five in Q4 and has driven down the cost of this life-saving medicine substantially (see box).

This quarter, GHSC-PSM continued to host the First-Line ARV Transition (FLAT) technical working group, ensuring regular reporting of TLD demand, supply and delivery. The project also facilitated information sharing through the First-Line ARV Reporting and Evaluation (FLARE) reports, which provide monthly inventory data from more than 65 warehouses in 16 countries for all first-line ARVs.

The project worked closely with USAID to streamline the number of ARV products in the catalog, reducing the number of offerings by 57 percent in Q4, to steer countries to optimal formulations.

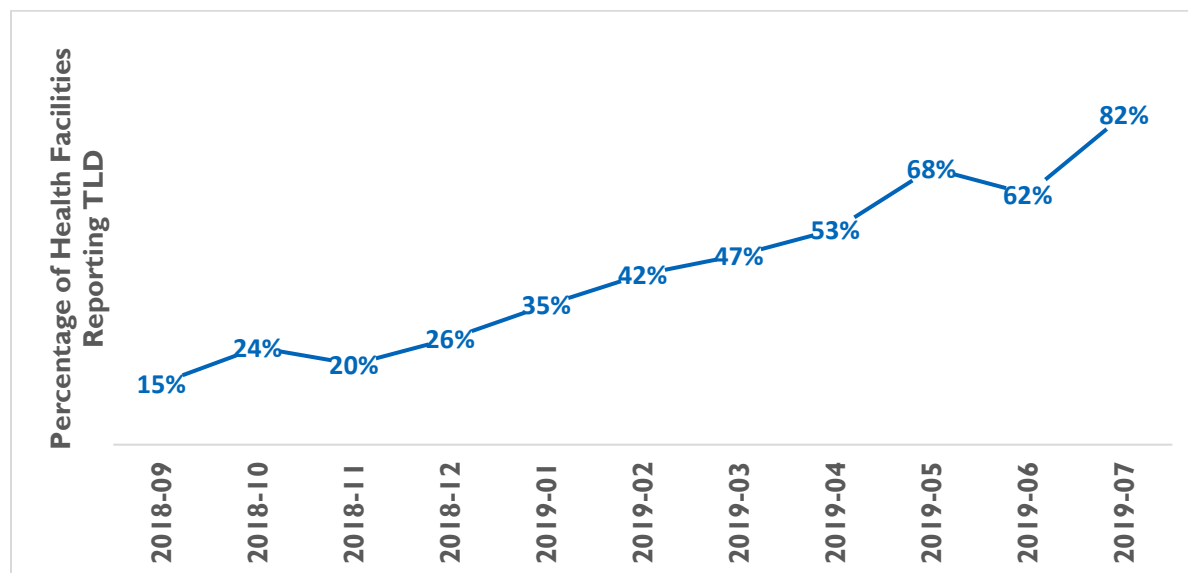
Scaling Up Supply of TLD

By the end of Q4, the project had delivered 24.4 million bottles of TLD to 17 countries. This is enough to provide more than **2.2 million patient-years of TLD treatment**.

¹⁰ Botswana, Burundi, Côte d'Ivoire, DRC, Eswatini, Haiti, Mozambique, Namibia, Nigeria, Rwanda, Tanzania, Uganda, Ukraine, Vietnam, Venezuela, Zambia, and Zimbabwe.

To provide last-mile visibility into the TLD transition, GHSC-PSM monitors TLD availability in PEPFAR-supported sites in seven countries.¹¹ Based on the latest available data (July 2019), as shown in Exhibit 8, 82 percent of sites reported TLD availability compared to 15 percent in September 2018, almost a 550 percent increase in just 10 months.

Exhibit 8. Percentage of Health Facilities in Seven Countries Reporting Availability of TLD



Multi-month dispensing (MMD)

In an update to the 2019 COP Guidance for MMD of ARVs, PEPFAR recommended that countries procure bottles of TLD or TLE400 containing a 180-day supply (180 tablets/bottle) or 90-day supply (90 tablets/bottle) to implement MMD, rather than issuing multiple 30-day supply bottles. To support this requirement, GHSC-PSM now procures only 90-count bottles as the default presentation unless USAID approves the 30- or 180-count presentation for a given country, while at the same time retaining the flexibility with manufacturers to switch before final packaging.

In Q4, GHSC-PSM delivered 815,000 units of carton-less 90-count TLD bottles to six countries¹². The carton-less approach reduces packaging, shipping and distribution costs. The project is now working with suppliers to explore the possibility of moving to carton-less packaging for other ARVs.

The project analyzes demand signals from country programs and based on forecasts pre-positions TLD in the regional distribution centers to help ensure timely delivery of product to countries. In Q4, we issued our largest order to date to restock the regional distribution centers with TLD: 4.3 million 90-count packs of TLD, valued at more than \$70 million, will be delivered to regional distribution centers for COP19 deliveries.

¹¹ Botswana, Haiti, Malawi, Mozambique, Nigeria, Uganda and Zambia.

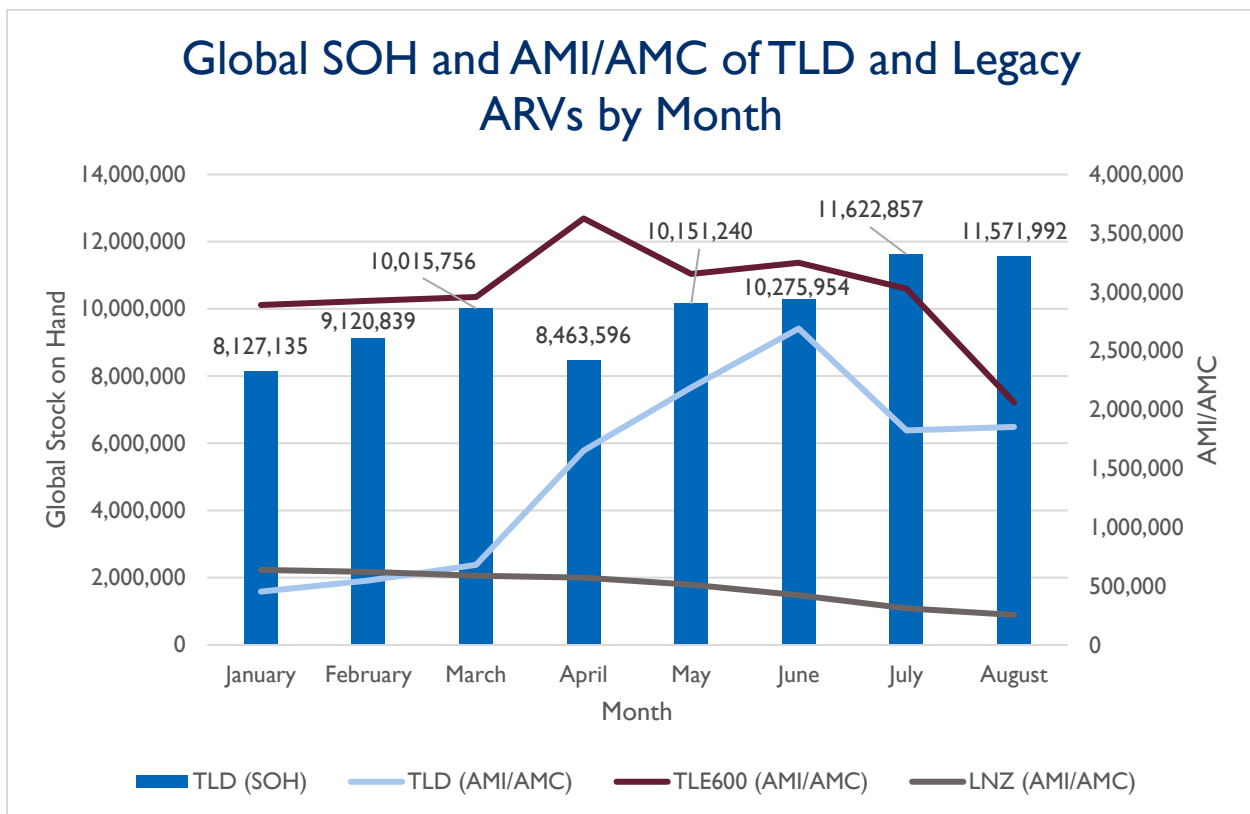
¹² Côte d'Ivoire, DRC, Eswatini, Tanzania, Uganda and Zambia.

Legacy ARV drawdown

Per the 2019 COP Guidance, GHSC-PSM stopped procuring and supported transitioning patients away from legacy ARVs containing nevirapine, such as lamivudine/zidovudine/nevirapine (LZN). In Q4, GHSC-PSM aligned the ARVs in the product catalog with the PEPFAR formulary to promote ordering of only the optimal ARV regimens. The project submits a weekly report to USAID outlining any second-line or sub-optimal products that are ordered by partner countries so that both parties can engage country counterparts to determine if a better product should be selected.

To monitor drawdown of legacy ARVs, GHSC-PSM collects, reviews and compiles monthly ARV inventory data from warehouses in 18 countries¹³ through the FLARE report. Since January 2019, average monthly consumption of LZN has declined by 60 percent and average monthly consumption of TLE600 has declined by 29 percent (see Exhibit 9).

Exhibit 9. FLARE Report Showing Availability of TLD and Legacy ARVs



The analysis above shows successful drawdown of Efavirenz- and Nevirapine-based regimens and an overall increase in the TLD stock-on-hand each month.

¹³ Botswana, Burundi, Cameroon, Côte d'Ivoire, DRC, Eswatini, Ethiopia, Ghana, Haiti, Lesotho, Mozambique, Namibia, Nigeria, Rwanda, Uganda, Vietnam, Zambia, and Zimbabwe.

Pediatric ARVs

The *WHO 2018 Optimal Formulary and Limited Use List for Pediatric ARVs* guidance emphasized four key optimal pediatric ARV products.¹⁴ This guidance significantly increased demand for these products, resulting in medium-term supplier constraints, particularly for the three ritonavir-based products. To manage this transition, GHSC-PSM hosts a bi-weekly Pediatric ARV Transition Technical Working Group meeting with USAID to review supply and demand, along with a monthly market dynamics meeting.

GHSC-PSM closely collaborates with suppliers to ensure an uninterrupted supply of products to countries, which allows GHSC-PSM to react quickly to changes in the supply base. As an example, at the start of Q4, with nevirapine no longer being in the preferred formulary for pediatric ARVs demand for lopinavir/ritonavir 100/25 increased rapidly and significantly and one of the three suppliers shut down its manufacturing line so it could prepare to scale up production in 2020. GHSC-PSM quickly reallocated more than 104,000 units of orders to the remaining suppliers to ensure orders could be filled.

In Q4, GHSC-PSM helped guide countries through their pediatric ARV transition by analyzing current data and modeling demand and supply scenarios. This guidance was especially effective in managing the demand of lopinavir/ritonavir 40/10 mg pellets and granules. GHSC-PSM also continues to regularly engage pediatric ARV suppliers to understand their timelines for developing and receiving FDA approvals for new pediatric ARVs, such as the 4-in-1 ABC/3TC/LPV/r and Dolutegravir singles (DTG).

Supporting Third 95: Viral-Load Testing

In Q4, GHSC-PSM continued to support PEPFAR countries in building their capacity to procure reagents and other commodities to reach their objectives for viral-load and early infant diagnosis (EID) coverage. The project also worked with in-country partners to strengthen laboratory forecasting and supply planning and to optimize laboratory networks.

GHSC-PSM maintained high OTD of 88 percent for laboratory commodities by using fixed-price, long-term agreements with multiple suppliers to procure laboratory consumables, medical supplies, general laboratory reagents, and laboratory support equipment. These agreements cover more than 60 percent of all lines. GHSC-PSM issued the global viral-load request for proposals to ensure a robust and competitive market that ultimately will reduce costs and cycle time and improve service for PEPFAR priority countries that are scaling up HIV viral-load monitoring.

In Q4, the project continued evaluating responses to the global viral load and EID request for proposals. The new contracts will support transition of all PEPFAR-supported testing services to an all-inclusive reagent rental model, which should significantly improve service levels and streamline the pricing and procurement of laboratory equipment. The project expects to announce awards in early FY 2020.

Efforts continued to enhance the viral-load dashboard, which is used to analyze and visualize global and country viral-load and EID scale-up. The dashboard's global view includes, but is not limited to, national targets and tests completed against those targets; theoretical national capacity; known demand from supply plans; and price per test. At the country level, the dashboard provides past, current and future

¹⁴ Lopinavir/ritonavir 40/10 mg pellets, lopinavir/ritonavir 40/10 mg granules, lopinavir/ritonavir 100/25 mg, and abacavir/lamivudine 120/60 mg.

national viral-load targets and national capacity and maps testing sites (in countries where geo-referenced location is available from laboratory optimization). The dashboard also includes site-level specifics, where data are available.

GHSC-PSM continued to build country capacity to procure viral-load testing reagents, specimen collection consumables, and testing equipment. For example, the project worked with local partners to strengthen laboratory forecasting and supply planning in Haiti and eSwatini. The project also provided refresher training on laboratory forecasting for viral-load scale-up using ForLab quantification software.

In Q4, GHSC-PSM conducted diagnostics laboratory network optimization in Lesotho with USAID, U.S. Centers for Disease Control and Prevention, the Global Fund, and the Ministry of Health (MOH) to help the country use data driven decision making to strategically plan the scaleup of VL testing and meet the third 95 (427,873 patients) by FY 2020. The optimized laboratory and sample referral network reduced service distance of the network by 16% and resulted in 35% savings to maintain the sample referral network.

Stock Tracking, Oversight and Planning for HIV/AIDS

This quarter, GHSC-PSM carried out multiple efforts to support USAID's vision for improved visibility into HIV commodity inventories at all levels of the supply chain.

Site-level data visibility in 12 countries at 11,538 health facilities¹⁵

The project continued to collect, review and report site-level inventory data from 11,538 facilities in 12 countries.¹⁶ Important outputs from this extensive data collection effort include HIV commodity data visibility at 65 central and regional warehouses.

Each month, GHSC-PSM reviews inventory data for more than 20 HIV drugs and commodities at central and regional warehouse levels in 18 PEPFAR countries to identify stock imbalances. GHSC-PSM reports data generated at this level on the status of first-line ARV drawdown, the transition to TLD, and HIV commodity stock-out risk to USAID and PEPFAR. We support use of this information to mitigate imbalances and avoid rationing and waste, where possible, by raising awareness, identifying opportunities to shift GHSC-PSM shipments, and supporting redistribution within a country.

When the platform previously used to collect central and regional warehouse inventory data was no longer available, GHSC-PSM ensured access to and use of these data and improved capacity for data visualizations through the new Warehouse ADVISER dashboard. The project updates this dashboard each month to provide full visibility into country HIV commodity inventory at the central and regional levels. ADVISER will soon be available to USAID on the GHSC program website.

¹⁵ For Q4, the latest reporting period for most countries is August 2019.

¹⁶ GHSC-PSM is collecting site-level data from Angola, Botswana, Cameroon, Haiti, Lesotho, Malawi, Mozambique, Namibia, Nigeria, Uganda, Zambia, and Zimbabwe.

Country Support

The HIV task order, funds supply-chain system strengthening in 32 countries.¹⁷ We provide examples of our systems strengthening work in Q4 below.





GHSC-PSM seconded staff to the **Burundi** Ministry of Health and the National AIDS Control Program to improve viral load/EID logistic data management and provide testing support. Their impact was immediate. In one laboratory, the average number of sample plates completed per month almost doubled from 6.4 earlier in the year to 11 after the new staff person's arrival.

In **Ethiopia**, GHSC-PSM is working with the Ethiopian Pharmaceutical Supply Agency and Ministry of Health to collect adult Nevirapine-based ARVs from ART sites for destruction. During Q4, together we successfully collected almost 317,000 packs of AZT/3TC/NVP and almost 170,000 packs of Nevirapine tablets from more than 880 ART sites nationwide within one week.

GHSC-PSM actively supports **Vietnam** in transitioning from relying on PEPFAR to procure its ARVs to procuring its own ARVs. Starting in January 2020, 38,000 HIV patients will start receiving ARVs procured by Vietnam's Social Health Insurance (SHI) fund or National Targeted Program. GHSC-PSM supported the Vietnam Administration for HIV/AIDS Control (VAAC) in reviewing and analyzing the stock status of ARV medicines from PEPFAR and other sources to understand if there will be adequate supply on time for this transition. Noting risk of a potential ARV shortage nationwide, the project helped VAAC strengthen ARV supply monitoring and increase coordination with relevant partners to push up its ARV procurement using SHI funds. These efforts are critical to ensuring an uninterrupted and sustainable supply of ARVs.

¹⁷ The countries for which GHSC-PSM provided technical assistance with HIV funding are: AFRICA: Angola, Botswana, Burundi, Cameroon, Eswatini, Ethiopia, Ghana, Kenya (TO5), Lesotho, Malawi, Mali, Mozambique, Namibia, Nigeria, Rwanda, South Sudan, Uganda, Zambia, Zimbabwe; LAC: Barbados, Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Panama, Suriname; ASIA: Burma, Cambodia, Indonesia, Vietnam.

B2. Malaria

	The project has delivered enough antimalarials to treat nearly 82 million infections in FY 2019.
	Procured malaria commodities for 30 countries and provided health supply-chain systems strengthening to 23 countries in FY 2019.
	The project procured 33,289,723 LLINs that could provide protection from malaria for more than 66.5 million people in 22 countries in FY 2019.
	Delivered enough SPAQ for seasonal malaria chemoprevention to protect 5.8 million children in eight countries.

Under the PMI-funded malaria task order, GHSC-PSM supplies life-saving prevention and treatment medicines, RDTs and LLINs. We offer partner countries new approaches to strategic planning, logistics, data visibility, analytics and capacity building. The project also provides technical guidance to strengthen global supply, demand, financing and the introduction of new malaria medicines and other health commodities.

Commodity Sourcing, Procurement and Delivery

GHSC-PSM's provision of malaria commodities this year entailed strategic sourcing, procurement, QA, deliveries and support for transferring/redistributing stocks, as summarized below.

Sourcing and Procurement Strategies

For the malaria task order, GHSC-PSM implemented a suite of new, data-driven strategies, processes, tools, and communications protocols. These were designed to deliver overall better value, support market objectives, increase supply-chain efficiencies and responsiveness, and refocus efforts on the most value-added activities. In FY 2019, new tools and process changes included:

- Producing supplier-specific forecasts for product demand based on the project's order allocation approach.
- Conducting data-driven and systematic order validation through development and use of a new, auto-populated order tracker.
- Managing staggered deliveries of select products to countries to achieve freight savings when stock-on-hand is adequate.
- Assigning orders to suppliers using the Order Assignment System, which uses pre-defined business rules per approved sourcing strategies to automate order decision making.

In FY 2019, based on guidance from PMI, the team started shifting to using ocean freight as the primary mode of transportation to reduce freight costs. The team evaluates every new order for cost effectiveness of shipment mode, urgency of the country's need for the product, transit times, and the product's remaining shelf-life requirements. The objective is to achieve cost savings while meeting need in country and respecting country regulatory and programmatic needs. The project will fine-tune and expand this process in FY 2020.

In Q4, strategic sourcing of malaria commodities focused on:

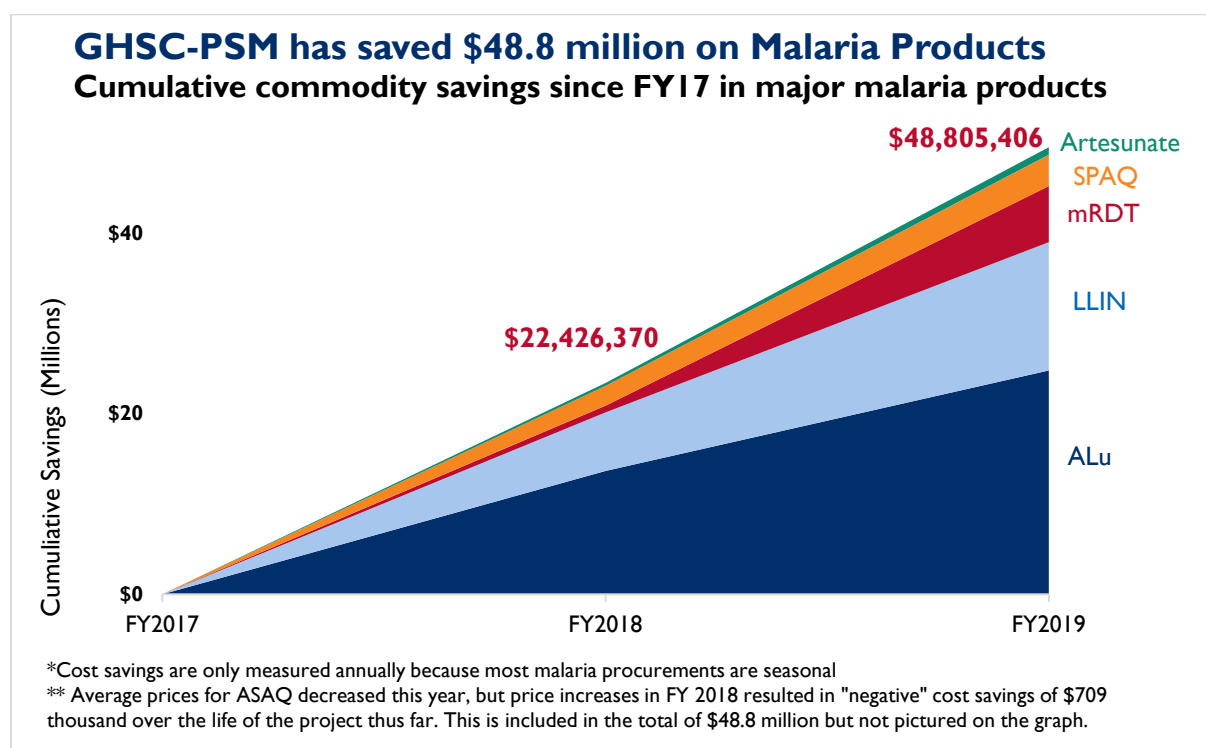
- Establishing long-term and fixed-price agreements with eligible suppliers of LLINs. GHSC-PSM evaluated offers and expects to award contracts in Q1 FY 2020. These contracts reflect market-shaping efforts to ensure the long-term quality, competitive pricing and availability of LLINs.
- Finalizing an agreement with the Innovative Vector Control Consortium (IVCC), under the New Nets Project, to increase accessibility of next-generation LLINs, which are designed to address insecticide resistance. According to the WHO, 68 countries have reported resistance to at least one class of insecticide, with 57 reporting resistance to two or more classes, since 2010. Per the agreement, IVCC will provide a co-payment to make dual-active ingredient nets more affordable for countries experiencing resistance to single pyrethroid-treated nets.
- Evaluating proposals from suppliers to establish long-term agreements to provide sulfadoxine/pyrimethamine (SP), a key preventative pharmaceutical for pregnant women. The new agreements, to be finalized in Q1 FY 2020, will establish fixed prices in a market that has seen substantial fluctuation and will reduce the tendering burden for GHSC-PSM and its suppliers.
- Agreeing with select suppliers on the principal terms and conditions of vendor-stored inventory of malaria pharmaceuticals. With vendor-stored inventory agreements, vendors will manufacture and maintain inventories for GHSC-PSM that the project can draw down when needed, increasing the project's ability to fulfill emergency needs.
- Finalizing allocation strategies for the coming fiscal year's procurement of RDTs and artemisinin-based finished pharmaceutical products. The allocation strategies use project and country evaluation criteria to determine which supplier offers the best value for a particular product/country combination, and then award orders to suppliers that can best meet those criteria. The project will use these allocation strategies to guide commodity procurements in FY 2020.

Use of the Malaria Stockpile to Prevent Stock-outs

GHSC-PSM used the PMI ACT stockpile, located in the project's regional distribution center (RDC) in Belgium, to fulfill emergency needs and avert stock-outs for ALu in six countries. Also, from the same Belgium warehouse, GHSC-PSM distributed SP to two countries and artesunate injectables to three countries, shortening wait times for delivery by several months in each instance.

Over the life of the project, GHSC-PSM has achieved \$48.8 million in cost savings for malaria commodities, including \$25.2 million in savings this fiscal year (see Exhibit 10). Due to the annual cycle of malaria procurements, the project calculates these savings figures once at the end of each year. Much of these savings were achieved as a result of strategic sourcing initiatives in FY 2018 and early FY 2019, which focused on diversifying the supplier base for key commodities and locking in fixed and tiered pricing.

Exhibit 10. Life-of-Project Cost Savings on Malaria Commodities



Procurement and deliveries

GHSC-PSM procures a variety of preventive, diagnostic and treatment commodities for PMI’s program. In FY 2019, the project procured malaria commodities for 30 countries¹⁸. Exhibit 11 summarizes the procurements. In FY 2019, 52 percent of the value of procurements was for LLINs.

Exhibit 11. GHSC-PSM Procurements of Malaria Commodities

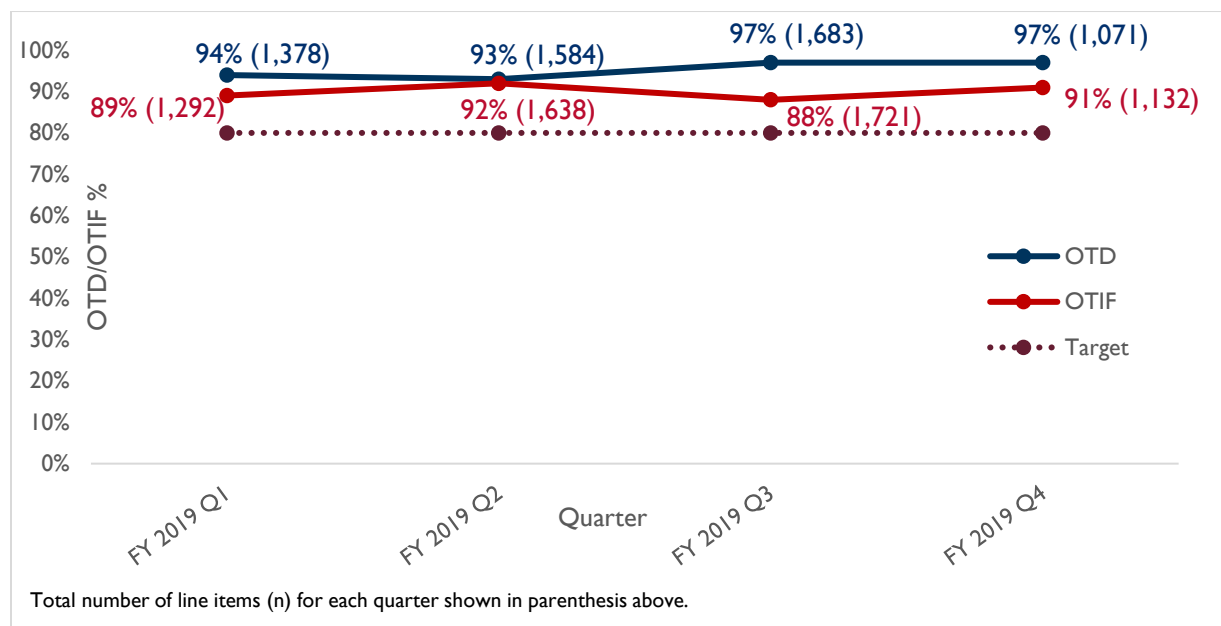
ITEM	FY 2019	Life of Project
LLINs	\$ 69,909,465	\$ 278,722,229
ACTs	\$ 24,901,930	\$ 106,033,848
RDTs	\$ 16,827,150	\$ 60,161,896
Severe malaria medicines	\$ 10,839,259	\$ 30,822,714
Sulphadoxine-Pyrimethamine (SP)	\$ 5,221,770	\$ 9,471,294
Seasonal malaria chemoprevention (SMC)	\$ 5,154,199	\$ 21,265,157
Laboratory	\$ 634,270	\$ 1,365,488
Other non-pharmaceutical products	\$ 553,863	\$ 1,194,414
Other pharmaceutical products	\$ 380,160	\$ 574,146
TOTAL	\$ 134,422,067	\$ 509,611,184

¹⁸ GHSC-PSM procured malaria commodities for the following countries in FY 2019: AFRICA: Angola, Benin, Burkina Faso, Burundi, Cameroon, Côte d’Ivoire, DRC, Ethiopia, Ghana, Guinea, Kenya, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, South Sudan, Tanzania, Uganda, Zambia, Zimbabwe; ASIA: Burma, Cambodia, Laos, Thailand

Timeliness of Deliveries

GHSC-PSM produced consistently high on-time delivery performance for malaria commodities in FY 2019 (see Exhibit 12). Annual OTD for malaria commodities was 95 percent, a substantial improvement over OTD in FY 2018.

Exhibit 12. Malaria Commodity Deliveries, OTD and OTIF¹⁹



Seasonal Malaria Chemoprevention (SMC)

GHSC-PSM procures SPAQ for countries that implement SMC campaigns to prevent malaria in children. Typically, countries manage four-month-long campaigns during the rainy season between June and October. Timely delivery of the medicine is critical. However, because all global procurers were sourcing product from a single manufacturer, and as the number of countries conducting campaigns and the scope of the campaigns increased, demand for production in the months before the SMC season exceeded capacity. This created bottlenecks and required complicated product swaps among procurers. Moreover, since the product was not yet WHO prequalified, GHSC-PSM procured SPAQ through wholesalers, further complicating the management of an already challenging commodity.

In 2018, GHSC-PSM developed and executed a new SMC sourcing strategy to alleviate the supply-chain and market-related challenges associated with this critical commodity. GHSC-PSM:

- Contracted directly with the manufacturer (rather than procuring through a wholesaler) to:
 - Negotiate more favorable commodity pricing, generating significant cost savings
 - Directly coordinate production slots to ensure availability of the product when needed
- Generated forecasts and placed large inventory orders for 80 percent of the projected 2019 SPAQ needs with the supplier during a slower time of demand just after the SMC campaigns. This effort avoided competition with other global procurers and minimized the risk of delays.

¹⁹ OTD is based on agreed delivery data and OTIF is based on actual delivery data

The project also hedged against overstock by planning to place a top-up order for the remaining 20 percent once countries had a firmer understanding of quantities needed. (Ultimately, significant changes in demand meant that a top-up was unnecessary.) The project maintained an appropriate level of stock to meet the year's needs and a buffer to meet any unanticipated demand.

- Staged the product in the RDC in Belgium, where stockpiled inventory was managed carefully to optimize remaining shelf-life relative to requested delivery dates.

In FY 2019, GHSC-PSM delivered more than 23 million doses of SPAQ on time to eight countries²⁰ for their SMC campaigns, with potential enormous health benefits (see box).

Quality Assurance

GHSC-PSM is directly responsible for ensuring the quality of PMI-funded commodities. For FY 2019, major QA activities and accomplishments included:

- Addressed challenges due to an LLIN manufacturer's quality issues. In Q3 and Q4, the project performed additional post-shipment quality control (QC) testing of the LLINs produced by this manufacturer when they arrived in country.
- Implemented a quality assurance management system (QAMS), which captures QA-related information for malaria commodity orders that require QA support. The project developed the system in Q1, piloted it in Q2, and has had it in full use since Q3. Real-time data in QAMS inform planning and decision making for commodity shipments and other activities that depend on QC activities. The project trained staff in using the QAMS and continued to refine the system to improve functionality and user-friendliness.
- Used the revised testing strategy, which is based on the project's risk-based analysis for ACTs, to save almost \$350,000 in testing costs for FY 2019.
- Evaluated the quality management systems of LLIN manufacturers that responded to a request for proposals to ensure they meet PMI's and the project's minimum quality requirements.
- Completed QA procedures on 100 percent of orders (97 in total) within the targeted designated lead times.
- Completed QA review of vendors' proposals for LLINs and dihydroartemisinin/piperazine (DHA-PPQ).
- Participated in the Global Fund's LLIN supplier and partner meeting in Singapore to foster global collaboration on QA issues.
- Created a strategy for conducting QA testing concurrent with shipment to support the new ocean shipment strategy for malaria products.

Scale of GHSC-PSM SPAQ Deliveries

This year's deliveries of SPAQ would provide preventative **treatment for more than 5.8 million children** from malaria during the high-transmission season.

²⁰ Benin, Burkina Faso, Cameroon, Ghana, Guinea, Mali, Niger and Senegal

Support for Prioritizing Orders and Transferring Stock

In Q4, 26 countries submitted data to the Procurement Planning and Monitoring Report–malaria (PPMRm). The PPMRm collects and reports information on stock status and on host governments' and other donors' shipments. The visibility of stock status and shipment information enables PMI and the project to make decisions on prioritizing, expediting, transferring or delaying procurements or shipments, and facilitates review of forecasts and supply plans to optimize procurements.

Based on PPMRm data, several actions were taken at the national level in Q4, including:

- In Burkina Faso, due to overstock of SP, stakeholders are discussing transferring some of the product to another country to avoid expiries.
- In Uganda, the public sector warehouse transferred 300,000 vials of overstocked artesunate injectable to the private-not-for-profit (PNFP) sector to cover the latter's supply gap.

The PPMRm report was also shared with the Global Supply Chain team to inform them of countries that are at risk of stock-out or are overstocked so that they may adjust procurements or shipments.

Preliminary Analysis for Stockout Reduction Strategy

Since February 2019, the project has been supporting PMI's efforts in comparing countries' LMIS data visibility and malaria commodities' availability. It is for illustrative purpose to visualize where countries are positioned within the data visibility and stock availability matrix and to facilitate an examination of possible commonalities within country systems. The ultimate objective is to identify areas for investment for stockout reduction. Countries' data visibility and systems were collected through a survey, and the stock availability information was collected from countries' LMIS or EUV surveys. PSM developed a matrix based on a weighted index derived from identified criteria. After discussions with PMI, a decision was made to refine the concept further, to identify areas for root cause analyses, and to create a playbook to guide investments to address stockouts. By the end of Q4, a subcontractor was awarded to carry out these activities in the next quarter.

LLIN Distribution Support

In FY 2019, a number of countries managed large-scale LLIN campaigns and routine distribution as a key malaria prevention strategy. These massive initiatives ensure beneficiaries, particularly in high-burden areas, receive the nets they need in advance of the rainy season. While the distributions last just a few weeks, logistics, supply planning, procurement and pre-positioning the nets can take months. At the country level, with PMI's funding, GHSC-PSM supported the host countries to manage planning, training, warehousing, transportation and documentation. Exhibit I3 provides information on some large-scale LLIN campaigns supported by the project this year.

Exhibit 13. Select LLIN Distribution in FY 2019

Country	Type of Distribution	No. of Nets Distributed
Burundi	Routine distribution	764,150
Ethiopia	Mass distribution	5,100,000
Ghana	School distribution	1,350,000
Malawi	Routine distribution	340,840
Nigeria	Mass distribution in one state	2,349,727
South Sudan	Mass distribution	494,150
Zimbabwe	Routine and mass distribution	1,135,750
Total		11,534,617



Teachers hand out LLINs to schoolchildren during Ghana's annual distribution campaign. *Photo credit: 5fifty Production/GHSC-PSM*

Country Support

GHSC-PSM provided supply-chain systems strengthening support for malaria medicines and commodities in 23 countries in Q4.²¹ Examples of our work in Q4 follow.

Since 2017, GHSC-PSM in **Burkina Faso** helped the Central Purchasing of Essential Drugs (CAMEG) system reconfigure its central warehouses to optimize storage space. In Q4, GHSC-PSM helped CAMEG assign codes to each aisle and each level on the shelves/racks. CAMEG is entering those codes into its warehouse management software and now assigns a location code to all the products in its warehouses. Previously, CAMEG received products in a dedicated area and kept them in quarantine for an average of three months. With the reconfiguration, CAMEG immediately moves products to their assigned racks, which reduces destocking time and maximizes storage space. GHSC-PSM is now helping CAMEG reconfigure its regional warehouses.



1- CAMEG Tengodogo Warehouse before reconfiguration
Photo credit: GHSC-PSM

2- CAMEG Tengodogo Warehouse after reconfiguration

In **Burundi**, GHSC-PSM collaborated with the Department of Pharmacy, Medicines and Laboratories (DPML) and other national counterparts to conduct a data quality audit (DQA) in 54 health facilities. The DQA aims to improve the quality of logistics data for malaria, HIV/AIDS and family planning commodities. The team successfully completed the audit, finding, among other things, that overall data quality for malaria commodities was good. DQA results will inform prioritization of ongoing support. Most importantly, the exercise built the capacity of DPML, which will conduct next year's DQA.

In **Ethiopia**, GHSC-PSM, through seconded staff, supported three Regional Health Bureaus (Amhara, Oromia and Tigray) in collecting, analyzing and providing feedback on health supply-chain management key performance indicators (KPIs) from woredas and health facilities. Regional Health Bureaus use the

²¹ The countries for which GHSC-PSM provides technical assistance with malaria funding are Angola, Burkina Faso, Burma, Burundi, Cambodia, Cameroon, Ethiopia, Ghana, Guinea, Kenya (funded by TO5), Liberia, Malawi, Mali, Mozambique, Niger, Nigeria, Rwanda, Sierra Leone, South Sudan, Thailand, Uganda, Zambia and Zimbabwe

KPIs to monitor health facility performance and advise facilities on actions to increase the availability of anti-malarials and other commodities.

In **Guinea**, GHSC-PSM helped the MOH update its standard operating procedures (SOPs) for integrated logistics management of health commodities. The revised SOPs reflect enhancements requested by the supply-chain workforce and have been approved and disseminated by the MOH. The new SOPs increase the number of managed products from 113 to 194 and include updates on logistics transaction and reporting tools. The project started training trainers from the central level and several regional supply-chain staff on the revised SOPs.

As part of a larger initiative to improve management of malaria commodities in **Zimbabwe**, GHSC-PSM facilitated the redesign of the logistics system for the supply/re-supply of malaria commodities to community health workers (CHWs). The redesign included developing SOPs for CHWs and a training manual for orienting CHWs and health facility staff. The project engaged representatives from national, provincial and district levels, health facilities, hospitals, and the community health worker and school health coordinator communities to generate the best system design, working to meet all user needs and expectations. Stakeholder engagement was critical for building buy-in for the proposed system design. The new system will improve stock management and availability at the community level and provide much-needed data to improve management of the community supply chain and inform national quantification and procurement efforts.

B3. Family Planning and Reproductive Health



GHSC-PSM launched the online, interactive dashboard for the **Contraceptive Security (CS) Indicators Survey** and completed dissemination of the 2017 survey results to numerous partners and stakeholders through conference presentations and posters, partner meetings, and online through listservs and websites.



GHSC-PSM continued to strengthen **our global leadership role through the launch of our FP/RH Global Collaboration Strategic Framework** and associated work plan.



GHSC-PSM was a key player in launching the **Global FPVAN platform** under Reproductive Health Supplies Coalition (RHSC) in January. **GHSC-PSM is facilitating 100 percent of the inventory and supply plan data exchange** and is one of two procurers providing upstream order and shipment data to the platform to enable collaborative supply planning.



Per the FP/RH **five-year sourcing strategy**, **GHSC-PSM expanded our supplier base by introducing three generic manufacturers** that added products to the catalog and reduced costs.

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

Sourcing, Procurement and Delivery

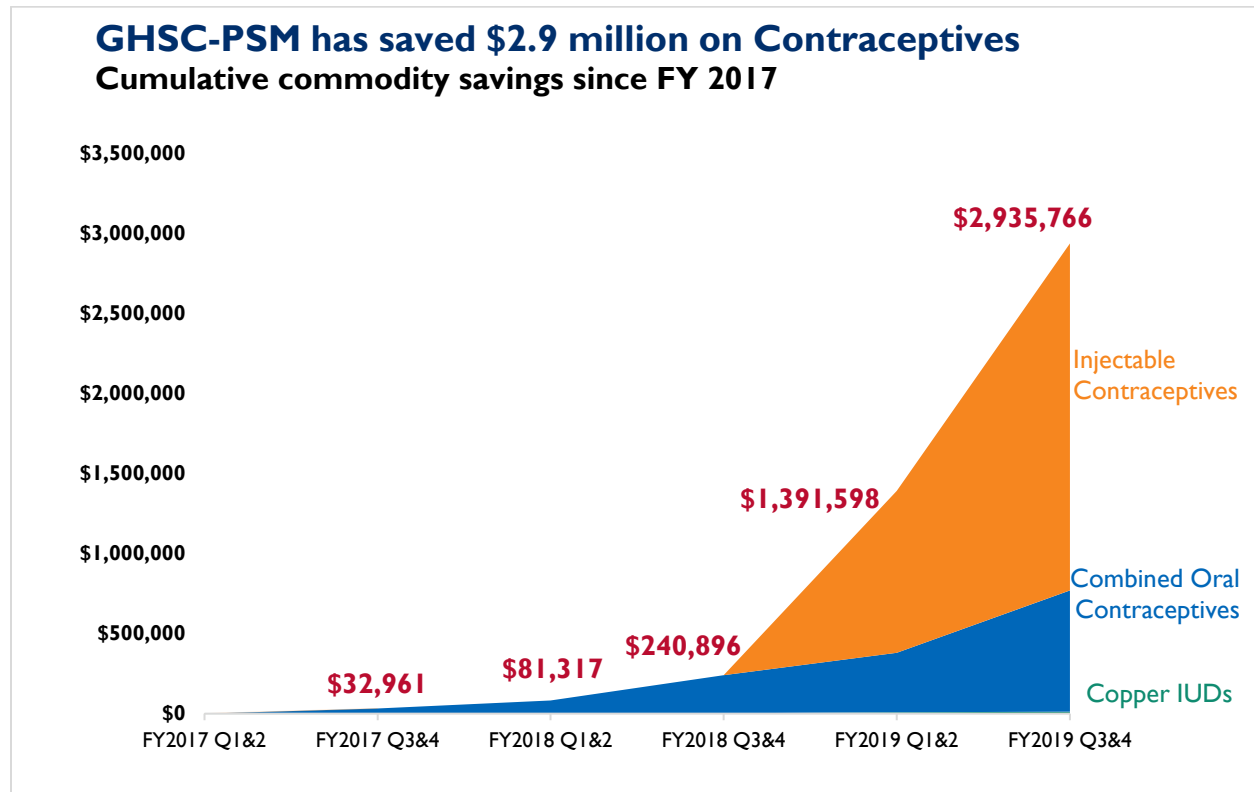
Strategic Sourcing to address the constrained global supply of FP/RH products

During FY 2019, GHSC-PSM ensured a continuous and reliable supply of commodities to various countries despite severe global supply shortages of injectable, implantable and oral contraceptives. GHSC-PSM achieved an annual OTD of 94 percent, including 100 percent for FP/RH commodities in Q3.

GHSC-PSM's strategic sourcing activities generate significant cost savings for USAID through the diversification of the supply base, addition of generic products, and negotiations of new supply contracts. As shown in Exhibit 14, the project has saved \$2.9 million on combined oral contraceptives, injectable contraceptives, and copper-bearing intrauterine devices (IUDs) over the life of the project. This is equivalent to about 15 percent of the project's FY 2019 annual spend in these product categories. The introduction of a generic depot medroxyprogesterone acetate intramuscular (DMPA-IM) product has been key to these savings; the generic represented 20 percent of all injectable procurements this fiscal year, resulting in significant savings in this category. Furthermore, the team negotiated an exclusive long-term minimum supply commitment for a product that often has constrained supply, leveraged our strong vendor management strategy, and held stock centrally at regional distribution centers to further mitigate supply risk.

The project developed several internal tools to maximize the utility of the expanded supplier base and contracts. Staff use these tools to track, allocate and monitor country orders and supply when interchangeable or equivalent products are available.

Exhibit 14. Life-of-project Cost Savings on FP/RH Commodities



RDC strategy: an analysis of the use of RDCs for the FP/RH supply chain

The project fulfills a large volume of FP/RH orders from inventory managed at one of GHSC-PSM’s RDCs rather than from direct shipments from suppliers. In FY 2019, GHSC-PSM evaluated the impact of this strategy across a variety of factors. The study found that the project can deliver product from the RDCs significantly faster than when filling orders directly from manufacturers. For example, median cycle times for RDC-filled orders for contraceptive implants were 14 weeks faster than for direct drop orders. Similarly, injectable contraceptives were 8 weeks faster and oral contraceptives were 25 weeks faster. An interesting finding was how the RDC strategy allows GHSC-PSM to create a steadier, more predictable order stream for suppliers, thus improving supplier relations and reducing the likelihood of supply disruptions. For example, there were 3 times fewer RDC orders to suppliers than there were country orders, and those orders were 3 times larger. In some cases, country orders would not have met the production minimum or minimum batch size of suppliers, suggesting those orders likely would have been delayed without the RDC in place. The RDC strategy allows GHSC-PSM to create supplier forecasts that are less variable and roughly 4 times more accurate than country forecasts. Because of the relatively long shelf-life of family planning products, GHSC-PSM can maintain an RDC strategy that serves as a strategic buffer when supply is constrained, as was the case with contraceptive injectables and implants. It also serves as a strategic buffer for demand, allowing GHSC-PSM to fill unexpected orders spikes, such as for DRC and Angola. The RDC allows more flexibility to address situations when the country changes its orders, as the RDC buffers these customer changes from the supplier. To

realize these various benefits, GHSC-PSM pays roughly 1% of commodity value to cover the additional warehousing and inbound transport, making it inexpensive relative to the benefits it provides. The review concluded that the RDC plays an important role in buffering FP product supply and demand.

Procurement

In FY 2019, GHSC-PSM procured \$39.8 million in FP/RH commodities, as shown in Exhibit 15. Implants and injectables comprised 86 percent of the value of the project’s procurements for FP/RH commodities this year.

Exhibit 15. GHSC-PSM Procurements Under the FP/RH Task Order²²

ITEM	FY 2019	Life of Project
Implantable contraceptives	\$20,330,300	\$53,639,862
Injectable contraceptives	\$13,920,027	\$43,510,679
Combined oral contraceptives	\$4,119,313	\$13,374,337
Progestin-only pills	\$863,244	\$1,644,336
Other nonpharmaceutical products ²³	\$278,427	\$1,440,789
Standard days method	\$152,280	\$905,170
Copper-bearing IUDs	\$99,249	\$193,082
Emergency oral contraceptives	\$11,280	\$45,780
Pregnancy tests	\$0	\$8,760
TOTAL	\$39,774,119	\$114,762,794

GHSC-PSM released a new condoms catalog to assist in streamlining social marketing campaign orders to reduce lead times. The project also participated in the Coordinated Supply Planning (CSP) group’s supply-demand-allocation and forecasting activities.

GHSC-PSM continued to provide timely and accurate condom procurement information to USAID, UNFPA, the Bill and Melinda Gates Foundation, and others.

Registration database annual update

Throughout FY 2019, GHSC-PSM coordinated with UNFPA to capture and manage registration data for FP commodities with the joint product registration tool. Health commodities must be registered with the appropriate regulatory body to be marketed and sold in most countries. Tracking which products are registered in which countries is a challenge, with continually changing country requirements, regulatory submissions, and approvals. GHSC-PSM uses the registration tool to help allocate orders, for forecasting, and to help inform suppliers’ registration priorities.

In Q4, the project collaborated with UNFPA’s Procurement Services Branch to conduct the bi-annual update of registration data in the shared database. All 25 identified RH suppliers (including three male

²² Please note that this is lower than the full TO3 life-of-project procurement total (\$116 million) because previous year totals included procurements from other funding sources (namely Ebola). This tables shows FP/RH-funded procurements only.

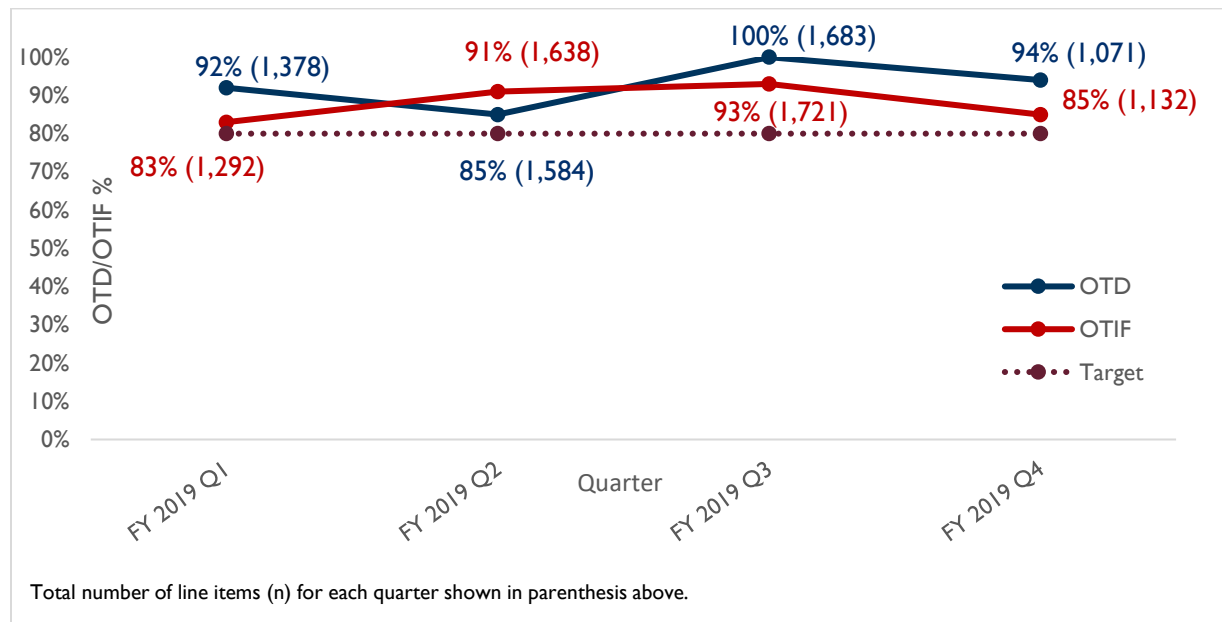
²³ “Other nonpharmaceutical products” can include syringes, medical equipment, and/or other supplies to support health facility operations as requested by the country.

condom and one female condom suppliers) included in the platform provided updated information to support procurement allocations and order fulfillment.

Deliveries

GHSC-PSM achieved an annual OTD of 94 percent for FP/RH commodities in FY 2019, as shown in Exhibit 16.

Exhibit 16. OTD and OTIF of FP/RH Commodity Deliveries²⁴



Collaboration with Global Stakeholders

In Q4, the project continued to build awareness of and support for the U.S. Government’s FP/RH priorities and programs with global partners, and to support USAID’s leadership in FP/RH commodity availability through the following activities.

Contraceptive security tracking

In FY 2019, GHSC-PSM launched a new round of the CS Indicators Survey and continued dissemination of the 2017 survey results to numerous partners and stakeholders through conference presentations and posters, partner meetings, and online listservs and websites. In advance of the 2019 survey, GHSC-PSM and USAID carried out an extensive review of the survey, ultimately strengthening survey components related to the procurement process, social marketing of FP products, provider training, logistics management information systems functionality, and, most notably, several new questions on quality and on the private sector to assess product registration, market health for FP product manufacturing and quality assurance, and plans for private sector engagement. The project has engaged with data providers from USAID priority countries to ensure comprehensive reporting. We also sought support from USAID backstops and Missions, GHSC-TA, RHSC, UNPFA and CHAI in countries where

²⁴ OTD is based on agreed delivery data and OTIF is based on actual delivery data

PSM does not have a presence. During the last RHSC Annual membership meeting, Nepal presented on the use of the data from the survey to inform FP programming.

Contraceptive and condom packaging rationalization

Previous analysis of different packaging configurations purchased by UNFPA and USAID showed that packaging of otherwise similar products can vary based on supplier, procurement agent, or program need. As a result, some countries manage multiple stock-keeping units in their supply chains for otherwise interchangeable products. Based on these findings, GHSC-PSM created an interview guide for use with manufacturers and suppliers to better understand potential opportunities and constraints related to packaging. GHSC-PSM will carry out these interviews in Q1 FY 2020. Results will inform recommendations for harmonization between the two procurers.

Pathways to increasing access to hormonal intrauterine system

GHSC-PSM joined USAID, DFID, UNFPA, CHAI, the Bill and Melinda Gates Foundation, Population Services International (PSI) and FHI 360 in forming a hormonal intrauterine system working group to catalyze demand for such products and to promote their availability and access. To support increased access, in Q4, GHSC-PSM issued the first solicitation in USAID's history for hormonal intrauterine systems. Also, the project is working closely with CHAI, FHI 360 and PSI in developing a global demand forecast to better align supply and demand.

Oral Contraceptive Market Analysis

In FY 2019, GHSC-PSM conducted a market analysis to identify and evaluate alternative combined oral contraceptive formulations in the market. Findings and recommendations will inform ongoing discussions about how to secure supply within a shifting demand landscape, align offerings with key procurers, and increase choices for clients.

South Africa Total Market Contraceptive Landscape Analysis

In support of the USAID Global Health Bureau's interest in integrating support for FP and HIV, GHSC-PSM contracted IQVIA, a health sciences information company, to conduct a total market analysis of the contraceptive landscape in South Africa. This analysis will yield information on the national contraceptive procurement and distribution situation to help the government and USAID identify gaps in contraceptive method choice and opportunities to strengthen their contraceptive programs. IQVIA presented its findings in Q4. The analysis revealed that South Africa is dependent on one contraceptive method, with injectables constituting 70 percent of public sector supply. The government of South Africa will use the analysis to move toward a more balanced method mix and the Mission will leverage the data to engage in a dialogue with the government, partners and civil society.

Total Market Approach Working Group

In September, GHSC-PSM participated in the USAID Total Market Approach (TMA) Working Group, co-convened by USAID and PSI. Topics included TMA tools; the intersection between self-care and TMA; the managing-markets-for-health approach for systematically analyzing, designing and implementing policies to steer private actors to contribute to sustained health and equity outcomes; and initiation of a private sector subcommittee for the 2021 International Conference on Family Planning.

Implementing new work plan for the RHSC Systems Strengthening Working Group

As Chair of the RHSC's Systems Strengthening Working Group (SSWG), the project supported implementation of the new SSWG strategy this quarter, along with the work plan that had been developed earlier this year. For the newly launched visibility and analytics workstream, which focuses on country information systems, the project held a kickoff webinar in July on the GHSC-PSM Supply Chain Information Systems Maturity Model. The workstream surveyed members to prioritize activities going forward, including defining the workstream's purpose.

The project also worked with Avenir Health to analyze data from Track20's Universal Stockout Indicator, which has been adopted by USAID and UNFPA. This analysis will inform recommendations to countries around data sources for the indicator as well as possible changes to the indicator itself.

Enhancing visibility of data on family planning supplies

Throughout FY 2019, GHSC-PSM provided support to the Global FP VAN, the reproductive health community's pioneering undertaking to increase supply-chain visibility and improve collaboration across stakeholders. The Global FP VAN is a shared platform that captures and uses contraceptive supply-chain data from multiple donors, procurers and country programs to improve data visibility as an input to coordinated decision making. The purpose is to improve allocation of health resources and gain efficiencies throughout the global supply chain from supplier to country-level recipient programs. In the fourth quarter, GHSC-PSM added condoms to the list of products for which we provide inventory and order/shipment data.

Collaborating Globally to Avert Stock-outs and Expiries

In FY 2019, the GHSC-PSM Procurement Planning and Monitoring Report (PPMR) team processed data from 263 new reports from country programs and tracked 519 issues reported by programs/countries. Based on PPMR data, the project worked with the Coordinated Assistance for Reproductive Health Supplies (CARhs) group to:

- Create 26 new shipments for countries to prevent or resolve stock-outs
- Expedite 12 shipments to countries, including Angola, Burkina Faso, Burundi, Chad, Guinea, Liberia, Madagascar and Tanzania to prevent stock-outs
- Initiate 25 transfers of commodities to Benin, Burkina Faso, DRC, Madagascar, Malawi and Togo
- Track and provide valuable shipment information on planned and emergency shipments to 36 country representatives
- Initiate and monitor the execution of six emergency reports to resolve stock-out issues
- Help postpone/cancel 26 shipments to seven countries to avoid or reduce overstock, resulting in significant savings and efficient use of stock-on-hand

Country Support

Below, we illustrate the technical assistance that GHSC-PSM provided to strengthen in-country²⁵ supply chains for FP/RH commodities in Q4.

In **Nigeria**, access to voluntary FP/RH products and services has become a national priority. GHSC-PSM supplies central medical stores and clinics with an appropriate method mix of contraceptives so clients can choose the method that best suits their needs. Equally important, GHSC-PSM provides hands-on training to health facility workers across the country on how to manage stock levels to ensure there is always a reliable supply. In Q4, GHSC-PSM documented how these central-level investments to strengthen systems are noticeably improving patient lives.²⁶ To date, GHSC-PSM has shipped almost 9.3 million units of family planning commodities to Nigeria; these could provide nearly 3.5 million couple years protection to Nigerian women.



At Apata clinic in Oyo state, Nigeria, Nurse Folashade advises patient Taiwo on the FP/RH options available to her. *Photo credit: Anthony Abu/GHSC-PSM*



A health facility in Angola is piloting the DOOR system, mounted on the back wall, to provide real-time site level data to central warehouse managers. *Photo credit: Michael Cohen/GHSC-PSM*

Drugs Out of Range

In Q4, the project piloted a new Drugs Out of Range (DOOR) system to address the often slow and incomplete stock reporting at public health facilities that can result in extended stock-outs of health commodities. The DOOR system relies on “Internet of Things,” or IoT, technology to enable simple capture of data in real time through the push of a

²⁵GHSC-PSM procured FP/RH commodities for the following countries: AFRICA: Benin, Burkina Faso, Burundi, DRC, Ethiopia, Ghana, Guinea, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Nigeria, Rwanda, Senegal, Tanzania, Uganda, Zambia; LAC: Haiti; ASIA/NEAR EAST: Afghanistan, Bangladesh, Nepal, Yemen. The countries for which GHSC-PSM provided technical assistance with FP/RH funding are AFRICA: Angola, Burundi, Ethiopia, Ghana, Guinea, Kenya (TO5), Liberia, Madagascar, Malawi, Mali, Mozambique, Nigeria, Rwanda, South Sudan, Uganda, Zambia; LAC: Guatemala, Haiti; ASIA/NEAR EAST: Nepal, Pakistan

²⁶<https://www.ghsupplychain.org/index.php/news/photo-essay-families-plan-their-future>

button at health facilities. It incorporates multiple external data analytics systems to provide real-time stock status availability with immediate alerts to supply-chain actors. In September, GHSC-PSM began installing the DOOR system in 20 pilot sites in **Angola**. This system will send SMS (short message service) alerts to municipal and provincial points of contact when sites report a change in status of the commodities selected for the pilot – condoms, two-rod implants, injectable contraceptives, and the malaria treatment Alu. The DOOR system will provide the first real-time site-level data from many facilities in Angola to central warehouse managers.

B4. Maternal, Newborn, and Child Health



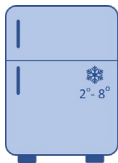
Nine countries procured MNCH medicines and commodities and **16 countries received health supply-chain systems strengthening** with MCH support this year.



By the end of Q4, the project had procured **\$9.5 million in MNCH commodities over the life of the project.**



GHSC-PSM continued to provide technical input on key resources to increase access to quality-assured commodities for MNCH, including a **Decision-maker's Guide for Program and Procurement Managers for Uterotonics and Tranexamic Acid.**



The project continued to lead efforts to **improve the availability of quality oxytocin** in West Africa, including providing direct support in Ghana.

Under the MNCH task order, GHSC-PSM helps prevent child and maternal deaths by increasing access to quality-assured medicines and supplies for MNCH. In collaboration with USAID, the project provides global technical leadership on MNCH commodities and ensures that supply-chain management considerations are included in global dialogue and initiatives. GHSC-PSM focused on three key areas this year: improving the availability of quality oxytocin, ensuring the availability of MNCH medicines and commodities, and providing global technical leadership.

Improving the Availability of Quality Oxytocin

Oxytocin, the recommended product for preventing and treating post-partum hemorrhage, is a heat-sensitive uterotonic that requires transport and storage in a temperature-controlled supply chain, or cold chain. Storing oxytocin at room temperature or higher can result in product degradation. Keeping oxytocin within a proper temperature range is a common challenge in many countries where cold chain infrastructure is limited. GHSC-PSM has supported work to ensure the availability of quality oxytocin in USAID MNCH priority countries since 2017. This year, at the global level, GHSC-PSM collaborated with and supported stakeholders, such as the Maternal Health Supplies Caucus, WHO and UNFPA, to improve procurement, storage and distribution guidance for oxytocin. In addition to global-level leadership and collaboration, GHSC-PSM provided technical assistance to countries seeking to improve the quality of oxytocin. We present progress to date in one of these countries, Ghana, in the box.

Multi-faceted Approach to Ensuring the Quality of Oxytocin in Ghana

The presence of poor-quality oxytocin is well documented in Ghana. In recent post-marketing surveillance studies, **over 50 percent of samples failed quality testing**. In previous quarters, GHSC-PSM supported the Ghana Health Services to identify root causes of poor-quality oxytocin within the public-sector health supply chain and to develop solutions to address them. In Q3 and Q4 FY 2019, the project made notable progress in implementing multi-faceted solutions to improve the quality of this life-saving drug, from national policy advocacy to focused supply-chain support.

Improved temperature monitoring and cold-chain management. GHSC-PSM supported installation of temperature-monitoring devices in two regional medical stores in Eastern and Brong Ahafo regions to provide real-time data on storage conditions of cold-chain items, including oxytocin, and trained staff to use the devices. Based on these data, staff in **Eastern regional medical stores stopped using two oxytocin storage refrigerators that were recording temperatures outside the recommended range**.

Training in managing storage. Data collectors for the updated End Use Verification (EUV) survey collect logistics data on oxytocin and its storage conditions. EUV data collectors leverage the observation visits during which they collect data to **provide on-the-job-training to improve storage practices**.

Improved procurement practices. Procurement of many of Ghana's essential medicines is decentralized, which can challenge efforts to ensure the quality and affordability of products. To address these challenges, the Ministry of Health and the Ghana Health Service introduced a framework contracting mechanism that enables regional medical stores to buy health products directly from pre-approved sources at negotiated prices. GHSC-PSM collaborated with the government of Ghana to **require storage of oxytocin in 2–8°C conditions in the framework contract**. This will ensure facilities procure appropriately labelled and managed oxytocin.

Advocacy to increase reimbursement rates for oxytocin. GHSC-PSM presented findings from an assessment of how to improve supply-chain management of oxytocin to ensure its quality at the Maternal and Child Health conference held in Accra in June. In response, the Director General of the Ghana Health Service committed to advocate with the National Health Insurance Agency at the next Ghana Health Service Council meeting **to reimburse oxytocin at realistic market prices**.

Ensuring the Availability of Quality-assured MNCH Commodities within the Public and Private Sectors

Improving availability of information on MNCH commodities

The EUV survey collects data on commodity availability, storage conditions, and factors that affect commodity availability at service delivery points. Typically, the EUV is implemented in countries where national logistics management information systems are either not available or do not include consistent data on commodities. Originally, the EUV was developed to collect data specifically on malaria commodities. However, GHSC-PSM has expanded the EUV to include MNCH and FP/RH commodities for improving availability of these products.

GHSC-PSM expanded the EUV survey and made general implementation upgrades, including improving survey design, adding new commodities on which data are collected, and refining reporting guidelines. In

FY 2019, the project supported collection of data on MNCH commodities in EUV surveys in seven African countries: Ethiopia, Ghana, Liberia, Mali, Mozambique, Nigeria and Zambia. Six of the countries conducted data collection in Q4. Because data on MNCH commodities are rarely managed in national logistics management information systems, these EUV surveys are now providing first glimpses into availability of critical lifesaving MNCH commodities in these countries (see box).

Assessing barriers among private sector wholesalers in Mozambique and Zambia

GHSC-PSM designed and executed a rapid assessment of the challenges and barriers that private sector wholesalers and distributors face in providing quality-assured MNCH products in Mozambique and Zambia. The rapid assessments aimed to identify wholesalers that provide MNCH commodities in these countries and examine the scope and quality of their services. GHSC-PSM interviewed more than 50 key stakeholders to collect data on barriers and drafted reports in Q4. The project will produce a public-facing documentation to share lessons learned.

Providing Global Technical Leadership and Coordination in MNCH

Global Guidance on Uterotonics for Post-Partum Hemorrhage (PPH)

In Q4, GHSC-PSM continued to provide significant technical input into a PPH guidance document, *Uses of Medicines for Prevention and Treatment of Post-partum Hemorrhage and Other Obstetric Purposes: A Summary of Information on Recommended Uses, Contraindications, and Supply Chain Considerations for Program Managers and Procurement Managers*. This guidance highlights key characteristics and supply-chain considerations for individual uterotonic medicines and tranexamic acid. Program and procurement managers can use the guidance to determine the most appropriate combination of medicines for preventing and treating PPH and other obstetric indications at different levels of the health system. The document was developed as a response to WHO's updated Recommendations for the Prevention of Postpartum Hemorrhage to provide additional practical information and clarification on the different PPH products.

Uterotonics Meeting in Dakar

In September, GHSC-PSM co-led a meeting with the GHSC Francophone task order (implemented by Chemonics International), Merck for Mothers, and the West African Economic and Monetary Union (UEMOA) that focused on improving oxytocin quality within the supply chain. Approximately 65 participants from eight countries—Benin, Burkina Faso, Côte d'Ivoire, Guinea Bissau, Mali, Niger, Senegal and Togo—participated. GHSC-PSM presented data on oxytocin degradation and information on best practices for ensuring oxytocin's quality from the point of manufacture until it is administered to the patient. Merck for Mothers presented updated information on heat-stable carbetocin. During the meeting, participants worked through several case examples to deepen their understanding of presented content and to have the opportunity to brainstorm and draw from their country experience in solving tough maternal health commodity challenges. Participants developed action plans with concrete next steps to improve oxytocin and uterotonic quality and availability in their respective countries.

First Visibility into MNCH Stock Levels

For the first time, in FY 2019, seven countries started obtaining consistently collected data on availability of MNCH commodities at randomly sampled health facilities through the EUV.

What was learned? Many countries regularly suffer from stock-outs of key MNCH commodities. In Ethiopia, these data have helped to **bolster the case for increased government funding for MNCH commodities.**

Country Support: A Deep Dive on Quantification TA

Increasing Financial Resources for MNCH Commodities through Improved Quantification in Ethiopia

Accurate quantification helps governments ensure appropriate levels of funding are budgeted for MNCH commodities. Unfortunately, some governments lack capacity or access to the right tools to prepare quantifications. In Ethiopia, GHSC-PSM provided ongoing quantification support for MNCH commodities to the Federal Ministry of Health (FMOH). Using the Quantimed® and Pipeline® software tools, FMOH staff determined the funding needed for procurements of key MNCH commodities—including oxytocin, magnesium sulphate, gentamicin, amoxicillin, oral rehydration salt, and zinc—and secured additional funding for these life-saving commodities.

Transitioning Quantification Expertise and Responsibility in Mali

As part of USAID’s Journey to Self-Reliance agenda, GHSC-PSM supported the MNCH technical working group within the national quantification committee of Mali in developing a manual of SOPs to quantify MNCH products. GHSC-PSM also supported the Ministry of Health in building the MNCH technical working group’s capacity in forecasting and supply planning using Quantimed® and Pipeline®. Using the quantification SOPs, the MNCH technical working group achieved an important milestone in performing a long-term forecast for MNCH products (2019–2023) in Q4 (see box).

Self-Reliance in Quantification

In August 2019, Mali’s national quantification committee completed its first quantification of MNCH commodities without technical assistance from development partners. This initiative represents an important milestone in improving domestic supply-chain capabilities.

Procurement and Deliveries

To further support MNCH activities at the country level, GHSC-PSM delivered MNCH commodities to nine countries²⁷ in FY 2019 worth approximately \$4.1 million, with one order carried out by the in-country decentralized procurement team.

Procurement

We summarize GHSC-PSM procurements of MNCH commodities in FY 2019 in Exhibit 17.

²⁷ Countries that received procurement support for MNCH: DRC, Ghana, Haiti, Liberia, Madagascar, Mali, Mozambique, Rwanda, Zambia. The countries for which GHSC-PSM provided technical assistance with MNCH funding are: AFRICA: Ethiopia, Ghana, Guinea, Kenya (TO5), Liberia, Madagascar, Malawi, Mali, Mozambique, Nigeria, Rwanda, Zambia; LAC: Guatemala, Haiti; ASIA: Nepal, Pakistan

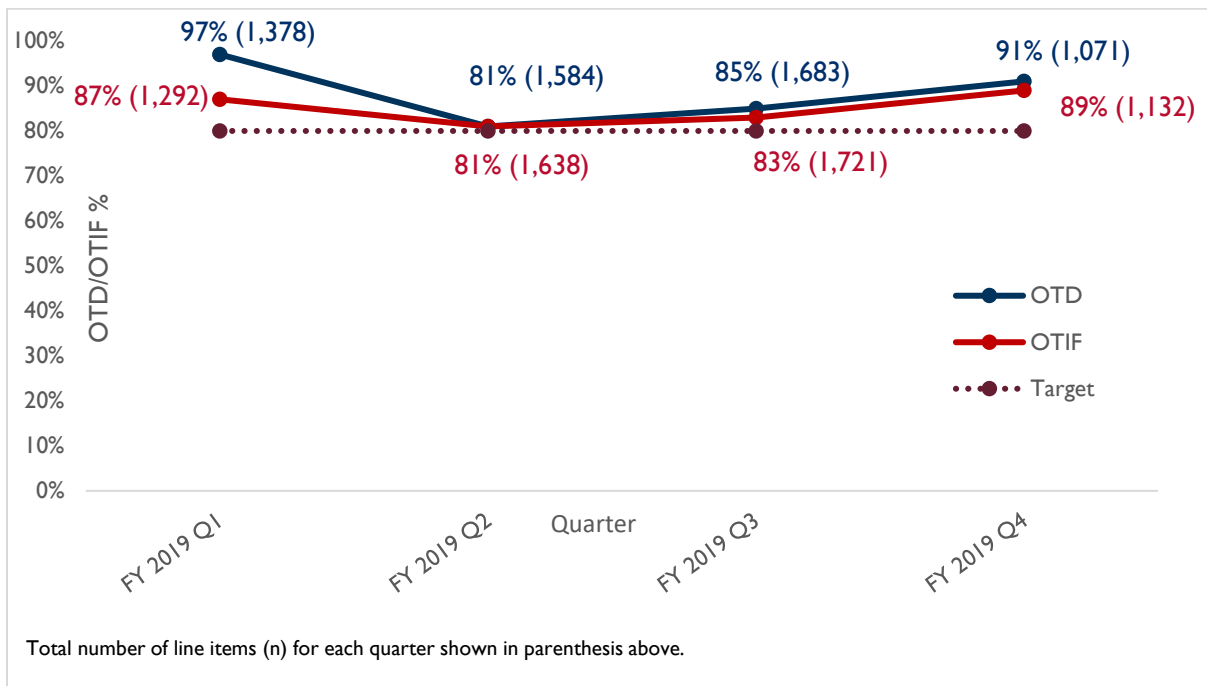
Exhibit 17. GHSC-PSM Procurements of MNCH Commodities

ITEM	FY 2019	Life of Project
Other pharmaceutical products	\$3,507,014	\$7,161,906
Other nonpharmaceutical products	\$337,501	\$1,037,838
Other RTK	\$268,290	\$1,048,857
Laboratory	\$6,743	\$231,203
Food, water, sanitation, and hygiene	0	\$9,570
TOTAL	\$4,119,548	\$9,489,375

Delivery

Timeliness of GHSC-PSM deliveries has varied over the reporting period, as shown in Exhibit 18.

Exhibit 18. OTD and OTIF for MNCH Commodities in FY 2019²⁸



²⁸ OTD is based on agreed delivery data and OTIF is based on actual delivery data

B5. Other Emerging Health Threats



The project procured **1.2 million bottles of repellent** (worth approximately **\$5.3 million**) for **seven** countries, and **distributed repellent to antenatal care facilities** to ensure that pregnant women have access to Zika prevention commodities.



GHSC-PSM conducted TA activities in four countries and held a regional workshop to build the capacity of health ministry supply-chain teams to **prepare for future outbreaks of infectious disease**.

GHSC-PSM is working with Ministries of Health across Latin American and the Caribbean to provide critical Zika diagnostic and prevention supplies. GHSC-PSM is also building resilient supply chains that are equipped to face the challenge of emerging public health threats when they arise.

Supporting the Zika Response

GHSC-PSM provides commodities used by health programs to help pregnant women throughout Latin America and the Caribbean avoid contracting Zika, an arbovirus and sexually transmitted infection that can cause severe birth defects when it infects women during pregnancy. GHSC-PSM is equipping health ministries with male condoms and mosquito repellent and providing technical assistance to resist Zika's spread.

In FY 2019, GHSC-PSM procured male condoms or mosquito repellent for 14 countries for Zika prevention²⁹. Despite the lack of long-term GHSC-PSM staff in 13 of these countries, GHSC-PSM headquarters-based and short-term specialists provided robust supply-chain and procurement support. GHSC-PSM managed and coordinated all aspects of supply-chain technical assistance, including quantification, import permitting, warehousing, transport, and distribution logistics.

Repellent

In Q4, GHSC-PSM delivered repellent to Paraguay (approximately 200,000 bottles) and Peru (approximately 45,000 bottles). GHSC-PSM has also been finalizing the necessary paperwork for shipping repellents to Ecuador in FY 2020.

Condoms

This quarter, GHSC-PSM planned for the final shipment of condoms to El Salvador, scheduled for FY 2020.

Assessment of Use of Repellent and Instructional Materials

²⁹ The countries for which GHSC-PSM procured male condoms or mosquito repellent for Zika prevention in FY 2019 were Antigua and Barbuda, Barbados, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Paraguay, St. Kitts and Nevis, Saint Lucia, Saint Vincent and Grenadines, and Trinidad and Tobago.

To verify whether mosquito repellent and guidance materials are being distributed and used as intended, GHSC-PSM developed an assessment tool to be used at distribution centers and antenatal care facilities across the Latin America and Caribbean region. The tool is used to collect data on availability of repellent and the conditions in which it is stored, the knowledge of the health workers distributing repellent and the women using it for Zika prevention, and the extent to which pregnant women have received the donated product. In Q4, GHSC-PSM completed data collection for the availability assessments in El Salvador and Honduras, thus completing the assessments in the five countries that received repellents (having completed assessments previously in the Dominican Republic, Haiti and Jamaica).


In Q4, GHSC-PSM presented preliminary findings of these assessments to USAID and other Zika implementing partners. While the assessment reports detail the country-specific findings, in general, the assessments found that the repellent had been distributed to antenatal clinics and given to pregnant women as planned.

Emergency Supply-Chain Preparedness


The project has now provided emergency supply-chain preparedness support in four countries and, at a regional workshop in Jamaica, for eight Caribbean countries. In Q4, GHSC-PSM worked with national stakeholders in the Dominican Republic and Paraguay to develop supply-chain plans in the event of an infectious disease emergency. The work has stimulated discussion and planning for supply-chain needs during infectious disease emergencies and helped countries identify weaknesses in their routine supply chains and coordination gaps among government agencies and offices.

PROGRESS BY OBJECTIVE



CI. Global Commodity Procurement and Logistics



Procured almost \$544 million this year in drugs, diagnostics and health commodities. Procurement values now exceed **\$2.1 billion for the life of the project.**



Delivered 5,784 line-item orders this year, with a value of nearly **\$699 million.**

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 85 percent OTIF.** GHSC-PSM has now achieved **five consecutive quarters of OTD above 80 percent (including 16 consecutive months above 80 percent) and five consecutive quarters of OTIF above 80 percent.**

CIa. Global Supply Chain: Focused on Safe, Reliable, Continuous Supply

In FY 2019, GHSC-PSM focused on sustaining on-time delivery performance at or above 80 percent. Through better coordination among teams, continuous improvement of our systems and tools, and improved use of analytics to drive performance, this target was achieved for each of the 12 months and for each of the four quarters of the year. At the same time, GHSC-PSM continued to conduct strategic-sourcing and market-shaping activities that has generated cost savings in excess of \$19.4 million over the life of the project and increased the number of long-term agreements from 64 to 79, positioning the team to drive down cycle time and reduce transactional costs. The work of each of the teams within the Global Supply Chain is described in more detail below.

The Global Supply Chain at a Glance

- **70 countries** served
- **4,050 products** in the catalog provided by **315 suppliers**
- Five international freight forwarders responsible for **5,969 shipping lanes**

More Health Commodities Through Market Dynamics, Strategic Sourcing and Supplier Management

The GSC Strategy Team continued to work with teams across the project and alongside external stakeholders to understand markets for the medicines, diagnostics and other health commodities that we procure. We developed sourcing strategies and built strategic relationships with suppliers that shaped markets, enhanced project performance, and achieved greater value for USAID within each product category. This team conducted actionable market analysis, led strategy development, shared

best sourcing practices, contributed to process improvements, participated in negotiations, and supported contract management.

During FY 2019, the GSC Strategy Team managed and provided technical expertise to the joint USAID/GHSC-PSM commodity councils, which are cross-functional groups charged with formulating commodity sourcing strategies. The sourcing strategies developed in the commodity councils informed the decisions of the sourcing governance boards, a precursor to project contract awards.

In FY 2019, GHSC-PSM established long-term agreements with 15 suppliers of ARVs, essential medicines, laboratory supplies, malaria pharmaceutical products and male condoms. To date, the project has finalized 79 long-term agreements, five of which were signed in Q4. These contracts, together with order optimization and allocation tools, are reducing cycle time and facilitating closer management of supplier performance.

GHSC-PSM proactively expanded and managed relationships with API manufacturers. This collaboration is crucial to monitoring and promoting market stability, particularly for critical products such as TPT that experienced constrained API supply during FY 2019. The TPT market has been disrupted because of increased demand to treat HIV/TB co-infected patients, as well as the imminent transition to the 3HP treatment regimen.

In FY 2019, GHSC-PSM worked to better manage supplier compliance, conduct root-cause analysis of supply disruptions, mitigate supply risks, and improve supply visibility. To achieve these goals, the project enhanced our supplier performance framework to include more comprehensive KPIs related to supply incident management and Global Standards (GSI) compliance. The team also held regular quarterly business reviews with key suppliers. These structured meetings between senior project and supplier representation communicated future procurement strategies and emphasized that supplier past performance is a key metric for evaluating bids and awarding orders. The project's close, high-level and regular communication with suppliers is driving continuous improvement to achieve best value for our client.

In partnership with the GHSC-QA contract, GHSC-PSM developed briefing material to be used in advocating for improved regulations related to shelf-life requirements upon importation. The briefer catalyzed PEPFAR funding for USAID to work with WHO on a draft policy recommendation to take into account months of remaining shelf rather than percentage of remaining shelf life. Also, the briefer informed a USAID presentation at the Scientific Conference on Medical Products Regulation in Zimbabwe in September 2019.

Driving Performance with Analytic Tools

As part of the project's continual improvement processes, GHSC-PSM continues to strengthen existing tools and to design new tools to support operations innovations and meet emerging needs. Recent updates that help the project better meet USAID's needs include the following:

- **Requisition Order Pipeline Dashboard.** Since its introduction in September 2017, the requisition order pipeline dashboard has been a key tool that project procurement specialists use in their daily work. The dashboard now visualizes information on projected on-time delivery and on-time, in-full delivery performance to help teams track and manage orders to both these standards.
- **Freight Estimator Tool.** The freight estimator tool was updated with rates from the 2019 freight awards, to allow specification of the Inco-term, and to improve the user interface.

- **Order Promising Tool.** The project continues to provide a monthly release of the Order Promising Tool so that it reflects current information and helps project staff determine and commit to realistic delivery dates for orders.

Procurement and Logistics

In FY 2019, the commodity procurement teams made significant progress in executing commodity procurement strategies. For the HIV, malaria, FP/RH, and MCH health areas, these are summarized in Sections BI–B4, respectively. Below we summarize important strategic sourcing and procurement achievements associated with cross-cutting essential medicines.

Essential Medicines

During Q4, the Strategy Team finalized modifications to existing long-term agreements to establish updated fixed prices for 212 essential medicines products for 19 different countries for a period of 15 months. The updated allocation strategy aims to incentivize consolidation of suppliers to a given country. Also, with the challenge in finding suppliers who are interested in supporting what can be small orders for individual essential medicines, in the 2019 Q4 fixed-price updates, the project focused on selecting and making awards to some suppliers who can provide low quantities of products for specific countries.

In April 2019, GHSC-PSM co-hosted an Essential Medicines Supplier Summit with USAID and the GHSC-QA project for USAID-approved wholesalers. Procurement and QA professionals shared lessons learned from the essential medicines strategy and solicited feedback and input for the upcoming 2020 essential medicines strategy. The team reviewed the essential medicines product list, rationalizing and prioritizing products to be included to support all health areas.

Also, the project trained staff in seven countries (Haiti, Mozambique, Nigeria, Rwanda, Uganda, Zambia and Zimbabwe) to procure essential medicines under the fixed-price long-term agreements.

To ensure smooth implementation of the new long-term agreements and evolve the sourcing strategy with suppliers, GHSC-PSM staff visited USAID-approved essential medicines wholesalers in the Netherlands and Denmark during Q4. This trip lent insight into suppliers' internal procurement and quality assurance processes, and consolidation and stock-holding capabilities at their warehouses. At the meetings, staff also discussed GHSC-PSM's vision, priorities and requirements, such as the use of African manufacturers and distributors.

The team enhanced its focus on proactive supplier engagement and management with weekly calls, project management for large orders and quarterly business reviews. With the availability of strong data analytics, the Essential Medicines team is using past performance as a key metric for current and future evaluations.

Decentralized Procurement

Bolstering USAID's efforts to promote country level journeys to self-reliance, GHSC-PSM's decentralized procurement teams, whereby GHSC-PSM country offices conduct their own procurements rather than relying on headquarters staff to manage procurements, achieved a strong on-time delivery performance of 89 percent in FY 2019. GHSC-PSM also expanded the range of products procured by local staff. Highlights of decentralized procurement in FY 2019 include:

- The project trained field office teams in June 2019 to use fixed-price long-term agreements, standard operating procedures, business rules and work instructions to procure essential medicines without competing each order.
- Staff in Haiti, Mozambique, Nigeria and Zambia are procuring viral load and EID reagents from suppliers' local representatives under the project's all-inclusive pricing model for reagents. Local management of procurement has provided the flexibility to adapt delivery schedules based on emerging needs in country.
- The project continues to achieve best value by procuring laboratory commodities from local vendors. GHSC-PSM collaborates with the GHSC-QA contractor to review local vendor eligibility, then establishes long-term framework contracts with local vendors who meet the required quality, performance and competitiveness standards. To date, the project has qualified local laboratory wholesalers in Mozambique and Zambia. The project expects to expand this approach in other countries in FY 2020.
- Decentralized procurement specialists also use the project's long-term agreements with international wholesalers for laboratory supplies, which reduces procurement cycle time and level of effort.

GHSC-PSM's sustained effort to train and mentor in-country specialists to procure commodities on the local market and internationally according to rigorous standard operating procedures is building local cadres of well-qualified procurement specialists for countries' long-term benefit.

Deliver/Return

In FY 2019, the Deliver/Return team executed 5,784 shipments and expanded delivery of products to 11 new countries. While the headquarters team managed most shipments, the project established a small team in Dubai in January 2019 to manage shipments to/from that regional distribution center. The Dubai satellite team coordinates more closely with outbound 3PLs and the country offices receiving shipments from the facility, proactively identifying and addressing issues more expeditiously, given both teams operate in the similar time zones. Based on these successes, the project gave the Dubai team responsibility for outbound shipments to Angola, Cameroon, eSwatini and Mozambique.

In FY 2019, GHSC-PSM conducted three strategic procurements of logistics services that achieved superior performance at lower costs. These procurements were:

- Annual rate refresh of freight lanes
 - The team completed the annual rate refresh for more than 5,000 multi-modal lanes by competing lanes among the project's five contracted 3PLs.
 - The team developed a strategy for addressing the challenges of delivering to DRC, which is unique given the number of locations within the country to which the project delivers and the vast distances between them. As part of the freight procurement that concluded in April 2019, the project modified our process for competing freight for DRC by breaking requirements into two separate segments—from origin door to destination port in the DRC (generally the less-expensive part of the total freight cost), and from destination port to destination city (generally the more expensive part of the total freight cost). The team also adopted a pooled concept for in-land distribution, whereby a pool of pre-qualified 3PLs continue to compete for each delivery to ensure ongoing competition to reduce in-land distribution costs.
 - The team also improved its approach to managing delivery of large LLIN orders by competing them through spot bids. This lowered costs and allows the project to

coordinate pickup and delivery of these complex shipments, which can require moving up to 200 containers of product for one order.

- **RDC in South Africa.** In FY 2019, GHSC-PSM awarded the management of the South Africa regional distribution center to a new contractor. Operations began in November 2018 and ramped up through the fiscal year. In addition to using this RDC for shipments throughout southern and eastern Africa, the project continued to stage shipments to Mozambique from it, resulting in shorter lead times and more effective collaboration with relevant stakeholders to navigate Mozambique's complex importation process.
- **Freight Bill Payment and Audit.** In FY 2019, the team awarded the freight bill payment and audit services contract to a best-in-class System and Organization Controls-certified service provider. The new contractor has provided superior service, increased value, improved visibility into all stages of freight invoicing, and reduced invoice payment cycle times.

Efficiencies Achieved Through the Flexible Use of Regional Distribution Centers

The GHSC-PSM network of three RDCs, located in Belgium, South Africa, and the United Arab Emirates, continues to provide a critical strategic capability, with approximately one-third of all items, valued at almost \$240 million in FY 2019, being routed through the network. Use of the project's regional distribution centers to maintain inventory of some products has been instrumental to achieving several key project targets. OTD of items transferred through the regional distribution centers was 91 percent for FY 2019. Use of regional distribution centers also provided the flexibility needed to accommodate programs' specific needs, for example:

- Initiation and quick adoption of new products with estimated large and volatile demand (e.g., to support the transition to TLD as the new first-line ARV for 15 countries, with OTD performance of 94 percent)
- Prepositioning of products for campaigns, emergency situations, or seasonal needs (e.g., SPAQ stockpile for malaria from which the project sent product to triple the number of countries in FY 2019, with 100 percent OTD)
- Build-up of stocks in anticipation of future supply constraints in the market (e.g., DMPA-IM for family planning/reproductive health)
- Overall reduction of cycle times for Mozambique shipments that move through the South Africa location with much faster shipment pre-inspection times

In Q4, the project distributed \$39.7 million and 207 order lines of products from RDCs. Additional highlights of our RDC use in Q4 include delivering TLD in MMD units (90-count bottles) to multiple countries and dynamically allocating constrained contraceptive supply from these facilities.

GHSC-PSM Quality Assurance

The GHSC-PSM **QA Team for the HIV, FP/RH and MNCH health areas** continued to work collaboratively with the GHSC-QA project to maintain communications, identify areas of mutual concern, clarify each team's roles and responsibilities, and ensure QA requirements were incorporated into GHSC-PSM systems and applicable procedures. Specific examples of GHSC-PSM collaboration with GHSC-QA include the following:

- Continued ensuring timely provision of information and smooth communication with GHSC-QA to close product quality incidents and make products available for use.

- Managed the coordination/facilitation of two recalls with GHSC-QA and suppliers. Identified potential gaps during the recalls and initiated corrective and preventive actions (CAPAs) to improve processes/procedures.
- Reviewed/approved quality-related procedures and provided input on optimizing/consolidating/streamlining processes and procedures.
- Addressed and provided input in areas related to product assessments, product qualification, and quality requirements in supplier contracts. Challenged suppliers on the outcomes of their investigations, at times requesting a more thorough investigation and/or CAPAs related to supply chain incidents and emphasized the importance of implementing quality management procedures.
- Worked with GHSC-QA to ensure product quality incidents were addressed and investigated adequately. Identified and monitored implementation of measurable CAPAs.
- Initiated a process to capture and integrate all GHSC QA/QC (sampling/testing/inspection) investigation into one platform, AssurX.
- Supported the decentralized procurement team in qualifying local vendors to supply products to the project.
- Continuously advocated for a quality mindset across the project, ensuring that all staff follow processes, document actions per the applicable procedures, and recognize that promoting quality is everyone's responsibility.

The **Malaria QA/QC Team** is responsible for the quality assurance of PMI-funded commodities. For FY 2019, major malaria QA/QC activities and accomplishments were as follows:

- Addressed challenges due to an LLIN manufacturer's quality issues by incorporating additional quality management system (QMS) requirements for all LLIN manufacturers and creating a more robust QMS.
- Fully implemented, in Q4, a Quality Assurance Management System (QAMS), which captures QA-related information for malaria commodity orders that require QA support. Data in QAMS inform planning and decision making for shipment of commodities and other activities that are dependent on QC activities. Trained staff to use the QAMS and continued to refine the system to improve functionality and user-friendliness.
- Continued using the revised testing strategy for ACTs, which is based on the project's risk-based analysis for ACTs, yielding cost-savings of more than \$127,000 in Q4, and almost \$350,000 for FY 2019.
- Completed three method transfers at third-party laboratories to strategically optimize third-party testing capability and capacity.
- Evaluated the quality management systems of LLIN manufacturers that responded to a request for proposals to ensure they meet PMI's and the project's minimum quality requirements.
- Completed QA procedures on 100 percent of orders (97 in total) within the targeted lead times.
- Completed QA review of vendors' proposals for LLINs and DHA-PPQ.
- Participated in the Global Fund's LLIN Supplier and Partner Meeting in Singapore to foster collaboration on QA issues among global donors.

- Created a strategy for concurrent QA testing with shipment in support of the new ocean shipment strategy for malaria products.

Global Standards and Traceability

In FY 2018, GHSC-PSM implemented a new procurement requirement for suppliers of pharmaceuticals, medical devices, laboratory reagents, and sterile kits to identify and label their commodities in accordance with GSI global standards for health care. The requirement also includes exchange of product master data through the GSI Global Data Synchronization Network (GDSN).

To provide suppliers with the time needed to make necessary investments for compliance, the requirement has a phased implementation approach. In Phase I, suppliers need to submit the Global Location Numbers (GLNs) that identify their business entities; submit the Global Trade Item Numbers (GTINs) that identify their items and various levels of packaging; and label the tertiary-pack trade item with a barcode encoding the GTIN, batch/lot, and expiration date. By the end of Q4, a total of 29 percent of all in-scope³⁰ trade items were confirmed as compliant with Phase I requirements.

The project is taking several measures to address the compliance gap with our suppliers and to increase compliance with Phase 1 and upcoming Phase 2 and 3 requirements in FY 2020. The project made the strategic decision to focus supplier engagement on core commodity groups. This resulted in at least 80 percent compliance for several product categories, including HIV/AIDS pharmaceuticals, ACTs, malaria RDTs, oral contraceptives, contraceptive implants, IUDs, and male and female condoms. Other categories with a greater variation in product type and suppliers (e.g., essential medicines, laboratory reagents, laboratory consumables) account for a significant proportion of commodities for which compliance has not yet been verified.

To mitigate similar risks in FY 2020, the project has dedicated three full-time specialists to focus solely on supplier engagement and compliance and to support further integration of GSI compliance into broader strategic global supply-chain supplier performance initiatives.

For Phase 2, suppliers need to submit master data for their products through the GDSN by December 30, 2019. By the end of Q4, GHSC-PSM was synchronizing data for 40 trade items through the GDSN with nine suppliers, covering all task orders and a range of product categories, including HIV/AIDS pharmaceuticals, essential medicines, laboratory reagents, laboratory consumables, VMMC kits, malaria pharmaceuticals, contraceptive implants and intrauterine devices.

GHSC-PSM also successfully rolled out the GSI supplier scorecard across all commodity groups, making compliance with GSI requirements a component of routine supplier feedback. Taking lessons learned from others' efforts to drive supplier adoption of GSI (e.g., Australia Health Purchasing Victoria), the project posted scores of high-performing suppliers on our website,³¹ publicly recognizing high performers and early adopters and incentivizing their competitors to pursue compliance. The project will continue to update this scorecard each quarter and will publish updates through social media channels by the end of 2019.

³⁰ *In-scope* items are pharmaceuticals, medical devices, sterile kits, and laboratory reagents that have been ordered before, are currently saleable, and are procured under long-term agreements (e.g., IDIQs, basic ordering agreements, and blanket purchase agreements).

³¹ <https://www.ghsupplychain.org/GS1supplierscorecard>

CIb. Project Performance

In this section, we summarize findings on key indicators of global supply-chain performance. Additional detail on these and other indicators is provided in Annex A.

Timeliness of Delivery

GHSC-PSM measures on-time delivery in two ways:

- OTD is the number of on-time deliveries as a percentage of *expected* deliveries in the period.
- The OTIF rate reflects the number of on-time deliveries as a percentage of *actual* deliveries in the period.

These two indicators together better capture GHSC-PSM holistic performance, as OTD is a more accurate reflection of recent performance, while OTIF is a lagging indicator as late orders due in prior periods get delivered.

In Q4, GHSC-PSM continued to drive efficiencies in global supply-chain processes, while sustaining the timeliness of our deliveries. For Q4, we averaged 92 percent OTD, and 85 percent OTIF, reducing the backlog to 0.3 percent of annual volume.

Cost Savings

As shown in the Executive Summary, the project saved \$130 million on commodities and \$19.4 million on logistics over the life of the project. GHSC-PSM saves money on logistics by using a fourth-party logistics (4PL) model that competes lanes between shipping companies (3PLs) to improve services and reduce costs. This leads to cost-savings on shipping rates compared to an alternative approach with limited or no competition for shipping lanes (a simple 3PL approach) through scale and competition.

From FY 2017 to Q2 FY 2019, the benchmark for comparison was the quoted rates on shipping lanes from the shipping company that handled most shipments at the inception of the project. This method had the following limitations:

- The shipping company that served as the benchmark did not bid on FY 2019 lanes making this method unsustainable
- The quotes reported in FY 2018 from the benchmark shipping company were not comparable to quotes that were expected in a sole source environment
- Only cost-savings from shipments with quotes from the benchmark shipping company were reported
- The figure, comparing to the predecessor project, was only reported for HIV shipments

Health Area	Cost-Savings from Competing Freight Lanes since April 2019
HIV	\$4,047,446
Malaria	\$5,278,836
FP/RH	\$142,042
MNCH	\$60,488
Total	\$9,528,812

Based on this methodology, cost-savings were reported as \$1.9 million for the HIV task order from FY 2017 to Q2 FY 2019. Since April 2019, as agreed with USAID, the project revised its methodology for tracking cost-savings. The new methodology focuses on identifying the benefits of competition of freight services among the various 3PLs. The savings are calculated as the difference between the rates awarded to the selected 3PL and the average of the two most expensive 3PLs³². This method provides a comparison for all shipping lanes and better simulates the rates that would likely be obtained under a non-competitive, 3PL model. Based on this updated methodology the project has generated \$9.5 million in cost-savings due to open competition for freight lanes.

The project has saved \$7.9 million through optimization of the project’s network of regional distribution centers. This generates:

- Warehousing savings from lower costs at the project’s three regional distribution centers. This report’s life-of-project cost savings include the actual savings from the project’s new South African RDC from the last year.
- Transportation savings from shipping costs on actual commodities moving through the three regional distribution centers, compared to what warehousing and shipping would have cost for those commodities under the previous five-warehouse model, which are in addition to the cost savings from negotiating lower shipping rates.

³² The two 3PLs used for creating the benchmark can vary depending on how many quotes are submitted for a given lane.

C2. Systems Strengthening Technical Assistance



GHSC-PSM **assisted 41 countries** with health supply-chain systems strengthening and **supported 34 country or regional offices**.



GHSC-PSM provided **technical feedback on 136 supply plans** to strengthen national supply planning capabilities.



The project started measuring progress in **helping countries achieve technical independence** in 29 supply chain technical activities (as relevant).

GHSC-PSM's strategic goal is for every country to have a locally led health supply chain that is integrated, optimized, accountable, agile, lean and able to sustainably supply quality products to all citizens. To support this goal, headquarters-based health supply-chain systems strengthening technical specialists share global best practices and approaches and work closely with field teams to develop their work plans, guiding successful integration and scale up of best practices. Headquarters and field teams define systems-strengthening strategies that are appropriate to the local context with ambitious but realistic targets for self-reliance. Emphasis is placed on automated data capture and real-time, end-to-end data visibility, pharmaceutical-grade infrastructure, and efficient distribution. Additionally, each supply chain should be managed by a professional supply-chain workforce dedicated to quality improvement, with robust governance oversight, and, where possible, countries should develop strategies to outsource functions to accountable private-sector providers.

Different health areas fund supply-chain systems strengthening assistance in each country. The costs of technical assistance and supply-chain systems strengthening activities are proportionally shared across health task orders (HIV, malaria, FP/RH and MNCH). Cost-sharing formulas are reviewed annually to verify that each health area's share of the total cost for technical assistance remains equitable. Systems strengthening efforts associated with health area-specific activities (e.g., LLIN distribution for malaria or viral load scale-up for HIV) are supported entirely by the relevant health area.

C2a. Activities and Achievements

Systems Strengthening Themes Over FY 2019

In FY 2019, GHSC-PSM's supply-chain systems strengthening efforts yielded important achievements in three broad, cross-cutting areas: data use to improve supply-chain performance, the journey to self-reliance, and private sector engagement, as summarized below.

Data Use to Improve Supply-Chain Performance

Collection and use of data to drive evidence-based decision making is a constant in GHSC-PSM supply-chain systems strengthening work. We strengthen countries' ability to use data for quantification, product selection, logistics management, network optimization, traceability and performance assessment and to support resilience in an emergency. Examples of our work enhancing data use include:

- Launching an early warning system in Zimbabwe that aggregates supply-chain data into a single dataset with graphs and heatmaps to highlight stock risks by product. The system was used to identify a risk from future unfunded ARV shipments; with this early warning, \$7 million was mobilized to help cover that gap. The early warning system had already been tested and successfully used in Zambia.
- Providing network optimization and supplementary analysis, including a cash flow analysis to help determine the strategy for funding the selected solution, to recommend a location and size for hubs of a central-level network in Ghana. The analysis, done in collaboration with the Global Fund, looked at options from a one-hub to a three-hub solution, and provided likely costs, risks and benefits of the different options.
- Expanding use of the new electronic logistics management information system (eLMIS) in Nepal. Use of the eLMIS has cut the delay in receiving site-level stock data from seven months to two to four months.
- Expanding use of the Transportation Information Tool (TransIT) and the electronic proof of delivery (ePOD) app, in multiple countries, including Angola, Cameroon and Mozambique. These tools provide end-to-end data to help managers track performance, location, and costs of health commodity distribution and to increase security.
- Supporting a pilot early-warning system in Burkina Faso, where health facilities in 10 health districts communicate stock levels of selected malaria medicines and commodities (ALu 6x2, sulphadoxine-pyrimethamine, LLINs, RDTs, artesunate injectable) to the district pharmacist, who analyzes the data and provides immediate feedback to the health facility on its stock situation. Between the launch of the pilot in July 2018 and May 2019, the system provided visibility that the selected malaria commodities stock-out rates dropped from 16 percent to 5 percent.
- Collating and preparing data on health commodities received at the warehouse in Haiti to generate a searchable inventory dashboard. This dashboard is used to identify slow-moving items and to closely monitor key products. Another key tool is tracking close-to-expiring commodities and supporting planning strategies to allocate products before they expire.
- Starting “rapid last-mile distribution,” a new initiative to resupply health facilities identified as high-volume sites in Nigeria. The program uses historical LMIS data to determine reorder quantities rather than waiting for health facilities to submit LMIS reports with order quantities. This process is expected to help reduce the volume of health commodities and the time required to complete routine distribution.
- Supporting development of a vehicle adherence monitoring tool to improve visibility and adherence to delivery schedules in the Zambia.
- Responding to the Cyclone Idai disaster in Mozambique, Malawi, and Zimbabwe by quickly assessing damages and loss of product, responding to emerging and critical needs, and broadly sharing supply-chain data with all parties that were dealing with the emergency.

Private Sector Engagement

The project works to better engage the private sector in supply-chain management in assisted countries, recognizing the potential for cost savings, flexibility and improved performance that this engagement can provide, as well as the opportunity for long-term sustainability.

- Country offices in Mozambique and Zambia are establishing long-term agreements with local vendors of medicines and other health commodities who meet the required quality, performance and competitiveness standards rather than procuring commodities from international vendors. This is building markets and enhancing sustainability of local providers.
- The project contracts 3PLs to distribute USAID commodities in many countries. The advantages of this arrangement are numerous: it strengthens the private sector contractors who provide the service and can generate cost savings and performance benefits for USAID. For example, an analysis comparing cost and performance of using 3PLs for last-mile delivery against using the government of Ghana's vehicles or health facilities doing their own pick-ups showed the 3PL approach was up to 31 percent less costly while generating a 30 percent lower stock-out rate.
- GHSC-PSM is supporting Rwanda's shift to a commercial supply chain. The project conducted a costing exercise to determine the true costs of the supply chain for donor-funded commodities and essential medicines through all five tiers of the supply chain. The study gave supply-chain operators the information they need to establish appropriate markups/margins for both categories of products.
- The project helped the National Directorate of Pharmacy and Medicines in Guinea map and capture geo-coordinates for all private pharmaceutical establishments. This information will help the directorate better engage the private sector in addressing public health priorities such as more rational use of medicines and will facilitate regulatory compliance.
- GHSC-PSM developed a rapid assessment to identify challenges and barriers that private-sector wholesalers and distributors face in providing quality-assured MNCH products throughout the health supply chain. GHSC-PSM collected data on these barriers in Mozambique and Zambia.

The Journey to Self-Reliance

GHSC-PSM supply-chain systems strengthening efforts in FY 2019 considerably advanced assisted countries along their journey to self-reliance. We provide a sampling of this progress below.

- ***Forecasting and Supply Planning.*** Countries submitted 136 quarterly supply plan updates in Q4—the highest number ever—reflecting the extent to which this best practice for commodity planning has been institutionalized. Starting in Q4, many countries used a new, project-developed supply plan automation tool to automate review of their own plans. This deepens their understanding of required data inputs and, ultimately, improves their ability to promote availability of medicines in their countries.
- ***Procurement.*** The government of Vietnam managed its own tender for ARVs. Ownership of this process marked technical independence and Vietnam's strong commitment to gradually assuming full financial responsibility for its HIV/AIDS program.
- ***Workforce Development.*** One of the project's most long-lasting workforce development interventions is supporting pre-service training in supply-chain management. Examples from FY 2019 include:
 - Providing technical and financial support to the Ministry of Health in Angola to initiate a public health supply-chain management post-graduate certification course at the National School of Public Health.
 - Developing training materials on a new integrated LMIS to be incorporated into Burkina Faso's National School of Public Health curriculum.
 - Providing technical assistance to the University of Ghana to develop supply-chain management curriculum, trainings and certifications.

- Helping the University of Lahore expand its supply-chain management training curriculum to meet the needs of the private and humanitarian sectors in Pakistan. Additional income from this training will allow the university to continue offering this curriculum without USAID support.
- Helping institutionalize supply-chain management in the national nursing curriculum in Zambia.
- **Financing.** GHSC-PSM is working with three states in Nigeria to develop drug revolving funds. The funds will provide a sustainable mechanism through which the states can ensure a steady supply of essential MNCH commodities.
- **Governance.** The project is helping restructure the Medicines Procurement and Production Division of the Ministry of Health in the Republic of Rwanda to transform it into a legally and financially autonomous state-owned enterprise.
- **Local manufacture of medicines.** GHSC-PSM supported a feasibility study and convened stakeholders to develop plans for Pakistan to start manufacturing contraceptives.

Systems Strengthening Achievements in Q4

Following are highlights of where and how GHSC-PSM applied health supply-chain systems-strengthening approaches in specific countries in Q4.

Warehousing and Distribution

GHSC-PSM continues to improve country warehousing and distribution systems through 33 field offices. Our approaches seek to improve data-driven decision making across the supply chain, optimize in-country warehouse networks, and increase efficiencies in warehousing and distribution operations.

In **Malawi**, new storage units have expanded and greatly improved storage conditions of commodities for health facilities serving people in remote areas. Between September 2018 and March 2019, with funding from PEPFAR, PMI and the United Kingdom’s Department for International Development, the project installed 239 prefabricated pharmacy storage units at health facilities in rural areas, including 117 health facilities that are off the electrical grid and powered by solar panels. His Royal Highness Prince Harry visited one of the solar- powered *pharmacies in a box* during a Royal Tour in October 2019. The new storage units provide an additional 10,000 cubic meters of temperature-controlled space to the sites. They have considerably improved the government’s ability to meet population needs for secure, quality medicines—especially in rural areas—with 73 percent of health facilities now having adequate storage space. Clinics have shifted boxes of medicines out of clinic hallways, examination rooms, and cupboards, allowing health facility staff to better focus on patients seeking care (see box). The units have

systems that monitor temperature and security conditions and alert staff of any breaches to help prevent theft and ensure medicines are stored at the proper temperature.

GHSC-PSM became the first entity to receive approval to operate unmanned aerial vehicles (UAVs) beyond visual line-of-sight for a multi-month cargo activity in **Malawi**. In Q3, the project conducted community sensitization and 77-

kilometer test flights across Lake Malawi. In Q4, regular, bi-directional flights landed at the health facility to deliver medicine and test results and pick up laboratory samples. The UAV has achieved faster and more reliable delivery of patient diagnostic samples and results, including for viral load, EID and tuberculosis (TB).

In July, **Mali's** Minister of Health and Social Affairs and the U.S. Ambassador inaugurated a prefabricated warehouse installed in Bamako by GHSC-PSM. The warehouse is a prime example of USAID's investment in Mali's journey to self-reliance, doubling the storage capacity of the previous storage space. Storage conditions are now pharmaceutical grade and support product quality. With the new warehouse, the Pharmacie Populaire du Mali will save \$450,000 annually on warehouse rents, which will amortize its contribution to installing the new warehouse in three years.

Workforce Development

GHSC-PSM strengthens public health supply-chain workforces through 22 field offices. These interventions build sustainable workforces through professionalization and systematic approaches to workforce development, putting countries on a path to self-reliance.

The project organized a workshop with **Burkina Faso's** National Public Health Schools to review its pre-service training curricula and integrate training materials on LMIS SOPs. The project finished reviewing the nurses training curriculum, with review of the midwives' curriculum scheduled for October.

In **Botswana**, GHSC-PSM trained staff of the Tebelopele Wellness Center, a local NGO and a PEPFAR implementing partner, on how to manage inventory of health supply-chain commodities. Tebelopele Wellness Center provides HIV voluntary counseling and testing, treatment and referral services, targeting underserved PLHIV including adolescent girls and young women, key populations and non-citizens. GHSC-PSM conducted the training in collaboration with Peace Corps Botswana, which has provided a volunteer to serve as a trainer-of-trainers on health-commodity supply-chain management.



Prince Harry, Duke of Sussex, visits one of 117 solar-powered pharmacies in a box in Malawi during the Royal Tour of Southern Africa. Photo credit: Dominic Lipinski/PA

“I’m now able to properly examine my patients since all the cartons of medicines in the examination room have been removed.”

- Hezekeil Mwale, the head of Likangala Health Center, Mali

Management Information Systems

GHSC-PSM strengthened country supply-chain information systems through 32 field offices. Although at different levels of supply-chain maturity, these countries are on a path to developing end-to-end data visibility, with data-driven mechanisms to support evidence-based decision making.

In **South Sudan**, GHSC-PSM implements a call center to collect data on health facility stock levels and products at risk of expiry. This addresses a gap due to poor infrastructure and lack of resources at the central level. Call center staff call stock managers around the country to collect data on stock status of key commodities and essential medicines. The project uses these data to help estimate consumption throughout the country, help plan future procurements and better plan distributions. In FY 2019, GHSC-PSM further developed the software behind the call center, customizing the online portal where calls are made and data are stored. Other countries struggling with poor infrastructure, like Cameroon and Niger, having noted the success of the call center, plan to pilot their own call centers in FY 2020.

Limited access to medicines remains a major barrier to health and well-being in **Ethiopia**, with the stock-out rate of essential medicines higher than 23 percent in most health facilities. To bridge this gap, Ethiopian Pharmaceuticals Supply Agency (EPSA) introduced Quick Win, an information exchange and communication initiative, in collaboration with GHSC-PSM and other stakeholders. The Quick Win initiative is establishing an effective communication and information-sharing platform among EPSA and health facilities. Participants share stock status information through electronic media like email and Viber groups and regular weekly meetings. The project facilitated the bi-directional information exchange between health facilities and EPSA branches, analyzed stock status, and facilitated product redistribution and swift product delivery from hubs to health facilities. This reduced waste and significantly improved availability. Currently, around 160 hospitals and EPSA hubs are implementing the Quick Win initiative.

A Quick Win for the People of Ethiopia

By adopting the Quick Win intervention to easily share and review information and then manage redistributions, the EPSA increased availability of essential medicines at health facilities from 77 percent to 90 percent in FY 2019, avoiding waste of approximately \$150,000 of products in the first few months of implementation.

Global Standards and Traceability

In Q4, GHSC-PSM supported national traceability vision and strategy workshops in **Angola, Malawi** and **Zambia**. For each of these workshops, the project helps the ministries of health and other relevant agencies convene dozens of public-and private-sector stakeholders to develop a vision, strategy and roadmap for traceability. The project will support follow-up workshops to review the draft documents.

In July, project staff supported the integration of automatic identification and data capture (AIDC) barcode technologies that leverage GSI standards in the **Uganda** Joint Medical Store (JMS). This integration will improve inventory handling processes by providing an automated, systematic and accurate warehouse management system that reduces errors, increases efficiency and is updated in near real-time. The project made recommendations about data and inventory management and at which stages to use barcode scanning and will help JMS implement the recommendations. The project undertook these traceability activities concurrently with an Activity Based Costing (ABC) study so that the two interventions could inform each other.

Governance, Financing and Leadership

With GHSC-PSM support, countries work to achieve a responsive health supply-chain system led by a strong team with managerial capacity, institutionalized checks and balances, robust governance oversight, open civil society involvement, and cost-effective and transparent financing mechanisms. GHSC-PSM strengthens governance, financing and leadership through 18 field offices.

In July, GHSC-PSM supported an intensive exercise with the **Zambia** Minister of Health to revitalize basket-fund financing, a mechanism for pooling funds from various sources for pharmaceutical commodities. The priority objectives of the rejuvenated basket fund are: (i) to align policy, planning and funding for medicine expenditures and to increase funding levels and drug availability as part of the Government of Zambia's effort to achieve universal health coverage, and (ii) to design and implement innovative financing for essential medicines with new funding from donors and the private sector. The government is forming a core Basket Fund Working Group to pursue this vision. GHSC-PSM helped prepare a three-year roadmap for developing the basket fund.

GHSC-PSM also has facilitated implementation of the Medical Stores Limited (MSL) whistleblower policy in Zambia. GHSC-PSM helped raise awareness of MSL staff, media and civil society organizations, among others, about their roles in reporting suspected illegal, unethical and inappropriate activities. The whistleblower policy will assist in safeguarding health commodities, resulting in improved availability and access to essential medicines and other health commodities for Zambians.

The Government of **Malawi** aims to improve the overall health of the Malawi population through Universal Health Coverage. Strengthening supply-chain management of medicines and other health commodities to address the persistent shortages of essential medicines in public facilities is a key part of the strategy. The MOH established a drug theft investigation unit (DTIU) to help reduce drug pilferage in the public health sector. GHSC-PSM is providing technical support to the unit. Since its inception in 2016, the unit has conducted drug audits and investigations in all 28 districts, and brought 245 cases to court, leading to 180 convictions. The project supported development of the DTIU Supply Chain Audit and Raids SOPs and Supply Chain Risk Mitigation Plan to strengthen preventative efforts to reduce risk of health product theft.

Procurement

Procurement of pharmaceuticals and medical supplies accounts for as much as 40–60 percent of health system expenditures in low- and middle-income countries. GHSC-PSM helps countries analyze the enabling environment for procurement at the policy and institutional levels, improve procurement efficiencies and reduce procurement delays. The project provides procurement system strengthening through 32 field offices.

At the GHSC-PSM County Directors' meeting in July 2019, the Country Directors reviewed the lessons learned from the project's recent contract management course in **Botswana**. They agreed that a top contract management priority for ministries of health and central medical stores is to ensure supplier performance through tight supplier relationship management. They supported providing training and building capacity of health sector government procurement staff with other health sector colleagues from quality assurance, senior management, financial management and budgeting. These priorities will be reflected in the next contract management course, to be held in Lesotho in FY 2020.

Laboratory Systems Strengthening

The government of **Nigeria** is investing in collecting and delivering blood samples and test results for PLHIV. The National Integrated Specimen Referral Network (NiSRN), established in 2018 by GHSC-

PSM on behalf of the Nigerian government, is a cost-effective, efficient, safe and secure specimen referral system that enables patients to access quality laboratory testing regardless of their location in the country. Through NiSRN, private sector partners provide a dedicated team of motorcycle couriers who are accountable for timely pickup, transport and delivery of blood and other samples for viral load, early infant diagnosis, CD4 and tuberculosis diagnosis. GHSC-PSM is working with the government of Nigeria to develop an NiSRN policy document that will provide the structure of this intervention. Once the document is finalized and a structure put in place by the MOH, GHSC-PSM will train personnel in how to negotiate rates. NiSRN has achieved numerous noteworthy results that are making a real difference for PLHIV (see box).

Driving Test Results in Nigeria

As of August 2019, NiSRN has:

- Delivered **one million samples** for testing
- Returned **958,000 results**
- Reduced test result turnaround time **from six months to two weeks**
- Reduced sample pick-up and drop-off costs by **40 percent**



In Nigeria, through NiSRN, private sector partners provide a dedicated team of motorcycle couriers who pick up, transport and deliver blood and samples for viral load, early infant diagnosis, CD4 and sputum for tuberculosis diagnosis. *Photo credit: Anthony Abu/ GHSC-PSM*

Forecasting and Supply Planning

GHSC-PSM continued to institutionalize forecasting and supply planning processes in 34 countries, transitioning them from relying on external technical support to developing their own fully integrated forecasting and supply planning capabilities.

Countries continued to increase the number of supply plans that they update and submit to GHSC-PSM. To date this quarter, countries have submitted 136 supply plans, including for new product categories like medicines for opportunistic infections and TB.

GHSC-PSM developed a supply plan review automation tool that flags data quality issues and provides feedback on the plan based on country planning and global supply-chain considerations. This new tool has allowed the project to provide more comprehensive feedback to supply plans submitted as well as increase the number of reviews of the submitted plans by 115% when compared to the quantity of plans

GHSC-PSM was able to review in FY 2018 Q4 (from 60 to 129). The supply plan reviews identify issues with future orders, including flagging a country’s and GHSC-PSM’s ability to effectively execute on planned shipment(s). In FY19Q4, with comprehensive testing of the supply plan review tool completed, GHSC-PSM offered countries the option of self-assessing their supply plans and reporting the results to project headquarters. Results are positive, with countries noting increased engagement and ownership by forecasting teams, decreased review cycle time, and faster access to procurement-ready supply plans to inform procurement planning.

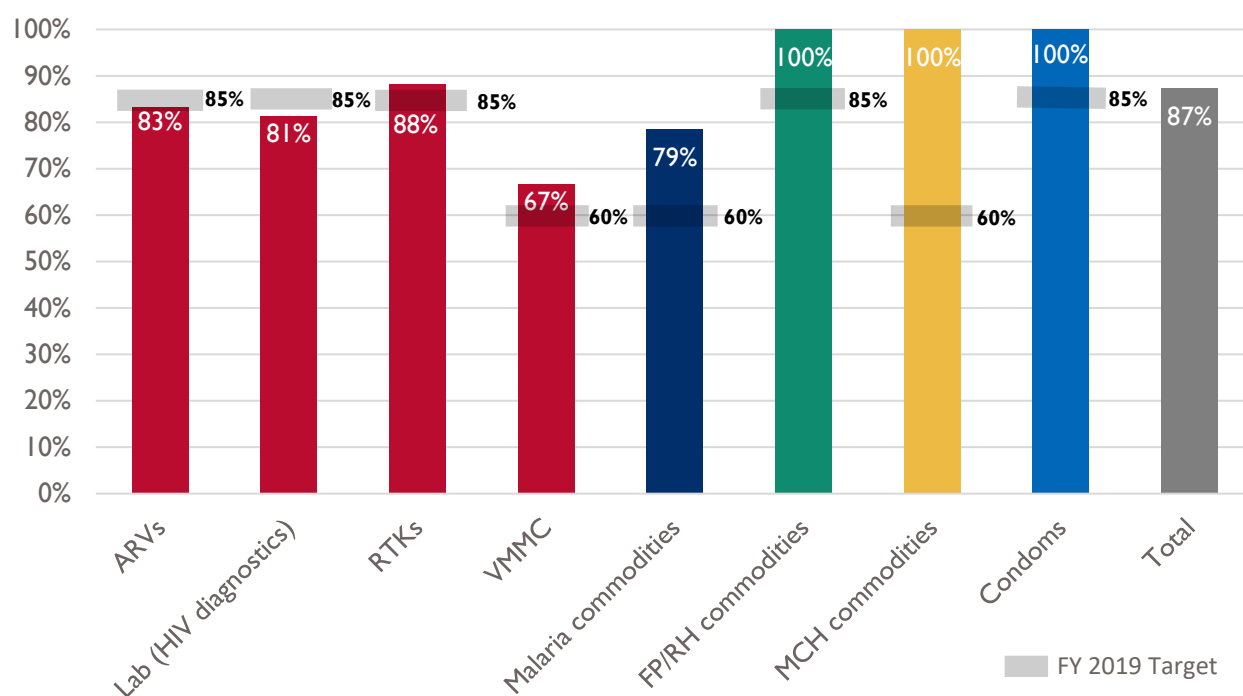
C2b. Project Performance

GHSC-PSM collects and analyzes data on a variety of indicators of national health supply-chain systems to understand the environments in which we operate and to help us calibrate our work. These indicators also help establish priorities for our health supply-chain systems strengthening support and, over time, will allow us to assess the outcomes of our technical assistance. Values for the indicators are provided in Annex A. To facilitate understanding of progress in each country, health supply-chain systems strengthening indicators are presented country by country and include important contextual information for each country. Dashboards with these country-specific indicators are made available to GHSC-PSM field offices to explore with national stakeholders.

Quarterly Supply Plan Updates

In Exhibit 19, we present results for one indicator—percentage of countries conducting quarterly supply plan updates—that is critical to ensuring procurements are planned well ahead so that adequate stock levels can be maintained in the supply chains that we support. Under the quantification model supported by GHSC-PSM, supply plans take a regularly updated, forward-looking view of demand for 18 months. This comprehensive, systematic and long-term approach to supply planning provides visibility into monthly demand even if a single quarterly update is not submitted.

Exhibit 19. Percentage of Required Supply Plans Submitted During Q4 by Commodity Group



Countries develop and submit to GHSC-PSM supply plans for up to eight commodity groups. Supply plans are the source of country-level procurements, based on projections of consumption and inventory. As described above, for Q4, GHSC-PSM received 136 supply plans from 28 countries. The project developed and is now using a supply plan automation tool that assesses plan quality against 16 criteria, with the reviews generating actionable recommendations for improvement. The supply plan reviews identify issues with future orders, including flagging a country's and GHSC-PSM's ability to effectively execute on planned shipment(s) and inquiries regarding ROs. With this new tool, the project can review 100 percent of the submitted supply plans, providing valuable feedback and corrective actions to improve supply plan procurement readiness. We trained staff in 18 countries to use the tool to assess and improve their own plans. Whereas reviewing and finalizing the plans might have taken two to five weeks of back-and-forth between headquarters and country staff in the past, countries now are critically reviewing and improving their data before submitting their plans. This deepens their understanding of required data inputs and, ultimately, improves their ability to ensure availability of medicines in their countries.

Technical Independence

In FY 2019, GHSC-PSM rolled out the B8 indicator, which will capture:

The percentage of targeted supply chain activities in which the host country entity³³ has achieved technical independence³⁴ with GHSC-PSM technical assistance.

In collaboration with USAID, the project identified 29 significant supply-chain activities that we are working to strengthen in multiple countries. Each GHSC-PSM Country Director worked with the USAID Activity Manager to identify the supply-chain activities in which USAID, the host government and GHSC-PSM expect the host government to achieve technical independence by the end of the project.

Technical independence means the host country can lead implementation of the designated activity and has in place five capacity elements that should allow it to perform the activity on an ongoing basis and consistently:

1. Designation of responsibility—a host country entity is formally responsible for the activity
2. Standardization—SOPs and/or guidelines for the activity exist
3. Training approach—the host country entity can train new personnel to implement the activity competently
4. Resources—the host country entity has the information, equipment, software, and other tools needed to carry out the activity
5. Performance indicators—the entity itself is monitoring its performance of this activity using at least one KPI

³³ The host country entity refers to the host country government or a non-governmental entity that the government has tasked with performing the function (such as a parastatal).

³⁴ Since negotiating financial independence is largely a government-to-government issue, financial independence is outside the project's influence or control. The B8 indicator measures only a host country's achievement of *technical independence*, which the project can influence.

Because B8 is an indicator of GHSC-PSM's performance, the project must have played a significant role in building the country's technical capacity.

In FY 2019, Country Directors and USAID Activity Managers identified the technical areas targeted for technical independence in their countries. The supply-chain activities most commonly targeted for technical independence are:

- Developing an annual forecast, targeted in 25 countries
- Monitoring the commodities pipeline, targeted in 24 countries
- Monitoring inventory levels at central warehouses, targeted in 20 countries
- Managing a logistic coordination mechanism, targeted in 17 countries
- System administration for LMIS, targeted in 16 countries

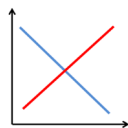
After several years of investment and sustained systems strengthening support, several countries already have achieved technical independence in targeted activities, as detailed in Annex A. To illustrate:

- Host country entities in Zimbabwe have achieved technical independence in eight out of 12 targeted activities, notably in the areas of warehousing and inventory management, transportation and distribution, and strategy and governance activities.
- Counterpart authorities in Burkina Faso have achieved technical independence in three out of 11 targeted supply chain activities, including active use of data for supply chain management decision making, ongoing data quality assurance, and monitoring inventory levels.
- Lesotho reached technical independence in five out of eight targeted activities, including supply planning, managing a logistics coordination committee, LMIS administration, and inventory monitoring.

In the future, country office staff and short-term specialists from GHSC-PSM headquarters will work to establish the remaining capacity elements to support countries' technical independence in the targeted areas to be achieved by 2023.

We provide details on this indicator by country in the annex.

C3. Global Collaboration



Project data informed **global market shaping activities** for numerous commodities (e.g., male condoms, pediatric ARVs, hormonal intrauterine system), and close collaboration with other procurers to **allocate scarce supply** of several commodities (e.g., implants and injectables) allowed the global health community to meet country needs.



Two GHSC-PSM-supported initiatives—guidance on implementation of global standards and on storage and management of oxytocin—**received global endorsement** this year, spurring greater adoption of important supply-chain improvements at the country level.



The project conducted research and shared findings on a range of supply-chain issues, including **packaging rationalization, shelf-life requirements, and private sector provision of commodities**.

GHSC-PSM's global collaboration throughout FY 2019 focused on strategic engagement, market dynamics and other research, and awareness and advocacy efforts. The scale, scope and complexity of managing a global supply chain require us to collaborate with many global and local partners to ensure the availability of medicines, diagnostics and other health commodities. By integrating our work across health sectors and sharing information, resources, activities and capabilities, we can achieve together what we could never achieve alone.

Global Collaboration

The HIV, malaria, FP/RH and MNCH health area teams engaged with stakeholders throughout the year to improve long-term availability of health commodities. They garnered project data, research findings, technical resources, and convening power to advance this objective, as summarized below.

Ensure that procurement and supply-chain issues are taken into consideration in global health programs. Availability of relevant medicines and health commodities underpin most successful health programs. GHSC-PSM is charged with ensuring that commodity procurement and supply-chain issues are adequately integrated into planning and implementation of health initiatives. Illustrative of this work in FY 2019, GHSC-PSM:

- Provided significant technical input to a guidance document on medicines for preventing and treating post-partum hemorrhage.
- Continued developing and implementing a new strategy for the RHSC's SSWG, which a project staff member chairs. The SSWG is tackling new workstreams, including data visibility and analytics and humanitarian settings, as well as a learning agenda covering workforce development, health financing and last-mile distribution.

Align procurement and supply-chain approaches. Multiple international organizations procure and supply medicines, diagnostics and other health commodities to global health initiatives. If their requirements and processes differ, countries and the global community waste resources accommodating those differences. To align and streamline global activities in FY 2019, GHSC-PSM:

- Rallied donors and procurement agents to align around a common set of standards for identification, labeling and data exchange for use in donor-supported countries. The project published the *Global Standards Technical Implementation Guideline for Global Health Commodities*, which was endorsed jointly by the Global Drug Facility (Stop TB), the Global Fund, UNDP, UNFPA, USAID, PEPFAR and PMI. This initiative paves a path to a future where countries can rely on a standardized set of data and labels to enable automation of supply-chain processes to support improved efficiency, data quality and product traceability.
- Coordinated the TraceNet Working Group, which is co-chaired by USAID and the Global Fund, to develop a GSI-based identification, labeling and data exchange procurement requirement for LLINs. The group advocated and raised awareness of global standards in the context of the LLIN market. Adoption of GSI standards will help ensure traceability of this critical and widely used malaria prevention product.
- Conducted shelf-life research in Zimbabwe to elucidate the requirements for minimum months of supply for MMD given the risk of expiration. The project provided these data to USAID for use in upcoming discussions on ARV shelf-life requirements with WHO and the Global Fund.
- Collaborated with the Global Fund to (1) require that all finished pharmaceutical manufacturers under long-term agreements provide products derived from artemisinin exclusively procured from pre-approved suppliers and (2) incrementally provide incentives for finished pharmaceutical product manufacturers to use semi-synthetic artemisinin.
- Undertook a packaging rationalization study in Mozambique, Rwanda, Zambia and Zimbabwe for USAID and UNFPA to inform recommendations for harmonized packaging of condoms and contraceptives.
- Harmonized supplier communication, data structure and tools for FP commodities with UNFPA to improve the quality of registration data and to reduce unnecessary burden on suppliers of providing the same data to multiple parties.
- Provided key support in developing and testing the Global FP VAN; is contributing order/shipment data for project-supported countries and supply plan data for the two pilot countries, Malawi and Nigeria; and is helping plan the second phase of the initiative that will increase by five the number of countries exchanging data with the platform, increase the number of upstream supply-chain data providers, and enhance the platform so it can better facilitate country-led procurement processes.

Promote product quality. Commodities must be of adequate quality to improve health outcomes. The project worked with other global stakeholders to help ensure product quality, including:

- Contributing to development of a definitive statement regarding proper storage and management of oxytocin to improve the availability of quality-assured product to prevent and treat post-partum hemorrhage. This statement was jointly issued by WHO, UNICEF and UNFPA. The statement was the culmination of considerable preparatory work that included reviewing the latest evidence around quality of oxytocin and its storage requirements and developing guidance to assist procurement agents in procuring quality oxytocin.
- Contributing to efforts through education of suppliers and ongoing engagement with UNFPA to trademark the Blue Lady Logo as an indicator of quality and to support appropriate use of these combined oral contraceptives.

- Promoting use of quality-assured generic FP/RH products, including presenting on USAID / GHSC-PSM's efforts and successes to date on integrating quality-assured generic products into the USAID catalog at the Quality Reproductive Health Medicines and Contraceptive Devices procurers meeting. The project continues to engage other procurers on continued barriers and opportunities to support healthy FP/RH markets and promote quality-assured generic sources.
- Participated in a panel with the Global Fund and Merck for Mothers on quality medicines for women and children at the Women Deliver conference.

Address immediate global supply risk. One of the greatest threats to a health program is limited global supply of the necessary medical products. GHSC-PSM worked throughout the year to address critical risks, including by:

- Reviewing the 2019–2020 global demand for implants and injectables as the global shortages of these high-demand FP products continued and developing strategies for product allocations across countries through the CSP group.
- Sharing rigorous supply and demand analyses with global donors and met with suppliers to discuss expanding their capacity to address shortages of recommended pediatric ARVs.
- Working to mitigate the global supply risk for male condoms (for both HIV prevention and voluntary FP programs), including by providing forecasts to suppliers, negotiating minimum supply commitments from suppliers, identifying alternative sources, and coordinating efforts with UNFPA and the social marketing organization PSI.

Promote long-term market health and sustainable supply. We complement our work to address immediate supply risk with work to promote long-term market health. This goal is achieved when multiple suppliers have sustained interest in servicing the market due to the scale of the opportunity and reasonable financial returns. The interest of multiple suppliers ensures competition, promotes responsiveness and cost competitiveness, and reduces the risk of over-reliance on too few suppliers. Our contributions to global efforts to promote market health this year include:

- Sharing market demand information and participating in efforts to increase access to and enhance market health for the hormonal intrauterine system. Stakeholders are working to achieve an affordable public-sector price for this important contraceptive that is under-utilized in global public health programs.
- Participating in the ARV Procurement Working Group's efforts to coordinate global procurers and influencers (USAID, UNITAID, the Global Fund, CHAI and WHO) to assess key strategies around obtaining high-demand or difficult-to-source ARVs. The project also is contributing to a strategy group to address market issues for medicines used in treating and preventing opportunistic infections for HIV patients.
- Hosting discussions with MedAccess and USAID on how to improve access to new and improved LLINs through market-shaping opportunities.
- Contributing to the Total Market Approach Working Group, including studying markets and collaborating with partners to better understand what strategies will be successful within a country to improve clients' access to contraceptive methods of their choice.
- Collaborating with partners such as the Bill and Melinda Gates Foundation and the William Davidson Institute at the University of Michigan to better understand which MNCH products are carried by private sector wholesalers and distributors, who are potentially sustainable

sources of supply in countries. The project harmonized approaches to conducting assessments and is sharing findings with those groups.

Share information to promote commodity availability. GHSC-PSM collects and manages vast amounts of data on country demand for products, orders and stock levels, as well as related information on supply-chain systems strengthening, and global markets. The scale, the diversity of health areas supported by the project, and the large global footprint position the project to be a significant data resource for global health initiatives. This year, the project:

- Tracked 519 FP/RH stock issues reported by programs/countries through the PPMR, and, with other FP/RH procurers, created 26 new shipments, supported 25 commodity transfers, and postponed or canceled 26 shipments.
- Joined global procurers in forming a hormonal intrauterine system working group to catalyze demand for these products.
- Worked with the West African Health Organization (WAHO) and UNFPA within the CARhs and CSP Group coordination mechanisms to ensure commodity availability, including collaborating with the nine Ouagadougou Partnership countries to create synergies and coordinate procurements for countries across donors to reduce duplication.
- Collected, reviewed, and compiled monthly inventory data from more than 65 warehouses in 18 countries for all first-line ARVs to monitor TLD scale-up and drawdown of legacy ARVs. The project shares this information each month with the Coordinated HIV/AIDS Supplies Group to inform decisions about LNZ shipments and support the transition to TLD.
- Continued providing timely and accurate condom procurement information to USAID, UNFPA and the Bill and Melinda Gates Foundation. To better meet their information needs, the project revised the analytic methodology used in the Contraceptives and Condoms Report.
- Participated in the FP2020 Performance Monitoring and Evidence Working Group, co-led by the Population Council, WHO and the University of California, San Francisco, specifically by contributing supply-chain data and analytic insights to FP2020's Core Indicator 10 on stock-outs.
- Raised awareness of the CS Indicators dashboard, which provides country-specific data that can be used to guide policy, financing, leadership, and supply-management strategies to promote increased contraceptive availability and use. The project also updated the CS Indicators survey and conducted another round of data collection.

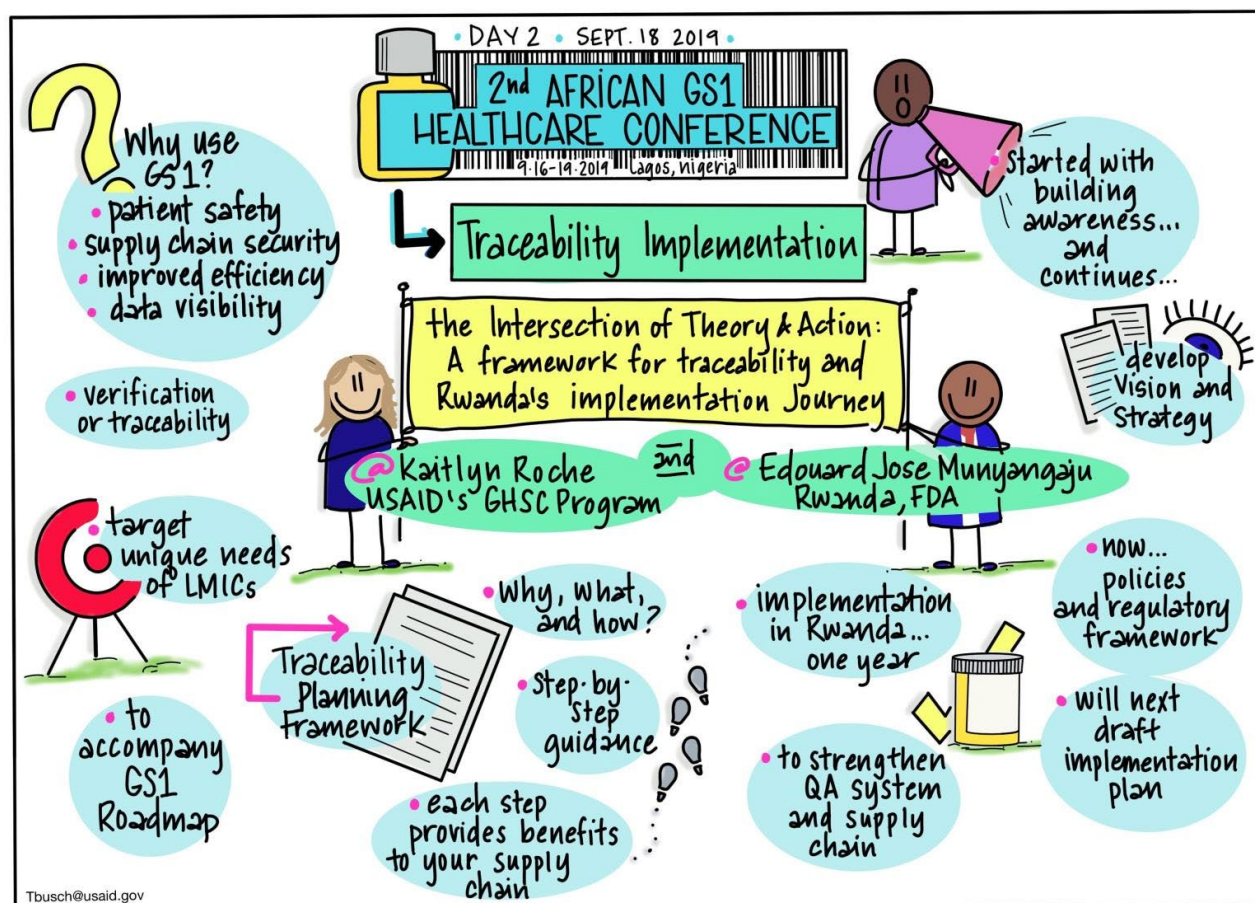
Strategic Engagement in Q4

In July, GHSC-PSM presented at the Health and Humanitarian Logistics Conference in Kigali, Rwanda on the challenges with master data in today's supply chains, USAID and GHSC-PSM's leadership in advancing use of global standards and pharmaceutical traceability globally, and the project's global technical approach for traceability.

In September 2019, GHSC-PSM participated in the second African GSI Healthcare Conference in Lagos, Nigeria. A total of 20 staff from headquarters and the Burundi, Cameroon, Ghana, Guinea, Liberia, Malawi, Namibia, Nigeria, Rwanda, Zambia and Zimbabwe country offices participated. GHSC-PSM also provided financial support for government representatives from many of these countries to participate. Before the event, GHSC-PSM hosted a pre-conference meeting with staff across GHSC (including Francophone task order) and USAID Activity Managers to review GHSC-PSM's global technical approach for traceability; hear presentations from country programs that have implemented activities in

FY 2019 on successes, challenges, and lessons learned; and solicit input into the FY 2019 activity to develop a product master data management global technical approach. During the event, GHSC-PSM organized side meetings with country, donor and GSI representatives for Kenya, Zambia and Malawi to discuss their work to date and next steps. The event featured GHSC-PSM in several sessions, including:

- Participation in a panel on global harmonization of traceability requirements
- Co-presentation with the Rwanda FDA on GHSC-PSM's traceability framework and implementation of that framework in the Rwanda context (see graphic)
- Organization and moderation of a panel with national drug regulatory authority (NDRA) representatives from Kenya, Malawi, Nigeria, Rwanda and Zambia on launching a traceability initiative



Summary of GHSC-PSM and Rwanda FDA Session by Tobey Busch at USAID

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

Global Supply Chain M&E Indicator Performance

FY2019 Quarter 4, July - September 2019

Delivery Impact to Date



Number of ACT treatments delivered
206,165,040



Number of Couple Years Protection delivered
55,260,939



Person-years of ARV treatment delivered
6,760,782

OTIF, OTD and Backlog	Cycle Time	Quality Assurance (TO2 only)	Procurement	Total Landed Cost	Registration
Supply Plan Error	Forecast Error	Supply Plan Submissions	Warehousing	Vendor Performance	Global Advocacy Engagements
HIV Complete Quarterly Results (TO1)		Malaria Complete Quarterly Results (TO2)		FP/RH Complete Quarterly Results (TO3)	
MNCH & Zika Complete Quarterly Results (TO4)					



Fiscal Year 2019 Key Performance Overview - IDIQ

		FY 2019 Q1	FY 2019 Q2	FY 2019 Q3	FY 2019 Q4	FY 2019
Reporting Period (Quarter) Start Date		10/01/18	01/01/19	04/01/19	07/01/19	10/01/18
Reporting Period (Quarter) End Date		12/31/18	03/31/19	06/30/19	09/30/19	09/30/19
Global Supply Chain						
A1a.	Percentage of line items delivered on time and in full, within the minimum delivery window	84%	83%	85%	85%	85%
A1b.	Percentage of line items delivered on time, within the minimum delivery window	85%	88%	92%	92%	89%
A3.	Cycle time (average) – # days per shipment	258	261	273	232	259
A4.	Inventory turns (average number of times inventory cycles through GHSC-PSM-controlled global facilities) – ratio	4.6				
A5.	Total landed cost (logistics costs)	16.2%		16.1%		16.1%
A13.	Percentage of batches of product showing nonconformity (out of specification percentage)	0.0%	0.0%	0.0%	0.0%	0.0%

Important: Key performance metrics on this page are intended to provide an overall snapshot of the project's performance. They may conceal nuances of TO and/or country performance and must be interpreted in light of individual TO and/or country performance of more granular data.

Fiscal Year 2019 Key Performance Overview - IDIQ

		FY 2019 Q1	FY 2019 Q2	FY 2019 Q3	FY 2019 Q4	FY 2019	
Reporting Period (Quarter) Start Date		10/01/18	01/01/19	04/01/19	07/01/19	10/01/18	
Reporting Period (Quarter) End Date		12/31/18	03/31/19	06/30/19	09/30/19	09/30/19	
In-Country							
B1.	Stockout rate at SDPs	13%	12%	14%	15%	13%	
B2.	Percentage of stock status observations in storage sites where commodities are stocked according to plan, by level in supply system	25%	24%	26%	24%	25%	
B3.	SDP reporting rate to the logistics management information system (LMIS)	76%	77%	78%	79%	77%	
C1.	Number of people trained – #	TO-Specific Trainings Combined	1,143	2,281	2,190	1,960	7,574
		Cross-TO Trainings	456	948	3,073	6,930	11,407
		All Trainings (TO-Specific & Cross-TO)	1,599	3,229	5,263	8,890	18,981

Important: Key performance metrics on this page are intended to provide an overall snapshot of the project's performance. They may conceal nuances of TO and/or country performance and must be interpreted in light of individual TO and/or country performance of more granular data.

Fiscal Year 2019 Key Performance Overview By Task Order

Indicator		IDIQ FY19 Target	Task Order 1 HIV/AIDS					Task Order 2 Malaria					Task Order 3 PRH					Task Order 4 – MNCH					
			FY19 Target	2019 Q1	2019 Q2	2019 Q3	2019 Q4	FY19 Target	2019 Q1	2019 Q2	2019 Q3	2019 Q4	FY19 Target	2019 Q1	2019 Q2	2019 Q3	2019 Q4	FY19 Target	2019 Q1	2019 Q2	2019 Q3	2019 Q4	
Global Supply Chain																							
A1a	Percentage of line items delivered on time and in full, within the minimum delivery window (Total number of line items delivered)	80%	80%	82%	81%	85%	83%	80%	89%	92%	88%	91%	80%	83%	91%	93%	85%	80%	87%	81%	83%	89%	
				912	1062	1114	878		188	202	270	205		46	44	92	40		146	330	245	9	
A1b	Percentage of line items delivered on time within the minimum delivery window (Total number of ADDs in the quarter)	80%	80%	82%	89%	92%	91%	80%	94%	93%	97%	97%	80%	92%	85%	100%	94%	80%	97%	81%	85%	91%	
				1007	1003	1085	817		189	203	264	207		48	46	93	36		133	332	241	11	
A3	Cycle time (average) – days per line item delivered	NA	227	233	204	219	217	311	328	341	324	322	RDC: 232 DD: 272	RDC: 272 DD: 353	RDC: 254 DD: 293	RDC: 314 DD: 238	RDC: 381 DD: 237	216	308	397	454	219	
A4	Inventory turns – ratio	NA	4	6.6				3	3.9				3	1.4				NA	No inventory held				

A2: See Task Order 2 QA-specific indicators below. This indicator is not reported for TO1, TO3, and TO4 because QA processes for these task orders are managed by the GHSC-QA project. Fiscal Year targets represent desired indicator result aggregated over the full fiscal year.

Indicator		IDIQ FY19 Target	Task Order 1 HIV/AIDS					Task Order 2 Malaria					Task Order 3 PRH					Task Order 4 – MNCH				
			FY19 Target	2019 Q1	2019 Q2	2019 Q3	2019 Q4	FY19 Target	2019 Q1	2019 Q2	2019 Q3	2019 Q4	FY19 Target	2019 Q1	2019 Q2	2019 Q3	2019 Q4	FY19 Target	2019 Q1	2019 Q2	2019 Q3	2019 Q4
A5	Total landed cost (logistics costs)	11%	8%	9.2%	8.4%		18%	33.3%		34.7%		21%	16.6%		14.4%		21%	16.2%		36.2%		
A6a	Absolute percent supply plan error, with variants annual absolute percent error and supply plan bias	<i>See Forecast and Supply Plan Performance pages for detailed indicator results</i>																				
A6b	Absolute percent forecast error, with variants annual absolute percent error and forecast bias																					
A7	Temporary waiver percentage	NA	NA	<i>Not required for TO1 per M&E Plan</i>				NA	NA	NA	5%	10%	NA	NA	NA	7%	3%	NA	<i>Not required for TO4 per M&E Plan</i>			
A8	Average percentage of shelf life remaining for warehoused commodities, weighted by the value of each commodity's stock	NA	78%	81%	82%	80%	77%	70%	68%	66%	59%	71%	78%	85%	86%	83%	83%	NA	<i>No inventory held</i>			
A10	Percentage of product procured using a framework contract (framework contract percentage)	NA	77%	72%	71%	81%	87%	39%	60%	68%	19%	57%	95%	100%	100%	100%	100%	90%	98%	61%	88%	100%
A16	Percentage of backlogged line	<5%	<5%	4%	2%	2%	0.4%	<5%	1%	0.3%	1%	0.5%	<5%	0%	2%	0%	0.4%	<5%	1%	0.6%	2%	0%

A9, A11, A12: These indicators have been removed from the GHSC-PSM M&E Plan with approval from USAID.

A13, A14, A15: See Task Order 2-specific indicator results below. These indicators are not reported for TO1, TO3, and TO4 because QA processes for these task orders are managed by the GHSC-QA project.

Fiscal Year targets represent desired indicator result aggregated over the full fiscal year.

Indicator		Task Order 2 Malaria				
		FY19 Target	2019 Q1	2019 Q2	2019 Q3	2019 Q4
A2	Percentage of QA processes completed within the total estimated QA lead times	80%	84%	80%	74%	100%
A13	Percentage of batches of product for which the final result is showing nonconformity (out of specification percentage)	<1%	0.0%	0.0%	0.0%	0.0%
A14b	Average vendor rating score – QA labs	NA	79%	74%	80%	85%
A15	Percentage of QA investigation reports submitted within 30 calendar days of outcome determination (QA investigation report submission)	90%	100%		50%	
Indicator		Crosscutting				
A14a	Average vendor rating score – Suppliers	NA	75%	76%	74%	71%
A14c	Average vendor rating score – Freight Forwarders	NA	82%	86%	84%	84%
C4	Percentage of required files submitted to BI&A in the reporting period	NA	84%	84%	NA	NA
C5	Percentage of required files timely submitted to BI&A in the reporting period	NA	84%	81%	NA	NA
Indicator		Task Order 1 HIV/AIDS				
C6	Average percent variance between GHSC-PSM ARTMIS and GHSC-BI&A calculations of key supply chain indicators for Task Order 1	NA	0.2%	0.3%	NA	NA

Fiscal Year targets represent desired indicator result aggregated over the full fiscal year. For certain performance indicators GHSC-PSM and USAID have agreed that targets are not appropriate, either because performance is not fully within project control, to avoid unwanted incentives, or because there is insufficient data to set targets at this time. For more detail, please see Annex C of the GHSC-PSM Monitoring and Evaluation Plan (11 Feb 2019). C4, C5, C6: Reporting for these indicators is no longer required following FY2019 Q2.

Indicator		Task Order 1 HIV/AIDS				Task Order 2 Malaria				Task Order 3 PRH				Task Order 4 – MNCH				Crosscutting			
		2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4
In country Context, Performance, and Sustainability																					
B1	Stockout rate at SDPs	8%	10%	11%	9%	13%	12%	13%	12%	15%	13%	15%	19%	NA				NA			
B2	Percentage of stock status observations in storage sites where commodities are stocked according to plan, by level in supply system	35%	36%	37%	36%	25%	22%	26%	22%	19%	16%	18%	15%	NA				NA			
B3	SDP reporting rate to the logistics management information system (LMIS)	96%	88%	84%	87%	90%	87%	76%	73%	68%	71%	78%	82%	52%	63%	71%	74%	NA			
B4	Average rating of in-country data confidence at the central, subnational, and SDP levels – (0-9 scale)	5.7				7.0				6.4				6.7				NA			
B5	Percentage of required annual forecasts conducted	See country-specific indicator pages for detailed data for this indicator (reported annually).																			
B6	Percentage of required supply plans submitted to GHSC-PSM during the quarter	See Supply Plan Submission and country-specific indicator pages for detailed data for this indicator.																			

Targets for in-country performance indicators are set at the country level. Targets are not required for context indicators.

Indicator	Task Order 1 HIV/AIDS				Task Order 2 Malaria				Task Order 3 PRH				Task Order 4 – MNCH				Crosscutting			
	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4

In country Context, Performance, and Sustainability

B7	Percentage of total spent or budgeted on procurement of commodities for public sector services by funding source	See country-specific indicator pages for detailed data for this indicator (reported annually).																						
B8	Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance.	See country-specific indicator pages for detailed data for this indicator (reported annually).																						
B9	Supply chain technical staff turnover rate	See country-specific indicator pages for detailed data for this indicator (reported annually).																						
B10	Percentage of countries that have a functional logistics coordination mechanism in place		75%		72%		69%		67%		NA													
B11	Percentage of leadership positions in supply chain management that are held by women		NA		NA		NA		NA		31%													

Targets for in-country performance indicators are set at the country level. Targets are not required for context indicators.

Indicator	Task Order 1 HIV/AIDS				Task Order 2 Malaria				Task Order 3 PRH				Task Order 4 – MNCH				Crosscutting			
	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4

In country Context, Performance, and Sustainability

B12	Absolute percent consumption forecast error, with forecast bias variant	<i>See country-specific indicator pages for detailed data for this indicator (reported annually).</i>																			
C1	Number of innovations (including operations research studies) that were developed, implemented, or introduced and are related to the health commodity market or supply chain best practices	4	8	0	6	1	2	0	1	2	4	1	1	0	0	2	0	2	11	5	8
C2	Number of people trained	594	993	942	1246	492	198	667	379	19	85	192	324	38	1005	389	11	456	948	3073	6930
C7a	Percentage of product lost due to expiry while under GHSC-PSM control	<i>See Warehouse Performance and country-specific indicator pages for detailed data for this indicator.</i>																			
C7b	Percentage of product lost due to theft, damage, or other causes while under GHSC-PSM control	<i>See 3PL and Commodity Vendor Performance and country-specific indicators pages for detailed data for this indicator.</i>																			

Targets for in-country performance indicators are set at the country level. Targets are not required for context indicators.

C3: This indicator has been removed from the GHSC-PSM M&E Plan with approval from USAID. C4, C5, and C6, are reported in the Global Supply Chain section above.

Indicator		Task Order 1 HIV/AIDS				Task Order 2 Malaria				Task Order 3 PRH				Task Order 4 MNCH				Crosscutting			
		2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4
In country Context, Performance, and Sustainability																					
C8	Number of global advocacy engagements in support of improved availability of essential health commodities	2		0		4		1		9		7		0		3		6		5	
C10	Percentage of GHSC-PSM-procured or supported molecular instruments that remained functional during the reporting period	63%	69%	71%	76%	NA				NA				NA							
C11	Supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance	See country-specific indicator pages for detailed narratives for this indicator.																			

Targets for in-country performance indicators are set at the country level. Targets are not required for context indicators.

C9: This indicator has been removed from the GHSC-PSM M&E Plan with USAID approval.

Delivery Performance

Current Reporting Period

2019-Q4

A1a. On-time, In-Full Delivery

Task Order ▲	Total # of Line Items Delivered	OTIF	OTIF Target
TO1	878	83%	80%
TO2	205	91%	80%
TO3	40	85%	80%
TO4	9	89%	80%
Total	1,132	85%	80%

A1b. On-time Delivery

Task Order ▲	Total # of Line Items with ADDs in the quarter	OTD	OTD Target
TO1	817	91%	80%
TO2	207	97%	80%
TO3	36	94%	80%
TO4	11	91%	80%
Total	1,071	92%	80%

A16. Backlog Percentage

Task Order ▲	Total # of line items with ADDs in the last 12 months	Backlog	Backlog target
TO1	3,964	0.4%	5%
TO2	864	0.5%	5%
TO3	226	0.4%	5%
TO4	718	0.0%	5%
Total	5,772	0.3%	5%

Analysis ▲

Task Order 1 performance was consistent with overall project performance, continuing a five-quarter trend of meeting or exceeding targets in all three delivery indicators.

Task Order 2 maintained strong on-time delivery performance, with OTIF returning to performance above 90 percent and OTIF sustaining at 97 percent. The backlog percentage fell to 0.5 percent. Delivery volume returned to very consistent volume around 200 lines, after spiking last quarter with deliveries to DRC.

Task Order 3 OTIF and OTD performance dipped from its exceptional third quarter, although the trend is still one of strong performance comfortably above the 80 percent target for both OTIF and OTD. Backlog ticked up slightly to 0.4 percent, representing a single line item where a supplier missed their committed goods availability date. The item has since been picked up and is shipping to the country.

Task Order 4 had its strongest OTIF quarter so far, reaching 89 percent. OTD also performed well, at 91 percent, and no items remained undelivered in the backlog. Line item deliveries fell significantly, with a year's worth of high-volume essential medicines deliveries to DRC wrapping up in the previous quarter. (Large orders are expected to pick up again in FY2020.)

Data notes ▼

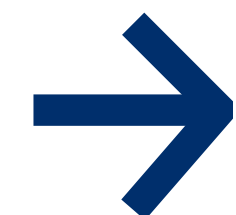
See "Indicator Details" pages in this report for more information.

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.

See next page for
break down by
product category



Delivery Performance

Current Reporting Period

2019-Q4



A1a. OTIF rate

A1b. OTD rate

A16. Backlog percentage

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
TO1	83%	878	91%	817	0.4%	3,964
Adult ARV	86%	76	96%	67	0.0%	408
Condoms	81%	42	90%	39	0.5%	219
Laboratory	78%	460	88%	428	0.2%	2,206
Other Non-Pharma	88%	108	96%	93	0.2%	406
Other Pharma	96%	102	97%	103	1.0%	293
Other RTK					0.0%	6
Pediatric ARV	81%	67	97%	61	1.2%	257
TB HIV	100%	1	100%	1	0.0%	13
Vehicles and other equipment	0%	1			0.0%	9
VMMC	95%	21	88%	25	2.0%	147
TO2	91%	205	97%	207	0.5%	864
ACTs	92%	53	100%	53	0.0%	356
Laboratory	98%	55	98%	59	1.5%	68
LLINs	95%	20	86%	22	1.6%	123
mRDTs	74%	23	96%	24	0.9%	107
Other Non-Pharma	94%	16	100%	16	0.0%	25
Other Pharma	100%	2	100%	2	0.0%	12
Severe Malaria Meds	80%	25	100%	19	0.0%	108
SMC	100%	1	100%	1	0.0%	22
SP	100%	10	91%	11	0.0%	43

A1a. OTIF rate

A1b. OTD rate

A16. Backlog percentage

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
TO3	85%	40	94%	36	0.4%	226
All Other TO3 Products					0.0%	1
Combined Oral Contraceptives	60%	5	60%	5	2.9%	34
Copper-Bearing Intrauterine Devices	100%	3	100%	3	0.0%	26
Emergency Oral Contraceptives					0.0%	12
Implantable Contraceptives	100%	17	100%	16	0.0%	52
Injectable Contraceptives	63%	8	100%	6	0.0%	54
Other Non-Pharma	67%	3	100%	2	0.0%	19
Progestin Only Pills	100%	4	100%	4	0.0%	25
Standard Days Method					0.0%	3
TO4	89%	9	91%	11	0.0%	718
Food and WASH					0.0%	8
Laboratory					0.0%	52
Other Non-Pharma	100%	5	100%	7	0.0%	226
Other Pharma	100%	3	100%	3	0.0%	421
Other RTK	0%	1	0%	1	0.0%	6
TB HIV					0.0%	5

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

2019-Q4

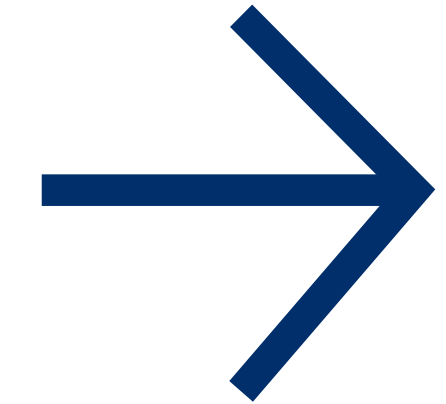
A3. Average overall cycle time

Task Order	# of line items delivered	Average Cycle Time	Cycle time target
TO1	878	217	219
TO2	205	322	299
TO3	40	338	
TO4	9	219	209
Total	1132	240	228

A3. Average overall cycle time (with TO3 Targets)

Task Order	# of line items delivered	Average Cycle Time	Cycle time target
TO3	40	338	
Direct drop fulfillment	12	237	261
Warehouse fulfillment	28	381	223

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



Task Order	Analysis
TO1	Cycle times for the Pick Up and Deliver segments exclude any deliveries shipped under C and D Incoterms. These deliveries are handled by suppliers, meaning that Pick Up dates are not relevant or available. Due to the large line item volume of these types of orders for TO1, the Pick Up and Deliver segment data reported for TO1 direct drops represents only about 40 percent of all TO1 direct drops.
TO1	Task Order 1 cycle times averaged 217 days this quarter, beating the target by two days. Average cycle times for TO1 have been remarkably consistent, for end-to-end measures as well as segment cycle times. Direct drop orders (including DCP) represent 80 percent or more of delivery volume and average slightly shorter cycle times, at 207 days. RDC fulfillments are fewer but longer (267 days this quarter), with lengthy DO processing times, suggesting early order placement and dwell times between USAID approval and DO release for these items.
TO2	Average cycle time for quality assurance was 47 days. This represents a return to QA cycle times consistent with Q1 and Q2, after an increase (57 days) in Q3.
TO2	Cycle time for malaria orders remained consistent this quarter, at 322 days. Despite improvements in the process PO/DO segment times, there was an increase of 50 days in the average time to clarify and source orders. This was driven by two ROs for lab items in Ethiopia, comprising over 50 line items (25 percent of all TO2 deliveries this quarter). These items were procured locally via decentralized procurement (DCP) and required detailed clarifications on technical specifications and QA certificates. With DCP items removed from the results, average time to clarify and source drops to 96 days, consistent with previous quarters. Overall TO2 cycle time falls to 293 days, just within the target of 299.
TO3	For direct drop orders, cycle times remained consistent with the previous quarter at 237 days, within the target of 261.
TO3	Overall cycle time increased this quarter, to 338 days overall and 381 days for warehouse fulfillments. This was driven by a few extreme outliers. Eight line items were part of orders placed more than 18 months ahead of their requested delivery date; one was placed three years in advance. These items account for the excessive average timeframe to "clarify and source" orders. With these items removed, end-to-end cycle time from the RDC is 228 days. Apart from early-stage dwell time for orders placed with long lead times, the project did see lengthening in the DO processing segment for some items. This was due largely to supply constraints on implants and injectables, which required exacting management of inventory allocation across countries, splitting of some shipments, and additional communication and verifications with destination countries. Additionally, there was a global shortage of oral contraceptives due to production delays at one manufacturer. A large order of progestin-only pills for Mozambique was therefore delayed in the DO release phase as it awaited product availability, although the project was able to ship a portion of the order in time to meet the requested delivery date.
TO4	Task Order 4 cycle times dropped dramatically in Q4, coming within 10 days of the targeted average cycle time of 209 days. The performance tracks with a lack of deliveries to DRC. Clarification, sourcing, USAID approval and PO processing have remained reasonably consistent throughout the year (with one USAID approval outlier in Q3). The effect of DRC's long waiver and logistics processes

Data notes

Quarterly indicator targets are effective beginning FY2018 Q4.

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. The project is implementing new dwell tracking procedures, with the intent of reporting dwell-adjusted cycle time by FY2020.

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.

Cycle Time Performance

Current Reporting Period

2019-Q4



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

Fulfillment Channel Task Order	Direct Drop Fulfillment				Warehouse Fulfillment				Total
	Air	Land	Multiple	Sea	Air	Land	Multiple	Sea	
TO1	190	205	450	295	214	293		264	217
Adult ARV	219		581	326	221	294		309	272
Condoms	153	348		273	176			212	239
Laboratory	168	220		249					198
Other Non-Pharma	227	159	319	201					171
Other Pharma	236			312	67	299			285
Pediatric ARV	232			338	234	145		290	240
TB HIV	65								65
Vehicles and other equipment		121							121
VMMC	266			295	75			84	251
TO2	333	309		336	144	361			322
ACTs	320				99	353			290
Laboratory	371								371
LLINs		309		302					304
mRDTs	210								210
Other Non-Pharma	374			407					378
Other Pharma	291								291
Severe Malaria Meds	406			364		409			386
SMC					50				50
SP	319				258				294
TO3	253		418	194	398	453	168	301	338
Combined Oral Contraceptives				270			168	260	243
Copper-Bearing Intrauterine Devices					607				607
Implantable Contraceptives				139	215	638		343	303
Injectable Contraceptives	253		418	176	986				449
Other Non-Pharma				224					224
Progestin Only Pills					243	269			262

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

Fulfillment Channel Product Category	Direct Drop Fulfillment			Total
	Air	Land	Sea	
Other Non-Pharma	223		237	234
Other Pharma	209		231	216
Other RTK		158		158
Total	213	158	235	219

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. The project is implementing new dwell tracking procedures, with the intent of reporting dwell-adjusted cycle time by FY2020.

Quarterly indicator targets are effective beginning FY2018 Q4.

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	69	4	36		78	38	29
TO1	49	3	35		87	29	27
TO2	152	9	39		51	53	28
TO3	39	6	29		63	36	62
TO4	29	5	76		65	31	49
Warehouse fulfillment	87	4	106	62			18
TO1	60	5	119	65			18
TO2	98	2	68	40			11
TO3	232	6	63	56			24
Total	72	4	49	89			26

Quality Assurance Performance (TO2 only)

Current Reporting Period

2019-Q4



A2. QA processes completed within required lead times

Task Order	Total # of QA processes completed	% QA Processes On Time	A2 Target
TO2	97	100%	80%
ACTs	30	100%	80%
LLINs	22	100%	80%
mRDTs	25	100%	80%
Other Pharma	2	100%	80%
Severe Malaria Meds	11	100%	80%
SMC	0		80%
SP	7	100%	80%

A13. Out-of-specification percentage

Task Order	Total # of batches tested	Out-of-specification percentage	A13 Target
TO2	318	0.0%	1%
ACTs	151	0.0%	1%
LLINs	48	0.0%	1%
mRDTs	52	0.0%	1%
Other Pharma	9	0.0%	1%
Severe Malaria Meds	39	0.0%	1%
SMC	0		1%
SP	19	0.0%	1%

Data notes

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

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

Quarterly indicator targets are effective beginning FY2018 Q4.

A15. QA investigation report submission

Task Order	# of reports due	Report submissions	A15 Target
TO2	2	50%	90%
ACTs	2	50%	90%
LLINs	0		90%
mRDTs	0		90%
Other Non-Pharma	0		90%
Other Pharma	0		90%
Severe Malaria Meds	0		90%
SMC	0		90%
SP	0		90%

Ref

Analysis

- A02 The percentage of routine QA processes completed within the required lead times reached 100 percent this quarter, a strong improvement over Q3. Contributing factors include an improved forecasting process and notifications to the labs regarding sample arrival; close monitoring of key labs to ensure activities were on track; and strategic allocation of method transfers to ensure sufficient lab capacity. Looking ahead to the new fiscal year, the GHSC-PSM TO2 QA team is planning to continue refining its forecasting tools and to make strategic decisions regarding method transfer, taking into account lab capacity as well as cost and capability.
- A13 This quarter, 318 batches of product underwent routine testing. None were found to be out of specification.
- A14b Performance for quality assurance lab vendors increased from a score of 80 percent last quarter to 85 percent this quarter. Good communications between labs and the GHSC-PSM QA team has resulted in improved timeliness of provision of test results, from 71 to 92 percent, while responsiveness (timely confirmation of receipt of samples) increased from 66 to 97 percent. Both of these were key factors in the improvement of overall QA lab vendor rating scores.
- A15 Two QA investigation reports were due in the second half of FY2019. One was submitted on time, but one was delayed due to staff transitions and prioritization of ongoing investigations. Due dates for investigation reports are closely monitored by the GHSC-PSM TO2 QA team. Additionally, the team is piloting a new approach to add the reports to the project's Continual Improvement system, which will track report progress and generate reminders to finalize reports on time.

Warehouse Performance and Product Losses

Current Reporting Period

2019-Q4

A8. Shelf life remaining

Task Order	Inventory Balance	% Shelf Life Remaining	Shelf life target
TO1	\$104,788,078	82%	78%
TO2	\$21,697,296	69%	70%
TO3	\$58,668,600	84%	77%
Total	\$185,153,973	78%	

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	RDC	Damage	ARVs	\$19	\$31,671,452	0.00%
TO1	Rwanda	Damage	ARVs	\$18	\$6,287,038	0.00%
TO1	Vietnam	Damage	ARVs	\$8	\$1,226,596	0.00%
TO3	Senegal	Damage	Combined oral contraceptive	\$104	\$48,672	0.21%
TO1	Rwanda	Damage	Other Pharma	\$1	\$5,068,125	0.00%
TO4	DRC	Damage	Other Pharma	\$180	\$1,627,057	0.01%
TO2	RDC	Damage	SMC	\$2,682	\$9,746,377	0.03%
TO2	RDC	Expiry	NA	\$0	\$2,565,214	0.00%
TO1	RDC	Expiry	Other Pharma	\$1,426	\$12,723,401	0.01%
TO2	Nigeria	Missing product	ACTs	\$140	\$8,978,366	0.00%
TO1	Nigeria	Missing product	ARVs	\$743	\$21,862,411	0.00%
TO1	Rwanda	Missing product	ARVs	\$38	\$6,287,038	0.00%
TO1	Uganda	Missing product	ARVs	\$1,218	\$14,656,937	0.01%
TO2	Uganda	Missing product	LLINs	\$8,415	\$4,223,454	0.20%

Ref	Analysis
A08	GHSC-PSM's remaining shelf life indicators focuses on all items that are in the RDC as part of the ACT emergency stockpile. At the close of Q4, the project had a little less than \$60,000 in emergency ACTs in stock, with a remaining shelf life of 79 percent.
A08	Overall shelf life remaining for family planning items was 83 percent, which is unchanged from the previous quarter. This continues a consistent performance above the target of 78 percent.
A08	Shelf life remaining for HIV items dropped slightly from the previous quarter, to be just below the target, at 77 percent (target: 78 percent). The change was driven mainly by 90-count bottles of TLD. The project has built up inventory of this product and has a high volume of orders planned for release and delivery throughout FY2020.
C07a	TO1 had expiries of some other pharma products this quarter. The expiries occurred due to direct drop stock rejected by a country that was re-routed back to the RDC. The total loss represents less than 1 percent of the average inventory balance.
C07a	TO2 had no expiries during the quarter.
C07a	TO3 had no expiries during the quarter.
C07b	The most common forms of product loss continue to be damage or discrepancies that occur during transit through the global supply chain, which affect relatively small proportions of GHSC-PSM's order volume. These types of losses are typical for large supply chain operations.

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.

Procurement Performance

Current Reporting Period

2019-Q4

A10. Framework contract percentage

Task Order	Procurement total	Framework contract percentage	Framework contract target
▲			
TO1	\$103,659,089	87%	80%
TO2	\$22,511,210	57%	40%
TO3	\$9,948,282	100%	95%
TO4	\$3,137,845	100%	90%
Total	\$139,256,425	83%	NA

A10. Product-level detail

Task Order	Framework contract percentage	Procurement total
TO1	87%	\$103,659,089
Adult ARV	100%	\$58,668,043
Condoms	100%	\$3,478,449
HIV RTK	0%	\$44,475
Laboratory	48%	\$24,890,062
Other Non-Pharma	76%	\$813,790
Other Pharma	100%	\$243,291
Other RTK	2%	\$181,189
Pediatric ARV	100%	\$10,203,599
TB HIV	100%	\$2,585,913
Vehicles and other equipment	0%	\$7,675
VMMC	100%	\$2,542,604
TO2	57%	\$22,511,210
ACTs	100%	\$3,796,569
Laboratory	0%	\$3,903
LLINs	0%	\$9,625,268
mRDTs	100%	\$956,784
Other Pharma	100%	\$51,950
Severe Malaria Meds	100%	\$2,509,893
SMC	100%	\$4,040,760

A10. Product-level detail

Task Order	Framework contract percentage	Procurement total
TO3	100%	\$9,948,282
Combined Oral Contraceptives	100%	\$2,026,453
Emergency Oral Contraceptives	100%	\$2,640
Implantable Contraceptives	100%	\$4,354,040
Injectable Contraceptives	100%	\$3,070,847
Other Non-Pharma	100%	\$20,147
Progestin Only Pills	100%	\$330,156
Standard Days Method	100%	\$144,000
TO4	100%	\$3,137,845
Other Non-Pharma	100%	\$232,024
Other Pharma	100%	\$2,905,821

Analysis

Task Order 1 framework contract procurements rose again this quarter, from 81 to 87 percent. It was lifted by an increased volume of adult ARV procurements (all framework contracts) and the continued steady rise in framework contracting for laboratory items. Use of Basic Ordering Agreements (BOAs) and IDIQs covered nearly half (48 percent) of lab items this quarter. The project also placed orders for \$3.6 million in commodities to fight TB coinfection, a significant increase from \$260,000 the previous quarter. These commodities were also purchased under BOAs.

Task Order 2 recovered from its dip in performance in the previous quarter, climbing back up to 57 percent of procurement value under framework contracts. As with the past several quarters, all pharmaceuticals and rapid diagnostic tests continue to be procured under framework contracts, while LLINs and laboratory items are under non-framework contracts. Only a few LLIN orders were placed this quarter compared to Q3, which largely explains the change in overall performance. IDIQs for LLINs are expected to be in place beginning in FY2020, which should drive additional increases in this indicator in the coming fiscal year.

Task Order 3 continues to procure all items under framework contracts, per the sourcing strategy for these commodities.

Task Order 4 framework contracting reached 100 percent this quarter. This includes procurements of insect repellent for Zika prevention in Peru, procured under an IDIQ, and essential medicines orders for DRC and Zambia, procured under a BOA.

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	9.8%	205
Laboratory	0.0%	55
ACTs	11.3%	53
Severe Malaria Meds	16.0%	25
mRDTs	0.0%	23
LLINs	0.0%	20
Other Non-Pharma	0.0%	16
SP	70.0%	10
Other Pharma	100.0%	2
SMC	100.0%	1
TO3	10.0%	40
Implantable Contraceptives	0.0%	17
Injectable Contraceptives	0.0%	8
Combined Oral Contraceptives	20.0%	5
Progestin Only Pills	75.0%	4
Copper-Bearing Intrauterine Devices	0.0%	3
Other Non-Pharma	0.0%	3
Emergency Oral Contraceptives		0
Total	9.8%	245

Analysis

While GHSC-PSM and USAID have a strong preference to procure and ship registered products, in compliance with each country's regulations and to avoid the need for waivers, securing and maintaining product registrations is ultimately a business decision for vendors. In the family planning market, demand for oral contraceptives in particular is declining in favor of long-acting reversible methods, such as implants and injectables. Vendors are therefore less likely to maintain their registrations for low-volume products. GHSC-PSM and GHSC-QA are working strategically to communicate USAID priorities and forecast demand to help vendors target their registration efforts.

The use of temporary registration waivers to import malaria products remained consistent this quarter, at 9.8 percent. Waivers were used for pharmaceutical products across ACTs, severe malaria meds, SMC, SP, and other pharma categories for 10 countries.

The use of temporary registration waivers to import family planning items increased to 10 percent this quarter. This represents four line items: three lines of the same progestin-only pills for three different destinations in Mozambique, and one line of combined oral contraceptives for Haiti. In the case of Mozambique, the same product has been routinely procured and shipped by both GHSC-PSM and its predecessors. In the case of Haiti, the project typically ships combined oral

Supply Plan Submissions

Current Reporting Period

2019-Q4

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

Product Group	# of supply plans required	Supply plan submission rate	Submission target
ARVs	18	83%	85%
Condoms	17	100%	85%
FP commodities	18	100%	85%
Lab (HIV diagnostics)	16	81%	85%
Malaria commodities	28	79%	60%
MCH commodities	6	100%	60%
RTKs	17	88%	85%
VMMC	6	67%	60%
Total	126		

Analysis

Supply plan submissions for both family planning commodities and condoms both reached 100 percent this quarter. Expectations for condom supply plans increased from 16 to 18 countries, adding Angola, Burundi, Guinea, Liberia, and Mali, and releasing Côte d'Ivoire, Nepal, and Senegal. Expectations for family planning remained consistent at 18 plans, with Angola, Guinea, and Zimbabwe added and Kenya, Madagascar, and South Sudan released.

Supply plan submissions for malaria products has remained consistent since last quarter, when the expectations expanded from 13 to 28 required supply plans. 79 percent of plans were submitted in Q4, exceeding the target of 60 percent. Submissions from large and mid-sized GHSC-PSM field office countries remain strong, while smaller offices (Cambodia, Niger, Thailand) and non-presence countries (Madagascar, Senegal) are more likely to miss their requirements.

Supply plan submissions for maternal and child health commodities reached 100 percent this quarter. Madagascar is no longer required to submit a plan for this product category, while Tanzania has been added to the requirements this quarter.

Supply plan submissions were strong in HIV/AIDS product categories this quarter, exceeding the target for RTKs, VMMC, and condoms, and falling barely short for ARVs and lab items. Submission expectations shifted and increased in all categories this quarter, with new plans required from eSwatini, Angola, Ghana, Guinea, Ethiopia, Burundi, Liberia, and Mali.

Supply Plan and Forecast Performance

Current Reporting Period

2019-Q4

A6a. Supply plan error - HIV Products

Product Category	Supply plan/forecast error	Supply plan/forecast bias	4-quarter error	Annual APE Target	4-quarter bias
Pediatric ARV	41%	-5%	11%	26%	-5%
Laboratory	24%	15%	28%	29%	28%
Condoms	37%	10%	15%	34%	10%
Adult ARV	20%	11%	8%	26%	6%

A6a. Supply plan error - Malaria products

Product Category	Supply plan/forecast error	Supply plan/forecast bias	4-quarter error	Annual APE Target	4-quarter bias
ACTs	28%	-28%	2%	35%	-2%
mRDTs	80%	-80%	37%	35%	-37%

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	16%	16%	15%	35%	15%
Copper-bearing Intrauterine Devices	0%	0%	2%	35%	-2%
Implantable Contraceptives	28%	28%	26%	35%	26%
Injectable Contraceptives	76%	76%	37%	35%	37%
Progestin Only Pills	382%	-382%	5%	35%	5%

Analysis

Supply plan error for lab items remained consistent with past performance, increasing slightly from 8 to 11 percent for the quarter, and decreasing from 17 to 15 percent for the last four quarters. Error rates on the four-quarter measure have steadily fallen over the last year.

Supply plan error for ACTs was 28 percent for the quarter, an improvement from the previous quarter. Within the category, there was a clear difference between AL products, which had an aggregate error rate of only 7.3 percent, and ASAQ, which saw no orders placed with requested delivery dates in the period. On the rolling measure, supply plan error for the last three quarters fell to just 2 percent.

Forecast error for implants fell this quarter, although three successive quarters of elevated variance have caused the four-quarter error to rise. The global shortage of one-rod implants is a key factor here, as countries convert orders of one-rod to two-rod on short notice. Injectables have also seen increased variance, with an error rate of 76 percent this quarter and the four-quarters measure just tipping outside of the targeted range, at 37 percent. Shortages have also been a relevant factor, caused by the global constraint on DMPA-IM and a unexpected QA hold on DMPA-SC. Countries have therefore been placing emergency orders for DMPA-IM on short notice while DMPA-SC cannot be released. The fluctuations have caused decreased forecast accuracy, but GHSC-PSM's stockpiles of DMPA-IM have been able to accommodate this demand.

Forecast error for condoms grew slightly, from 20 to 29 percent this quarter, but improved from 17 to 15 percent on the four-quarter measure. Variance here was driven by Haiti, which delayed an order planned for this quarter until January 2020 and revised the order quantity downwards, causing actual orders to fall short of the forecast.

For malaria rapid diagnostic tests, supply plan variance has widened over the course of the last three quarters that this analysis has been conducted. Supply plan error for Q4 on its own was 80 percent, with supply plan quantities exceeding actual orders placed. On the rolling measure of supply plan error, which includes data from the last three quarters, the rate has reached 37 percent.

Combined oral contraceptives has maintained similar performance from the previous quarter, within the targeted range. Progestin-only pills saw a dramatic increase in forecast error, but this is a function of its small order volume. Actual orders fell short of the forecast due to quantity reductions and an earlier requested deliver for a single order for Zambia, which represented nearly 80 percent of the forecasted quantity. On a four quarters rolling basis, forecast error for this product is still comfortably within the targeted range. Finally, for copper-bearing IUDs, actual orders matched exactly with forecasted quantities this quarter, and four-quarters error remained minimal.

Absolute supply plan error for both adult and pediatric ARVs grew this quarter, both the single-quarter and four-quarter performance. In the adult category, orders fell short of the supply plan total due to changes to a planned order for Zambia, which was split into several orders with requested delivery date spread over FY19 Q4 and FY20 Q1. On the pediatric side, actual orders exceeded the supply plan totals due to orders from Uganda's National Medical Store (NMS). The project receives supply plans for orders for the Joint Medical Store in Uganda, but we do not typically receive them from NMS. For both adult and pediatric ARVs, variance this quarter caused the four-quarter performance to weaken as well. Both, however, remain within the targeted range of 20 percent error or less.

Total Landed Cost

Current Reporting Period

2019-Q4

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	8.4%	8%	\$479,672,638	12.5%
TO2	34.7%	18%	\$173,603,858	38.7%
TO3	14.4%	21%	\$36,187,060	28.2%
TO4	36.2%	21%	\$9,446,723	49.2%
Total	15.6%	11%	\$698,910,280	20.3%

A5. Cost Breakdown

Cost Type	TO1	TO2	TO3	TO4	Total
▲					
Freight and Logistics	\$40,366,654	\$60,170,611	\$5,195,066	\$3,419,505	\$109,151,837
Country-specific Logistics	\$2,552,764	\$2,900,427	(\$87,039)	\$346,879	\$5,713,031
Demurrage	\$208,226	\$34,124	\$95,399	\$7	\$337,756
Drop Ship Freight	\$18,089,684	\$47,986,202	\$1,543,864	\$3,071,238	\$70,690,987
Inbound Freight	\$6,435,990	\$2,731,970	\$209,713	\$0	\$9,377,672
Insurance	\$558,940	\$365,502	(\$34,832)	(\$685)	\$888,924
Loss	\$46,492	\$78	\$1,839	\$5	\$48,414
Outbound Freight	\$10,115,301	\$5,421,421	\$3,009,243	\$238	\$18,546,203
Security	\$382,113	\$208,871	\$28,923	\$1,824	\$621,732
Warehousing	\$1,977,144	\$522,016	\$427,957	\$0	\$2,927,117
HQ Operations	\$19,595,560	\$7,097,750	\$5,008,090	\$1,224,222	\$32,925,622
Forecasting and Supply Planning	\$1,333,376	\$353,437	\$426,395	\$15,350	\$2,128,559
MIS	\$2,950,910	\$1,742,306	\$1,664,789	\$96,024	\$6,454,029
Monitoring and Evaluation	\$4,207,146	\$878,416	\$770,967	\$165,456	\$6,021,985
Procurement	\$7,961,268	\$3,566,227	\$1,883,646	\$825,462	\$14,236,603
Warehousing and Distribution	\$3,142,860	\$557,363	\$262,293	\$121,931	\$4,084,446
Total	\$59,962,214	\$67,268,361	\$10,203,156	\$4,643,727	\$142,077,459

Analysis

Total landed costs on Task Order 3 declined this period, falling to 14.4 percent since the mid-year reporting period, below the target of 21 percent. Total expenditures fell in key freight and logistics categories, including Warehousing, Outbound Freight, and Drop Ship Freight. The second variant of this indicator, which includes HQ Global Supply Chain operations costs, also remained stable, at 28.2 percent.

Total landed cost for Task Order 2 increased slight this period, from 33.3 percent to 34.7 percent. While there was an increase, the growth was much slower than we saw between FY18 and the FY19 mid-year reporting period. At that time, 12-month delivery volume had increased by almost 20 percent; it has fallen again after that spike, to slightly (4 percent) above FY18 levels. The most notable change we saw at the time of the initial increase at mid-year was a rapid rise in the volume of deliveries in the severe malaria medicines category. This includes injectable artesunate, a heavy liquid product that is more costly to ship. Volumes of this product continued to rise this period, increasing 20 percent over volumes at mid-year, nearly double the FY18 volume. Other factors, such as the mix of air vs. ocean shipment, or direct drop vs. RDC fulfillments, remain consistent with mid-year reporting.

Total landed cost for Task Order 1 fell this period, from 9.2 to 8.4 percent. Costs increased for Outbound and Inbound freight to GHSC-PSM's distribution centers, but fell for drop ship freight. This tracks with an increase in the proportion of deliveries originating from the RDC this period. Costs may also have decreased as greater volumes were delivered via sea and land rather than air.

Task Order 4 saw a jump in total landed cost this period, rising to 36.2 percent of 12-month delivery value. This indicator continues to be variable for TO4, due to its comparatively low volumes. The measurement is sensitive to changes in delivery volumes and lags between the timing of deliveries and payment of invoices. TO4 delivered large and complex orders to multiple inland locations in DRC in Q1 and Q2 of this year, driving an increase in 12-month delivery value of over 250 percent from FY18 Q4 to FY19 Q2. However, freight and logistics costs in that period rose only 77 percent, suggesting that not all invoices for those deliveries were paid at the time of reporting. (Invoice payments typically occur 60 days after shipments are delivered, assuming no clarifications, corrections, or other invoicing delays are required). The actual total landed cost for the FY2019 Q2 reporting period are likely higher than the project is able to report, and the growth in costs from Q2 to Q4 is likely not as steep as it appears in the visual above.

Per agreement with USAID, quality assurance costs are not included in this indicator, since GHSC-PSM does not manage QA across

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

2019-Q4

A14a-c. Average vendor rating score

Vendor Type	Average vendor rating
Commodity Supplier	71%
Freight Forwarder	84%
QA Lab	85%

Analysis

Performance for quality assurance lab vendors increased from a score of 80 percent last quarter to 85 percent this quarter. Good communications between labs and the GHSC-PSM QA team has resulted in improved timeliness of provision of test results, from 71 to 92 percent, while responsiveness (timely confirmation of receipt of samples) increased from 66 to 97 percent. Both of these were key factors in the improvement of overall QA lab vendor rating scores.

Performance of 3PL vendors remained steady this quarter with a score of 84 percent. Scores for most of the component elements remained similar to last quarter, with the exception of booking timeliness which decreased from 89 to 77 percent. This was due to two 3PLs who had system problems that prevented the booking confirmation EDI statuses from being received. One of the two 3PLs has since resolved the issue, while shipments through the other are being withheld until there is evidence that the problem has been resolved.

The supplier OTIF order fulfillment rate dipped slightly this quarter, from 74 to 71 percent. A delay in one large, complex order with multiple shipments accounted for much of this drop. GHSC-PSM and the supplier in question have discussed how to move forward, including building in more buffer time and more active communication for complex orders, particularly for destination countries with challenging environments.

Global Advocacy Engagements

Current Reporting Period

2019-Q4



Crosscutting

5

Name of Engagement	Description
GHSC-QA Technical Advisory Group (TAG) Meeting (April 2019)	GHSC-PSM joined the GHSC-QA Technical Advisory Group (TAG) meeting in April 2019. The TAG is a committee supporting GHSC-QA that provides independent feedback and guidance to FHI360 and USAID on quality assurance for HIV/AIDS, essential medicines, reproductive, maternal and child health products. This year's TAG committee meeting included sessions on: implementation and use of QA innovations; pharmaceutical risk assessment methodology; shelf-life and temperature excursions; and health product-specific technical updates.
Quality Assurance for RH Medicines & Devices (June 2019)	GHSC-PSM joined USAID and a range of other key procurers in presenting at and attending the Quality Assurance for RH Medicines and Devices Meeting at UNFPA in June 2019. Though more broadly dubbed "RH," the meeting includes sessions on addressing the quality of critical MCH medicines. This year's meeting included sessions on: Quality Guiding Principles; Prequalification of RH and MCH products; updates from procurers on their quality management programs; and carbetocin.
2nd African GS1 Healthcare Conference in Lagos, Nigeria (September 2019)	GHSC-PSM participated in a panel session on global harmonization of traceability requirements; co-presented with Rwanda FDA on GHSC-PSM's traceability framework and Rwanda's implementation of that framework; and organized and moderated a panel with regulators from Nigeria, Kenya, Zambia, Malawi and Rwanda on launching traceability initiatives in their countries.
Call to Action for "Africa Strategy for Traceability"	GHSC-PSM worked with the World Bank, GS1, USAID, Global Fund and the Director General of NAFDAC to develop the Call to Action for the "Africa Strategy for Traceability," signed by 25 African regulatory authorities and six donor organizations in September 2019. For more information: https://www.gs1.org/events/2019/lagos/call-to-action
World Bank Global Steering Committee on Quality Assurance of Medicines	GHSC-PSM's Global Standards team leader participates in quarterly GSC meetings at the World Bank to present to the broader donor community and the Private Sector Advisory Council on USAID/GHSC-PSM progress for global standards implementation and report out on ongoing country activities. This forum provides an opportunity to identify areas for collaboration and to bring other organizations into USAID/GHSC-PSM activities - for example, document input and review, GS1 Africa conference organization, and participation in national traceability workshops as relevant to various stakeholders.



HIV/AIDS

0

Name of Engagement	Description
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Global Advocacy Engagements

Current Reporting Period

2019-Q4



Malaria

2

Name of Engagement	Description
The Global Fund LLIN Supplier and Partner Summit (Singapore 26-27 September 2019)	A Procurement and a Quality Assurance team member participated in the summit. The discussions focused on quality requirements and sourcing strategies of the Global Fund, PMI and UNICEF for upcoming procurement activities. The procurement agencies places particular emphasis on ensuring that LLINs in the market are of the requisite quality to meet end user needs as well as best practices related to social accountability, environmental health and safety, and occupational health and safety.
Launch of TraceNet Working Group	The project and its partners launched the TraceNet working group in May 2019 to establish GS1 global health procurement requirements to enable identification, data capture and data exchange for LLINs. By coordinating nine working sessions in FY 2019, the project obtained consensus on recommendations for LLIN identification data attributes and data capture labels for the product and packaging level hierarchy. TraceNet is chaired by USAID and the Global Fund and consists of representatives from GHSC-PSM, country program field offices, GS1, ten LLIN manufacturers, and other LLIN stakeholders. A harmonized procurement requirement and implementation plan is expected by the end of calendar year 2019.



Maternal, Newborn, and Child Health

3

Name of Engagement	Description
Consultative meeting on Integrated Community Case Management of Childhood Illness	The task order director participated in a consultative meeting organized by the World Health Organization in Addis Ababa in July on the status of implementation of integrated community case management in African countries. The task order director provided inputs to the participating country teams on improving supply chains for community case management.
Women Deliver Conference	The task order director was invited to participate in a panel at the Women Deliver June 2019 conference on quality of medicines for women and children. The panel was organized by Devex and the United States Pharmacopeial Convention (USP). While at the conference, the task order director also participated in a side-meeting sponsored by Merck for Mothers, during which technical experts were asked to discuss their work on maternal health commodities and the potential challenges they anticipate with the introduction of heat-stable carbetocin for prevention of post-partum hemorrhage.
Francophone West Africa Regional Meeting on Improving Access to Family Planning and Reproductive Health Commodities	The task order technical coordinator participated in and led sessions focused on uterotonic quality in Dakar, Senegal from September 17 - 19, 2019. The meeting was carried out in collaboration with the GHSC-TA Francophone Task Order, Merck for Mothers, and the Economic Community of West African States and included MNCH program managers, representatives from medicines regulatory authorities, and national supply chain managers from eight West African countries.

Global Advocacy Engagements

Current Reporting Period

2019-Q4



Family Planning and Reproductive Health

7

Name of Engagement	Description
Coordinated Supply Planning group	GHSC-PSM is part of the RHSC's CSP group, which works collaboratively to prevent stock imbalances across donor-supported countries. The TO3 integrated supply chain manager, demand planning analyst and other GHSC-PSM staff participated in monthly CSP calls. As one of the two major procurers of FP/RH commodities for the public sector, GHSC-PSM's involvement is critical to the success of the group in addressing impending stock imbalances and managing global supply constraints in a coordinated manner. Three project staff attended the annual CSP meeting in June in Copenhagen. GHSC-PSM helped review 2019–2020 global demand for implants and injectables, agreed on a methodology for developing and communicating global forecasts for key commodities and designed a monthly process to improve collaborative decision making on order allocation across countries.
Pathways to increasing access to hormonal intrauterine system	GHSC-PSM was among a small group of organizations that participated in the levonorgestrel-releasing intrauterine system coordination meeting in Washington, DC, focused on providing program updates on efforts to increase access to the hormonal IUS and better understand market potential. As part of ongoing coordination efforts, GHSC-PSM is working closely with key stakeholders to better understand current and potential future market demand.
West Africa Health Organization's (WAHO) Early Warning System Workshop	In May, GHSC-PSM facilitated the West Africa Health Organization's (WAHO) Early Warning System Workshop in Lagos, Nigeria, along with the GHSC-Technical Assistance (GHSC-TA) contractor in West Africa (Chemonics). The early warning system aims to prevent stockout of contraceptives and ensure uninterrupted access to users. The meeting convened 31 individuals, primarily health ministry representatives, from 15 Economic Community of West African States countries, to discuss best practices in data reporting, analysis and use for regional and donor collaboration.
Global Family Planning Visibility and Analytics Network	Numerous GHSC-PSM staff participated in task forces associated with the launch of the Global FP VAN including the data-sharing and data-management task forces as well as the Steering Committee, technical task force and super user groups. The expertise put forward by project staff in these task forces built on well-established relationships with partners to advance USAID FP/RH objectives. In June, three GHSC-PSM staff participated in the second phase planning meeting at UNFPA's Procurement Services Branch in Copenhagen.
Family Planning Expenditure Tracking Advisory Group	The project's M&E manager attended this one-day annual meeting organized by Avenir Health and FP2020 to discuss the tracking of family planning expenditures. The M&E manager presented briefly on the project's Contraceptive Security Indicators and discussed methodologies used by the project to gather expenditure data.
Coordinated Assistance for Reproductive Health Supplies	The project's Procurement Planning and Monitoring Report (PPMR) administrators participated in monthly CARhs group phone calls and provided ongoing support to the group. As one of the two major procurers of FP/RH commodities for the public sector, GHSC-PSM's involvement is critical to the success of the group in addressing stock imbalances and impending crises.
Quality Reproductive Health Medicines and Contraceptive Devices procurers meeting	Two GHSC-PSM staff participated in the Quality Reproductive Health Medicines and Contraceptive Devices procurers meeting in Copenhagen. The annual event allows RH donors and procurers to discuss topics related to FP/RH product quality to achieve convergence on quality standards. Key sessions focused on quality versus price, quality guiding principles, prequalification of FP/RH products, and regulatory constraints and opportunities.

Complete Quarterly Results (TO1)

Reporting Period

2019-Q4

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

Task Order	OTIF	Total # of Line Items Delivered	OTD	Total # of Line Items with ADDs in the quarter	Backlog	Total # of line items with ADDs in the last 12 months	Framework contract percentage	Procurement total
TO1	83%	878	91%	817	0.4%	3,964	87%	\$103,659,089
Adult ARV	86%	76	96%	67	0.0%	408	100%	\$58,668,043
Condoms	81%	42	90%	39	0.5%	219	100%	\$3,478,449
HIV RTK							0%	\$44,475
Laboratory	78%	460	88%	428	0.2%	2,206	48%	\$24,890,062
Other Non-Pharma	88%	108	96%	93	0.2%	406	76%	\$813,790
Other Pharma	96%	102	97%	103	1.0%	293	100%	\$243,291
Other RTK					0.0%	6	2%	\$181,189
Pediatric ARV	81%	67	97%	61	1.2%	257	100%	\$10,203,599
TB HIV	100%	1	100%	1	0.0%	13	100%	\$2,585,913
Vehicles and other equipment	0%	1			0.0%	9	0%	\$7,675
VMMC	95%	21	88%	25	2.0%	147	100%	\$2,542,604
Total	83%	878	91%	817	0.4%	3,964	87%	\$103,659,089

A6a and A6b. Absolute percent supply plan or forecast error

A6 Indicator	Supply plan/ forecast error	Supply plan/ forecast bias	4-quarter error	4-quarter bias
A6a - Supply plan error				
Adult ARV	15%	-15%	10%	-10%
Laboratory	11%	11%	15%	15%
Pediatric ARV	34%	34%	15%	15%
A6b - Forecast Error				
Condoms	29%	-29%	15%	-15%

B6. Quarterly supply plan submissions

Product Group	Supply plan submission rate	# of supply plans required
ARVs	83%	18
Condoms	100%	17
Lab (HIV diagnostics)	81%	16
RTKs	88%	17
VMMC	67%	6

A3. Cycle time (average)

Fulfillment Channel Task Order	Direct Drop Fulfillment				Warehouse Fulfillment			Total
	Air	Land	Multiple	Sea	Air	Land	Sea	
TO1	190	205	450	295	214	293	264	217
Adult ARV	219		581	326	221	294	309	272
Condoms	153	348		273	176		212	239
Laboratory	168	220		249				198
Other Non-Pharma	227	159	319	201				171
Other Pharma	236			312	67	299		285
Pediatric ARV	232			338	234	145	290	240
TB HIV	65							65
Vehicles and other equipment		121						121
VMMC	266			295	75		84	251
Total	190	205	450	295	214	293	264	217

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

Country	Type of Loss	Product Group	Loss Value	Loss Denominator	% Loss
RDC	Damage	ARVs	\$19	\$31,671,452	0.00%
Rwanda	Damage	ARVs	\$18	\$6,287,038	0.00%
Vietnam	Damage	ARVs	\$8	\$1,226,596	0.00%
Rwanda	Damage	Other Pharma	\$1	\$5,068,125	0.00%
RDC	Expiry	Other Pharma	\$1,426	\$12,723,401	0.01%
Nigeria	Missing product	ARVs	\$743	\$21,862,411	0.00%
Rwanda	Missing product	ARVs	\$38	\$6,287,038	0.00%
Uganda	Missing product	ARVs	\$1,218	\$14,656,937	0.01%

A8. Shelf life remaining

% Shelf Life Remaining	Inventory Balance
77%	\$12,556,205

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	71%
Freight Forwarder	84%

Complete Quarterly Results (TO2)

Reporting Period

2019-Q4



Task Order	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	
	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	91%	205	97%	207	0.5%	864	9.8%	205	57%	\$22,511,210	100%	97	0.0%	318	50%	2
ACTs	92%	53	100%	53	0.0%	356	11.3%	53	100%	\$3,796,569	100%	30	0.0%	151	50%	2
Laboratory	98%	55	98%	59	1.5%	68	0.0%	55	0%	\$3,903						
LLINs	95%	20	86%	22	1.6%	123	0.0%	20	0%	\$9,625,268	100%	22	0.0%	48		0
mRDTs	74%	23	96%	24	0.9%	107	0.0%	23	100%	\$956,784	100%	25	0.0%	52		0
Other Non-Pharma	94%	16	100%	16	0.0%	25	0.0%	16								0
Other Pharma	100%	2	100%	2	0.0%	12	100.0%	2	100%	\$51,950	100%	2	0.0%	9		0
Severe Malaria Meds	80%	25	100%	19	0.0%	108	16.0%	25	100%	\$2,509,893	100%	11	0.0%	39		0
SMC	100%	1	100%	1	0.0%	22	100.0%	1	100%	\$4,040,760		0		0		0
SP	100%	10	91%	11	0.0%	43	70.0%	10	100%	\$1,526,083	100%	7	0.0%	19		0
Total	91%	205	97%	207	0.5%	864	9.8%	205	57%	\$22,511,210	100%	97	0.0%	318	50%	2

A3. Cycle time (average)

Fulfillment Channel Task Order	Direct Drop Fulfillment			Warehouse Fulfillment		Total
	Air	Land	Sea	Air	Land	
TO2	333	309	336	144	361	322
ACTs	320			99	353	290
Laboratory	371					371
LLINs		309	302			304
mRDTs	210					210
Other Non-Pharma	374		407			378
Other Pharma	291					291
Severe Malaria Meds	406		364	409		386
SMC				50		50
SP	319			258		294
Total	333	309	336	144	361	322

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	71%
Freight Forwarder	84%

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

Country	Type of Loss	Product Group	Loss Value	Loss Denominator	% Loss
RDC	Damage	SMC	\$2,682	\$9,746,377	0.03%
RDC	Expiry	NA	\$0	\$2,565,214	0.00%
Nigeria	Missing product	ACTs	\$140	\$8,978,366	0.00%
Uganda	Missing product	LLINs	\$8,415	\$4,223,454	0.20%

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	28%	-28%	2%	-2%
mRDTs	80%	-80%	37%	-37%

B6. Quarterly supply plan submissions

Product Group	Supply plan submission rate	# of supply plans required
Malaria commodities	79%	28

A8. Shelf life remaining

% Shelf Life Remaining	Inventory Balance
79%	\$59,986

A14. Average vendor rating - QA labs

Average vendor rating
240%

Complete Quarterly Results (TO3)

Reporting Period

2019-Q4



A1a. OTIF rate

A1b. OTD rate

A16. Backlog percentage

A10. Framework contracting

A6b. Absolute percent forecast error

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	85%	40	94%	36	0.4%	226	100%	\$9,948,282
All Other TO3 Products					0.0%	1		
Combined Oral Contraceptives	60%	5	60%	5	2.9%	34	100%	\$2,026,453
Copper-Bearing Intrauterine Devices	100%	3	100%	3	0.0%	26		
Emergency Oral Contraceptives					0.0%	12	100%	\$2,640
Implantable Contraceptives	100%	17	100%	16	0.0%	52	100%	\$4,354,040
Injectable Contraceptives	63%	8	100%	6	0.0%	54	100%	\$3,070,847
Other Non-Pharma	67%	3	100%	2	0.0%	19	100%	\$20,147
Progestin Only Pills	100%	4	100%	4	0.0%	25	100%	\$330,156
Standard Days Method					0.0%	3	100%	\$144,000
Total	85%	40	94%	36	0.4%	226	100%	\$9,948,282

A6 Indicator	Supply plan/ forecast error	Supply plan/ forecast bias	4-quarter error	4-quarter bias
A6b - Forecast Error				
Combined Oral Contraceptives	16%	16%	15%	15%
Condoms	29%	-29%	15%	-15%
Copper-bearing Intrauterine Devices	0%	0%	2%	-2%
Implantable Contraceptives	28%	28%	26%	26%
Injectable Contraceptives	76%	76%	37%	37%
Progestin Only Pills	382%	-382%	5%	5%

A3. Cycle time (average)

Fulfillment Channel Task Order	Direct Drop Fulfillment			Warehouse Fulfillment				Total
	Air	Multiple	Sea	Air	Land	Multiple	Sea	
TO3	253	418	194	398	453	168	301	338
Combined Oral Contraceptives			270			168	260	243
Copper-Bearing Intrauterine Devices				607				607
Implantable Contraceptives			139	215	638		343	303
Injectable Contraceptives	253	418	176	986				449
Other Non-Pharma			224					224
Progestin Only Pills				243	269			262
Total	253	418	194	398	453	168	301	338

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

Country	Type of Loss	Product Group	Loss Value	Loss Denominator	% Loss
Senegal	Damage	Combined oral contraceptive	\$104	\$48,672	0.21%

B6. Quarterly supply plan submissions

Product Group	Supply plan submission rate	# of supply plans required
Condoms	100%	17
FP commodities	100%	18

A8. Shelf life remaining

% Shelf Life Remaining	Inventory Balance
83%	\$13,499,199

A7. Temporary Waiver Percentage

Task Order	Temporary registration waiver percentage	Total # of line items delivered
TO3	10.0%	40
Combined Oral Contraceptives	20.0%	5
Copper-Bearing Intrauterine Devices	0.0%	3
Emergency Oral Contraceptives		0
Implantable Contraceptives	0.0%	17
Injectable Contraceptives	0.0%	8
Other Non-Pharma	0.0%	3
Progestin Only Pills	75.0%	4
Total	10.0%	40

Crosscutting indicators A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	71%
Freight Forwarder	84%

Complete Quarterly Results (TO4)

Reporting Period

2019-Q4

Crosscutting indicators

A14. Average vendor ratings

Vendor Type	Average vendor rating
Commodity Supplier	71%
Freight Forwarder	84%

B6. Quarterly supply plan submissions

Product Group	Supply plan submission rate	# of supply plans required
MCH commodities	100%	6

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
TO4	89%	9	91%	11	0.0%	718	100%	\$3,137,845
Food and WASH					0.0%	8		
Laboratory					0.0%	52		
Other Non-Pharma	100%	5	100%	7	0.0%	226	100%	\$232,024
Other Pharma	100%	3	100%	3	0.0%	421	100%	\$2,905,821
Other RTK	0%	1	0%	1	0.0%	6		
TB HIV					0.0%	5		
Total	89%	9	91%	11	0.0%	718	100%	\$3,137,845

A3. Cycle time (average)

Task Order	Direct Drop Fulfillment	Total
TO4	219	219
Other Non-Pharma	234	234
Other Pharma	216	216
Other RTK	158	158
Total	219	219

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
A03	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. The project is implementing new dwell tracking procedures, with the intent of reporting dwell-adjusted cycle time by FY2020.

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 assess 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 Engagements

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 only Artemether/Lumefantrine and Artesunate/Amodiaquine 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.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

All



Quarterly Indicator Details

Check out the [GHSC-PSM IDIQ M&E Plan](#) for complete details on all our indicators.

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
B01	Stockout rate at SDPs	Number of SDPs that were stocked out of a specific tracer product according to the ending balance of the most recent logistics report (or on the day of site visit)	Total number of SDPs that reported/were visited in GHSC-PSM-supported countries that offer the tracer product	LMIS reports, End User Verification surveys, other country-specific stock data sources	Quarterly	Stockout rates are provide for all tracer products for which data is available, regardless of whether GHSC-PSM procures or delivers the product. Data is provided for the ending balance of the middle month of each quarter for most countries. "Composite stockouts" are presented for select malaria and family planning commodities, indicating where SDPs are stocked out of all products they offer within the same product type or contraceptive method. At the task order level, aggregated stockout rates are calculated based on all SDP stock observations summed across all tracer products for that TO. TO-level denominators will therefore be greater than the number of SDPs that reported in that health area.
B02	Percentage of stock status observations in storage sites, where commodities are stocked according to plan, by level in supply system	Number of stock status observations for a tracer product that are within the designated minimum and maximum quantities at storage sites	Total number of stock status observations for a tracer product at storage sites	Warehouse management information systems, partner stock reports	Quarterly	Stocked according to plan rates are provided for all tracer products for which data is available, regardless of whether GHSC-PSM procures, delivers, or manages inventory for the product. Stock "observations" are typically based on inventory reports and will include as many observations (monthly, quarterly) from as many storage locations as are available at the time of reporting.
B03	SDP reporting rate to the LMIS	Number of SDPs whose LMIS report(s) or order form(s) were received at the central level within 30 days of the specified in-country deadline	The total number of SDPs in country that are required to report	LMIS reports, other country-specific stock data sources	Quarterly	All sites that have submitted reports within 30 days of the country-specified deadline are considered "reporting" for this indicator. Some countries have limited access to SDP-level data and are reporting rates from a small number of sites. Number of sites reporting for each country is listed on the "Complete Results" page for each country.
B06	Percentage of required supply plans submitted to GHSC-PSM during the quarter	Number of required supply plans that were submitted to GHSC-PSM in the quarter	Total number of required supply plans	Country supply plans, FASP tracker	Quarterly	Supply plan submission expectations are determined in consultation with USAID, headquarters FASP team, and field office technical leads. Submission rates are only calculated for prioritized submissions. Additional supply plans beyond the requirements are often submitted to GHSC-PSM headquarters.

Quarterly Indicator Details

Check out the [GHSC-PSM IDIQ M&E Plan](#) for complete details on all our indicators.

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
C01	Number of innovations (including operations research studies) that were developed, implemented, or introduced and are related to the health commodity market or supply chain best practices	Number of innovations (including operations research studies) that were developed, implemented, or introduced and are related to the health commodity market or supply chain best practices	NA	Field office reports, work plans	Quarterly	Innovations are reported in the quarter in which they are launched. Activities are considered innovations if they represent a significant advancement for the country. Similar activities may be reported from multiple countries.
C02	Number of people trained	Number of people trained. "People trained" refers to any type of participant, student, or learner in a training event, regardless of its duration	NA	Registration forms, attendance sheets	Quarterly	Training of USAID and GHSC-PSM personnel is excluded from this indicator. Participants may be counted more than once if they attend multiple discrete training activities.
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.
C10	Percentage of GHSC-PSM-procured or supported molecular instruments that remained functional during the reporting period	Total number of GHSC-PSM-procured or supported molecular instruments that remained functional for the entire reporting period	Total number of molecular instruments in the country that were procured or are supported by GHSC-PSM	Lab instrument outage reports	Quarterly	
C11	Supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance	Description of major GHSC-PSM efforts around developing or updating supply chain policies, regulations, strategies, or SOPs	NA	Field office reports, work plans	Quarterly	

Annual Indicator Details

Check out the [GHSC-PSM IDIQ M&E Plan](#) for complete details on all our indicators.

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
B04	Average rating of in-country data confidence at the central, subnational, and SDP levels (data availability, accuracy and timeliness)	Sum of all rating scores (0-9 points each) for all sites reporting	Total number of sites reporting	Data quality assessments	Annual	GHSC-PSM collects data for this indicator via data quality assessments conducted at health facilities and warehouses. Sites are scored based on the availability, accuracy, and timeliness of relevant supply chain data points. The selection methodology and number of sites visited varies between countries depending on available resources and other country-specific factors.
B05	Percentage of required annual forecasts conducted	Number of required annual forecasts conducted	Total number of required annual forecasts	Annual forecast documents	Annual	Annual forecast requirements for each country mirror their supply plan requirements.
B07	Percentage of total spent or budgeted on procurement of commodities for public sector services by the government, USG, the Global Fund, or other sources	Total budgeted/spent on health care commodities by a specific stakeholder in a country	Total budgeted/spent on health care commodities in a specific country	Supply plans, budgets, warehouse receipts, etc.	Annual	Data for this indicator may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.
B08	Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance.	Total number of targeted supply chain activities for which the relevant host country entity has achieved technical independence with GHSC-PSM technical assistance.	Total number of targeted supply chain activities	GHSC Supply Chain Technical Independence Scorecard; document reviews; key informant interviews	Annual	This indicator is measured for a defined set of targeted supply chain activities within each country that are expected to become technically independent by the end of the project, with GHSC-PSM technical assistance. The targeted activities are selected jointly between the USAID mission and the GHSC-PSM field office. The host country entities responsible for carrying out the targeted activities are then assessed on key capacity elements and their role in the implementation of the activity.

Annual Indicator Details

Check out the [GHSC-PSM IDIQ M&E Plan](#) for complete details on all our indicators.

Indicator Code	Name	Numerator	Denominator	Data Source(s)	Reporting frequency	Other Info
B09	Supply chain technical staff turnover rate	Number of supply chain technical staff who left the active health labor force in the last year	Total number of supply chain technical staff at the beginning of last year	Supply chain agency HR data	Annual	Data collection for this indicator focuses on technical employees of the primary supply chain agency in each country. It includes mainly central-level staff, with some countries including subnational levels if relevant and if data is available. It does not include all members of the health workforce who do supply chain tasks, such as SDP staff who keep and report consumption and stock records.
B10	Percentage of GHSC-PSM-supported countries that have a functional logistics coordination mechanism in place	Total number of countries with a functional logistics coordination mechanism in place as determined by a qualitative assessment	Total number of countries supported by GHSC-PSM for technical assistance	Key informant interviews	Annual	Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the project M&E plan.
B11	Percentage of leadership positions in supply chain management that are held by women (in countries where GHSC-PSM is providing technical assistance related to workforce development)	Number of leadership positions in supply chain management that were held by women in a specified time in countries where GHSC-PSM is providing technical assistance related to workforce development	Total number of leadership positions held in a specified time, in countries where GHSC-PSM is providing technical assistance related to workforce development	Supply chain agency HR data	Annual	
B12	Absolute percent consumption forecast error, with forecast bias variant	Absolute value of the difference between the actual quantities of products consumed at service delivery points during the year minus the forecasted consumption for the year	Sum of the actual quantities of products consumed during the year	Annual forecasts; Consumption or issues data from LMIS or WMS	Annual	

SDP Stockout Rates by Country - Overall

FY Quarter

2019-Q4



GHSC-PSM Support	Angola	Bots wana	Burkina Faso	Burma	Burundi	Came roon	eSwatini	Ethi opia	Ghana	Guinea	Haiti	Indo nesia	Kenya	Lesotho	Malawi	Mali	Mozam bique	Namibia	Nepal	Nigeria	Pakistan	Rwanda	Zambia	Zimbabwe
Supported	21.1%	8.3%	18.8%		0.7%	24.0%	4.8%	9.5%	9.4%	9.3%	0.5%	0.0%	23.2%	13.5%	7.1%	3.3%	10.1%	3.5%	12.0%	8.9%	36.5%	1.4%	27.6%	10.7%
Not Supported				0.0%																		5.5%		

Out-of-Cycle

Country	Stockout rate	Country	Stockout rate
Nepal	12.9%	Uganda	5.9%

Data Notes

Out-of-Cycle refers to countries that report on a full quarter delay due to the reporting and data processing time required in country.

Uganda is reported separately because its overall result includes a composite stockout rate (AL inability to treat). Composite stockout rates for AL inability to treat and PRH methods are excluded from other countries' overall results, so as to prevent double-counting of products included in the composites. For more details on the Uganda case, see "SDP Stockout Rates by Country - Malaria" in the following pages.

SDP Stockout Rates by Country - HIV/AIDS

GHSC-PSM Support Task Order	Not Supported		Supported																		
	Burma	Namibia	Angola	Botswana	Burundi	Cameroon	eSwatini	Ethiopia	Ghana	Haiti	Indonesia	Lesotho	Malawi	Mozambique	Namibia	Nigeria	Rwanda	Uganda	Zambia	Zimbabwe	
TO1-HIV/AIDS	0.0%	5.5%	10.2%	8.3%	0.8%	14.7%	4.8%	6.7%	16.7%	0.9%	0.0%	13.5%	4.6%	5.9%	3.5%	10.6%	1.1%	7.6%	15.1%	9.8%	
1st line adult ARV	0.0%	0.0%	0.0%	6.1%	1.4%	10.3%	0.0%	0.0%	8.8%	0.7%	0.0%	0.0%	2.3%	0.5%	0.0%	4.7%	1.6%	6.0%	2.1%	0.8%	
2nd line adult ARV	0.0%	4.5%	0.0%	6.1%	0.0%	54.5%	0.0%	0.0%	43.6%	0.0%	0.0%	0.0%	5.9%	2.4%	0.0%	8.2%	0.9%	6.2%	5.1%	5.6%	
Pediatric ARV	0.0%	18.2%	0.0%	0.0%	0.5%	10.3%	0.0%	0.0%	28.2%	2.2%	0.0%	3.6%	3.0%	1.8%	23.1%	10.7%	0.4%	5.0%	13.4%	4.3%	
First RTK		2.3%	0.0%	7.7%	1.0%	18.7%	11.8%	9.9%	17.1%	0.0%	0.0%	1.7%	8.1%	7.3%	0.0%	6.1%	0.5%	2.4%	9.9%	1.0%	
Second RTK		9.1%	0.0%	3.8%	0.3%	13.2%	12.9%	24.0%	16.6%	2.9%	0.0%	7.2%	1.8%	17.2%	0.0%	13.6%	1.4%	5.0%	6.7%	8.4%	
Tie-breaker RTK		4.5%						20.2%			0.0%	100.0%			0.0%	16.3%		20.0%		39.9%	
Viral load reagent	0.0%			64.3%			0.0%	5.3%				0.0%		0.0%		11.1%	0.0%	0.0%	25.0%	0.0%	
Viral load consumable	0.0%			7.1%			0.0%	18.5%								5.3%	0.0%				
EID reagent	0.0%			40.0%				47.4%				0.0%		0.0%		26.3%	0.0%	0.0%	7.1%	0.0%	
EID consumable	0.0%			15.4%				15.5%								5.3%	0.0%				
Male condoms (HIV)		0.0%	11.1%	0.0%	0.3%		4.9%	5.1%	7.3%	0.0%		2.5%	6.4%	13.1%	0.0%	10.9%	1.7%		28.8%	7.7%	
Female condoms (HIV)		0.0%	55.6%	0.0%	0.0%				27.8%			0.9%	4.4%	15.6%	0.0%	11.1%	1.4%		34.9%	11.1%	
RUTF													1.2%							28.6%	

SDP Stockout Rates by Country - Malaria

FY Quarter

2019-Q4

Table 1. Overall malaria stockout rates with product breakdown

GHSC-PSM Support Task Order	Supported														
	Angola	Burkina Faso	Burundi	Cameroon	Ethiopia	Ghana	Guinea	Kenya	Malawi	Mali	Mozambique	Nigeria	Rwanda	Zambia	Zimbabwe
TO2-Malaria	21.3%	18.8%	0.7%	47.4%	16.3%	57.7%	7.2%	26.9%	3.0%	3.2%	14.4%	5.6%	1.3%	24.1%	11.8%
AL 6x1	50.0%	21.3%		27.3%	15.9%	73.3%	7.0%	49.8%	1.6%	1.1%	15.0%	3.5%	1.6%	19.6%	21.0%
AL 6x2	60.0%	37.5%		36.4%	20.0%	63.4%	21.7%	23.9%	5.2%	1.6%	18.5%	4.6%	1.8%	20.7%	12.4%
AL 6x3	40.0%	25.0%		63.6%	21.1%	96.0%	5.9%	16.7%	2.8%	3.8%	10.9%	8.9%	1.2%	13.4%	11.1%
AL 6x4	30.0%	15.0%		18.2%	14.8%	17.8%	5.3%	12.3%	2.2%	5.4%	14.3%	4.5%	0.6%	23.7%	9.5%
AS/AQ 100/270mgx3	24.6%		1.3%	81.3%		97.0%						2.2%			
AS/AQ 100/270mgx6	17.1%		0.7%	77.5%		90.1%						2.1%			
AS/AQ 25/67.5mg	26.9%		0.4%	67.5%		81.2%						1.2%			
AS/AQ 50/135mg	21.9%		0.5%	71.3%		77.2%						2.0%			
mRDT	10.1%	6.3%	0.6%	4.4%	11.1%	12.9%	2.9%	52.5%	1.1%	1.8%	5.2%	8.8%	1.5%	10.2%	6.8%
SP	36.0%	11.3%	0.4%	1.1%		17.0%	1.1%	6.1%		1.9%	12.4%	6.0%		63.2%	8.7%
LLINs		15.0%	1.1%			8.9%				5.2%	11.5%	39.5%	16.6%		

Data Notes

Table 1:

Overall malaria stockout rates are calculated as an aggregation of stock observations across all malaria products. AL inability to treat is excluded from the overall result, as AL presentations are already factored in individually.

Table 2:

AL inability to treat is presented for each country that uses AL, separately from the overall results in Table 1.

Table 3:

In Uganda, health facilities report on all presentations of AL as a single item, equivalent to AL inability to treat. Stockout data is not available by individual presentation. As a result, GHSC-PSM incorporates AL inability to treat into Uganda's TO2 overall stockout rate to ensure that these essential products are represented.

Table 2. Inability to treat with AL (Composite stockout rate of four AL presentations)

GHSC-PSM Support Task Order	Supported														
	Angola	Burkina Faso	Ethiopia	Ghana	Guinea	Kenya	Malawi	Mali	Mozambique	Nigeria	Rwanda	Uganda	Zambia	Zimbabwe	
TO2-Malaria															
AL inability to treat	0.0%	2.5%	1.4%	11.9%	1.6%	4.5%	0.3%	0.2%		0.9%	1.1%	0.0%	3.0%	1.9%	1.1%

Table 3. Malaria stockout rates for Uganda

GHSC-PSM Support Task Order	Supported Uganda
TO2-Malaria	4.9%
AL inability to treat	3.0%
mRDT	3.7%
SP	8.6%

SDP Stockout Rates by Country - Family Planning

In GHSC-PSM-supported regions

FY Quarter

2019-Q4

Table 1. Family planning stockout rates - Product level

Task Order	Burundi	Ethiopia	Ghana	Guinea	Haiti	Kenya	Malawi	Mali	Mozambique	Nepal	Nigeria	Pakistan	Rwanda	Uganda	Zambia
TO3-PRH	0.4%	8.7%	5.7%	11.8%	0.1%	9.3%	12.0%	3.3%	11.3%	12.0%	12.2%	36.5%	1.8%	4.5%	42.8%
Combined oral contraceptive with iron	0.4%	8.1%	6.6%	14.9%	0.6%		8.0%	15.7%		14.2%	10.7%	42.9%	3.4%		42.7%
Combined oral contraceptive						5.1%			10.5%						
DMPA-Subcutaneous injectable									17.9%		19.9%				
NET-En Injectable			3.9%								6.2%				60.7%
DMPA-Intramuscular injectable	0.0%	8.9%	1.7%	19.0%	0.0%	0.8%	14.4%	0.9%	8.7%	8.8%	7.2%	32.0%	1.5%	4.5%	45.9%
1-rod implant		14.3%	3.1%			6.3%	16.2%				24.4%		1.7%		45.4%
2-rod implant	0.6%	8.2%	2.6%	11.0%	0.0%	2.5%	25.4%	0.7%	5.2%	15.4%	16.8%		1.9%		45.5%
Emergency contraceptive, 1 tablet	0.5%														
Emergency contraceptive, 2 tablets		8.6%				30.8%	27.0%		35.1%						
Progestin only pills	0.6%	12.4%	10.7%	14.2%		18.1%	6.7%	1.8%	10.0%		8.2%		1.6%		46.7%
Copper-bearing IUD	0.7%	3.4%	27.2%	5.3%	0.0%	3.8%	2.5%	0.8%	2.7%	18.4%	23.3%	16.2%	1.7%		33.3%
Calendar-based awareness methods					0.0%			0.5%					0.3%		
Male condoms (FP)	0.3%	5.1%	7.3%	7.3%	0.0%	7.2%	6.4%	1.3%	13.1%	9.3%	10.9%	45.8%	1.7%		28.8%
Female condoms (FP)	0.0%		27.8%				4.4%	2.5%	15.6%		11.1%		1.4%		34.9%

Table 2. Family planning stockout rates - Method level

Tracer Product	Burundi	Ethiopia	Ghana	Guinea	Haiti	Kenya	Malawi	Mali	Mozambique	Nepal	Nigeria	Pakistan	Rwanda	Uganda	Zambia
Combined oral methods	0.4%	8.1%	6.6%	14.9%	0.6%	5.1%	8.0%	15.7%	10.5%	14.2%	10.7%	42.9%	3.4%		42.7%
Injectable contraceptives	0.0%	8.9%	1.6%	19.0%	0.0%	0.8%	14.4%	0.9%	8.8%	8.8%	2.6%	32.0%	1.5%	4.5%	39.0%
Implantable contraceptives	0.6%	7.4%	1.8%	11.0%	0.0%	0.4%	8.1%	0.7%	5.2%	15.4%	16.8%		0.0%		36.1%
Emergency oral contraceptives	0.5%	8.6%				30.8%	27.0%		35.1%						
Progestin-only methods	0.6%	12.4%	10.7%	14.2%		18.1%	6.7%	1.8%	10.0%		8.2%		1.6%		46.7%
Copper-bearing IUD	0.7%	3.4%	27.2%	5.3%	0.0%	3.8%	2.5%	0.8%	2.7%	18.4%	23.3%	16.2%	1.7%		33.3%
Calendar-based awareness methods					0.0%			0.5%					0.3%		
Male condoms (FP)	0.3%	5.1%	7.3%	7.3%	0.0%	7.2%	6.4%	1.3%	13.1%	9.3%	10.9%	45.8%	1.7%		28.8%
Female condoms (FP)	0.0%		27.8%				4.4%	2.5%	15.6%		11.1%		1.4%		34.9%

Data Notes

The PRH "method level" (Table 2) refers to the percentage of facilities stocked out of all products offered within a given method. The stockout rate at the "product" level (Table 1) refers to the percentage of sites stocked out of that particular product (depending on what is offered at a particular facility). A facility could be stocked out of one product and not stocked out at the method level. Only product-level stock observations are factored into overall performance at the task order level, to prevent double-counting between products and methods.

Out-of-Cycle

Task Order	Nepal
TO3-PRH	12.9%
Combined oral contraceptive with iron	10.8%
Combined oral contraceptive	
DMPA-Subcutaneous injectable	
NET-En Injectable	
DMPA-Intramuscular injectable	10.0%
1-rod implant	
2-rod implant	21.4%
Emergency contraceptive, 2 tablets	
Progestin only pills	
Copper-bearing IUD	23.1%
Calendar-based awareness methods	
Male condoms (FP)	10.3%
Female condoms (FP)	

Out-of-Cycle

Tracer Product	Nepal
Combined oral methods	10.8%
Injectable contraceptives	10.0%
Implantable contraceptives	21.4%
Emergency oral contraceptives	
Progestin-only methods	
Copper-bearing IUD	23.1%
Calendar-based awareness methods	
Male condoms (FP)	10.3%
Female condoms (FP)	



Stocked According to Plan Rates by Country

Country	Stocked according to plan	Overstocked	Understocked	Stocked out
Vietnam	100%			
Zambia	55%	14%	14%	18%
Burma	49%	33%	18%	
Lesotho	48%	0%	36%	15%
Malawi	48%	33%	5%	14%
Uganda	40%	31%	28%	1%
Rwanda	37%	28%	33%	2%
Nigeria	37%	3%	57%	3%
Burundi	35%	15%	40%	9%
Mozambique	34%	18%	37%	11%
Haiti	27%	21%	45%	6%
Guinea	25%	32%	43%	
Indonesia	25%	0%	75%	0%
Pakistan	25%	31%	0%	44%
Zimbabwe	25%	44%	31%	0%
Liberia	23%	14%	46%	18%
eSwatini	21%	51%	28%	0%
Namibia	21%	6%	42%	31%
Cameroon	17%	17%	51%	15%
Ghana	17%	38%	12%	32%
Botswana	17%	17%	56%	11%
Mali	15%	27%	4%	54%
Ethiopia	13%	40%	38%	9%
Angola	5%	6%	42%	47%
Kenya	2%	13%	38%	47%
Burkina Faso		29%	71%	

Data Notes

Above data shows observations from the central and first subnational storage levels for which data is available in each country. Data on individual country pages may include additional supply chain levels.

LMIS Reporting Rates by Country

Country	Not Supported	Supported
Botswana		100%
Indonesia		100%
Lesotho		100%
Kenya		99%
Guinea		97%
Nigeria		97%
Burma	96%	
Haiti		95%
Rwanda		94%
Mali		92%
Zambia		91%
Ethiopia		89%
Malawi		89%
Uganda		87%
Namibia	86%	87%
Pakistan		82%
Burundi		79%
Mozambique		79%
eSwatini		78%
Angola		75%
Cameroon		65%
Nepal		53%
Zimbabwe		52%
Burkina Faso		1%

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Angola



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Angola

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	59	10.2%
1st line adult ARV	9	0.0%
2nd line adult ARV	9	0.0%
Pediatric ARV	5	0.0%
First RTK	9	0.0%
Second RTK	9	0.0%
Male condoms (HIV)	9	11.1%
Female condoms (HIV)	9	55.6%
Total	59	10.2%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	3,800	21.2%
AL 6x1	10	50.0%
AL 6x2	10	60.0%
AL 6x3	10	40.0%
AL 6x4	10	30.0%
AL inability to treat	10	0.0%
AS/AQ 100/270mgx3	703	24.6%
AS/AQ 100/270mgx6	703	17.1%
AS/AQ 25/67.5mg	703	26.9%
AS/AQ 50/135mg	703	21.9%
mRDT	713	10.1%
SP	225	36.0%
Total	3,800	21.2%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
Total		

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	9	100%
TO2-Malaria	954	75%
Total	963	75%

Ref Analysis

- B1 For TO1, of the seven HIV tracer products, two were found stocked out (male and female condoms). Male condoms were found stocked out again at Esperança hospital. Five SDPs were stocked out of female condoms this quarter. INLS has not procured this commodity for more than two years, and it was not included in the last quantification exercise. SDPs with female condoms in stock are keeping the same quantities for more than six months. This is the same result as the previous quarter. Looking at TO2, 703 SDPs reported against 595 in the previous quarter, an increase of 18% of SDPs in this period. The average stockout result for all ASAQ presentations was 57% in the previous quarter and has dropped dramatically to 23% this quarter. Last mile distribution has shown to be an effective way to guarantee that all functional SDPs are reached and receive the planned quantities as per the distribution plan. GHSC-PSM will continue to use this strategy for coming periods. The large reduction of the ASAQ stockout rate is attributed to GHSC-PSM's decision to distribute these commodities directly to SDPs in the six PMI-supported provinces. In July, GHSC-PSM carried out a last mile distribution to four PMI provinces through a 3PL providing distribution in addition to provincial government distribution efforts, while the remaining two provinces were covered by GHSC-PSM vehicles and staff in addition to provincial government distribution efforts and vehicles/staff. The stockout rate for the reporting period was based on the SOH at the end of August, which was the period in which the distribution to the provincial level started.
- B3 For TO1, all nine project-supported SDPs (100%) reported by the deadline or up to one week after. This report submission rate has been observed since the Q1 of FY2018. Looking at TO2, of the 980 SDPs expected to report during this quarter, a total of 713 SDPs have reported, a 75% submission rate against 63% for the previous period. From those that have reported, 706 reported by deadline or up to one week after, 7 reported between two weeks and one month after deadline, and submission was unknown for 267 reports. GHSC-PSM, through the embedded TA and provincial malaria supervisor, will update the health facility map to provide a more realistic picture of the health facilities functioning in each PMI province.

Warehouse stock status and product losses

Country

Angola

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	87	41%	43%	11%	5%
TO1-HIV/AIDS	21	67%	0%	29%	5%
TO2-Malaria	30	3%	77%	10%	10%
TO3-PRH	36	64%	33%	3%	0%
Subnational level 1	1,209	48%	42%	4%	6%
TO1-HIV/AIDS	21	14%	33%	14%	38%
TO2-Malaria	540	29%	60%	6%	4%
TO3-PRH	648	64%	27%	2%	7%
Total	1,296	47%	42%	5%	6%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

B2 Among TO1 products, the adult and pediatric first-line ARV had a very significant change: for the first time both ARVs had three observations stocked out. In the previous quarter, the adult first-line ARV had two overstocked observations and one observation stocked according to plan, and the pediatric had one overstocked observation and two understocked observations. The second-line ARV had one observation overstocked and two observations stocked according to plan. This ARV had two observations overstocked and one observation according to plan in Q3. At provincial level, the first-line ARV had one observation overstocked, one observation stocked according to plan and the third observation was understocked. The first-line pediatric had one observation overstocked, one stocked according to plan and one observation understocked. This ARV had three understocked observations in the previous period. For malaria commodities, the ASAQ presentations at central level had nine observations (75%) understocked and three observations (25%) stocked according to plan. The stocked according to plan observations were attributed to ASAQ 100/270mg x 6 tablet presentation. At the provincial level for all four ALu-based ACT presentations, only 36 (16%) observations were found stocked out against 51% in the previous quarter. In the same period, 170 observations (78%) against 100 observations (46%) from the previous quarter were found understocked. Looking at TO3, no significant changes have been observed from the previous quarter. At the central level, from 12 selected contraceptive tracer commodities, only one observation of male condoms was found stocked according to plan. In the previous period, no contraceptive was found stocked according to plan. From the total observations, 26 out of 36 (72%) in this period, against 16 out of 36 (44%) in the previous period, were found stocked out. The continuous increase of the stockout rate of contraceptives is linked to the fact that during FY19, no donors or the MOH processed the procurement of contraceptives. At the provincial level, of 648 stock status observations from 12 selected contraceptive tracer commodities, 63% were stocked out compared to 58% from the previous quarter; 1% were stocked according to plan compared to 4% in the previous quarter; 2% were overstocked against 10% in the previous quarter; and 32% were understocked against 27% in the previous quarter.

C7 There are no product losses to report this quarter.

Supply plans, innovations, and strategic activities

Country

Angola

FY Quarter

2019-Q4

Total Innovations implemented this quarter
0

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
There are no new innovations to report this quarter		

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
RTKs	Yes

Analysis

All required supply plans were submitted this quarter.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
GHSC-PSM conducted a three-day workshop with the Luanda Provincial Health Department on the analysis and resolution of identified logistics constraints and development of the Luanda Provincial Supply Chain and Logistics Strategic Plan.
GHSC-PSM worked with the National Hospital Round table to improve and revise inventory management guidelines for handling malaria products within facility store rooms.

Training for supply chain partners

Country

Angola

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	Total
Female	85	30	2	117
Male	20	99	1	120
Total	105	129	3	237

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	Total
Subnational level 1	101	47		148
SDP	4	82	3	89
Total	105	129	3	237

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	Total
Cross-TO	4	22	3	29
TO-specific	101	107		208
Total	105	129	3	237

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	Total
MIS	4	22	3	29
Monitoring and Evaluation		60		60
Warehousing and Inventory Management	101	47		148
Total	105	129	3	237

Analysis



A total of 237 health professionals were trained during the quarter. For TO1: 101 health professionals in Luanda benefited from a training session about inventory management. For TO2: A total of 107 health professionals were trained through two workshops. The first involved 60 supply chain professionals working on at provincial and municipal level were trained on data collection tools and reporting. The second training involved 47 health professionals working in the 12 national hospitals with participants from NMCP. The 3 days training was discussed the data quality issues on the malaria monthly report and confirming supporting data sources.

Molecular Instruments and HIV Tracer Products

Country

Angola

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

(Blank)

Analysis

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Efavirenz 300/300/600 mg
2nd line adult ARV	Lopinavir/Ritonavir
Pediatric ARV	Abacavir/Lamivudine 60/30 mg
First RTK	Determine
Second RTK	Uni-Gold
Tie-breaker RTK	Not reported

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

Supply Chain Level

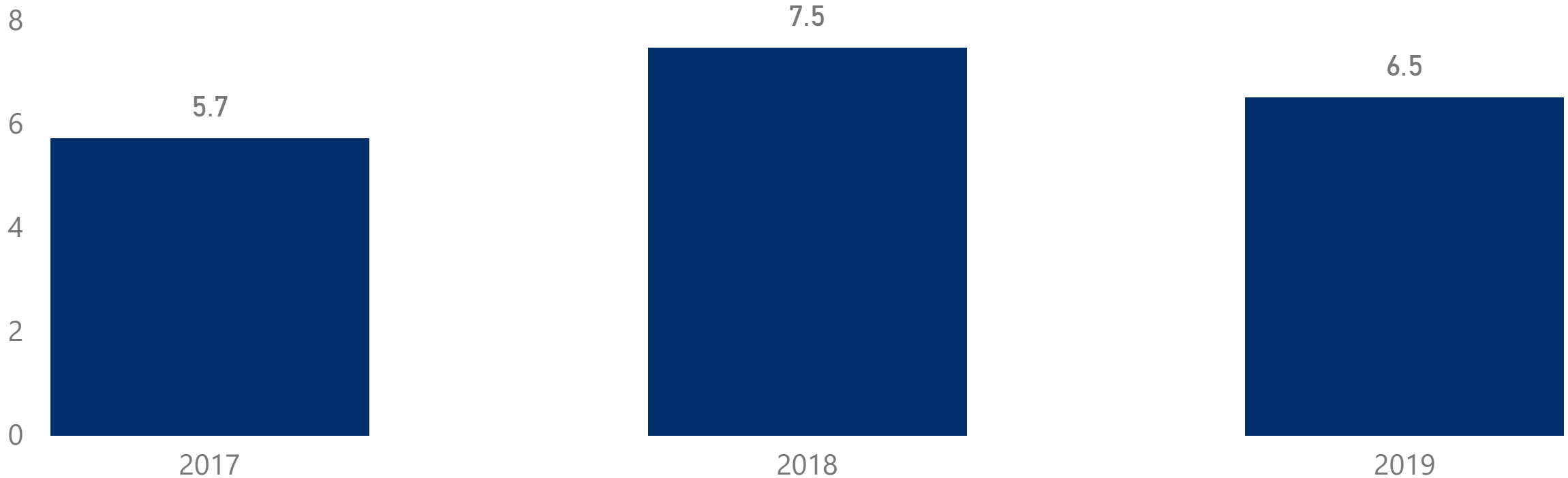
Country

All

All

Angola

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	2.0	2.5	2.9
2019	1.9	2.7	2.0

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY: 2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Subnational level 1		
TO1-HIV/AIDS	9.0	1
TO2-Malaria	7.0	13
TO3-PRH	6.2	13
SDP		
TO1-HIV/AIDS	8.0	8
TO2-Malaria	6.1	40

Analysis

GHSC/PSM Angola provides technical assistance to one central warehouse for TO1, 2 and 3, 18 provincial warehouses for both TO2 & 3, and one provincial warehouse for TO1. At the SDP level, GHSC-PSM provides TA to nine PEPFAR-supported SDPs for TO1 and 980 SDPs, including 12 national hospitals, for TO2. A sample was generated by each supply chain level from the sites that receive TA from GHSC-PSM, using a stratified sample with 10% margin of error and 90% confidence level. From the population size of 18 provinces, 15 provincial warehouses were randomly selected. The same approach was used for the SDPs for TO2. The DQA covered the six PMI provinces, which account for 968 SDPs only for TO2. From the total population size, 64 SDPs were randomly selected in these provinces. During the DQA in the PMI provinces, the teams learned that some of the selected SDPs were closed or not functioning. The main reasons described were that there were only one health professional working in that SDPs and he/she was either sick or on leave. Other SDPs were not functioning at all due to degradation. The random selection selected SDPs in very remote areas that was difficult to access. For the first time, the DQA was carried out using the Survey CTO data collection platform. The analysis in Survey CTO was designed considering that each site visited should be assessed in all TOs to calculate the overall score. In Angola, GHSC-PSM provides TA to 980 SDPs only for TO2, so the other TOs were not assessed.

Annual Forecasts

FY

2019

Country

Angola

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	0.9%	-
2nd line adult ARV	34.4%	-
Pediatric ARV	19.5%	-
First RTK	4.7%	-
Second RTK	5.8%	-
Male condoms (HIV)	20.2%	-
Female condoms (HIV)	8.9%	-

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
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B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
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Ref Analysis

B12 GHSC-PSM in Angola uses a proxy of average monthly distribution to calculate forecast accuracy. It is the total quantity received by each SDP during FY19 and the total quantity distributed during the same period. The data for this indicator were collected from the nine PEPFAR-supported SDPs. In FY18, the data reported were from the central level (CECOMA) using the TO2 commodities, considering quantity received and the quantity distributed during FY18. As explained in indicators related to CECOMA, GHSC-PSM did not have access to CECOMA in the last three months though other technical area stock was provided by the national program and there was no interruption. USAID Angola held discussions with MoH over new terms to allow GHSC-PSM to have access to CECOMA and as of late Oct 2019, GHSC-PSM has access to CECOMA again.

B5 For HIV commodities, the INLS and GHSC-PSM updated the quantification exercise resulting from new targets. For malaria commodities, NMCP and GHSC-PSM carried out a quantification update which included seasonality factors. The seasonality can affect the increase or decrease of malaria cases and associated monthly consumption and distribution. GHSC-PSM also carried out a forecast update for contraceptives during this quarter.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
Condoms	No
FP commodities	Yes
Lab (HIV diagnostics)	No
Malaria commodities	Yes
RTKs	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Angola

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS	No
TO2-Malaria	No
TO3-PRH	No

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	6.0	6.0
TO2-Malaria	6.0	6.0
TO3-PRH	7.0	6.5

Ref Analysis

B10 In Angola, none of the Task Orders had logistics TWGs considered as functional. One key limitation is that there is no legislative act or ministerial decree that creates a coordination mechanism and outlines its mandate. Although they have met three to five times in this reporting period, their Terms of Reference are pending approval from MOH. Although not officially qualified as functional, the logistics TWGs are active and have been producing results. All programs have their quantification reports and they are updated annually. GHSC-PSM will advocate with MOH to have the Terms of Reference approved.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Total		

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Subnational level 1	58%	72
Crosscutting	56%	18
TO1-HIV/AIDS	50%	18
TO2-Malaria	33%	18
TO3-PRH	94%	18
Subnational level 2	15%	173
Crosscutting	15%	173
Total	28%	245

Ref Analysis

B11 In Angola, a survey was conducted to assess the total number of health professionals working in the supply chain at provincial and municipal levels. These health professionals include provincial warehouse managers, program focal points at the provincial level and municipal depot managers. This same approach was used in FY17. In FY18, GHSC-PSM reported only supply chain position at the central level (CECOMA). For this reporting period, it was not possible to get data at CECOMA. During this reporting period, four positions were considered for the subnational level 1 (provincial), which includes the warehouse manager and three focal points for each program (HIV, malaria and reproductive health). At subnational level 2 (municipal), it was considered only one position, which was the municipal depot manager. From the total of 245 positions in September 2019, 68 leadership positions (27%) were filled by women.

Commodity Funding

FY
2019

Country
Angola

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
HIV/AIDS	\$6,602,185	61%	\$3,773,860	35%	\$421,534	4%			\$10,797,579
Malaria	\$685,094	4%	\$7,757,164	49%	\$7,469,302	47%			\$15,911,560

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

In Angola, data were only available for HIV and malaria commodities. For HIV, USG spent \$421,534 to procure 2 million condoms using funds from the condom fund through GHSC-PSM this fiscal year. Budgeted figures for Global Fund and MOH were extracted from the HIV Angola Quantification report 2018 – 2021 Final. For this FY19 reporting period, we are reporting the total amount budgeted for FY19. For this period, GoA budgeted \$6,602,185 and GF budgeted \$3,773,860 for HIV treatments. In total, \$10,376,045 was budgeted in FY19, of which the GoA contributed 64%. The other 36% was covered by GF. For malaria commodities, figures were retrieved from Malaria Operational Plan (MOP19). For this FY19 reporting period, USG spent \$7,469,302 through PMI funds allocated to GHSC-PSM, Global Fund spent \$7,757,164, and the GoA spent \$685,094. From the total spent during FY19, the GoA only contributed with 4%.

B8. Supply Chain Technical Independence

FY

2019

Country

Angola

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

Complete Results and Denominators

Country

FY Quarter

Angola

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO2-Malaria	21.3%	3,790
SP	36.0%	225
mRDT	10.1%	713
AS/AQ 50/135mg	21.9%	703
AS/AQ 25/67.5mg	26.9%	703
AS/AQ 100/270mgx6	17.1%	703
AS/AQ 100/270mgx3	24.6%	703
AL 6x4	30.0%	10
AL 6x3	40.0%	10
AL 6x2	60.0%	10
AL 6x1	50.0%	10
TO1-HIV/AIDS	10.2%	59
Female condoms (HIV)	55.6%	9
Male condoms (HIV)	11.1%	9
Second RTK	0.0%	9
First RTK	0.0%	9
Pediatric ARV	0.0%	5
2nd line adult ARV	0.0%	9
1st line adult ARV	0.0%	9
Total	21.1%	3,849

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	0.0%	10

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	100%	9
TO2-Malaria	75%	954

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	11%	5%	43%	41%	81
TO1-HIV/AIDS	29%	5%	0%	67%	21
TO2-Malaria	10%	10%	77%	3%	30
TO3-PRH	3%	0%	33%	64%	36
Subnational level 1	4%	6%	42%	48%	1,209
TO1-HIV/AIDS	14%	38%	33%	14%	21
TO2-Malaria	6%	4%	60%	29%	540
TO3-PRH	2%	7%	27%	64%	648
Total	5%	6%	42%	47%	1,296

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	85	20	105
TO2-Malaria	30	99	129
TO3-PRH	2	1	3
Total	117	120	237

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	1
Condoms	1	1
FP commodities	1	1
Lab (HIV diagnostics)	1	1
Malaria commodities	1	1
RTKs	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Botswana



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Botswana

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	276	8.3%
1st line adult ARV	33	6.1%
2nd line adult ARV	33	6.1%
Pediatric ARV	33	0.0%
First RTK	26	7.7%
Second RTK	26	3.8%
Viral load reagent	14	64.3%
Viral load consumable	14	7.1%
EID reagent	5	40.0%
EID consumable	26	15.4%
Male condoms (HIV)	33	0.0%
Female condoms (HIV)	33	0.0%
Total	276	8.3%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
Total		

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	33	100%
Total	33	100%

Ref Analysis

B1	ARVs: Stockout rates for ARVs remained low. Two of thirty-three reporting SDPs recorded stockouts in first- or second-line adult ARVs and none recorded stockouts in pediatric ARVs. The two reported stockouts can be attributed to the ongoing phaseout and transitioning of products. As reported in previous quarters, procurement of ARVs in general is complicated by an ongoing lawsuit regarding ARV tender awards. The high court has interdicted CMS from running ARV tenders. The country is allowing small procurements through waivers, but local suppliers do not have the capacity to meet the full demands of the country's ARV consumption through short-term microprocurements.
B1	Condoms: No reporting facilities recorded stockouts in male or female condoms in FY2019 Q4. The CMS recently distributed large quantities of male condoms to district warehouses to alleviate warehouse space constraints at the central level.
B1	HIV rapid test kits: Stockout rates continued to improve for rapid test kits. Despite delayed shipments from the supplier, the central stocks have been adequate to meet facility order quantities.
B1	The average stockout rate for HIV tracer products rose from 5.8% in FY2019 Q3 to 8.3% in Q4. The increase largely reflects jumps in stockout rates for viral load (14.3% in Q3 to 64% in Q4) and EID (20% in Q3 to 40% in Q4) reagent.
B1	Viral load, EID reagents and consumables: The stockout rate of viral load reagents has significantly increased in FY2019 Q4. Nine facilities (of 14) were stocked out of the most commonly used viral load reagent, compared to two stockouts in the previous quarter. During the reporting period, there was a central stockout of this and EID reagents for some time in Q4 due to delayed shipments. Overdue shipments were delivered in late September 2019, and stocked out facilities have replenished their stocks.
B3	The reporting rate of ARV LMIS to CMS was 100%, with all 33 SDPs reporting out of the prioritized list of 33 facilities (i.e., GHSC-PSM supported facilities). All except one facility reported on time. The reporting rate and timeliness are consistent with the previous quarters. GHSC-PSM deploys site monitors to health facilities to support timely and quality reporting.

Warehouse stock status and product losses

Country

Botswana

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	36	11%	56%	17%	17%
TO1-HIV/AIDS	36	11%	56%	17%	17%
Total	36	11%	56%	17%	17%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

- B2 Centrally, only female condoms were observed to be stocked according to plan during FY2019 Q4, and only EID consumables to be overstocked. All other tracer products were observed to be either understocked or stocked out. ARV stock status reflects the ongoing lawsuit referenced above. A shipment of RTKs expected in July 2019 has yet to arrive, explaining the diminishing central stock of RTKs. The shipment is now expected in November 2019. Shipment delays also contributed to temporary central stockouts of EID and viral load reagent. Finally, male condoms were purposively pushed from the central to district warehouses to alleviate space constraints, explaining the understocked status observed in FY2019 Q4.
- C7 This indicator is not applicable, as there are no products stored under GHSC-PSM Botswana control in country.

Supply plans, innovations, and strategic activities

Country

Botswana

FY Quarter

2019-Q4

Total Innovations implemented this quarter
0

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
None to report this quarter.		

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	Yes
RTKs	Yes

Analysis

Supply plans for ARV and RTK commodities were prepared and submitted to HQ for FY19 Q4. GHSC-PSM provided technical assistance to develop a Pipeline database for ARVs and RTKs for monitoring stocks and to serve as an early warning tool for prompting supply plan and procurement decisions. The ARV Management team (GHSC-PSM is a member) meets every fortnight and uses pipeline for monitoring stock and making supply and procurement decisions for ARVs and RTKs.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for this period.

Training for supply chain partners

Country

Botswana

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	Total
Female	7	7
Total	7	7

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	Total
SDP	7	7
Total	7	7

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	Total
Cross-TO	7	7
Total	7	7

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	Total
Warehousing and Inventory Management	7	7
Total	7	7

Analysis



In September 2019, GHSC-PSM conducted a three-day health commodities logistics management training for seven Tebelopele staff from Gaborone and Francistown Wellness Centers, warehouse and head office. The purpose of the training was to provide participants with necessary skills for effective inventory management and also fulfill the organizational mandate of expanding HIV/AIDS care and treatment services to previously underserved PLHIV. The training was conducted in collaboration with Peace Corps Botswana, providing training facilitation experience for Peace Corps volunteers who were recently trained as a trainer-of-trainers (TOTs) on health commodity supply chain management.

Molecular Instruments and HIV Tracer Products

Country

Botswana

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

GHSC-PSM Botswana does not procure or support molecular instruments in the country.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Dolutegravir 300/300/50mg
2nd line adult ARV	Tenofovir/Lamivudine/Dolutegravir 300/300/50mg
Pediatric ARV	Lopinavir/Ritonavir 125mg
First RTK	Determine
Second RTK	Uni-Gold
Tie-breaker RTK	ELISA Confirmatory Test
Viral load reagent	Cobas Ampliprep/Cobas taqman HIV-1 test 48 tests
Viral load consumable	Cobas Ampliprep/CobasTaqman Wash reagent 5.1L
EID reagent	Kit CAP-G/CTM HIV 1-Qual v2.0 (CEIVD), 48 Tests
EID consumable	Dried Blood Spot Collection Kit

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

All

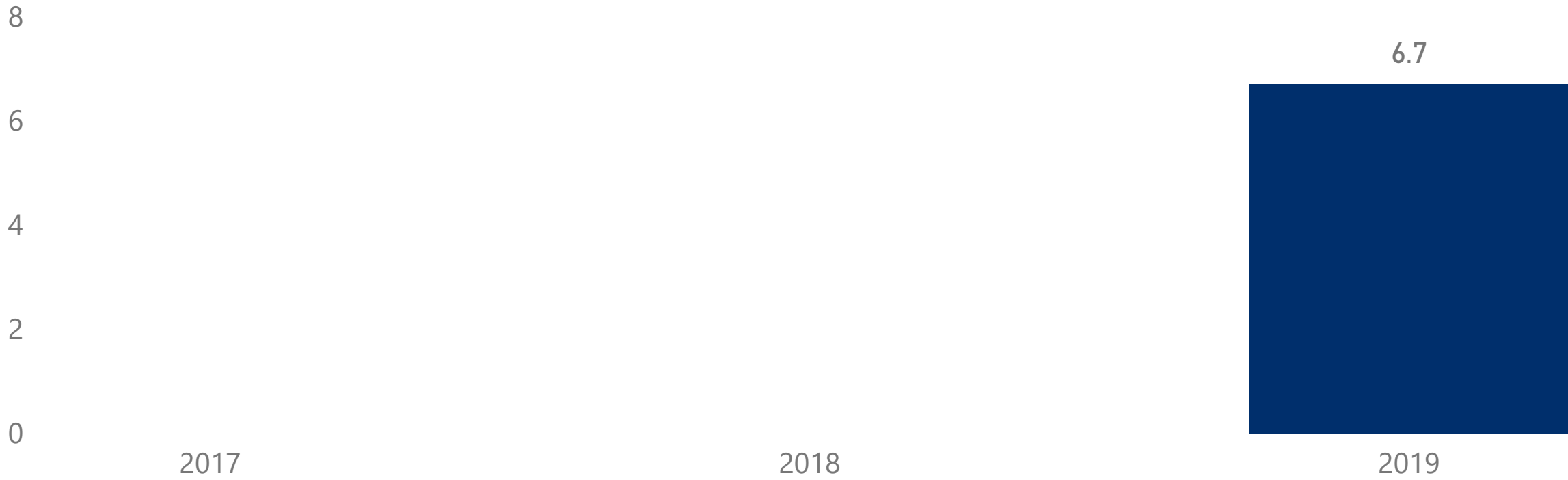
Supply Chain Level

All

Country

Botswana

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018			
2019	2.0	2.7	2.0

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY: 2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Subnational level 2		
TO1-HIV/AIDS	8.8	5
SDP		
TO1-HIV/AIDS	6.3	23

Analysis

GHSC-PSM conducted data quality assessments (DQAs) in 28 facilities out of a possible 33 supported sites (85% of sites). DQAs were integrated into supportive supervision visits, which were conducted twice in FY2019.

LMIS records at each facility were assessed on their availability, accuracy and timeliness, and scored between a 0 and 3 (highest) on each metric (9 sum total maximum). On average, data quality was high at higher-level facilities, averaging 8.8 of 9, across five assessed facilities. Data quality diminished at lower-level facilities, averaging 6.3 of 9 across 23 assessed facilities. At lower-level facilities, data were broadly available (averaging a score of 2.7 out of 3), but available data scored lower on measures of accuracy (averaging 1.8) and timeliness (averaging 1.8).

Annual Forecasts

FY

2019

Country

Botswana

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	4.4%	+

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
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B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
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B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
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Ref Analysis

B5	An annual forecast for ARVs was successfully conducted in April 2019. GHSC-PSM organized a three-day workshop jointly with MOHW and the national ARV Forecasting and Costing TWG. The forecast exercise revised forecasts generated in July 2018 and updated TLD transition plans using Quantimed software. This was then transferred to PipeLine software for supply planning. Planned forecasts for RTKs have not been conducted as of October 2019.
B12	The consumption forecast error for three tracer ARVs in FY2019 was 4.4%, indicating that consumed quantities exceeded those forecasted. The forecast for two of the tracer ARVs assumed adherence to the planned TLD transition. Delays in the assumed transition translated into forecast error. The one product not affected by the TLD transition (TEE) was accurately forecasted, recording a forecast error of only 1%.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
Lab (HIV diagnostics)	No

Workforce, Leadership, and Governance

FY
2019

Country
Botswana

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	8.0	9.8

Ref Analysis

B10 Botswana has a robust logistics coordination mechanism in place for ARVs. The National ARV Costing and Forecasting Technical Working Group's (TWG) main role is coordinating forecasting, stock monitoring, supply planning, and transition planning and monitoring of ARVs. The mechanism scored a 9.5 out of a possible 11 points on this indicator, reflecting its institutionalized responsibilities, diverse stakeholder engagement, regular meetings, and success in implementing action plans, including the TLD transition.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Total		

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Total		

Ref Analysis

B11 GHSC-PSM Botswana does not currently have visibility into government human resource data to report on this indicator.

B9 GHSC-PSM Botswana does not currently have visibility into government human resource data to report on this indicator.

Commodity Funding

FY
2019

Country
Botswana

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
▲ HIV/AIDS	Not Available		\$0		\$4,902,151		\$0		Not Available

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

GHSC-PSM spent \$4,902,151 for HIV commodities (specifically, DTG and TLD) during the FY19. The last delivery of GHSC-PSM-procured commodities arrived in February 2019. GHSC-PSM does not currently have visibility into the amount spent by the government of Botswana to procure commodities during this period. The government had previously led the procurement of most health commodities for public health facilities. Since February 2019, the government has financed procurement and distribution of all health commodities for public health facilities, including ARVs and HIV laboratory commodities.

B8. Supply Chain Technical Independence

FY

2019

Country

Botswana

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Botswana

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

6

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

GHSC-PSM and USAID identifies six supply chain activities targeted for technical independence by the end of the GHSC-PSM project: 1) monitoring the commodities pipeline (FASP), 2) developing/updating supply plans (FASP), 3) developing annual forecasts (FASP), 4) system administration of the LMIS (MIS), 5) conducting ongoing DQAs (M&E) and 6) facilitating the active use of supply chain data for decision making (M&E). The country has yet to achieve technical independence on any of the targeted activities. The most common missing components of technical independence (as defined by this indicator) are the institutionalization of training approaches (e.g., the means to train new personnel) for given activities and evidence that performance is being actively monitored. GHSC-PSM will work closely with the relevant host government entities over the remaining duration of the project to ensure these components are in place in support of the ultimate goal of self-reliance.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Monitor the commodities pipeline	CMS	HIV/AIDS	Yes; Major contribution	Yes; Major contribution	No; Limited contribution	Yes; Major contribution	No; Limited contribution	Participant	No
	Develop/update supply plan	CMS	HIV/AIDS	Yes; Major contribution	Yes; Major contribution	No; Limited contribution	Yes; Major contribution	No; Limited contribution	Participant	No
	Develop annual forecast	ARV Costing and Forecasting Technical Working Group	HIV/AIDS	Yes; Major contribution	Yes; Major contribution	No; Limited contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
MIS	System administration - logistics management information system	CMS	HIV/AIDS	Yes; No contribution	Yes; Limited contribution	Yes; Moderate contribution	Yes; Limited contribution	No; No contribution	Primary technical implementer	No
Monitoring and Evaluation	Conduct ongoing data quality assurance	CMS	HIV/AIDS	Yes; Major contribution	Yes; Major contribution	No; Limited contribution	Yes; Major contribution	No; No contribution	Participant	No
	Facilitate active use of data for supply chain management decision making	CMS	HIV/AIDS	Yes; Moderate contribution	Yes; Moderate contribution	No; Limited contribution	Yes; Limited contribution	No; No contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Botswana

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO1-HIV/AIDS	8.3%	276
Female condoms (HIV)	0.0%	33
Male condoms (HIV)	0.0%	33
EID consumable	15.4%	26
EID reagent	40.0%	5
Viral load consumable	7.1%	14
Viral load reagent	64.3%	14
Second RTK	3.8%	26
First RTK	7.7%	26
Pediatric ARV	0.0%	33
2nd line adult ARV	6.1%	33
1st line adult ARV	6.1%	33
Total	8.3%	276

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
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See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	100%	33

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	17%	17%	56%	11%	36
TO1-HIV/AIDS	17%	17%	56%	11%	36
Total	17%	17%	56%	11%	36

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Total
TO1-HIV/AIDS	7	7
Total	7	7

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	1
RTKs	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
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For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Burkina Faso



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Burkina Faso

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	640	16.7%
AL 6x1	80	21.3%
AL 6x2	80	37.5%
AL 6x3	80	25.0%
AL 6x4	80	15.0%
AL inability to treat	80	2.5%
mRDT	80	6.3%
SP	80	11.3%
LLINs	80	15.0%
Total	640	16.7%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
Total		

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO2-Malaria	2,337	1%
Total	2,337	1%

Ref Analysis

- B1 Due to the health sector strike that has persisted for the last six months or so, stock reporting rates have plummeted and the project has had to rely on the End Use Verification (EUV) survey results from September 2019 to report the stockout rate this quarter. The survey was conducted using a representative sample of facilities in all regions in the country, with a 90% confidence interval and 10% margin of error. The results show that stockout rates increased notably from last quarter, from 8% to 19%. Most pronounced was the increase in stockouts for AL 6X2, which went from 5% to 38% of SDPs stocked out. Stockouts of AL 6X3 also increased, from 10% to 25%. The rate for "inability to treat" was at 4% this quarter, up from 1% the previous quarter. Stockouts of SP increased from 5% to 11%, while stockouts of LLINs increased from 8% to 15%. Discussions between the health workers' union and the government are ongoing to try to resolve this longstanding crisis.
- B3 Only 1% of facilities submitted stock reports this reporting period due to the ongoing health sector strike. The trend of declining reporting rates since the second quarter is consistent with the length of the strike.

Warehouse stock status and product losses

Country

Burkina Faso

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	7		71%		29%
TO2-Malaria	7		71%		29%
Total	7		71%		29%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

B2 The stock situation at the central medical store (CAMEG) is showing mostly understocking (71%) and some overstocking (29%), with no products stocked out and none stocked according to plan. All AL formulations except for AL 6X3 were understocked, while AL 6X3 was overstocked. RDTs and LLINs were understocked, while SP was overstocked. The understocks of AL 6X1, 6X2 and 6X4 are due to delays in government orders, which continue to face delays and are not expected until December. AL 6X3 was overstocked due to low consumption. The country is working on a solution to transfer the overstock of SP to another country to avoid expiry. Similar measures will be taken to ensure that the AL 6X3 does not expire.

Supply plans, innovations, and strategic activities

Country

Burkina Faso

FY Quarter

2019-Q4

Total Innovations implemented this quarter **0**

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
There are no new innovations to report this quarter		

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
Malaria commodities	Yes

Analysis

The malaria commodity quarterly supply plan was conducted and shared with the GHSC-PSM forecasting and supply planning team.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
During this quarter, the project supported the development of a training guide and participants' guide for quantification.

Training for supply chain partners

Country

Burkina Faso

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	Total
Total	

C2. Number of people trained by supply chain level

Supply Chain Level	Total
Total	

C2. Number of people trained by funding source and type

Type	Total
Total	

C2. Number of people trained by technical area

Supply Chain Function	Total
Total	

Analysis



There were no trainings to report this quarter.

Average Rating of In-country Data Confidence

Task Order

All

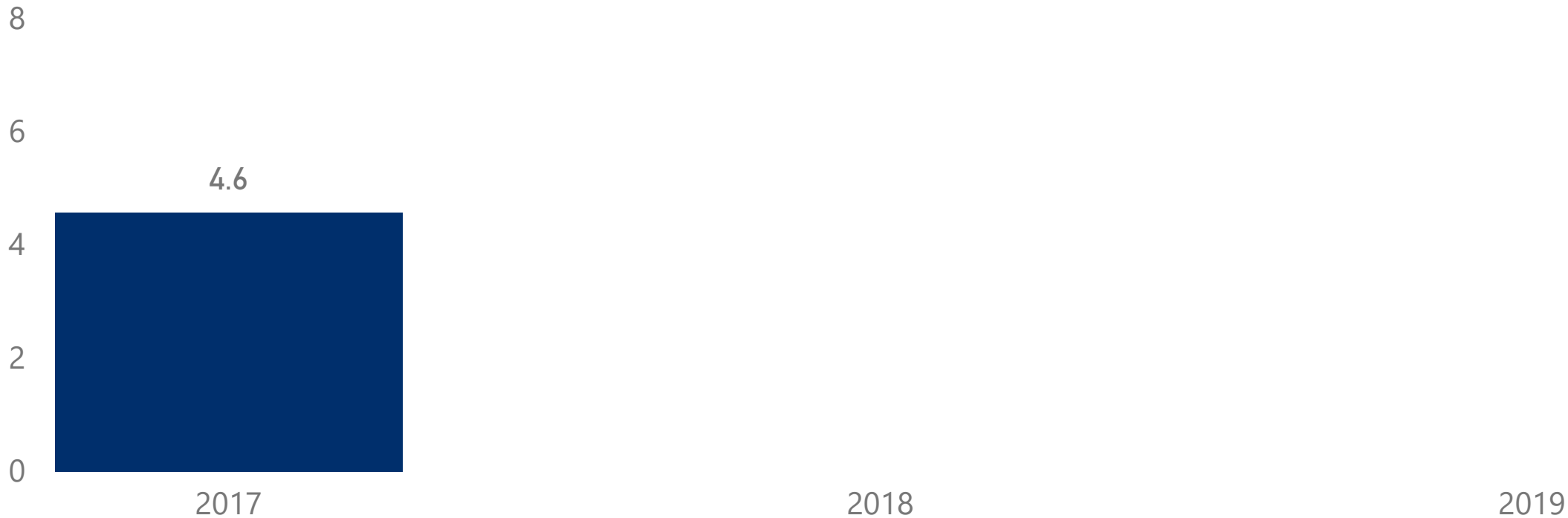
Supply Chain Level

All

Country

Burkina Faso

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY

- 2017
- 2018
- 2019

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

Data Confidence Rating Breakdown by Supply Chain Level

FY	Supply Chain Level	Overall data quality rating	Total # of sites rated
2019			

Analysis

No data quality assessment was conducted in FY2019 due to budget limitations. However, an assessment will be conducted in FY2020.

Annual Forecasts

FY

2019

Country

Burkina Faso

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL 6x1	23.5%	+
AL 6x2	31.6%	+
AL 6x3	73.1%	-
AL 6x4	48.4%	-
mRDT	9.1%	-
SP	35.9%	-
LLINs	23.5%	+

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

Ref Analysis

B5	The malaria commodity forecast was conducted and shared with the GHSC-PSM forecasting and supply planning team.
B12	The available forecast and consumption figures reported for this indicator are from FY2018 Q3 through FY2019 Q2. The forecast error ranged from 9% for RDTs to 73% for AL 6X3. In most cases the forecast bias variant was negative, meaning that there was an overforecast. Forecast error improved considerably from last year, where several products had error rates in the hundreds of percentage points, with the lowest error at 23%. AL 6X3 continues to be over-forecast, and as noted in Indicator B2, is less frequently consumed.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
Malaria commodities	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Burkina Faso

B10. Is there a functional logistics coordination mechanism in place?

TO2-Malaria Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO2-Malaria	9.0	9.2

Ref Analysis

B10 The logistics coordination mechanism remained functional. There is a decree that establishes the national commission for the coordination of the health supply chain, and within that the health program technical coordination committees. These individual technical committees meet quarterly.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	19%	16
Central	19%	16
Subnational level 1	11%	9
Health regional directory	11%	9
Subnational level 2	11%	290
Health District	11%	290
Total	11%	315

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	39%	18
TO2-Malaria	39%	18
Subnational level 1	38%	8
TO2-Malaria	38%	8
Subnational level 2	42%	101
TO2-Malaria	42%	101
Total	41%	127

Ref Analysis

B11 The percentage of supply chain leadership posts held by women is 41%, up from 36% last year.

B9 The supply chain technical staff turnover rate stood at 11% overall this year, including 19% at the central level, and 11% at both the regional and district levels. This is up from a rate of 3% last year. Note that the number of positions also increased at each of the levels, totaling 31 additional positions across levels.

Commodity Funding

FY

2019

Country

Burkina Faso

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
▲ Malaria	\$642,896	1%	\$47,226,990	77%	\$9,426,949	15%	\$4,065,593	7%	\$61,362,428

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

The majority of funding for malaria commodities came from the Global Fund (77%), while 15% came from the USG, 7% from the World Bank and Malaria Consortium ("other"), and 1% from the government of Burkina Faso. The government's share of spending has dropped significantly since 2018 when it stood at 18%. The USG's share of funding has dropped from 33% to 15%, although the dollar amount has decreased only slightly. This is due to greater contributions by the Global Fund, whose funding increased about three-fold. The Global Fund's share of funding, now 77%, was only 31% in 2018.

B8. Supply Chain Technical Independence

FY

2019

Country

Burkina Faso

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Burkina Faso

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

11

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

27%

Analysis

GHSC-PSM Burkina Faso and the USAID Mission have targeted 11 activities for technical independence, and to date three have already been achieved. These include monitoring inventory levels at the central medical store (CAMEG), where the project invested in cascade training and implementing a labeling system, as well as two M&E activities: conducting ongoing data quality assurance, and facilitating active use of data for supply chain management decision making. In the case of the two M&E activities, the government's Department of Sectoral Statistics (Direction des statistiques sectorielles, DSS) required moderate project support in the way of training on data extraction and analysis, development of procedures manuals, provision of modems and other resources, and accompaniment on data quality assessment visits. The project invested heavily in upgrading the country's LMIS and GESDIS and made significant strides. However, the system faces many constraints and as such, the country may be considering revisiting options for this system. While the project has made great strides in building capacity over the past three years, the current political turmoil is threatening to derail much of the progress. The ongoing health sector strike has affected all aspects of the project, particularly any access to supply chain data. The insecurity is leading to health worker shortages at the lower levels, as many areas are becoming unsafe for health workers. Financing shortages are threatening central level progress as well. Even though many of the capacity elements have been put in place with the help of the project, handing over leadership responsibilities will become more of a challenge as staff turnover worsens and financial shortages continue.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Monitor the commodities pipeline	Direction de la gestion de la Chaîne d'Approvisionnement des Produits de Santé (DCAPS)	Malaria	Yes; No contribution	Yes; Major contribution	Yes; Major contribution	No; Major contribution	Yes; Major contribution	Participant	No
	Develop/update supply plan	Direction de la gestion de la Chaîne d'Approvisionnement des Produits de Santé (DCAPS)	Malaria	Yes; Moderate contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
	Develop annual forecast	Direction de la gestion de la Chaîne d'Approvisionnement des Produits de Santé (DCAPS)	Malaria	Yes; Moderate contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
Human Resources Capacity Development	Plan and implement comprehensive supply chain human resources strategy	Direction Générale de l'Accès aux Produits de Santé (DGAP)	Malaria	Yes; No contribution	Yes; Moderate contribution	Yes; Moderate contribution	Yes; No contribution	Yes; No contribution	Participant	No
	Implement supply chain management pre-service curriculum	Ecole Nationale de Santé Publique (ENSP)	Malaria	Yes; No contribution	Yes; Moderate contribution	Yes; Major contribution	Yes; Moderate contribution	Yes; Limited contribution	Participant	No
MIS	System administration - logistics management information system	Direction de la gestion de la Chaîne d'Approvisionnement des Produits de Santé (DCAPS)	Malaria	Yes; No contribution	Yes; Major contribution	No; Major contribution	Yes; Moderate contribution	Yes; Major contribution	Participant	No

B8. Supply Chain Technical Independence

FY

2019

Country

Burkina Faso

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

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All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Monitoring and Evaluation	Conduct ongoing data quality assurance	Direction des statistiques sectorielles (DSS)	Malaria	Yes; No contribution	Yes; Moderate contribution	Yes; Major contribution	Yes; Moderate contribution	Yes; Major contribution	Primary technical implementer	Yes
	Facilitate active use of data for supply chain management decision making	Direction des statistiques sectorielles (DSS)	Malaria	Yes; No contribution	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Major contribution	Yes; Moderate contribution	Primary technical implementer	Yes
Warehousing and Inventory Management	Receive commodities	Centre d'achat des médicaments essentiels generiques et des consommables médicaux (CAMEG)	Malaria	Yes; No contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
	Put away commodities	Centre d'achat des médicaments essentiels generiques et des consommables médicaux (CAMEG)	Malaria	Yes; No contribution	Yes; Major contribution	No; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
	Monitor inventory levels	Centre d'achat des médicaments essentiels generiques et des consommables médicaux (CAMEG)	Malaria	Yes; No contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Primary technical implementer	Yes

Complete Results and Denominators

Country

FY Quarter

Burkina Faso

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO2-Malaria	18.8%	560
LLINs	15.0%	80
SP	11.3%	80
mRDT	6.3%	80
AL 6x4	15.0%	80
AL 6x3	25.0%	80
AL 6x2	37.5%	80
AL 6x1	21.3%	80
Total	18.8%	560

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	2.5%	80

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO2-Malaria	1%	2,337

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central		29%	71%		7
TO2-Malaria		29%	71%		7
Total		29%	71%		7

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Total
Total	

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
Malaria commodities	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Burma



Service Delivery Point Stockouts and Reporting Rates

For countries with data available from GHSC-PSM non-supported regions

Country

Burma

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - SDPs located in supported regions

GHSC-PSM Support	Stockout rate	# SDP stock observations
Total		

B1. Stockout rate at service delivery points - SDPs located in non-supported regions

GHSC-PSM Support	Stockout rate	# SDP stock observations
Not Supported	0.0%	20
TO1-HIV/AIDS	0.0%	20
1st line adult ARV	0.0%	3
2nd line adult ARV	0.0%	3
Pediatric ARV	0.0%	2
Viral load reagent	0.0%	4
Viral load consumable	0.0%	4
EID reagent	0.0%	2
EID consumable	0.0%	2
Total	0.0%	20

B3. LMIS reporting rate

GHSC-PSM Support	Total # of SDPs required to report	Reporting rate
Not Supported	8,386	96%
Total	8,386	96%

Ref Analysis

B1	In Burma, GHSC-PSM continued its technical support to three ART centers (Mingalardon Specialist Hospital and Waibargi Specialist Hospital in Yangon, and Naypyitaw Hospital) for quarterly ARV stock monitoring, and four viral load PCR sites (National Health Laboratory and Mingalardon Specialist Hospital in Yangon, Public Health Laboratory in Mandalay and Magway Hospital Lab) for quarterly stock monitoring of viral load commodities. In FY19 Q4, all three ART centers and three out of four Abbot viral load sites provide stock monitoring reports and two (total of two labs in country) have a functioning stock monitoring/EWS system. As result, no ART sites, viral load labs or EID labs have been stocked out of any HIV tracer commodities in FY19 Q4.
B3	GHSC-PSM continues its support to LMIS in three regions (Ayeyarwaddy, Bago and Magway) at the health facilities level below the township level. In FY19 Q4, out of 4,188 facilities requiring reporting, 4,055 facilities submitted LMIS reports within one week for a reporting rate of 96%.

Warehouse stock status and product losses

Country

Burma

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	6		33%	33%	33%
TO1-HIV/AIDS	3			33%	67%
TO2-Malaria	3		67%	33%	
Subnational level 1	115		17%	50%	33%
TO1-HIV/AIDS	76		12%	64%	24%
TO2-Malaria	39		28%	21%	51%
Total	121		18%	49%	33%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

C7	Burma does not report on this indicator.
B2	For TO1, HIV/AIDS: Burma is submitting data not only for government facilities but also NGO partners. For the government, we have central and regional warehouses (marked as sub-national 1). NGO warehouses are also included in the sub-national 1 level. Therefore central level is the National AIDS Program (NAP) warehouse, Subnational level 1 is the 21 government regional warehouses as well as NAP partners (UNION, Alliance, IOM, MSI, MDM, MSFCH, PSI). At the central level in NAP, the tracer first-line adult ARV drug is stocked according to plan. The tracer first-line pediatric ARV and second-line ARV are overstocked. These observations remain unchanged from last quarter. At the subnational level 1, stocked according to plan (SATP) rates overall have increased, from 59% last quarter to 64%. For TO 2, malaria, stock status are reporting National Malaria Control Program (NMCP) as central level, defeat malaria as subnational Level 1, and the 18 state and region warehouses as subnational level 1, also. At the central level in NMCP, malaria first-line ACT (AL 6x4) is understocked, rapid diagnostic tests for malaria are stocked according to plan and LLINs are understocked. Overall, central-level SATP rates have decreased by 33%. However, the denominator for this is quite low, so large swings are to be expected. At subnational level 1, overstock rates have increased from 13% to 51%, and understocked rates have increased from 8% to 28%.

Supply plans, innovations, and strategic activities

Country

Burma

FY Quarter

2019-Q4

Total Innovations implemented this quarter

New approaches
1

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
TO1-HIV/AIDS	New approaches	Business Intelligence Dashboard (mSupply) BACKGROUND mSupply system currently provides LMIS data/information from over 9,000 facilities from 212 townships in 10 states/regions. mSupply also provides LMIS data/information from 65 central and regional ATM warehouses. Though mSupply provides LMIS data/information as various standard reports (reporting frequency, stock status, consumption, item status), townships/regional users rarely using these data for their supply chain decisions. ACTIONS: The project innovated the idea to present the data on a business intelligence dashboard using Microsoft's Power BI platform. Microsoft Power BI is a business intelligence platform that provides nontechnical business users with tools for aggregating, analyzing, visualizing and sharing data. Power BI's user interface is intuitive for users familiar with Excel, and its deep integration with other Microsoft products makes it a versatile self-service tool that requires little upfront training. Power BI is the collective name for an assortment of cloud-based apps and services that help organizations collate, manage, and analyze data from a variety of sources through a user-friendly interface. Power BI pulls data together and processes them, turning them into intelligible insights, often using visually compelling and easy-to-process charts and graphs. This allows users to generate and share clear and useful snapshots of what is happening in their business. The users are regularly informed and updated with their KPIs such as stock status, expiry risk, percentage of on-time data entry, activeness of each warehouse, etc. for their supply chain decisions.

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
Malaria commodities	Yes

Analysis

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
<p>Myanmar National Policy on Tuberculosis Laboratory Harmonization and Standardization</p> <p>In 2018, the Myanmar National Tuberculosis Program (NTP) and Ministry of Health and Sports (MoHS) held a consultative workshop and developed a national policy on tuberculosis laboratory harmonization and standardization, with the support of GHSC-PSM and in collaboration with other implementing partners. This policy aims to give guidelines for all stakeholders who are working in the management of each level of the laboratory services in NTP, particularly for enhancing laboratory network for quality laboratory services and laboratory supply chain system.</p> <p>NTP has made significant efforts to standardize laboratory equipment platforms across the tiered laboratory structure. Following this policy document can benefit the program and the clinical performance of laboratory services, help supply chain management, simplify equipment maintenance strategies, and optimize the overall instrument procurement decision. It will provide potential savings by effectively using available budget and resources and will strengthen the capacity of NTP laboratory services and the national laboratory logistics system.</p> <p>The TB laboratory harmonization and standardization policy is a guiding document for all laboratories and stakeholders to adhere to when procuring new equipment or commodities at each level of the laboratory. In addition, the national TB laboratory product list of this policy document can be used in an LMIS. This policy will result in improvements in quantifying and supply planning for TB laboratory commodities.</p> <p>This national laboratory harmonization and standardization policy needs to be used throughout the country at all levels of laboratories within the public and private sectors.</p>

Training for supply chain partners

Country

Burma

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	Total
Female	73	10	83
Male	42	9	51
Total	115	19	134

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	Total
Subnational level 1	115	19	134
Total	115	19	134

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	Total
Cross-TO	76	19	95
TO-specific	39		39
Total	115	19	134

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	Total
Forecasting and Supply Planning	39		39
MIS	76	19	95
Total	115	19	134

Analysis



In FY19 Q4, two trainings for implementation of "Guidelines and Standard Operation Procedures on National TB Laboratory Logistics System," including job aids, training materials, assessment tools and supervision checklists, were jointly conducted with SM & EWS. One training, in Mandalay, had 13 women and two men while the other, in Yangon, had 19 women and five men. A total of 51 women and 44 men attended an mSupply Basic User Refresher training for NAP, NTP and NMCP. A total 162 people were trained in FY19.

Molecular Instruments and HIV Tracer Products

Country

Burma

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Efavirenz/Lamivudine/Tenofovir DF 600/300/300 mg
2nd line adult ARV	Lopinavir/Ritonavir 200/50 mg
Pediatric ARV	Abacavir/Lamivudine 60/30 mg
Viral load reagent	Abbott RealTime HIV-1 Amplification Reagent Kit – Quantitative
Viral load consumable	2.0 ml skirted base cryovials with knurls
EID reagent	Abbott RealTime HIV-1 Amplification Reagent Kit – Qualitative
EID consumable	Tube, screw cap, conical, 50ml set, box/500

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Workforce, Leadership, and Governance

FY
2019

Country
Burma

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS	No
TO2-Malaria	Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2019
TO1-HIV/AIDS	5.5
TO2-Malaria	8.3

Ref	Analysis
-----	----------

B10 GHSC-PSM in Burma interviewed members of two different logistics coordination mechanisms, one for HIV and one for malaria. For HIV, the score was 5.5 The major components missing were the lack of a legislative or ministerial decree establishing the mechanism and no evidence showing adherence to policies and procedures, implementing action plans, and following up on and addressing issues. For the malaria mechanism, the score was 8.25. This is high enough to be considered functional mechanism. Only one of the two coordination mechanisms were considered functional in this reporting year.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Total		

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Total		

Ref	Analysis
-----	----------

Annual Forecasts

FY

2019

Country

Burma

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

Ref Analysis

B5 GHSC-PSM contributed in the National Annual forecasting workshop for AIDS, TB and malaria programs in May 2019. In FY19, the project team contributed through its participation in pre-forecasting, forecasting and post-forecasting, meetings, workshops and sessions to help all three programs in finalization of annual forecast till the end of 2020.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
RTKs	Yes

B8. Supply Chain Technical Independence

FY

2019

Country

Burma

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Burma

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

15

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

In Burma, GHSC-PSM has selected 13 technical activities for technical independence. However, there are a total of 15 health area-technical activity combinations, as support is provided to multiple siloed national programs, specifically in the area of forecasting. For this reporting period, none of the 15 activities are considered technically independent by the government. The activities that are closest to technical independence are the MIS activities: system administration - logistics management information system; system administration - stock/inventory management; and system administration - warehouse management system. The only item missing for all three of these activities is a government-led training approach. The remaining activities across FASP, HRCD, Governance, and Strategy & Planning all had only two or fewer of the five needed capacity elements in place. GHSC-PSM will continue to work on advancing the technical independence of all targeted activities.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Monitor the commodities pipeline	National AIDS Program, MOHS	HIV/AIDS	Yes; No contribution	No; Moderate contribution	No; Moderate contribution	No; Moderate contribution	No; No contribution	Participant	No
		National Malaria Control Program	Malaria	No; No contribution	No; Limited contribution	No; No contribution	Yes; No contribution	No; No contribution	Participant	No
	Develop/update supply plan	National AIDS Program, MOHS	HIV/AIDS	Yes; No contribution	No; Moderate contribution	No; Moderate contribution	No; Moderate contribution	No; Moderate contribution	Participant	No
		National Malaria Control Program	Malaria	No; No contribution	No; Limited contribution	No; No contribution	Yes; No contribution	No; No contribution	Participant	No
	Develop annual forecast	National AIDS Program, MOHS	HIV/AIDS	Yes; No contribution	No; Moderate contribution	No; Moderate contribution	Yes; Moderate contribution	No; Moderate contribution	Participant	No
		National Malaria Control Program	Malaria	No; No contribution	No; Moderate contribution	No; No contribution	Yes; No contribution	No; No contribution	Participant	No
Human Resources Capacity Development	Implement supply chain management pre-service curriculum	MOHS	Integrated	Yes; Moderate contribution	No; Moderate contribution	No; Moderate contribution	No; Moderate contribution	No; Moderate contribution	Participant	No
Strategy and Planning	Manage implementation of a supply chain master plan	Ministry of Health and Sport (MoHS)	Integrated	Yes; Limited contribution	No; Limited contribution	No; Limited contribution	No; Limited contribution	No; No contribution	Observer	No

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FY

2019

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Governance and Financing	Cultivate leadership competencies	Procurement and Supply Division (PSD), MOHS	Integrated	Yes; Limited contribution	No; Limited contribution	No; Limited contribution	No; Limited contribution	No; Limited contribution	Participant	No
	Manage logistics management committee	Procurement and Supply Division (PSD), MOHS	Integrated	Yes; Limited contribution	No; Limited contribution	No; Limited contribution	No; Limited contribution	No; Limited contribution	Participant	No
MIS	System administration - logistics management information system	Procurement and Supply Division (PSD), MOHS	Integrated	Yes; Limited contribution	Yes; Limited contribution	No; Moderate contribution	Yes; Limited contribution	Yes; Moderate contribution	Participant	No
	System administration - warehouse management system	Procurement and Supply Division (PSD), MOHS	Integrated	Yes; Limited contribution	Yes; Limited contribution	No; Moderate contribution	Yes; Limited contribution	Yes; Moderate contribution	Participant	No
	Manage user helpdesk and provide system training	Procurement and Supply Division (PSD), MOHS	Integrated	No; Limited contribution	No; Moderate contribution	No; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	Observer	No
	IT project management	Procurement and Supply Division (PSD), MOHS	Integrated	Yes; No contribution	No; No contribution	No; No contribution	No; Limited contribution	No; Limited contribution	Observer	No
	IT governance	Procurement and Supply Division (PSD), MOHS	Integrated	Yes; No contribution	No; No contribution	No; No contribution	Yes; Limited contribution	No; Limited contribution	No involvement	No

Complete Results and Denominators

Country

FY Quarter

Burma

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM non-supported regi...

Task Order	Stockout rate	# SDP stock observations
TO1-HIV/AIDS	0.0%	20
EID consumable	0.0%	2
EID reagent	0.0%	2
Viral load consumable	0.0%	4
Viral load reagent	0.0%	4
Pediatric ARV	0.0%	2
2nd line adult ARV	0.0%	3
1st line adult ARV	0.0%	3
Total	0.0%	20

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
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See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
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B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	33%	33%	33%		6
TO1-HIV/AIDS	33%	67%			3
TO2-Malaria	33%		67%		3
Subnational level 1	50%	33%	17%		115
TO1-HIV/AIDS	64%	24%	12%		76
TO2-Malaria	21%	51%	28%		39
Total	49%	33%	18%		121

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	73	42	115
TO2-Malaria	10	9	19
Total	83	51	134

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
Malaria commodities	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
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For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Burundi



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Burundi

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	2,612	0.8%
1st line adult ARV	654	1.4%
2nd line adult ARV	85	0.0%
Pediatric ARV	208	0.5%
First RTK	677	1.0%
Second RTK	315	0.3%
Male condoms (HIV)	590	0.3%
Female condoms (HIV)	83	0.0%
Total	2,612	0.8%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	5,407	0.7%
AS/AQ 100/270mgx3	799	1.3%
AS/AQ 100/270mgx6	821	0.7%
AS/AQ 25/67.5mg	737	0.4%
AS/AQ 50/135mg	782	0.5%
mRDT	815	0.6%
SP	698	0.4%
LLINs	755	1.1%
Total	5,407	0.7%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	3,788	0.4%
Combined oral contraceptive with iron	682	0.4%
DMPA-Intramuscular injectable	687	0.0%
2-rod implant	626	0.6%
Emergency contraceptive, 1 tablet	380	0.5%
Progestin only pills	468	0.6%
Copper-bearing IUD	272	0.7%
Male condoms (FP)	590	0.3%
Female condoms (FP)	83	0.0%
Total	3,788	0.4%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	934	87%
TO2-Malaria	934	78%
TO3-PRH	926	73%
Total	2,794	79%

Ref Analysis

B1	Stockout rates in Burundi continue to be low, at less than one percent of sites stocked out across all three health areas. Supportive supervision has focused on improving outcomes in this area. GHSC-PSM will continue to communicate with district pharmacy managers to ensure adherence to the requisition schedule, and to meet with internal and counterpart staff to monitor stockout data.
B3	Reporting rates to DHIS2 rose for HIV/AIDS products, from 79 to 87 percent. Rates fell for malaria and family planning products, to 78 and 73 percent, respectively. In all three health areas, the number of sites expected to report rose, now exceeding 900 sites for each. To improve the reporting rate, GHSC-PSM's LMIS team works closely with the District Chief Medical Officers and the Directorate of Health Information Systems, to raise awareness around logistics information management.

Warehouse stock status and product losses

Country

Burundi

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	47	0%	47%	24%	29%
TO1-HIV/AIDS	17	0%	71%	18%	12%
TO2-Malaria	21	0%	33%	29%	38%
TO3-PRH	9		22%	22%	56%
Subnational level 1	837	10%	40%	36%	14%
TO1-HIV/AIDS	270	19%	23%	37%	21%
TO2-Malaria	567	5%	48%	36%	11%
Total	884	9%	40%	35%	15%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

B2 The stocked according to plan rate for Task Order 1 narrowed from the previous quarter, from 45 to 36 percent, while understocking and overstocking both increased. The central level was especially understocked. Contributing factors include the transition from TLE to TLD, which has caused TLE stock levels to draw down; late delivery of TLE and second line adult ARVs; and budget shortfalls impacting stock levels for first RTKs.

Malaria products followed a similar trend, with the stocked according to plan rate falling from 43 to 36 percent and with increased understocking. A key factor for understocks at the central level is draw downs of ASAQ products, which will be replaced by AL. These results are expected in the context of the transition in treatment regimens.

Family planning products improved on this indicator this quarter, rise from no observations stocked according to plan to 22 percent this quarter. Most observations, however, continue to be overstocked.

To drive improvements in this area, GHSC-PSM will continue its efforts to strengthen reporting and data quality at the district level, as well as supply plan reviews for all three program areas. GHSC-PSM will also continue to collaborate with the national AIDS and malaria control programs to manage the TLD and AL product transitions.

C7 There are no product losses to report this quarter.

Supply plans, innovations, and strategic activities

Country

Burundi

FY Quarter

2019-Q4

Total Innovations implemented this quarter **0**

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
There are no new innovations to report this quarter		

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
RTKs	Yes

Analysis

Six quarterly supply plans were submitted to GHSC-PSM headquarters as required.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
GHSC-PSM supported the validation and dissemination of the Operational Plan Guide for the transportation of samples for viral load, EID, and tuberculosis testing.

Training for supply chain partners

Country

Burundi

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	Total
Female	28	33	19	80
Male	15	18	9	42
Total	43	51	28	122

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	Total
Subnational level 1	43	51	28	122
Total	43	51	28	122

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	Total
Cross-TO	43	51	28	122
Total	43	51	28	122

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	Total
MIS	43	51	28	122
Total	43	51	28	122

Analysis



The project conducted training and supportive supervision for 122 staff at the district level this quarter, focused on best practices for logistics management. During the supervision, staff observed that storage conditions are generally satisfactory, and product availability is high, ranging from 95 to 100 percent. However, there are still challenges around the use of standard management tools and timely submission of logistics reports.

Molecular Instruments and HIV Tracer Products

Country

Burundi

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

GHSC-PSM does not manage or support maintenance for any molecular instruments in Burundi.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Dolutegravir 300/300/50mg
2nd line adult ARV	Abacavir/Lamivudine 600/300 mg
Pediatric ARV	Abacavir/Lamivudine 60/30 mg
First RTK	Determine
Second RTK	STAT-PAK Dipstick
Tie-breaker RTK	Not reported
Viral load reagent	
Viral load consumable	Not reported
EID reagent	
EID consumable	

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

Supply Chain Level

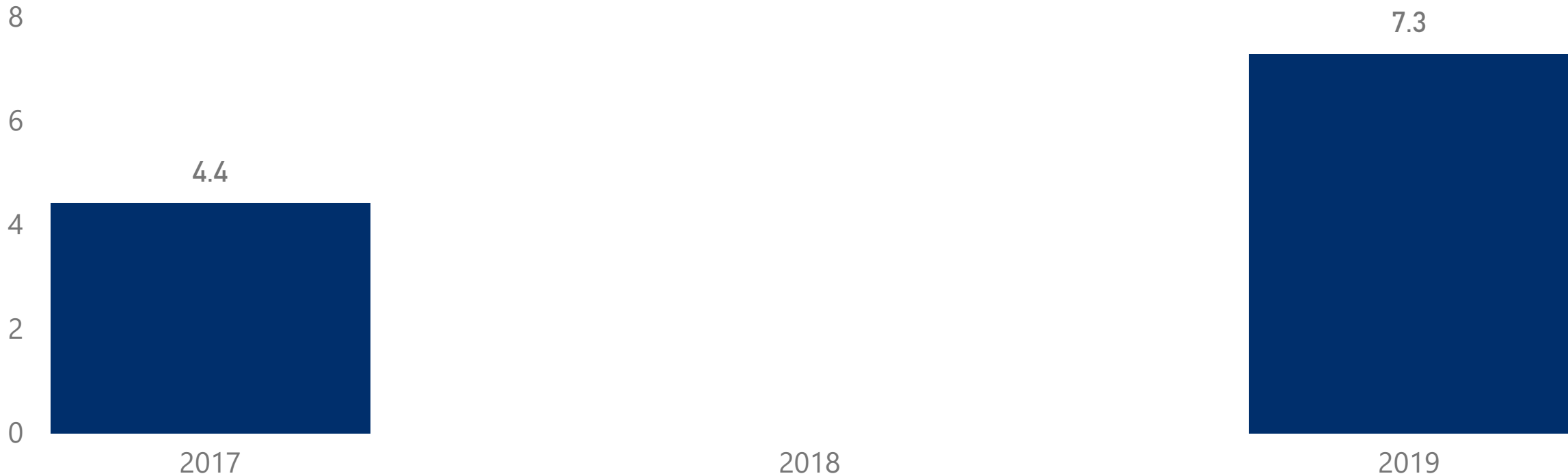
Country

All

All

Burundi

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018			
2019	2.6	2.8	1.9

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Central		
TO1-HIV/AIDS	9.0	1
TO2-Malaria	9.0	1
TO3-PRH	9.0	1
Subnational level 1		
TO1-HIV/AIDS	5.7	16
TO2-Malaria	5.9	16
TO3-PRH	5.7	16
SDP		
TO1-HIV/AIDS	7.6	38
TO2-Malaria	8.2	38
TO3-PRH	7.9	38

Analysis

In partnership with the National Malaria Control Program (PNILP), National AIDS Control Program (PNLS), National Reproductive Health Program (PNSR), Directorate for Health Information Services, and the Directorate of Pharmacies, Medicines, and Laboratories, the project carried out data quality assessment in June of this year. The DQA covered all three levels of the supply system (central, district, and health facility), and was accompanied by supportive supervision aimed at implementing good pharmaceutical management practices, effective use of LMIS tools, and monthly reporting of logistics data into DHIS2. In addition to CAMEBU, the DQA included 57 health facilities and district pharmacies from 16 health districts, three of which were ultimately excluded due to missing data.

CAMEBU performed the strongest, with a rating of 9 out of 9 for all three health areas, indicating very good data quality. At the lower levels, health facility data was rated well, between 7.6 and 8.2 across program areas, while the district level was comparatively lower, with ratings of 5.7 and 5.9. At both levels, malaria data quality was rated slightly higher than the other two programs. At the district level where data confidence was weakest, data timeliness scored the lowest of the three data quality elements. The results of the DQA will be used to guide supportive supervision going forward.

Annual Forecasts

FY

2019

Country

Burundi

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	14.0%	+
2nd line adult ARV	8.3%	-
Pediatric ARV	25.8%	-
First RTK	40.0%	+
Second RTK	68.0%	+
Male condoms (HIV)	28.3%	-
Female condoms (HIV)	30.0%	+

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AS/AQ 100/270mgx3	16.7%	-
AS/AQ 100/270mgx6	111.9%	-
AS/AQ 25/67.5mg	58.0%	-
AS/AQ 50/135mg	35.3%	-
mRDT	28.0%	-
SP	7.7%	+
LLINs	2.7%	-

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral contraceptive with iron	2.9%	-
DMPA-Intramuscular injectable	3.6%	-
2-rod implant	4.1%	-
Emergency contraceptive, 1 tablet	1.7%	+
Progestin only pills	4.3%	-
Copper-bearing IUD	3.2%	-
Male condoms (FP)	28.3%	-
Female condoms (FP)	30.0%	+

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

Ref Analysis

B5 Annual forecasts were conducted as expected for six health product groups. The forecasts are conducted by the quantification committees for each program area, with technical and financial support from GHSC-PSM.

B12 Data shown above is for calendar year 2018. This is the most recent complete annual period for which both forecast and consumption/distribution data are available. "Actuals" data for HIV commodities, condoms, and LLINs refers to total quantities issued from distribution centers. All other actuals refer to consumption at service delivery points. Among HIV/AIDS products, first and second line adult ARVs performed the best against their forecasts, with error rates of less than 15%. Rates for pediatric ARVs, RTKs, and condoms were more elevated. For malaria products, variance from forecasted totals ranged from 17% error to over 100%. All showed a negative forecast bias, indicating that actual consumption was less than the forecast. Performance for SP and LLINs was stronger, with error rates of less than 10% for both. As a group, contraceptives had the most accurate forecasts, with all items (except condoms) showing error rates of less than 5%.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
RTKs	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Burundi

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS	Yes
TO2-Malaria	Yes
TO3-PRH	Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	10.0	11.0
TO2-Malaria	10.0	11.0
TO3-PRH	10.0	11.0

Ref Analysis

B10 Burundi has a functional logistics coordination mechanism, scoring 11 out of 11 on the rating criteria. The mechanism has thematic groups for drugs and for laboratory systems, all of which are appointed by the MSPLS. The groups meet regularly to make decisions regarding the improvement of supply chain systems.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	7%	56
CAMEBU et DPML	7%	56
Subnational level 1	10%	49
Pharmacies de district	10%	49
Total	9%	105

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	0%	5
Crosscutting	0%	5
Total	0%	5

Ref Analysis

B9 The supply chain staff turnover rate at CAMEBU and the Directorate of Pharmacies, Medicines, and Laboratories was 7.1 percent this fiscal year, slightly down from 8 percent last year. At the district pharmacy level, the turnover rate was 10.2 percent, up from 4 percent last year, due to changed and replacements within the district management teams. The overall supply chain workforce in these structures was also reduced, from 112 positions last year to 105 this year. The project will continue to advocate with various institutional structures within the MSPLS to stabilize trained technical staff to continue to evolve toward technical independence in supply chain management.

B11 Women are not well-represented in supply chain leadership. Looking at the five director-level positions at CAMEBU and DPML, all of them are held by men.

Commodity Funding

FY
2019

Country
Burundi

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
Family Planning and Reproductive Health	Not Available		Not Available		\$129,600		Not Available		Not Available
HIV/AIDS	Not Available		Not Available		\$1,630,465		Not Available		Not Available
Malaria	Not Available		Not Available		\$549,600		Not Available		Not Available

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

GHSC-PSM has limited access to commodity spending data for funding sources other than the U.S. government. Global Fund is a key donor for both HIV/AIDS and malaria commodities, and UNFPA is contributor for family planning and reproductive health.

B8. Supply Chain Technical Independence

FY

2019

Country

Burundi

Definitions and interpretation guidance

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Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Burundi

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

13

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

In Burundi, GHSC-PSM and the USAID mission have agreed to target 13 supply chain activities to achieve technical independence by the end of the project. This represents seven distinct supply chain functions across forecasting and supply planning, management information systems (MIS), and warehousing and inventory management. Within the FASP technical area, the project aims to support technical independence in three activities for all three of the national health area programs with which we are working. Capacity elements in these areas are already widely in place, especially for annual forecasting and routine commodity monitoring. For supply planning, staff at the three national programs have been training and are capable of completing the activity, but the programs have not yet institutionalized their own approach to ongoing training for new personnel. This is also the case for warehousing activities and LMIS system management. In all cases, the relevant counterpart entities are active participants in carrying out the activities, but the project still maintains a necessary technical role in implementation.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	Programme National de Lutte contre le Sida (PNLS)	HIV/AIDS	Yes; No contribution	Yes; Limited contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
		Programme National de Sante de la Reproduction (PNSR)	FP/RH	Yes; No contribution	Yes; Limited contribution	Yes; Major contribution	Yes; Moderate contribution	Yes; Major contribution	Participant	No
		Programme National Intégré de Lutte contre le Paludisme (PNILP)	Malaria	Yes; No contribution	Yes; Limited contribution	Yes; Major contribution	Yes; Moderate contribution	Yes; Major contribution	Participant	No
Develop/update supply plan	Develop/update supply plan	Programme National de Lutte contre le Sida (PNLS)	HIV/AIDS	Yes; No contribution	Yes; Major contribution	No; Moderate contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
		Programme National de Sante de la Reproduction (PNSR)	FP/RH	Yes; No contribution	Yes; Major contribution	No; Moderate contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
		Programme National Intégré de Lutte contre le Paludisme (PNILP)	Malaria	Yes; No contribution	Yes; Major contribution	No; Moderate contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
Monitor the commodities pipeline	Monitor the commodities pipeline	Programme National de Lutte contre le Sida (PNLS)	HIV/AIDS	Yes; No contribution	Yes; Major contribution	Yes; Moderate contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
		Programme National de Sante de la Reproduction (PNSR)	FP/RH	Yes; No contribution	Yes; Major contribution	Yes; Moderate contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
		Programme National Intégré de Lutte contre le Paludisme (PNILP)	Malaria	Yes; No contribution	Yes; Major contribution	Yes; Moderate contribution	Yes; Major contribution	Yes; Major contribution	Participant	No

B8. Supply Chain Technical Independence

FY

2019

Country

Burundi

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

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Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

In Burundi, GHSC-PSM and the USAID mission have agreed to target 13 supply chain activities to achieve technical independence by the end of the project. This represents seven distinct supply chain functions across forecasting and supply planning, management information systems (MIS), and warehousing and inventory management. Within the FASP technical area, the project aims to support technical independence in three activities for all three of the national health area programs with which we are working. Capacity elements in these areas are already widely in place, especially for annual forecasting and routine commodity monitoring. For supply planning, staff at the three national programs have been training and are capable of completing the activity, but the programs have not yet institutionalized their own approach to ongoing training for new personnel. This is also the case for warehousing activities and LMIS system management. In all cases, the relevant counterpart entities are active participants in carrying out the activities, but the project still maintains a necessary technical role in implementation.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
MIS	System administration - logistics management information system	DPML-DSNIS	Integrated	Yes; Moderate contribution	Yes; Major contribution	No; Moderate contribution	Yes; Moderate contribution	Yes; Major contribution	Participant	No
Warehousing and Inventory Management	Monitor inventory levels	CAMEBU, PNLIS, PNSR, PNILP	Integrated	Yes; Limited contribution	Yes; Major contribution	No; Major contribution	Yes; Moderate contribution	Yes; Major contribution	Participant	No
	Put away commodities	CAMEBU	Integrated	Yes; Limited contribution	Yes; Major contribution	No; Major contribution	No; Moderate contribution	Yes; Major contribution	Participant	No
	Receive commodities	CAMEBU	Integrated	Yes; Limited contribution	Yes; Major contribution	No; Major contribution	No; Limited contribution	Yes; Major contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Burundi

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO3-PRH	0.4%	3,788
Female condoms (FP)	0.0%	83
Male condoms (FP)	0.3%	590
Copper-bearing IUD	0.7%	272
Progestin only pills	0.6%	468
Emergency contraceptive, 1 tablet	0.5%	380
2-rod implant	0.6%	626
DMPA-Intramuscular injectable	0.0%	687
Combined oral contraceptive with iron	0.4%	682
TO2-Malaria	0.7%	5,407
LLINs	1.1%	755
SP	0.4%	698
mRDT	0.6%	815
AS/AQ 50/135mg	0.5%	782
AS/AQ 25/67.5mg	0.4%	737
AS/AQ 100/270mgx6	0.7%	821
AS/AQ 100/270mgx3	1.3%	799
TO1-HIV/AIDS	0.8%	2,612
Female condoms (HIV)	0.0%	83
Male condoms (HIV)	0.3%	590
Second RTK	0.3%	315
First RTK	1.0%	677
Pediatric ARV	0.5%	208
2nd line adult ARV	0.0%	85
1st line adult ARV	1.4%	654
Total	0.7%	11,134

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO3-PRH		
Combined oral methods	0.4%	682
Injectable contraceptives	0.0%	687
Implantable contraceptives	0.6%	626
Emergency oral contraceptives	0.5%	380
Progestin-only methods	0.6%	468

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	87%	934
TO2-Malaria	78%	934
TO3-PRH	73%	926

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	24%	29%	47%	0%	45
TO1-HIV/AIDS	18%	12%	71%	0%	17
TO2-Malaria	29%	38%	33%	0%	21
TO3-PRH	22%	56%	22%		9
Subnational level 1	36%	14%	40%	10%	837
TO1-HIV/AIDS	37%	21%	23%	19%	270
TO2-Malaria	36%	11%	48%	5%	567
Total	35%	15%	40%	9%	882

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	28	15	43
TO2-Malaria	33	18	51
TO3-PRH	19	9	28
Total	80	42	122

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	1
Condoms	1	1
FP commodities	1	1
Lab (HIV diagnostics)	1	1
Malaria commodities	1	1
RTKs	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Cambodia



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Cambodia

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
Total		

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
Total		

Ref Analysis

B1	Cambodia has not yet reported on the B1, B2, B3 indicators due to lack of resources at the field office, but it will report on these three indicators as of Q1 2020.
B3	Cambodia has not yet reported on the B1, B2, B3 indicators due to lack of resources at the field office, but it will report on these three indicators as of Q1 2020.

Warehouse stock status and product losses

Country

Cambodia

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Total					

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

B2 Cambodia has not yet reported on the B1, B2, B3 indicators due to lack of resources at the field office, but it will report on these three indicators as of Q1 2020.

Supply plans, innovations, and strategic activities

Country

Cambodia

FY Quarter

2019-Q4

Total Innovations implemented this quarter
0

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
There are no new innovations to report this quarter		

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
Malaria commodities	No

Analysis

Cambodia did not update or submit a supply plan to GHSC-PSM HQ this quarter.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for FY2019 Q4

Training for supply chain partners

Country

Cambodia

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	Total
Female	4	42	46
Male	10	81	91
Total	14	123	137

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	Total
Central	6	44	50
Subnational level 1	8	79	87
Total	14	123	137

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	Total
Cross-TO	2	12	14
TO-specific	12	111	123
Total	14	123	137

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	Total
Forecasting and Supply Planning	2	27	29
MIS	12		12
Strategy and Planning		96	96
Total	14	123	137

Analysis

▲ In Q4 FY19, GHSC-PSM Cambodia conducted six trainings for a total of 137 participants (90 men, 46 women). The trainings focused on strategy and planning, MIS, and forecasting and supply planning. Those six trainings were: Monitoring mSupply Implementation; Principle of Quantification; Annual Malaria Quantification; mSupply User Training; Training on Increasing Data Reporting; and Training on Increasing Data Reporting. While trainings took place at both the central and subnational level, there were more participants that attended trainings at the subnational level. There were also many more participants that attended TO2 funded trainings (N=111) compared to participants that attended TO1 trainings (N=12). Additionally, many more participants attended the strategy and planning training (N=96) compared to MIS trainings (N=12). The number of trainings that took place this quarter are less than half the number of trainings that occurred in FY19 Q3, where up to 396 people were trained (219 men and 177 women). These trainings in Q3 focused on FASP, HRCD, transportation and distribution, and MIS.

Complete Results and Denominators

Country

FY Quarter

Cambodia

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
Total		

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
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See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
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B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Total					

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	4	10	14
TO2-Malaria	42	81	123
Total	46	91	137

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
Malaria commodities	1	0

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
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For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Cameroon



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Cameroon

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	1,391	14.7%
1st line adult ARV	504	10.3%
2nd line adult ARV	22	54.5%
Pediatric ARV	29	10.3%
First RTK	503	18.7%
Second RTK	333	13.2%
Total	1,391	14.7%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	546	47.4%
AL 6x1	11	27.3%
AL 6x2	11	36.4%
AL 6x3	11	63.6%
AL 6x4	11	18.2%
AS/AQ 100/270mgx3	80	81.3%
AS/AQ 100/270mgx6	80	77.5%
AS/AQ 25/67.5mg	80	67.5%
AS/AQ 50/135mg	80	71.3%
mRDT	91	4.4%
SP	91	1.1%
Total	546	47.4%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
Total		

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	872	100%
TO2-Malaria	3,734	57%
Total	4,606	65%

Ref Analysis

B1	The overall stockout rate for HIV/AIDS products increased slightly from last quarter. This is primarily driven by the increase in the stockout rate for most used first-line ARVs. The increased stockout rate is due to delayed distribution. For malaria, the EUV is the data source. The stockout rates for ALu products are only for PMI-supported regions (North and Far North), of which 11 facilities were visited. The stock out rates for ASAQ products are for non-PMI supported regions, of which 80 facilities were visited.
B3	The reporting rate for HIV/AIDS increased to 100% this quarter as a result of continuous supervisory support and training. OSPSIDA continues to be the system reported for HIV/AIDSs. For Malaria, GHSC-PSM Cameroon provided training to the Centre and Littoral districts and regional team on entering data into DHIS2. Additionally, the regional Delegation of Public Health monitored reporting into the system and provided feedback to districts for improvement. These actions helped increase the reporting rate for the malaria program area.

Warehouse stock status and product losses

Country

Cameroon

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	15	13%	87%	0%	0%
TO1-HIV/AIDS	15	13%	87%	0%	0%
Subnational level 1	141	15%	47%	19%	19%
TO1-HIV/AIDS	60	25%	48%	23%	3%
TO2-Malaria	81	7%	46%	16%	31%
Total	156	15%	51%	17%	17%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
----	-------	--------------	--------------	--------------	------------	------------------	--------

Ref Analysis

- B2 The overall stocked according to plan rate for HIV/AIDS and malaria products increased slightly from the previous quarter. For HIV/AIDS, while the central level continued to be understocked or stocked out, the regional level saw a slight increase in their stocked according to plan rate. The stocked according to plan rate is only at the regional level for malaria products.
- C7 There was no product loss to report this quarter.

Supply plans, innovations, and strategic activities

Country

Cameroon

FY Quarter

2019-Q4

Total Innovations implemented this quarter **0**

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
------------	--------------------	-------------

There are no new innovations to report this quarter

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	No
Lab (HIV diagnostics)	No
Malaria commodities	No
RTKs	Yes

Analysis

GHSC-PSM in Cameroon only submitted an updated supply plan for RTKs this quarter. The other supply plans have not been updated yet but are expected to be done by mid-November 2019.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
 GHSC-PSM supported CENAME in revising several SOPs using process improvement techniques. Some of the new standardized procedures include stock transfers between agencies/annexes and procedures for stock management when quality assurance release is still pending. SOPs on stock management were also finalized and submitted. A job aid to facilitate stock management at the operational level was also finalized and printed. Dissemination is ongoing.

Training for supply chain partners

Country

Cameroon

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	Total
Female	36	15	51
Male	50	22	72
Total	86	37	123

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	Total
Subnational level 2	86	37	123
Total	86	37	123

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	Total
Cross-TO	86	37	123
Total	86	37	123

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	Total
MIS	73	31	104
Warehousing and Inventory Management	13	6	19
Total	86	37	123

Analysis



GHSC-PSM in Cameroon trained 104 district supply chain focal point on data entry into DHIS2, which has been implemented in Cameroon since January 2019. Additionally, 19 storekeepers at the regional funds for health promotion in Littoral region were trained on inventory management.

Molecular Instruments and HIV Tracer Products

Country

Cameroon

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

GHSC-PSM does not manage or support maintenance for any molecular instruments in Cameroon.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Efavirenz 300/300/600 mg
2nd line adult ARV	Abacavir/Lamivudine 600/300 mg
Pediatric ARV	Zidovudine/Lamivudine/Nevirapine 60/30/50 mg
First RTK	Determine
Second RTK	OraQuick, Shanghi
Tie-breaker RTK	Not reported
Viral load reagent	Not reported
Viral load consumable	Not reported
EID reagent	Not reported
EID consumable	Not reported

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

Supply Chain Level

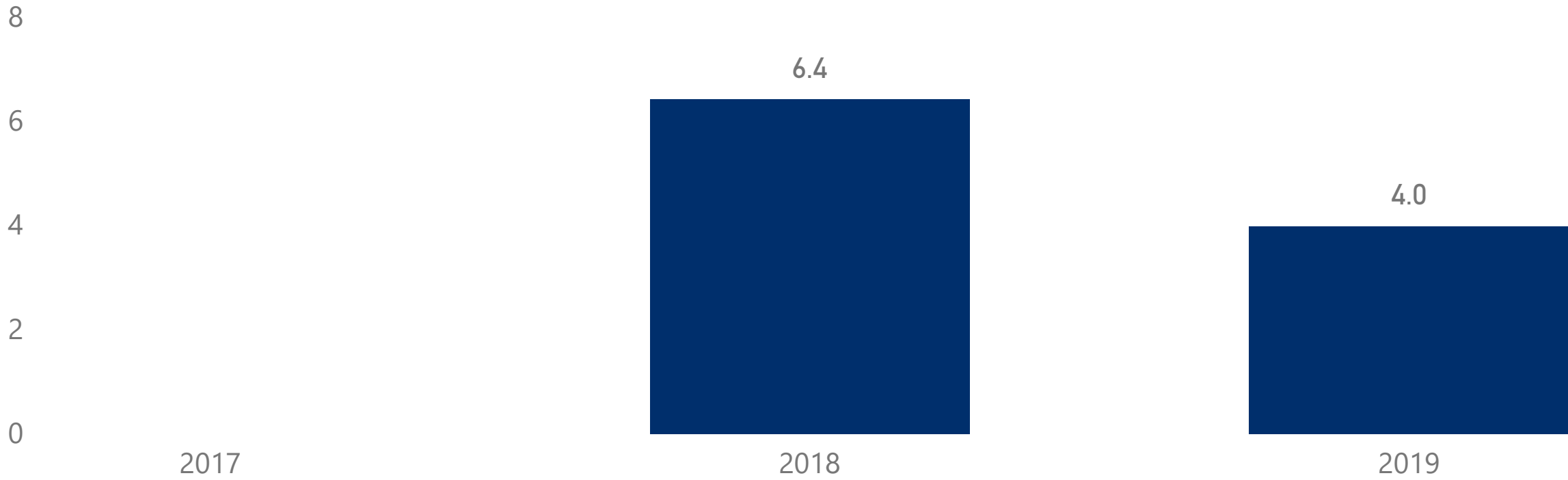
Country

All

All

Cameroon

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	1.4	2.2	2.8
2019	1.6		2.4

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Central		
TO1-HIV/AIDS	6.0	1
TO2-Malaria	6.0	1
Subnational level 1		
TO1-HIV/AIDS	3.5	1
TO2-Malaria	3.0	3
SDP		
TO1-HIV/AIDS	3.9	31
TO2-Malaria	4.1	49

Analysis

At the central level, the CENAME received a full score of 3 in accuracy and timeliness for TO1 and TO2. At the regional level, TO1 data received a better overall rating than TO2, with scores of 3.5 and 3.0 respectively. At the SDP level, TO2 received a slightly better overall rating than TO1 with scores of 3.9 and 4.1 respectively. An availability score was not reported for this FY due to a data collection issue.

Annual Forecasts

FY

2019

Country

Cameroon

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

Ref Analysis

B5	GHSC-PSM in Cameroon conducted an annual forecast for the four required product groups.
B12	GHSC-PSM in Cameroon will not be reporting the annual forecast indicator in FY19. The country has only started receiving actual consumption data countrywide since January 2019 when DHIS2 was implemented, so one year of data is not available yet. This indicator will be reported starting in FY20.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
RTKs	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Cameroon

B10. Is there a functional logistics coordination mechanism in place?

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	10.0	0.0
TO2-Malaria	8.0	0.0

Ref Analysis

B10 While Cameroon has regional logistics committees in the Littoral, Centre, South West and North West regions that are operational with GHSC-PSM's support, the country does not have a functional logistics committee at the national level. (Scores for FY2018 are given for the regional level. Regional-level assessments are not standard for this indicator and were not conducted in FY2019).

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	11%	47
CENAME	9%	23
DPML(Direction de la Pharmacie, du Medicament et des Laboratoires)	13%	8
NACC(Comite National de Lutte contre le SIDA)	22%	9
NMCP(Programme National de Lutte contre le Paludisme)	0%	7
Subnational level 1	21%	39
RFHP and GAS Unit at the Regional Delegation of Public Health(Centre& Littoral only)	21%	39
Subnational level 2	0%	133
GAS unit at District level(Centre & Littoral only)	0%	133
Total	6%	219

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	44%	18
Crosscutting	44%	18
Subnational level 1	42%	19
Crosscutting	42%	19
Subnational level 2	53%	107
Crosscutting	53%	107
Total	51%	144

Ref Analysis

B9 In Cameroon, the project measured supply chain staff turnover at several levels. Central-level supply chain entities include CENAME (the central medical store), Direction de la Pharmacie, du Medicament et des Laboratoires (DPML), National AIDS Control Committee (NACC) and the National Malaria Control Program (NMCP). Among these groups, turnover of supply chain technical staff ranged from 0% at NMCP to 22% at NACC. In Centre and Littoral regions, the Regional Funds for Health Promotion (RFHP) and the Gestion Approvisionnement des Stocks (GAS) Units at the Regional Delegations of Public Health saw a turnover rate of 21%. Finally, at the district level GAS Units in Centre and Littoral, there was no turnover during the year.

B11 About 50% of the supply chain leadership positions are held by women.

Commodity Funding

FY
2019

Country
Cameroon

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
HIV/AIDS	\$8,807,532	26%	\$22,147,872	65%	\$2,624,275	8%	\$660,300	2%	\$34,239,978
Malaria	\$12,524,691	50%	\$7,153,342	29%	\$5,240,318	21%	\$0	0%	\$24,918,351

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

This year, GHSC-PSM in Cameroon was able to obtain funding information for the four funding sources for January - December 2019, whereas last year only U.S. government funding was available.

Complete Results and Denominators

Country

FY Quarter

Cameroon

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO2-Malaria	47.4%	546
SP	1.1%	91
mRDT	4.4%	91
AS/AQ 50/135mg	71.3%	80
AS/AQ 25/67.5mg	67.5%	80
AS/AQ 100/270mgx6	77.5%	80
AS/AQ 100/270mgx3	81.3%	80
AL 6x4	18.2%	11
AL 6x3	63.6%	11
AL 6x2	36.4%	11
AL 6x1	27.3%	11
TO1-HIV/AIDS	14.7%	1,391
Second RTK	13.2%	333
First RTK	18.7%	503
Pediatric ARV	10.3%	29
2nd line adult ARV	54.5%	22
1st line adult ARV	10.3%	504
Total	24.0%	1,937

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
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See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	100%	872
TO2-Malaria	57%	3,734

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	0%	0%	87%	13%	15
TO1-HIV/AIDS	0%	0%	87%	13%	15
Subnational level 1	19%	19%	47%	15%	141
TO1-HIV/AIDS	23%	3%	48%	25%	60
TO2-Malaria	16%	31%	46%	7%	81
Total	17%	17%	51%	15%	156

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	36	50	86
TO2-Malaria	15	22	37
Total	51	72	123

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	0
Lab (HIV diagnostics)	1	0
Malaria commodities	1	0
RTKs	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
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For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

eSwatini



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

eSwatini

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	252	4.8%
1st line adult ARV	35	0.0%
2nd line adult ARV	34	0.0%
Pediatric ARV	35	0.0%
First RTK	34	11.8%
Second RTK	31	12.9%
Viral load reagent	1	0.0%
Viral load consumable	1	0.0%
Male condoms (HIV)	81	4.9%
Total	252	4.8%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
Total		

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	45	78%
Total	45	78%

Ref Analysis

B1	The stockout rate among HIV tracer products for the final quarter of FY2019 was at 4.8% (12/252). This largely reflects stockouts of two rapid diagnostic kits (Determine and Unigold) in four service delivery points due to supplier delays and increased consumption. An HIV SURGE campaign during this period focused on finding positive clients not yet on treatment in the country. For upcoming FY2020, new consumption levels for RTKs were used in the quantification that captures and supports increased demand from the ongoing SURGE campaign. Male condoms also registered stockouts in four SDPs out of the 81 that reported.
B3	78% of required service delivery points (35/45) reported stock and order data into the Commodity Tracking System (CTS) in August 2019. The denominator reflects the number of ART SDPs required to report and order commodities through the CTS, while the numerator captures the number of facilities that successfully submitted reports to the Data Management Unit (DMU). Overall, transport challenges and weak regional support structures contribute to delays in submission of the reports to the Data Management Unit at the CMS. Improved reporting is an area targeted for strengthening through mentorship and supervision in the upcoming year at both regional and central levels.

Warehouse stock status and product losses

Country

eSwatini

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	72	0%	28%	21%	51%
TO1-HIV/AIDS	72	0%	28%	21%	51%
Total	72	0%	28%	21%	51%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

- B2 During FY2019 Q4, six observations of the central medical stores were conducted to assess stock levels of 12 HIV tracer commodities (72 total observations). At the central level, min/max levels for all commodities are set at 4-7 months of stock (MOS). Commodities were found to be stocked according to plan in 20.8% of cases (15/72), understocked 27.8% of cases (20/72), and overstocked 51.4% of cases (37/72). There were no observations of stockouts of HIV tracer commodities at the central level in this period. The high proportion of overstocked cases was primarily among EID consumables, male and female condoms and first-line pediatric ARVs. The first-line pediatric ARVs were overstocked to ensure ART treatment optimization scale-up is uninterrupted. This situation should resolve over the next six months once the treatment optimizations are completed. The second most used RTK (Unigold RTK) and VL load reagent were the commodities mostly frequently observed to be understocked (six and four times, respectively). This was due to increased requirements in the ongoing ART treatment optimizations, Eswatini's HIV SURGE campaign and delayed government tender approvals.
- C7 This indicator is not applicable, as there are no products stored under GHSC-PSM Eswatini control in country.

Supply plans, innovations, and strategic activities

Country

eSwatini

FY Quarter

2019-Q4

Total Innovations implemented this quarter

New technologies **1**

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
TO1-HIV/AIDS	New technologies	The TransIT electronic tool was successfully implemented in Eswatini in September 2019. Previously, the Central Medical Store (CMS) used hard copy signed invoices as proof of delivery of commodities, which did not provide for real time distribution reporting to CMS management. To ensure real time distribution tracking, availability of electronic proof of deliveries and reporting of shipment metrics at the CMS, GHSC-PSM in September 2019 adapted and implemented the Transportation Information Tool (TransIT®) application developed by Chemonics' SOLVE Team—a working group that develops, manages, enhances and implements innovative solutions to supply chain challenges. TransIT was previously implemented in Cameroon and Mozambique by GHSC-PSM. TransIT extracts all outbound facility orders (shipments) data directly from the warehouse management system and loads it on distribution driver smart phones/tablets. Stock recipients at the health facility then sign on tablets upon receiving stock. Pictures of medicines and receiving staff at delivery points can also be captured in the new TransIT application. These data are instantly uploaded online and available to CMS management for reporting and tracking shipment metrics in real time. The next phase of GHSC-PSM support will support the creation of customized reports on agreed KPIs for the CMS distribution system and provide users and managers at the CMS further analytics for reporting, and will also continue building user capacity.

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	Yes
Condoms	Yes
Lab (HIV diagnostics)	No
RTKs	No
VMMC	No

Analysis

Quarterly forecasts were successfully conducted and submitted to HQ for ARVs and condoms in FY2019 Q4. Plans for RTKs, lab (HIV diagnostics) and VMMC remain outstanding as of the first week of November.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for this period.

Training for supply chain partners

Country

eSwatini

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	Total
Female	62	62
Male	37	37
Total	99	99

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	Total
Central	90	90
SDP	9	9
Total	99	99

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	Total
TO-specific	99	99
Total	99	99

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	Total
Forecasting and Supply Planning	9	9
Warehousing and Inventory Management	90	90
Total	99	99

Analysis



GHSC-PSM facilitated four trainings in FY2019 Q4 covering topics in warehousing and inventory management (WHIM) and forecasting and supply planning (FASP). The personnel trained came from various facilities and implementing partners. There were 90 participants (36 men, 54 women) trained in WHIM, and 9 participants (1 man, 8 women) trained in FASP, totaling to 99 participants trained in the past year (37 men, 62 women).

Molecular Instruments and HIV Tracer Products

Country

eSwatini

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

GHSC-PSM Eswatini does not procure or support molecular instruments in the country.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Dolutegravir (300/300/50mg)
2nd line adult ARV	Atazanavir/Ritonavir (300/100mg)
Pediatric ARV	Abacavir/Lamivudine (60/30mg) (ABC/3TC)
First RTK	Determine HIV 1/2
Second RTK	Unigold HIV KIT
Tie-breaker RTK	None
Viral load reagent	CAP/CTM HIV-1 Monitor V2.0
Viral load consumable	CAP K TIPS
EID reagent	HIV-1 Qualitative Test
EID consumable	HIV-1 Qual Spex

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

All

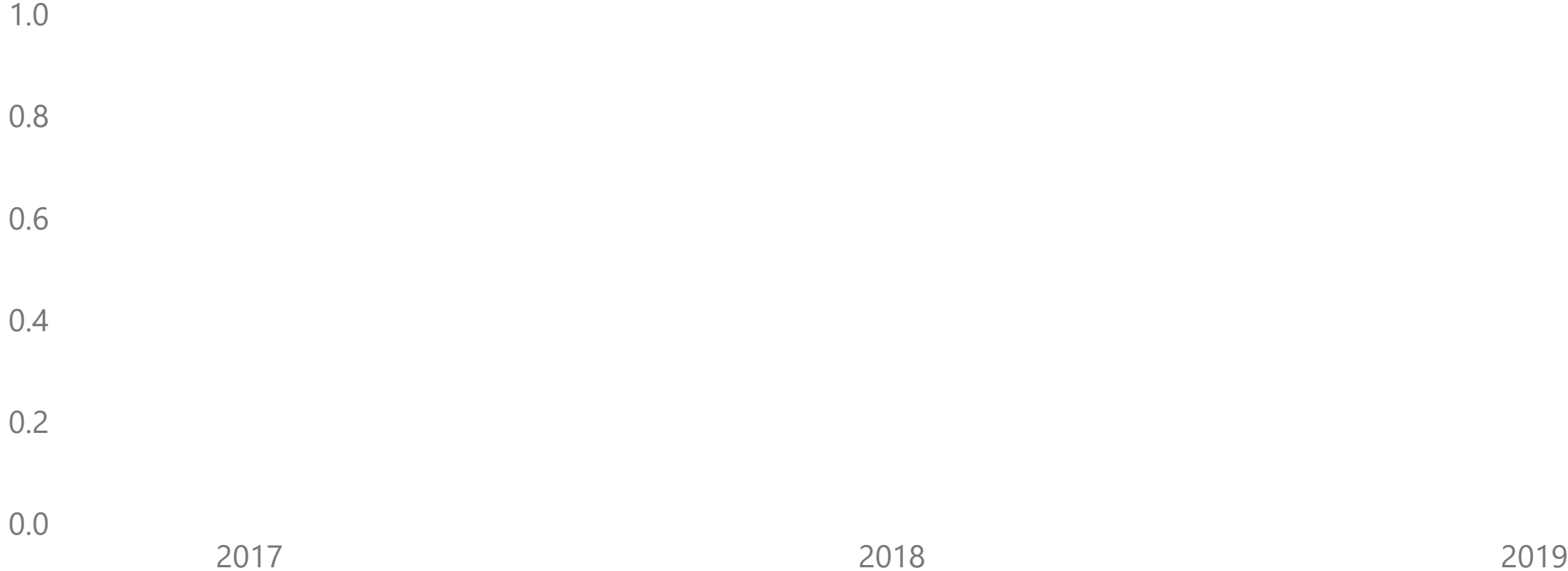
Supply Chain Level

All

Country

eSwatini

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY

2017

2018

2019

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

Data Confidence Rating Breakdown by Supply Chain Level			
FY	Supply Chain Level	Overall data quality rating	Total # of sites rated
2019			

Analysis

Eswatini will begin reporting on this indicator in FY2020.

Annual Forecasts

FY

2019

Country

eSwatini

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

Ref Analysis

B5	Annual forecasts were successfully conducted for ARVs, condoms, RTKs and lab (HIV diagnostics) with GHSC-PSM support. Forecasts were conducted in September 2019 and cover the upcoming period of April 2020 to March 2023. VMMC commodity forecasts were conducted by a consultant in collaboration with the USAID VMMC team.
B12	At this time, there is no active tracking of forecast error in Eswatini. GHSC-PSM will institute systems to track error during FY2020.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
Condoms	Yes
Lab (HIV diagnostics)	Yes
RTKs	Yes
VMMC	Yes

Workforce, Leadership, and Governance

FY
2019

Country
eSwatini

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2019
TO1-HIV/AIDS	8.0

Ref	Analysis
-----	----------

B10 Supply chain activities are governed by the Eswatini Supply Chain Strategy 2018-2022 and the incumbent logistics coordination mechanism. The Supply Chain TWG supported by GHSC-PSM provides technical direction and guidance in management of these activities. The mechanism is deemed to have achieved a threshold level of functionality, reflecting its formal institutionalization (TOR), inclusive membership, and regularly scheduled meetings. Nonetheless, opportunities exist for the body to more actively engage in the development, implementation, and mitigation of policies, procedures and plans. GHSC-PSM intends to further strengthen the operations of the TWG and the operationalization of the supply chain strategy to effectively manage supply chain activities in FY2020.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Total		

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Total		

Ref	Analysis
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B11 As a new office, GHSC-PSM Eswatini does not yet have visibility into MOH HR practices. It is planning to develop a data collection strategy for this indicator for FY2020.

B9 As a new office, GHSC-PSM Eswatini does not yet have visibility into MOH HR practices. It is planning to develop a data collection strategy for this indicator for FY2020.

Commodity Funding

FY
2019

Country
eSwatini

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
HIV/AIDS	\$18,258,403		\$4,869,324		\$5,586,827		Not Available		Not Available

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

The host government is the major procurer of HIV/AIDS commodities for public sector services (~ 65% contribution), followed by USG (~20%) and Global Fund (~15%). In the past, MOH commodity tenders approval have been delayed due to fiscal challenges that are expected to resolve in the coming years with improving fiscal policy. Please note that the timeframe of the figures overlaps slightly given the different fiscal years between Eswatini (April 2018-March 2019) and USG/Global Fund (October 2018-September 2019).

B8. Supply Chain Technical Independence

FY

2019

Country

eSwatini

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

eSwatini

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

7

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

Seven activities have been targeted for technical independence (TI) over the life of the GHSC-PSM project. Specifically, host entities in Eswatini are expected to achieve technical independence in the following key supply chain activities: 1) monitoring the commodity pipeline (FASP), 2) developing/updating supply plans (FASP), 3) developing annual forecasts (FASP), 4) monitoring inventory levels (WIM), 5) IT project management (MIS), 6) collecting and reporting supply chain performance indicators (M&E), and 7) facilitating active use of data for supply chain management decision making (M&E).

Activities selected as targeted for technical independence under "management information systems" (MIS) and "monitoring and evaluation" (M&E) are at an early stage of capacity building and will require more strengthening in the journey to technical independence. GHSC-PSM has identified these as priority areas in the upcoming year.

Activities bundled under "forecasting and supply planning" (FASP) and "warehousing and inventory management" (WIM) are currently at a more advanced stage. The CMS is already actively leading, and a number of key technical components (including standardization and designation of authority) are already in place. GHSC-PSM is providing targeted backstopping and technical support to further improve, standardize and advance these activities in the journey toward technical independence.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	Central Medical Stores (CMS)	HIV/AIDS	Yes; Limited contribution	Yes; Moderate contribution	No; Limited contribution	Yes; Moderate contribution	No; No contribution	Participant	No
	Develop/update supply plan	Central Medical Stores (CMS)	HIV/AIDS	Yes; Limited contribution	Yes; Moderate contribution	No; Limited contribution	Yes; Moderate contribution	No; No contribution	Participant	No
	Monitor the commodities pipeline	Central Medical Stores (CMS)	HIV/AIDS	Yes; Limited contribution	Yes; Moderate contribution	No; Limited contribution	Yes; Moderate contribution	No; No contribution	Participant	No
MIS	IT project management	Central Medical Stores (CMS)	HIV/AIDS	Yes; Limited contribution	No; No contribution	No; No contribution	No; No contribution	No; No contribution	No involvement	No
Monitoring and Evaluation	Facilitate active use of data for supply chain management decision making	Central Medical Stores (CMS)	HIV/AIDS	Yes; Limited contribution	Yes; Limited contribution	No; Limited contribution	No; Limited contribution	No; Limited contribution	Primary technical implementer	No
	Collect and report supply chain performance indicators	Central Medical Stores (CMS)	HIV/AIDS	Yes; Limited contribution	Yes; Limited contribution	No; Limited contribution	Yes; Moderate contribution	Yes; Limited contribution	Primary technical implementer	No
Warehousing and Inventory Management	Monitor inventory levels	Central Medical Stores (CMS)	HIV/AIDS	Yes; No contribution	Yes; Limited contribution	No; Moderate contribution	Yes; Limited contribution	No; Limited contribution	Primary technical implementer	No

Complete Results and Denominators

Country

FY Quarter

eSwatini

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO1-HIV/AIDS	4.8%	252
Male condoms (HIV)	4.9%	81
Viral load consumable	0.0%	1
Viral load reagent	0.0%	1
Second RTK	12.9%	31
First RTK	11.8%	34
Pediatric ARV	0.0%	35
2nd line adult ARV	0.0%	34
1st line adult ARV	0.0%	35
Total	4.8%	252

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
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See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	78%	45

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	21%	51%	28%	0%	72
TO1-HIV/AIDS	21%	51%	28%	0%	72
Total	21%	51%	28%	0%	72

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	62	37	99
Total	62	37	99

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	1
Condoms	1	1
Lab (HIV diagnostics)	1	0
RTKs	1	0
VMMC	1	0

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
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GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Ethiopia



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Ethiopia

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	4,419	6.7%
1st line adult ARV	1,059	0.0%
2nd line adult ARV	286	0.0%
Pediatric ARV	880	0.0%
First RTK	483	9.9%
Second RTK	384	24.0%
Tie-breaker RTK	377	20.2%
Viral load reagent	19	5.3%
Viral load consumable	27	18.5%
EID reagent	19	47.4%
EID consumable	193	15.5%
Male condoms (HIV)	692	5.1%
Total	4,419	6.7%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	2,880	12.3%
AL 6x1	403	15.9%
AL 6x2	350	20.0%
AL 6x3	336	21.1%
AL 6x4	682	14.8%
AL inability to treat	785	1.4%
mRDT	324	11.1%
Total	2,880	12.3%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	6,354	8.7%
Combined oral contraceptive with iron	912	8.1%
DMPA-Intramuscular injectable	957	8.9%
1-rod implant	845	14.3%
2-rod implant	613	8.2%
Emergency contraceptive, 2 tablets	813	8.6%
Progestin only pills	725	12.4%
Copper-bearing IUD	797	3.4%
Male condoms (FP)	692	5.1%
Total	6,354	8.7%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	1,228	93%
TO2-Malaria	1,044	80%
TO3-PRH	1,149	94%
TO4-MCH	1,164	81%
Total	4,585	87%

Ref Analysis

- B1** The overall stockout rate for Ethiopia increased slightly from 7% to 9% this quarter. For HIV/AIDS commodities, the stockout rate decreased slightly from 8% to 7%. This is the first quarter in which no facilities were stocked out of any of the three ARV tracer products. However, a very high stockout rate was observed for HIV-EID reagents (47%). This was mainly due to a cold room malfunction affecting one shipment that resulted in quarantining a large quantity of reagents. However, there was no service interruption, as all Roche sites have sufficient quantities of reagents, and many of the Abbott sites were transferring their EID samples to their nearby Roche sites for testing. The project is continuing to strengthen the integration of RTKs into the Integrated Pharmaceutical Logistics System. Stockouts of malaria products increased from 13% to 16%, most notably increasing for AL 6X1 from 9% to 16% of SDPs. Inability to treat, however, remained low at 1%. A shipment of Artemether-Lumefantrine expected to arrive in September was delayed; however the shipment has arrived and is making its way through the pipeline. Stockouts of FP/RH products increased from 7% to 9%. Most products saw an increase in stockout rates, although the percentage of SDPs with all modern contraceptives stocked out was only 1%. Stockout rates for FP/RH products may have been inflated due to a data quality problem stemming from some facilities failing to report on stock available at dispensing units. The project is working to strengthen the feedback mechanism to SDPs for data quality and logistics management support.
- B3** SDP reporting rates remained largely steady for HIV/AIDS and FP/RH commodities at 93% and 94%, respectively, but fell slightly from 84% to 80% for malaria commodities and from 83% to 81% for MNCH commodities. Due to some SDPs reporting on some health elements but not others, it is possible to have higher reporting rates by region or overall than by individual health element. Among the potential reasons for late or non-reporting are inadequate support from administrative units, a low commitment to reporting, and security problems in a few parts of the country. However, for regions that have improved their reporting rates, contributing factors may include collaboration between GHSC-PSM, RHBs and EPSA to follow up and remind/pre-alert sites about RRF submission deadlines; strengthening of routine data quality analysis practices and use of analysis results to identify low performing SDPs and provide them with more support; and advocating for discussion of data analysis during branch TWG meetings.

Warehouse stock status and product losses

Country

Ethiopia

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	24	4%	61%	9%	26%
TO1-HIV/AIDS	11		36%	18%	45%
TO2-Malaria	5		100%		
TO3-PRH	8	13%	63%		25%
Subnational level 1	360	10%	36%	13%	41%
TO1-HIV/AIDS	126	4%	33%	13%	50%
TO2-Malaria	90	20%	41%	11%	28%
TO3-PRH	144	7%	35%	13%	44%
Total	384	9%	38%	13%	40%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

B2 Across products and supply chain levels, the percentage of observations stocked according to plan decreased from 17% to 13%, driven by a slight increase in understocking. Understocking was most pronounced at the central medical store (61% of observations), and among malaria commodities (100% of central level observations) and FP/RH commodities (63%). There were no observed stockouts of HIV/AIDS commodities at the central medical store. EPSA hubs, however, were more likely to be overstocked (41% of observations), particularly with HIV/AIDS commodities (50% overstocked at the regional level, and only 4% stocked out). GHSC-PSM is working with EPSA to strengthen its inventory management system (both cyclic and annual inventories), to triangulate consumption and service data during refill periods, and to improve data quality at SDPs and storage sites.

Supply plans, innovations, and strategic activities

Country

Ethiopia

FY Quarter

2019-Q4

Total Innovations implemented this quarter

New approaches

1

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
Crosscutting	New approaches	<p>As part the Center of Excellence scale-up initiative, GHSC-PSM supported EPSA hubs to conduct inventory analysis using multiple techniques such as ABC and fast moving, slow moving and non-moving (FSN) analysis. Based on the results, the hubs assigned new locations within warehouses for fast moving commodities to decrease the distance traveled between the picking area and the dispatch location. Therefore, the ground pick face helped to minimize the distance traveled by the warehouse operatives, which eventually reduces the time taken to pick products.</p> <p>Picking commodities from the ground face will also avoid the movement or use of trucks for picking, which in turn reduces the chance of materials handling equipment breakdowns resulting from the overuse.</p> <p>Currently, Hawassa, Dessie and Adama pick more than 75% of their commodities from ground pick face.</p>

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	No
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
RTKs	Yes

Analysis

GHSC-PSM Ethiopia updated the required quarterly supply plans for RTKs, ART-monitoring laboratory commodities, male condoms, malaria commodities, and FP/RH commodities during the fourth quarter of the fiscal year. All of these supply plans were shared with the home office forecasting and supply planning team. A supply plan update for ARVs was conducted this quarter but not sent to the home office forecasting and supply planning team.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description

GHSC-PSM supported MOH to develop an implementation guide for the auditable laboratory transactions and services. This activity will contribute to the scaling up of APTS concepts and principles for lab commodity management and service improvement.

Training for supply chain partners

Country

Ethiopia

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Female	162	13	12	5	192
Male	207	32	27	11	277
Total	369	45	39	16	469

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Subnational level 1	5	31	11	5	52
SDP	364	14	28	11	417
Total	369	45	39	16	469

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Cross-TO	16	19	39	16	90
TO-specific	353	26			379
Total	369	45	39	16	469

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Governance and Financing	11	14	28	11	64
Strategy and Planning	353				353
Warehousing and Inventory Management	5	31	11	5	52
Total	369	45	39	16	469

Analysis

In the fourth quarter, GHSC-PSM Ethiopia provided training for 469 professionals (277 men and 192 women) on the following thematic areas:

1. Auditable pharmaceutical transactions and services (APTS) training for Meda Wolabo University Hospital for 29 professionals and for Jigjiga University Hospital for 35 professionals (classified as governance and financing);
3. A training-of-trainers on antimalarial medicines management for 26 professionals (classified as warehouse and inventory management);
4. ART training for 32 pharmacy professionals (classified as strategy and planning);
5. Training on TLD transition, DTG rollout and Nevirapine phaseout for 321 professionals (classified as strategy and planning); and
6. Pharmaceuticals warehouse operations management and center of excellence scaleup training for 26 EPSA staff (classified as warehousing and inventory management).

Molecular Instruments and HIV Tracer Products

Country

Ethiopia

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

90%

Analysis

Out of the 20 molecular instruments supported by GHSC-PSM, 18 remained functional throughout this quarter. Performance increased from 75% in the previous quarter to 90% this quarter. There were machine failures at EPHI and Debremarkos hospitals, where service was interrupted for 3 and 13 days, respectively, down from a total of 59 working days the previous quarter.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Efavirenz/Lamivudine/Tenofovir DF 600/300/300 mg
2nd line adult ARV	Atazanavir/Ritonavir 300/100 mg
Pediatric ARV	Lamivudine/Zidovudine/Nevirapine 30/60/50 mg
First RTK	Transitioning from Colloidal Gold to STAT-PAK.
Second RTK	Transitioning from Uni-Gold to Abon HIV 1/2/O kit
Tie-breaker RTK	Transitioning from Vikia to SD Bioline HIV 1/2 3.0 kit
Viral load reagent	Molecular, m2000 Real Time PCR, HIV-1 Amplification Reagent Kit, 96 tests, Quantitative, (4 Packs x 24) Assays Molecular, COBAS, TaqMan, CAP/CTM HIV v2.0, Quantitative, 48 Tests Plasma preparation tube of 100 (for plasma based test)
Viral load consumable	Dry Blood Spot (DBS) kit sample collection bundle of 20 tests
EID reagent	Molecular, m2000 RealTime PCR, HIV-1 Qualitative Amplification Reagent Kit, 96 Tests Molecular, COBAS TaqMan, AmpliPrep, HIV-1, Qualitative, 48 Tests,
EID consumable	Dry Blood Spot (DBS) kit sample collection bundle of 20 tests

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

All

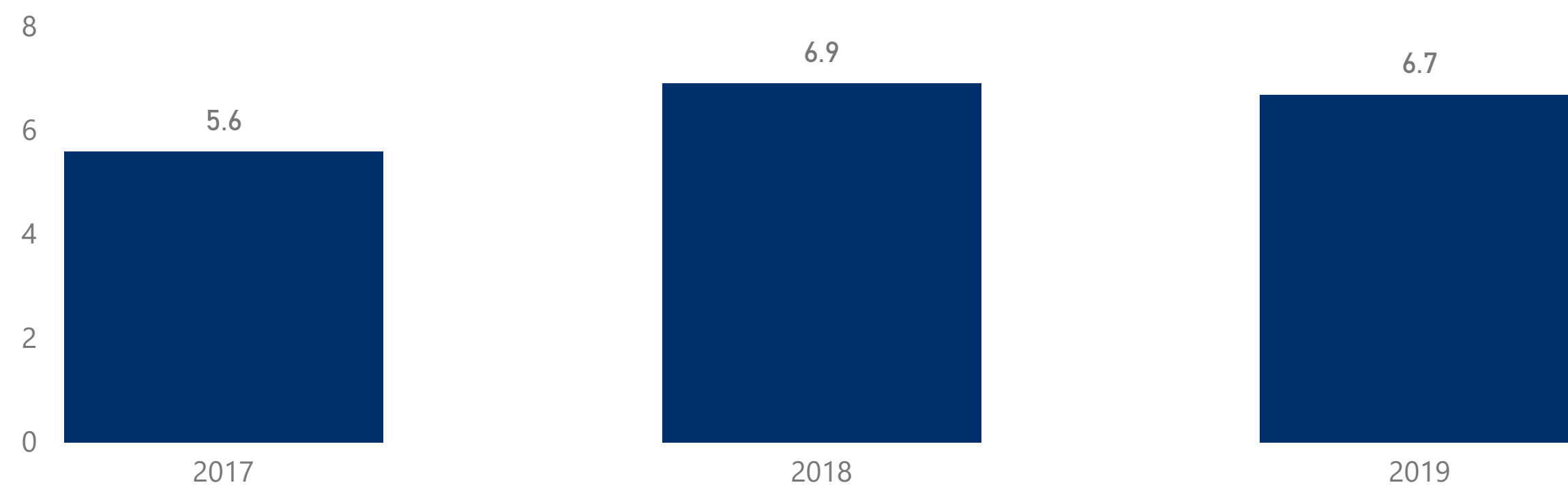
Supply Chain Level

All

Country

Ethiopia

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	1.9	2.5	2.4
2019	2.1	2.2	2.4

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Central		
TO1-HIV/AIDS	5.0	1
TO2-Malaria	5.0	1
TO3-PRH	5.0	1
TO4-MCH	5.0	1
Subnational level 1		
TO1-HIV/AIDS	7.5	15
TO2-Malaria	7.5	15
TO3-PRH	6.4	15
TO4-MCH	7.3	15
SDP		
TO1-HIV/AIDS	6.5	88
TO2-Malaria	6.7	80
TO3-PRH	6.4	81
TO4-MCH	6.9	81

Analysis

Overall data quality across health elements stayed nearly constant from 2018, falling slightly from 6.9 to 6.7 (classified as "good"). The slight decrease in data quality was driven by the central medical store and the regional hubs. At the central medical store, data accuracy fell from 1.5 out of 3 to 0 out of 3, while data availability fell from 3 to 2. At the regional level, timeliness fell from 2.4 to 1.9, while availability fell from 3 to 2.5. At the SDP level, only availability was lower in 2019, from 2.5 to 2.1, while the other two elements increased very slightly.

Data quality for malaria commodity reporting increased slightly from 6.6 to 6.8, while data quality for HIV/AIDS and MNCH commodities stayed largely constant. Only FP/RH commodity data quality dipped noticeably, from 7.2 to 6.4. This decrease was most pronounced at the central and regional levels, where FP/RH data quality fell from 8 to 5, and from 8 to 6.4, respectively. The EPSA recently terminated five warehouses that had been contracted to the private sector and consolidated the commodities at the center, which then required pushing more commodities out to the hubs. This may have led to data quality problems during this period.

Annual Forecasts

FY

2019

Country

Ethiopia

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	1.1%	+
2nd line adult ARV	15.3%	+
Pediatric ARV	24.2%	+
First RTK	24.6%	-
Second RTK	15.4%	-
Tie-breaker RTK	12.3%	-
Viral load reagent	10.6%	-
Viral load consumable	23.2%	-
EID reagent	0.9%	-
EID consumable	69.3%	+
Male condoms (HIV)	9.4%	+

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL 6x1	40.3%	+
AL 6x2	48.4%	+
AL 6x3	50.4%	+
AL 6x4	35.8%	+
mRDT	1.3%	-
LLINs	45.7%	+

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral contraceptive with iron	9.8%	+
DMPA-Intramuscular injectable	53.7%	-
1-rod implant	47.8%	-
2-rod implant	56.1%	-
Emergency contraceptive, 2 tablets	21.7%	+
Progestin only pills	20.2%	-
Copper-bearing IUD	33.6%	-
Male condoms (FP)	9.4%	+

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO4-MCH		
MgSO4	166.6%	-
Amoxicillin dispersible tablets	6.5%	+
Chlorhexidine gel	99.2%	+
Injectable gentamicin	34.1%	+
Oxytocin	111.9%	-
ORS+zinc	37.6%	+

Ref Analysis

B5 Annual forecasts for all four health commodity areas were conducted in FY2019. The activities were jointly planned with EPSA, MOH and other stakeholders from the beginning of the year. The annual forecasts were conducted as per the plan with the active engagement of key stakeholders. Forecasts were done for all commodity groups, including ARVs, lab commodities, RTKs, malaria commodities, FP/RH commodities, condoms and MNCH commodities. All annual forecasts were shared with the home office.

B12 GHSC-PSM in Ethiopia has been supporting the quantification of commodities for priority health programs. Forecasts for essential HIV, malaria, FP/RH and MNCH commodities are produced during annual quantification exercises. Consumption figures are calculated as the number of units issued by EPSA hubs to health facilities, where it is assumed for this indicator that all units distributed by the hubs are consumed. Compared to FY2018, the current results show radical improvement across all four health areas. In FY2018, forecast error for HIV/AIDS commodities ranged from 9% to 481% (for pediatric ARVs and EID consumables, respectively), while in FY2019 they ranged from 1% to 69% (for first-line adult ARVs and EID consumables). For malaria commodities, forecast error stayed relatively low for AL (at or below 50% for all presentations), while for RDTs, the error rate dropped from 14% to 1%. For FP/RH products, both implant products had forecast errors over 120% in FY2018, while in FY2019, the highest error rate for all products was 56% (for 2-rod implants). For MNCH commodities, four out of five products had forecast error rates in the hundreds of percent or higher in FY2018 (including injectable gentamicin at 1,393%), while in FY2019, four out of six products had errors under 100% with the highest error at 167% for magnesium sulphate and the lowest at only 7%, for amoxicillin. For most of the tracer commodities, the forecasting bias variant is negative, indicating over-forecasting of program commodities. For most malaria commodities however, there was an excess of units distributed (consumption) as compared to the forecasted demand. Having observed that there were more requests and more distributions, the National Malaria Control Program adjusted the previously forecasted quantities to reduce the discrepancies. The FP/RH forecast error rates indicate that most products were under-consumed compared to the forecast. The recommended increase in utilization of long-term FP commodities such as implants, IUCD and injectables does not appear to be occurring as was hoped. MoH is following need-based family planning principles, and the forecasted demand has therefore been revised in accordance with current demand. MNCH commodities were under-distributed as compared to the forecasted demand.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
MCH commodities	Yes
RTKs	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Ethiopia

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS	Yes
TO2-Malaria	Yes
TO3-PRH	Yes
TO4-MCH	Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	11.0	11.0
TO2-Malaria	9.0	11.0
TO3-PRH	11.0	11.0
TO4-MCH	11.0	11.0

Ref Analysis

B10 To assess the existence of functional logistics coordination mechanisms in Ethiopia, 10 key informants from the MoH and EPSA were interviewed using a structured checklist. Data were aggregated using GHSC-PSM's standard scoring tool. The results showed that the logistics coordination mechanisms across all four health areas continue to be highly functional, scoring 11, the maximum score. The national coordination platform led by EPSA involves the MOH disease programs, the central medical store, the LMU within the MOH, and several NGOs and donors. Members of the platform met on a monthly basis, and the meetings focused on identifying challenges and bottlenecks that hindered supply chain management in the country. Various action plans were developed and implemented by the TWG members in the past year. In general, the coordination platform can be considered well-functioning and effective at the national level.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	7%	121
EPSA	7%	121
Subnational level 1	5%	295
EPSA	5%	295
Total	6%	416

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	13%	30
Crosscutting	13%	30
Subnational level 1	11%	65
Crosscutting	11%	65
Total	12%	95

Ref Analysis

B11 Out of the 95 occupied management-level supply chain technical positions within EPSA (i.e., team coordinator level up to director general level), women held 11 positions as of September 2019, which is only 12%. This percentage was slightly higher at the central level (13% than the regional level (11%). Overall, the percentage remained unchanged from last year. GHSC-PSM has provided support to EPSA in FY18 and FY19 including leadership training for women and a training-of-trainers on gender issues.

B9 There were 416 supply chain technical employees in the EPSA at the start of Ethiopia's 2019 Fiscal Year in July 2018 (121 at the central level and 295 at EPSA branches). Of these, 24 EPSA supply chain professionals left the organization during the year, including 8 from central EPSA and 16 from EPSA branches (regional level). The total turnover rate was 6%. At the central and regional levels, this rate was 7% and 5%, respectively. This was an improvement from last year, where the overall supply chain technical staff turnover rate was 10%.

Commodity Funding

FY

2019

Country

Ethiopia

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
Family Planning and Reproductive Health	\$965,517	5%	\$0	0%	\$0	0%	\$20,049,518	95%	\$21,015,035
HIV/AIDS	\$206,613	0%	\$103,486,971	86%	\$12,266,985	10%	\$4,692,104	4%	\$120,652,673
Malaria	\$0	0%	\$43,065,016	47%	\$13,395,810	15%	\$35,824,255	39%	\$92,285,081
Maternal and Child Health	\$3,186	0%	\$8,916,764	8%	\$0	0%	\$97,406,103	92%	\$106,326,053
Other Essential Medicines	\$206,699	0%	\$26,560,905	25%	\$0	0%	\$78,524,345	75%	\$105,291,949

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

In Ethiopia, a total of \$445,570,791 was spent for procurement of health commodities for the public sector in Ethiopia's FY2019 (July 2018 through June 2019). Out of this, the Ethiopian government contributed 0.3%, while Global Fund, USG, and "other" sources contributed 41%, 6% and 53%, respectively.

The Sustainable Development Goals (SDG) Fund, categorized here as "other," contributed the majority (53%) of all commodity procurement. For HIV/AIDS commodity spending, 86% came from the Global Fund, followed by 10% from the USG, 4% from SDG ("other") and 0.2% from the Ethiopian government. The Global Fund was also the largest contributor to malaria commodity spending at 47%, followed by the SDG fund at 39% and the USG at 15%. The Ethiopian government had no contribution for the procurement of malaria commodities. For FP/RH commodities, on the other hand, the SDG Fund contributed the vast majority, at 95%, while the Ethiopian government contributed the remaining 5%. For MNCH commodities, the SDG Fund again contributed the vast majority at 92% while the Global Fund contributed the remaining 8%.

B8. Supply Chain Technical Independence

FY

2019

Country

Ethiopia

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Ethiopia

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

7

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

GHSC-PSM Ethiopia and the USAID Mission have targeted seven activities for technical independence in Ethiopia, in the areas of forecasting and supply planning (three activities), warehousing and inventory management, governance and financing, monitoring and evaluation, and human resources capacity development. As of the end of FY2019, the government was assessed to be the primary technical implementer for all seven targeted activities. In general, the project is a moderate to major contributor for most capacity elements among most of the targeted activities. None have yet to reach technical independence, but two are only missing one component. "Managing the logistics management committee" lacks only a performance indicator; the EPSA is planning to develop one. The monitoring and evaluation activity, "collect and report supply chain performance indicators," is missing only a training approach. The EPSA acknowledges the need to develop a standardized M&E training curriculum and guides for on-the-job training and mentorship. In the case of warehousing and inventory management, there is a training approach led by GHSC-PSM that has yet to be transitioned to the government. Despite good progress in the forecasting and supply planning activities, remaining constraints include high staff turnover, a lack of sufficient tools for pipeline monitoring and the lack of handover of GHSC-PSM's training strategy, all exacerbated by the lack of government financing in these three activities.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	Ethiopian Pharmaceuticals Supply Agency	Integrated	Yes; Moderate contribution	No; Major contribution	No; Major contribution	No; Major contribution	Yes; Major contribution	Primary technical implementer	No
	Develop/update supply plan	Ethiopian Pharmaceuticals Supply Agency	Integrated	Yes; Moderate contribution	Yes; Major contribution	No; Major contribution	No; Major contribution	Yes; Major contribution	Primary technical implementer	No
	Monitor the commodities pipeline	Ethiopian Pharmaceuticals Supply Agency	Integrated	Yes; Moderate contribution	No; Major contribution	No; Major contribution	No; Major contribution	Yes; Major contribution	Primary technical implementer	No
Governance and Financing	Manage logistics management committee	Ethiopian Pharmaceuticals Supply Agency	Integrated	Yes; Moderate contribution	Yes; Major contribution	Yes; Moderate contribution	Yes; Moderate contribution	No; Major contribution	Primary technical implementer	No
Human Resources Capacity Development	Implement supply chain management pre-service curriculum	Addis Ababa University, School of Pharmacy	Integrated	Yes; No contribution	Yes; Major contribution	No; Moderate contribution	No; Moderate contribution	No; No contribution	Primary technical implementer	No
Monitoring and Evaluation	Collect and report supply chain performance indicators	Ethiopian Pharmaceuticals Supply Agency	Integrated	Yes; Limited contribution	Yes; Major contribution	No; Major contribution	Yes; Major contribution	Yes; Major contribution	Primary technical implementer	No
Warehousing and Inventory Management	Monitor inventory levels	Ethiopian Pharmaceuticals Supply Agency	Integrated	Yes; No contribution	No; Moderate contribution	No; Major contribution	No; No contribution	No; Moderate contribution	Primary technical implementer	No

Complete Results and Denominators

Country

FY Quarter

Ethiopia

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO3-PRH	8.7%	6,354
Male condoms (FP)	5.1%	692
Copper-bearing IUD	3.4%	797
Progestin only pills	12.4%	725
Emergency contraceptive, 2 tablets	8.6%	813
2-rod implant	8.2%	613
1-rod implant	14.3%	845
DMPA-Intramuscular injectable	8.9%	957
Combined oral contraceptive with iron	8.1%	912
TO2-Malaria	16.3%	2,095
mRDT	11.1%	324
AL 6x4	14.8%	682
AL 6x3	21.1%	336
AL 6x2	20.0%	350
AL 6x1	15.9%	403
TO1-HIV/AIDS	6.7%	4,419
Male condoms (HIV)	5.1%	692
EID consumable	15.5%	193
EID reagent	47.4%	19
Viral load consumable	18.5%	27
Viral load reagent	5.3%	19
Tie-breaker RTK	20.2%	377
Second RTK	24.0%	384
First RTK	9.9%	483
Pediatric ARV	0.0%	880
2nd line adult ARV	0.0%	286
1st line adult ARV	0.0%	1,059
Total	9.5%	12,176

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	1.4%	785
TO3-PRH		
Combined oral methods	8.1%	912
Injectable contraceptives	8.9%	957
Implantable contraceptives	7.4%	931
Emergency oral contraceptives	8.6%	813
Progestin-only methods	12.4%	725

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	93%	1,228
TO2-Malaria	80%	1,044
TO3-PRH	94%	1,149
TO4-MCH	81%	1,164

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	9%	26%	61%	4%	23
TO1-HIV/AIDS	18%	45%	36%		11
TO2-Malaria			100%		5
TO3-PRH		25%	63%	13%	8
Subnational level 1	13%	41%	36%	10%	342
TO1-HIV/AIDS	13%	50%	33%	4%	126
TO2-Malaria	11%	28%	41%	20%	90
TO3-PRH	13%	44%	35%	7%	144
Total	13%	40%	38%	9%	365

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	162	207	369
TO2-Malaria	13	32	45
TO3-PRH	12	27	39
TO4-MCH	5	11	16
Total	192	277	469

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	0
Condoms	1	1
FP commodities	1	1
Lab (HIV diagnostics)	1	1
Malaria commodities	1	1
RTKs	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
20	90%

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Ghana



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Ghana

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	5,323	16.7%
1st line adult ARV	433	8.8%
2nd line adult ARV	433	43.6%
Pediatric ARV	433	28.2%
First RTK	433	17.1%
Second RTK	433	16.6%
Male condoms (HIV)	2,374	7.3%
Female condoms (HIV)	784	27.8%
Total	5,323	16.7%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	1,211	53.9%
AL 6x1	101	73.3%
AL 6x2	101	63.4%
AL 6x3	101	96.0%
AL 6x4	101	17.8%
AL inability to treat	101	11.9%
AS/AQ 100/270mgx3	101	97.0%
AS/AQ 100/270mgx6	101	90.1%
AS/AQ 25/67.5mg	101	81.2%
AS/AQ 50/135mg	101	77.2%
mRDT	101	12.9%
SP	100	17.0%
LLINs	101	8.9%
Total	1,211	53.9%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	22,277	5.7%
Combined oral contraceptive with iron	2,168	6.6%
NET-En Injectable	3,167	3.9%
DMPA-Intramuscular injectable	4,734	1.7%
1-rod implant	3,324	3.1%
2-rod implant	3,577	2.6%
Progestin only pills	1,543	10.7%
Copper-bearing IUD	606	27.2%
Male condoms (FP)	2,374	7.3%
Female condoms (FP)	784	27.8%
Total	22,277	5.7%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
Total		

Ref Analysis

B1 The overall stockout rates for HIV/AIDS and family planning products remained consistent with the previous quarter. For HIV/AIDS products, the availability of most used 1st line ARVs remained high at above 90 percent, while the most used second-line ARV and most used pediatric ARVs had consistently high stockout rates. This can be attributed to the fact that although ART facilities are required to stock the product, some facilities do not have clients on the second-line regimen or pediatric patients so they refrain from stocking it to avoid expiries. As for malaria products, the stockout for individual products was high, with all products except LLINs having a stockout rate of at least 10 percent. For ACTs, the stockout rate for each individual product was above 50 percent; however, over 90 percent of facilities maintained at least one ACT that can treat malaria. The observed high stock-out rates for individual ACTs are attributable to stocking preferences by facilities contrary to the requirement of stocking all the ACT age bands. The National Health Insurance Scheme (NHIS) maintains a uniform reimbursement for all the age-bands or formulations of ACTs hence the facilities are inclined to stock just one or two of the ACT formulations that enables them to maximize returns through the NHIS reimbursement. This enables the facilities to manage their limited resources and reduce debt accumulation while maintaining access to malaria treatment options. For non-ACT malaria products, the high stock out rates are due to some facilities being indebted to regional medical stores (RMS). To manage the growth of debt levels, these facilities are unable to order enough product to maintain adequate stock levels. Additionally, if facilities are unable to accurately determine the stock needed for the next distribution cycle, they may not order enough quantity to meet their facility's needs. Finally, the low stock at regional warehouses has also contributed to the stockout rates at site level. For family planning products, the overall stockout rate remained consistent with the previous quarter. However, the stockout level for some individual products, such as copper-bearing IUDs and female condoms, increased. This can be attributed to the slow uptake by health facilities as a result of client preference for other contraceptive methods and a lack of trained staff in some facilities.

B3 The LMIS reporting rate is not reported for GHSC-PSM in Ghana. It is expected to be reported sometime in FY20.

Warehouse stock status and product losses

Country

Ghana

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	81	20%	8%	23%	49%
TO1-HIV/AIDS	21	10%	0%	57%	33%
TO2-Malaria	30	37%	13%	3%	47%
TO3-PRH	30	7%	7%	33%	53%
Subnational level 1	810	33%	13%	17%	37%
TO1-HIV/AIDS	210	18%	7%	22%	53%
TO2-Malaria	300	50%	18%	14%	19%
TO3-PRH	300	23%	11%	14%	51%
Total	891	32%	12%	17%	38%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

C7 There was no product loss to report this quarter.

B2 While the overall stocked according to plan rate remained consistent for HIV/AIDS, it decreased for malaria and family planning products by 5% and 6%, respectively. At the central level, the stocked according to plan rate increased drastically for HIV/AIDS products. With the exception of most used first-line pediatric ARVs, all HIV/AIDS products were available at the central level. For malaria products, while the central level saw a decrease in its stocked according to plan rate, it also saw a decrease in its stocked out rate. Nearly 50% of observations were overstocked across all malaria products. For family planning, the central level saw an increase in its stocked out rate due to expiration of levonorgestrel 0.75mg (2 tablets). At the regional level, the stocked according to plan rate decreased slightly and the stockout rate increased. With the exception of male condoms, HIV/AIDS products saw an increase in stockout rates. For malaria products, the decrease in stocked according to plan rate coincided with an increase in stockout rates across all products except ASAQ 25/67.5 mg, resulting from a recent distribution to SDPs. For family planning, the regional level saw an increase in the overstocked and stocked out rates. For overstocked rates, this is due to recent deliveries and slow uptake of the product at the site level.

Supply plans, innovations, and strategic activities

Country

Ghana

FY Quarter

2019-Q4

Total Innovations implemented this quarter

New approaches **1** New technologies **1**

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
Crosscutting	New approaches	GHSC-PSM initiated processes to standardize warehousing operations at the sub-subnational level. GHSC-PSM is working with the Food and Drugs Authority to achieve Good Warehousing Practices (GWP) at the sub-national level through an accreditation process. Assessments have been completed in two regional medical stores toward accreditation. Accreditation of the RMS will ensure they meet the minimum national standard for ensuring integrity of commodities in storage.
Crosscutting	New technologies	GHSC-PSM has installed 51 digital temperature sensors and 6 data access points in two regional medical stores (Eastern and Brong Ahafo RMS). The sensors are configured to send text messages and email alerts in the event of a temperature excursion. This forms part of a process to improve temperature monitoring and protect the integrity of commodities in storage at the regional levels. This investment will transition the warehouses from using manual temperature monitoring systems to using intelligent automatic temperature monitoring devices.

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	No
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	No
Malaria commodities	Yes
RTKs	No

Analysis

GHSC-PSM in Ghana updated and submitted 50% of their required supply plans. The field office expects to submit the updated supply plans in mid-November 2019.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description

There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for FY2019 Q4

Training for supply chain partners

Country

Ghana

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	Total
Total	

C2. Number of people trained by supply chain level

Supply Chain Level	Total
Total	

C2. Number of people trained by funding source and type

Type	Total
Total	

C2. Number of people trained by technical area

Supply Chain Function	Total
Total	

Analysis

There were no trainings to report this quarter.

Molecular Instruments and HIV Tracer Products

Country

Ghana

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

GHSC-PSM does not manage or support maintenance for any molecular instruments in Ghana.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Efavirenz 300/300/600 mg
2nd line adult ARV	Lopinavir/Ritonavir 200/50 mg
Pediatric ARV	Zidovudine 60 mg + Lamivudine 30 mg Tablet + Nevirapine 10mg/ml or Nevirapine 50mg dispersible tablet
First RTK	First Response
Second RTK	OraQuick
Tie-breaker RTK	Genscreen (ELISA test)
Viral load reagent	CAP/CTM HIV v2.0, Quantitative, 48 Tests
Viral load consumable	Not reported
EID reagent	CAP CTM HIV Qual 48 tests
EID consumable	Not reported

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

Supply Chain Level

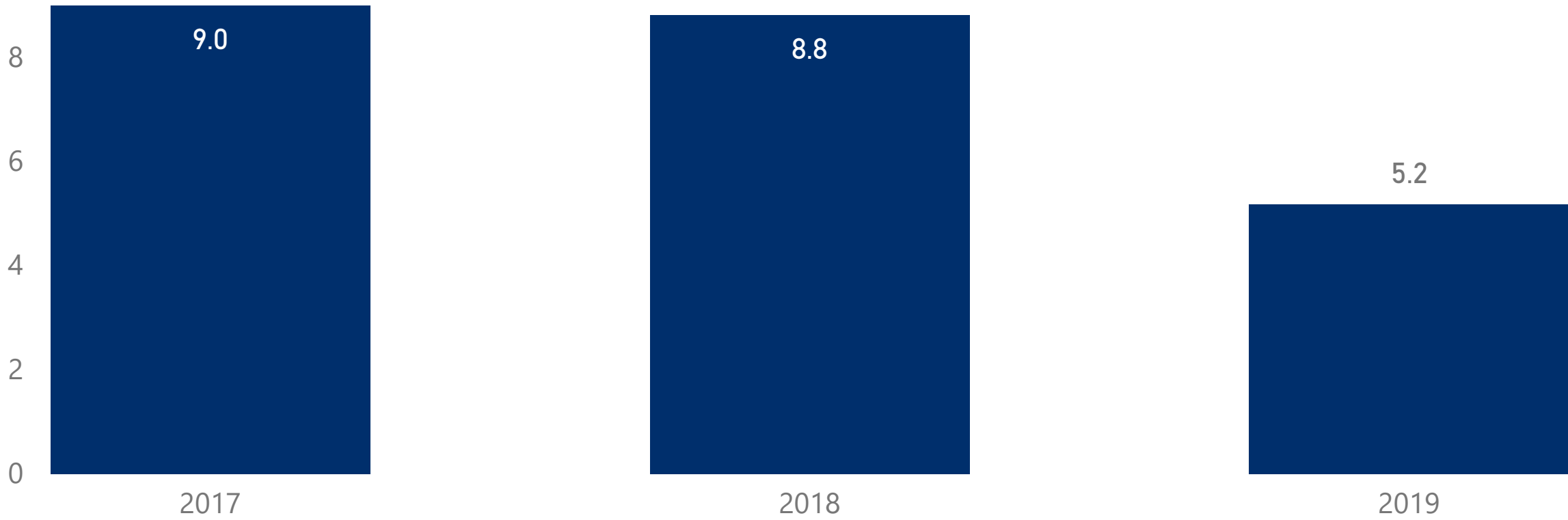
Country

All

All

Ghana

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	2.8	3.0	3.0
2019	0.5	2.0	2.6

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY: 2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Central		
TO1-HIV/AIDS	7.0	1
TO2-Malaria	7.0	1
TO3-PRH	7.0	1
Subnational level 1		
TO1-HIV/AIDS	6.0	7
TO2-Malaria	6.4	9
TO3-PRH	5.3	8
TO4-MCH	6.2	9
SDP		
TO1-HIV/AIDS	5.4	29
TO3-PRH	4.7	84

Analysis

The overall data confidence rating decreased from FY18 to FY19. This could be attributed to the increase in the number of facilities sampled and an enhanced tool which improved the accuracy of data collection. FY18 data collection was restricted to only the CMS and two regional warehouses, whereas, FY19 data collection was conducted in 104 facilities (93 SDPs, 10 regional warehouses and the CMS). The increased sample coupled with an enhanced tool used in FY19 means that the data confidence obtained is likely a more accurate reflection of the country situation as compared to the previous year.

Annual Forecasts

FY

2019

Country

Ghana

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	49.6%	-
2nd line adult ARV	27.4%	-
Pediatric ARV	29.2%	+
First RTK	14.8%	-
Second RTK	81.2%	-
Tie-breaker RTK	NaN	-
Viral load reagent	310.7%	-
Viral load consumable	137.4%	-
EID reagent	215.9%	-
EID consumable	34.4%	+
Male condoms (HIV)	78.8%	-
Female condoms (HIV)	44.9%	-

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL 6x1	22.6%	+
AL 6x2	15.3%	+
AL 6x3	32.0%	+
AL 6x4	20.7%	-
AS/AQ 100/270mgx3	34.5%	+
AS/AQ 100/270mgx6	71.6%	+
AS/AQ 25/67.5mg	1.5%	-
AS/AQ 50/135mg	154.6%	-
mRDT	73.4%	-
SP	25.8%	-

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral methods	6.4%	-
Combined oral contraceptive with iron	6.4%	-
NET-En Injectable	66.5%	-
DMPA-Intramuscular injectable	17.3%	-
1-rod implant	2.4%	-
2-rod implant	16.5%	-
Emergency oral contraceptives	10.8%	+
Emergency contraceptive, 2 tablets	10.8%	+
Progestin-only methods	8.6%	-
Progestin only pills	8.6%	-
Copper-bearing IUD	2.6%	+
Calendar-based awareness methods	41.0%	-
Male condoms (FP)	78.8%	-
Female condoms (FP)	44.9%	-

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
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B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Malaria commodities	Yes
RTKs	Yes

Ref Analysis

B5 GHSC-PSM in Ghana conducted an annual forecast for the five required product groups. For the TO1 commodities, the annual forecast was conducted in November 2018 and covers the period between October 2019 - September 2021. For TO2 commodities, the forecast was made in November 2018 and covers the period between January 2019 - December 2021. For TO3 commodities, the forecast was made in February 2019 and covers the period between January 2019 - December 2021.

B12 The time period for the forecast is January - December 2019. The MAPEs were reasonable for most products across program areas. The MAPE for viral load reagents and EID reagents were high because the amount forecasted was above the amount actually consumed. Forecasting for these reagents is rather new compared to other HIV commodities, and forecasting for these products is expected to improve as GHSC-PSM continues to provide technical assistance on this activity. For malaria products, the high forecasted quantity for ASAQ 50/135 mg can be attributed to the fact that ALu products are being used more in the country. All family planning products were within a reasonable range.

Workforce, Leadership, and Governance

FY

2019

Country

Ghana

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS	No
TO2-Malaria	No
TO3-PRH	Yes
TO4-MCH	No

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	11.0	5.8
TO2-Malaria	11.0	5.8
TO3-PRH	11.0	8.5
TO4-MCH	11.0	5.8

Ref Analysis

B10 There is one logistics coordination committee for HIV/AIDS, Malaria, Family Planning, MNCH and other health commodities. There is also the interagency coordination committee for contraceptive security which is specific to Family Planning commodities. While the family planning logistics coordination committee remained functional in both FY18 and FY19, the one for all commodities did not perform as strongly as it did in FY 2018. This is because some planned meetings for the year were missed and it was not as active as the previous year.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	3%	30
Family Health Division, GHS	0%	1
National Aids Control Program	0%	2
National Malaria Control Program	0%	1
SSDM, GHS	4%	26
Subnational level 1	11%	38
Regional Health Administration	11%	38
Subnational level 2	2%	283
Regional Medical Stores	2%	283
Total	3%	351

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	50%	10
Crosscutting	20%	5
TO1-HIV/AIDS	50%	2
TO2-Malaria	100%	1
TO3-PRH	100%	1
TO4-MCH	100%	1
Subnational level 1	16%	38
Crosscutting	16%	38
Total	23%	48

Ref Analysis

B11 At the central level, one cross-cutting position changed from being held by a woman in FY18 to being held by a man in FY19.

B9 In Ghana, there were 391 supply chain technical workers at the start of FY19, of which 10 workers left the health labor force during the year.

Commodity Funding

FY
2019

Country
Ghana

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
Family Planning and Reproductive Health	\$0	0%	\$0	0%	\$4,646,296	67%	\$2,301,888	33%	\$6,948,184
HIV/AIDS	\$62,370	1%	\$4,030,842	68%	\$1,846,195	31%	\$0	0%	\$5,939,407
Malaria	\$1,600,000	9%	\$8,119,003	44%	\$8,800,500	48%			\$18,519,503

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

The other funding sources for family planning commodities are UNFPA and WAHO.

B8. Supply Chain Technical Independence

FY

2019

Country

Ghana

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Ghana

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

13

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

In Ghana, GHSC-PSM is targeting 13 supply chain activities to achieve technical independence by the end of the project. The targeted activities represent a wide swath of supply chain technical functions, ranging from strategic planning, forecasting, nuts-and-bolts logistics, the maintenance of information systems, and the use of data for decision-making. At this stage of the project, none of the targeted activities have yet achieved technical independence, although several have key capacity elements in place and notable progress has been achieved in areas such as FASP. In most areas, the relevant teams, divisions, or units at the Ministry of Health are active participants in the targeted activities, with ongoing GHSC-PSM technical contributions. Using indicators to monitor performance is an example of an area where the project is actively working to build capacity. A draft M&E framework has been developed, which, once institutionalized, will help move the MOH toward standardization for M&E activities and support performance monitoring across activities in other technical areas.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	National Quantification Team	Integrated	Yes; Moderate contribution	Yes; Moderate contribution	No; Limited contribution	Yes; Moderate contribution	No; Major contribution	Participant	No
	Develop/update supply plan	National Quantification Team	Integrated	Yes; No contribution	Yes; Moderate contribution	No; Limited contribution	Yes; Limited contribution	No; Major contribution	Participant	No
	Monitor the commodities pipeline	National Quantification Team	Integrated	No; No contribution	No; Moderate contribution	No; Limited contribution	Yes; Limited contribution	No; Major contribution	Participant	No
Governance and Financing	Manage logistics management committee	Ghana Health Service	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Limited contribution	Yes; No contribution	No; Moderate contribution	Participant	No
Strategy and Planning	Manage implementation of a supply chain master plan	Procurement and Supply (P&S) Directorate, MoH	Integrated	No; No contribution	No; Moderate contribution	No; No contribution	No; Limited contribution	No; Limited contribution	Participant	No
Transportation and Distribution	Distribution to service delivery points	Supplies, Stores and Drug Management Division Ghana Health Service	Integrated	No; Major contribution	No; Moderate contribution	No; Moderate contribution	No; Limited contribution	No; Major contribution	Participant	No
Warehousing and Inventory Management	Monitor inventory levels	Supplies, Stores and Drug Management Division Ghana Health Service	Integrated	Yes; No contribution	No; Moderate contribution	Yes; No contribution	Yes; No contribution	No; Moderate contribution	Participant	No

B8. Supply Chain Technical Independence

FY

2019

Country

Ghana

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

13

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

In Ghana, GHSC-PSM is targeting 13 supply chain activities to achieve technical independence by the end of the project. The targeted activities represent a wide swath of supply chain technical functions, ranging from strategic planning, forecasting, nuts-and-bolts logistics, the maintenance of information systems, and the use of data for decision-making. At this stage of the project, none of the targeted activities have yet achieved technical independence, although several have key capacity elements in place and notable progress has been achieved in areas such as FASP. In most areas, the relevant teams, divisions, or units at the Ministry of Health are active participants in the targeted activities, with ongoing GHSC-PSM technical contributions. Using indicators to monitor performance is an example of an area where the project is actively working to build capacity. A draft M&E framework has been developed, which, once institutionalized, will help move the MOH toward standardization for M&E activities and support performance monitoring across activities in other technical areas.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
MIS	Manage user helpdesk and provide system training	Supplies, Stores and Drug Management Division Ghana Health Service	Integrated	No; Limited contribution	Yes; No contribution	No; No contribution	Yes; No contribution	No; No contribution	Observer	No
	System administration - warehouse management system	Supplies, Stores and Drug Management Division Ghana Health Service	Integrated	Yes; Limited contribution	No; Moderate contribution	Yes; Moderate contribution	Yes; No contribution	No; Moderate contribution	Participant	No
	System administration - logistics management information system	Supplies, Stores and Drug Management Division Ghana Health Service	Integrated	No; Moderate contribution	No; No contribution	No; No contribution	No; No contribution	No; No contribution	Participant	No
Monitoring and Evaluation	Facilitate active use of data for supply chain management decision making	Ministry of Health and Ghana Health Service	Integrated	No; Limited contribution	No; No contribution	No; No contribution	No; No contribution	No; Moderate contribution	Observer	No
	Conduct ongoing data quality assurance	Ministry of Health and Ghana Health Service	Integrated	No; No contribution	No; No contribution	No; Limited contribution	No; Limited contribution	No; Moderate contribution	Observer	No
	Collect and report supply chain performance indicators	Ministry of Health and Ghana Health Service	Integrated	No; Major contribution	No; Major contribution	No; No contribution	No; No contribution	No; Major contribution	Observer	No

Complete Results and Denominators

Country

FY Quarter

Ghana

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO3-PRH	5.7%	22,277
Female condoms (FP)	27.8%	784
Male condoms (FP)	7.3%	2,374
Copper-bearing IUD	27.2%	606
Progestin only pills	10.7%	1,543
2-rod implant	2.6%	3,577
1-rod implant	3.1%	3,324
DMPA-Intramuscular injectable	1.7%	4,734
NET-En Injectable	3.9%	3,167
Combined oral contraceptive with iron	6.6%	2,168
TO2-Malaria	57.7%	1,110
LLINs	8.9%	101
SP	17.0%	100
mRDT	12.9%	101
AS/AQ 50/135mg	77.2%	101
AS/AQ 25/67.5mg	81.2%	101
AS/AQ 100/270mgx6	90.1%	101
AS/AQ 100/270mgx3	97.0%	101
AL 6x4	17.8%	101
AL 6x3	96.0%	101
AL 6x2	63.4%	101
AL 6x1	73.3%	101
TO1-HIV/AIDS	16.7%	5,323
Female condoms (HIV)	27.8%	784
Male condoms (HIV)	7.3%	2,374
Second RTK	16.6%	433
First RTK	17.1%	433
Pediatric ARV	28.2%	433
2nd line adult ARV	43.6%	433
1st line adult ARV	8.8%	433
Total	9.4%	25,552

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	11.9%	101
TO3-PRH		
Combined oral methods	6.6%	2,168
Injectable contraceptives	1.6%	4,905
Implantable contraceptives	1.8%	4,111
Progestin-only methods	10.7%	1,543

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
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B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	23%	49%	8%	20%	75
TO1-HIV/AIDS	57%	33%	0%	10%	21
TO2-Malaria	3%	47%	13%	37%	30
TO3-PRH	33%	53%	7%	7%	30
Subnational level 1	17%	37%	13%	33%	750
TO1-HIV/AIDS	22%	53%	7%	18%	210
TO2-Malaria	14%	19%	18%	50%	300
TO3-PRH	14%	51%	11%	23%	300
Total	17%	38%	12%	32%	825

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Total
Total	

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	0
Condoms	1	1
FP commodities	1	1
Lab (HIV diagnostics)	1	0
Malaria commodities	1	1
RTKs	1	0

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
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For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Guinea



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Guinea

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	3,362	6.4%
AL 6x1	487	7.0%
AL 6x2	461	21.7%
AL 6x3	488	5.9%
AL 6x4	488	5.3%
AL inability to treat	489	1.6%
mRDT	489	2.9%
SP	460	1.1%
Total	3,362	6.4%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	2,392	11.8%
Combined oral contraceptive with iron	389	14.9%
DMPA-Intramuscular injectable	401	19.0%
2-rod implant	420	11.0%
Progestin only pills	358	14.2%
Copper-bearing IUD	397	5.3%
Male condoms (FP)	427	7.3%
Total	2,392	11.8%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO2-Malaria	522	98%
TO3-PRH	466	97%
Total	988	97%

Ref Analysis

B1 Guinea's overall stockout rate for TO2 has gone up slightly from last quarter, from 5.5% in FY19 Q3 to 7.2% in FY19 Q4. TO3, on the other hand, has improved significantly, from 19% in FY19 Q3 to 11.8% in FY19 Q4. The trends in overall stockout rate over FY19 show a steady progress toward the LOP targets of 4% and 10% defined for TO2 and TO3, respectively. Health facilities have continued to consistently submit their orders ahead of the distribution cycles as shown by the analyses of the FY19 Q4 order submissions. In fact, more than 89% of malaria orders and 50%+ of FPRH orders were submitted, analyzed and treated by the regional Pharmacie Centrale de Guinee (PCG) depots. The higher number of orders submitted ahead of the distribution cycle made it possible for the regional depots to fulfill health facility orders on time and prevent/minimize potential stockouts. TO2: The "inability to treat rate" also increased from 1.0% to 1.6% over the same period. The slight decrease in performance of this indicator for TO2 is mainly driven by increased stockout of AL 6x2. This was due to lower availability of this product at the central level which resulted in sub-optimal filling of orders of health facilities, especially during the period of July – September 2019, which coincides with the high-transmission season and higher demand and consumption of malaria commodities. TO3: Improvement in the TO3 stockout rate stems from higher availability of contraceptives at both the central and regional levels, which made it possible for the regional depots to adequately fill FY19 Q4 orders for health facilities. Recommendations have gone out to CRS to speed up delivery of 120,000 blisters of AL 6X2 which was in Pipeline. Other recommendations include efforts to align the ordering cycles of both malaria and FPRH commodities, and deploy strategies to increase the percentage of FPRH orders that are submitted within the ordering timeline, i.e., ahead of the distribution cycle.

B3 Although the overall LMIS reporting rate shows a slight decrease from 98% in FY19 Q3 to 97% in FY19 Q4, the performance by specific TO has remained consistent over the previous quarters and is close to the LOP target of 100% for TO2 and 98% for TO3 throughout the FY.

TO2: The slight performance decrease in reporting LMIS data is due to the migration from the NMCP database to eLMIS. This process involved health facilities moving from reporting LMIS data into the NMCP-owned database to keying malaria LMIS data into the eLMIS at the district level. The change entailed adding new private clinics to the eLMIS database and will require training of new eLMIS users from these clinics on the use of eLMIS database. TO3: Similarly, TO3 LMIS data are associated with the upgrades to the eLMIS, which included adding new health facilities to the database. Staff from these health facilities have yet to receive training on the use of eLMIS. Both changes to the TO2 and TO3 LMIS data reporting brought minor challenges to the reporting function because the newly added private clinics have been slow over the first months to adopt the eLMIS system.

Warehouse stock status and product losses

Country

Guinea

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	12		25%	25%	50%
TO2-Malaria	6		50%	50%	
TO3-PRH	6				100%
Subnational level 1	72		46%	25%	29%
TO2-Malaria	36		36%	33%	31%
TO3-PRH	36		56%	17%	28%
Total	84		43%	25%	32%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

B2 In general, Guinea improved its performance on this indicator. Results at both the central and regional levels show that TO2 products that were stocked according to plan increased slightly, from 24% in FY19 Q3 to 36% in FY19 Q4. Nonetheless, TO3 SAP products decreased from 21% in FY19 Q3 to 14% this quarter at both supply chain levels. There was a significant improvement in overstocked products for TO2 which went from 40% in FY19Q3 to 26% this quarter at both supply chain levels. Understocked products increased from 26% for TO2 and 17% for TO3 in FY19Q4 to 38% for TO2 and 48% for TO3 at both supply chain levels. This overall performance is attributed to the continuous support provided by GHSC-PSM regional staff to the PCG depots to strengthen the quarterly stock assessments and monitoring of stock statuses. Results from these analyses are used to inform the calculations of resupply quantities, which the central warehouse fills ahead of the distribution cycles. When disaggregated by TO and by supply chain level the data show that most AL formulations are understocked at the central level at 75%, indicating the need for mandatory delivery of shipments on order over the next three months to fill the national malaria pipeline with adequate supply levels. The data indicate that most TO3 commodities are overstocked, and this is mostly predominant at the central level. This situation is a result of the arrival of huge quantities of commodities purchased by the GoG which was delivered in bulk rather than staggered shipments as suggested in the approved supply plan. Furthermore, as opposed to TO2, systematic pre-positioning of TO3 stocks within regional depots isn't effective, which explains why the regional level was understocked for most contraceptive products.

Supply plans, innovations, and strategic activities

Country

Guinea

FY Quarter

2019-Q4

Total Innovations implemented this quarter

New technologies
2

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
Crosscutting	New technologies	GHSC-PSM supported the MoH to complete the design and successfully test the interoperability system which connects both DHIS2 (HIS) and eSIGL Guinea (eLMIS) and allows data transfer and triangulation to support informed decision making.
TO2-Malaria	New technologies	GHSC-PSM assisted the MoH to develop a digital map of all pharmacy institutions using the GPS technology which captures the geographic coordinates and key regulatory data of all surveyed pharmacies. This map will be regularly updated and used to reform the Guinean private pharmaceutical sector.

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
Condoms	Yes
FP commodities	Yes
Malaria commodities	Yes

Analysis

GHSC-PSM FY19 FASP interventions have consisted of developing country technical expertise to maintain and improve FASP practice. This included conducting systematic quarterly reviews and updates to the supply plan of malaria and FPRH commodities using the Pipeline tool. These reviews involve updating the Pipeline database with most up-to-date related to stock on hand, consumption, shipment, expiries and losses and making adjustments to the supply plan to ensure optimal deliveries of planned shipments so that the program can consistently maintain adequate levels of stock (i.e., between the predefined minimum and maximum levels).

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description

GHSC-PSM supported the MoH to review and update the SOP for integrated logistics management of health commodities (2016 version). This review involved updating the facility list, the commodity list, adapting the minimum/maximum levels to the feedback from LMIS users and adding a standard supervision tool. The Minister of Health has validated and endorsed this document. GHSC-PSM provided technical assistance to the MOH to develop and validate the guidelines for registration of pharmaceutical products in Guinea. The application of the guidelines will enable the harmonization of the registration practices of medical products in Guinea to that of ECOWAS, reduce the time and resources required to compile applications for the registration of pharmaceutical products, and facilitate the preparation of electronic submissions. The project assisted the MoH with the development of a procedures manual for the operation and administration of the interoperability system. This system was designed to consolidate the MoH information systems by allowing LMIS data transfer into DHIS2 and triangulation of HMIS/LMIS data to optimize decision making around service delivery in health facilities.

Training for supply chain partners

Country

Guinea

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Female	8	6	7	21
Male	36	26	36	98
Total	44	32	43	119

C2. Number of people trained by supply chain level

Supply Chain Level	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Central	32	21	32	85
Subnational level 1	12	11	11	34
Total	44	32	43	119

C2. Number of people trained by funding source and type

Type	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Cross-TO	44	32	43	119
Total	44	32	43	119

C2. Number of people trained by technical area

Supply Chain Function	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Forecasting and Supply Planning	9	3	10	22
Human Resources Capacity Development	4	2	5	11
MIS	31	27	28	86
Total	44	32	43	119

Analysis

The trainings conducted in this quarter have covered three supply chain functional areas: MIS, FASP and HRCD. The trainings took place at both the central level as well as subnational level 1. In total there were 119 participants at these trainings, 21 women and 98 men. The total number of people trained by TO was comparable, with 44 participants under TO2, 32 under TO3 and 43 under TO4. The MIS trainings attracted the most participants, a total of 86 from the central and subnational levels. The MIS training consisted of introducing 52 central-level staff to the revised SOP for integrated logistics management of health commodities. These staff will in turn serve as trainers to roll out the trainings of health facility staff and dissemination of SOPs in all eight regions of Guinea. The FASP training focused on refreshing the knowledge of the FPRH_PSM-TWG on the quantifications processes and tools to enhance their capabilities in quantification of FPRH commodities. The HRCD training was conducted under a partnership with two main teaching universities of Guinea (University of Gamal Abdel Nasser of Conakry – UGANC and University of Kofi Annan of Guinea – UKAG) in the move by the MoH and USAID to create a local supply chain training program to benefit existing and future supply chain staff. GHSC-PSM facilitated a workshop with 10 teaching staff to design and validate a short-course supply chain training module and trained the 10 staff on this module. The trained personnel will apply and replicate their new knowledge and skills by training 5th grade pharmacy students of UGANC and UKAG as well as addressing in-service training on an as-needed basis.

Average Rating of In-country Data Confidence

Task Order

All

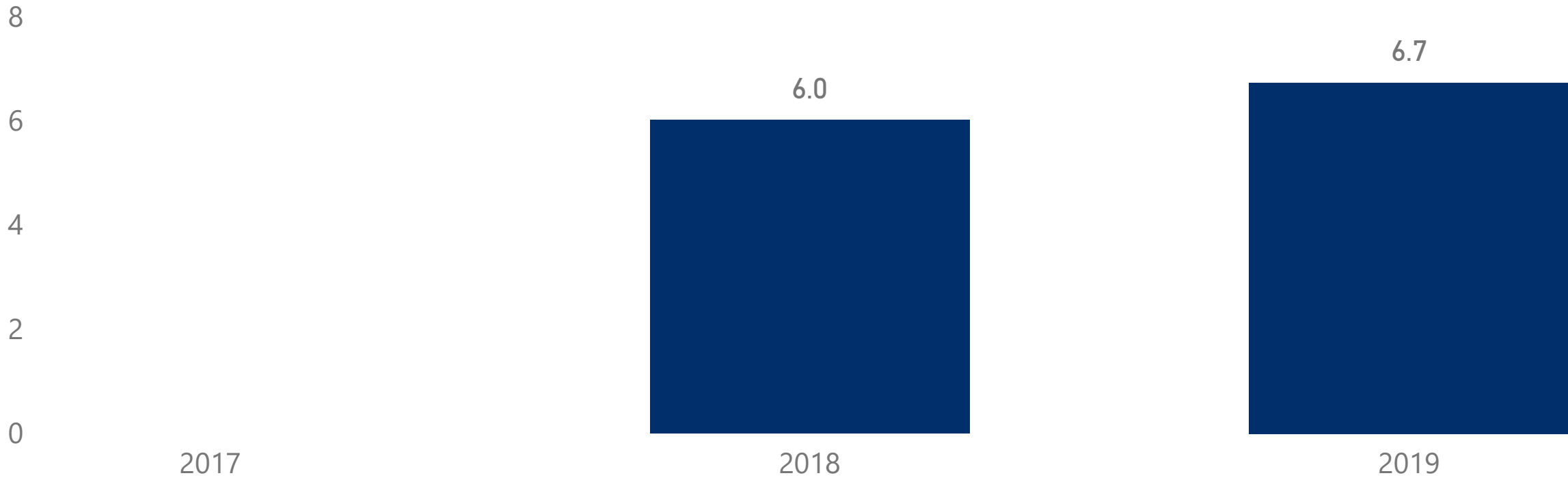
Supply Chain Level

All

Country

Guinea

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	1.8	1.9	2.3
2019	2.1	1.9	2.8

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Subnational level 1		
TO2-Malaria	7.0	6
TO3-PRH	5.7	6
SDP		
TO2-Malaria	7.1	25
TO3-PRH	6.6	25

Analysis

In September 2019 in Guinea, GHSC-PSM supported the implementation of a DQA where a total of 25 health facilities and 7 warehouses (regional and central level) were surveyed throughout the regions of Boke, Conakry, Faranah, Kankan, Kindia, Labe, Mamou and Nzerekore. The sampling strategy included a random sample based on a standardized GHSC-PSM sampling strategy. The DQA was conducted through Android tablets using the data collection software, SurveyCTO. GHSC-PSM staff from the regional field offices collected data. To prepare for this role, they were trained on the new survey tool, as well as on data collection best practices. During the DQA, the Guinea technical advisor was in regular contact with the M&E specialists at GHSC-PSM HQ to provide support during data collection and data analysis. Overall, the results of the DQA showed that the level of data quality and data confidence was "good" or equal to a rate of 6.7/9. The quality of TO2 products at the subnational level 1 (regional and central warehouses) was assessed to be good at a rate of 7/9. This is similar to the rate at the SDP level for TO2, which was at 7.1/9. The performance for TO3 at the subnational level 1 was lower at 5.7/9 and slightly higher for TO3 at SDPs at 6.6/9.

Annual Forecasts

FY

2019

Country

Guinea

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
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B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL 6x1	16.8%	+
AL 6x2	7.1%	+
AL 6x3	2.3%	-
AL 6x4	6.4%	-
mRDT	7.0%	+
SP	4.4%	-

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral contraceptive with iron	123.0%	-
Injectable contraceptives	49.3%	-
DMPA-Intramuscular injectable	49.3%	-
Implantable contraceptives	21.4%	-
2-rod implant	21.4%	-
Progestin only pills	42.3%	-
Copper-bearing IUD	1.5%	+
Male condoms (FP)	16.6%	-

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

Ref Analysis

B5 This FY, Guinea conducted annual forecasts and supply plans for condoms, which they had not done in FY18. All annual forecasts were sent to GHSC-PSM's HQ this year. GHSC-PSM FY19 forecasting and supply planning (FASP) interventions have consisted of developing country technical expertise to maintain and improve FASP practice. This involved supporting both the NMCP and FPRH Directorate to conduct systematic annual quantification exercises. In June 2019, GHSC-PSM supported the NMCP to conduct the annual quantification exercise which led to the review/update of the 2018 forecast and establishment of a three-year malaria forecast for the 2019 – 2021 period.

B12 TO2: The annual performance data show an average annual consumption forecast error of approximately 7%. This strong performance stems from the fact that the forecast of malaria commodity requirements for the previous two years has been based on consumption data. The maturity of the LMIS system has improved data completeness and reliability. TO3: The data show a poor performance with the average annual consumption forecast error of approximately 42%. This can be explained by the fact that the quantification practice is new to the FPRH program and that consumption data is mostly of poor quality. The forecast of requirements has so far been done based on morbidity data which may explain this significant variance.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
Condoms	Yes
FP commodities	Yes
Malaria commodities	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Guinea

B10. Is there a functional logistics coordination mechanism in place?

TO2-Malaria	Yes
TO3-PRH	No

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO2-Malaria	8.0	8.0
TO3-PRH	6.8	4.0

Ref Analysis

B10 Similar to FY2018, a functional logistics coordination mechanism is in place for TO2, which received a score of 8; yet this is not in place for TO3, which received a score of 4. While a logistics management unit (LMU) is mandated to organize and coordinate the supply chain interventions and stakeholders, this unit has yet to serve this function because it lacks strong back end support from the senior MoH leadership. Consequently, the coordination mechanism is not optimally functional. Root causes of this include governance inefficiencies that are internal to the DNPM. However, sub-coordination mechanisms exist at the program level where the NMCP has a procurement and supply management TWG. This TWG is mandated to coordinate on all supply chain aspects related to the malaria program including quantification, inventory management, distribution, LMIS and capacity-building. A similar group for the FPRH commodities is being formalized this year through the adoption of terms of reference which assign membership, objectives, TWG activities, and roles and responsibilities of the various FPRH stakeholders involved.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Total		

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	38%	16
Crosscutting	30%	10
TO2-Malaria	0%	3
TO3-PRH	100%	3
Subnational level 1	33%	6
Crosscutting	33%	6
Total	36%	22

Ref Analysis

B11 The percentage of supply chain leadership positions held by women in FY19 was higher at the central level than at the subnational level 1. Across TO2 and TO3 (cross cutting), it was at 30%, and for TO3 100%. Similarly at the subnational level 1, across TO2 and TO3 it was 33%. This is an improvement from last FY where there were no supply chain leadership positions held by women at the subnational level, and the highest percentage at the central level across TO2 and TO4 was 21%.

Commodity Funding

FY
2019

Country
Guinea

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
Family Planning and Reproductive Health	\$1,419,213	21%	\$0	0%	\$531,448	8%	\$4,853,454	71%	\$6,804,115
Malaria	Not Available		\$5,193,973		\$5,244,468		Not Available		Not Available

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

Health commodities were reported using the budgeted funds from all four levels of funding sources, including USG, the Global Fund, host government and other sources, where "other" represents funding from UNFPA. Funding sources for TO2 include Global Fund and USG, and for TO3 host government, USG and UNFPA ("other"). As with many other countries, Guinea has joined several global health initiatives such as the Universal Health Coverage, Global agendas, FP2020. Guinea's adherence to these initiatives is demonstrated through the increase of the health allocation out of the total national budget, which has consistently increased since 2012, from 2% then to 5% in 2015 and 8% in 2017. This has enabled the government to fund more health activities, specifically procurements of malaria and FPRH commodities. For instance, after the FP2020 London summit, the GoG funded FP commodities under the FP2020 initiative/commitment. We can see these efforts reflected in the government funding for this period.

B8. Supply Chain Technical Independence

FY

2019

Country

Guinea

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Guinea

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

14

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

PSM Guinea selected up to fourteen activities for technical independence by 2023. Of these activities none have reached technical independence, thus do not meet the criteria of having the five capacity elements in place and having the MOH be the primary technical implementer. The capacity elements for these selected activities show trends worth noting. For almost all of the activities (13/14), there is a document that assigns responsibility to the designated entities and about half of the activities (7/14) have standardized SOPs in place. However, no activities have a training approach in place as well as no performance indicators and approximately half have other resources in place. The host country entity is listed as the primary technical implementer under five activities under warehousing and inventory management, transportation and distribution and governance and financing. Nonetheless, these selected activities do not have all five capacity elements in place. Additionally, a grand majority of the activities are financed through donor funding (10/14), while only a select few are financed through host country funding. Finally, the majority of activities (11/14) would have to either scale back operations due to lack of financing, or the host entity would not be able to implement the activity at all.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	PNLP	Malaria	Yes; Major contribution	No; Major contribution	No; Major contribution	No; No contribution	No; Major contribution	Participant	No
	Develop/update supply plan	PNLP	Malaria	Yes; Major contribution	No; Major contribution	No; Major contribution	No; No contribution	No; Major contribution	Participant	No
	Monitor the commodities pipeline	PNLP	Malaria	Yes; Major contribution	No; Major contribution	No; Major contribution	No; No contribution	No; Major contribution	Participant	No
Governance and Financing	Manage logistics management committee	DNPM	Integrated	Yes; Major contribution	No; Major contribution	No; Major contribution	No; No contribution	No; Major contribution	Primary technical implementer	No
Human Resources Capacity Development	Implement supply chain management pre-service curriculum	DNPM	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	Yes; No contribution	No; Major contribution	Participant	No
Transportation and Distribution	Select and pack commodities for distribution ('pick and pack')	PCG	Integrated	Yes; Moderate contribution	Yes; Moderate contribution	No; Moderate contribution	Yes; Moderate contribution	No; Limited contribution	Primary technical implementer	No
Warehousing and Inventory Management	Monitor inventory levels	PCG	Integrated	Yes; Moderate contribution	No; Moderate contribution	No; Moderate contribution	Yes; Moderate contribution	No; Major contribution	Primary technical implementer	No
	Put away commodities	PCG	Integrated	Yes; Limited contribution	Yes; Limited contribution	No; No contribution	Yes; No contribution	No; No contribution	Primary technical implementer	No
	Receive commodities	PCG	Integrated	Yes; Limited contribution	Yes; Limited contribution	No; No contribution	Yes; No contribution	No; Limited contribution	Primary technical implementer	No

B8. Supply Chain Technical Independence

FY

2019

Country

Guinea

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

14

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

PSM Guinea selected up to fourteen activities for technical independence by 2023. Of these activities none have reached technical independence, thus do not meet the criteria of having the five capacity elements in place and having the MOH be the primary technical implementer. The capacity elements for these selected activities show trends worth noting. For almost all of the activities (13/14), there is a document that assigns responsibility to the designated entities and about half of the activities (7/14) have standardized SOPs in place. However, no activities have a training approach in place as well as no performance indicators and approximately half have other resources in place. The host country entity is listed as the primary technical implementer under five activities under warehousing and inventory management, transportation and distribution and governance and financing. Nonetheless, these selected activities do not have all five capacity elements in place. Additionally, a grand majority of the activities are financed through donor funding (10/14), while only a select few are financed through host country funding. Finally, the majority of activities (11/14) would have to either scale back operations due to lack of financing, or the host entity would not be able to implement the activity at all.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
MIS	System administration - stock/inventory management	PCG	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	No; Major contribution	No; No contribution	Participant	No
	System administration - warehouse management system	PCG	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	No; Major contribution	No; No contribution	Participant	No
	System administration - logistics management information system	MOH	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	No; Major contribution	No; Major contribution	Participant	No
Monitoring and Evaluation	Facilitate active use of data for supply chain management decision making	DNPM	Integrated	Yes; Major contribution	No; Major contribution	No; Major contribution	No; No contribution	No; Moderate contribution	Participant	No
	Collect and report supply chain performance indicators	DNPM	Integrated	No; Major contribution	No; Major contribution	No; Moderate contribution	Yes; No contribution	No; Major contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Guinea

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO3-PRH	11.8%	2,392
Male condoms (FP)	7.3%	427
Copper-bearing IUD	5.3%	397
Progestin only pills	14.2%	358
2-rod implant	11.0%	420
DMPA-Intramuscular injectable	19.0%	401
Combined oral contraceptive with iron	14.9%	389
TO2-Malaria	7.2%	2,873
SP	1.1%	460
mRDT	2.9%	489
AL 6x4	5.3%	488
AL 6x3	5.9%	488
AL 6x2	21.7%	461
AL 6x1	7.0%	487
Total	9.3%	5,265

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	1.6%	489
TO3-PRH		
Combined oral methods	14.9%	389
Injectable contraceptives	19.0%	401
Implantable contraceptives	11.0%	420
Progestin-only methods	14.2%	358

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO2-Malaria	98%	522
TO3-PRH	97%	466

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	25%	50%	25%		12
TO2-Malaria	50%		50%		6
TO3-PRH		100%			6
Subnational level 1	25%	29%	46%		72
TO2-Malaria	33%	31%	36%		36
TO3-PRH	17%	28%	56%		36
Total	25%	32%	43%		84

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO2-Malaria	8	36	44
TO3-PRH	6	26	32
TO4-MCH	7	36	43
Total	21	98	119

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
Condoms	1	1
FP commodities	1	1
Malaria commodities	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Haiti



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Haiti

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	856	0.9%
1st line adult ARV	136	0.7%
2nd line adult ARV	136	0.0%
Pediatric ARV	136	2.2%
First RTK	136	0.0%
Second RTK	136	2.9%
Male condoms (HIV)	176	0.0%
Total	856	0.9%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	1,056	0.1%
Combined oral contraceptive with iron	176	0.6%
DMPA-Intramuscular injectable	176	0.0%
2-rod implant	176	0.0%
Copper-bearing IUD	176	0.0%
Calendar-based awareness methods	176	0.0%
Male condoms (FP)	176	0.0%
Total	1,056	0.1%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	154	97%
TO3-PRH	219	93%
Total	373	95%

Ref Analysis

B1	Stockout rates for both HIV/AIDS and FP/RH commodities remained overall at or below one percent this quarter, with a slight uptick in stockouts of HIV/AIDS commodities, including first-line adult ARVs (0.7 percent of SDPs stocked out), pediatric ARVs (2 percent), and second RTKs (3 percent). Among the reasons for the stockouts of pediatric ARVs was a doubling in the number of patients on this regimen in August, while simultaneously there was a stockout at the central warehouse. Given the multi-month dispensing, no current patients were affected in August; however, it has yet to be determined if this affected any new patients in the following months. An order of Dolutegravir (DTG/3TC/TDF 50/300/300 mg) that was prepared and picked up by the Health Facilities Implementing Partners Network never arrived at the destination, which was discovered during the reporting period. This incident is being followed up. RTK stockouts occurred due to an unanticipated uptick in consumption, due to an increase in positive cases for the month, and no subsequent order request from several sites. GHSC-PSM's validation team will discuss these ordering challenges with the central GHSC-PSM supply chain monitors related to several problem sites.
B3	Reporting rates this quarter dipped slightly for both HIV/AIDS commodities (from 100% to 97%) and FP/RH commodities (from 100% to 93%). Timeliness also decreased slightly. These problems may be related to the deteriorating security situation in the country, which has hampered the project's ability to conduct site visits.

Warehouse stock status and product losses

Country

Haiti

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	36	6%	45%	27%	21%
TO1-HIV/AIDS	18	11%	56%	33%	
TO3-PRH	18		28%	33%	39%
Total	36	6%	45%	27%	21%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
TO1	Central	Storage	Expiry	ARVs, RTKs, laboratory, opportunistic infection	\$45,744	\$10,085,571	0.45%

Ref Analysis

- C7 **▲** Out of the average inventory balance for HIV/AIDS commodities Haiti stored in the central warehouse this quarter, 0.5% expired, down from 0.8% last quarter. These products included ARVs, RTKs, laboratory reagents and consumables, and opportunistic infections commodities. There were no expiries or other loss of FP/RH commodities. The project has been steadily reducing expiries through a strategy of continuing to analyze products close to their expiration date and offering them to large hospitals that can make use of them.
- B2 There was a reduction this quarter in the percentage of HIV/AIDS commodities stocked according to plan, from 44% to 33%, while understocking and stockouts increased. There was a stockout of pediatric ARVs and second-line adult ARVs. Second-line ARVs faced understocking and a stockout due to the introduction of multi-month dispensing in April, when sites were allocated with 7.5 months of stock. With this new protocol in place, consumption gradually increased. The current pediatric ARV tracer commodity, ABC/3TC 60/30mg, faced a stockout this quarter because it is in the process of being phased out and replaced with ABC/3TC 120/60mg. The orders of the old product have been canceled. FP/RH products were mostly overstocked (39%) or stocked according to plan (33%) with no stockouts this quarter. Injectable contraceptives were understocked during one month due to a quarantine of some stock in June due to labeling problems.

Supply plans, innovations, and strategic activities

Country

Haiti

FY Quarter

2019-Q4

Total Innovations implemented this quarter
0

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
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There are no new innovations to report this quarter

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
MCH commodities	Yes
RTKs	Yes

Analysis

Supply plans for all six required commodity groups were updated this quarter and shared with the home office forecasting and supply planning team.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
 GHSC-PSM continued to support the Ministry of Health's Department of Pharmacy, Medicine, and Traditional Medicine (DPMMT) in its implementation of the National Supply Chain Strategic Plan (SNADI), including: pre-testing the integrated LMIS paper tools in the Western Health Department along with WHO, UNFPA, Global Fund, and other USAID partners, developing content for a training-of-trainers on the LMIS tools, conducting a preliminary evaluation of the SNADI transition plan, developing a draft monitoring and evaluation plan for the SNADI, and developing a draft national distribution strategy for SNADI.

Training for supply chain partners

Country

Haiti

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	Total
Female	29	29
Male	17	17
Total	46	46

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	Total
SDP	46	46
Total	46	46

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	Total
TO-specific	46	46
Total	46	46

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	Total
Quality Assurance	46	46
Total	46	46

Analysis

As part of a capacity building initiative for users of SYSMEX HIV/AIDS lab equipment, GHSC-PSM, together with the MOH (MSPP) and the National Public Health Laboratory (LNHP), conducted eight training sessions in six departments to strengthen the capacity of lab technicians, reduce the frequent outages of SYSMEX machines, and optimize usage of the machines for better results. Forty-six people participated in these trainings, including 29 women and 17 men.

Molecular Instruments and HIV Tracer Products

Country

Haiti

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

100%

Analysis

All eight GHSC-PSM-supported molecular instruments remained functional for the entire quarter.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	TDF/3TC/EFV 300/300/600 mg
2nd line adult ARV	ATV/r 300/100 mg
Pediatric ARV	AZT/3TC/NVP 60/30/50 mg
First RTK	Determine
Second RTK	Uni-Gold
Tie-breaker RTK	Not reported
Viral load reagent	Not reported
Viral load consumable	Not reported
EID reagent	Not reported
EID consumable	Not reported

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

Supply Chain Level

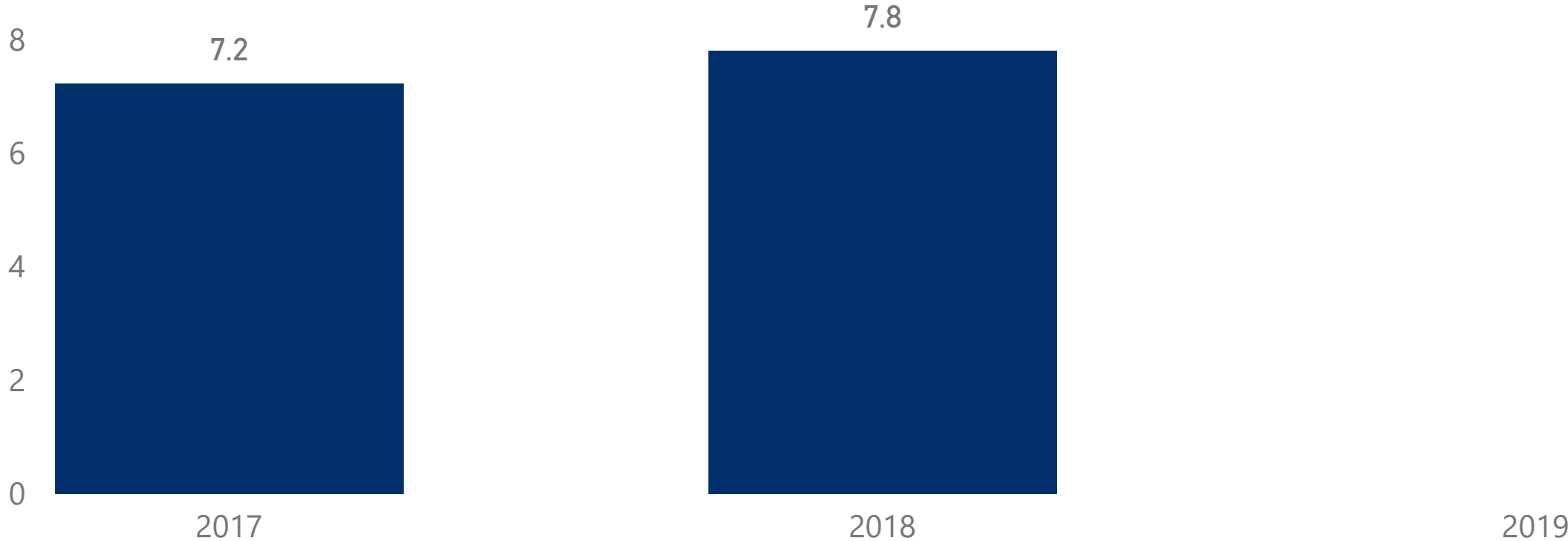
Country

All

All

Haiti

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	2.2	2.8	2.8
2019			

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

Data Confidence Rating Breakdown by Supply Chain Level

FY	Supply Chain Level	Overall data quality rating	Total # of sites rated
2019			

Analysis

The data quality assessment activity could not be completed as planned this year, due to the security situation in the country that is hampering the project's ability to travel to sites.

Annual Forecasts

FY

2019

Country

Haiti

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	17.2%	-
2nd line adult ARV	0.8%	+
Pediatric ARV	6.2%	-
First RTK	52.0%	-
Second RTK	2.0%	-
Male condoms (HIV)	19.5%	-

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
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B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral contraceptive with iron	14.4%	-
DMPA-Intramuscular injectable	10.4%	-
2-rod implant	3.7%	-
Copper-bearing IUD	145.5%	-
Calendar-based awareness methods	169.0%	-
Male condoms (FP)	19.5%	-

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

Ref Analysis

B5	Quantification activities for lab, RTKs, ARVs and MNCH all were conducted, but due to security disruptions that have closed the project office on a number of occasions this quarter, the data are still being processed. Forecasts for condoms and FP commodities were not conducted this quarter.
B12	Levels of forecast error for HIV/AIDS commodities remain low. Only one product, first RTKs, had an error rate of above 50 percent (52 percent). For family planning commodities, however, copper-bearing IUDs and calendar-based awareness methods both had error rates over 100 percent (145 and 169 percent, respectively).

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
Condoms	No
FP commodities	No
Lab (HIV diagnostics)	Yes
MCH commodities	Yes
RTKs	Yes

Workforce, Leadership, and Governance

FY
2019

Country
Haiti

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS	Yes
TO3-PRH	Yes
TO4-MCH	No

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	8.0	8.0
TO3-PRH	5.0	10.5
TO4-MCH		6.0

Ref Analysis

B10 The logistics coordination mechanisms in Haiti that manage HIV/AIDS and FP/RH commodities continued to be assessed as functional this year, scoring an 8 and 10.5 out of 11, respectively. The MNCH coordination mechanism only scored a 6, however, and was not yet deemed functional. Its terms of reference are still being developed, it only meets twice a year rather than the recommended four times, and it is just beginning to develop and implement policies, procedures and/or action plans.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Total		

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Total		

Ref Analysis

B11 This indicator is not collected in Haiti for lack of visibility.
B9 This indicator is not collected in Haiti for lack of visibility.

Commodity Funding

FY
2019

Country
Haiti

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
▲ Family Planning and Reproductive Health	\$0	0%	\$0	0%	\$2,575,263	70%	\$1,099,727	30%	\$3,674,990
HIV/AIDS	\$0	0%	\$4,416,807	27%	\$11,741,404	73%	\$0	0%	\$16,158,211

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

The U.S. government (USG) contributed to 73% of commodity spending for HIV/AIDS commodities, while Global Fund contributed the remaining 27%. The government of Haiti does not contribute to HIV/AIDS or FP/RH commodity procurement. For FP/RH, the USG contributed 70%, while UNFPA ("other") contributed 30%.

B8. Supply Chain Technical Independence

FY

2019

Country

Haiti

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Haiti

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

3

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

GHSC-PSM Haiti and the USAID Mission have targeted three activities for technical independence: managing implementation of a supply chain master plan, developing an annual forecast, and MIS system administration – LMIS. None of the three have achieved technical independence yet. However, the MOH (MSPP) is the primary technical implementer in the first and third activities, and many of the capacity elements are already in place. For two of the activities, a performance indicator has been developed and validated, but it is not yet in use. For all three activities, the MSPP has not yet developed and/or implemented an institutionalized training approach that could be continued without GHSC-PSM support. The annual forecasting activity still requires the development and implementation of software.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	MSPP	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	No; Major contribution	No; Limited contribution	Participant	No
MIS	System administration - logistics management information system	MSPP	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	Yes; Major contribution	No; Major contribution	Primary technical implementer	No
Strategy and Planning	Manage implementation of a supply chain master plan	MSPP	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	Yes; Major contribution	No; Major contribution	Primary technical implementer	No

Complete Results and Denominators

Country

FY Quarter

Haiti

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO3-PRH	0.1%	1,056
Male condoms (FP)	0.0%	176
Calendar-based awareness methods	0.0%	176
Copper-bearing IUD	0.0%	176
2-rod implant	0.0%	176
DMPA-Intramuscular injectable	0.0%	176
Combined oral contraceptive with iron	0.6%	176
TO1-HIV/AIDS	0.9%	856
Male condoms (HIV)	0.0%	176
Second RTK	2.9%	136
First RTK	0.0%	136
Pediatric ARV	2.2%	136
2nd line adult ARV	0.0%	136
1st line adult ARV	0.7%	136
Total	0.5%	1,736

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO3-PRH		
Combined oral methods	0.6%	176
Injectable contraceptives	0.0%	176
Implantable contraceptives	0.0%	176

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	97%	154
TO3-PRH	93%	219

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	27%	21%	45%	6%	33
TO1-HIV/AIDS	33%		56%	11%	18
TO3-PRH	33%	39%	28%		18
Total	27%	21%	45%	6%	33

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	29	17	46
Total	29	17	46

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	1
Condoms	1	1
FP commodities	1	1
Lab (HIV diagnostics)	1	1
MCH commodities	1	1
RTKs	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
8	100%

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

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Country M&E Indicator Performance

Country

Indonesia



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Indonesia

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	59	0.0%
1st line adult ARV	12	0.0%
2nd line adult ARV	8	0.0%
Pediatric ARV	3	0.0%
First RTK	12	0.0%
Second RTK	12	0.0%
Tie-breaker RTK	12	0.0%
Total	59	0.0%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
Total		

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	12	100%
Total	12	100%

Ref Analysis

B1 The 12 sites reported a 0% stockout rate for the third quarter in a row.

B3 The 12 sites reported for all quarters in FY19.

Warehouse stock status and product losses

Country

Indonesia

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	6	0%	67%	33%	0%
TO1-HIV/AIDS	6	0%	67%	33%	0%
Subnational level 1	6	0%	83%	17%	0%
TO1-HIV/AIDS	6	0%	83%	17%	0%
Subnational level 2	30	10%	30%	53%	7%
TO1-HIV/AIDS	30	10%	30%	53%	7%
Total	42	7%	43%	45%	5%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

B2 While both the central and provincial levels had no observations that saw a stockout this quarter, most used first-line ARVs were understocked. This is mainly due to procurement delays at the central level which impacted the stock at the lower levels.

Supply plans, innovations, and strategic activities

Country

Indonesia

FY Quarter

2019-Q4

Total Innovations implemented this quarter
0

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
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There are no new innovations to report this quarter

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
---------------	-------------------------------

Analysis

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for FY2019 Q4

Training for supply chain partners

Country

Indonesia

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	Total
Female	15	15
Male	6	6
Total	21	21

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	Total
Central	4	4
Subnational level 1	17	17
Total	21	21

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	Total
TO-specific	21	21
Total	21	21

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	Total
Quality Assurance	21	21
Total	21	21

Analysis



GHSC-PSM Indonesia trained central and provincial level staff on interpreting line probe assay results.

Molecular Instruments and HIV Tracer Products

Country

Indonesia

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

GHSC-PSM does not manage or support maintenance for any molecular instruments in Indonesia.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Efavirenz 300/300/600 mg
2nd line adult ARV	Lopinavir/ritonavir (LPV/r) 200/50mg
Pediatric ARV	Zidovudine (ZDV) 100mg
First RTK	SD Bioline, Fokus
Second RTK	Fokus and Intec
Tie-breaker RTK	Vikia and Oncoprobe
Viral load reagent	Abbott
Viral load consumable	Abbott
EID reagent	Abbott
EID consumable	Abbott

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

All

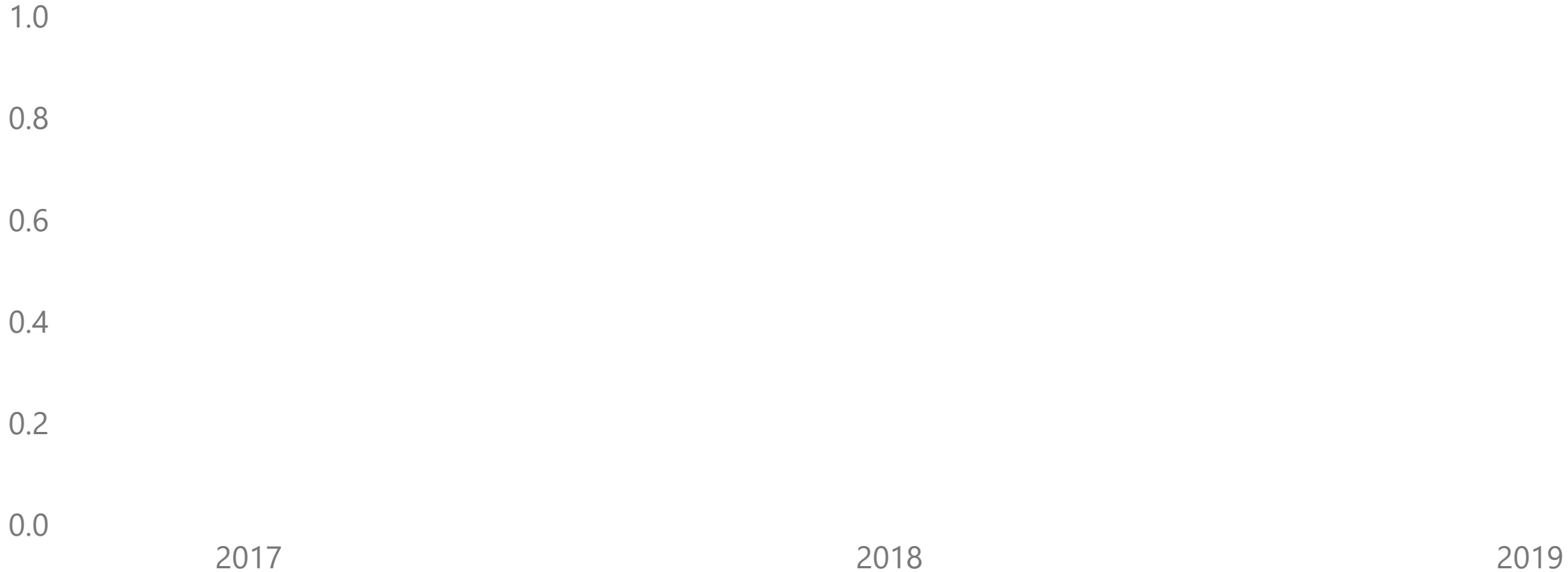
Supply Chain Level

All

Country

Indonesia

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY

2017

2018

2019

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

Data Confidence Rating Breakdown by Supply Chain Level

FY	Supply Chain Level	Overall data quality rating	Total # of sites rated
2019			

Analysis

GHSC-PSM Indonesia will report on the data confidence indicator during FY20 Q2.

Annual Forecasts

FY

2019

Country

Indonesia

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

Ref Analysis

B12 GHSC-PSM Indonesia will report this indicator in FY20 as they were unable to get the data needed for this report.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country

Workforce, Leadership, and Governance

FY

2019

Country

Indonesia

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2019
TO1-HIV/AIDS	8.8

Ref Analysis

B10 Indonesia has a functional HIV/AIDS logistics coordination mechanism in place. This was determined based on two informant interviews with a logistics coordinator for the National AIDS Program (NAP) and a planning coordinator.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	0%	8
TO1 - HIV/AIDS	0%	8
Subnational level 1	0%	7
TO1 - HIV/AIDS	0%	7
Subnational level 2	4%	25
TO1 - HIV/AIDS	4%	25
Total	3%	40

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	67%	3
TO1-HIV/AIDS	67%	3
Subnational level 1	100%	3
TO1-HIV/AIDS	100%	3
Subnational level 2	60%	15
TO1-HIV/AIDS	60%	15
Total	67%	21

Ref Analysis

B9 One person left the supply chain sector in FY19 due to retirement.

B11 Two-thirds of supply chain leadership positions in Jakarta province were held by women in FY19.

Commodity Funding

FY
2019

Country
Indonesia

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
▲ HIV/AIDS	\$88,750,315		Not Available		\$0		\$0		Not Available

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

The amount the Government of Indonesia budgeted for the procurement of public sector HIV/AIDS commodities during calendar year 2019 increased by about 64 percent from the previous year due to the government increasing the number of patients they are targeted for treatment. The funding information for other sources was not available.

B8. Supply Chain Technical Independence

FY

2019

Country

Indonesia

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Indonesia

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

6

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

In Indonesia, GHSC-PSM selected six activities for technical independence that span four technical areas. In all activities, there is a document designating responsibility for the activity to the National AIDS Program (NAP) and NAP has the resources necessary to carry out the activity. While there is an on-the-job training program in place called Care Support Treatment (CST), it does not include training modules on all the targeted activities or there is no standardized process in place to inform the training. GHSC-PSM has had a moderate contribution towards building or strengthening each of the activities.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	National AIDS Program	HIV/AIDS	Yes; No contribution	No; Moderate contribution	No; Moderate contribution	Yes; Moderate contribution	No; Moderate contribution	Participant	No
	Develop/update supply plan	National AIDS Program	HIV/AIDS	Yes; No contribution	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	No; Moderate contribution	Participant	No
	Monitor the commodities pipeline	National AIDS Program	HIV/AIDS	Yes; No contribution	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	No; Limited contribution	Participant	No
Governance and Financing	Manage logistics management committee	National AIDS Program	HIV/AIDS	Yes; No contribution	Yes; No contribution	No; Moderate contribution	Yes; Moderate contribution	No; No contribution	Participant	No
Monitoring and Evaluation	Facilitate active use of data for supply chain management decision making	National AIDS Program	HIV/AIDS	Yes; No contribution	No; Moderate contribution	No; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	Participant	No
Warehousing and Inventory Management	Monitor inventory levels	National AIDS Program	HIV/AIDS	Yes; No contribution	No; Moderate contribution	No; Moderate contribution	Yes; Moderate contribution	No; Moderate contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Indonesia

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO1-HIV/AIDS	0.0%	59
Tie-breaker RTK	0.0%	12
Second RTK	0.0%	12
First RTK	0.0%	12
Pediatric ARV	0.0%	3
2nd line adult ARV	0.0%	8
1st line adult ARV	0.0%	12
Total	0.0%	59

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
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See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	100%	12

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	33%	0%	67%	0%	6
TO1-HIV/AIDS	33%	0%	67%	0%	6
Subnational level 1	17%	0%	83%	0%	6
TO1-HIV/AIDS	17%	0%	83%	0%	6
Subnational level 2	53%	7%	30%	10%	30
TO1-HIV/AIDS	53%	7%	30%	10%	30
Total	45%	5%	43%	7%	42

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	15	6	21
Total	15	6	21

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
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C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
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For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Kenya



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Kenya

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	8,295	23.7%
AL 6x1	1,185	49.8%
AL 6x2	1,185	23.9%
AL 6x3	1,185	16.7%
AL 6x4	1,185	12.3%
AL inability to treat	1,185	4.5%
mRDT	1,185	52.5%
SP	1,185	6.1%
Total	8,295	23.7%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	1,896	9.3%
Combined oral contraceptive	237	5.1%
DMPA-Intramuscular injectable	237	0.8%
1-rod implant	237	6.3%
2-rod implant	237	2.5%
Emergency contraceptive, 2 tablets	237	30.8%
Progestin only pills	237	18.1%
Copper-bearing IUD	237	3.8%
Male condoms (FP)	237	7.2%
Total	1,896	9.3%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO2-Malaria	1,189	100%
TO3-PRH	256	97%
Total	1,445	99%

Ref Analysis

- B1 TO2: The reported stockout rates for specific ACT dosages (e.g. AL 6x1, AL 6x2) ranged from 12%-50%, but overall inability-to-treat remained low at 4% (53 of 1185 SDPs). More than half of SDPs (622 of 1185), however, reported a stockout of rapid diagnostic tests for malaria. Increased stockout rates reflect central level stockouts in recent months, which in turn reflect a failure to get a waiver to import PMI-funded commodities into the country. The GOK recently granted the waiver needed to import these commodities, so the number of facilities stocked out is expected to decrease in coming months.
- B1 TO3: Overall average stockout rates for FPRH remained relatively low for FY2019 Q4. The stockout rates decreased for three FPRH commodities: DMPA (from 3.1% to 0.8%), levonorgestrel implants (from 3.5% to 2.5%) and copper-bearing IUD (from 7.0% to 3.8%). Conversely, reported stockouts increased for five tracer commodities--estronogestrel implants (up from 2.2% to 6.3%), COCs (2.6% to 5.1%), male condoms (5.7% to 7.2%), progestin-only pills (15.3% to 18.1%) and emergency oral contraceptives (18.3% to 30.8%). In the case of emergency oral contraceptives and estronogestrel implants, this is due to central-level stockouts, which in turn reflect that no agency committed to procuring these items in the most recent supply plan. The stockout of male condoms reflects irregular resupply. Additionally, some progestin-only pills and male condoms reportedly expired at facilities in July and August 2019, worsening the stockout situation.
- B3 FY2019 Q4 saw sustained high rates of LMIS reporting. All SDPs required to report (1189) LMIS on TO2/Malaria products successfully reported in this period, as did 96.9% of SDPs required to report on TO3/FPRH products (256). The most common cause of failure to report was that facility staff were on leave, staff transfers, inadequate supply of reporting tools, and attitudinal issues. GHSC-PSM continues to provide on-the-job training at low performing facilities and to provide reporting tools as a stop-gap where needed.

Warehouse stock status and product losses

Country

Kenya

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	45	47%	38%	2%	13%
TO2-Malaria	18	72%	28%		
TO3-PRH	27	30%	44%	4%	22%
Total	45	47%	38%	2%	13%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
----	-------	--------------	--------------	--------------	------------	------------------	--------

Ref Analysis

- B2 Only two commodities were observed to be stocked according to plan during FY2019 Q4: Depot Medroxyprogesterone Acetate and injectable contraceptives, though this was found for each only once out of three observations. Four FPRH commodities--COCs, levonorgestrel, levonorgestrel/ethinyl estradiol, and progestin-only pills--were consistently overstocked centrally during this period. All other tracer commodities, including all malaria tracer commodities, were observed to be either understocked or stocked out centrally during this reporting period.
- C7 There is no product loss from theft, damage or expiry to report in this period.

Supply plans, innovations, and strategic activities

Country

Kenya

FY Quarter

2019-Q4

Total Innovations implemented this quarter **0**

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
None to report this quarter.		

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
Malaria commodities	Yes

Analysis

The malaria commodities supply plan was successfully updated in FY2019 Q4 as expected. The national supply plan for FP commodities is only updated annually, and thus a quarterly update was not submitted.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for this period.

Training for supply chain partners

Country

Kenya

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO3-PRH	Total
Female	59	59
Male	99	99
Total	158	158

C2. Number of people trained by supply chain level

Supply Chain Level	TO3-PRH	Total
SDP	158	158
Total	158	158

C2. Number of people trained by funding source and type

Type	TO3-PRH	Total
TO-specific	158	158
Total	158	158

C2. Number of people trained by technical area

Supply Chain Function	TO3-PRH	Total
Warehousing and Inventory Management	158	158
Total	158	158

Analysis

In FY2019 Q4, GHSC-PSM trained select health care workers on inventory management, pharmacovigilance, continuous quality improvement, and accurate and timely reporting. In total, 158 participants (99 men and 59 women) were trained in three supported countries.

Molecular Instruments and HIV Tracer Products

Country

Kenya

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

GHSC-PSM Kenya does not procure or support molecular instruments in the country.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Efavirenz 300/300/600 mg
2nd line adult ARV	Atazanavir/Ritonavir 300/100 mg
Pediatric ARV	ABC/3TC 60/30mg FDC tabs; NVP susp 50mg/5ml
First RTK	
Second RTK	
Tie-breaker RTK	
Viral load reagent	
Viral load consumable	
EID reagent	
EID consumable	

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

All

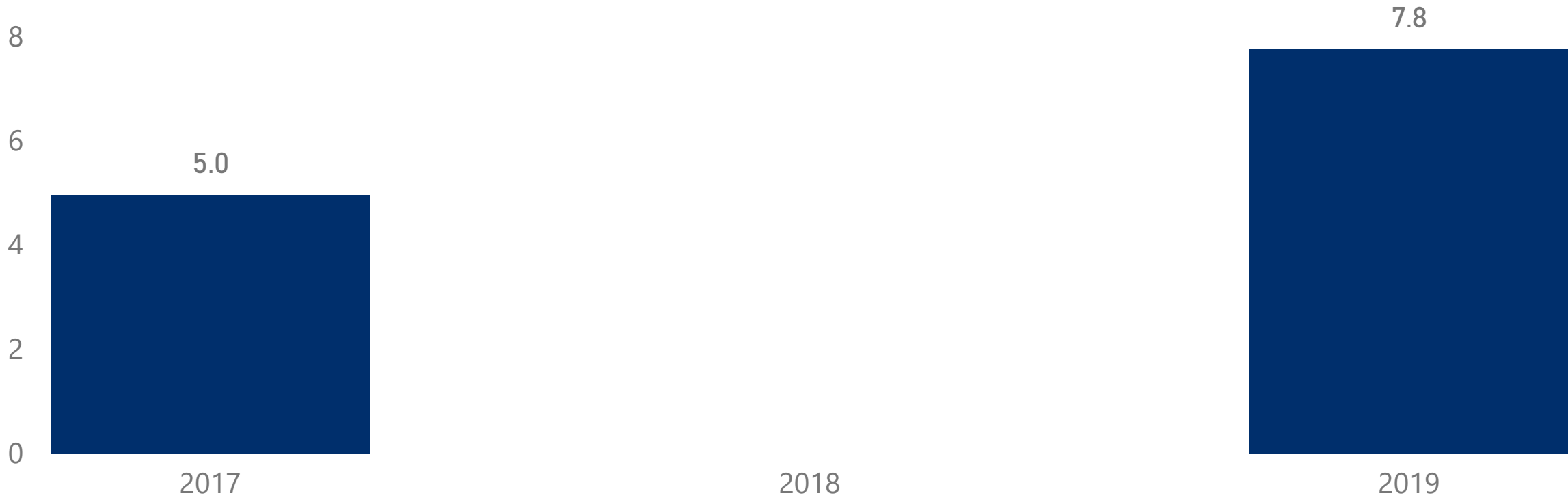
Supply Chain Level

All

Country

Kenya

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018			
2019	2.2	2.8	2.8

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
SDP		
TO2-Malaria	8.1	118
TO3-PRH	7.0	57

Analysis

Data quality assessments were conducted at 57 TO3-supported facilities and 118 TO2-supported facilities to measure data availability, accuracy and timeliness. Facility sites were sampled randomly, but practical considerations such as access, road conditions, etc., necessitated occasional purposive sampling as well. Each facility received a score out of 0-3 on three metrics. On average, TO2-supported facilities received slightly higher scores on data availability (2.8), accuracy (2.3) and timeliness (2.9). TO3-supported facilities averaged scores of 2.6 on data availability, 1.8 on accuracy, and 2.5 on timeliness. Overall, ensuring consistent data accuracy remains an important opportunity for growth across both TOs.

Annual Forecasts

FY Country

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL inability to treat	11.4%	-
mRDT	35.4%	-
SP	33.9%	-

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral methods	130.6%	-
DMPA-Intramuscular injectable	177.4%	-
1-rod implant	27.6%	+
2-rod implant	18.4%	+
Progestin only pills	723.4%	-
Copper-bearing IUD	32.0%	+
Male condoms (FP)	43.8%	+
Female condoms (FP)	38.9%	+

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

Ref Analysis

B5	The annual forecast for TO2/malaria commodities was successfully completed in September 2019. Report compilation is ongoing.
B12	Forecast accuracy remained a challenge in FY2019. Forecasted quantities exceeded consumption for all malaria tracer commodities (with forecast errors ranging from 11%-33%). Forecast error in these cases is largely attributed to central and facility-level stockouts of RDTs (leading to lower consumption than forecasted) and poor data in the case of SP forecasts. For FPRH commodities, forecast error was both more erratic and more extreme. Forecasted quantities greatly exceeded consumption in some cases--especially DPA (177%), COCs (131%), and levonorgestrel (723%)--and fell short in others, such as male and female condoms (44% and 39%, respectively). GHSC-PSM does not currently participate in forecasting for contraceptives but will advocate to attend the next annual activity.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
Malaria commodities	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Kenya

B10. Is there a functional logistics coordination mechanism in place?

TO2-Malaria	Yes
TO3-PRH	No

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2019
TO2-Malaria	8.5
TO3-PRH	1.3

Ref	Analysis
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B10	TO2: The Commodities Management Subcommittee of the National Malaria Program is a functional logistics coordination mechanism according to the criteria for this indicator, with written and approved terms of reference that outlines its responsibilities. TO3: Conversely, the family planning and reproductive health programmatic area lacks a functional logistics coordination mechanism. Commodity security TWGs have been established and are functional in multiple sub-counties. However, to date these groups largely lack formal TORs, diverse membership, policies or evidence of effectiveness.
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Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Total		

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Total		

Ref	Analysis
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B11	GHSC-PSM Kenya does not currently have visibility into government human resource data to report on this indicator.
B9	GHSC-PSM Kenya does not currently have visibility into government human resource data to report on this indicator.

Commodity Funding

FY
2019

Country
Kenya

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
Family Planning and Reproductive Health	\$5,568,607	73%	\$2,096,646	27%	\$0	0%	\$0	0%	\$7,665,253
Malaria	Not Available		Not Available		\$2,607,274		Not Available		Not Available

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

The U.S. government spent more than \$2.6 million on malaria commodities in FY2019. GHSC-PSM has no visibility into the comparable amounts spent in this program area by the host government, Global Fund or other actors. For FPRH products, budgetary figures show the host government reportedly accounting for 73% of commodity purchases and Global Fund 27%. The U.S. government did not purchase commodities in this program area for the reporting period.

B8. Supply Chain Technical Independence

FY

2019

Country

Kenya

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Kenya

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

10

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

GHSC-PSM and USAID identified 10 supply chain activities - within governance, information management, FASP, warehousing and inventory management, and M&E technical areas - as targeted for technical independence in Kenya by the end of the project. While all targeted activities had at least one of five components of technical independence in place, the country has yet to fully achieve technical independence on any of the targeted activities (ranging from 10% to 80% of components in place). The most frequently missing components of technical independence are existence of indicators to monitor activity performance (missing in 8 of 10 targeted activities) and the institutionalization of a training approach (missing in 6 of 10 targeted activities). In the case of two activities (monitoring inventory levels and managing logistics management committees), only one assessed component was missing, suggesting a targeted intervention would help the responsible host entity fully achieve technical independence. It is important to note, however, that these measures of technical independence explicitly exclude consideration of financial sustainability. In all cases, donors provide some or all funding for the activity under consideration.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	County Pharmacists - 6 counties supported by Afya Ugavi	Integrated	Yes; Moderate contribution	Yes; Moderate contribution	No; Moderate contribution	No; Limited contribution	No; Limited contribution	Primary technical implementer	No
	Develop/update supply plan	County Health Directors - 10 counties supported by Afya Ugavi	Integrated	No; Major contribution	No; Moderate contribution	Yes; Major contribution	Yes; Major contribution	No; Moderate contribution	Primary technical implementer	No
	Monitor the commodities pipeline	County Health Directors in 6 counties	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	No; Major contribution	Yes; Moderate contribution	Primary technical implementer	No
Governance and Financing	Manage logistics management committee	TWG - 14 counties	Integrated	Yes; Moderate contribution	Yes; Major contribution	Yes; Major contribution	Yes; Moderate contribution	No; Moderate contribution	Primary technical implementer	No
	Cultivate leadership competencies	County Directors of Health - 10 counties	Integrated	No; Moderate contribution	No; Limited contribution	Yes; Moderate contribution	Yes; No contribution	No; Moderate contribution	Primary technical implementer	No
Strategy and Planning	Manage implementation of a supply chain master plan	Division of Health Products and Medical Technologies	Integrated	No; Major contribution	No; Moderate contribution	No; Moderate contribution	Yes; Major contribution	No; Limited contribution	Primary technical implementer	No
Warehousing and Inventory Management	Monitor inventory levels	County Health Products and Medical Technology Units	Integrated	Yes; Moderate contribution	Yes; Major contribution	No; Moderate contribution	Yes; Major contribution	Yes; Moderate contribution	Primary technical implementer	No

B8. Supply Chain Technical Independence

FY

2019

Country

Kenya

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

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Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

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Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
MIS	System administration - stock/inventory management	National Division of Health Products and Medical Technologies	Integrated	No; Major contribution	No; Moderate contribution	Yes; Major contribution	No; Limited contribution	No; Moderate contribution	Primary technical implementer	No
Monitoring and Evaluation	Facilitate active use of data for supply chain management decision making	County Health Products and Medical Technology Units - 10 counties	Integrated	Yes; Major contribution	Yes; Major contribution	No; Moderate contribution	Yes; Major contribution	No; Moderate contribution	Primary technical implementer	No
	Conduct ongoing data quality assurance	County Health Products and Medical Technology Units - 10 counties	Integrated	No; Major contribution	Yes; Major contribution	No; Moderate contribution	No; Moderate contribution	No; Moderate contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Kenya

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO2-Malaria	26.9%	7,110
AL 6x1	49.8%	1,185
AL 6x2	23.9%	1,185
AL 6x3	16.7%	1,185
AL 6x4	12.3%	1,185
mRDT	52.5%	1,185
SP	6.1%	1,185
TO3-PRH	9.3%	1,896
Combined oral contraceptive	5.1%	237
DMPA-Intramuscular injectable	0.8%	237
1-rod implant	6.3%	237
2-rod implant	2.5%	237
Emergency contraceptive, 2 tablets	30.8%	237
Progestin only pills	18.1%	237
Copper-bearing IUD	3.8%	237
Male condoms (FP)	7.2%	237
Total	23.2%	9,006

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	4.5%	1,185
TO3-PRH		
Combined oral methods	5.1%	237
Injectable contraceptives	0.8%	237
Implantable contraceptives	0.4%	237
Emergency oral contraceptives	30.8%	237
Progestin-only methods	18.1%	237

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO2-Malaria	100%	1,189
TO3-PRH	97%	256

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	2%	13%	38%	47%	45
TO2-Malaria			28%	72%	18
TO3-PRH	4%	22%	44%	30%	27
Total	2%	13%	38%	47%	45

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO3-PRH	59	99	158
Total	59	99	158

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
Malaria commodities	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Lesotho



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Lesotho

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	1,508	13.5%
1st line adult ARV	200	0.0%
2nd line adult ARV	197	0.0%
Pediatric ARV	167	3.6%
First RTK	180	1.7%
Second RTK	180	7.2%
Tie-breaker RTK	176	100.0%
Viral load reagent	4	0.0%
EID reagent	1	0.0%
Male condoms (HIV)	118	2.5%
Female condoms (HIV)	113	0.9%
RUTF	172	1.2%
Total	1,508	13.5%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
Total		

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	200	100%
Total	200	100%

Ref Analysis

- B1 The overall stockout rate during the quarter remained at 14%. Most products had a stockout rate at or near zero percent; however, tie-breaker RTKs (SD Bioline) were stocked out in all 176 reporting sites for the second consecutive quarter, due to a stockout at the central medical store (NDSO) from the previous quarter. The product is procured by another donor and is expected to arrive in October. There is low demand for the product due to a lack of discordant results from first and second RTKs, although the product is still procured to use for quality control purposes. Several sites were stocked out of pediatric ARVs due to the change in guidelines increasing the weight bands, as well as a change in the formulation. Second RTKs (Unigold) had expired in 13 out of 180 SDPs that reported use of the commodity (a 7% stockout rate). During the reporting period, the commodity had been stocked out at NDSO, but PSI and PEPFAR have since procured 700 and 1900 boxes, respectively, as a stop gap measure.
- B3 Reporting rates through the informed push tool continue to be excellent (100%). The MOH makes continuous efforts, through GHSC-PSM support, to ensure that commodity use across all SDPs is reported through the system in the 10 districts.

Warehouse stock status and product losses

Country

Lesotho

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	33	15%	36%	48%	0%
TO1-HIV/AIDS	33	15%	36%	48%	0%
Total	33	15%	36%	48%	0%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

B2 The rate of commodities stocked according to plan improved from 30% to 48%, while two products, second RTKs and tie-breaker RTKs, faced stockouts. As noted for B1, an emergency order of second RTKs (Unigold) was placed and received in September, with delivery to SDPs in early October. Another order was placed and was expected for late October. Also noted for B1, tie-breaker RTKs (SD-Bioline) are a slow-moving product which often expire at the facility level. It also expired in the previous quarter, which contributed to the current high stockout rate of the commodity at the SDP level. An order of 450 units of SD-Bioline has been placed on order. Partial delivery of 363 units arrived at the end of September. An order for point-of-care commodities has also been placed, and this will stabilize the demand of SD-Bioline.

Supply plans, innovations, and strategic activities

Country

Lesotho

FY Quarter

2019-Q4

Total Innovations implemented this quarter

New approaches

1

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
TO1-HIV/AIDS	New approaches	Pharmacy tally sheets have been updated to track the exact number of bottles and regimens as a result of introduction of multi-month dispensing. This improved tally sheet further assists in recording exact number of months for which the commodity was distributed while recording the dispensend regimens. Through use of this tally sheet, it is envisaged that the accuracy of quantifications will improve due to availability of this consumption data in this format.

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group

Supply Plan Submission Status

Analysis

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description

A revised Supply Chain Strategic Plan and new supply chain manuals and SOPs were launched on May 2, 2019. During the current reporting period, trainings on these strategic documents continued and further distribution and dissemination of the documents were ongoing. These manuals and SOPs are strategic guiding documents that provide detailed instructions, guidance and direction to SCMD, DHMTs, SDPs and all relevant players within the supply chain system on procedures to be followed when conducting supply chain activities at all levels. The revised strategic plan also provides an overall strategic direction and road map for the health supply chain system.

Training for supply chain partners

Country

Lesotho

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	Total
Female	271	271
Male	172	172
Total	443	443

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	Total
Central	21	21
Subnational level 1	218	218
SDP	204	204
Total	443	443

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	Total
TO-specific	443	443
Total	443	443

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	Total
Human Resources Capacity Development	443	443
Total	443	443

Analysis

A total of 443 (271 women and 172 men) central, district and SDP-level staff were trained on recently developed supply chain policy documents (manuals and SOPs) during the reporting period. Different supply chain actors participated, as these trainings are key for the effective delivery of supply chain functions. Among others, ministry of health staff from the central level, district logistics officers, laboratory heads, laboratory technicians, pharmacists, and district pharmacy officers all took part in these trainings so that they can continue with step-down trainings in their respective districts.

Molecular Instruments and HIV Tracer Products

Country

Lesotho

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Efavirenz 300/300/600 mg
2nd line adult ARV	Lopinavir/Ritonavir 200/50 mg
Pediatric ARV	Abacavir/Lamivudine 60/30 mg
First RTK	Determine
Second RTK	Uni-Gold
Tie-breaker RTK	Bioline
Viral load reagent	COBAS, TaqMan, CAP/CTM HIV v2.0, Quantitative, 48 Tests
Viral load consumable	Not reported
EID reagent	COBAS TaqMan AmpliPrep, HIV-1 Qualitative Test, v2.0, 48
EID consumable	Not reported

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

Supply Chain Level

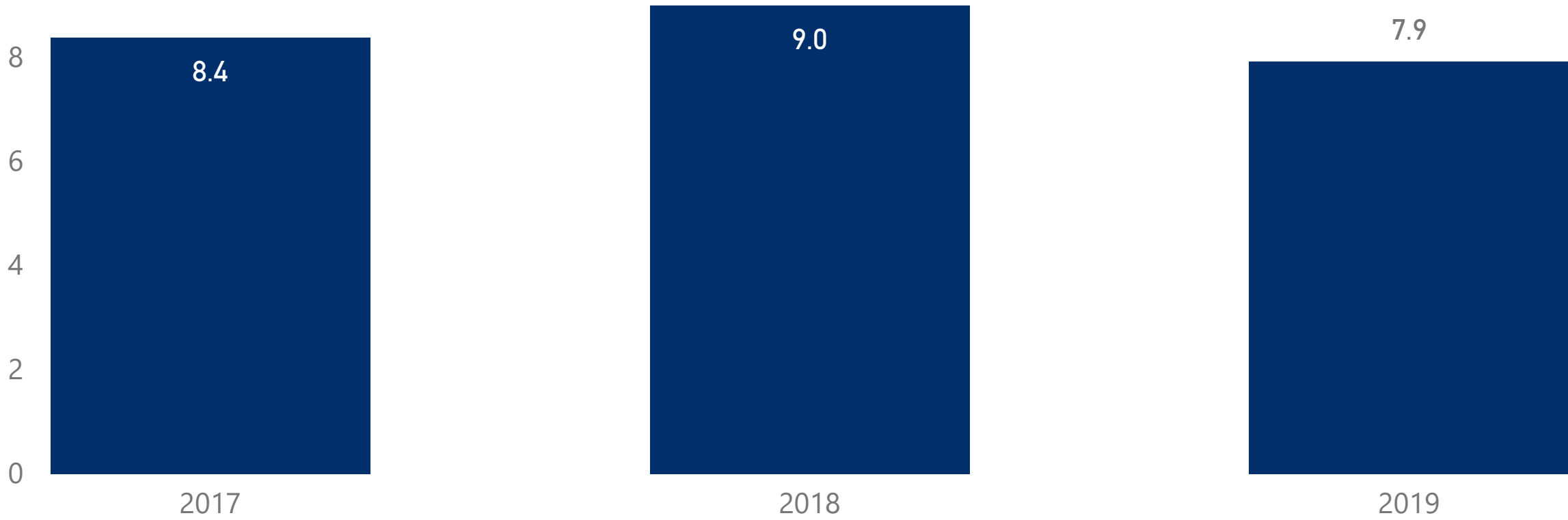
Country

All

All

Lesotho

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	3.0	3.0	3.0
2019	2.3	2.6	3.0

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
SDP		
TO1-HIV/AIDS	7.9	13

Analysis

The four districts that were visited for the DQA (Butha-Buthe, Mafeteng, Mohale’s Hoek and Quthing) were selected based on data captured in the informed push system for the month of June 2019, which was the most recent and complete dataset. Based on abnormalities that were identified on the captured data elements within the informed push system during this period (e.g. incomplete entries in the stock on hand, quantity received, quantity used and transfers fields), the project used simple random sampling to select facilities.

The overall data quality score was 7.9 (very good), down from 9 last year. Data accuracy dropped the most, from 3 to 2.3. Two of the thirteen facilities visited, which are private facilities, had no stock cards for most of the commodities they manage, and therefore brought down the overall scores. The visiting team had meetings with the respective district logistics officers to provide feedback and to encourage the facilities to adhere to the required reporting practices. A full-time nurse has recently been engaged at one of the facilities to manage the SDP and improve commodity management. The project is recommending more frequent data verification and mentorship exercises at SDPs to improve data quality and use of data for decision making. Initiatives like SDP monthly dashboards and summary trends can institute a culture of data use for decision making across different supply chain levels.

Annual Forecasts

FY

2019

Country

Lesotho

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	7.2%	+
2nd line adult ARV	11.7%	+
Pediatric ARV	11.3%	-
First RTK	25.5%	-
Second RTK	22.2%	+
Tie-breaker RTK	135.7%	-
Viral load reagent	11.2%	-
EID reagent	20.7%	-
Male condoms (HIV)	813.0%	-
Female condoms (HIV)	78.0%	-
RUTF	82.0%	-

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
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B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

Ref Analysis

B12 Forecast error was under 50 percent for most products, however there were high error rates for male condoms and tie-breaker RTKs. The distribution channel for condoms changed this year. Last year, Global Fund funded a local NGO to distribute condoms from the central medical stores down to the health facilities and the community. This year, the country returned to its former practice of health facilities picking up the products from the central medical stores. As many condoms remained at facilities from the earlier distributions, fewer were distributed this year, and the indicator relies on warehouse distribution data to estimate consumption levels. For tie-breaker RTKs, the high error rate relates to the stockout at the central medical store that lasted more than three months and therefore prevented distribution and consumption.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
---------------	--------------------------------------

Workforce, Leadership, and Governance

FY

2019

Country

Lesotho

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	6.0	9.0

Ref Analysis

B10 The Supply Chain Technical Working Group (SCTWG), established in 2016, was found to be functional this year. The SCTWG includes various stakeholders and organizations involved in the health supply chain including development partners that take part in supply chain activities. It coordinates all supply chain activities and discusses successes, bottlenecks, and current stock levels, and accordingly plays an advocacy role to recommend the best option for avoiding service interruptions in light of stock levels, the commodity pipeline, and expected delivery dates. The chair is the director of the Supply Chain Management Directorate. Meeting minutes are routinely circulated among participants for implementation of action points.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	0%	91
NDSO	0%	83
SCMD	0%	8
Total	0%	91

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Total		

Ref Analysis

B11 The B11 indicator is not reported in Lesotho.

B9 This year, the project included only supply chain technical positions at the central level for this indicator, including the Supply Chain Management Directorate (SCMD) and the National Drug Service Organization (NDSO). It found that out of 83 individuals at the NDSO and 8 at the SCMD, none left the active health labor force in the past year. In the previous year, one percent of central level supply chain staff had turned over.

Commodity Funding

FY

2019

Country

Lesotho

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
▲ HIV/AIDS	\$19,014,993	78%	\$5,502,919	22%	\$0	0%	\$0	0%	\$24,517,912

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Analysis

This year the Government of Lesotho funded 78 percent of HIV/AIDS commodities, while the Global Fund funded the remaining 22 percent. The increase in government spending on HIV/AIDS commodities between 2018 and 2019, from about \$7 million to about \$19 million can be attributed to several factors, including carryover of payments for last year’s procurements, the transition to TLD, and multi-month dispensing.

B8. Supply Chain Technical Independence

FY

2019

Country

Lesotho



Definitions and interpretation guidance

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Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Lesotho

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

8

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

63%

Analysis

GHSC-PSM Lesotho and the USAID Mission targeted eight activities for technical independence from five different technical sub-categories. With five activities having already achieved technical independence, it is the highest performing GHSC-PSM country on this indicator so far. For all five of the activities for which Lesotho has achieved technical independence, the Ministry of Health's Supply Chain Management Directorate (SCMD) is the designated host country entity. GHSC-PSM has worked closely with the SCMD since its establishment, including helping to develop and disseminate standardized supply chain policy documents with standard operating procedures across all programs, developing and updating the Supply Chain Training Manual, training core teams on several quantification tools (QuantiB, QuantiMed, and PipeLine), and the development and implementation of the SCMD's monitoring and evaluation plan. GHSC-PSM has been instrumental in helping to pilot and launch the informed push system through the LMIS, and continues to support end-to-end data visibility, including through building capacity on data quality assurance and data management. The country continues to maintain a 100 percent or near 100 percent reporting rate for SDPs in GHSC-PSM-supported regions. However, among the challenges that remain for the SCMD are hiring and funding a sufficient number of LMIS and M&E personnel and procuring sufficient equipment such as vehicles and computers, as well as improving data quality and LMIS system performance. The lack of sufficient personnel, therefore, means that the SCMD still relies heavily on the GHSC-PSM project.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop/update supply plan	Ministry of Health-Supply Chain Management Directorate	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Primary technical implementer	Yes
	Monitor the commodities pipeline	Ministry of Health-Supply Chain Management Directorate	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Primary technical implementer	Yes
Governance and Financing	Manage logistics management committee	Ministry of Health-Supply Chain Management Directorate	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Primary technical implementer	Yes
MIS	Manage user helpdesk and provide system training	Ministry of Health-Supply Chain Management Directorate	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
	System administration - logistics management information system	Ministry of Health-Supply Chain Management Directorate	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Primary technical implementer	Yes
Warehousing and Inventory Management	Monitor inventory levels	Ministry of Health-Supply Chain Management Directorate	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Primary technical implementer	Yes

B8. Supply Chain Technical Independence

FY

2019

Country

Lesotho

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

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All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Monitoring and Evaluation	Conduct ongoing data quality assurance	Ministry of Health-Supply Chain Management Directorate	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	No; Moderate contribution	No; Major contribution	Participant	No
	Collect and report supply chain performance indicators	Ministry of Health-Supply Chain Management Directorate	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	No; Moderate contribution	No; Major contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Lesotho

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO1-HIV/AIDS	13.5%	1,508
1st line adult ARV	0.0%	200
2nd line adult ARV	0.0%	197
Pediatric ARV	3.6%	167
First RTK	1.7%	180
Second RTK	7.2%	180
Tie-breaker RTK	100.0%	176
Viral load reagent	0.0%	4
EID reagent	0.0%	1
Male condoms (HIV)	2.5%	118
Female condoms (HIV)	0.9%	113
RUTF	1.2%	172
Total	13.5%	1,508

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
------------	---------------	-------------------------

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	100%	200

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	48%	0%	36%	15%	33
TO1-HIV/AIDS	48%	0%	36%	15%	33
Total	48%	0%	36%	15%	33

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	271	172	443
Total	271	172	443

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
---------------	----------------------------	-------------

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
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For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Liberia



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Liberia

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
Total		

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
Total		

Ref Analysis

B1	SDP stock out rates are not reported this quarter, as there was no EUV survey conducted. The next survey is planned for FY2020 Q1.
B3	LMIS reporting rates are not reported this quarter, as rollout activities for Liberia's e-LMIS are focused on training and populating the system with previous periods' data. LMIS activities this quarter were focused training County and District Health Teams on paper-based reporting and data collection, which should improve the quality and timeliness of supply chain data moving forward.

Warehouse stock status and product losses

Country

Liberia

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	57	18%	46%	23%	14%
TO2-Malaria	33	12%	42%	30%	15%
TO3-PRH	24	25%	50%	13%	13%
Total	57	18%	46%	23%	14%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
----	-------	--------------	--------------	--------------	------------	------------------	--------

Ref Analysis

- B2 Stocked according to plan rates for malaria commodities remained consistent this quarter, at 30 percent. There were some reductions in understocking, which declined from 55 to 42 percent, and increase in overstocked commodities. Among family planning products, stocked according to plan rates fell from 41 to 13 percent, with increases in understocking (oral contraceptives, DMPA-IM, implants, and copper IUDs) and stockouts (female condoms, standard days methods). GHSC-PSM has pending deliveries in FY2020 Q1 for oral contraceptives, standard days methods, and two-rod implants, with additional products slated for future quarters.
- B2 The minimum stock level in Liberia is 6 months of stock. The maximum is 15 months of stock.
- C7 There are no product losses to report this quarter.

Supply plans, innovations, and strategic activities

Country

Liberia

FY Quarter

2019-Q4

Total Innovations implemented this quarter
0

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
------------	--------------------	-------------

There are no new innovations to report this quarter

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
Condoms	Yes
FP commodities	Yes
Malaria commodities	Yes

Analysis

Supply plans for all three required product groups were completed and sent to GHSC-PSM headquarters as required.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for FY2019 Q4

Training for supply chain partners

Country

Liberia

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Female	21	0	24	0	45
Male	9	2	133	0	144
Total	30	2	157	0	189

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Central	7	2	1	0	10
Subnational level 1			156		156
SDP	23				23
Total	30	2	157	0	189

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Cross-TO	0	2	1	0	3
TO-specific	30		156		186
Total	30	2	157	0	189

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Forecasting and Supply Planning	7				7
Human Resources Capacity Development	23				23
MIS			156		156
Warehousing and Inventory Management	0	2	1	0	3
Total	30	2	157	0	189

Analysis

GHSC-PSM conducted several training activities this quarter. Within the HIV program area, the project trained seven staff from the Ministry of Health and UNFPA on forecasting and supply planning, as part of an annual quantification. GHSC-PSM also supported pharmacovigilance training for 23 staff from high-burden health facilities. The project partnered with the Liberia Medicines and Health Products Regulatory Authority (LMHRA) to facilitate the training and orient health workers on appropriate procedures for completing and submitting the adverse drug reaction forms to the NACP. In the LMIS arena, GHSC-PSM trained 156 District Health Team staff from eight counties in the collection of the paper-based LMIS forms from health facilities, which in turn feed the e-LMIS. (This training was funded with Ebola resources under TO3). Finally, four staff members at CMS received training on warehouse standard operating procedures.

Molecular Instruments and HIV Tracer Products

Country

Liberia

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

GHSC-PSM does not manage or support maintenance for any molecular instruments in Liberia.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Efavirenz 300/300/600 mg
2nd line adult ARV	Lopinavir/ritonavir 250mg
Pediatric ARV	Lamivudine/Zidovudine/Nevirapine 60/30/50mg
First RTK	Determine HIV1/2
Second RTK	Bioline HIV1/2
Tie-breaker RTK	Unigold
Viral load reagent	Not reported
Viral load consumable	Not reported
EID reagent	Not reported
EID consumable	Not reported

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

All

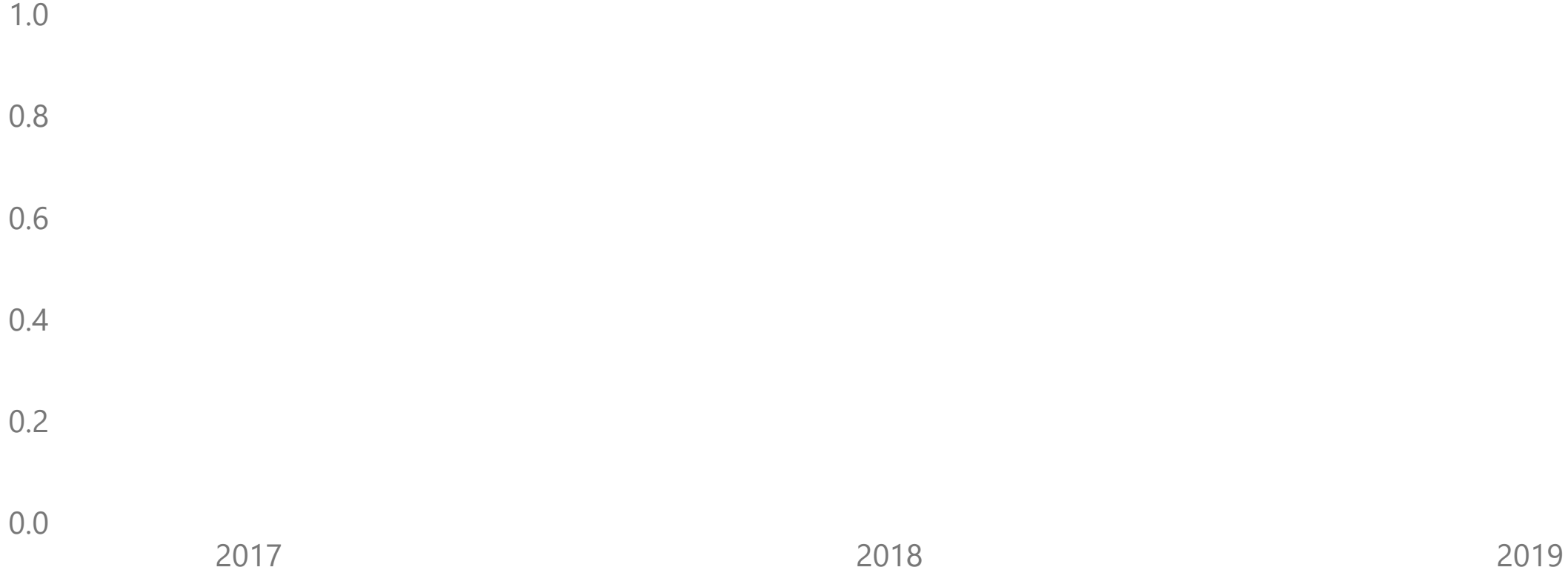
Supply Chain Level

All

Country

Liberia

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY

2017

2018

2019

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated

Analysis

A data quality assessment could not be conducted at the central warehouse due to ongoing distribution activities at the time of reporting. The assessment will be conducted in FY2020 Q1.

Annual Forecasts

FY Country

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL 6x1	90.8%	+
AL 6x2	91.6%	+
AL 6x3	80.2%	+
AL 6x4	90.6%	+
AS/AQ 100/270mgx3	56.0%	+
AS/AQ 100/270mgx6	35.7%	+
AS/AQ 25/67.5mg	23.1%	+
AS/AQ 50/135mg	63.2%	-
mRDT	86.2%	+
SP	8.4%	+
LLINs	80.9%	-

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral contraceptive with iron	284.7%	-
DMPA-Subcutaneous injectable	71.4%	-
DMPA-Intramuscular injectable	59.1%	-
2-rod implant	53.4%	+
Progestin only pills	46.7%	-
Copper-bearing IUD	41.5%	-
Calendar-based awareness methods	88.9%	+

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
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Ref Analysis

B5	Annual forecasts were conducted this year for condoms, family planning commodities, and malaria commodities, as expected.
B12	Data shown above is based on the FY2019 forecast, compared to issues from CMS for the same period. Forecast error for malaria commodities varied by product. Among ACTs, product forecasts for AS/AQ were generally more accurate than forecasts for AL, although over-issues compared to forecast was common for both products. High levels of variance were also observed for mRDTs and LLINs, while SP performance against the forecast was much stronger. Error rates for family planning items were also high. Issues of combined oral contraceptives in particular were low compared to the forecast. Under-issues were also observed for both DMPA injectable products, progestin-only pills, and copper-bearing IUDs. Issues of 2-rod implants and calendar-based awareness methods both exceeded the forecast.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
Condoms	Yes
FP commodities	Yes
Malaria commodities	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Liberia

B10. Is there a functional logistics coordination mechanism in place?

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order

Ref Analysis

B10 The Ministry of Health has a Supply Chain Technical Working Group that operates as the logistics coordination mechanism for Liberia. GHSC-PSM reached out to the relevant supply chain partners but was unable to complete data collection for this indicator in time for reporting.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Total		

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	33%	6
Crosscutting	33%	6
Subnational level 1	10%	30
Crosscutting	10%	30
Total	14%	36

Ref Analysis

B11 At the central level, two out of six supply chain leadership positions are held by women. At the county level, three out of 30, or 10 percent, are held by women.

B9 GHSC-PSM reached out to the relevant supply chain partners but was unable to collect data for this indicator this year.

Commodity Funding

FY
2019

Country
Liberia

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
Family Planning and Reproductive Health	Not Available		Not Available		\$868,531		Not Available		Not Available
Malaria	Not Available		Not Available		\$761,844		Not Available		Not Available
Maternal and Child Health	Not Available		Not Available		\$121,176		Not Available		Not Available

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

GHSC-PSM has limited access to commodity spending or budgeting data from other partners. The U.S. government spending totals reported here refer to the total value of GHSC-PSM Purchase Orders released during the fiscal year.

B8. Supply Chain Technical Independence

FY

2019

Country

Liberia

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Liberia

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

11

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

In Liberia, GHSC-PSM and the mission have identified eleven supply chain activities that are targeted to achieve technical independence by the end of the project. This includes five activities where the Central Medical Store (CMS) is the designated host country entity, in the areas of warehousing and inventory management, transportation and distribution, and MIS system administration for the WMS. As a co-manager of the central warehouse with CMS, GHSC-PSM has provided significant support toward institutionalizing capacity elements for these activities. Standardization, tools and equipment, and performance monitoring are largely in place. However, training is still largely provided via technical assistance, rather than internally or locally managed programs or approaches.

The remaining targeted activities are of mixed status. This ranging from commodity pipeline monitoring for FASP, which is heavily supported by GHSC-PSM, to LMIS system administration, which is led by the MOH Health Information System Unit with a mix of support from GHSC-PSM and other donors. Other targeted activities under M&E for supply chain have historically not seen much investment from GHSC-PSM or the MOH, but they are priorities for the coming years of the project.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Monitor the commodities pipeline	Ministry of Health - Supply Chain Management Unit (SCMU)	Integrated	No; Major contribution	No; Major contribution	No; Major contribution	No; No contribution	No; Major contribution	Observer	No
Governance and Financing	Cultivate leadership competencies	Ministry of Health	Integrated	Yes; Limited contribution	No; Limited contribution	No; Limited contribution	No; Limited contribution	No; Limited contribution	Observer	No
MIS	System administration - warehouse management system	Central Medical Store	Integrated	No; Major contribution	No; Major contribution	No; Moderate contribution	Yes; Major contribution	No; No contribution	Participant	No
	System administration - logistics management information system	Ministry of Health - Health Information System Unit	Integrated	Yes; Limited contribution	Yes; Limited contribution	No; Moderate contribution	No; Major contribution	No; No contribution	Primary technical implementer	No
Transportation and Distribution	Select and pack commodities for distribution ('pick and pack')	Central Medical Store	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	Yes; Moderate contribution	Yes; Major contribution	Participant	No
Warehousing and Inventory Management	Monitor inventory levels	Central Medical Store	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
	Put away commodities	Central Medical Store	Integrated	No; Major contribution	Yes; Major contribution	No; Major contribution	Yes; Major contribution	No; Major contribution	Participant	No
	Receive commodities	Central Medical Store	Integrated	No; Major contribution	Yes; Major contribution	No; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No

B8. Supply Chain Technical Independence

FY

2019

Country

Liberia

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

11

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

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All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Monitoring and Evaluation	Facilitate active use of data for supply chain management decision making	Ministry of Health - Supply Chain Management Unit (SCMU)	Integrated	No; Moderate contribution	No; No contribution	No; No contribution	No; No contribution	No; No contribution	No involvement	No
	Conduct ongoing data quality assurance	Ministry of Health - Monitoring and Evaluation Unit	Integrated	No; No contribution	No; No contribution	No; No contribution	No; No contribution	No; No contribution	No involvement	No
	Collect and report supply chain performance indicators	Ministry of Health - Supply Chain Management Unit (SCMU)	Integrated	No; Major contribution	No; Major contribution	No; Major contribution	Yes; No contribution	No; Major contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Liberia

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
Total		

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
------------	---------------	-------------------------

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
------------	----------------	------------------------------------

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	23%	14%	46%	18%	57
TO2-Malaria	30%	15%	42%	12%	33
TO3-PRH	13%	13%	50%	25%	24
Total	23%	14%	46%	18%	57

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	21	9	30
TO2-Malaria	0	2	2
TO3-PRH	24	133	157
TO4-MCH	0	0	0
Total	45	144	189

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
Condoms	1	1
FP commodities	1	1
Malaria commodities	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
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For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Malawi



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Malawi

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	4,067	4.6%
1st line adult ARV	573	2.3%
2nd line adult ARV	573	5.9%
Pediatric ARV	563	3.0%
First RTK	595	8.1%
Second RTK	600	1.8%
Male condoms (HIV)	593	6.4%
Female condoms (HIV)	570	4.4%
Total	4,067	4.6%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	4,289	2.6%
AL 6x1	623	1.6%
AL 6x2	616	5.2%
AL 6x3	618	2.8%
AL 6x4	626	2.2%
AL inability to treat	626	0.3%
mRDT	625	1.1%
LLINs	555	5.2%
Total	4,289	2.6%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	4,885	12.0%
Combined oral contraceptive with iron	573	8.0%
DMPA-Intramuscular injectable	568	14.4%
1-rod implant	531	16.2%
2-rod implant	445	25.4%
Emergency contraceptive, 2 tablets	537	27.0%
Progestin only pills	541	6.7%
Copper-bearing IUD	527	2.5%
Male condoms (FP)	593	6.4%
Female condoms (FP)	570	4.4%
Total	4,885	12.0%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	680	88%
TO2-Malaria	680	92%
TO3-PRH	680	87%
TO4-MCH	680	78%
Total	2,720	86%

Ref Analysis

- B1 Overall stockout rates for HIV and malaria commodities remains low this quarter, at 4.6% and 3%, respectively. Stockouts of family planning items remain elevated above the other two program areas, at 12% stocked out. The most impacted products include both 1-rod and 2-rod implants, DMPA intramuscular, and emergency oral contraceptives. Despite an elevated stockout rate of 14% for DMPA-IM, this represents an improvement from 22% stocked out in the previous quarter. The rise in SDP stockouts resulted from the delay in delivery of FP commodities due to a prolonged physical count exercise at CMST warehouse from June to July 2019. The warehouse was closed and no distribution was carried out during this time. Delivery of DMP-IM was conducted in August, following of 800,000 units from GHSC-PSM. DMPA-IM stock availability continues to be a challenge owing to global supply shortage and funding constraints. The MOH has implemented a stop gap measure to substitute DMPA-SC for DMPA-IM until the situation normalizes.
- B3 LMIS reporting rates declined this quarter for all health areas, although rates for HIV, malaria and family planning are still above or within close reach of the in-country target of 90%. The decrease in reporting on maternal and child health commodities was more pronounced, falling more than 10 percentage points to 78%. GHSC-PSM continues to support reporting in Malawi, through the provision of airtime for reporting connectivity and follow up supervision in conjunction with district MOH staff.

Warehouse stock status and product losses

Country

Malawi

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	69	14%	5%	48%	33%
TO1-HIV/AIDS	21			86%	14%
TO2-Malaria	21	14%		43%	43%
TO3-PRH	27	22%	11%	22%	44%
Total	69	14%	5%	48%	33%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

B2	Stocked according to plan rates remained high for HIV products this quarter, at 86%. A single item, female condoms, was overstocked. Malaria products were 43% stocked according to plan. Two presentations of AL were overstocked, and LLINs were stocked out. A GHSC-PSM shipment is expected to arrive in the coming quarter. Family planning items saw more overstocking, with only 1-rod implants stocked according to plan. There were also stockouts of emergency oral contraceptives and progestin-only pills.
C7	There are no product losses to report this quarter.

Supply plans, innovations, and strategic activities

Country

Malawi

FY Quarter

2019-Q4

Total Innovations implemented this quarter **0**

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
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There are no new innovations to report this quarter

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
Condoms	Yes
FP commodities	Yes
Malaria commodities	Yes
VMMC	Yes

Analysis

Supply plans for four required product groups were submitted to GHSC-PSM headquarters as expected this quarter. RTKs, which are primarily managed by the Global Fund, have been revised from the list of supply plans required from GHSC-PSM in Malawi.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
 The project supported the MOH's Drug Theft Investigation Unit (DTIU) in developing Supply Chain Audit and Raids SOPs and a Supply Chain Risk Mitigation Plan. These new tools will strengthen efforts to minimize risks that lead to pilferage of health products.

Training for supply chain partners

Country

Malawi

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Female	3	6	14	2	25
Male	3	5	13	2	23
Total	6	11	27	4	48

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
SDP	6	11	27	4	48
Total	6	11	27	4	48

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Cross-TO	6	11	27	4	48
Total	6	11	27	4	48

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
MIS	6	11	27	4	48
Total	6	11	27	4	48

Analysis



The project trained a total of 48 participants in crosscutting MIS skills this quarter.

Molecular Instruments and HIV Tracer Products

Country

Malawi

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

GHSC-PSM does not manage or support maintenance for any molecular instruments in Malawi.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Dolutegravir 300/300/50mg
2nd line adult ARV	Atazanavir/Ritonavir 300/100 mg
Pediatric ARV	Zidovudine/Lamivudine/Nevirapine 60/30/50 mg
First RTK	Determine
Second RTK	Uni-Gold
Tie-breaker RTK	Not reported
Viral load reagent	Not reported
Viral load consumable	Not reported
EID reagent	DBS Bundles for Early infant diagnosis (EID) and Viral Load testing
EID consumable	Not reported

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

Supply Chain Level

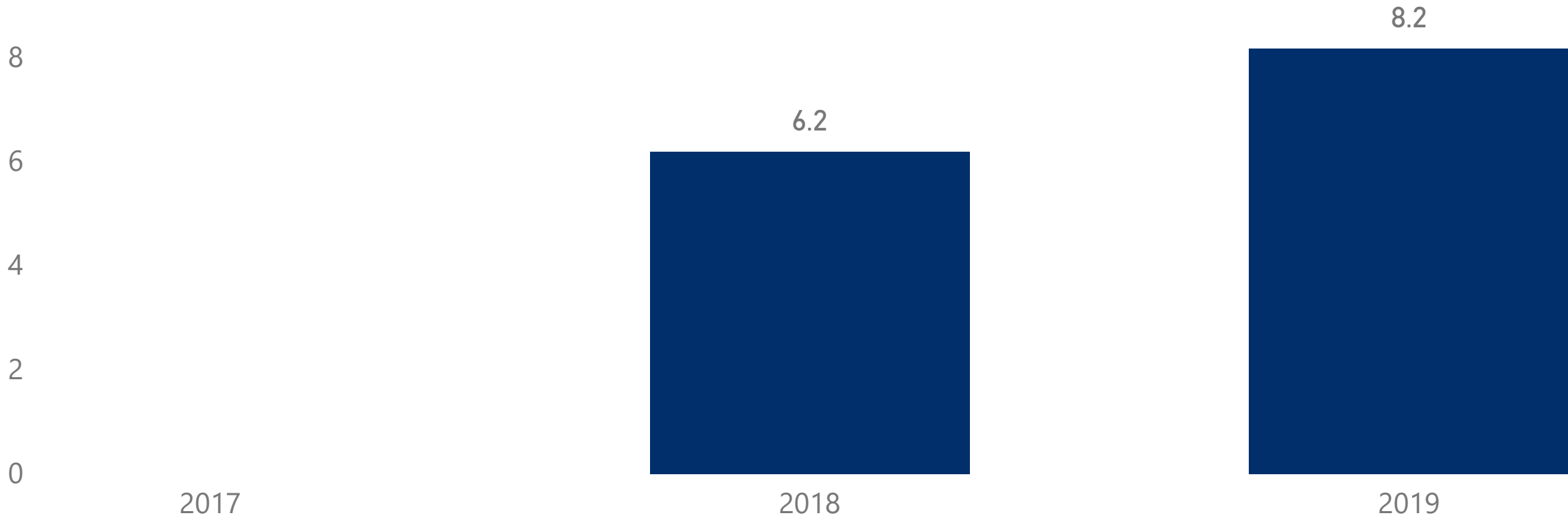
Country

All

All

Malawi

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	2.4	2.6	1.2
2019	2.8	2.8	2.6

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
SDP		
TO1-HIV/AIDS	8.1	69
TO2-Malaria	8.3	70
TO3-PRH	8.2	63
TO4-MCH	8.0	63

Analysis

Average rating of in-country data confidence increased significantly this year, with improvements across all health areas. Data timeliness improved most significantly, with smaller gains in availability (completeness) as well as accuracy.

Annual Forecasts

FY Country

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
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B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL 6x1	38.1%	-
AL 6x2	10.4%	-
AL 6x3	4.9%	-
AL 6x4	14.6%	-
mRDT	16.1%	-
SP	4.9%	-
LLINs	4.1%	+

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral contraceptive with iron	5.1%	-
DMPA-Intramuscular injectable	21.3%	-
1-rod implant	116.9%	-
2-rod implant	254.5%	-
Progestin only pills	23.9%	+
Copper-bearing IUD	120.2%	-
Male condoms (FP)	43.3%	-
Female condoms (FP)	207.6%	-

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
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Ref Analysis

B5	Annual forecasts for all required product groups were conducted as expected.
B12	Forecast error this year was generally good for malaria products, with five out of seven tracer products having less than 15% error. Family planning forecast error tended to be more significant, with notable underconsumption of 1-rod and 2-rod implants, female condoms and copper-bearing IUDs.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
Condoms	Yes
FP commodities	Yes
Malaria commodities	Yes
VMMC	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Malawi

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS	Yes
TO2-Malaria	Yes
TO3-PRH	Yes
TO4-MCH	No

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	9.0	11.0
TO2-Malaria	9.0	10.0
TO3-PRH	7.0	10.0
TO4-MCH	6.0	6.0

Ref Analysis

B10 The project assessed technical working groups for each of the four health areas that GHSC-PSM is supporting in Malawi. The TWGs for HIV and malaria solidified their status as functional coordination mechanisms, with formal status, well-composed membership, frequent meetings and active technical developments. Key decisions for the HIV TWG this year focused on the introduction of new regimen introduced in January 2019. For malaria, key decisions were made related to procurement and LLIN campaigns. Efforts to reinvigorate the Reproductive Health Commodity Security TWG showed some success this year, with the mechanism passing the threshold to become functional. Key decisions focused on various donors to fund the FP commodity gap. Finally, while there has been some progress on logistics coordination for MNCH, there is still no functional mechanism in place. MNCH discussions are held with the RHCS TWG, but there has been limited MNCH decision making and follow up.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	0%	5
Health Technical Support Services (HTSS) - Ministry of Health Headquarters	0%	5
Total	0%	5

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	40%	5
Crosscutting	40%	5
Total	40%	5

Ref Analysis

B11 Of the five supply chain leadership positions at the central level, two (40%) positions are held by women.

B9 Supply chain human resources data are limited to the Ministry of Health - Health Technical Support Services division. Of the five supply chain technical roles in that unit, there was no turnover this year.

Commodity Funding

FY
2019

Country
Malawi

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
Family Planning and Reproductive Health	\$102,000	0%	\$5,024,678	20%	\$2,136,691	9%	\$17,369,027	71%	\$24,632,396
HIV/AIDS	Not Available		Not Available		\$2,688,735		Not Available		Not Available
Malaria	Not Available		Not Available		\$7,532,111		Not Available		Not Available
Maternal and Child Health	Not Available		Not Available		\$0		Not Available		Not Available

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

GHSC-PSM has limited access to commodity spending data for funding sources other than the U.S. government. The most complete picture is available for family planning and reproductive health commodities. The largest contributor here is other donors, at 71% of the total share. This represents budgeted commitments from DFID, via UNFPA, and from the Health Services Joint Fund, a mechanism pooling funds across several donor entities. Funding from the government of Malawi is limited, while the U.S. government is providing about 9%. U.S. government funding has declined slightly from the previous year, from \$2.9 million to \$2.1 million for these commodities. USG funding for malaria remains consistent, decreasing slightly from \$7.8 million to \$7.5 million this year. USG funding for HIV has fallen substantially, from \$6.6 to \$2.7 million.

B8. Supply Chain Technical Independence

FY

2019

Country

Malawi



Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Malawi

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

6

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

GHSC-PSM is targeting six supply chain activities to achieve technical independence in Malawi by the end of the project. This includes three FASP activities, two M&E activities, and logistics coordination management. The Ministry of Health's Health Technical Support Services (HTSS) division is the responsible counterpart entity for all targeted activities and is currently a participant in all six, with GHSC-PSM support. For most targeted activities, the designation of responsibility for the activity has already been established and procedures have been standardized and documented. While HTSS is monitoring performance indicators to manage logistics coordination, data quality, and data use, no formal indicators related to FASP activities have yet been established. HTSS also continues to rely on project support for OpenLMIS and other tools and resources to support M&E and management activities.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	Health Technical Support Services (HTSS) - Ministry of Health	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	No; No contribution	Participant	No
	Develop/update supply plan	Health Technical Support Services (HTSS) - Ministry of Health	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	Yes; Major contribution	No; No contribution	Participant	No
	Monitor the commodities pipeline	Health Technical Support Services (HTSS) - Ministry of Health	Integrated	No; Major contribution	No; No contribution	No; Major contribution	Yes; Major contribution	No; Major contribution	Participant	No
Governance and Financing	Manage logistics management committee	Health Technical Support Services (HTSS) - Ministry of Health	Integrated	Yes; Major contribution	Yes; Major contribution	No; Limited contribution	No; Major contribution	Yes; Major contribution	Participant	No
Monitoring and Evaluation	Facilitate active use of data for supply chain management decision making	Health Technical Support Services (HTSS) - Ministry of Health	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	No; Major contribution	Yes; Major contribution	Participant	No
	Conduct ongoing data quality assurance	Health Technical Support Services (HTSS) - Ministry of Health	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	No; Major contribution	Yes; Major contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Malawi

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO1-HIV/AIDS	4.6%	4,067
1st line adult ARV	2.3%	573
2nd line adult ARV	5.9%	573
Pediatric ARV	3.0%	563
First RTK	8.1%	595
Second RTK	1.8%	600
Male condoms (HIV)	6.4%	593
Female condoms (HIV)	4.4%	570
TO2-Malaria	3.0%	3,663
AL 6x1	1.6%	623
AL 6x2	5.2%	616
AL 6x3	2.8%	618
AL 6x4	2.2%	626
mRDT	1.1%	625
LLINs	5.2%	555
TO3-PRH	12.0%	4,885
Combined oral contraceptive with iron	8.0%	573
DMPA-Intramuscular injectable	14.4%	568
1-rod implant	16.2%	531
2-rod implant	25.4%	445
Emergency contraceptive, 2 tablets	27.0%	537
Progestin only pills	6.7%	541
Copper-bearing IUD	2.5%	527
Male condoms (FP)	6.4%	593
Female condoms (FP)	4.4%	570
Total	7.1%	11,452

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	0.3%	626
TO3-PRH		
Combined oral methods	8.0%	573
Injectable contraceptives	14.4%	568
Implantable contraceptives	8.1%	445
Emergency oral contraceptives	27.0%	537
Progestin-only methods	6.7%	541

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	88%	680
TO2-Malaria	92%	680
TO3-PRH	87%	680
TO4-MCH	78%	680

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	48%	33%	5%	14%	63
TO1-HIV/AIDS	86%	14%			21
TO2-Malaria	43%	43%		14%	21
TO3-PRH	22%	44%	11%	22%	27
Total	48%	33%	5%	14%	63

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	3	3	6
TO2-Malaria	6	5	11
TO3-PRH	14	13	27
TO4-MCH	2	2	4
Total	25	23	48

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
Condoms	1	1
FP commodities	1	1
Malaria commodities	1	1
VMMC	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Mali



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Mali

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	7,431	2.8%
AL 6x1	1,034	1.1%
AL 6x2	986	1.6%
AL 6x3	872	3.8%
AL 6x4	801	5.4%
AL inability to treat	1,149	0.2%
mRDT	1,008	1.8%
SP	1,023	1.9%
LLINs	558	11.5%
Total	7,431	2.8%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	6,889	3.3%
Combined oral contraceptive with iron	1,019	15.7%
DMPA-Intramuscular injectable	1,058	0.9%
2-rod implant	995	0.7%
Progestin only pills	673	1.8%
Copper-bearing IUD	897	0.8%
Calendar-based awareness methods	795	0.5%
Male condoms (FP)	895	1.3%
Female condoms (FP)	557	2.5%
Total	6,889	3.3%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	136	24%
TO2-Malaria	1,275	96%
TO3-PRH	1,275	96%
TO4-MCH	1,275	96%
Total	3,961	94%

Ref Analysis

- B1** The overall stockout rate at the health facility level decreased from 10.2% from FY19Q3 to 3.3% this quarter. Compared to the same period last year (FY18Q4), there is a notable decrease of 13.4% (16.7% in FY18Q4 and 3.3% in FY19Q4). It is worth noting that the stockout rates for TO2 and TO3 were very comparable at 3.2% for TO2 and 3.3% for TO3. In all the target of 23% stockout rate at SDPs has been largely met this quarter. Several action items have contributed to this performance, such as: full implementation of antimalarial drug distribution plans at the site level; periodic monitoring of the level of stocks at the operational level through weekly monitoring of stock status at the central, regional and district levels, and finally the EUV survey carried out in 92 health facilities during which the enumerators carried out redeployments of stocks in order to improve the overstocks and stock outs.
- B3** The reporting rate for TO2, TO3, and TO4 for the quarter was 96%, which is an increase of 3% over the previous quarter. The reporting rate of TO1 products, however has remained low at 24%. To improve the reporting rate for TO1, data entry and publication efforts are underway through technical assistance of GHSC-PSM.

Warehouse stock status and product losses

Country

Mali

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	14	57%	7%	7%	29%
TO2-Malaria	6	100%			
TO3-PRH	8	25%	13%	13%	50%
Subnational level 1	70	53%	3%	17%	27%
TO2-Malaria	30	57%	7%	23%	13%
TO3-PRH	40	50%		13%	38%
Total	84	54%	4%	15%	27%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

B2 During the course of the quarter, 15% of tracer products for all TO's at the central and regional warehouses were stocked according to plan. Compared to the previous quarter, FY19Q3 where the SAP rate was 8%, this is a notable improvement. During the same period last year FY18Q4, the SAP rate was 29%. There is a notable decrease of 14% between these two periods. At the TO level, 19% TO2 products were stocked according to plan, and 13% TO3 products were stocked according to plan. In terms of stock outs, the majority of TO2 products, 64% were stocked out/potentially stocked out at the warehouse level, compared to 46% for TO3 products. A very small amount of products were understocked at 6% for TO2 and 3% for TO3. Comparatively, there were more products that were overstocked for TO3, 40% compared to 11% for TO2. Factors contributing to stockouts as well as overstocks for TO2 and TO3 products are generally logistical issues at the regional and central levels. To address these issues orders are being closely monitored and placed in a timely manner to ensure product availability and reduce overstocks at the central and regional levels.

Supply plans, innovations, and strategic activities

Country

Mali

FY Quarter

2019-Q4

Total Innovations implemented this quarter

New technologies
2

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
Crosscutting	New technologies	GHSC-PSM Mali supported the Pharmacie Populaire du Mali (PPM) during its transition from a central warehouse to a modern and newly prefabricated central warehouse (WIB), funded in part by USAID. The inauguration of the WIB was held on July 18, 2019 by the US Ambassador to Mali, accompanied by the Minister of Health and Social Affairs and the PPM President and CEO. The new and modern WIB will bring a lot of infrastructural changes, beginning with adhering to all storage norms for pharmaceutical products, including temperature, luminosity, cleanliness and palletization. In terms of capacity, there are about 2,000 pallets for a total volume of about 2,780 cubic meters. The warehouse also has two cold rooms, one of 25 cubic meters (positive temperature) and the other of 15 cubic meters (negative temperature).
Crosscutting	New technologies	GHSC-PSM supported the implementation of the SAGE X3 software at the PPM. The SAGE X3 software is an inventory management software that provides real time data availability, effective supply change management, supports decision making and reduces stock out rates. The implementation of SAGE X3 will allow PPM to improve stock management at all sites and in real time. It will also improve decision making and thus reduce the risk of stockouts and overstocks. During this quarter, several activities were carried out as part of the implementation of the SAGE X3 software at the central PPM level. These activities include: Completing the functional process development phase taking into account site management, outage alert systems, and volumetry; pilot tests carried out; training of key users within PPM; training of system administrators; technical and final approval of the software; and deployment of Warehouse Management Module at WIB level and training of the pharmacists in charge.

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
FP commodities	Yes
Malaria commodities	Yes
MCH commodities	Yes

Analysis

Supply plans were updated for TO2, TO3 and TO4 this quarter and sent to GHSC-PSM HQ. TWGs on existing quantification for different health elements (HIV/AIDS, Malaria, FP RH and MNCH) meet quarterly to review procurement plans and determine when products should be delivered to ensure an uninterrupted supply of basic health products. Throughout the year, GHSC-PSM provided technical assistance to update supply plans for products under TO2, TO3 and TO4. The last update of the supply plans took place after the quantification exercise. The results were then validated at the last technical committee meeting held in September 2019.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description

There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for FY2019 Q4.

Training for supply chain partners

Country

Mali

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Female	0	2	0	2	4
Male	0	10	3	12	25
Total	0	12	3	14	29

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Subnational level 1	0	12	3	14	29
Total	0	12	3	14	29

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Cross-TO	0	12	3	14	29
Total	0	12	3	14	29

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
MIS	0	12	3	14	29
Total	0	12	3	14	29

Analysis



With the technical and financial support of the GHSC-PSM project and under the leadership of the host country entity, 29 participants (25 men and 4 women) from the northern regions of Mali (Timbuktu, Gao, Menaka and Taoudeni) involved in stock management were trained on LMIS and DHIS2 / OSPSANTE interoperability during this quarter. While this training was well attended and crucial for the improved reporting rates, it is important that the host country entity take into consideration the recommendations that came out of the training so as to improve the reporting rate as well as improve the quality of the data being reported in the northern region. Compared to last quarter, the Mali FO has increased its trainings by 100% given that no trainings occurred in Q3 FY19.

Average Rating of In-country Data Confidence

Task Order

All

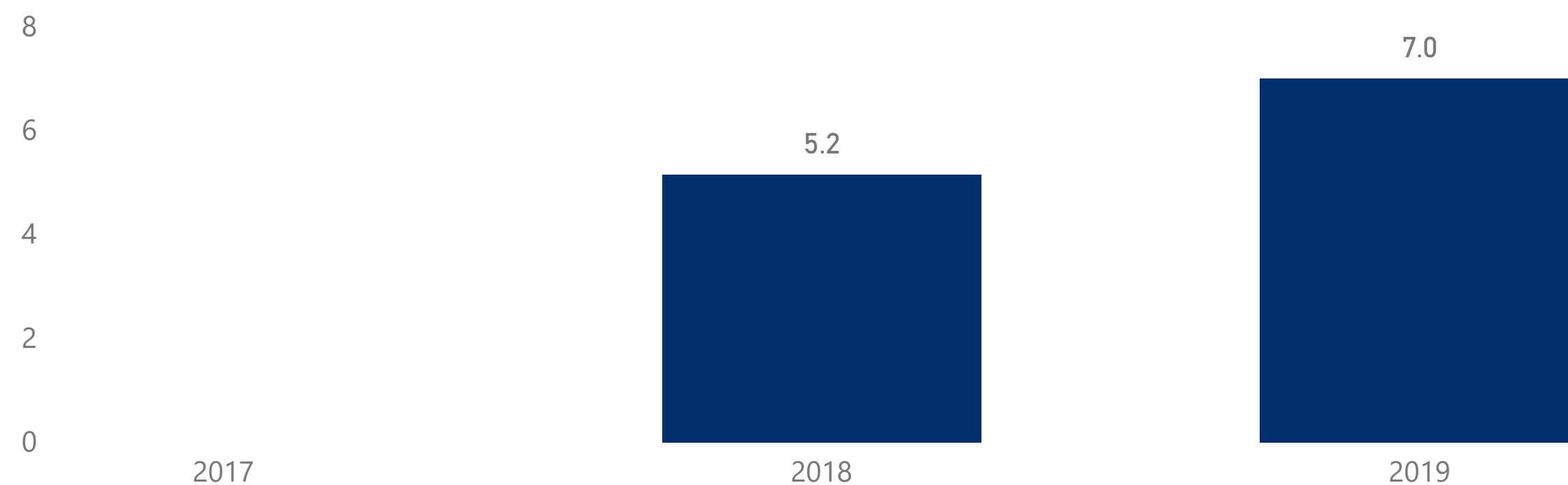
Supply Chain Level

All

Country

Mali

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	1.5	2.1	1.5
2019	2.4	2.2	2.3

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Central		
TO1-HIV/AIDS	6.0	1
TO2-Malaria	6.0	1
TO3-PRH	6.0	1
TO4-MCH	6.0	1
Subnational level 1		
TO1-HIV/AIDS	5.6	5
TO2-Malaria	6.6	5
TO3-PRH	6.4	5
TO4-MCH	6.6	5
Subnational level 2		
TO1-HIV/AIDS	6.6	7
TO2-Malaria	7.6	11
TO3-PRH	7.8	11
TO4-MCH	7.8	11
SDP		
TO1-HIV/AIDS	3.8	26
TO2-Malaria	7.7	61
TO3-PRH	7.1	61
TO4-MCH	7.5	61

Analysis

In FY2019, GHSC-PSM Mali supported the DPM for the implementation of the second edition of the DQA. A total of 78 health facilities were surveyed throughout the regions of Kayes, Koulikoro, Sikasso, Segou, Mopti and Bamako district. The sampling strategy included a random sample based on a standardized GHSC-PSM sampling strategy. The DQA took place during end May - early June 2019 and was conducted through Android tablets using the data collection software, SurveyCTO. The enumerators were trained on the data collection tool in Bamako by GHSC-PSM staff. During data collection there was regular contact with the M&E team at HQ to monitor the process and provide any needed support. Generally, the results of the DQA showed that data quality and confidence was "good". The quality of TO2 products ranged from good to very good with a confidence rating of 6.0 at the central level to 7.7 at the SDP level. The confidence rating for TO3 was similar at 6.0 at the central level and 7.8 at the subnational level 2. The confidence rating for TO4 was also similar at 6.0 for central level and 7.8 at the subnational level 2. However, the confidence level for TO1 was lower with 6.0 at the central level and 3.8 at the SDP level. In comparison with the former iteration of the DQA conducted, we note a general improvement in the quality of data at sampled health facilities. The average confidence rating went from "fair" to "good". With the goal of continuously improving data entry, as well as data quality, corrective actions have been implemented by the enumerators in the field.

Annual Forecasts

FY

2019

Country

Mali

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
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B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL 6x1	4.2%	+
AL 6x2	7.5%	-
AL 6x3	47.1%	-
AL 6x4	18.8%	-
mRDT	13.9%	+
SP	11.3%	+
LLINs	15.1%	-

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral contraceptive with iron	26.2%	-
DMPA-Intramuscular injectable	10.5%	-
2-rod implant	0.5%	+
Progestin only pills	9.0%	-
Copper-bearing IUD	90.5%	+
Calendar-based awareness methods	27.1%	+
Male condoms (FP)	2.7%	+
Female condoms (FP)	18.2%	-

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

Ref Analysis

B5 In Q4 FY19, products under all TOs were forecasted, and forecasts for all products except condoms were sent to GHSC-PSM HQ. The tools used for the quantification exercise included Pipeline, Reality check and Microsoft Excel. Methods used to forecast needed products were based on: statistical services and demographic data for TO1; consumption data, statistical services and demographic data for TO2; consumption data for TO3; and consumption data, statistical services and demographic data for TO4. A number of challenges were noted during the quantification exercise. These include, among others: lack of specific reporting system for TO3 products, lack of and/or incomplete TO3 data, lack of availability of consumption data for products under social marketing, the number of stockout dates is not regularly recorded, and logistical data from the northern region is not available due to security issues.

B12 The forecast error greatly improved this quarter as compared to FY18Q4. The annual consumption forecast error this quarter fluctuates among task orders and among tracer product within the TOs. For instance for TO2, while AL 6X1 has a consumption forecast error of 4.2%, AL 6X3 has a consumption forecast error of up to 47.1%. There are also wide fluctuations among TO3 products: while 2-rod implants have a consumption forecast error as low as 0.5%, copper IUDs have a consumption forecast error of up to 90.5%.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
MCH commodities	Yes
RTKs	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Mali

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS	Yes
TO2-Malaria	Yes
TO3-PRH	Yes
TO4-MCH	Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	8.5	10.5
TO2-Malaria	8.5	10.5
TO3-PRH	8.5	10.5
TO4-MCH	8.5	10.5

Ref Analysis

B10 With a score of 10.5, Mali has a functional logistics coordination mechanism in place. This is an improvement from FY18 Q4's score of 8.5. Mali has an integrated coordination mechanism in place which cuts across all four task orders, and the policies and procedures pertaining to the mechanism have been widely respected.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	10%	52
PPM centrale	10%	52
Total	10%	52

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Total		

Ref Analysis

B9 Mali's supply chain agency, Pharmacie Populaire du Mali (PPM), has been striving to provide optimal supply chain services, particularly with regard to the acquisition of essential health products and their distribution to its customers. However, in delivering these services, the PPM has faced a number of challenges, including a low level of suppliers for essential commodities, inadequate funding and insufficient human resource capacity (both in terms of numbers and skill set). This FY, there were 52 supply chain workers at the beginning of the year, and 5 workers who left the workforce by the end of the FY.

Commodity Funding

FY
2019

Country
Mali

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
Family Planning and Reproductive Health	\$0	0%	\$0	0%	\$2,108,461	62%	\$1,317,546	38%	\$3,426,007
Malaria	\$1,029,376	18%	\$0	0%	\$4,640,255	82%	\$0	0%	\$5,669,631
Maternal and Child Health	\$1,559,745	63%	\$0	0%	\$920,082	37%	\$0	0%	\$2,479,827

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

This indicator is collected through the Pipeline and Artemis platforms and shows USD amount spent by funding source. Funders include USAID GHSC-PSM, PMI, the World Bank and the Global Fund. It is worth noting that throughout the year, the majority of funding has come through USAID, representing 82% for TO2, 62% for TO3 and 37% for TO4. One of the major issues affecting funding of products at the host government level is that the level of engagement is low - particularly for TO2 and TO3 products.

B8. Supply Chain Technical Independence

FY

2019

Country

Mali

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Mali

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

10

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

GHSC-PSM Mali selected up to ten activities for technical independence by 2023. Of these, none have reached technical independence and thus do not meet the criteria of having the five capacity elements in place and having the MOH be the primary technical implementer. All selected activities have a document that assigns implementation responsibility to designated entities and for most of the selected activities the entities have information, hardware and software in place to achieve them. GHSC-PSM is a moderate to major contributor in the implementation of these selected activities, and the majority of funding is from USG. Most activities would have to scale back or stop if USG funding was discontinued. Below is a summary of a few select activities: FASP activities are moderately technically independent. For instance, for "monitor the commodities pipeline," 2 of 5 capacity elements are in place, but if USG funding ceased, the activity could no longer be implemented by the host country. Similarly for "develop/update supply plan," the host country has 2 of 5 capacity elements in place. GHSC-PSM continues to support the host entity both financially and through TA to implement this activity, and thus the host entity is considered to be a participant. M&E activities are closer in reaching technical independence. In "collect and report supply chain indicators," the host entity has all 5 capacity elements in place, and is a participant of this activity. GHSC-PSM provides a major contribution to 4 of 5 capacity elements. As with other activities, it is primarily financed through donors and the host country would no longer be able to implement his activity if USG funding ceased.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	Direction de la Pharmacie et du Médicament (DPM)	Integrated	Yes; No contribution	Yes; Major contribution	Yes; Moderate contribution	Yes; Major contribution	No; Major contribution	Participant	No
	Develop/update supply plan	Direction de la Pharmacie et du Médicament (DPM)	Integrated	Yes; No contribution	No; No contribution	Yes; Moderate contribution	No; Major contribution	No; Major contribution	Participant	No
	Monitor the commodities pipeline	Direction de la Pharmacie et du Médicament (DPM)	Integrated	Yes; No contribution	No; No contribution	Yes; No contribution	No; Major contribution	No; Major contribution	Participant	No
MIS	System administration - warehouse management system	Pharmacie Populaire du Mali (PPM)	Integrated	Yes; No contribution	Yes; Moderate contribution	No; Major contribution	Yes; Major contribution	Yes; Major contribution	Primary technical implementer	No
	System administration - logistics management information system	Directions Régionales de la Santé (DRS)	Integrated	Yes; No contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
Warehousing and Inventory Management	Monitor inventory levels	Pharmacie Populaire du Mali (PPM)	Integrated	Yes; No contribution	Yes; No contribution	No; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No

B8. Supply Chain Technical Independence

FY

2019

Country

Mali

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

10

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

GHSC-PSM Mali selected up to ten activities for technical independence by 2023. Of these, none have reached technical independence and thus do not meet the criteria of having the five capacity elements in place and having the MOH be the primary technical implementer. All selected activities have a document that assigns implementation responsibility to designated entities and for most of the selected activities the entities have information, hardware and software in place to achieve them. GHSC-PSM is a moderate to major contributor in the implementation of these selected activities, and the majority of funding is from USG. Most activities would have to scale back or stop if USG funding was discontinued. Below is a summary of a few select activities: FASP activities are moderately technically independent. For instance, for "monitor the commodities pipeline," 2 of 5 capacity elements are in place, but if USG funding ceased, the activity could no longer be implemented by the host country. Similarly for "develop/update supply plan," the host country has 2 of 5 capacity elements in place. GHSC-PSM continues to support the host entity both financially and through TA to implement this activity, and thus the host entity is considered to be a participant. M&E activities are closer in reaching technical independence. In "collect and report supply chain indicators," the host entity has all 5 capacity elements in place, and is a participant of this activity. GHSC-PSM provides a major contribution to 4 of 5 capacity elements. As with other activities, it is primarily financed through donors and the host country would no longer be able to implement his activity if USG funding ceased.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence	
Monitoring and Evaluation	Facilitate active use of data for supply chain management decision making	Direction de la Pharmacie et du Médicament (DPM)	Integrated	Yes; No contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No	
	Conduct ongoing data quality assurance	Direction de la Pharmacie et du Médicament (DPM)	Integrated	Yes; Major contribution	Yes; Major contribution	No; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No	
	Collect and report supply chain performance indicators	Direction de la Pharmacie et du Médicament (DPM)	Integrated	Yes; No contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
		Programme National de Lutte contre le Paludisme (PNLP)	Malaria	Yes; Major contribution	Yes; Major contribution	No; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Mali

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO2-Malaria	3.2%	6,282
AL 6x1	1.1%	1,034
AL 6x2	1.6%	986
AL 6x3	3.8%	872
AL 6x4	5.4%	801
mRDT	1.8%	1,008
SP	1.9%	1,023
LLINs	11.5%	558
TO3-PRH	3.3%	6,889
Combined oral contraceptive with iron	15.7%	1,019
DMPA-Intramuscular injectable	0.9%	1,058
2-rod implant	0.7%	995
Progestin only pills	1.8%	673
Copper-bearing IUD	0.8%	897
Calendar-based awareness methods	0.5%	795
Male condoms (FP)	1.3%	895
Female condoms (FP)	2.5%	557
Total	3.3%	13,171

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	0.2%	1,149
TO3-PRH		
Combined oral methods	15.7%	1,019
Injectable contraceptives	0.9%	1,058
Implantable contraceptives	0.7%	995
Progestin-only methods	1.8%	673

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	24%	136
TO2-Malaria	96%	1,275
TO3-PRH	96%	1,275
TO4-MCH	96%	1,275

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	7%	29%	7%	57%	14
TO2-Malaria				100%	6
TO3-PRH	13%	50%	13%	25%	8
Subnational level 1	17%	27%	3%	53%	70
TO2-Malaria	23%	13%	7%	57%	30
TO3-PRH	13%	38%		50%	40
Total	15%	27%	4%	54%	84

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	0	0	0
TO2-Malaria	2	10	12
TO3-PRH	0	3	3
TO4-MCH	2	12	14
Total	4	25	29

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
FP commodities	1	1
Malaria commodities	1	1
MCH commodities	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Mozambique



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Mozambique

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	5,500	5.9%
1st line adult ARV	1,515	0.5%
2nd line adult ARV	586	2.4%
Pediatric ARV	1,145	1.8%
First RTK	672	7.3%
Second RTK	668	17.2%
Viral load reagent	28	0.0%
EID reagent	10	0.0%
Male condoms (HIV)	626	13.1%
Female condoms (HIV)	250	15.6%
Total	5,500	5.9%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	5,907	12.4%
AL 6x1	811	15.0%
AL 6x2	817	18.5%
AL 6x3	805	10.9%
AL 6x4	825	14.3%
AL inability to treat	875	0.9%
mRDT	802	5.2%
SP	663	12.4%
LLINs	309	39.5%
Total	5,907	12.4%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	3,401	11.3%
Combined oral contraceptive	542	10.5%
DMPA-Subcutaneous injectable	235	17.9%
DMPA-Intramuscular injectable	743	8.7%
2-rod implant	192	5.2%
Emergency contraceptive, 2 tablets	114	35.1%
Progestin only pills	402	10.0%
Copper-bearing IUD	297	2.7%
Male condoms (FP)	626	13.1%
Female condoms (FP)	250	15.6%
Total	3,401	11.3%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	2,474	88%
TO2-Malaria	923	68%
TO3-PRH	923	68%
TO4-MCH	923	68%
Total	5,243	77%

Ref Analysis

B1	While the overall stockout rates for all program areas remained consistent with previous quarters, some individual products saw their stockout rate increase. LLINs stockout rate increased to 39% this quarter, which could be due to incorrect reporting from facilities. LLINs are not stored in the facilities' storerooms, and the person responsible is supposed to bring the LLIN stock card to the storeroom once per week to update the system. However, this is not always done and as a result facilities report there was a stockout. For family planning products, emergency contraceptives stockout rate increased to 35%. This is due to a stockout at all levels in the supply chain. An emergency order has been placed by UNFPA and is expected to arrive by the end of the year.
B3	The reporting rate decreased across program areas this quarter. There was an increase in the number of facilities reporting to SIGLUS; however, some facilities were unable to report on time because there were issues with using the system, and some facilities have not received the tablets used to report. For facilities that have not received their tablet, GHSC-PSM is working with implementing partners to expedite this process.

Warehouse stock status and product losses

Country

Mozambique

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	69	2%	49%	30%	19%
TO1-HIV/AIDS	21	0%	48%	33%	19%
TO2-Malaria	21	0%	57%	33%	10%
TO3-PRH	27	4%	48%	26%	22%
Subnational level 1	825	12%	35%	35%	18%
TO1-HIV/AIDS	252	4%	29%	54%	13%
TO2-Malaria	249	10%	47%	31%	12%
TO3-PRH	324	18%	31%	24%	28%
Total	894	11%	37%	34%	18%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

B2 The overall stocked according to plan rate increased slightly from the previous quarter. There were no stockouts of HIV/AIDS and malaria products at the central level. There was an increase in the understocked rate of HIV/AIDS products at the central level due to shortages of first- and second-line ARVs, a result of challenges faced while transitioning formulations. There was an increase in the overall stockout rate of malaria products, which can be attributed to the stockout of ALu 6x2, ALu 6x3, LLINs and SP products at the provincial level due to shipment delays. For family planning products, the stocked according to plan rate decreased significantly while the understocked rate increased due to shortages of Depo-Provera and combined oral contraceptives.

C7 There was no product loss to report this quarter.

Supply plans, innovations, and strategic activities

Country

Mozambique

FY Quarter

2019-Q4

Total Innovations implemented this quarter

New approaches

2

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
Crosscutting	New approaches	<p>e-supervision: GHSC-PSM and CMAM trained the heads of provincial depots, provincial M&E officers, provincial logistics advisers, central hospital pharmaceutical services directors and CMAM regional warehouse managers in the use of electronic data (from SIGLUS and SIMAM) for decision making. With the implementation of this approach, nine provinces can:</p> <ul style="list-style-type: none"> • verify general availability of key medicines and commodities (including malaria, HIV, RH, NMCH and nutrition) in a given province/district/health facility; • monitor the stock status (stocked out; shortage; normal stock; overstocked) of a specific medicine in a given health facility/district/province; • prevent medicines from expiring on the shelves by monitoring expiration dates of products. With this approach, potential problems can be promptly identified, and a corrective action taken. This is innovative because for the first time Mozambique is leveraging the cost savings of digital data visibility provided through SIGLUS and SIMAM for commodities across all task orders, while utilizing a more targeted and effective approach through GHSC-PSM's provincial logistics advisers to conduct monthly supervision visits to sites for data validation and on-the-job mentorship. The benefits will be evidenced-based decision making across the supply chain as well as cost savings.
Crosscutting	New approaches	<p>GHSC-PSM Mozambique supported Central Medical Stores (CMAM) with the introduction of an SOP for warehouse and inventory management trainings at all health professional institutes with a training for all teachers and supervision of course replications around the country. Prior to this, pharmacists and other medical staff would receive training after assuming positions, on-job trainings or SOP trainings held with GHSC-PSM support and provincial and/or district level support. CMAM organized the training in coordination with the National Training Direction of MISAU and with financial and technical support from GHSC-PSM. Participants comprised the teachers of the institutes and health training centers of Mozambique. This central level training is reported in indicator C2 and was performed in two groups: Group 1 with 21 participants from June 24-28, 2019 (reported on in FY2019 Q3); and Group 2 with 25 participants from July 1-5, 2019 (reported on in FY2019 Q4). As a result, we have 46 SOP trainers for health training institutes and centers which can implement the workshop-based training system before graduating pharmacy students, medical technician students, maternal child health nursing students, preventive medicine technician students, and nursing students. Following the training of trainers for the institute teachers, the workshop training journey for the finalist students at the institutes was started. GHSC-PSM only provided advice in the preparation of these trainings. From July 15, 2019 to September 21, 2019, a total of 583 finalists were trained in 10 institutes. These trainings are not included in the GHSC-PSM training activities as they are a result of the institutes' training after the training of the trainers. With this new approach, new staff will be onboarded with knowledge and skills on inventory management SOP instead of waiting years to receive the training.</p>

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
MCH commodities	Yes
RTKs	Yes
VMMC	Yes

Analysis

GHSC-PSM Mozambique has updated and submitted all required supply plans for the past two years.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
Radio Frequency SOPs for Zimpeto Regional warehouse updated to reflect the new processes for location barcode scanner utilization. The updated SOPs reflect the processes of goods-in, goods-out and put away.

Training for supply chain partners

Country

Mozambique

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Female	117	26	10	8	161
Male	156	35	12	11	214
Total	273	61	22	19	375

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Cross-TO	266	61	22	19	368
TO-specific	7				7
Total	273	61	22	19	375

Analysis

A total of 375 people were trained this quarter with GHSC-PSM support, nearly 50% of which were trained in warehousing and inventory management at the SDP level.

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Central	28	6	2	2	38
Subnational level 1	66	15	5	5	91
Subnational level 2	40	10	3	2	55
SDP	139	30	12	10	191
Total	273	61	22	19	375

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Human Resources Capacity Development	7				7
MIS	36	9	4	2	51
Monitoring and Evaluation	25	6	1	1	33
Warehousing and Inventory Management	205	46	17	16	284
Total	273	61	22	19	375

Molecular Instruments and HIV Tracer Products

Country

Mozambique

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

29%

Analysis

One new molecular instrument was put in place during the quarter. Out of the 28 instruments, 29% remained functional for the entire reporting period. Molecular instruments were out of service for periods ranging from 2 to 40 days.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Efavirenz/Lamivudine/Tenofovir 600/300/300 mg
2nd line adult ARV	Atazanavir/Ritonavir (300/100mg)
Pediatric ARV	Lamivudine/Nevirapine/Zidovudine 30/50/60mg, dispersible tablets, 60 Tabs
First RTK	Determine Kit 100 Tests
Second RTK	Uni-Gold Kit 20 tests
Tie-breaker RTK	Not reported
Viral load reagent	Abbot RealTime HIV-1 Amplification Reagent Kit Quant, 4 x 24 tests
Viral load consumable	Not reported
EID reagent	KIT CAP-G/CTM HIV-QUAL 48T CE IVD
EID consumable	Not reported

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

All

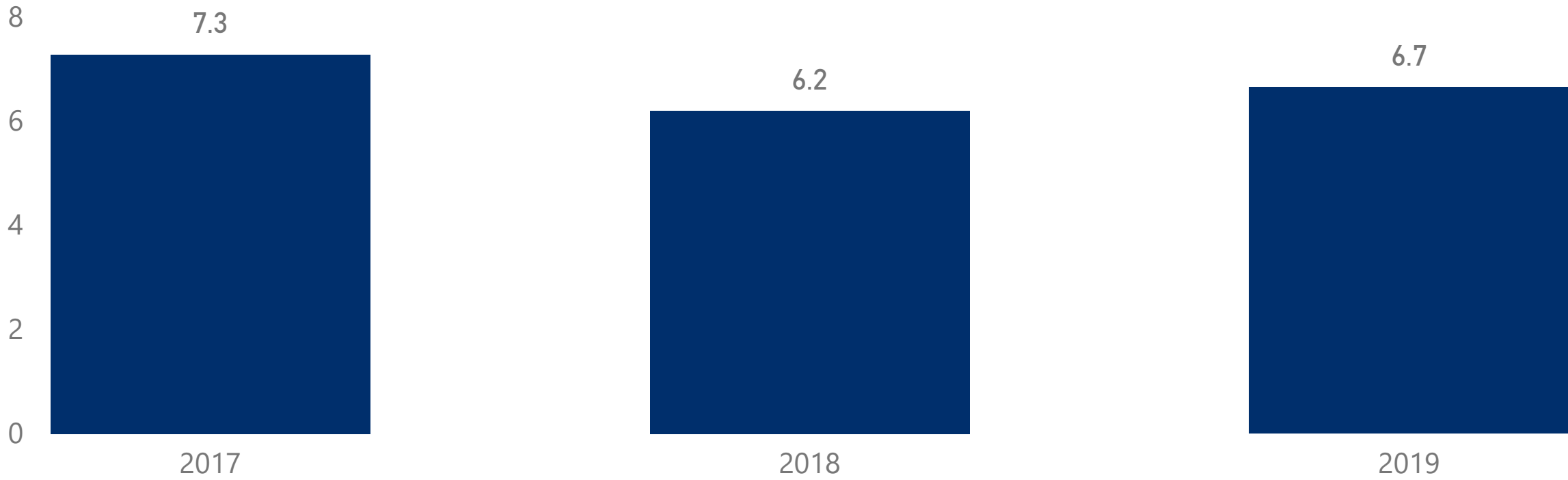
Supply Chain Level

All

Country

Mozambique

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	1.8	2.1	2.2
2019	2.0	2.4	2.3

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY: 2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Central		
TO1-HIV/AIDS	9.0	1
TO2-Malaria	9.0	1
TO3-PRH	9.0	1
TO4-MCH	9.0	1
Subnational level 1		
TO1-HIV/AIDS	7.6	8
TO2-Malaria	7.8	8
TO3-PRH	7.5	8
TO4-MCH	7.4	8
Subnational level 2		
TO1-HIV/AIDS	7.5	11
TO2-Malaria	7.2	22
TO3-PRH	7.2	22
TO4-MCH	6.9	22
SDP		
TO1-HIV/AIDS	6.2	43
TO2-Malaria	6.3	43
TO3-PRH	6.2	43
TO4-MCH	6.1	43

Analysis

Overall, confidence in SIGLUS has increased from FY18 to FY19. All levels in the supply chain scored at least a 2 of 3 for the three elements assessed (availability, accuracy, and timeliness), with the exception of the accuracy rating at the SDP level.

Annual Forecasts

FY Country

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	1.0%	-
2nd line adult ARV	15.5%	+
Pediatric ARV	28.9%	-
First RTK	9.9%	-
Second RTK	5.7%	-
Viral load reagent	12.5%	-
EID reagent	37.2%	-
Male condoms (HIV)	42.6%	-
Female condoms (HIV)	14.6%	+

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL 6x1	17.9%	-
AL 6x2	2.7%	+
AL 6x3	27.4%	-
AL 6x4	15.2%	-
mRDT	3.9%	-
SP	27.2%	-
LLINs	11.5%	-

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral methods	83.4%	-
DMPA-Subcutaneous injectable	30.7%	+
DMPA-Intramuscular injectable	51.0%	-
2-rod implant	40.2%	-
Emergency oral contraceptives	20.2%	+
Progestin-only methods	65.4%	-
Copper-bearing IUD	46.7%	-

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO4-MCH		
MgSO4	126.9%	-
Amoxicillin dispersible tablets	6.4%	-
Chlorhexidine gel	181.1%	-
Injectable gentamicin	13.8%	+
Oxytocin	25.0%	-
ORS (alone)	2.8%	+
Zinc (alone)	55.6%	-

Ref Analysis

B5	All required annual forecasts were conducted. All quantifications took place at some point between April and September 2019 and cover the period 2019-2021.
B12	The time period for the forecast for malaria products covers FY19 while the forecast for TO1 lab, family planning and MNCH products covers July 2018 to June 2019. The time period for the TO1 ARV forecast is September 2018 to August 2019. Overall the MAPEs across program areas was within a reasonable range, with majority forecasting slightly higher than the amount actually consumed. The amount forecasted for MgSO4 was higher than the actual consumption because the product was unavailable in warehouses due to a canceled shipment, which impacted consumption.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
MCH commodities	Yes
RTKs	Yes
VMMC	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Mozambique

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS	Yes
TO2-Malaria	Yes
TO3-PRH	Yes
TO4-MCH	Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	11.0	11.0
TO2-Malaria	11.0	11.0
TO3-PRH	8.0	10.5
TO4-MCH	8.5	10.5

Ref Analysis

B10 All four logistic coordination mechanisms are in place and functional, and all of them held four meetings during FY19.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	1%	189
Central Medical Stores	1%	189
Total	1%	189

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	44%	16
Crosscutting	44%	16
Subnational level 1	13%	16
Crosscutting	13%	16
Total	28%	32

Ref Analysis

B11 In calendar year 2018, 28% of supply chain leadership positions were held by women. At the central level, there was one more woman who held a leadership position than in the previous year.

B9 The 189 people at the central level includes personnel seconded the six regional warehouses managed by CMAM. GHSC-PSM does not have access to the number of people employed at subnational levels. Only two central level supply chain staff left the workforce in calendar year 2018.

Commodity Funding

FY

2019

Country

Mozambique

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
Family Planning and Reproductive Health	\$29,568	0%	\$0	0%	\$2,757,844	33%	\$5,471,230	66%	\$8,258,643
HIV/AIDS	\$0	0%	\$68,400,620	68%	\$29,140,281	29%	\$2,424,177	2%	\$99,965,079
Malaria	\$0	0%	\$10,873,307	68%	\$5,137,906	32%	\$78,616	0%	\$16,089,828
Maternal and Child Health	\$809,948	49%	\$0	0%	\$564,570	34%	\$273,843	17%	\$1,648,361

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

While the amount budgeted to procure HIV/AIDS and family planning products increased in FY19, the amount budgeted to procure malaria and MNCH products decreased. For HIV/AIDS commodities, funding increased about 30% over FY18 due to an increase in funding from Global Fund. Though the U.S. government decreased funding, other funding sources increased their budget, resulting in an increase in the overall budget to procure FP/RH commodities in FY19. UNFPA and DFID were the other donors for FP/RH commodities. For malaria products, the amount budgeted decreased by about \$14 million due to a cut in funding from the U.S. government. For MNCH products, the amount budgeted across funding sources decreased slightly from FY18 due to a decrease in funding from the host government and the U.S. government.

B8. Supply Chain Technical Independence

FY

2019

Country

Mozambique

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Mozambique

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

4

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

In Mozambique, GHSC-PSM is targeting four activities to achieve technical independence by the end of the project. This includes monitoring inventory level at the warehouse, picking and packing orders for distribution, managing a logistics management committee, and collecting and reporting supply chain performance indicators. While no activity has yet met all six criteria for technical independence, two of the four are missing only a single capacity element: performance monitoring. In the areas of inventory monitoring and picking and packing, the Central Medical Store (CMAM) is already calculating and monitoring a relevant indicators with project support. CMAM should be able to take this over in the near future to assume technical independence in these activities. In terms of managing the logistics coordination committee and collecting and reporting performance indicators, CMAM is an active participant. While resources for these activities are in place, notably information systems such as the Ferramenta Central (FC), SIMAM, and SIGLUS, GHSC-PSM continues to provide significant support for these tools. Building government ownership and capacity to process data and calculate performance indicators will be a key step to take these activities to the level of technical independence.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Governance and Financing	Manage logistics management committee	Central Medical Stores	Integrated	Yes; No contribution	Yes; No contribution	No; Major contribution	Yes; Major contribution	No; No contribution	Participant	No
Monitoring and Evaluation	Collect and report supply chain performance indicators	Central Medical Stores	Integrated	Yes; No contribution	Yes; Major contribution	No; Major contribution	Yes; Major contribution	No; Major contribution	Participant	No
Transportation and Distribution	Select and pack commodities for distribution ('pick and pack')	Central Medical Stores	Integrated	Yes; No contribution	Yes; Limited contribution	Yes; Limited contribution	Yes; Major contribution	No; Major contribution	Primary technical implementer	No
Warehousing and Inventory Management	Monitor inventory levels	Central Medical Stores	Integrated	Yes; No contribution	Yes; Limited contribution	Yes; Limited contribution	Yes; Major contribution	No; Major contribution	Primary technical implementer	No

Complete Results and Denominators

Country

FY Quarter

Mozambique

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO3-PRH	11.3%	3,401
Female condoms (FP)	15.6%	250
Male condoms (FP)	13.1%	626
Copper-bearing IUD	2.7%	297
Progestin only pills	10.0%	402
Emergency contraceptive, 2 tablets	35.1%	114
2-rod implant	5.2%	192
DMPA-Intramuscular injectable	8.7%	743
DMPA-Subcutaneous injectable	17.9%	235
Combined oral contraceptive	10.5%	542
TO2-Malaria	14.4%	5,032
LLINs	39.5%	309
SP	12.4%	663
mRDT	5.2%	802
AL 6x4	14.3%	825
AL 6x3	10.9%	805
AL 6x2	18.5%	817
AL 6x1	15.0%	811
TO1-HIV/AIDS	5.9%	5,500
Female condoms (HIV)	15.6%	250
Male condoms (HIV)	13.1%	626
EID reagent	0.0%	10
Viral load reagent	0.0%	28
Second RTK	17.2%	668
First RTK	7.3%	672
Pediatric ARV	1.8%	1,145
2nd line adult ARV	2.4%	586
1st line adult ARV	0.5%	1,515
Total	10.1%	13,057

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	0.9%	875
TO3-PRH		
Combined oral methods	10.5%	542
Injectable contraceptives	8.8%	751
Implantable contraceptives	5.2%	192
Emergency oral contraceptives	35.1%	114
Progestin-only methods	10.0%	402

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	88%	2,474
TO2-Malaria	68%	923
TO3-PRH	68%	923
TO4-MCH	68%	923

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	30%	19%	49%	2%	63
TO1-HIV/AIDS	33%	19%	48%	0%	21
TO2-Malaria	33%	10%	57%	0%	21
TO3-PRH	26%	22%	48%	4%	27
Subnational level 1	35%	18%	35%	12%	753
TO1-HIV/AIDS	54%	13%	29%	4%	252
TO2-Malaria	31%	12%	47%	10%	249
TO3-PRH	24%	28%	31%	18%	324
Total	34%	18%	37%	11%	816

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	117	156	273
TO2-Malaria	26	35	61
TO3-PRH	10	12	22
TO4-MCH	8	11	19
Total	161	214	375

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	1
Condoms	1	1
FP commodities	1	1
Lab (HIV diagnostics)	1	1
Malaria commodities	1	1
MCH commodities	1	1
RTKs	1	1
VMMC	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
28	29%

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Namibia



Service Delivery Point Stockouts and Reporting Rates

For countries with data available from GHSC-PSM non-supported regions

Country

Namibia

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - SDPs located in supported regions

GHSC-PSM Support	Stockout rate	# SDP stock observations
Supported	3.5%	86
TO1-HIV/AIDS	3.5%	86
Pediatric ARV	23.1%	13
1st line adult ARV	0.0%	13
2nd line adult ARV	0.0%	13
First RTK	0.0%	13
Second RTK	0.0%	13
Tie-breaker RTK	0.0%	13
Male condoms (HIV)	0.0%	4
Female condoms (HIV)	0.0%	4
Total	3.5%	86

B1. Stockout rate at service delivery points - SDPs located in non-supported regions

GHSC-PSM Support	Stockout rate	# SDP stock observations
Not Supported	5.5%	308
TO1-HIV/AIDS	5.5%	308
1st line adult ARV	0.0%	44
2nd line adult ARV	4.5%	44
Pediatric ARV	18.2%	44
First RTK	2.3%	44
Second RTK	9.1%	44
Tie-breaker RTK	4.5%	44
Male condoms (HIV)	0.0%	22
Female condoms (HIV)	0.0%	22
Total	5.5%	308

B3. LMIS reporting rate

GHSC-PSM Support	Total # of SDPs required to report	Reporting rate
Supported	15	87%
Not Supported	51	86%
Total	66	86%

Ref Analysis

B1 Data on this page pertains to Task Order 1. (No other task orders are operating in Namibia.)

B1 The overall stockout rate for HIV tracer products in GHSC-PSM-supported facilities this quarter was 3.5%, down from 4.2% the previous quarter. The only product with any stockouts reported from these sites was pediatric ARVs, which was also stocked out at the central and regional levels. Non-supported facilities also reported stockouts of second-line adult ARVs and all three RTK tracer products, especially second RTKs. Stockouts of pediatric ARVs and second RTKs are due to lengthy procurement lead times for the Central Medical Store, which requires the confirmation of availability of funds before an RFQ can proceed. To manage the shortages, GHSC-PSM worked with district-level MoHSS pharmacy staff to redistribute existing stock of pediatric ARVs and second RTKs. The project also worked with CMS to expedite delivery of stocked out products.

B3 The reporting rate from GHSC-PSM-supported facilities dropped slightly this quarter, from 93% to 87% of the 15 supported sites. GHSC-PSM-supported tools and reporting dashboard are running well, and the project is engaging with the pharmaceutical services head office to address the drop-off in reporting at some sites. The rate in non-supported sites also dropped, from 88% to 86%.

Warehouse stock status and product losses

Country

Namibia

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	16	25%	38%	25%	13%
TO1-HIV/AIDS	16	25%	38%	25%	13%
Subnational level 1	32	34%	44%	19%	3%
TO1-HIV/AIDS	32	34%	44%	19%	3%
Total	48	31%	42%	21%	6%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

- C7 GHSC-PSM does not have custody of any products in Namibia and therefore does not report on product losses.
- B2 The stocked according to plan rate in Namibia's central and regional distribution centers was 21% this quarter, a slight decrease from the previous quarter (23%). Understocking fell slightly, but stockouts increased to 31% of observations. The most commonly stocked out items included pediatric ARVs and second RTKs, with some additional stockouts reported from the regional level for tie-breaker RTKs and both male and female condoms. The lengthy procurement process due to lack of supply contracts to ensure a stable supply of ARVs continues to contribute to a high percentage of stocked and understocked out observations. Tenders were awarded and framework contracts were signed earlier this year. GHSC-PSM worked with CMS to prepare supply plans for these items, and MoHSS has placed orders as per the supply plan with contracted suppliers.

Supply plans, innovations, and strategic activities

Country

Namibia

FY Quarter

2019-Q4

Total Innovations implemented this quarter

New approaches
1

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
TO1-HIV/AIDS	New approaches	GHSC-PSM has recently updated the Facility Electronic Stock Card (FESC), from which LMIS reports are generated, to include information on budget allocation and use. The new version can track the value of stock issued to different facilities and departments. The facilities are then able to track their expenditures as they order from the warehouse. This feature will help to improve accountability of pharmacy staff on managing pharmaceutical products and help managers on decision making on issues concerning pharmaceutical stock and expenditure.

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
---------------	-------------------------------

Analysis

There are currently no supply plan submission expectations for Namibia.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
In the quarter, GHSC-PSM supported the revision of the 6th edition Namibia Standard Treatment Guidelines for HIV/AIDS management and the accompanying training curriculum. The project also developed the user guide for TLD transition on supply chain management for pharmacy staff.

Training for supply chain partners

Country

Namibia

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	Total
Female	16	16
Male	6	6
Total	22	22

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	Total
SDP	22	22
Total	22	22

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	Total
TO-specific	22	22
Total	22	22

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	Total
Warehousing and Inventory Management	22	22
Total	22	22

Analysis



The project trained 22 people this quarter in four regions. The training focused on inventory and patient management, including use of the Facility Electronic Stock Card (FESC). Training on FESC has helped staff become confident in using the tool, which facilitates better stock management at facilities and accountability. The training also helped staff manage the supply chain aspects of transitioning to TLD.

Molecular Instruments and HIV Tracer Products

Country

Namibia

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

GHSC-PSM does not manage or support maintenance for any molecular instruments in Namibia.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir DF/Lamivudine/Efavirenz 300/300/400 mg
2nd line adult ARV	Atazanavir/Ritonavir 300/100 mg
Pediatric ARV	Abacavir/Lamivudine 60/30 mg
First RTK	Colloidal Gold Device HIV 1 /2
Second RTK	Uni-Gold HIV 1 /2
Tie-breaker RTK	Sure Check HIV 1 /2
Viral load reagent	Not reported
Viral load consumable	Not reported
EID reagent	Not reported
EID consumable	Not reported

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Workforce, Leadership, and Governance

FY

2019

Country

Namibia

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS No

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2019
TO1-HIV/AIDS	5.3

Ref Analysis

B10 The relevant logistics coordination mechanism for HIV in Namibia is the forecasting and supply planning TWG. The TWG contains good representation from the MoHSS, CMS and donors, and it meets regularly throughout the year. However, it has no formal legislative status or establishing ministerial decree, and it shows limited evidence of developing policies, procedures or actions plans. It is therefore not considered a functional mechanism.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	7%	54
CMS/NMPC	7%	54
Total	7%	54

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	50%	10
TO1-HIV/AIDS	50%	10
Total	50%	10

Ref Analysis

B11 Among leadership positions in supply chain management at the central level, women are equally represented, holding half of those positions.

B9 Between the Central Medical Store and the National Medicines Policy Coordination (NMPC) sub-division of the MoHSS, there were 54 supply chain technical positions at the start of the fiscal year. Four of those staff left this year, for a turnover rate of 7%.

Annual Forecasts

FY

2019

Country

Namibia

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	14.3%	+
2nd line adult ARV	4.4%	+
Pediatric ARV	23.4%	+
First RTK	14.9%	+
Second RTK	72.8%	+
Tie-breaker RTK	65.4%	+
Male condoms (HIV)	9.6%	+

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
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B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

Ref Analysis

- B5 Annual forecast completion is only tracked in countries where there are GHSC-PSM supply plan submission expectations. There are currently no supply plan submission expectations for Namibia.
- B12 Data shown above related to the Namibian government fiscal year (April 2018-March 2019). Namibia's most accurate forecast was for second line ARVs, with an annual forecast error rate of 4%. All other forecasted tracer products saw positive forecast bias, indicating consumption exceeding the forecasted total. The broadest gaps, in percentage terms, were for second and tie-breaker RTKs, which saw higher rates of error both this year and last. The variance for first-line adult ARVs was smaller, at only 14%, but this is an increased error rate compared to the previous year. This may be due to shifting consumption, as Namibia managed a first-line transition from TEE to TLE400 in October 2018 and plans for the upcoming switch to TLD in October 2019. (Data shown here is for TLE400). Error rates for pediatric ARVs improved, falling from 52% to 23% this year. Forecasts for male condoms improved as well.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
---------------	--------------------------------------

B8. Supply Chain Technical Independence

FY

2019

Country

Namibia

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Namibia

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

9

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

In Namibia, GHSC-PSM has agreed with the USAID mission to target 9 supply chain activities to achieve technical independence by the end of the project. These activities are focused in the technical areas of forecasting and supply planning, as well as MIS system administration. While none of the relevant counterparts have yet achieved technical independence at this point in the project, all of them have at least one institutional capacity element in place. GHSC-PSM has been especially critical in supporting the required resources for most activities in the form of information systems that are necessary to complete these supply chain tasks. Gaps still remain in the development and use of standard operating procedures, tools, and manual to guide several targeted activities under FASP and MIS, as well as formalized training approaches that counterparts can implement without donor support. In the coming year, the project plans to develop standardized materials and presentations that the NMPC can adopt to support technical independence in system administration of its key stock and inventory management tools, the Electronic Dispensing Tool (EDT) and Facility Electronic Stock Card (FESC).

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	Technical Working group	HIV/AIDS	No; Major contribution	No; No contribution	No; Moderate contribution	Yes; Major contribution	No; No contribution	Participant	No
	Develop/update supply plan	Central Medical Stores	HIV/AIDS	Yes; Major contribution	No; No contribution	No; Limited contribution	Yes; Major contribution	No; No contribution	Participant	No
	Monitor the commodities pipeline	Technical Working group	HIV/AIDS	Yes; Major contribution	No; Limited contribution	No; No contribution	Yes; Major contribution	No; No contribution	Participant	No
Monitoring and Evaluation	Collect and report supply chain performance indicators	National Medicines Policy Co-ordination (NMPC)	HIV/AIDS	Yes; No contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
Procurement	Prepare and award RFxs	Central Medical Stores	HIV/AIDS	Yes; Moderate contribution	No; Moderate contribution	No; Moderate contribution	Yes; Major contribution	No; Limited contribution	Participant	No
Warehousing and Inventory Management	Monitor inventory levels	National Medicines Policy Co-ordination (NMPC)	HIV/AIDS	Yes; No contribution	Yes; Major contribution	No; Major contribution	No; Major contribution	Yes; Major contribution	Participant	No

B8. Supply Chain Technical Independence

FY

2019

Country

Namibia

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

9

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

In Namibia, GHSC-PSM has agreed with the USAID mission to target 9 supply chain activities to achieve technical independence by the end of the project. These activities are focused in the technical areas of forecasting and supply planning, as well as MIS system administration. While none of the relevant counterparts have yet achieved technical independence at this point in the project, all of them have at least one institutional capacity element in place. GHSC-PSM has been especially critical in supporting the required resources for most activities in the form of information systems that are necessary to complete these supply chain tasks. Gaps still remain in the development and use of standard operating procedures, tools, and manual to guide several targeted activities under FASP and MIS, as well as formalized training approaches that counterparts can implement without donor support. In the coming year, the project plans to develop standardized materials and presentations that the NMPC can adopt to support technical independence in system administration of its key stock and inventory management tools, the Electronic Dispensing Tool (EDT) and Facility Electronic Stock Card (FESC).

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
MIS	Manage user helpdesk and provide system training	National Medicines Policy Co-ordination (NMPC)	HIV/AIDS	No; Major contribution	No; Major contribution	No; Major contribution	Yes; Major contribution	No; Major contribution	Observer	No
	System administration - stock/inventory management	National Medicines Policy Co-ordination (NMPC)	HIV/AIDS	No; No contribution	No; Major contribution	No; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
	System administration - logistics management information system	National Medicines Policy Co-ordination (NMPC)	HIV/AIDS	No; Major contribution	No; Major contribution	No; Major contribution	No; Major contribution	Yes; Major contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Namibia

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO1-HIV/AIDS	3.5%	86
Female condoms (HIV)	0.0%	4
Male condoms (HIV)	0.0%	4
Tie-breaker RTK	0.0%	13
Second RTK	0.0%	13
First RTK	0.0%	13
Pediatric ARV	23.1%	13
2nd line adult ARV	0.0%	13
1st line adult ARV	0.0%	13
Total	3.5%	86

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
------------	---------------	-------------------------

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	87%	15

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	25%	13%	38%	25%	16
TO1-HIV/AIDS	25%	13%	38%	25%	16
Subnational level 1	19%	3%	44%	34%	32
TO1-HIV/AIDS	19%	3%	44%	34%	32
Total	21%	6%	42%	31%	48

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	16	6	22
Total	16	6	22

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
---------------	----------------------------	-------------

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
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For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Nepal



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Nepal

FY Quarter

Multiple selections

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	12,639	12.9%
Combined oral contraceptive with iron	3,297	10.8%
DMPA-Intramuscular injectable	3,301	10.0%
2-rod implant	1,652	21.4%
Copper-bearing IUD	1,091	23.1%
Male condoms (FP)	3,298	10.3%
Total	12,639	12.9%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO3-PRH	4,140	53%
TO4-MCH	4,140	53%
Total	8,280	53%

Ref Analysis

B1 Data for this indicator cover the period of January 15, 2019 to April 15, 2019. In Nepal this is known as FY75/76, Quarter 3. The stockout denominator is based on a 79% reporting rate whereas last quarter the stockout was based on 61% reporting. Compared to last quarter, four FP/RH commodities showed slight increases in stockout rates. Condoms remain unchanged in stockout levels from the previous quarter. The increased denominator (and thus additional sites) may explain the slightly increased overall stockout rate for FP/RH commodities.

B3 FY19 Q4 saw the largest improvement in terms of LMIS timeliness reporting, from 0% in Q1 to 24% in Q2 to 41% in Q3 and finally 53% in Q4. The project implemented various strategies to improve the LMIS reporting rate. First, the project followed up with FSOs and pharmacists for FY75/76 Q4 LMIS reports and also for previous quarter LMIS reports still pending. Then, LMIS reporting rates for each pharmacist-stationed district were analyzed and shared with the pharmacists to demonstrate their respective reporting status. The project also encouraged FSOs, pharmacists and two computer operators to enter data at their respective stores. Finally, an LMIS data entry tracker (national and provincial) and eLMIS dashboard was monitored daily to track the LMIS reporting rate and guided the data entry operators and FSOs.

Warehouse stock status and product losses

Country

Nepal

FY Quarter

Multiple selections

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	5		40%		60%
TO3-PRH	5		40%		60%
Subnational level 1	16	6%	38%	13%	44%
TO3-PRH	16	6%	38%	13%	44%
Subnational level 2	277	4%	35%	18%	42%
TO3-PRH	277	4%	35%	18%	42%
Total	298	4%	36%	18%	42%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
----	-------	--------------	--------------	--------------	------------	------------------	--------

Ref Analysis

C7	There are no product losses to report this quarter.
B2	The stock status at storage sites data cover the period of January 15, 2019 to April 15, 2019. The stock status of FP commodities was reported for all three tiers of storage: central, provincial and district. The overall stocked according to plan rates decreased slightly this quarter to 17.8%, down from 20.7% the previous quarter. Encouragingly, storage sites reported a decrease in stockout rates to 14%, down from a year-high of 27%. Overstocked levels remain unchanged from last quarter at 42%. The stock statuses are being continuously monitored by project staff and the field support officers based in the provincial and central medical stores. The stock statuses are also shared at the External Development Partners on a monthly basis.

Supply plans, innovations, and strategic activities

Country

Nepal

FY Quarter

Multiple selections

Total Innovations implemented this quarter

0

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
------------	--------------------	-------------

There are no new innovations to report this quarter

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
FP commodities	Yes

Analysis

All required supply plans were submitted this quarter.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for FY2019 Q4

Average Rating of In-country Data Confidence

Task Order

Supply Chain Level

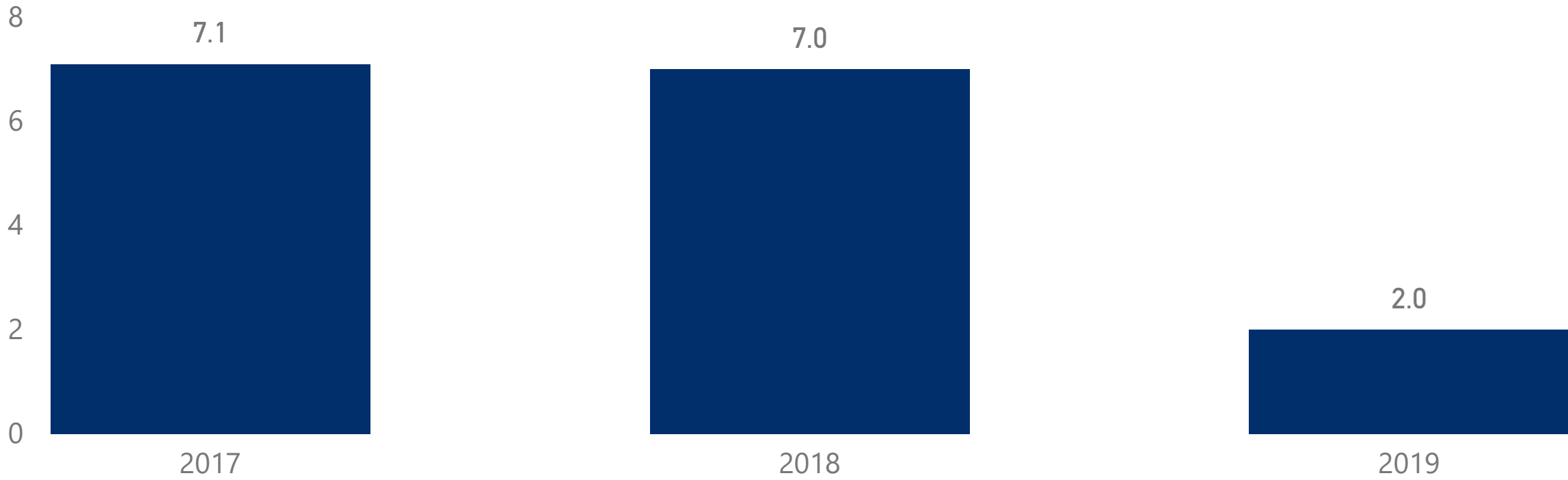
Country

All

All

Nepal

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	1.0	3.0	3.0
2019	1.0	1.0	

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY: 2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Central		
TO3-PRH	2.0	1

Analysis

The Central Medical Store at Teku was the only store where DQA was conducted this year. Because procurement of essential commodities has been moved to local level governments, the Teku store is not procuring any essential commodities; therefore, this year only FP commodities were assessed for data availability and data accuracy. Compared to FY18, the overall data confidence rating for this store has declined to 50%. Only two commodities--depo and pills--had required monitoring tools, while condoms, implants and IUCDs lacked all the required monitoring tools. Similarly, data accuracy was assessed on the ending balance on the day of the DQA. A physical count found that only two commodities (depo and pills) met the accuracy parameter. The findings of the DQA were discussed with both the field support officer and the store in-charge, who were asked to ensure proper maintenance of bin cards.

Workforce, Leadership, and Governance

FY
2019

Country
Nepal

B10. Is there a functional logistics coordination mechanism in place?

TO3-PRH	No
TO4-MCH	No

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO3-PRH	4.4	4.5
TO4-MCH	4.4	4.5

Ref	Analysis
-----	----------

B10 Logistics Working Group (LWG) and LMIS task force meetings are two platforms that the M&E plan designated for assessment for this indicator. In FY19, no LWG meetings were conducted, mainly because it was neither feasible nor relevant with the slow pace of structural changes in MoHP system. Instead there were 15 joint weekly meeting with the management division resolving issues around the logistics coordination mechanism as part of the MIS review meeting. The management division director was instructed to consider the first of these MIS review meetings of each Nepali month as LMIS Task Force meetings, as per the meeting minutes of February 11, 2019. Because no LWG meetings were conducted and based on FY18 experience of not getting any response from government officials interviewed, in FY19, no KIIs were conducted. GHSC-PSM will work closely with management division, MOSD and PHLMC to revive the LWG in FY20.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Total		

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Total		

Ref	Analysis
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Annual Forecasts

FY

2019

Country

Nepal

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
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B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
------------	-----------------------------------	---------------

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral methods	22.7%	-
Combined oral contraceptive with iron	22.7%	-
Injectable contraceptives	33.9%	-
DMPA-Intramuscular injectable	33.9%	-
Implantable contraceptives	3.3%	-
2-rod implant	3.3%	-
Copper-bearing IUD	8.9%	-
Male condoms (FP)	99.7%	-

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO4-MCH		
MgSO4	44.1%	-
Amoxicillin dispersible tablets	2.2%	+
Chlorhexidine gel	111.8%	-
Injectable gentamicin	265.4%	-
Oxytocin	18.9%	-
ORS (alone)	72.1%	-
Zinc (alone)	0.2%	+

Ref Analysis

B12	The forecast exercise in Nepal is conducted annually. This year the forecast error improved over last year, which may be due to the methodology used this year to calculate the forecast error. The exercise this year used various sources such as LMIS, HMIS and demography data and as per discussion with the GHSC-PSM team, we have used the same consumption source data used during forecasting as available. Thus, for condoms, LMIS data were used; for depo, pills, IUD and implants, HMIS dispensed data were used; and for all seven MCH commodities, LMIS data were used. However, for the commodities where LMIS consumption data were used, the reporting rate was adjusted to 100% reporting, similar to what was done in FY18 forecast error calculation. GHSC-PSM will work closely with the management division and all the other divisions to minimize the gap between the forecast and consumption.
B5	The National Consensus Quantification of Program Commodities and Vaccines was conducted on April 4-5, 2019. Annual forecasts for both FP/RH commodities and MCH commodities were shared with GHSC-PSM HQ.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
FP commodities	Yes
MCH commodities	Yes

Commodity Funding

FY
2019

Country
Nepal

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
▲ Family Planning and Reproductive Health	\$1,955,295	74%			\$696,960	26%			\$2,652,255

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

With the federal structure in Nepal, the budget for the procurement of essential commodities goes to provincial and local level with no budget allocated at the central level. This makes it very challenging to report on MCH product budgeting. However, FP commodity budgeting is still conducted at the central level. Thus these budget figures are shared there.

B8. Supply Chain Technical Independence

FY

2019

Country

Nepal



Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Nepal

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

5

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

For the first data collection for B8, Nepal has elected five activities spanning forecasting and supply planning, warehousing and inventory management, and governance and financing. As of the publishing of this report, zero of five targeted supply chain activities are considered to be conducted independently by the host government in a technical capacity. The two activities that are the furthest along to technical independence are monitoring the commodities pipeline and monitoring inventory levels. Both of these have 40% of the capacity elements in place to achieve technical independence. The remaining activities scored 20% or lower. GHSC-PSM will work closely with the management division to ensure the sustainability of the identified activities as the project continues to implement its technical assistance strategy.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	Management Division	Integrated	No; Moderate contribution	No; Moderate contribution	No; Moderate contribution	Yes; Moderate contribution	No; Moderate contribution	Primary technical implementer	No
	Develop/update supply plan	Management Division	Integrated	No; Moderate contribution	No; Moderate contribution	No; Moderate contribution	Yes; Moderate contribution	No; Moderate contribution	Primary technical implementer	No
	Monitor the commodities pipeline	Management Division	Integrated	Yes; Moderate contribution	No; Moderate contribution	No; Moderate contribution	Yes; Moderate contribution	No; Moderate contribution	Primary technical implementer	No
Governance and Financing	Manage logistics management committee	Management Division	Integrated	No; Limited contribution	No; No contribution	No; No contribution	No; Limited contribution	No; Limited contribution	Primary technical implementer	No
Warehousing and Inventory Management	Monitor inventory levels	Management Division	Integrated	No; Major contribution	Yes; Moderate contribution	No; Moderate contribution	Yes; Major contribution	No; Major contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Nepal

Multiple selections

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO3-PRH	12.9%	12,639
Male condoms (FP)	10.3%	3,298
Copper-bearing IUD	23.1%	1,091
2-rod implant	21.4%	1,652
DMPA-Intramuscular injectable	10.0%	3,301
Combined oral contraceptive with iron	10.8%	3,297
Total	12.9%	12,639

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO3-PRH		
Combined oral methods	10.8%	3,297
Injectable contraceptives	10.0%	3,301
Implantable contraceptives	21.4%	1,652

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO3-PRH	53%	4,140
TO4-MCH	53%	4,140

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central		60%	40%		5
TO3-PRH		60%	40%		5
Subnational level 1	13%	44%	38%	6%	16
TO3-PRH	13%	44%	38%	6%	16
Subnational level 2	18%	42%	35%	4%	277
TO3-PRH	18%	42%	35%	4%	277
Total	18%	42%	36%	4%	298

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Total
Total	

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
FP commodities	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Niger



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Niger

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
Total		

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
Total		

Ref Analysis

B1 The data source for Indicator B1, Stockout rate at service delivery points, is currently the End Use Verification (EUV) survey, which is only conducted once a year in fiscal year quarter 2 or 3. Therefore, no data was available this quarter.

B3 For Indicator B3, LMIS reporting rate, the LMIS (DHIS2) is not currently able to provide this data.

Warehouse stock status and product losses

Country

Niger

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Total					

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

B2 For Indicator B2, Stocked according to plan, the available data source, DHIS2 is not currently able to provide this data.

Supply plans, innovations, and strategic activities

Country

Niger

FY Quarter

2019-Q4

Total Innovations implemented this quarter
0

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
There are no new innovations to report this quarter		

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
Malaria commodities	No

Analysis

The supply plan is still being finalized, and therefore has not yet been shared with the home office forecasting and quantification team.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for FY2019 Q4

Training for supply chain partners

Country

Niger

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO2-Malaria	Total
Female	3	3
Male	10	10
Total	13	13

C2. Number of people trained by supply chain level

Supply Chain Level	TO2-Malaria	Total
Central	13	13
Total	13	13

C2. Number of people trained by funding source and type

Type	TO2-Malaria	Total
TO-specific	13	13
Total	13	13

C2. Number of people trained by technical area

Supply Chain Function	TO2-Malaria	Total
Forecasting and Supply Planning	7	7
Monitoring and Evaluation	6	6
Total	13	13

Analysis



This quarter, 13 people were trained on quantification tools: six from the National Malaria Control Program and seven others.

Average Rating of In-country Data Confidence

Task Order

All

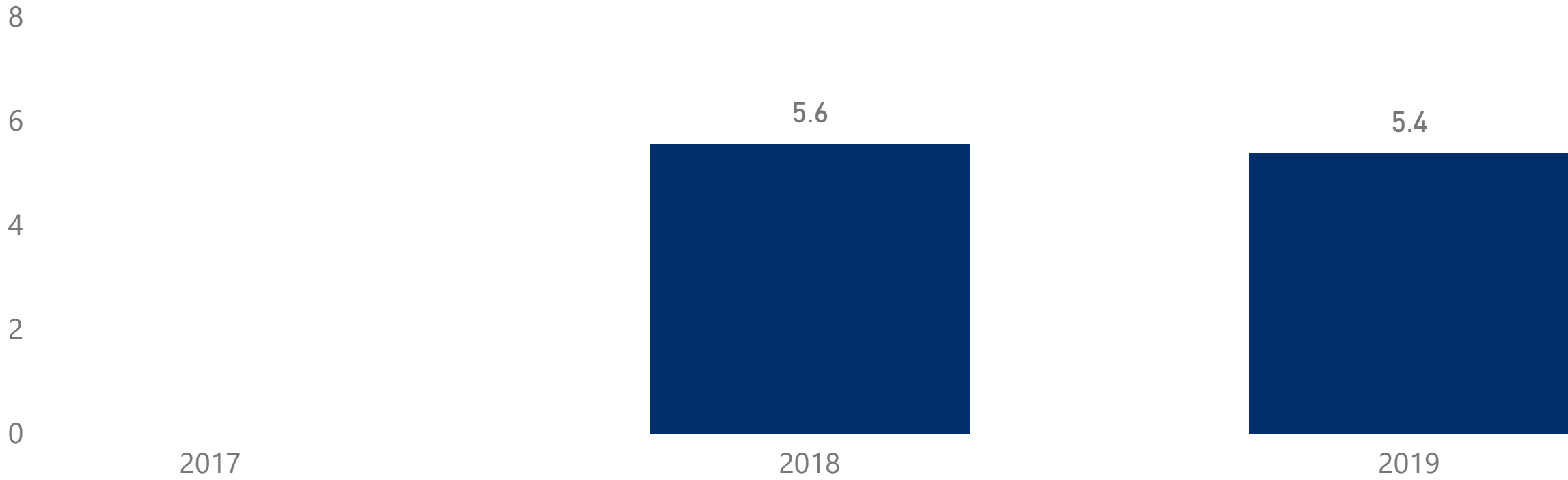
Supply Chain Level

All

Country

Niger

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	1.6	2.0	2.0
2019	1.7	2.5	1.1

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Subnational level 2		
TO2-Malaria	4.7	6
SDP		
TO2-Malaria	5.5	48

Analysis

A data quality assessment was conducted in a representative sample of 48 SDPs and 6 district warehouses in the two GHSC-PSM-supported regions of Dosso and Tahoua. The total score for both supply chain levels was 5.4, categorized as fair. The SDP level scored higher than the district level (5.5 compared to 4.7), with both levels scoring the highest in availability of data. Timeliness could only be calculated as "submitted" (a score of 3 out of 3) or "not submitted" (a score of 0 out of 3), based on the information available in DHIS2. The assessment uncovered difficulties with the ability of stock managers to fill out the stock cards, the need to strengthen logistics-based supervision, and the need to triangulate health service and stock data at the district level to improve the reliability of the consumption data.

Annual Forecasts

FY

2019

Country

Niger

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
▲		
TO2-Malaria		
AL 6x1	6.6%	+
AL 6x2	6.7%	+
AL 6x3	27.4%	+
AL 6x4	47.4%	+
mRDT	20.0%	+
SP	7.7%	+
LLINs	182.7%	-

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

Ref Analysis

B5	An annual forecasting exercise was conducted in September.
B12	Forecast error for all malaria products but LLINs in 2019 was below 50 percent. For LLINs, the error rate was -183 percent, indicating a large over-forecast. The other products were all under-forecast.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
Malaria commodities	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Niger

B10. Is there a functional logistics coordination mechanism in place?

TO2-Malaria No

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO2-Malaria	3.3	4.0

Ref Analysis

B10 There is a logistics coordination mechanism that has just been established, however its terms of reference are still being finalized and therefore the mechanism is not yet functional. After these are finalized, the mechanism will be expected to meet quarterly to develop policies and procedures to improve the efficiency of the supply chain.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	7%	15
ONPPC	7%	15
Total	7%	15

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	50%	12
TO2-Malaria	50%	12
Total	50%	12

Ref Analysis

B9 Out of the 15 supply chain personnel working at the National Office of Pharmaceuticals and Chemicals (Office National des Produits Pharmaceutiques et Chimiques, ONPPC), only 1 (7 percent) left the active health labor force during the year.

B11 This year, an additional six leadership positions were included in the definition. In addition to the director of the National Drug Authority (Direction de la Pharmacie et Médecine Traditionnelle), this year the department heads were also included. As with last year, the director general of the Office National des Produits Pharmaceutiques et Chimiques was also included. In total the number of positions considered as central supply chain leadership increased from 6 to 12. Last year, five out of six of the positions were held by women. This year the number is 6 out of 12, as the new head of the Unité Gestion Sanitaire (Special Management Unit for donor commodities) is a woman.

Commodity Funding

FY

2019

Country

Niger

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
▲ Malaria	\$1,033,821		Not Available		\$3,504,232		\$1,285,295		Not Available

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

This past year, of the known amounts of spending for the procurement of malaria commodities for Niger, the US government funded 60 percent, while the World Bank ('other') funded 22 percent, and the Government of Niger funded 18 percent. An unknown amount was funded by the Global Fund.

B8. Supply Chain Technical Independence

FY

2019

Country

Niger

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Niger

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

7

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

14%

Analysis

GHSC-PSM Niger and the USAID Mission targeted seven activities for technical independence, including all three forecasting and supply planning activities, all three warehousing and inventory management activities, and managing the logistics management committee under governance and financing. The country has become technically independent in one activity to date, receiving commodities at the central medical store. However, GHSC-PSM had a limited contribution to this activity that was already close to technical independence. The project helped the National Office of Pharmaceuticals and Chemicals (Office National des Produits Pharmaceutiques et Chimiques, ONPPC) to develop an Excel-based tool to manage inventory. The ONPPC has a system in place for on-the-job training, has standard operating procedures in place that also designate the ONPPC as the responsible entity, and are measuring indicators such as the average number of days of stockouts and stocked according to plan through the DHIS2 platform. Some of the other targeted activities lack only an institutionalized training approach and/or a performance indicator, while three activities are still led by GHSC-PSM or other partners.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	Comité Quantification et SIGL du paludisme	Malaria	Yes; No contribution	Yes; No contribution	Yes; Limited contribution	Yes; Major contribution	No; Major contribution	Participant	No
	Develop/update supply plan	Comité Quantification et SIGL du paludisme	Malaria	Yes; No contribution	No; Limited contribution	No; Moderate contribution	Yes; Major contribution	No; Moderate contribution	Participant	No
	Monitor the commodities pipeline	Comité Quantification et SIGL du paludisme	Malaria	Yes; Major contribution	No; No contribution	No; Moderate contribution	No; Major contribution	No; No contribution	Primary technical implementer	No
Governance and Financing	Manage logistics management committee	DPHMT	Malaria	Yes; Moderate contribution	No; Moderate contribution	No; Limited contribution	No; Limited contribution	No; Major contribution	Participant	No
Warehousing and Inventory Management	Monitor inventory levels	Office national des produits pharmaceutiques et chimiques	Malaria	Yes; No contribution	Yes; No contribution	No; No contribution	Yes; Limited contribution	No; No contribution	Primary technical implementer	No
	Put away commodities	Office national des produits pharmaceutiques et chimiques	Malaria	Yes; No contribution	Yes; No contribution	No; No contribution	Yes; Major contribution	Yes; No contribution	Primary technical implementer	No
	Receive commodities	Office national des produits pharmaceutiques et chimiques	Malaria	Yes; No contribution	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	Primary technical implementer	Yes

Complete Results and Denominators

Country

FY Quarter

Niger

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
Total		

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Total					

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO2-Malaria	3	10	13
Total	3	10	13

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
Malaria commodities	1	0

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Nigeria



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Nigeria

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	15,500	10.6%
1st line adult ARV	1,719	4.7%
2nd line adult ARV	744	8.2%
Pediatric ARV	972	10.7%
First RTK	1,349	6.1%
Second RTK	2,181	13.6%
Tie-breaker RTK	1,484	16.3%
Viral load reagent	18	11.1%
Viral load consumable	19	5.3%
EID reagent	19	26.3%
EID consumable	19	5.3%
Male condoms (HIV)	3,765	10.9%
Female condoms (HIV)	3,211	11.1%
Total	15,500	10.6%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	36,386	5.2%
AL 6x1	3,494	3.5%
AL 6x2	3,492	4.6%
AL 6x3	3,479	8.9%
AL 6x4	3,501	4.5%
AL inability to treat	3,515	1.1%
AS/AQ 100/270mgx3	2,537	2.2%
AS/AQ 100/270mgx6	2,337	2.1%
AS/AQ 25/67.5mg	2,529	1.2%
AS/AQ 50/135mg	2,467	2.0%
mRDT	3,482	8.8%
SP	3,062	6.0%
LLINs	2,491	16.6%
Total	36,386	5.2%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	30,016	12.2%
Combined oral contraceptive with iron	3,620	10.7%
DMPA-Subcutaneous injectable	1,476	19.9%
NET-En Injectable	3,866	6.2%
DMPA-Intramuscular injectable	3,859	7.2%
1-rod implant	2,523	24.4%
2-rod implant	2,744	16.8%
Progestin only pills	3,498	8.2%
Copper-bearing IUD	1,454	23.3%
Male condoms (FP)	3,765	10.9%
Female condoms (FP)	3,211	11.1%
Total	30,016	12.2%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	3,181	96%
TO2-Malaria	3,681	98%
TO3-PRH	4,202	97%
Total	11,064	97%

Ref Analysis

B1	Stockout rates for tracer commodities generally improved in FY2019 Q4, most especially for TO1, which saw stockout rates decrease from 17.5% in Q3 to 10.6% in Q4. Stockout rates for RTKs, which had skyrocketed to 28% in the previous quarter, returned to 6.1% in Q4. Two exceptions to this trend of improved stock rates among TO1 tracer commodities were the stockout rates for pediatric ARVs--which increased from 6% in Q3 to 10.7% in Q4--and PCR reagents. The increase in the case of pediatric ARVs is partially due to the ongoing transition between regimens for pediatric patients. In the case of reagents, zero stock on hand was recorded for either viral load or EID reagent at six facilities, reflecting barcode errors that made the present reagents unusable. Emergency resupply processes were initiated and all facilities were resupplied via warehouse or interfacility transfer to forestall disruption to service.
B1	TO2: Stockout rates for TO2/malaria tracer commodities declined from 8.6% in FY2019 Q3 to 5.6% in Q4. AL inability to treat remains low at just 1.1%, reflecting the sustained supply of ACTs. Stockout rates for SP and LLINs, which had more than tripled in the prior quarter, returned to more typical rates in Q4, 6% and 16.6%, respectively.
B1	TO3: the family planning commodities stockout rate largely decreased across all methods and categories. The general improvement reflects stakeholders' efforts to expedite orders and deliveries based on the country's 2019 supply plan. This was necessary to address rationing of commodities. The exception was copper-bearing intrauterine devices (IUCD), for which stockout rates increased to 23% in Q4 from 16% in Q3. Availability of IUCDs was affected by expiries at the facility level; this trend will be corrected when the expected shipments arrive.
B3	Reporting rates remained well above the 90% target throughout the period with over 3,000 SDPs successfully reporting (96%-98% reporting, for all three TOs).

Warehouse stock status and product losses

Country

Nigeria

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	32	3%	57%	37%	3%
TO1-HIV/AIDS	12		58%	42%	
TO2-Malaria	10		40%	60%	
TO3-PRH	10	10%	80%		10%
Total	32	3%	57%	37%	3%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
TO1	Central	Storage	Expiry	ARVs, RTKs, laboratory	\$7,879	\$21,199,250	0.04%
TO1	Global	Transit	Missing product	ARVs	\$743	\$21,862,411	0.00%
TO2	Global	Transit	Missing product	ACTs	\$140	\$8,978,366	0.00%

Ref Analysis

- B2 In FY2019 Q4, approximately one-third of tracer commodities were stocked according to plan at the Nigerian central medical store, and the majority understocked. Some contextual points to note relate to specific commodities. In the case of EID and viral load reagents, there was significant pressure to push out these commodities as both were at risk of expiry. Despite understocked status, however, the country has sufficient stock of viral load reagent to support the next distribution cycle. The diminished stock of malaria commodities reflects a delayed approval for the procurement of malaria commodities, excess consumption beyond the MOP projection and provision, and skewed consumption of ALs over ASAQs. The only product to be stocked out centrally were 2-rod implants (TO3). Overall, the favorable "stocked according to plan" indicator results reflect to some extent a concerted commodity inventory management system strategy of ensuring lean inventory, even as most commodities were available at lower level facilities.
- C7 In FY2019 Q4, loss of product under GHSC-PSM control from theft, damage or expiry remained well under 1% of product value. The project recorded expiration of \$7,878.60 worth of HIV commodities total in Q4, or about 0.04% of the average inventory balance for TO1 commodities for the period. There was no loss of malaria products due to expiration. In addition, the QA process was resolved for a FY2019 Q2 incident in which a portion of HIV and malaria commodities (valued \$883) went missing during a 3PL delivery to 3 facilities. The 3PL will reimburse the project for missing product.

Supply plans, innovations, and strategic activities

Country

Nigeria

FY Quarter

2019-Q4

Total Innovations implemented this quarter

New technologies

1

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
TO3-PRH	New technologies	The Global Family Planning Visibility Analytic Network (GFPVAN) was launched in this fiscal year. The Reproductive Health supplies Coalition (RHSC) manages the GFPVAN and piloted it in two countries, one of which was Nigeria. The GFPVAN is a shared web-based platform to capture and use FP supply chain data from multiple sources and organizations to provide enhanced visibility for decision making.

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
RTKs	Yes

Analysis

All required quarterly supply plans (ARVs, lab, RTKs, condoms, malaria, PRH) continued to be submitted in a timely manner in FY2019 Q4.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description

Review and harmonization of SOPs for the supply chain of Nigerian health programs in the following thematic areas: LMIS, M&E, governance, quality assurance and quality control.

There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for FY2019 Q4. During this period, GHSC-PSM supported the ongoing review and harmonization of SOPs on multiple supply chain areas - namely, LMIS, M&E, governance, and quality assurance and quality control - but documents have yet to be finalized or made available for distribution.

Training for supply chain partners

Country

Nigeria

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	Total
Female	1,170	585	585	2,340
Male	1,575	788	787	3,150
Total	2,745	1,373	1,372	5,490

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	Total
SDP	2,745	1,373	1,372	5,490
Total	2,745	1,373	1,372	5,490

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	Total
Cross-TO	2,745	1,373	1,372	5,490
Total	2,745	1,373	1,372	5,490

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	Total
MIS	2,745	1,373	1,372	5,490
Total	2,745	1,373	1,372	5,490

Analysis



Overall, in FY2019, GHSC-PSM trained 5,490 health care professionals (3150 male and 2340 female) from 23 states on NHLMIS. Training participants consisted mainly of health facility staff, State Logistic Management Coordinating Unit Officers, LGA officers, and RBM managers, from 23 states across Nigeria. Trainings were aimed at building capacity, reducing the turnaround time between data upload and review on the NHLMIS, improving reporting management, and ensuring use of collected data and the platform for active evidence-based engagement of users and stakeholders. PLEASE NOTE that this quarter aggregates participation in these trainings across all quarters in FY2019. The trainings were not originally included in reported C2 numbers in the first three quarters of FY2019 for reasons of data availability - it was not possible to disaggregate by participants' gender in real time.

Molecular Instruments and HIV Tracer Products

Country

Nigeria

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

75%

Analysis

In FY2019 Q4, 15 of 61 PSM-supported molecular machines (24.6%) recorded downtime, amounting to 219 days total. The most commonly reported causes were hardware error, QS invalid, thermocycler challenge and UPS/electrical/inverter issues. Among the machines experiencing challenges, downtime ranged from 4 to 31 days and averaged two weeks (14.6 days).

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Dolutegravir 300/300/50mg
2nd line adult ARV	Lopinavir /Ritonavir 200/50mg and 100/25mg
Pediatric ARV	Zidovudine/Lamivudine/Nevirapine 60/30/50 mg
First RTK	Determine
Second RTK	Uni-Gold
Tie-breaker RTK	STAT-PAK
Viral load reagent	Molecular, m2000 RT PCR, VL Plasma Quantitative, Reagents and Consumable Bundle, 960 Tests, Molecular, m2000 RealTime PCR, HIV-1 Amplification Reagent Kit, Quantitative, 4 Packs x 24 Assays, Molecular, COBAS, TaqMan, CAP/CTM HIV v2.0, Quantitative, 48 Tests
Viral load consumable	Ktube
EID reagent	Molecular, m2000 RT PCR, EID Qualitative, Reagents and Consumable Bundle, 960 Tests, Molecular, COBAS TaqMan, AmpliPrep, HIV-1, Qualitative, 48 Tests,
EID consumable	K tube

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

All

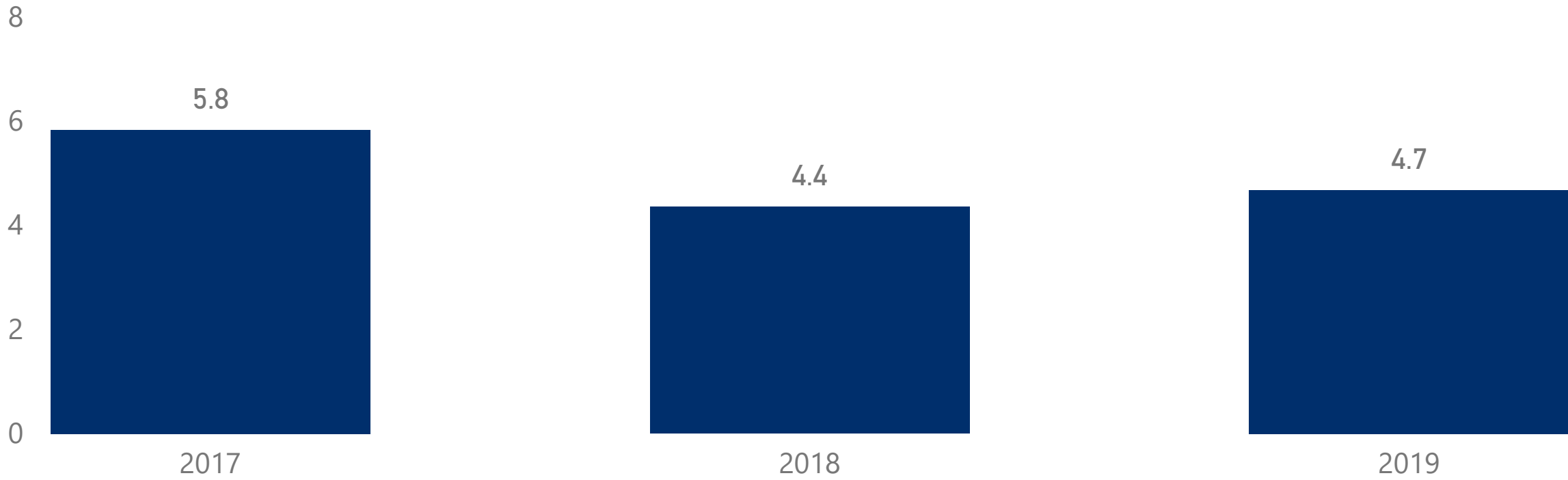
Supply Chain Level

All

Country

Nigeria

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	1.0	1.7	1.6
2019	1.2	1.4	2.1

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Central		
TO1-HIV/AIDS	8.3	4
TO2-Malaria	8.5	4
TO3-PRH	8.0	4
SDP		
TO1-HIV/AIDS	3.5	344
TO2-Malaria	6.5	161
TO3-PRH	5.3	121

Analysis

GHSC-PSM conducted data quality assessments at 445 health facilities (290 primary, 135 secondary and 20 tertiary sites) in 19 states plus FCT. Assessed sites were selected based on a mixture of simple random, stratified and purposive sampling. All selected facilities managed at least one health program area supported by the project. The breakdown of assessed facilities by program area of the commodities managed was: 121 facilities managing FPRH commodities (TO3), 344 managing HIV/AIDS commodities (TO1), 161 managing malaria commodities (TO2), and 263 managing MNCH commodities (TO4).

LMIS records at each facility were assessed on their availability, accuracy and timeliness, and scored between a 0 and 3 on each metric (9 sum total maximum). Average scores of data quality across all assessed sites increased from 4.4 in FY2018 to 4.7 in FY2019. On average, higher-level facilities scored higher on data quality (8.3 out of 9 possible) than lower-level facilities (5.1 out of 9) in FY2019. At the central level, measures of data timeliness lagged as compared to higher scores on data availability and accuracy. At the lower-level facilities, data quality at sites managing malaria commodities averaged higher scores (6.5) than FPRH sites (5.3) and HIV/AIDS sites (3.5).

Annual Forecasts

FY

2019

Country

Nigeria

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	26.5%	-
2nd line adult ARV	19.1%	+
Pediatric ARV	8.5%	-
First RTK	11.0%	+
Second RTK	5.3%	-
Tie-breaker RTK	3.3%	-
Viral load reagent	0.3%	-
EID reagent	4.4%	+

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL 6x1	5.7%	-
AL 6x2	3.7%	-
AL 6x3	1.7%	+
AL 6x4	1.9%	-
AS/AQ 100/270mgx3	80.6%	-
AS/AQ 100/270mgx6	98.0%	-
AS/AQ 25/67.5mg	20.5%	-
AS/AQ 50/135mg	79.8%	-
mRDT	1.8%	+
SP	100.9%	-

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral contraceptive with iron	27.6%	-
DMPA-Subcutaneous injectable	158.6%	-
NET-En Injectable	7.9%	-
DMPA-Intramuscular injectable	46.0%	-
1-rod implant	13.7%	+
2-rod implant	20.2%	-
Progestin only pills	4.0%	-
Copper-bearing IUD	4.6%	-
Calendar-based awareness methods	184.8%	-
Male condoms (FP)	68.9%	-
Female condoms (FP)	35.4%	-

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
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Ref Analysis

B5	All required annual forecasts (ARVs, lab, RTKs, condoms, malaria, PRH) were successfully conducted in FY2019.
B12	The accuracy of forecasts varied significantly across programs and commodities in FY2019. Consumption was most accurately forecasted among HIV products, ranging from less than 1% error (viral load reagent) to 27% (ARVs). TO2 and TO3 products were, on average, less accurately forecasted. In most cases, reported consumption was less than the quantity forecasted.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
RTKs	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Nigeria

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS	Yes
TO2-Malaria	Yes
TO3-PRH	Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	9.3	10.6
TO2-Malaria	9.5	10.5
TO3-PRH	10.0	9.5

Ref Analysis

B10 The procurement and supply chain TWGs for TO1, TO2 and TO3 are functional. Routine quarterly meetings were held and action plans were implemented. Nigeria has functional logistics coordination mechanisms in place for HIV/AIDS, malaria, and family planning and reproductive health areas. The procurement and supply technical working groups scored a 10.5 out of a possible 11 points on this indicator, denoting institutionalized responsibilities, diverse stakeholder engagement, regular meetings, and evidence of successful implementing of policies and plans.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Total		

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	27%	11
Crosscutting	60%	5
TO1-HIV/AIDS	0%	1
TO2-Malaria	0%	1
TO3-PRH	0%	4
Subnational level 1	23%	71
Crosscutting	23%	71
Total	23%	82

Ref Analysis

B11 At the subnational level, GHSC-PSM's enquiries about supply chain leadership positions determined that 71 positions exist, 16 of which are held by women (22.5%). At the central level, 11 leadership positions were identified, of which 3 are held by women (27.3%). All women-held positions were cross-cutting programmatically, rather than specific to given TOs/health programs.

B9 GHSC-PSM Nigeria does not currently have visibility into government human resource data to report on this indicator.

Commodity Funding

FY
2019

Country
Nigeria

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
Family Planning and Reproductive Health	\$3,324,117	16%	\$0	0%	\$4,653,019	22%	\$12,914,367	62%	\$20,891,503
HIV/AIDS	\$3,952,353	2%	\$39,336,134	25%	\$114,893,736	73%	\$0	0%	\$158,182,223
Malaria	Not Available		Not Available		\$29,110,319		\$0		Not Available

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

Donors including USG, the Global fund and UNFPA continue to provide the bulk of funding for procurement of health commodities. Host government spending on health commodities accounted for 2% of that spent on TO1 products and 16% of TO3 products. The U.S. government spent over \$110 million on TO1 products (73%), nearly \$30 million on TO2 products (100% of known spending) and over \$3 million on TO3 products (16%). GHSC-PSM did not have visibility into host government's spending--or lack thereof--on TO2 products for this period.

B8. Supply Chain Technical Independence

FY

2019

Country

Nigeria

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Nigeria

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

9

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

33%

Analysis

GHSC-PSM and USAID (TO1) identified nine supply chain activities--within governance, information management, FASP and M&E technical areas--as targeted for technical independence in Nigeria by the end of the project. Three of these nine have successfully achieved technical independence to date, with significant support from GHSC-PSM. These are managing a logistics management committee (governance), collecting and reporting supply chain performance indicators (M&E) and conducting ongoing data quality assurance (M&E). It is important to note, however, that these measures of technical independence explicitly exclude consideration of financial sustainability. In all three cases, donors provide some or all funding for the activity.

In a couple targeted activity cases--namely, developing/updating supply plans and developing annual forecasts--the only outstanding component of technical independence is the institutionalization of an intentional training approach, which ensures that the responsible host entity has the means to train new personnel to an adequate level of competency to carry out this activity. Indeed, this is the most frequently absent component of technical independence. In Nigeria, on-the-job training is a widespread but largely informal means of training new staff. Formalizing current processes via pre-service, in-service or online training programs; onboarding guidelines; or formal mentorship programs could help ensure sufficient and consistent human capacity is available to implement a given activity.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	National AIDS ,Sexually Transmitted Disease Control Program (NASCP)	HIV/AIDS	Yes; No contribution	Yes; Moderate contribution	No; Moderate contribution	Yes; Moderate contribution	Yes; Limited contribution	Primary technical implementer	No
	Develop/update supply plan	National AIDS ,Sexually Transmitted Disease Control Program (NASCP)	HIV/AIDS	Yes; No contribution	Yes; Major contribution	No; Limited contribution	Yes; Major contribution	Yes; Moderate contribution	Primary technical implementer	No
	Monitor the commodities pipeline	National AIDS ,Sexually Transmitted Disease Control Program (NASCP)	HIV/AIDS	Yes; Major contribution	No; Limited contribution	No; Limited contribution	Yes; Major contribution	No; No contribution	Participant	No
Governance and Financing	Manage logistics management committee	National AIDS ,Sexually Transmitted Disease Control Program (NASCP)	HIV/AIDS	Yes; No contribution	Yes; No contribution	Yes; No contribution	Yes; Limited contribution	Yes; Limited contribution	Primary technical implementer	Yes
MIS	Manage user helpdesk and provide system training	National Product Supply Chain Management Product (NPSCMP)	HIV/AIDS	Yes; Limited contribution	No; Limited contribution	Yes; Major contribution	Yes; No contribution	Yes; No contribution	Primary technical implementer	No
	System administration - logistics management information system	National Product Supply Chain Management Product (NPSCMP)	HIV/AIDS	Yes; Major contribution	No; No contribution	Yes; Major contribution	Yes; Limited contribution	No; No contribution	Participant	No

B8. Supply Chain Technical Independence

FY

2019

Country

Nigeria

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

9

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

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Analysis

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All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Monitoring and Evaluation	Facilitate active use of data for supply chain management decision making	National AIDS ,Sexually Transmitted Disease Control Program (NASCP)	HIV/AIDS	Yes; No contribution	Yes; Limited contribution	No; Major contribution	Yes; Limited contribution	No; No contribution	Participant	No
	Conduct ongoing data quality assurance	National Product Supply Chain Management Product (NPSCMP)	HIV/AIDS	Yes; Limited contribution	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	Primary technical implementer	Yes
	Collect and report supply chain performance indicators	National Product Supply Chain Management Product (NPSCMP)	HIV/AIDS	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Major contribution	Yes; Moderate contribution	Yes; Major contribution	Primary technical implementer	Yes

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO3-PRH	12.2%	30,016
Female condoms (FP)	11.1%	3,211
Male condoms (FP)	10.9%	3,765
Copper-bearing IUD	23.3%	1,454
Progestin only pills	8.2%	3,498
2-rod implant	16.8%	2,744
1-rod implant	24.4%	2,523
DMPA-Intramuscular injectable	7.2%	3,859
NET-En Injectable	6.2%	3,866
DMPA-Subcutaneous injectable	19.9%	1,476
Combined oral contraceptive with iron	10.7%	3,620
TO2-Malaria	5.6%	32,871
LLINs	16.6%	2,491
SP	6.0%	3,062
mRDT	8.8%	3,482
AS/AQ 50/135mg	2.0%	2,467
AS/AQ 25/67.5mg	1.2%	2,529
AS/AQ 100/270mgx6	2.1%	2,337
AS/AQ 100/270mgx3	2.2%	2,537
AL 6x4	4.5%	3,501
AL 6x3	8.9%	3,479
AL 6x2	4.6%	3,492
AL 6x1	3.5%	3,494
TO1-HIV/AIDS	10.6%	15,500
Female condoms (HIV)	11.1%	3,211
Male condoms (HIV)	10.9%	3,765
EID consumable	5.3%	19
EID reagent	26.3%	19
Viral load consumable	5.3%	19
Viral load reagent	11.1%	18
Tie-breaker RTK	16.3%	1,484
Second RTK	13.6%	2,181
First RTK	6.1%	1,349
Pediatric ARV	10.7%	972
2nd line adult ARV	8.2%	744
1st line adult ARV	4.7%	1,719
Total	8.9%	71,411

Complete Results and Denominators

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	1.1%	3,515
TO3-PRH		
Combined oral methods	10.7%	3,620
Injectable contraceptives	2.6%	3,949
Implantable contraceptives	16.8%	2,744
Progestin-only methods	8.2%	3,498

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	96%	3,181
TO2-Malaria	98%	3,681
TO3-PRH	97%	4,202

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	37%	3%	57%	3%	30
TO1-HIV/AIDS	42%		58%		12
TO2-Malaria	60%		40%		10
TO3-PRH		10%	80%	10%	10
Total	37%	3%	57%	3%	30

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

Country

FY Quarter

Nigeria	2019-Q4
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C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	1,170	1,575	2,745
TO2-Malaria	585	788	1,373
TO3-PRH	585	787	1,372
Total	2,340	3,150	5,490

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	1
Condoms	1	1
FP commodities	1	1
Lab (HIV diagnostics)	1	1
Malaria commodities	1	1
RTKs	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
61	75%

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Pakistan



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Pakistan

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
Total		

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	40,964	36.5%
Combined oral contraceptive with iron	11,533	42.9%
DMPA-Intramuscular injectable	11,533	32.0%
Copper-bearing IUD	6,365	16.2%
Male condoms (FP)	11,533	45.8%
Total	40,964	36.5%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO3-PRH	14,023	82%
Total	14,023	82%

Ref Analysis

- B1 Stockout rates have increased significantly across all products and in three of the four provinces in which GHSC-PSM works. The exception was Sindh, where the stockout rate only ticked up 1% (from 9% to 10%). In total, the stockout rate went from 22% to 36%, with the largest increase in KP province, from 40% to 73%. In KP, the Population and Welfare Department (PWD) experienced delays in the international procurement of condoms and IUDs, leading to stockouts at the SDP level. In Punjab, the government's Integrated Reproductive, Maternal, Newborn & Child Health (IRMNCH) program also experienced delays in internationally procuring condoms and IUDs. The provincial medical store (Medical Supply Depot) had already been low on stock, leading to lack of distribution to the district level. In Balochistan, there were delays in the initiation of the procurement process. The locally procured contraceptives are expected to be received by the middle of next quarter.
- B3 The reporting rate increased from 77% to 82%, including about 100% of SDPs in PWD Punjab, KP and Sindh provinces.

Warehouse stock status and product losses

Country

Pakistan

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Subnational level 1	16	44%	0%	25%	31%
TO3-PRH	16	44%	0%	25%	31%
Subnational level 2	975	51%	22%	15%	12%
TO3-PRH	975	51%	22%	15%	12%
Total	991	51%	22%	16%	12%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

B2 The overall stocked according to plan rate for the GHSC-PSM-supported provinces of KP, Punjab, Balochistan, and Sindh was 16% during the reporting quarter, up from 11% in the previous quarter. Stocked according to plan has increased in Punjab Province from 5% to 14%, in Sindh province from 19% to 26% and in Balochistan from 17% to 19%, whereas in KP stocked according to plan has decreased from 3% to 0% during the reporting period. While stocked according to plan was higher at the provincial level (25%) than at the district level (15%), both levels also experienced substantial stockouts (44% and 51% of observations at the provincial and district levels, respectively).

Supply plans, innovations, and strategic activities

Country

Pakistan

FY Quarter

2019-Q4

Total Innovations implemented this quarter
0

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
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There are no new innovations to report this quarter

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
---------------	-------------------------------

Analysis

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description

There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for FY2019 Q4

Training for supply chain partners

Country

Pakistan

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO3-PRH	TO4-MCH	Total
Male	10	11	21
Total	10	11	21

C2. Number of people trained by supply chain level

Supply Chain Level	TO3-PRH	TO4-MCH	Total
Subnational level 2	10	11	21
Total	10	11	21

C2. Number of people trained by funding source and type

Type	TO3-PRH	TO4-MCH	Total
TO-specific	10	11	21
Total	10	11	21

C2. Number of people trained by technical area

Supply Chain Function	TO3-PRH	TO4-MCH	Total
MIS	10	11	21
Total	10	11	21

Analysis



A two-day training session for staff from four pilot districts on the Inventory Management Module was held in Islamabad in July. The same staff was also provided on-the-job training during field visits to these districts.

Average Rating of In-country Data Confidence

Task Order

All

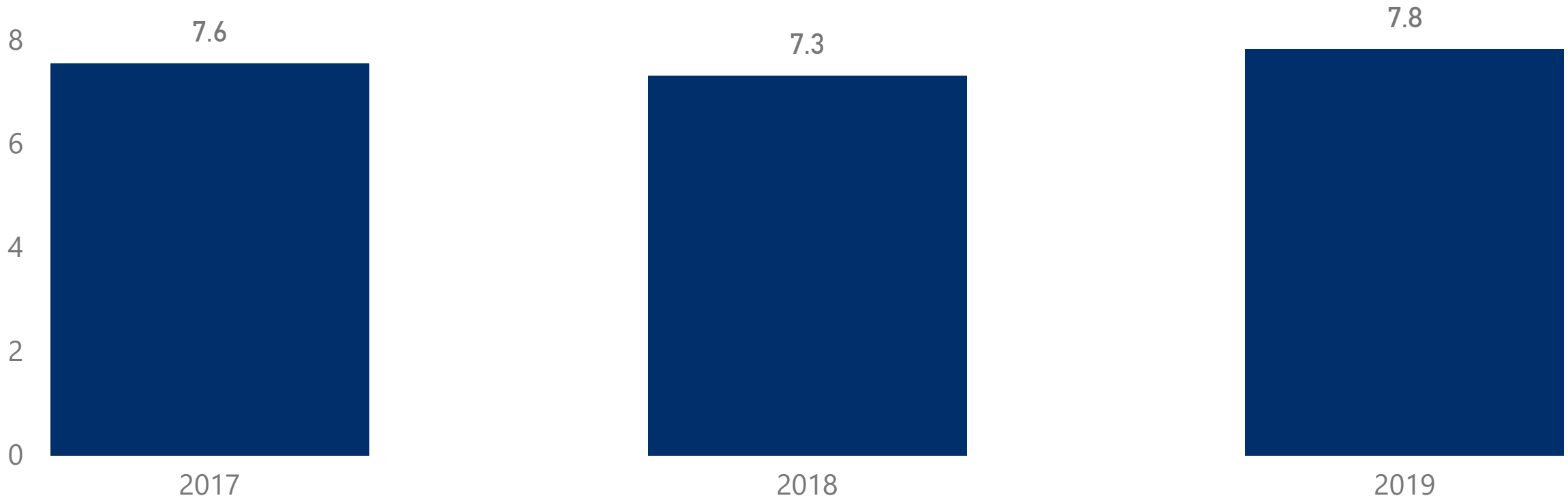
Supply Chain Level

All

Country

Pakistan

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	2.4	2.7	2.2
2019	2.1	3.0	2.8

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY: 2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Subnational level 1		
TO3-PRH	8.0	2
SDP		
TO3-PRH	8.0	25
TO4-MCH	6.7	3

Analysis

Joint field monitoring visits were conducted at districts and the facility level to collect and analyze data on the B4 data confidence indicator that assesses data availability, accuracy and timeliness for FP tracer products. The sites visited included only the two districts of Charsadda and Swat, including both district stores and the SDPs. A convenience sampling method was adopted this year due to time and funding limitations. The overall score was a 7.8 out of 9, which indicates good/very good data availability, accuracy and timeliness of tracer products, up from a score of 7.3 last year. However, while data timeliness and availability improved since last year, accuracy fell slightly from 2.4% to 2.1%. The overall score was slightly higher at the district level (8) than at the SDP level (7.8); however these disaggregations as well as comparisons with previous years' data should be taken with caution due to the small convenience sample.

Annual Forecasts

FY

2019

Country

Pakistan

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
▲		

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
▲		
TO3-PRH		
Combined oral contraceptive	239.0%	-
DMPA-Intramuscular injectable	228.9%	-
Implantable contraceptives	147.8%	-
1-rod implant	5472.5%	-
2-rod implant	19.8%	-
Emergency contraceptive, 2 tablets	64.5%	+
Progestin only pills	7923.6%	-
Copper-bearing IUD	2.3%	-
Male condoms (FP)	125.5%	-

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
▲		

Ref Analysis

B12 This indicator is used to assess the accuracy of the Pakistan consumption forecasts, and to promote efficient supply management practices throughout the country's supply chain. The overall forecast bias for FP/RH products was -132% from October 2018 to September 2019. All products except for emergency contraceptives were overforecast, with bias ranging from only 2% for copper IUDs to 7,924% for progestin-only pills, and 5,473% for 1-rod implants. High forecast error rates have been observed mainly due to the increased use of combined oral contraceptives instead of progestin-only pills. Additionally, high stockout rates among the Lady Health Worker community health worker program in Punjab and PWD KP have contributed to high forecast errors.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
NA	No

Workforce, Leadership, and Governance

FY

2019

Country

Pakistan

B10. Is there a functional logistics coordination mechanism in place?

TO3-PRH Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO3-PRH	9.5	9.5

Ref Analysis

B10 The logistics coordination mechanism continued to be functional this year. Key informant interviews were conducted with the Secretary of the KP Population and Welfare Department (PWD) and the Director General for Health in KP concerning the activities of Country Engagement Working Groups.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Subnational level 1	0%	15
Provincial	0%	15
Subnational level 2	0%	217
District	0%	217
Total	0%	232

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Subnational level 1	0%	16
TO3-PRH	0%	9
TO4-MCH	0%	7
Total	0%	16

Ref Analysis

B9 Data for this indicator were collected for supply chain management positions from the KP province only this year, including both provincial and district level positions. In previous years, this indicator was collected for both KP and Punjab provinces. Supply chain turnover was at 0%.

B11 Data for this indicator were collected from KP government officers through GHSC-PSM provincial teams. In previous years, the indicator was reported for KP and Punjab provinces. The percentage of leadership positions held by women at the provincial level is 0 (out of 16), down from 11% (4 out of 38) in 2018.

Commodity Funding

FY
2019

Country
Pakistan

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
▲ Family Planning and Reproductive Health	\$25,430,000	99%	\$0	0%	\$0	0%	\$128,224	1%	\$25,558,224

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

During FYs 2018 to 2019, Pakistan budgeted a total of \$25.43 million for the procurement of family planning and reproductive health commodities (99%) while the remaining 1% of funds included \$90,000 from UNFPA and \$38,000 from an unspecified other source (data source: RHInterchange). The USG and Global Fund did not contribute to FP/RH commodity procurement.

B8. Supply Chain Technical Independence

FY

2019

Country

Pakistan



Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Pakistan

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

10

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

10%

Analysis

GHSC-PSM Pakistan and the USAID Mission targeted 10 activities for technical independence in forecasting and supply planning, procurement, MIS, governance and financing, monitoring and evaluation, and human resources capacity development. Of these, management of the logistics management committee is already technically independent. Several others require only a performance indicator to have the five capacity elements in place, and several require the host country entity to take on the lead technical implementation role.

For MIS, the project has brought together federal and provincial stakeholders and selected private sector entities to create an integrated LMIS platform, including standard operating procedures that clearly define the roles and responsibilities for federal and provincial stakeholders. The project is working closely with these stakeholders to transition full stewardship of LMIS data validation, data analytics, change management, software maintenance, and help desk management.

For the pre-service training curriculum activity under human resources, the University of Health Sciences, Lahore has established a 3-credit hour and short certificates courses on supply chain management, which have been attended by government officials, as part of a pre-service curriculum. The project has conducted a training of trainers for UHS and Peshawar University faculty and handed over the course curriculum. The only element lacking for technical independence is a performance monitoring indicator.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	Population Welfare, Health Department	FP/RH	Yes; Major contribution	Yes; Major contribution	No; Moderate contribution	Yes; Moderate contribution	No; No contribution	Primary technical implementer	No
Governance and Financing	Manage logistics management committee	Population Welfare, Health Department	FP/RH	Yes; Limited contribution	Yes; Limited contribution	Yes; Major contribution	Yes; No contribution	Yes; Limited contribution	Primary technical implementer	Yes
Human Resources Capacity Development	Implement supply chain management pre-service curriculum	UHS, University of Peshwar, KMU	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Moderate contribution	No; No contribution	Primary technical implementer	No
MIS	Manage user helpdesk and provide system training	Population Welfare, Health Department	Integrated	Yes; Major contribution	Yes; Major contribution	No; Moderate contribution	Yes; Limited contribution	Yes; Major contribution	Participant	No
	System administration - stock/inventory management	Population Welfare, Health Department	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Moderate contribution	Yes; Limited contribution	No; No contribution	Primary technical implementer	No
	System administration - logistics management information system	Population Welfare, Health Department	Integrated	Yes; Major contribution	Yes; Major contribution	No; Moderate contribution	Yes; Limited contribution	Yes; Major contribution	Participant	No
Procurement	Manage contracts and vendors	Population Welfare, Health Department	FP/RH	No; Moderate contribution	No; Moderate contribution	No; Limited contribution	No; Limited contribution	No; No contribution	Participant	No
	Prepare and award RFxs	Population Welfare, Health Department	FP/RH	No; Moderate contribution	No; Moderate contribution	No; Limited contribution	No; Limited contribution	No; No contribution	Participant	No

B8. Supply Chain Technical Independence

FY

2019

Country

Pakistan

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

10

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

10%

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GHSC-PSM Pakistan and the USAID Mission targeted 10 activities for technical independence in forecasting and supply planning, procurement, MIS, governance and financing, monitoring and evaluation, and human resources capacity development. Of these, management of the logistics management committee is already technically independent. Several others require only a performance indicator to have the five capacity elements in place, and several require the host country entity to take on the lead technical implementation role.

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All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Monitoring and Evaluation	Facilitate active use of data for supply chain management decision making	Population Welfare, Health Department	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Moderate contribution	Yes; No contribution	Participant	No
	Conduct ongoing data quality assurance	Population Welfare, Health Department	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Major contribution	Yes; Moderate contribution	No; Major contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Pakistan

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO3-PRH	36.5%	40,964
Combined oral contraceptive with iron	42.9%	11,533
DMPA-Intramuscular injectable	32.0%	11,533
Copper-bearing IUD	16.2%	6,365
Male condoms (FP)	45.8%	11,533
Total	36.5%	40,964

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO3-PRH		
Combined oral methods	42.9%	11,533
Injectable contraceptives	32.0%	11,533

C2. Number of people trained

Task Order	Male	Total
TO3-PRH	10	10
TO4-MCH	11	11
Total	21	21

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO3-PRH	82%	14,023

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
---------------	----------------------------	-------------

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Subnational level 1	25%	31%	0%	44%	16
TO3-PRH	25%	31%	0%	44%	16
Subnational level 2	15%	12%	22%	51%	975
TO3-PRH	15%	12%	22%	51%	975
Total	16%	12%	22%	51%	991

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
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B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Rwanda



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Rwanda

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	3,584	1.1%
1st line adult ARV	559	1.6%
2nd line adult ARV	546	0.9%
Pediatric ARV	494	0.4%
First RTK	585	0.5%
Second RTK	566	1.4%
Viral load reagent	9	0.0%
Viral load consumable	9	0.0%
EID reagent	6	0.0%
EID consumable	6	0.0%
Male condoms (HIV)	584	1.7%
Female condoms (HIV)	220	1.4%
Total	3,584	1.1%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	3,139	1.1%
AL 6x1	485	1.6%
AL 6x2	562	1.8%
AL 6x3	500	1.2%
AL 6x4	520	0.6%
AL inability to treat	541	0.0%
mRDT	531	1.5%
Total	3,139	1.1%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	4,155	1.8%
Combined oral contraceptive with iron	497	3.4%
DMPA-Intramuscular injectable	518	1.5%
1-rod implant	535	1.7%
2-rod implant	568	1.9%
Progestin only pills	446	1.6%
Copper-bearing IUD	407	1.7%
Calendar-based awareness methods	380	0.3%
Male condoms (FP)	584	1.7%
Female condoms (FP)	220	1.4%
Total	4,155	1.8%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	590	97%
TO2-Malaria	590	94%
TO3-PRH	590	90%
TO4-MCH	572	96%
Total	2,342	94%

Ref Analysis

- B1** The average stockout rate for Rwanda this quarter was at a low of 1.4%. Specifically per TO, the stockout rate for TO1 products was 1.1%, TO2 1.3%, and for TO3 1.8%. This quarter Rwanda reported on a higher number of SDPs than last quarter, up to 223 more SDPs. On the product level, it is noted that there are very few SDPs that reported on HIV-reagent, consumable and viral load reagent. This is because these are the only facility Hubs in Rwanda that undertake these tests, so the other SDPs refer samples to them. While we note that stockout rates have remained low since the last quarter, we note that there are some improvements that can be made to continue to bring stockout rates to 0%. In order to reach a 0% rate, GHSC-PSM will continue to support the MoH to monitor the stock information and to rebalance stock levels at both the District Phamaracies (DPs) and SDPs to ensure that there is no stock out. Also, QMIA, e-LMIS performance reports, and monthly stock status updates have contributed to improved performance and reduction of stockouts.
- B3** The average Service Delivery Point reporting rate to the Logistics Management Information System (LMIS) was 94.25% across all sites and across all TOs as reported from the e-LMIS system. This is rather constant in comparison with the reporting rate during the previous quarter. Despite not hitting 100% reporting accuracy rate from SDP data is flowing into the e-LMIS with minimal bottlenecks attributed to timely data entry into e-LMIS by the SDPs as required. The difference of 5.75% could be attributed to but not limited to staff turnover at SDPs, internet connectivity issues etc. In order to ensure timely submission of reports, PSM Rwanda will continue to ensure close collaboration with and support to all health facilities. The project will also continue to advocate for the need of a dedicated supply chain staff at SDPs.

Warehouse stock status and product losses

Country

Rwanda

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	25		87%	9%	4%
TO1-HIV/AIDS	11		91%	9%	
TO2-Malaria	5		80%	20%	
TO3-PRH	9		89%		11%
Subnational level 1	660	2%	31%	38%	29%
TO1-HIV/AIDS	240	5%	28%	43%	25%
TO2-Malaria	150	0%	35%	34%	31%
TO3-PRH	270	4%	30%	33%	33%
Total	685	2%	33%	37%	28%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
TO1	Global	Transit	Damage	ARVs	\$18	\$6,287,038	0.00%
TO1	Global	Transit	Damage	Other Pharma	\$1	\$5,068,125	0.00%
TO1	Global	Transit	Missing product	ARVs	\$38	\$6,287,038	0.00%

Ref Analysis

- C7 In FY2019 Q4, product loss under GHSC-PSM control due to theft, damage or expiry was prevalent under TO1 for three products during transit. The types of product loss that occurred include two damaged shipments and one missing product. The damaged shipment for ARV was the result of boxes being damaged by a forklift and for other pharma the damaged shipment included 1 bottle that was delivered broken. The missing ARV was due to some of the received cartons being incomplete. The Quality Assurance team has however determined that no replacement is needed for the 6 missing boxes, and as a result the incident status has been closed.
- B2 The number of observations at the SDP level were the same this quarter and last quarter, at 965 observations. While there are some notable improvements in the number of overstocked products for all TO's, where the number decreased by 4% for TO1, 8% for TO2% and 5% for TO3, the number of understocked products have increased for each TO. By 6% for TO1, 9% for TO2 and 5% for TO3. The number of products that are stocked according to plan and stocked out have remained comparable to those last quarter. It is important to note that while there were some fluctuations from last quarter, generally, all the commodities were available at the facility level, which means that even for those under stocked or stocked out at DPs, there was no interruption of the services at SDP level. At the product level it is worth noting that there was an increase in stock outs for contraceptives at the DP level, which was due to the low acceptance and awareness regarding Female condom and calendar-based awareness method. Also, some DPs do not request this product because of low demand from their SDPs.

Supply plans, innovations, and strategic activities

Country

Rwanda

FY Quarter

2019-Q4

Total Innovations implemented this quarter

New approaches

1

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
TO1-HIV/AIDS	New approaches	Laboratory commodity bundling is a process where a set of required reagents and supplies needed to run a given number of tests without shortage, wastage and expiry is procured, requested and issued as one entity referred to as a bundle. Different test menus in the laboratory require different testing reagents and consumables, with any single one missing a test would not be performed to its entirety. A laboratory bundling approach is an efficient scheme to be used for better management of laboratory commodities and hence solve the challenges with the existing supply chain of laboratory commodities. Those challenges include but are not limited to expiries, services interruption due to stock out. GHSC-PSM conducted a Training of Trainers for 34 health personnel on laboratory commodity bundling innovation who will go on to train others under the supervision of the GHSC-PSM technical staff. The implementation phase will kick start in Feb 2020. The next steps on this innovation will entail organizing a meeting between National Reference Lab, GHSC-PSM, Medical Procurement and Production Division and distributors to finalize the usage rates and the bundling tools as well as follow up on the upcoming user trainings to be conducted.

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
MCH commodities	Yes
RTKs	Yes

Analysis

This quarter, all quarterly supply plan updates were conducted as planned and submitted to GHSC-PSM HQ, which differs from last quarter where supply plan updates were not conducted and they were not submitted to GHSC-PSM HQ. Products included ARVs, Labs and RTKs for TO1, malaria commodities for TO2, FP commodities for TO3, MCH commodities for TO4 and condoms. GHSC-PSM continues to support the Ministry of Health carry out Quarterly supply plan reviews.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description

The Rwanda FDA is implementing key regulatory functions such as drug registration, GMP inspections and quality control testing of pharmaceutical products. The Rwanda FDA will develop appropriate regulatory tools such as technical regulations, guidelines and standard operating procedures and will clearly define procedures and processes that support good regulatory practice, efficiency and transparency. GHSC-PSM provided technical assistance to the FDA in the validation of the guidelines. However this is still an ongoing activity that is mainly based on the following expected outcomes: Validated Guidelines on Submission of Documentation for Registration of Pharmaceutical products; Guidelines on variation of registered products; and Guidelines of biologicals and biosimilars ready for approval by Rwanda FDA authorities.

Training for supply chain partners

Country

Rwanda

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	Total
Female	16	40	56
Male	18	82	100
Total	34	122	156

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	Total
Subnational level 1		122	122
SDP	34		34
Total	34	122	156

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	Total
TO-specific	34	122	156
Total	34	122	156

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	Total
Human Resources Capacity Development		122	122
Warehousing and Inventory Management	34		34
Total	34	122	156

Analysis

In total 156 people were trained in Human Resource Capacity Development and Warehouse and Inventory Management. Of these, 56 were female and 100 were male. There were more participants at the HRCD training funded under TO2 with a total of 122 people trained. In comparison, the Warehousing and Inventory Management training funded under TO1 had 34 participants. Trainings took place at the SDP level and the subnational level 1 (district pharmacies). There were notably more participants at the trainings at the DPs (N= 122), compared at the SDP level (N=34). In comparison with last quarter, there were fewer people trained this quarter. Last quarter had up to 1540 people trained where 834 were female and 706 were male.

Molecular Instruments and HIV Tracer Products

Country

Rwanda

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

89%

Analysis

This quarter there were 2 molecular instruments with serial Nos: 893180 and 895828 in Nyagatare District Hospital that have been unfunctional for a period of 30 days. The associated issue was that the Thermocyclers was not working. As an immediate solution, GHSC-PSM will work in collaboration with the MoH to have the instruments functional in the nearest future possible. Nonetheless, 89% still remained functional throughout this reporting period

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Efavirenz 300/300/600 mg
2nd line adult ARV	Atazanavir/Ritonavir 300/100 mg
Pediatric ARV	Abacavir/Lamivudine 60/30 mg
First RTK	Determine
Second RTK	STAT-PAK
Tie-breaker RTK	Not reported
Viral load reagent	COBAS TAQMQRN HIV-1 TEST V2.0/HI2CAP
Viral load consumable	COBAS AMPILPREP (CAP48)-K TIPS
EID reagent	CAP/TaqMan HIV-1 Qualitative v2.0, 48 Test
EID consumable	Cobas AmpliPrep/TaqMan Specimen Pre-Extraction (SPEX) reagent,5x78 mL

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

Supply Chain Level

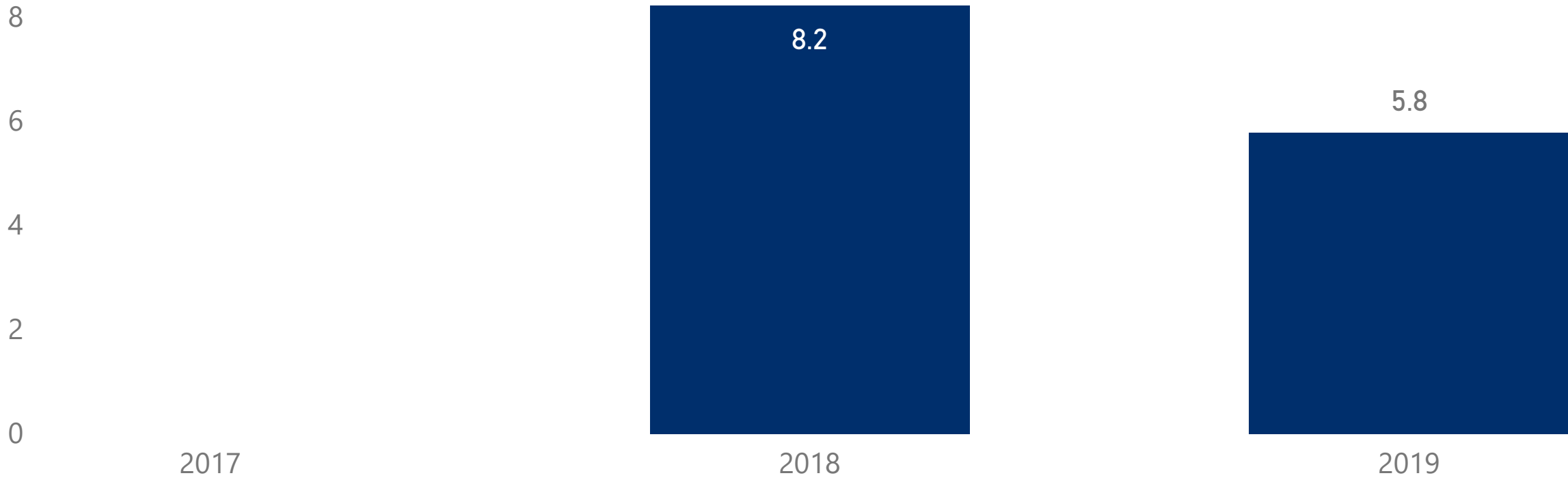
Country

All

All

Rwanda

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017	-	-	-
2018	2.6	2.8	2.8
2019	1.9	2.3	1.6

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Subnational level 1		
TO1-HIV/AIDS	7.0	29
TO2-Malaria	6.6	29
TO3-PRH	6.4	29
TO4-MCH	6.3	29
SDP		
TO1-HIV/AIDS	6.0	87
TO2-Malaria	5.8	87
TO3-PRH	5.2	87
TO4-MCH	5.1	87

Analysis

A DQA took place in June 2019, where quality of data recorded into the country's LMIS at subnational level and service delivery points were assessed on data availability, accuracy and timeliness. Due to limited time and staff availability to undertake this DQA exercise, data was collected from DPs and SDPs only, of which 29 DPs were selected and 87 SDPs were selected. Random sampling and purposive sampling were used during the sampling process. SDPs were chosen purposively due to characteristics such as size or volume of patients treated. Samples were taken randomly from each DP and from each SDP based on the ratio of the facilities' size. To get a representative sample with minimal errors for the DQA exercise, sample size was determined by assuming a 95% confidence level and a margin of error (or confidence interval) of 9.14%. The results of the DQA in FY19 compared rather significantly with the results from last year. In particular there was a big drop in data confidence at the SDP level and a slight drop at the DP level. The drop in data confidence has been caused partly by Ebola cases in the neighboring Congo, where many of the store managers got involved in the prevention mechanisms that were put in place by the Government ranging from screening process, management of Ebola health commodities, and Ebola awareness sensitizations. This impacted greatly supply chain activities such as inventory control managements, storage of health commodities, and the reporting process. Also, the involvement of store managers in the TLD transition process where store managers got engaged in the transition orientation workshops may have taken a lot of their time which impacted the overall reporting process. The results of FY19 DQA showed data confidence at the DP level varying from 6.3 for TO4 to 7.0 for TO1. At the SDP level data confidence varied from 5.1 for TO4 to 6.0 for TO1. Performance was higher at the DP level than at the SDP level due to key interventions such as the Quality Management Improvement Approach (QMIA), as well as dedicated staff at the DP level, which has helped improve data quality and reporting. GHSC-PSM will continue to work towards increasing data visibility so that timely data is available at all levels through the supply chain system and accessible to appropriate users.

Annual Forecasts

FY

2019

Country

Rwanda

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	5.3%	+
2nd line adult ARV	16.7%	+
Pediatric ARV	12.4%	-
First RTK	8.4%	+
Second RTK	26.2%	-
Viral load reagent	7.9%	+
Viral load consumable	68.0%	-
EID reagent	28.3%	-
EID consumable	14.3%	+

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL 6x1	9.8%	+
AL 6x2	22.5%	-
AL 6x3	20.5%	-
AL 6x4	19.1%	-
mRDT	42.0%	-

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral contraceptive	5.1%	-
DMPA-Intramuscular injectable	14.7%	-
1-rod implant	81.1%	+
2-rod implant	6.4%	+
Progestin only pills	1.8%	+
Calendar-based awareness methods	12.5%	-
Male condoms (FP)	3.1%	-
Female condoms (FP)	9.8%	+

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO4-MCH		
MgSO4	139.9%	-
Amoxicillin dispersible tablets	335.7%	-
Oxytocin	71.7%	-
ORS (alone)	28.5%	+
Zinc (alone)	40.7%	+

Ref Analysis

B5 Similarly to FY18, all the required annual forecasts were conducted and submitted to GHSC-PSM HQ accordingly for ARVs, Lab, Malaria commodities, FP commodities, MCH commodities, Condoms and RTKs. The Annual quantification report was uploaded into the SharePoint database. GHSC-PSM continues to ensure effective supply planning as well as timely and effective procurement planning and resource mobilization through its support to MoH.

B12 The forecast accuracy in FY19 is comparable with the forecast accuracy in FY18 where variations between forecasted quantity and actual quantity consumed is very minimal. There have also been some slight improvements this year with forecast bias. This year there were two TO4 products with forecast bias of more than 100%, whereas in FY18 there were up to three TO4 products with forecast bias above 100%. The two TO4 products have above 100% forecast bias for the following reasons:
 -MCH- MgSO4 (50% injectable). These are vital products in stock but used only for special cases which may happen or not happen. Consumption basically depends on the occurrence of such cases eclampsia/pre-eclampsia
 -MCH-Amoxicillin (125mg or 250mg dispersible tablets): – The distribution of this product depends on the project implementation and availability of health workers, and reporting issues from health facilities.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
MCH commodities	Yes
RTKs	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Rwanda

B10. Is there a functional logistics coordination mechanism in place?

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018
TO1-HIV/AIDS	10.0
TO2-Malaria	10.0
TO3-PRH	10.0
TO4-MCH	10.0

Ref Analysis

B10 An operational logistics mechanism is in place in Rwanda for all task orders. Although full data collection was not completed this quarter, the Coordinated Procurement and Distribution System Governance document, which is comprised of members from PSM, MoH, UNFPA, RBC, MPPD and USAID serves as an operational logistics coordination system. Additionally, the CPDS includes quantification annual reports as evidence that the system/mechanism is operational. Having the CPDS in place will play an important role of maintaining a national focus on issues related to long-term commodity access and availability, reduce duplication and inefficiency in efforts, and promote the sharing of information.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Total		

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Total		

Ref Analysis

B11 PSM-Rwanda does not have the jurisdiction to collect and access such information, which would necessitate the field office looking at different personnel contracts and job descriptions at different levels through the supply chain process. This process is deemed confidential and thus why PSM Rwanda does not report on this indicator.

B9 PSM-Rwanda does not have the jurisdiction to collect and access such information, which would necessitate the field office looking at different personnel contracts and job descriptions at different levels through the supply chain process. This process is deemed confidential and thus why PSM Rwanda does not report on this indicator.

Commodity Funding

FY
2019

Country
Rwanda

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
Family Planning and Reproductive Health	\$0	0%	\$0	0%	\$2,634,778	59%	\$1,861,773	41%	\$4,496,551
HIV/AIDS	\$0	0%	\$15,558,527	44%	\$19,621,975	56%	\$0	0%	\$35,180,502
Malaria	\$214,526	2%	\$6,292,196	68%	\$2,718,810	29%	\$0	0%	\$9,225,532
Maternal and Child Health	\$95,605	15%	\$0	0%	\$285,862	44%	\$271,487	42%	\$652,954

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

Health commodities were reported using the budgeted funds from all four levels of funding sources, including USG, Global Fund, Host Government and other sources regardless of the amount funded or if they did not provide any funding. The source of funds for "other" for TO3 and TO4 correspond to funding from UNFPA. The total sum budgeted across all four Task Orders for each funding source is equivalent to \$49,555,539. TO1 commodities were the highest budgeted at approximately \$35 million, followed by TO2 at \$9.2 million, then TO3 at \$4.4 million and finally TO4 at \$650,000. The majority of funding across TO 1, 3, and 4 came from USG, whereas for TO2 it came from Global Fund. In FY18, Rwanda spent approximately \$26.7 million among all four task orders, where similarly TO1 was highest amount spent and TO4 the lowest amount spent.

B8. Supply Chain Technical Independence

FY

2019

Country

Rwanda



Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Rwanda

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

4

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

PSM Rwanda selected up to four activities for technical independence by 2023. Of these activities none have reached technical independence, thus do not meet the criteria of having the five capacity elements in place and having the MOH be the primary technical implementer. GHSC-PSM is a major contributor for the all of the selected activities and their financing. Below is a summary of a few selected activities: Monitor Commodity Pipeline – The host country entity is able to follow-up on this activity through the quarterly supply plan review in which there is analysis of commodity consumption trend, stock status and update shipment status as performance indicators. The host country entity is a major participant of this activity with support from PSM in terms of finance and technical assistance. GHSC-PSM's overall plan to build the host country entity staff capacity to enhance sustainability through TA might still be needed even after GHSC-PSM involvement in some cases. Develop/update supply plan - The host country entity is able to follow-up on this activity through the quarterly supply plan review and annual quantification with a focus on developing annual forecasts based on the available data and treatment guidelines upon which the supply plan is developed by considering the projected annual consumption, available stock on hand and commodities in pipeline. Develop annual forecast - The host country entity is able to follow-up on this activity through the quarterly supply plan review through the quarterly supply review report as well as through the annual quantification report.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	Ministry of Health	Integrated	No; Moderate contribution	No; Major contribution	No; Major contribution	Yes; Major contribution	Yes; Major contribution	Primary technical implementer	No
	Develop/update supply plan	Ministry of Health	Integrated	Yes; Moderate contribution	No; Major contribution	No; Major contribution	Yes; Major contribution	Yes; Major contribution	Primary technical implementer	No
	Monitor the commodities pipeline	Ministry of Health	Integrated	Yes; Major contribution	No; Major contribution	No; Major contribution	Yes; Major contribution	Yes; Major contribution	Participant	No
Warehousing and Inventory Management	Monitor inventory levels	Ministry of Health	Integrated	No; Major contribution	Yes; Major contribution	No; Major contribution	Yes; Major contribution	No; Major contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Rwanda

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO1-HIV/AIDS	1.1%	3,584
1st line adult ARV	1.6%	559
2nd line adult ARV	0.9%	546
Pediatric ARV	0.4%	494
First RTK	0.5%	585
Second RTK	1.4%	566
Viral load reagent	0.0%	9
Viral load consumable	0.0%	9
EID reagent	0.0%	6
EID consumable	0.0%	6
Male condoms (HIV)	1.7%	584
Female condoms (HIV)	1.4%	220
TO2-Malaria	1.3%	2,598
AL 6x1	1.6%	485
AL 6x2	1.8%	562
AL 6x3	1.2%	500
AL 6x4	0.6%	520
mRDT	1.5%	531
TO3-PRH	1.8%	4,155
Combined oral contraceptive with iron	3.4%	497
DMPA-Intramuscular injectable	1.5%	518
1-rod implant	1.7%	535
2-rod implant	1.9%	568
Progestin only pills	1.6%	446
Copper-bearing IUD	1.7%	407
Calendar-based awareness methods	0.3%	380
Male condoms (FP)	1.7%	584
Female condoms (FP)	1.4%	220
Total	1.4%	9,533

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	0.0%	541
TO3-PRH		
Combined oral methods	3.4%	497
Injectable contraceptives	1.5%	518
Implantable contraceptives	0.0%	462
Progestin-only methods	1.6%	446

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	97%	590
TO2-Malaria	94%	590
TO3-PRH	90%	590
TO4-MCH	96%	572

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	9%	4%	87%		23
TO1-HIV/AIDS	9%		91%		11
TO2-Malaria	20%		80%		5
TO3-PRH		11%	89%		9
Subnational level 1	38%	29%	31%	2%	600
TO1-HIV/AIDS	43%	25%	28%	5%	240
TO2-Malaria	34%	31%	35%	0%	150
TO3-PRH	33%	33%	30%	4%	270
Total	37%	28%	33%	2%	623

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	16	18	34
TO2-Malaria	40	82	122
Total	56	100	156

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	1
Condoms	1	1
FP commodities	1	1
Lab (HIV diagnostics)	1	1
Malaria commodities	1	1
MCH commodities	1	1
RTKs	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
19	89%

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Uganda



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Uganda

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	846	7.6%
1st line adult ARV	217	6.0%
2nd line adult ARV	129	6.2%
Pediatric ARV	119	5.0%
First RTK	127	2.4%
Second RTK	121	5.0%
Tie-breaker RTK	110	20.0%
Viral load reagent	1	0.0%
EID reagent	1	0.0%
RUTF	21	28.6%
Total	846	7.6%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	1,338	4.9%
AL inability to treat	469	3.0%
mRDT	464	3.7%
SP	405	8.6%
Total	1,338	4.9%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	133	4.5%
DMPA-Intramuscular injectable	133	4.5%
Total	133	4.5%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	218	100%
TO2-Malaria	657	98%
TO3-PRH	426	64%
Total	1,301	87%

Ref Analysis

- B1** There has been an increase of 1% (from 7% in FY19 Q3 to 8% in FY19 Q4) in stockout rates for TO1 commodities. Stockout rates remained at zero for both EID reagents and viral load reagents. First-line adult ARV--TLE stockout rates increased from 2.8% to 6%. First-line pediatric ARV-Zidovudine/Lamivudine/Nevirapine rates decreased from 8% to 5%; and finally, HIV second RTK stockout rate increased from 3.2% to 5%. However, HIV tie-breaker RTK stockout remained at an average of 20%. The increase in the stockout rate of ARVs at the SDP level is attributed to the ongoing transition to TLD. For TO2 commodities, the overall stockout rate remained at 5% in FY19 Q3 and Q4. However, the stockout rate for ACTs reduced from 4% in FY19 Q3 to 3% in FY19 Q4. The stockout rate for RDTs remained at 4%. Compared to the previous quarter, there has been an increase in stockout rates for SP, from 7% to 9%. Stockout rates for depo increased to 4.5% in FY19 Q4 from 3.3% in FY19 Q3. Joint medical stores (JMS) continued to stabilize distribution of TO3 commodities and supported sites to report during the quarter. Also, JMS, through technical reps, monitored stock levels for depo closely at the facilities; this saw increased ordering for the commodity. The continuous review of the list of SDPs that qualified to receive FP commodities is based on Ministry of Health accreditation. Therefore, this led to the increase in the number of sites that were receiving RH/FP commodities from JMS. GHSC-PSM will continue to hold review meetings with the JMS technical team to ensure that consistency is maintained and SDPs always have stock available.
- B3** TO1 SDPs report directly in the web-based ARV ordering and reporting system (WAOS) that is managed by MOH. In the last quarter, the general reporting rates increased from 84% in FY19 Q3 to 87% in FY19 Q4. In the last quarter, the reporting rates for secondary SDPs for TO1 increased from 98% in FY19 Q3 to 100% in FY19 Q4. This high reporting rate is sustained due to continuous support to the SDPs to submit their ARV orders/reports online. For TO2, the reporting rate increased slightly from 97% in FY19 Q3 to 98% in FY19 Q4. There has been constant follow-up of the sites and verification of orders/reports to ensure that SDPs provide quality timely reports. Looking at TO3, the number of sites that received FP commodities reduced from 453 SDPs to 426 SDPs. This is because some implementing partners and community-based organizations are still receiving commodities on behalf of SDPs and the service delivery information is not available. Also, some SDPs are not registered in the national DHIS2, where the consumption data is retrieved. However, the reporting rate increased from 58% in FY19 Q3 to 64% in FY19 Q4. JMS is to continue mentoring the sites through the technical representatives to ensure that sites are registered in the DHIS2 report. Also, going forward, commodities will be provided directly to service delivery points and not through implementing partners.

Warehouse stock status and product losses

Country

Uganda

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	84	1%	28%	40%	31%
TO1-HIV/AIDS	36	3%	28%	33%	36%
TO2-Malaria	18		33%	39%	28%
TO3-PRH	30		30%	50%	20%
Total	84	1%	28%	40%	31%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
TO1	Global	Transit	Missing product	ARVs	\$1,218	\$14,656,937	0.01%
TO2	Global	Transit	Missing product	LLINs	\$1,808	\$4,003,243	0.05%
TO2	Global	Transit	Missing product	LLINs	\$6,607	\$220,212	3.00%

Ref Analysis

- C7 A consignment of nets was missing 972 LLINs. This loss occurred between customs and the warehouse. Corrective actions have been taken to address this chain of custody gap and a request for reimbursement has been filed with the 3PL.
- C7 A shipment of 385,000 LLINs was short by 3,441 nets, which were lost during the custody of the 3PL. A reimbursement has been filed and notice has been given to the 3PL regarding the incident.
- C7 A shipment of ARVs shipped from the RDC to Uganda through Mombosa was to be cleared by a 3PL. The shipment arrived short by 232 packs. Neither the 3PL nor RDC filed notification for this shortage till it was delivered. A GHSC-PSM review of shipment documents uncovered this shortage, which the field office later confirmed with the warehouse. Corrective actions have been taken with the 3PL to ensure this is identified more quickly in the future.
- B2 The MOH and/or storage sites provide stock status observations in storage sites every two months. Overall, commodities stocked according to plan increased from 28% from the previous quarter to 40% in FY19 Q4. Also, overall 31% of commodities are overstocked. In FY19 Q4, there has been a reduction of TO1 commodities stocked according to plan, from 33% in FY19 Q3 to 21%. This reduction may be attributed to first-line pediatric ARVs and second-line adult ARVs that remained overstocked from the previous quarter. The overstock of the ARVs is a result of the ongoing transition to TLD. To reduce the overstocks of legacy ARVs, revision of the forecast is ongoing and future deliveries will be delayed. GHSC-PSM will continue close monitoring of consumption with the transition to TLD. TO2 commodities stocked according to plan increased from 28% in FY19 Q3 to 39% in FY19 Q4. This could be attributed to reduction of overstock of 56% in Q3 to 28% in Q4; there is no expiry risk of the commodities. The overstock of ALU 6X1 is a result of low consumption, but it too has no risk of expiry. The percent of TO3 commodities stocked according to plan in FY19 Q3 increased from 24% to 50% in FY19 Q4. A focal person was employed by JMS to manage and oversee TO3 commodity stock at both the central and facility level, so all levels of stocks are being closely monitored continuously. In addition, we focused on aligning the supply plan to ensure that the commodities are planned within the minimum and maximum stock levels.

Supply plans, innovations, and strategic activities

Country

Uganda

FY Quarter

2019-Q4

Total Innovations implemented this quarter

New products

1

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
TO1-HIV/AIDS	New products	GHSC-PSM is assisting in the transition of TLD as the first-line adult ARV in Uganda. To date, GHSC-PSM has procured 74,104 units of 90-tablet bottles of TLDs for the public sector gap fill, with several lines still in the pipeline for both private and public sector. GHSC-PSM will continue to work with MOH, USAID and other partners to manage a smooth transition and reduce related potential risks of expiries/understocks/overstocks while ensuring availability of TLD, specifically the MMD that must be cautiously aligned to the transitioning of patients to the new drug.

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
RTKs	Yes
VMMC	Yes

Analysis

All required supply plans were submitted this quarter.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description

Participated in NDA meetings to discuss new customs clearance procedures. GHSC-PSM is requesting modification of the new guidelines to maintain USAID as a consignee due to supervision role and tax implication. GHSC-PSM has been granted a temporary waiver as discussions continue.

Participated in the tenofovir-lamivudine-dolutegravir (TLD) transition through the Commodity Security Group (CSG) and TLD task force committee meetings. The meetings discussed implementation, availability of commodities, challenges and solutions in implementing the new TLD guidelines, including enrollment of women of reproductive age and future plans.

Supported the Alternative Distribution Strategy (ADS) - one facility one warehouse resolution. In light of this, there have been inter-warehouse transfers from JMS to NMS to support method mix. However, it has not yet been fully implemented, as implementing partners continue to pick commodities on behalf of SDPs.

Molecular Instruments and HIV Tracer Products

Country

Uganda

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

GHSC-PSM in Uganda has no supported molecular instruments to report on.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Efavirenz 300/300/600 mg
2nd line adult ARV	Lopinavir/Ritonavir 200/50 mg
Pediatric ARV	Zidovudine/Lamivudine/Nevirapine 60/30/50 mg
First RTK	Determine
Second RTK	STAT-PAK
Tie-breaker RTK	Bioline
Viral load reagent	COBAS Taqman, CAP/CTM HIV V2.0 Quantitative test, 48 test
Viral load consumable	DBS – VL collection kit
EID reagent	COBAS Taqman Ampliprep HIV-1 Qualitative test, 48 test
EID consumable	Dry blood spot (DBS) – EID collection kit

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

Supply Chain Level

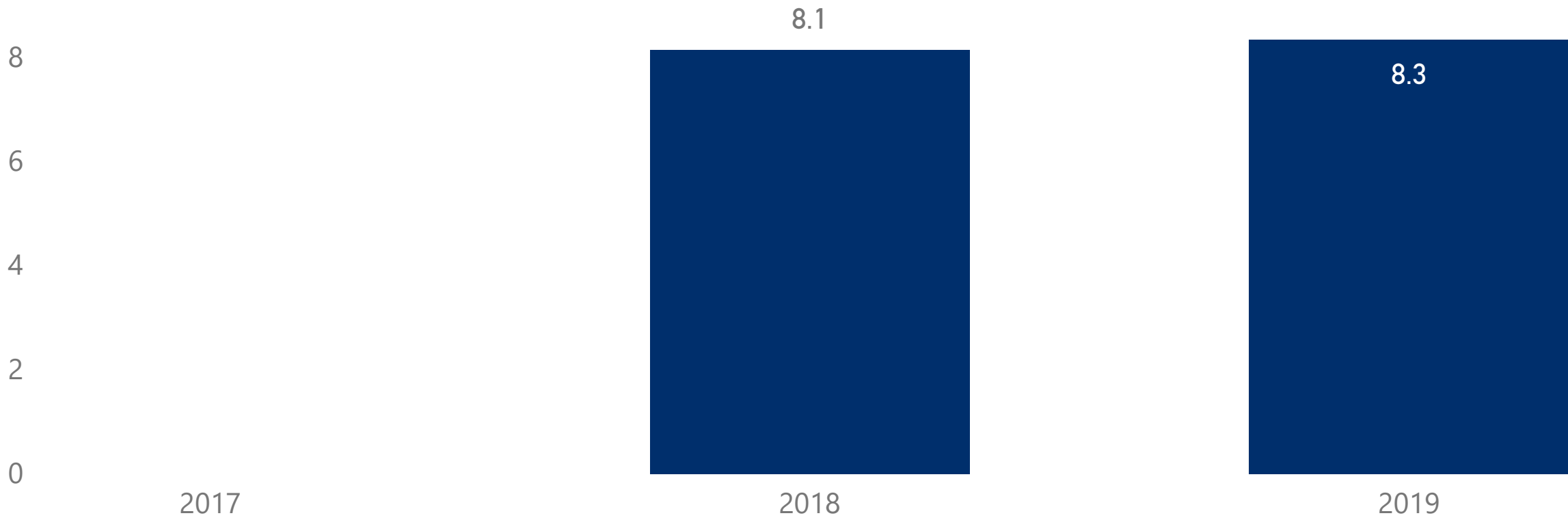
Country

All

All

Uganda

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	2.5	2.7	2.9
2019	2.4	3.0	3.0

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Central		
TO1-HIV/AIDS	9.0	1
TO2-Malaria	9.0	1
TO3-PRH	9.0	1
SDP		
TO1-HIV/AIDS	8.5	25
TO2-Malaria	8.2	31
TO3-PRH	8.3	15

Analysis

GHSC-PSM carried out a DQA that focused on three main attributes: availability, completeness and timeliness. This indicator assesses the quality of data submitted to the country logistics management information system (LMIS) at all supply chain levels, including both storage sites and SDPs. The purpose of the DQA was to build confidence in the logistics data from the national DHIS2/HMIS and to ensure that GHSC-PSM is aware of the strengths and weaknesses of logistics data in relation to three data quality dimensions. The DQA was carried out at one central warehouse, 25 TO1 sites, 31 TO2 sites and 15 TO3 sites. The results showed the availability and timeliness ratings to be 3 out of 3 while the average accuracy rating was 2.3 for all TOs. The average accuracy rate per task order was as follow: TO1 rating was 2.8, TO2 was 2.7 and TO3 2.8. The overall data confidence rating was 2.8 out of 3. The accuracy scores for both TO1 and TO2 reduced by 0.2 points from FY18. This is because the DQA was integrated within data verification exercises, where sites were purposively selected based on the poor quality of their reports, stockout of commodities and non-reporting sites. The sites were provided on-site mentorship during the integrated visits. Also, the warehouse was purposively sampled and interviewed. Some data collection challenges included incomplete stock cards and stock books, and lack of some stock cards for a few items. GHSC-PSM will continue to work with JMS and through regional implementing partners to support SDPs to ensure stock cards are always completed in a timely manner through continuous mentorship and coaching. The plan is having the DQA exercises integrated within the supportive supervision visits by the technical representatives.

Annual Forecasts

FY

2019

Country

Uganda

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	27.3%	+
2nd line adult ARV	33.9%	-
Pediatric ARV	34.8%	-
First RTK	30.2%	-
Second RTK	62.1%	-
Tie-breaker RTK	51.9%	-
Viral load reagent	40.8%	-
Viral load consumable	47.9%	+
EID reagent	25.0%	-
EID consumable	0.0%	
Male condoms (HIV)	161.4%	-
Female condoms (HIV)	1008.9%	-

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL 6x1	88.3%	-
AL 6x2	2.5%	+
AL 6x3	5.4%	+
AL 6x4	1.7%	+
mRDT	0.1%	+
SP	794.0%	-
LLINs	5.6%	+

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral methods	58.8%	+
Combined oral contraceptive with iron	58.8%	+
Injectable contraceptives	49.4%	+
DMPA-Subcutaneous injectable	42.8%	+
DMPA-Intramuscular injectable	52.9%	+
Implantable contraceptives	10.6%	+
1-rod implant	11.6%	-
2-rod implant	31.3%	+
Emergency oral contraceptives	25.4%	-
Emergency contraceptive, 1 tablet	25.4%	-
Progestin-only methods	10.6%	-
Progestin only pills	10.6%	-
Copper-bearing IUD	27.3%	+
Male condoms (FP)	161.4%	-
Female condoms (FP)	1008.9%	-

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
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B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	No
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	No
RTKs	Yes
VMMC	Yes

Ref Analysis

B12 For all products that GHSC-PSM has committed to supplying, it measures the percentage of difference between forecasts previously made for a year and the actual consumption or issues data for that year. For the denominator, quantities issued from the central medical store (specifically JMS) is used as a proxy for patient consumption data. From the data, the MAPE (mean average absolute percent error over time), also a measure of prediction accuracy of a forecasting, for FY18 was 7% and the forecast bias was -7%. In FY19, however, it was 138.23% with a forecast bias of -138.23%, indicating that the forecast is much higher than the actual demand. The commodity that contributed the greatest percentage to this outcome was female condoms. For TO1, the absolute percent consumption forecast error increased to 122.12% in FY19 from 5% in FY18, and the main contributing tracer items are female condoms that had a forecast bias of -1008.9% in FY19 from -232% in FY18. Male condoms were -161.44% and HIV second RTK was -62.06%. The demand for female condoms has consistently been low while the quantities of tested condoms released for distribution has not been matching the demand. In addition, some of the huge distributors of condoms have recently reduced their demands. The HIV second RTK was also over forecasted leading to a high error bias. TO2 forecast error increased to 198.11% in FY19 from 34% in FY18. This was mainly attributed to SP that had a forecast bias of -794% and AL 6x1 that had a forecast bias of -88.2%. SP was purchased as a one off procurement so this was not anticipated in the forecast. While for AL, there were switches during the year and these depended on which AL had high quantities in order to avert expiries. The other TO2 commodities had error biases below 6%. Forecast error bias for TO3 increased to 153.37% in FY19 from 9% in FY18. The main contributing tracer items are female condoms that had a forecast bias of -1008.9% in FY19 from -232% in FY18, while male condoms were at -161.44%. The demand for female condoms has consistently been low while the quantities of tested condoms released for distribution has not been matching the demand. All forecasts for all TOs were revised in FY18Q4 and consumption trends were taken into consideration. However, ARV forecasts are being revised again given the new changes in TLD transition. GHSC-PSM will continue with quarterly revisions of supply plans. Consumption will also continue to be monitored to ensure no stockouts at the SDP level or expiries at all levels.

B5 The quantification planning and procurement unit (QPPU) of MOH is generally responsible for annual forecasts. The forecasts for all thematic areas are made every three years and reviewed annually by the QPPU. The last forecast was in 2018. The annual forecast review is conducted routinely with care using a consistent rational methodology. Forecasts were made for all task orders in FY19 apart from ARVs, which is being reviewed, and malaria, which was done in June 2018. However, the forecast for ARVs is still being reviewed given the TLD transition changes as recommended by WHO.

Workforce, Leadership, and Governance

FY

2019

Country

Uganda

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS	Yes
TO2-Malaria	Yes
TO3-PRH	Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	10.0	10.0
TO2-Malaria	10.0	10.0
TO3-PRH	10.0	10.0

Ref Analysis

B10 Uganda has a logistics coordination mechanism that is government-led and constituted under the MOH. The Quantification Planning and Procurement Unit (QPPU) is responsible for managing the country's public-sector health commodity supply chain. The main role of the coordinating mechanism is quantification and supply planning for the country. The committee handles HIV/AIDS, malaria, family planning, maternal and child health and other health areas. Different stakeholders participate in the activities of the mechanism including relevant government agencies (MOH, vertical disease programs), central medical stores, private sector, relevant donors and nongovernmental organizations. The mechanism meets monthly through the Commodity Security Group meetings whose main role is to ensure commodity availability and inter-warehouse transfers and solicit funding. In addition, the stakeholders participate in medicines procurement and supply planning meetings, as well as medicines and supplies management and procurement TWG meetings that coordinate supply planning. The activities of the coordination mechanism did not change from FY18. However, it should be noted that there is no legislative or ministerial decree that creates the coordination mechanism (MOH QPPU) and outlines its mandate.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	11%	171
Joint Medical Store	11%	171
Total	11%	171

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Total		

Ref Analysis

B9 At the central level and specifically at JMS, there were 171 staff at the beginning of the year and 19 staff left the organization. Therefore, the supply chain loss ratio was 11:1, or 11%. This loss ratio was due mainly to staff contracts that ended and were not renewed plus a few that were terminated. Health workers with supply chain expertise include pharmacists, dispensers, cold chain technicians, laboratory staff and health administrative cadres.

B11 GHSC-PSM in Uganda did not collect this indicator for lack of visibility.

Commodity Funding

FY

2019

Country

Uganda



B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
▲ Family Planning and Reproductive Health	\$4,282,712	23%			\$6,750,000	37%	\$7,393,533	40%	\$18,426,245
HIV/AIDS	\$28,337,279	13%	\$97,204,410	46%	\$84,554,738	40%	\$2,605,000	1%	\$212,701,427
Malaria	\$2,972,746	7%	\$22,031,601	54%	\$14,874,400	37%	\$862,128	2%	\$40,740,876
Other Essential Medicines	\$30,899,105	100%							\$30,899,105

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

The total spent or budgeted is used to document either the budgeted amount Uganda allocates for the various types of products or the amount it spends on them. The FY19 data show that expenditures by the government of Uganda reduced from 23% in FY18 to 22% in FY19, and USG expenditures in the same timeframe reduced from 37% to 35%. However, expenditure increased from 38% to 39% and from 2% to 4% by Global Fund and other sources, respectively. Expenditure by health element shows an increase from 55% to 70% for HIV/AIDS and from 5% to 6% for reproductive health commodities. On the other hand, expenditure reduced from 15% in FY18 to 13% in FY19 for malaria and from 24% to 10% for all other essential medicines. The Other category for HIV funding is from UNITAID, for Malaria it is from UNICEF, and for FP/RH it is from UNFPA.

Complete Results and Denominators

Country

FY Quarter

Uganda

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO3-PRH	4.5%	133
DMPA-Intramuscular injectable	4.5%	133
TO2-Malaria	6.0%	869
SP	8.6%	405
mRDT	3.7%	464
TO1-HIV/AIDS	7.6%	846
RUTF	28.6%	21
EID reagent	0.0%	1
Viral load reagent	0.0%	1
Tie-breaker RTK	20.0%	110
Second RTK	5.0%	121
First RTK	2.4%	127
Pediatric ARV	5.0%	119
2nd line adult ARV	6.2%	129
1st line adult ARV	6.0%	217
Total	6.6%	1,848

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	3.0%	469
TO3-PRH		
Injectable contraceptives	4.5%	133

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	100%	218
TO2-Malaria	98%	657
TO3-PRH	64%	426

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	40%	31%	28%	1%	78
TO1-HIV/AIDS	33%	36%	28%	3%	36
TO2-Malaria	39%	28%	33%		18
TO3-PRH	50%	20%	30%		30
Total	40%	31%	28%	1%	78

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Total
Total	

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	1
Condoms	1	1
FP commodities	1	1
Lab (HIV diagnostics)	1	1
Malaria commodities	1	1
RTKs	1	1
VMMC	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Vietnam



Warehouse stock status and product losses

Country

Vietnam

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	6			100%	
TO1-HIV/AIDS	6			100%	
Total	6			100%	

Ref Analysis

- C7 Bottles of ARVs were delivered to the central warehouse, CPC1, with a pallet broken and some bottles crushed. Though 16 boxes were damaged, only one bottle was totally destroyed. The value of this loss was \$7.50
- B2 Stocked according to plan rates in Vietnam continue to increase. In Q4, rates were at 100%, up from 83% the previous quarter. The continued strategy of monthly (instead of quarterly) stock observations has continued to prove helpful to maintaining optimum stock levels in the CPC1 central warehouse.

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
TO1	Global	Storage	Damage	ARVs	\$8	\$1,226,596	0.00%

Supply plans, innovations, and strategic activities

Country

Vietnam

FY Quarter

2019-Q4

Total Innovations implemented this quarter
0

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
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There are no new innovations to report this quarter

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	Yes

Analysis

All required supply plans were submitted this quarter.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for FY2019 Q4.

Molecular Instruments and HIV Tracer Products

Country

Vietnam

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Efavirenz 300/300/600 mg
2nd line adult ARV	Lopinavir/Ritonavir 200/50 mg
2nd line adult ARV	Not reported
First RTK	Not reported
Second RTK	Not reported
Tie-breaker RTK	Not reported
Viral load reagent	Not reported
Viral load consumable	Not reported
EID reagent	Not reported
EID consumable	Not reported

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

All

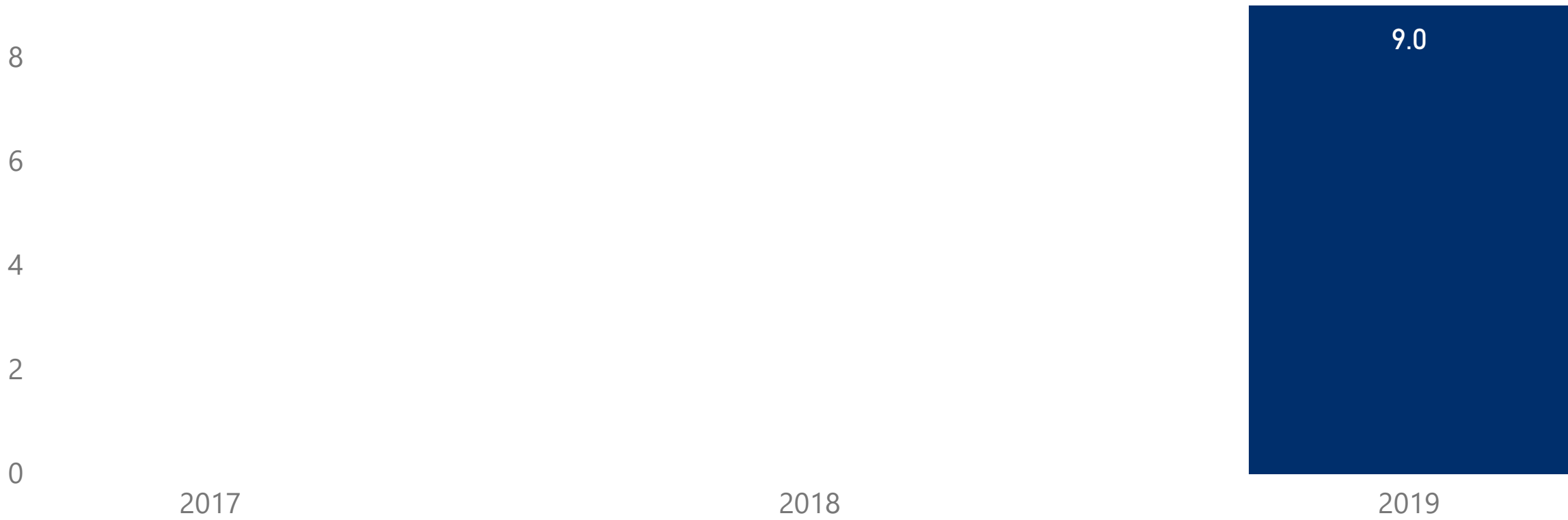
Supply Chain Level

All

Country

Vietnam

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018			
2019	3.0	3.0	3.0

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY: 2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
Central		
TO1-HIV/AIDS	9.0	1

Analysis

GHSC-PSM in Vietnam only works at the central level. Therefore the data quality assessment focused on CPC1, the central medical stores for Vietnam. The facility scored a perfect score of 3 on all dimensions (availability, timeliness, and accuracy). The facility has a strong LMIS in place and also follows all appropriate inventory management practices.

Annual Forecasts

FY

2019

Country

Vietnam

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	1.2%	+
2nd line adult ARV	14.2%	-

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
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B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
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B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
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Ref Analysis

B12 GHSC-PSM Vietnam measures forecast error for the product groups that it supplies to the Government of Vietnam. The two product groups are most used 1st line Adult ARVs and the most used 2nd line Adult ARVs. The forecast error for the 1st line Adult ARVs is just 1% (the bias is positive) while the forecast error for 2nd line ARVs is 14% (the bias is negative).

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
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Commodity Funding

FY
2019

Country
Vietnam

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
▲ HIV/AIDS	Not Available				\$3,222,402				Not Available

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

The only financing information that was accessible by GHSC-PSM in Vietnam was the procurements that the project provides to the government of Vietnam. In FY19, PEPFAR spent \$3.2 million on ARVs for Vietnam.

B8. Supply Chain Technical Independence

FY

2019

Country

Vietnam

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

Participant: The host country entity is a key stakeholder in carrying out technical tasks and may have some responsibilities for coordination and management. Other partners, including donor-funded projects, are involved in and necessary for the completion of the activity.

Observer: The host country entity is informed and/or consulted in the implementation of this activity, but it is not responsible for completing any technical tasks. The activity is primarily implemented by donor-funded projects.

No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Vietnam

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

3

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

GHSC-PSM in Vietnam selected three technical activities to be targeted for technical independence by the end of the project in forecasting and supply planning, procurement, and MIS. The three activities are developing an annual forecast, managing contracts and vendors, and system administration of the logistics management information system. For the first activity, developing an annual forecast, the project reports that currently two of five technical capacity elements are in place: designation of responsibility and standardization. The remaining items--training approach, other resources and performance indicator--still require significant support from GHSC-PSM to be implemented. GHSC-PSM is still conducting the trainings for government staff on behalf of the government. Also, lower levels do not have the necessary LMIS software in the system to provide quality data for forecasting, and currently the government has no M&E system in place. For the second activity, managing contracts and vendors, the project reports that currently two of five technical capacity components are in place: designation of responsibility and standardization. The remaining items--training approach, other resources, and performance indicator--still require significant support from GHSC-PSM to be implemented. The final activity, system administration of the LMIS, only has one capacity element in place: designation of responsibility. This activity is still in its nascent stages as LMIS is paper-based at facilities.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	Viet nam Authority of HIV/AIDS Control (VAAC)	HIV/AIDS	Yes; Moderate contribution	Yes; Major contribution	No; Major contribution	No; Major contribution	No; No contribution	Primary technical implementer	No
MIS	System administration - logistics management information system	Viet nam Authority of HIV/AIDS Control (VAAC)	HIV/AIDS	Yes; Moderate contribution	No; Limited contribution	No; Moderate contribution	No; Major contribution	No; No contribution	Primary technical implementer	No
Procurement	Manage contracts and vendors	The National Central Drug Procurement and The Multiline Payment Center - Viet Nam Social Security (VSS)	HIV/AIDS	Yes; Limited contribution	Yes; Major contribution	No; No contribution	No; Major contribution	No; No contribution	Primary technical implementer	No

Complete Results and Denominators

Country

FY Quarter

Vietnam

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
Total		

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	100%				6
TO1-HIV/AIDS	100%				6
Total	100%				6

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Total
Total	

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Zambia



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Zambia

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	7,395	15.1%
1st line adult ARV	426	2.1%
2nd line adult ARV	428	5.1%
Pediatric ARV	382	13.4%
First RTK	1,918	9.9%
Second RTK	1,906	6.7%
Viral load reagent	20	25.0%
EID reagent	14	7.1%
Male condoms (HIV)	1,516	28.8%
Female condoms (HIV)	785	34.9%
Total	7,395	15.1%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	12,294	20.7%
AL 6x1	1,783	19.6%
AL 6x2	1,743	20.7%
AL 6x3	1,800	13.4%
AL 6x4	1,778	23.7%
AL inability to treat	1,905	1.9%
mRDT	1,783	10.2%
SP	1,502	63.2%
Total	12,294	20.7%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
TO3-PRH	8,962	42.8%
Combined oral contraceptive with iron	1,638	42.7%
NET-En Injectable	938	60.7%
DMPA-Intramuscular injectable	1,417	45.9%
1-rod implant	575	45.4%
2-rod implant	1,089	45.5%
Progestin only pills	842	46.7%
Copper-bearing IUD	162	33.3%
Male condoms (FP)	1,516	28.8%
Female condoms (FP)	785	34.9%
Total	8,962	42.8%

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	2,207	89%
TO2-Malaria	2,248	92%
TO3-PRH	2,248	92%
TO4-MCH	2,248	92%
Total	8,951	91%

Ref Analysis

B1	TO1: HIV/AIDS tracer commodities averaged a 15% stockout rate, a slight increase of 1.5% from the previous quarter. Stockouts of female condoms (35%) are largely attributed to low demand as facilities. Stockouts of male condoms (29%) may be geographically district: they were ordered but not received in Central and Southern provinces, while facilities in the Western province did not order them. Viral load reagent stockouts (25%) reflect that orders from 5 of the 20 VL main hospitals have yet to be fulfilled. GHSC-PSM worked with MSL to ensure that these sites were supplied through an emergency order. In June 2019, the project, MSL and USAID developed and operationalized an emergency response plan that is aimed at improving the standard operations and distribution capacity of MSL. As a result, the project has increased 3PL support to MSL to help distribute commodities to hubs, selected districts and high-volume sites. Last-mile distribution to health centers and hosts, however, remains a challenge, as it is under the purview of districts which are also faced with financial difficulties. As a result, GHSC-PSM is working with implementing partners to distribute commodities to the last mile.
B1	TO2: Malaria tracer commodities averaged a 25% stockout rate, a reduction of 5% from the previous quarter. A low "inability to treat" rate of just 2% meant that most patients were able to access first-line malaria treatments (ACTs). Reported stockouts for malaria RDTs (10%) may be attributed to delays or failures on the part of some facilities in requesting resupplies. High stockout rates of SP (63%) were driven by the central stockout of the commodity, which is not procured by GHSC-PSM. The MOH has since committed to procuring 500,000 bottles of 1,000 tablets in split shipments this fiscal year to alleviate stockouts. Additionally, GHSC-PSM in Zambia generated and shared a supply plan for SP with the MOH, including recommendations for managing the pipeline to maintain a steady flow of the commodity.
B1	TO3: Family planning and reproductive health (FPRH) tracer commodities saw a stockout spike between 13% and 63% This translated to a 36% and 39% inability to offer a service for injectable and implantable contraceptives, respectively. Contributing factors for the family planning commodities stockouts may be challenges with last-mile distribution conditions across the provinces; low demand for female condoms (35% stocked out); a lack of trained staff for implant insertion of copper IUDs (33% stocked out), Etonogestrel (45% stocked out) and Levonorgestrel (46% stocked out). The 61% stockout of Norethisterone may be attributed to the long central stockout of the commodity due to procurement challenges at the MOH. Finally, stockouts for Microlut (47%) Depo Provera (46%) and male condoms (29%) reflect high demand for the commodities in most rural facilities across the provinces.
B3	The percentage of facilities reporting to the LMIS has been consistently high, with reporting rates above 85% for at least the last 12 months in all task orders. This quarter, the reporting rate for Task Orders 2, 3 and 4 was 92%, while it was 89% for TO1. Zambia has achieved consistently high levels of reporting rates against the targets across quarters, a result of USG and partner investments in logistics system capacity building, and eLMIS deployment and training in system use.

Warehouse stock status and product losses

Country

Zambia

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	24	18%	14%	55%	14%
TO1-HIV/AIDS	9	11%	11%	56%	22%
TO2-Malaria	6	17%	17%	67%	
TO3-PRH	9	22%	22%	44%	11%
Total	24	18%	14%	55%	14%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

- B2 Across task orders, stocking according to plan stayed largely constant since last quarter, with 42% of all observations stocked according to plan. It worth noting that the project only has one month of data in this reporting period, compared to the last quarter's three observations. MSL has had challenges in sharing issues data so that actual consumption can be generated in Pipeline after transitioning from one WMS (MACs) to another (EXPERT). However, the project is supporting MSL to ensure minimal disruption during the implementation phase of the EXPERT.
- B2 T O 1: HIV commodities were largely stocked according to plan (56%). This was driven by determine (low issues to facilities due to the PEPFAR targeted testing policy), male condoms, TLD (transition has been slowed down to run down TLE400), Lopinavir/Ritonavir 200/50mg and viral load reagents. The pediatric ARVs, Lopinavir/Ritonavir 80/20mg and SD Bioline, have been overstocked due to low demand and utilization respectively but there is no risk of expiry. The central stockout of EID reagents is largely attributed to high issues from MSL to facilities necessitated by the increase in equipment performing the EID testing such as the GeneXpert.
- B2 T O 2: 67% of malaria commodity observations were stocked according to plan, while 33.3% were understocked and stocked out respectively. The only product stocked out centrally was SP as discussed above for the SDP stockout rate. Understocks of AL 6X1was due to higher than expected issues to SDPs (demand); however, the MOH has since received shipments of 1.9 MOS and 1.5 MOS in July and August 2019 to bring the stock up to the required levels.
- B2 T O 3: 44% of family planning commodities (copper-bearing intrauterine devices, depo, combined oral and male condoms) were stocked according to plan. The Microlut overstock is due to low issues at MSL which in turn reflects low demand at SDPs. Jadelle and norethisterone enanthate have been centrally stocked out due to procurement funding challenges; however, UNFPA shipments are expected in-country to alleviate the central stockout. Female condoms were understocked after receipt of excess quantities via reverse logistics issued in November 2018 from the provincial health offices. The understock for Etonogestrel was a result of high issues (5.3 MOS) to the facilities in April 2019.
- B2 The project is engaged in several activities to address and ameliorate stockout rates, including providing on-the-job training to facilities that had prior reporting and ordering issues and helping MSL work with its third party logistics to more efficiently distribute commodities from central level facilities to service delivery points. In addition increased donor funds and the MOH's plans (through MSL) to bulk stock commodities at regional levels to better facilitate distribution to the facility level should help ameliorate stockout rates in the future.
- C7 There were no products lost due to expiry, theft, damage, or other causes while under GHSC-PSM control during FY2019 Q4.

Supply plans, innovations, and strategic activities

Country

Zambia

FY Quarter

2019-Q4

Total Innovations implemented this quarter
0

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
None to report this quarter.		

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
MCH commodities	Yes
RTKs	Yes

Analysis

All required quarterly supply plans (malaria, FP and MNCH commodities, and condoms) were developed and submitted to the home office forecasting and supply planning team this quarter.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
There were no new policies, strategies or regulations developed or updated in FY2019 Q4. An SOP manual for the health commodities logistics system (HCLS) was drafted during this period but has not yet been officially launched.

Training for supply chain partners

Country

Zambia

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Female	128	15	32	6	181
Male	141	16	36	7	200
Total	269	31	68	13	381

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Central	17	3	4	1	25
Subnational level 2	13	1	3	1	18
SDP	239	27	61	11	338
Total	269	31	68	13	381

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Cross-TO	269	31	68	13	381
Total	269	31	68	13	381

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	TO3-PRH	TO4-MCH	Total
Human Resources Capacity Development	269	31	68	13	381
Total	269	31	68	13	381

Analysis



During this reporting period, GHSC-PSM trained a total of 381 (181 women and 200 men) MOH staff via integrated training for ARVs and essential medicines, essential medicines and HIV, general nursing council training of trainers, and training of trainer for essential medicines/HIV/ARVs. The objective was to equip participants with knowledge, skills, and competencies to manage laboratory, family planning, malaria, ARVs, HIV test kits, and essential medicines commodities.

Molecular Instruments and HIV Tracer Products

Country

Zambia

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

94%

Analysis

During FY2019 Q4, 94% (33/35) of GHSC-PSM-supported molecular instruments remained functional for the full reporting period while 6% (2/35) were non-functional for some period of time in the quarter. Cobas TaqMan 96 in Kabwe General Hospital, Central Province was non-functional for 30 days as a result of a faulty component. The faulty component was replaced, and the machine is now working. At Levy Mwanawasa University, the Cobas TaqMan 96 in Lusaka Province was non-functional due to consistent errors. The problem was resolved after 30 days by the responsible engineer and the equipment is now operational.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Dolutegravir 300/300/50mg
2nd line adult ARV	Lopinavir 200mgs/Ritonavir 50mgs
Pediatric ARV	Lopinavir 80mgs/Ritonavir 20mgs
First RTK	Determine
Second RTK	Bioline
Tie-breaker RTK	Not reported
Viral load reagent	Cobas TaqMan 48/96: KIT CAP-G /CTM HIV-1 v2.0 Quantitative
Viral load consumable	Not reported
EID reagent	Cobas Taqman 48/96:HIV-1 Qualitative Test v2.0, 48 Tests
EID consumable	Not reported

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

All

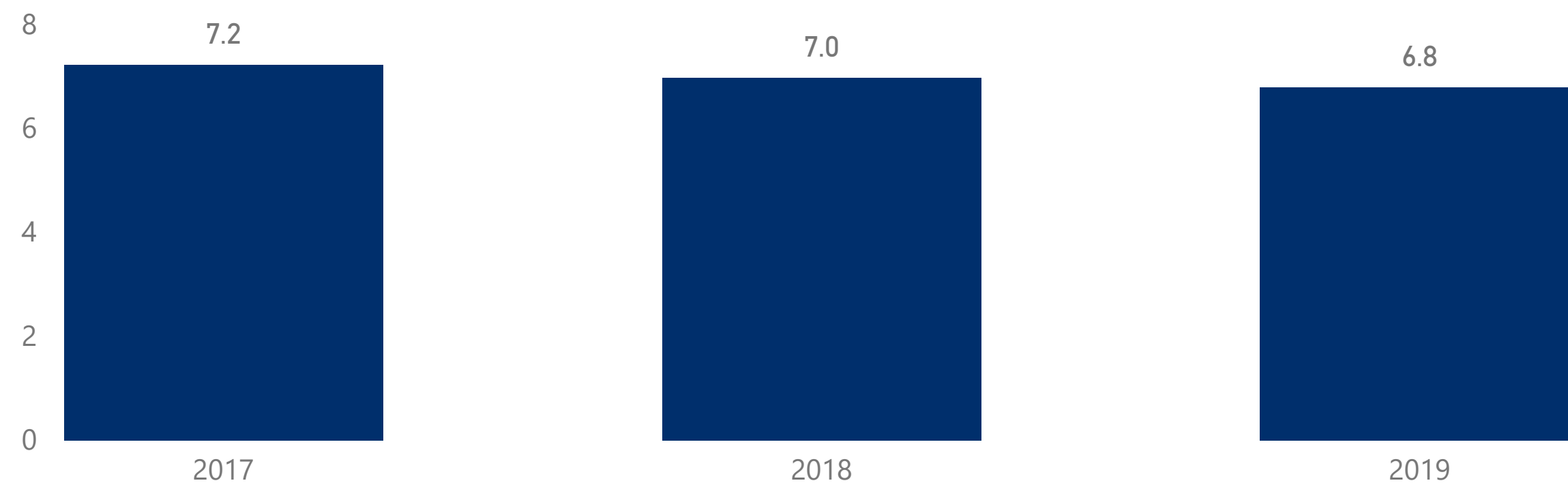
Supply Chain Level

All

Country

Zambia

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2017			
2018	2.1	2.4	2.4
2019	2.0	2.2	2.6

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY

2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
SDP		
TO1-HIV/AIDS	6.3	45
TO2-Malaria	7.5	45
TO3-PRH	6.1	45
TO4-MCH	7.3	45

Analysis

In FY2019 Q4, GHSC-PSM conducted an annual data quality assessment (DQA) in 22 districts and 45 purposively selected facilities across 10 provinces in Zambia to measure in-country data confidence levels. The DQA was conducted in collaboration with MOH district pharmacist and laboratory technologist representative staff. Data were collected using a standardized DQA tool designed in Survey CTO and methodology developed by GHSC-PSM. Average ratings across supply chain levels can provide insight into how much confidence should be credited to aggregated supply chain data when making strategic decisions. The DQA focused on the four parameters, namely data availability, accuracy, completeness and timeliness, in comparison with the existing monitoring tools.

Only 4% of data sampled was deemed of poor or very poor quality, indicating that stock data elements are recorded irregularly and for very few tracer products. There are frequent errors in recording, or no stock data elements are available at the site. Data are not recorded or reported accurately, and reports are submitted very late or not at all. The project will continue to provide TSS and conduct desk reviews and onsite training to facilities/DHOs to improve data quality in specific sites visited during the DQA.

The majority (80%) of data sampled from the facilities was deemed to be of very good or good quality: required data are available for all or nearly all tracer products, recorded, calculated, and reported accurately and in a timely manner. All reports were submitted within or at least two weeks ahead of the due date. Decision makers are likely to have a high level of confidence in the data. It was also observed that 16% of data sampled was only "fair," which suggests that some data elements for required tracer products may not be recorded routinely and a few stock monitoring tools (stock control cards /eLMIS) may not be available at the site. Several errors were noted in stock monitoring tools or reports. Reports have been submitted late and there is moderate confidence in the data.

Annual Forecasts

FY

2019

Country

Zambia

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	21.9%	-
2nd line adult ARV	63.5%	+
Pediatric ARV	44.5%	-
First RTK	9.4%	+
Second RTK	73.9%	-
Viral load reagent	0.2%	-
EID reagent	15.5%	+
Male condoms (HIV)	138.3%	-
Female condoms (HIV)	47.6%	+

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL 6x1	9.6%	+
AL 6x2	31.3%	+
AL 6x3	50.1%	+
AL 6x4	27.6%	+
mRDT	68.7%	-
SP	2093.0%	-

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
TO3-PRH		
Combined oral contraceptive with iron	37.1%	-
NET-En Injectable	33459.6%	-
DMPA-Intramuscular injectable	495.4%	-
1-rod implant	59.6%	+
2-rod implant	58.3%	-
Progestin only pills	276.8%	-
Copper-bearing IUD	53.2%	+
Male condoms (FP)	138.3%	-
Female condoms (FP)	47.6%	+

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO4-MCH		
MgSO4	47.9%	+
Amoxicillin dispersible tablets	8.9%	-
Injectable gentamicin	15037.8%	-
Oxytocin	30.8%	+
ORS (alone)	27389.1%	-
Zinc (alone)	29542.4%	-

Ref Analysis

- B5 GHSC-PSM conducted seven annual forecasts in FY2019, covering ARVs, FP commodities, condoms, lab (HIV diagnostics), RTKs, malaria commodities and MNCH commodities. A central forecast for VMMC was not conducted for lack of MOH coordination. Implementing partners engaged in forecasting and quantification based on their individual catchment targets and available funding.
- B12 In the period under review, the data show poor forecast accuracy across all task orders. In the most extreme cases, the amount forecasted greatly exceeded the amount consumed, especially for TO3 and TO4 products. Contributing factors to this poor forecast accuracy may be the following:
- Missing consumption data: two-months of data (July and September 2019) were not available at the time of reporting because MSL has had challenges in sharing the data so that actual consumption could be generated in Pipeline after transitioning from one WMS (MACs) to another (EXPERT).
 - Low demand, especially for some family planning products, also contributed to the huge changes in consumption.
 - Limited or no funding by stakeholders to ensure commodity availability for SP, some family planning products and MNCH products as indicated in B2 may have contributed to the lower than expected consumption.
 - Low order fill rates coupled with transport challenges in last-mile distribution due to logistical and resource challenges to meet distribution obligations from the central, hub and district levels, particularly with essential medicines, limited commodity availability in facilities and hence consumption.
 - Central stockouts for some commodities as indicated in B2 contributed to the poor forecast accuracy.
- Note: A good forecast accuracy should be within the range of -25 to +25.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
MCH commodities	Yes
RTKs	Yes
VMMC	No

Workforce, Leadership, and Governance

FY

2019

Country

Zambia

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS	Yes
TO2-Malaria	Yes
TO3-PRH	Yes
TO4-MCH	Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	9.2	11.0
TO2-Malaria	9.4	11.0
TO3-PRH	9.4	11.0
TO4-MCH	9.4	11.0

Ref Analysis

B10 ▲ A functional logistics coordination mechanism is in place for all task orders. The score of 11 out of a possible 11 reflects that mechanisms have formal institutionalization (TORs); inclusive membership; regularly scheduled meetings; policies, procedures and plans; and evidence of implementation of said policies.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Total		

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Total		

Ref Analysis

B11 ▲ This indicator is not collected in Zambia for lack of visibility.

B9 This indicator is not collected in Zambia for lack of visibility.

Commodity Funding

FY

2019

Country

Zambia



B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
Family Planning and Reproductive Health	\$170,593	1%	\$1,868,419	16%	\$1,579,414	14%	\$7,779,250	68%	\$11,397,676
HIV/AIDS	\$70,428,660	34%	\$51,148,448	25%	\$84,014,805	41%	\$0	0%	\$205,591,913
Malaria	\$8,251,416	49%	\$3,287,620	19%	\$5,388,657	32%	\$0	0%	\$16,927,693
Maternal and Child Health	\$12,232,059	100%	\$0	0%	\$0	0%	\$0	0%	\$12,232,059
Other Essential Medicines	\$649,439	8%	\$0	0%	\$7,313,097	92%	\$0	0%	\$7,962,536

Funding proportion charts will not display above if 1) a corresponding task order is not operating in the country, or 2) commodity spending or budget data is not available for all funding sources, so that proportions cannot be determined. Data may represent actual spending or budgeted amounts, depending on data availability. Data may represent U.S. government fiscal year, host government fiscal year, or other relevant annual period depending on data availability.

Analysis

USG invested \$98.3 million in health commodities across four health elements (ARVs, malaria, family planning and essential medicines) through PEPFAR and PMI. Global Fund procured and delivered \$56.3 million worth of ARVs, malaria and family planning commodities (namely, male condoms). The host government through MOH procured commodities estimated at \$92 million and received commodities worth \$7.8 million toward family planning and reproductive health through UNFPA/DFID. The value of commodities procured by other partners (GRZ and GF) are estimated costs and not actual receipts. The project is not privy to partner receipts.

B8. Supply Chain Technical Independence

FY

2019

Country

Zambia

Definitions and interpretation guidance

Targeted activities have been selected and agreed to by each GHSC-PSM field office and USAID mission from a standard list of 29 core supply chain activities. Given the current country context and anticipated project resources in the coming years, targeted activities are expected to be technically independent by the end of the project in 2023.

Host country entity - This is the local entity that is responsible for carrying out this activity. The entity may be a government ministry, agency, unit, committee, or individual. It may also be a parastatal, private sector, or non-governmental organization to which the government has outsourced the activity.

Technical independence - A host country entity is considered "technically independent" in a supply chain activity if it has **five institutional capacity elements** in place and is the **primary technical implementer** of the activity. Entities that have achieved technical independence are noted with a "Yes" in the far right column of the table on the following page. Those who are still progressing to this level are noted with a "No."

Institutional capacity elements

- 1. Designation of responsibility:** Formal documentation assigning responsibility for implementing the activity to the relevant non-donor host country entity.
- 2. Standardization:** Guidelines or standard operating procedures describing how the activity should be completed, reflecting current process and expectations.
- 3. Training Approach:** A formalized, intentional approach to training personnel to an adequate level of competency to carry out the activity, that is implemented by a non-donor entity.
- 4. Other resources:** Information, equipment, and other tools necessary to carry out the activity (non-labor resources only)
- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

Entities that have put each element in place are noted with a "Yes" in the corresponding element column in the table on the following pages. Entities that are still developing the element are noted with a "No."

GHSC-PSM project contribution toward establishing capacity elements

The level of GHSC-PSM contribution toward establishing each capacity element with the host country entity is noted in the table on the following page. Contribution is based on perception of project resources and effort expended in this area, along a spectrum of **major, moderate, limited, or no contribution.**

Host country entity implementation roles

Primary technical implementer: The host country entity is responsible for leading, managing, and ensuring completion of the activity. It is fluent in the technical requirements for the activity and is ultimately accountable for its outcomes.

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No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Zambia

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

5

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

0%

Analysis

The project and USAID targeted four core supply chain activities with the MOH to achieve technical independent by 2023: three forecasting and supply planning activities and one activity in support of human resources capacity development. The baseline results show that the respective entities in Zambia currently have a range of the key components in place--including designation of responsibility, standardization, material resources, a training approach, and monitoring of performance--that are deemed important to technical independence. Three of these five components (60%) are already in place for two activities: the creation of annual forecasts and the development and updating of supply plans. Only one capacity element (20%) is currently in place in the case of monitoring the commodity pipeline.

To support human resource capacity development, GHSC-PSM is supporting the General Nursing Council of Zambia in SCM pre-service training for the nurses in the nursing schools/colleges, and the biomedical scientists and the pharmacists at the University of Zambia under the SCM in the key supply chain activity of pre-service curriculum implementation.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other reasources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	Ministry of Health	Integrated	Yes; Major contribution	Yes; Major contribution	No; Moderate contribution	Yes; Major contribution	No; Major contribution	Participant	No
	Develop/update supply plan	Ministry of Health	Integrated	Yes; Major contribution	Yes; Major contribution	No; Moderate contribution	Yes; Major contribution	No; Major contribution	Participant	No
	Monitor the commodities pipeline	Ministry of Health	Integrated	No; Major contribution	Yes; Major contribution	No; Moderate contribution	No; Major contribution	No; Major contribution	Participant	No
Human Resources Capacity Development	Implement supply chain management pre-service curriculum	General Nursing Council of Zambia	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Moderate contribution	Yes; Limited contribution	No; Limited contribution	Participant	No
		University of Zambia	Integrated	Yes; Major contribution	Yes; Major contribution	Yes; Moderate contribution	No; Limited contribution	No; Limited contribution	Participant	No

Complete Results and Denominators

Country

FY Quarter

Zambia

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO1-HIV/AIDS	15.1%	7,395
1st line adult ARV	2.1%	426
2nd line adult ARV	5.1%	428
Pediatric ARV	13.4%	382
First RTK	9.9%	1,918
Second RTK	6.7%	1,906
Viral load reagent	25.0%	20
EID reagent	7.1%	14
Male condoms (HIV)	28.8%	1,516
Female condoms (HIV)	34.9%	785
TO2-Malaria	24.1%	10,389
AL 6x1	19.6%	1,783
AL 6x2	20.7%	1,743
AL 6x3	13.4%	1,800
AL 6x4	23.7%	1,778
mRDT	10.2%	1,783
SP	63.2%	1,502
TO3-PRH	42.8%	8,962
Combined oral contraceptive with iron	42.7%	1,638
NET-En Injectable	60.7%	938
DMPA-Intramuscular injectable	45.9%	1,417
1-rod implant	45.4%	575
2-rod implant	45.5%	1,089
Progestin only pills	46.7%	842
Copper-bearing IUD	33.3%	162
Male condoms (FP)	28.8%	1,516
Female condoms (FP)	34.9%	785
Total	27.6%	24,445

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	1.9%	1,905
TO3-PRH		
Combined oral methods	42.7%	1,638
Injectable contraceptives	39.0%	1,555
Implantable contraceptives	36.1%	1,231
Progestin-only methods	46.7%	842

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	89%	2,207
TO2-Malaria	92%	2,248
TO3-PRH	92%	2,248
TO4-MCH	92%	2,248

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	55%	14%	14%	18%	22
TO1-HIV/AIDS	56%	22%	11%	11%	9
TO2-Malaria	67%		17%	17%	6
TO3-PRH	44%	11%	22%	22%	9
Total	55%	14%	14%	18%	22

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	128	141	269
TO2-Malaria	15	16	31
TO3-PRH	32	36	68
TO4-MCH	6	7	13
Total	181	200	381

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	1
Condoms	1	1
FP commodities	1	1
Lab (HIV diagnostics)	1	1
Malaria commodities	1	1
MCH commodities	1	1
RTKs	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period
35	94%

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.

GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

FY2019 Quarter 4

July - September 2019

Country M&E Indicator Performance

Country

Zimbabwe



Service Delivery Point Stockouts and Reporting Rates

In GHSC-PSM-supported regions

Country

Zimbabwe

FY Quarter

2019-Q4

B1. Stockout rate at service delivery points - HIV/AIDS

Task Order	# SDP stock observations	Stockout rate
TO1-HIV/AIDS	9,523	9.8%
1st line adult ARV	1,111	0.8%
2nd line adult ARV	1,080	5.6%
Pediatric ARV	1,053	4.3%
First RTK	1,254	1.0%
Second RTK	1,244	8.4%
Tie-breaker RTK	1,154	39.9%
Viral load reagent	8	0.0%
EID reagent	3	0.0%
Male condoms (HIV)	1,313	7.7%
Female condoms (HIV)	1,303	11.1%
Total	9,523	9.8%

B1. Stockout rate at service delivery points - Malaria

Task Order	# SDP stock observations	Stockout rate
TO2-Malaria	7,913	10.2%
AL 6x1	1,220	21.0%
AL 6x2	1,219	12.4%
AL 6x3	1,223	11.1%
AL 6x4	1,227	9.5%
AL inability to treat	1,227	1.1%
mRDT	1,235	6.8%
SP	562	8.7%
Total	7,913	10.2%

B1. Stockout rate at service delivery points - Family Planning

Task Order	# SDP stock observations	Stockout rate
Total		

B3. LMIS reporting rate

Task Order	Total # of SDPs required to report	Reporting rate
TO1-HIV/AIDS	1,806	52%
TO2-Malaria	1,705	52%
Total	3,511	52%

Ref Analysis

B1 Stockout rates improved this quarter, falling noticeably from 20% to 12% for malaria commodities, and slightly for HIV commodities from just over 10% to just under that.

The decrease in malaria stockouts is due to the fact that this quarter falls outside of the peak malaria season in Zimbabwe. The project is working across both field office and headquarters to develop seasonality indices to help improve the supply of anti-malarials medicines during peak seasons.

While stockouts of HIV commodities remained steady on average, there were significant increases in stockouts of both male and female condoms. A key factor here has been inconsistent distribution of condoms by Natpharm. Condom storage is outsourced, and condoms have not been included in NatPharm's WMS. The project has engaged NatPharm on this issue to ensure that condoms will now be systematically picked and packed like any other commodity in the WMS. Zimbabwe also saw a notable decrease in stockouts of first RTKs, due to improved stock levels at the central warehouse over the last two quarters.

B3 Zimbabwe's reporting rate began to recover this quarter following the "accelerated push" initiative in Q3 that displaced routine reporting and distributions. Reporting rates for both malaria and HIV products rose from 41% to 52%. Reporting was completed late for an additional 20% of sites, bringing the total reporting rate to 73% for HIV and 72% for malaria.

Warehouse stock status and product losses

Country

Zimbabwe

FY Quarter

2019-Q4

B2. Stocked according to plan

Supply Chain Level	Total Observations	Stocked out	Understocked	Stocked according to plan	Overstocked
Central	16	0%	31%	25%	44%
TO1-HIV/AIDS	10	0%	40%	20%	40%
TO2-Malaria	6	0%	17%	33%	50%
Total	16	0%	31%	25%	44%

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

TO	Level	Site of Loss	Type of Loss	Product Type	Loss Value	Loss Denominator	Loss %
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Ref Analysis

- B2 Overall, stocked according to plan rates at the central level remained consistent from the previous quarter, at 25%. However, the share of products that were overstocked and understocked flipped, with understocking decreasing and overstocking increasing. This is due to shifting stock levels for HIV commodities. Understocking of HIV products, which had increased last quarter as a result of the accelerated push, has improved, falling from 60% of observations to 40%. Malaria stock statuses remain unchanged from the previous period, as these items were not impacted by the accelerated push and consumption has been limited due to the off-peak malaria season.
- C7 There were no product losses from GHSC-PSM-managed warehouses this quarter.

Supply plans, innovations, and strategic activities

Country

Zimbabwe

FY Quarter

2019-Q4

Total Innovations implemented this quarter
0

C1. Innovations implemented this quarter

Task Order	Type of innovation	Description
There are no new innovations to report this quarter		

B6. Quarterly supply plan submissions to GHSC-PSM HQ

Product Group	Supply Plan Submission Status
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
RTKs	Yes
VMMC	Yes

Analysis

Supply plans for seven required product groups were submitted to GHSC-PSM headquarters as expected this quarter. This includes a supply plan for family planning commodities, which was added to Zimbabwe's expectations this quarter.

C11. Supply chain policies, regulations, strategies or SOPs developed or updated with GHSC-PSM assistance

Description
There are no new supply chain policies, regulations, strategies, or SOPs developed or updated with GHSC-PSM assistance to report for FY2019 Q4

Training for supply chain partners

Country

Zimbabwe

FY Quarter

2019-Q4

C2. Number of people trained by sex

Sex	TO1-HIV/AIDS	TO2-Malaria	Total
Female	51	9	60
Male	74	12	86
Total	125	21	146

C2. Number of people trained by supply chain level

Supply Chain Level	TO1-HIV/AIDS	TO2-Malaria	Total
Subnational level 2	86	21	107
SDP	39		39
Total	125	21	146

C2. Number of people trained by funding source and type

Type	TO1-HIV/AIDS	TO2-Malaria	Total
Cross-TO	86	21	107
TO-specific	39		39
Total	125	21	146

C2. Number of people trained by technical area

Supply Chain Function	TO1-HIV/AIDS	TO2-Malaria	Total
Quality Assurance	39		39
Transportation and Distribution	86	21	107
Total	125	21	146

Analysis



The project trained 111 district pharmacy personnel on the ZAPS distribution system this quarter. An additional 39 participants at the facility level were trained in the use of VIAC Leep machines, used for the treatment of cervical cancer lesions, and autoclaves for sterilizing related equipment.

Molecular Instruments and HIV Tracer Products

Country

Zimbabwe

FY Quarter

2019-Q4

C10. Percentage of GHSC-PSM managed molecular instruments that remained functional for the entire reporting period

Analysis

GHSC-PSM does not manage or support maintenance for any molecular instruments in Zimbabwe.

HIV Tracer Products

Tracer Product	Exact Product Name
1st line adult ARV	Tenofovir/Lamivudine/Efavirenz 300/300/400 mg
2nd line adult ARV	Atazanavir/Ritonavir 300/100 mg
Pediatric ARV	Abacavir/Lamivudine 120/60 mg
First RTK	Determine
Second RTK	Chembio
Tie-breaker RTK	INSTI
Viral load reagent	Roche Ampliprep Automated kits VL
Viral load consumable	Not reported
EID reagent	Roche Ampliprep Automated kits EID
EID consumable	Not reported

HIV tracer products are selected based on the most-used commodities in each country. These products can change from quarter to quarter as products transition and consumption changes. The items listed here will refer to the products used as tracers for the current quarter. Data presented for previous reporting periods will refer to the most-used products *at that time*, which may differ from the current tracer item.

Average Rating of In-country Data Confidence

Task Order

All

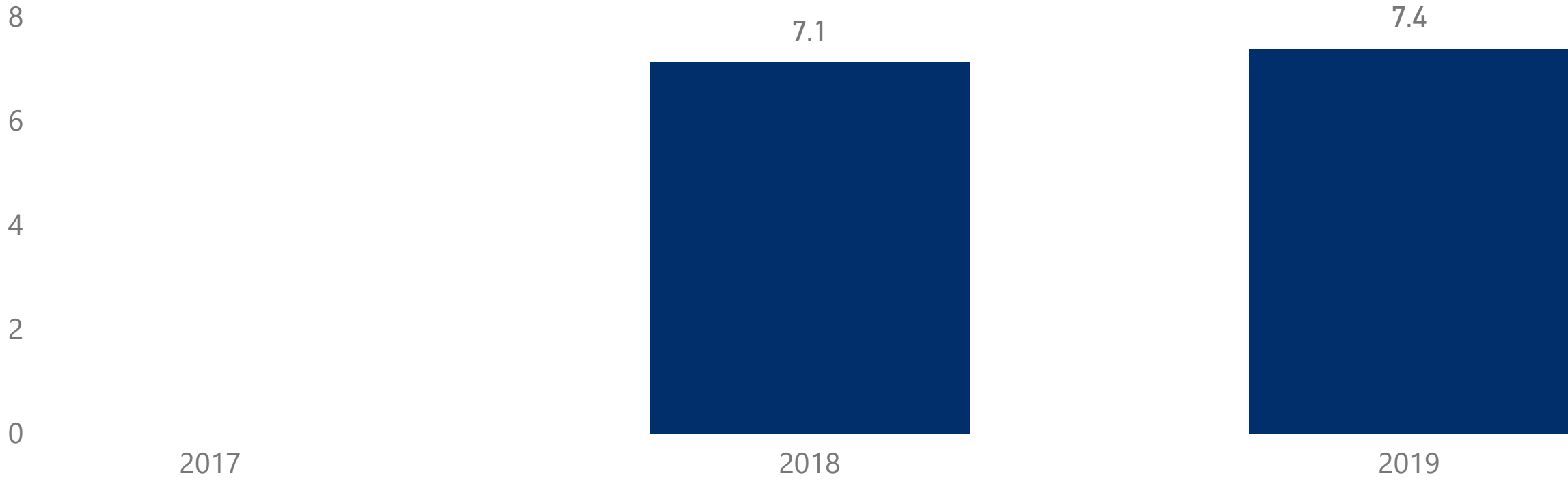
Supply Chain Level

All

Country

Zimbabwe

B4. Average rating of in-country data confidence



Rating breakdown by data quality element

FY	Accuracy	Availability	Timeliness
2018	1.9	3.0	2.2
2019	2.2	3.0	2.2

Data Notes

Data for this indicator is collected using a standardized DQA tool and methodology developed by GHSC-PSM to assess data availability, accuracy, and timeliness. Data collectors conduct on site data quality assessments, deriving a rating for each data quality element on a scale of 0-3. The ratings for each of the three elements is then summed to determine an overall data confidence rating out of a total possible score of 9, indicating the highest data confidence. The number of sites visited, the levels of the supply chain assessed, and the extent to which countries are able to conduct representative assessments varies per country. In many instances, the data have limited ability to be generalized outside of the sites visited.

FY: 2019

Data Confidence Rating Breakdown by Supply Chain Level

Supply Chain Level	Overall data quality rating	Total # of sites rated
SDP		
TO1-HIV/AIDS	7.3	50
TO2-Malaria	7.5	50

Analysis

The average rating of in-country data confidence improved this year, increasing from 7.1 to 7.4. The increase was most pronounced for HIV products, which improved from a rating of 6.9 to 7.3. Malaria data confidence improved from 7.3 to 7.5. Most of the gains came from improvements in data accuracy, which has been a focus of GHSC-PSM data quality efforts, in collaboration with MOHCC. Accuracy and data collection challenges do remain, however. Common issues include un-updated stock cards, incorrect units of measure on stock cards, and missing stock cards and facility order forms. The results of the DQA will be shared with MOHCC for further action.

The project sampled 50 sites of the 1,800 in the country. The DQA adopted a mixture of random and convenience sampling. For assessment feasibility, the country was divided into two regions, northern and southern. The southern region DQA was conducted in March 2019 and northern region in August 2019. Each region comprises five provinces. Three provinces were selected at random per region. For each of the selected province, two districts were selected at random, and then five sites were picked at random from every district.

Annual Forecasts

FY

2019

Country

Zimbabwe

B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
TO1-HIV/AIDS		
1st line adult ARV	4.5%	-
2nd line adult ARV	2.2%	+
Pediatric ARV	29.1%	-
First RTK	3.4%	-
Second RTK	9.7%	+
Tie-breaker RTK	1.2%	+
Viral load reagent	12.4%	-
EID reagent	1.9%	-
Male condoms (HIV)	12.8%	-
Female condoms (HIV)	17.3%	-

B12. Annual consumption forecast error and forecast bias - Malaria

Task Order	Annual consumption forecast error	Forecast Bias
TO2-Malaria		
AL 6x1	13.1%	-
AL 6x2	18.2%	-
AL 6x3	26.4%	-
AL 6x4	23.7%	+
mRDT	25.2%	-
SP	13.8%	-

B12. Annual consumption forecast error and forecast bias - FP/RH

Task Order	Annual consumption forecast error	Forecast Bias
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B12. Annual consumption forecast error and forecast bias - MNCH

Task Order	Annual consumption forecast error	Forecast Bias
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Ref Analysis

B5	Annual forecasts for all required product groups were conducted twice this year, as expected.
B12	Data for this period compared the forecasted quantities from the August 2018 quantification with actual data from site-level consumption reports, which were reviewed at the August 2019 quantification exercise. Three-quarters (75%) of all tracer commodities had error rates of less than 20% and all were within 30%. In most cases, actual consumption was less than forecasted, with the exception of second-line ARVs, two RTKs and AL 6x4.

B5. Annual forecasts conducted in country

Product Group	Annual forecast conducted in-country
ARVs	Yes
Condoms	Yes
FP commodities	Yes
Lab (HIV diagnostics)	Yes
Malaria commodities	Yes
RTKs	Yes
VMMC	Yes

Workforce, Leadership, and Governance

FY

2019

Country

Zimbabwe

B10. Is there a functional logistics coordination mechanism in place?

TO1-HIV/AIDS	Yes
TO2-Malaria	Yes

B10. Logistics Coordination Mechanism Total Score, by Health Area

Task Order	2018	2019
TO1-HIV/AIDS	8.0	9.0
TO2-Malaria	8.0	9.0

Ref Analysis

B10 Zimbabwe has one integrated logistics coordination unit, the Procurement and Supply Management (PSM) Committee, which oversees supply chain management for both HIV/AIDS and malaria program areas. The mechanism met the criteria to be a "functional mechanism" last year and has continued improved its score this year. Progress was noted in the areas of developing policies, procedures, and/or action plans, and in adherence, implementation and follow up of those deliverables.

Data Notes

Logistics coordination mechanisms are scored against six criteria, each with a point value. The maximum score is 11. Any mechanism that scores 8 or more is considered functional. More detail is available in the [project M&E plan](#).

B9. Supply chain technical staff turnover rate

Supply Chain Level	Supply chain technical staff turnover rate	Total # of supply chain technical workers at the start of the year
Central	0%	19
MOHCC DLS Lab Logistics Unit	0%	2
MOHCC DPS Logistics Unit	0%	17
Total	0%	19

B11. Percentage of supply chain leadership positions held by women

Supply Chain Level	Percentage of supply chain leadership positions held by women	Total number of supply chain leadership positions
Central	43%	14
Crosscutting	43%	14
Total	43%	14

Ref Analysis

B9 Supply chain technical staff turnover remains minimal within MOHCC's logistics units, with no personnel leaving their posts in the last year.

B11 Women occupy 6 out of 14 leadership positions within the central level of the public health supply chain.

Commodity Funding

FY
2019

Country
Zimbabwe

B7. Funding for public-sector commodity procurement, by health area and funding source

Health Element	Host Government	Host Government %	Global Fund	Global Fund %	USG	USG %	Other	Other %	Total Funding
HIV/AIDS	\$26,846,959	15%	\$124,756,998	71%	\$21,491,573	12%	\$1,855,765	1%	\$174,951,295
Malaria	\$238,554	10%	\$665,784	28%	\$1,450,014	62%	\$0	0%	\$2,354,352

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Analysis

Total spending on malaria commodities decreased this year, falling from \$3.8 million to \$2.3 million. The U.S. government remains a significant funding source in this health area, providing 62% of overall spending, similar to the previous year. The government of Zimbabwe, however, increased its spending on malaria commodities. Whereas last year there was no spending in this health area, the government contribution is now 10% of overall spending.

Total spending on HIV commodities increased slightly this year, from \$172 million to \$174 million. The share of funding provided by the Zimbabwe government also increased, from 12% to 15%. The Global Fund remains the most significant contributor, with additional funding from the U.S. government, CHAI, UNITAID, and some donations from pharmaceutical companies.

B8. Supply Chain Technical Independence

FY

2019

Country

Zimbabwe

Definitions and interpretation guidance

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- 5. Performance indicator:** The responsible host country entity is using one or more relevant indicators to monitor performance of the activity.

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GHSC-PSM project contribution toward establishing capacity elements

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No involvement: The activity is implemented by the GHSC project or other donor-funded projects with little to no interaction from the host country entity.

B8. Supply Chain Technical Independence

FY

2019

Country

Zimbabwe

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

12

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

67%

Analysis

GHSC-PSM and USAID have targeted 12 supply chain activities to achieve technical independence in Zimbabwe by the end of the project. Of those 12, 67% have already achieved this milestone. Most of the technically independent activities are within the warehousing and distribution technical areas and the related WMS, all operated by Natpharm. As a supply chain entity, Natpharm has considerable technical expertise. Most capacity elements were already in place with minimal GHSC-PSM technical involvement. The project's technical contributions in these activities have focused on supporting resources, such as supplemental warehouse space and delivery trucks, and information systems for performance monitoring. The Directorate of Pharmacy Services has also achieved technical independence for two management activities. While these technical achievements are significant, Natpharm and DPS both rely heavily on seconded staff and financing from USAID and other donors. The technical expertise is there, but a lack of secure financing for supply chain activities remains a risk to long-term self-reliance.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Forecasting and Supply Planning	Develop annual forecast	MOHCC DPS	Integrated	No; Major contribution	Yes; Moderate contribution	No; Major contribution	No; Major contribution	No; Major contribution	Primary technical implementer	No
	Develop/update supply plan	MOHCC DPS	Integrated	No; Major contribution	Yes; Moderate contribution	No; Major contribution	No; Major contribution	No; Major contribution	Primary technical implementer	No
	Monitor the commodities pipeline	MOHCC DPS	Integrated	No; Major contribution	Yes; Moderate contribution	No; Major contribution	No; Major contribution	No; Major contribution	Primary technical implementer	No
Governance and Financing	Manage logistics management committee	MOHCC DPS	Integrated	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	Primary technical implementer	Yes
MIS	System administration - warehouse management system	NatPharm	Integrated	Yes; No contribution	Yes; No contribution	Yes; No contribution	Yes; Moderate contribution	Yes; Moderate contribution	Primary technical implementer	Yes
Monitoring and Evaluation	Collect and report supply chain performance indicators	MOHCC DPS	Integrated	Yes; Limited contribution	Yes; Moderate contribution	Yes; Moderate contribution	No; Major contribution	No; Major contribution	Primary technical implementer	No
Strategy and Planning	Manage implementation of a supply chain master plan	MOHCC DPS	Integrated	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	Yes; Moderate contribution	Primary technical implementer	Yes
Transportation and Distribution	Distribution to service delivery points	NatPharm	Integrated	Yes; No contribution	Yes; No contribution	Yes; No contribution	Yes; Moderate contribution	Yes; Moderate contribution	Primary technical implementer	Yes
	Select and pack commodities for distribution ('pick and pack')	NatPharm	Integrated	Yes; No contribution	Yes; No contribution	Yes; No contribution	Yes; Limited contribution	Yes; Moderate contribution	Primary technical implementer	Yes

B8. Supply Chain Technical Independence

FY

2019

Country

Zimbabwe

Total number of supply chain activities targeted for technical independence by the end of the GHSC-PSM project

12

Percentage of targeted supply chain activities in which the host country entity has achieved technical independence with GHSC-PSM technical assistance

67%

Analysis

GHSC-PSM and USAID have targeted 12 supply chain activities to achieve technical independence in Zimbabwe by the end of the project. Of those 12, 67% have already achieved this milestone. Most of the technically independent activities are within the warehousing and distribution technical areas and the related WMS, all operated by Natpharm. As a supply chain entity, Natpharm has considerable technical expertise. Most capacity elements were already in place with minimal GHSC-PSM technical involvement. The project's technical contributions in these activities have focused on supporting resources, such as supplemental warehouse space and delivery trucks, and information systems for performance monitoring. The Directorate of Pharmacy Services has also achieved technical independence for two management activities. While these technical achievements are significant, Natpharm and DPS both rely heavily on seconded staff and financing from USAID and other donors. The technical expertise is there, but a lack of secure financing for supply chain activities remains a risk to long-term self-reliance.

All countries aim to achieve 100% technical independence on targeted activities by the end of the project in 2023.

Detailed Breakdown by Targeted Activity

Technical Sub-category	Activity	Responsible host country entity	Health Area	a. Designation of responsibility	b. Standardization	c. Training approach	d. Other resources	e. Performance indicator	Host Country Entity Implementation Role	Technical Independence
Warehousing and Inventory Management	Monitor inventory levels	NatPharm	Integrated	Yes; No contribution	Yes; No contribution	Yes; No contribution	Yes; Moderate contribution	Yes; Limited contribution	Primary technical implementer	Yes
	Put away commodities	NatPharm	Integrated	Yes; No contribution	Yes; No contribution	Yes; No contribution	Yes; Moderate contribution	Yes; Limited contribution	Primary technical implementer	Yes
	Receive commodities	NatPharm	Integrated	Yes; No contribution	Yes; No contribution	Yes; No contribution	Yes; Moderate contribution	Yes; Limited contribution	Primary technical implementer	Yes

Complete Results and Denominators

Country

FY Quarter

Zimbabwe

2019-Q4

B1. Stockout rate at service delivery points (GHSC-PSM-supported regions)

Task Order	Stockout rate	# SDP stock observations
TO1-HIV/AIDS	9.8%	9,523
1st line adult ARV	0.8%	1,111
2nd line adult ARV	5.6%	1,080
Pediatric ARV	4.3%	1,053
First RTK	1.0%	1,254
Second RTK	8.4%	1,244
Tie-breaker RTK	39.9%	1,154
Viral load reagent	0.0%	8
EID reagent	0.0%	3
Male condoms (HIV)	7.7%	1,313
Female condoms (HIV)	11.1%	1,303
TO2-Malaria	11.8%	6,686
AL 6x1	21.0%	1,220
AL 6x2	12.4%	1,219
AL 6x3	11.1%	1,223
AL 6x4	9.5%	1,227
mRDT	6.8%	1,235
SP	8.7%	562
Total	10.7%	16,209

B1. Composite stockout rates

Task Order	Stockout rate	# of SDPs that reported
TO2-Malaria		
AL inability to treat	1.1%	1,227

See "Indicator Details" for B01 at the end of this annex for more detail about composite stockouts.

B3. SDP reporting rate to LMIS (GHSC-PSM-supported regions)

Task Order	Reporting rate	Total # of SDPs required to report
TO1-HIV/AIDS	52%	1,806
TO2-Malaria	52%	1,705

B2. Stocked according to plan at storage sites

Supply Chain Level	Stocked according to plan	Overstocked	Understocked	Stocked out	Total Stock Observations
Central	25%	44%	31%	0%	16
TO1-HIV/AIDS	20%	40%	40%	0%	10
TO2-Malaria	33%	50%	17%	0%	6
Total	25%	44%	31%	0%	16

B1 and B2 denominator note: For countries that report male and female condoms under both B1 and B2, total stock observations will be equal to the sum of all observations (i.e. SDPs that reported) for all tracer products, minus one set of observations for condoms.

C2. Number of people trained

Task Order	Female	Male	Total
TO1-HIV/AIDS	51	74	125
TO2-Malaria	9	12	21
Total	60	86	146

B6. Quarterly supply plan updates

Product Group	# of supply plans required	# submitted
ARVs	1	1
Condoms	1	1
FP commodities	1	1
Lab (HIV diagnostics)	1	1
Malaria commodities	1	1
RTKs	1	1
VMMC	1	1

C10. HIV molecular instrument functionality

# GHSC-PSM-supported instruments	% of instruments that functional for the entire period

For complete results on innovations (C1), strategy, policy, and regulation activities (C11), and product losses (C7a and C7b), please see the specific pages for those indicators.