USAID GLOBAL HEALTH
SUPPLY CHAIN PROGRAM
Procurement and Supply Management

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MAIDEN ISSUE

WESTERN PULSE

USAID FROM THE AMERICAN PEOPLE

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

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

Contents

Welcome to the maiden edition of Western Pulse!

Imagine a world where anyone, no matter who they are and where they live, can access quality and affordable healthcare. With support from the US. Government, The USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project works with countries across West Africa to make quality health products consistently available where they are needed.

In this issue, we find that heroes can be ordinary citizens. In **Burkina Faso**, their superpowers are coordination and a burning desire to prevent commodity stock out.

In **Nigeria**, we see a determination to get health supplies to the most hard-to-reach and often marginalized communities.

In **Cameroon**, GHSC-PSM proffers a simple solution to ensure access to reliable warehouse data.

One of the fastest ways to end malaria is to prevent it. In **Ghana** and **Liberia**, this means finding ways to limit the hassle for households by bringing long lasting insecticide-treated nets closer to their doorstep.

In **Sierra Leone**, central and district level actors are working together to sustain efficient forecasting and supply planning for supply chain improvement.

Finally, ensuring a global supply of health commodities comes with a potential cost to the environment when countries do not have a strategy to safely dispose of out-of-use pharmaceutical products. Read to the end to find out how **Guinea** is averting this potential danger to the environment.

Cover Photo: Malaria medicines being transported with cattle to Karyo Dispensary in Birnin Kebbi, Kebbi State, Nigeria.

Photo by GHSC-PSM.

GHSC-PSM Website

Malaria medicines being transported with cattle to Karyo Dispensary in Birnin Kebbi, Kebbi State, Nigeria. Photo credit: GHSC-PSM

With support from the U.S. President's Malaria Initiative, malaria medicines reach even the most difficult to reach communities across Nigeria.

Gloria Samuel is the Officer-in-charge of Karyo Dispensary, the only health facility in a remote community in Birnin Kebbi local government area of Kebbi State, Nigeria. Gloria's work is very important in the fight to end malaria in Kebbi State, which has a malaria prevalence of 52 percent according to the **World Health Organization's World Malaria Report 2021**. She works round the clock to ensure her facility always has malaria commodities in stock.

FEATURED PHOTO

"I am happy I never have to turn back clients diagnosed with malaria. Thanks to PMI for always resupplying my facility with the needed malaria commodities. I am fulfilled as a health worker."

– Gloria Samuel Community Health Extension Worker/Officer-in-chargeKaryo Health Dispensary, Kebbi State

Feature Story

"We prepared for the trip as if our lives depended on not missing the bus.

The bus leaves the village at exactly 5:00AM and does not wait for anyone. If you miss it, you have to wait till the following month before you can get another appointment to visit the lab. That was a risk none of us was willing to take"

— Zainab Lafiagi community, Kwara State

Photo top: Zainab at Lafiagi General Hospital where she receives care and provides her blood sample for viral load testing. Photo bottom left to right: Zainab interacting with her caregiver; portion of the Lafiagi-Ilorin road gets flooded during the raining season in Nigeria, Specimen courier transporting viral load samples from remote communities to a USAID-supported lab for viral load testing. Photos by GHSC-PSM.

Making Viral Load Testing Accessible to Hard-to-Reach Communities

Zainab, a fifty-two-year-old grandmother and trader, has been living with HIV for more than 22 years. Although she has had stable access to antiretroviral medicines (ARVs) this whole time, she faces extreme difficulties accessing laboratories providing viral load testing services which she needs to monitor the treatment efficacy of the ARVs. Zainab lives in Lafiagi, a remote community in Kwara State, Nigeria, and the closest laboratory to her village is 78 miles away, a journey that takes about four hours, through bumpy and flooded roads. The only way for Zainab and others to make this trip was on a bus arranged by the Local Government Area Action Committee on AIDS.

Find out how GHSC-PSM, with support from PEPFAR bridged the gap between hard-to-reach communities and the few testing sites in the country to ensure hassle-free access to viral load testing for patients like Zainab.

Read the full story on our website

Sabou District store manager delivering commodities to a health facility in the district Photo by GHSC-PSM.

Heroes of the District: Working Together to Keep Essential Medicines in Stock at the Last Mile

BURKINA FASO

Since March 2021, GHSC-PSM and district health managers in the central west region of Burkina Faso have worked together to ensure health commodities are always available at the last mile. Of the seven health districts in this region, one stands out for dynamic leadership and coordinated effort demonstrated by the district health management team.

Sabou health district has 23 public health facilities and one district medical store which supplies health commodities to all 23 facilities on a well-defined monthly schedule. A chief medical officer oversees the daily operations of district health facilities while a district pharmacist leads operations at the district medical store. Together, the chief medical officer and district pharmacist at Sabou have made consistent availability of health commodities a main objective for the district.

To avoid gaps in the supply chain and ensure that issues at the health facilities are promptly addressed, the chief medical officer created an effective feedback system between the facilities, the medical store, and the district health office by dividing the district into three municipalities and appointing a head nurse to oversee operations in each municipality. Each week, these head nurses collect stock updates on family planning, maternal, newborn and child health, and malaria commodities,

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"When you receive a patient for consultation in a health facility and you prescribe a drug and the drug is not available, then the management of the patient is doomed to failure. This is why I have made the availability of health commodities at the health facilities a priority in the district."

— Dr Yaya SOURABIE, Chief Medical Officer, Sabou district

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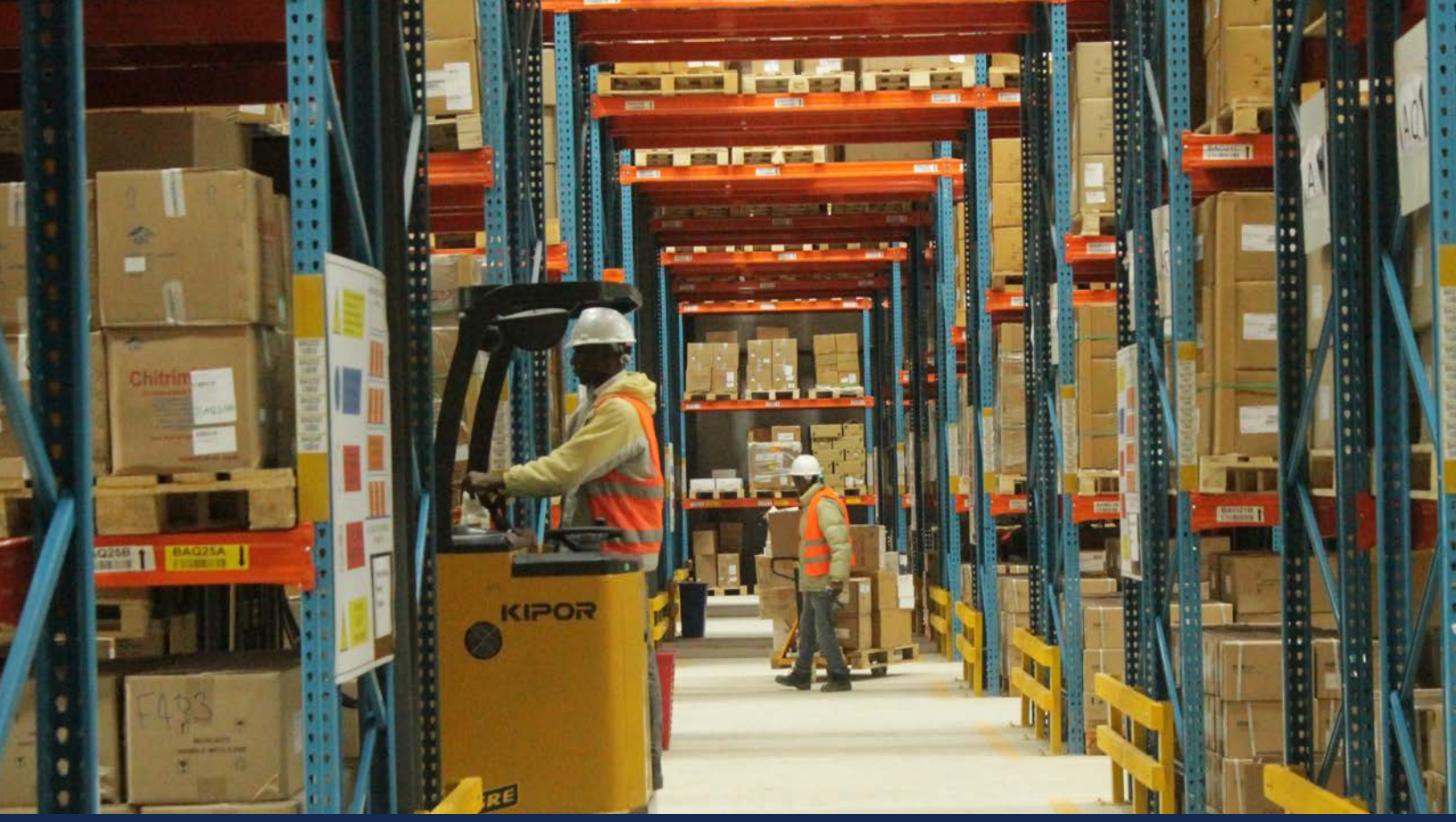
organize them by municipality, and submit a stock report to the district pharmacist, who analyzes the reports and provides feedback to the health facilities. The district pharmacist then presents the stock situation by health facility at the district health management meetings, led by the chief medical officer, where immediate recommendations and decisions are made.

The district health management team, made up of the chief medical officer, district pharmacist, data manager, the Officer in-charge of Reproductive Health (RH), Health Promotion Officer and, the Administrative and Finance Officer, do more than just oversee health commodity availability within Sabou district. They understand that seamless operations can only be achieved when the people involved have the required capacity and support to carry out their jobs effectively. With this in mind, the management team conducts supportive supervision in the health facilities each month, building the skills of the facility storekeepers on essential logistics concepts – such as average monthly consumption, stock evaluation, emergency order, adequate storage, etc. – whilst helping them understand the implications of commodity stockout on the patients.

Furthermore, the district pharmacist, recognizing the difficulties encountered by most of the storekeepers in using the standard storekeeping data collection tools, created and printed simplified formats of the same tools, adapted to the level of the storekeepers' understanding, and made them available to the health facilities. This simple effort has had a remarkable effect on keeping stock records at the facilities.

Thanks to these supply chain heroes of the district, weekly commodity stock reports for the first 30 weeks of 2022 showed that Sabou health district had the lowest stock-out rates for almost all commodities among the seven districts in the central west region.

GHSC-PSM Regional Logistics advisor providing supportive supervision at Sogpelce health facility, Sabou District. Photo by GHSC-PSM.



Creating a Simple Solution to Improve Warehouse Data Accessibility

CAMEROON

For many years, Cameroon's health system has collected inventory data from regional and central warehouses using multiple tools that often do not meet stakeholders' data needs. This made the country's data unreliable and limited the ability to make decisions based on it. For example, all too often, the inventory data used by implementers was different from the Ministry of Public Health's data.

To address this challenge, the Directorate of Pharmacy, Medicines and Laboratory (DPML), which is responsible for coordinating supply chain interventions, initiated the implementation of an eLMIS solution, which works by extracting, centralizing and disseminating stock status information from the different warehouse management systems to all stakeholders. Although this long-term solution began in 2019, it is not yet completed.

To close the gap, GHSC-PSM proposed a simple solution – a Spreadsheet-based inventory database hosted on Google Drive™ which allows data to be uploaded and updated in real-time. The project worked with the DPML and government officers in charge of the country's HIV/AIDS and malaria programs to validate the list of products and identify the variables that need to be collected during monthly inventories.

GHSC-PSM and these government stakeholders developed and launched this tool - tagged the Electronic Stock Status Report or **e-SSR** in January 2022. The e-SSR is updated monthly by the regional supply chain focal points for the 10 regional medical stores and a focal person in charge at the central medical store. The inventory databases have since been connected to a dynamic online dashboard using Google Data Studio™. This dashboard allows

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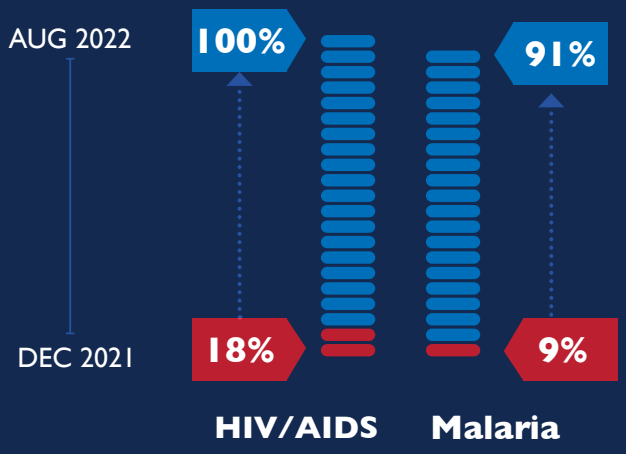
Warehouse Reporting Rates

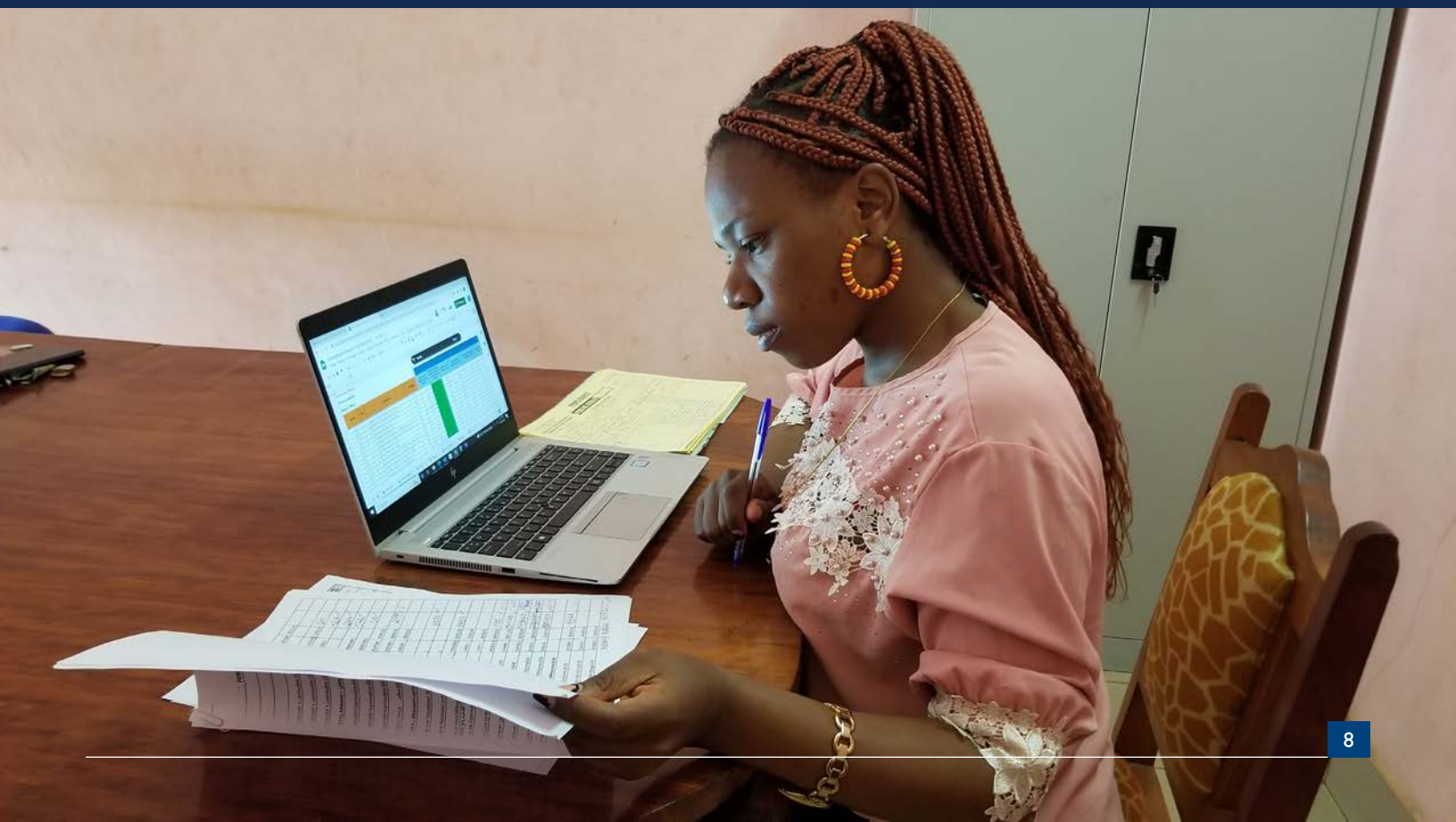


users to visualize inventory data in real-time — completeness, stock status, etc. — and provides useful analysis for decision-making. DPML administers the tool and several users, including HIV/AIDS and malaria implementers and USAID, have access.

Since the rollout of the Electronic Stock Status Report (e-SSR) tool in January 2022, warehouse reporting rates for HIV/AIDS commodities increased dramatically from 18 percent in December 2021 to 100 percent between January and August 2022. Reporting rate for malaria commodities increased from 9 percent in December 2021, to 91 percent in August 2022.

Now, the e-SSR tool harmonizes warehouse data, reducing disparities from multiple data sources. Data quality is assured as each region is responsible for the entry of their data and regular audits permit the verification of the reported data against source documents for accuracy. DPML is taking the lead in monitoring the availability and timeliness of warehouse reports as well as stock status analysis.

Dr. Ngahoune Vanessa, Pharmacist at the West Regional Delegation of Health inputting data into the e-SSR. Photo by Wouembe Blandine.



Ending malaria faster in Ghana, Liberia, and Nigeria

Photo by GHSC-PSM.

Getting LLINs Closer to the Doorsteps of Mothers and Children in Ghana

GHANA

Continuous distribution of long-lasting insecticide treated nets (LLINs) remains one of the strategies for achieving high and sustained usage, especially for vulnerable groups like pregnant women and children under 5 years. In Ghana, this is done routinely through antenatal (ANC) and child welfare clinics. These service delivery points however must travel several kilometers to pick-up LLINs from the district health directorates (DHDs) – which do not have adequate resources to store and distribute LLINs – resulting in loss of man hours for the clinics and extra cost in transporting the nets. Where they are unable to pick up due to busy clinic days and unavailability of transport, this results in stockout.

The USAID Global Health Supply Chain-Procurement and Supply Management (GHSC-PSM) project with funding from the President's Malaria Initiative (PMI) supports the National Malaria Control Program (NMCP) in Ghana with strategies that ensure continuous availability of malaria prevention and treatment commodities throughout the country. One of such strategies is the Malaria commodity Stockout Reduction Strategy (MSRS) developed to ensure timely and efficient supply of health commodities to the doorstep of health facilities in an effort to improve availability and access at the last mile. One of the interventions under the MSRS is the integration of LLIN distribution into the last mile distribution (LMD) program to reduce the persistent stockout of this commodity at service delivery points.

Prior to this approach, the NMCP used a parallel distribution mechanism to transport nets from the

Mother and child receive LLIN at Teberebie Health Centre, Ghana. Photo by GHSC-PSM.

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central level to districts, following which health facilities were expected to request and pick up their orders. NMCP in collaboration with GHSC-PSM began the pilot program in July 2020 to integrate LLIN distribution into LMD in three regions - Eastern, Volta and Western Regions.

Prior to commencement of the LLIN-LMD integration program, NMCP and GHSC-PSM identified storage as a key constraint that could affect the smooth implementation of the program. This was due to concerns that the quantity and bulkiness of the nets may likely put pressure on the limited warehousing space in the pilot regions. Therefore the project, with funding from USAID and in collaboration with the NMCP procured and installed three prefabricated LLIN storage containers (2x40 ft) to ensure adequate storage space for the LLINs in the pilot regions and facilitate the integration of LLINs into the last mile distribution program.

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"The provision of the LLIN containers for the storage of LLINs has really helped the Western Regional Medical Stores. We used to have storage challenges which was compounded by COVID-19. Getting storage spaces for medicines and COVID-19 items became a huge challenge so, without the storage containers, the integration of the LLINs into LMD would have been very difficult. The provision of the containers has really helped to ease the congestion so RMS has enough space to store LLINs which has helped to maintain supply to health facilities."

—Issah Seidu, Pharmacist at the Western Regional Medical Stores

USAID-funded LLIN storage container at Western Regional Medical Stores, Ghana. Photo by GHSC-PSM.

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Mother and her child receiving LLIN at a health facility in Ghana. Photo by GHSC-PSM.

Results from an LLIN-LMD integration assessment jointly organized by NMCP and GHSC-PSM show that between September 2019 and August 2022, availability of LLINs in health facilities in the Western Region increased from 92 percent to 94 percent. As of June 2022, the Regional Medical Stores had distributed over 136,000 pieces of LLINs to health facilities in Western and Western North Regions and this is expected to protect close to 274,000 people against malaria.

Through this program, LLINs have been brought to the doorstep of health facilities to ensure availability for pregnant women and children at the antenatal and child welfare clinics. Bringing nets to these clinics through the last mile distribution program also eliminates the long travel hours previously faced by service providers, thereby enabling them to focus on their core duty of providing services to clients.

"Net distribution is very important, considering the endemic nature of malaria in Ghana. The distribution of nets has really helped parents and I am a direct beneficiary of the program. Previously my children used to have a lot of malaria episodes but thankfully, because of the bed nets, I have not treated any of my children for malaria in the past one year and I believe the bed nets have contributed to that".

—Issah Seidu

Getting Nets to More Households in Liberia through a School-based Distribution Campaign

LIBERIA

In December 2021, GHSC-PSM, with support from the USAID Mission in Liberia, collaborated with a consortium of partners, including the Liberia National Malaria Control Program (NMCP), READ Liberia, Breakthrough Action Liberia, and the Central Medical Stores, to launch a school based LLINs distribution campaign. Working through the Ministry of Education, the campaign targeted schools in Nimba, Bong, and Montserrado counties. 403 schools were targeted across all three counties with a student population of over 157,000. This school-based distribution campaign is part of the country's national routine distribution of LLINs to increase access to nets in households using the school channel.

The campaign began with a pilot in Montserrado County where the activity was launched at the Matadi Elementary School in Matadi, Monrovia. USAID Mission Director, Jim Wright, led the distribution of 216 pieces of LLINs to students of the institution. By the end of the pilot phase in February 2022, over 53,000 pieces of LLINs had been distributed to students in 129 public schools in Montserrado County. With funding from PMI, and the USAID Mission in Liberia, GHSC-PSM worked with the NMCP to develop a national strategy for school- based distribution of LLINs. This strategy will guide further expansion of school-based campaign to additional counties and across the country in the coming year.

USAID Mission Director, Jim Wright, presents LLINs to students. Photo by GHSC-PSM.

Jamila Abdullahi, a 43-year-old petty trader who lives in Kofar Tirwun village, Bauchi State, benefits from the quality and cost-effective malaria medicines supplied by PMI. Photo by GHSC-PSM.

Making Quality Malaria Medicines Available and Affordable for Families

NIGERIA

Jamila Abdullahi still remembers the bitter taste of the herbal mixture her mother gave to her and her siblings whenever they had malaria. Jamila's mother had no other choice but to give her young children this extract from a blend of boiled leaves from a neem tree and other herbs because the primary health center in their community did not always have malaria commodities in stock. In addition, she was unsure of the quality of drugs sold at the nearby patent medicine store and could not afford to buy the popular brands in big pharmacies at the city. Jamila, who now has five children of her own, is saddled with the same responsibilities as her mother – providing good malaria treatment for herself and her family.

Fortunately for Jamila, who lives in Kofar Tirwun Village in Bauchi State, PMI, through GHSC-PSM and the Bauchi State government, procure and deliver malaria medicines, including artemisinin-based combination therapy and rapid diagnostic test kits to health facilities. In 2021, PMI funding strengthened Bauchi State government's Drug Revolving Fund (DRF) scheme by updating the standard operating procedure to adopt a sustainable cost-recovery strategy and increase the number of primary health centers under the scheme.

In addition, PMI donated a seed stock of nearly 715,000 doses of malaria medicines, worth over $300,000, which were distributed to 26 secondary health facilities and 323 primary health centers.

Thanks to PMI, over 7 million people in Bauchi State can access affordable quality malaria treatment at public healthcare centers. Jamila is now walking in her mother's shoes but under better circumstances. She has access to affordable quality malaria care from the primary healthcare facility in her area, one of the many PMI-supported facilities included in the DRF scheme. Because of the support from PMI, malaria medicines are never out of stock at the health facility.

"Every time my children fall sick, I quickly take them to the nearby health facility for malaria test and treatment. My primary health center has affordable malaria medicines."

—Jamila Abdullahi

PMI, through GHSC-PSM, delivers cost-effective, life-saving malaria interventions, including insecticide-treated bed nets, rapid test kits, and essential medicines to over 5,000 health facilities in Nigeria. The project also provides catalytic technical and operational assistance to equip and empower the government of Nigeria to end malaria in the country.

Decentralized Commodity Forecasting and Supply Planning Promotes Inclusion and Sustainability

SIERRA LEONE

As Sierra Leone fights to reduce malaria morbidity and mortality, it faces persistent challenges in assuring a timely and uninterrupted supply of malaria commodities. Among the key challenges associated with supply chain success is the irregular and low reporting rate of supply chain data which negatively impacts future needs and delivery times of medicines to each facility in the country's 16 districts. Another challenge is a weak inventory management which often leads to stockouts and sometimes expiration of products. In addition to these, commodity forecasting, and supply planning was done on an ad-hoc basis and to a large extent by expensive international consultants at the central level without district level participation.

Realizing that the success of the supply chain rests on people making the right decisions at every step as the commodities move along the chain, the Ministry of Health and Sanitation (MoHS) sought to address these challenges by collaborating with GHSC-PSM to revitalize the National Quantification Committee (NQC) and Disease Program Quantification Technical Working Groups (TWGs) while also creating visibility for the data collected from health facilities by integrating LMIS into the country's DHIS-2 web-based platform.

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GHSC-PSM trained key personnel at the central and districts levels on the DHIS-2 platform, provided technical assistance to the malaria quantification TWG (MQ TWG) at the central level to use data from DHIS-2 for forecasting and supply planning and supported the development of a a quantification standard operating procedure manual and users guide for malaria commodities. Following these events, the TWG led their first ever malaria forecast in 2020 with limited technical support from the project. These series of activities at the central level further necessitated the need for replication at the district levels. Thus, the District Forecasting and Distribution Technical Working Groups (DFD-TWGs) were formed in the 16 districts across Sierra Leone in 2020 with support from GHSC-PSM.

DFD-TWG members extracting and reviewing data from DHIS-2. Photo by Mohamed B. Kanu.

The DFD-TWGs were designed as a platform for coordination, collaboration, and informed decision-making among various district-level stakeholders, including the central MoHS, hospitals, disease programs, and implementing partners. To address the challenges with data quality, completeness and timeliness and ensure that accurate projections can be made for the quantities and delivery times of medicines, the malaria quantification TWG cascaded structures already established at the central level to the district level and built capacities of the DFD-TWGs on the effective use of reporting tools –both paper and electronic based – data extraction, review, analysis, presentation, and feedback techniques, as well as forecasting methods (morbidity and consumption).

Woman checking deliveries of ACTs for distribution. Photo by GHSC-PSM.

The formation and capacity building of the District Forecasting and Distribution Technical Working Groups has boosted the use of data for forecasting and supply planning at the district levels. The feedback and mentorship provided to health facilities has also made facility staff more accountable and willing to contribute to strengthening the supply chain system.

In 2021 and 2022 with technical support from GHSC-PSM and the malaria quantification TWG, the 16 DFD-TWGs effectively conducted their district-level forecast using facility level data for both morbidity and consumption methods. The malaria quantification TWG reviews and consolidates the different district forecast results to generate a national forecast which is then submitted to the donors (Global Fund and PMI) and used for developing the gap analysis in the country's Malaria Operational Plan (MOP)

Decentralizing commodity forecasting and distribution to the district level has aided in building capacity at both central and district levels, thus ensuring the county has localized technical resources which saves cost and ensures sustainability and independence.

Sorting and weighing out-of-use products in Conakry. Photo by Abu Quisia, GHSC-PSM.

Protecting the Environment and Health of Patients through Effective Disposal of Pharmaceutical Products

GUINEA

The management of out-of-use pharmaceutical products in Guinea remains one of the major challenges for which the Ministry of Health (MOH) is seeking a sustainable solution. This was evident after the Ebola epidemic when the national health system experienced a massive import of pharmaceutical products which led to an overstock of out-of-use products in health facilities across the country. The absence of a national strategy for the waste management of pharmaceutical products made the MOH request the support of partners in 2018 to manage expired and out-of-use pharmaceutical products in Guinea. With funding from USAID GHSC-PSM supported the Guinea ministry of health to implement a strategic plan that collected and centralized out-of-use pharmaceutical products throughout the country. This operation resulted in the re-export and destruction of more than 150 tons of solid and liquid waste in Le Havre, France.

Furthermore, GHSC-PSM supported the development of two strategic documents – a National Plan for the Management of out-of-use Pharmaceutical Products and a National Guide for the Management of out-of-use Pharmaceutical Products – to ensure a sustainable and effective national waste management system across the country.

In 2022, as part of the national plan, GHSC-PSM supported the deployment of trained pharmacists and representatives of the National Directorate of Pharmacy and Medicines, regional and district health authorities and the Ministry of Environment, to health facilities across the countries to collect data on the quantity of products, the volume of storage space, and the availability of materials necessary for good storage practices. This was followed by the acquisition and installation of 10 containers in all health regions of the country to provide storage space for out-of-use health products stored in health facilities. Through the collaborative effort of the Ministries of Health and Environment and GHSC-PSM, a national collection exercise was conducted in six out of the eight health regions – Conakry, Nzerekore, Faranah, Boke, Mamou and Labe – with subsequent storage of over 76 tons of out-of-use products from 401 health facilities.

Other than the benefits to the environment, instituting an effective waste management system for out-of-use pharmaceutical products prevents the illegal reuse of such products, thus protecting the health and wellbeing of healthcare workers and patients.

RESOURCES

African Society of Laboratory Medicine (ASLM)

ASLM is an independent, international, not-for-profit organization that coordinates, galvanizes and mobilizes stakeholders at the local, national, and international levels to improve local access to world-class diagnostic services and ensure healthy African communities now and for the long-term.

https://aslm.org/

WHO World Malaria Report 2021

Each year, WHO's World malaria report offers in-depth information on the latest trends in malaria control and elimination at global, regional and country levels. The report highlights progress towards global targets and describes opportunities and challenges for curbing and eliminating the disease.

https://who.int/publications/

Africa Resource Center (ARC)

ARC works with ministries of health to address the critical areas for building more efficient and effective health supply chain systems.

https://www.africaresourcecentre.org/

COVID-19 Resources

GHSC-PSM project is closely monitoring COVID-19 spread and working to mitigate its impact on the global health supply chain.

https://www.ghsupplychain.org/COVID-19-Resources

Confronting Substandard and Falsified Covid-19 Vaccines: Strategies and tools for global settings

High global demand and insufficient supply have resulted in an inequitable global distribution of COVID-19 vaccines, creating an economic incentive for falsified vaccines and opportunities for substandard vaccines, resulting from an unintentional error in production, distribution, storage, and handling. To help address this issue, the U.S. Pharmacopeia (USP) has released this new resource.

https://www.usp.org/covid-19/vaccines

ABOUT US

USAID GLOBAL HEALTH SUPPLY CHAIN PROGRAM

Procurement and Supply Management

The USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM) project enhances the health care experience in the communities we serve through transformative supply chain solutions. GHSC-PSM purchases and delivers health commodities, strengthens national supply chain systems, and provides global supply chain leadership to ensure lifesaving health supplies reach those in need, when they need them. By working closely with country partners and suppliers worldwide, the project aims to promote wellbeing and help countries develop sustainable supply chain systems. GHSC-PSM has programs in nine countries of Southern Africa: Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, Zambia and Zimbabwe. For more information go to **https://www.ghsupplychain.org/PSM**.