



Task Order 7 Semi-Annual Report

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PRESIDENT'S MALARIA INITIATIVE



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The authors' views expressed in this publication do not necessarily reflect the views of the U.S. Agency for International Development or the United States Government.

USAID | DELIVER PROJECT, Task Order 7

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Task Order 7 supports USAID's goal of reducing the malaria burden in sub-Saharan Africa by procuring and delivering safe, effective, and high-quality malaria commodities; by providing technical assistance and on-the-ground logistics expertise to strengthen in-country supply systems and build capacity for managing commodities; and by improving the global supply and long-term availability of malaria commodities.

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Abstract

This report describes the activities and achievements of the USAID | DELIVER PROJECT, Task Order 7, from October 1, 2014, to March 31, 2015. The project works to improve the lives of men, women, and families by strengthening the supply chains that deliver health commodities, developing sustainable national capacity and ownership for operating the supply chain, and cultivating enabling environments for malaria products.

Cover photos:

A pharmacist in Chokwe, Mozambique, dispenses Coartem®, and explains to a mother how to administer the prescription to her child with malaria. Photographer: Arturo Sanabria for USAID DELIVER / PROJECT.

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Acronyms

ACT	artemisinin-based combination therapy
AIDS	acquired immune deficiency syndrome
AL	artemether/lumefantrine
AMP	Alliance for Malaria Prevention
ANC	antenatal care
AS/AQ	artesunate/amodiaquine
BCC	behavior change communication
CAMEG	Centrale d'Achat des Médicaments Essentiels Génériques et des Consommables Médicaux
CHAI	Clinton Health Access Initiative
CMS	Central Medical Stores
COA	certificate of analysis
CPIR	commodity procurement information request
DFID	Department for International Development
DRC	Democratic Republic of Congo
EIWG	Emerging Issues Working Group
eLMIS	electronic logistics management information system
EMFTWG	Emergency Medicines Fund Technical Working Group
EMLIP	Essential Medicines Logistics Improvement Program
EMMP	Environmental Mitigation and Monitoring Plan
ERP	enterprise resource planning
EUV	End Use Verification
FDC	fixed-dose combination
FIND	Foundation for Innovative Diagnostics
FY	fiscal year
GFATM	Global Fund to Fight HIV and AIDS, Tuberculosis and Malaria
GHS	Ghana Health Service
HIV	human immunodeficiency virus
IEE	initial environmental examination
IA	interim approach
ILS	Integrated Logistics System
JSI	John Snow, Inc.
LLIN	long-lasting insecticide-treated bed net
LMIS	logistics management information system
LMK	laboratory malaria kit
LMU	logistics management unit

MCDMCH	Ministry of Community Development, Mother and Child Health
MIS	management information system
MMK	malaria microscopy kit
MMSCT	Medicines and Medical Supplies Coordination Team
MOH	Ministry of Health
MOHCC	Ministry of Health and Child Care
MOHSW	Ministry of Health and Social Welfare
MOP	Malaria Operational Plan
MOPDD	Malaria and Other Parasitic Disease Department
MSD	Medical Stores Department
MSL	Medical Stores Limited
NDS	National Drug Stores
NGO	Non-governmental organization
NMCC	National Malaria Control Centre
NMCP	National Malaria Control Program
NMEP	National Malaria Elimination Program
OAA	Office of Acquisition and Assistance
PHCP	Primary Health Care Package
PMI	President's Malaria Initiative
PMP	Performance Monitoring Plan
POD	proof of delivery
PPMRm	Procurement Planning and Monitoring Report for malaria
PSC	parallel supply chain
PSI	Population Services International
PSM WG	Procurement and Supply Chain Management Working Group
QA	quality assurance
R&R	rest and relaxation
RBM	Roll Back Malaria
RDMA	Regional Development Mission Asia
RDT	rapid diagnostic test
SCM	supply chain management
SCMS	Supply Chain Management System
SCMU	Supply Chain Management Unit
SCTWG	Supply Chain Technical Working Group
SDP	service delivery point
SIAPS	Systems for Improved Access to Pharmaceuticals and Services
SMK	severe malaria kit
SP	sulfadoxine-pyrimethamine

STTA	short-term technical assistance
TA	technical assistance
TB	tuberculosis
TO	task order
TO Malaria	Task Order Malaria
TO7	Task Order 7
TWG	technical working group
UNICEF	United Nations Children’s Fund
UPS SCS	UPS Supply Chain Solutions
USAID	U.S. Agency for International Development
USG	U.S. Government
WHO	World Health Organization
WHOPES	World Health Organization Pesticide Evaluation Scheme
ZIP	Zimbabwe Informed Push

Executive Summary



Photo Credit: Tenly Snow for USAID | DELIVER PROJECT, 2014.

Pharmacists work to fill prescriptions at the county health department in Margibi County, Liberia.

Products are needed for malaria programs to meet the goal of reducing malaria-related morbidity and mortality. These include products for the prevention, diagnosis, and treatment of malaria. Strong health programs cannot function without well-designed, well-operated, and well-maintained supply chain systems to manage and move those products. The USAID | DELIVER PROJECT works to strengthen the supply chains that deliver health commodities, improve supply chain visibility and accountability, and build local capacity to sustain system performance.

This semi-annual report covers the period from October 1, 2014, to March 31, 2015; it describes the activities of Task Order 7 (TO7), called Task Order Malaria (TO Malaria), under the USAID | DELIVER PROJECT indefinite quantity contract with John Snow, Inc. TO Malaria is part of the U.S. Government (USG) effort to fight malaria in sub-Saharan Africa through the President's Malaria Initiative (PMI). The initiative works in 19 sub-Saharan African focus countries and the Mekong region. PMI is a joint initiative led by the U.S. Agency for International Development (USAID) and the Centers for Disease Control and Prevention. TO Malaria has a long-

term presence in 13 of the PMI focus countries (Democratic Republic of Congo [DRC], Ghana, Guinea, Liberia, Madagascar, Malawi, Mali, Mozambique, Nigeria, Rwanda, Tanzania, Zambia, and Zimbabwe); the Regional Development Mission Asia (RDMA); and the three USAID malaria non-focus countries (Burkina Faso, Burundi, and South Sudan).

TO Malaria has three main objectives, under which all its activities are organized: (1) to improve, implement, and expand USAID's provision of antimalarial commodities to country programs; (2) to strengthen in-country supply systems and their capacity for managing antimalarial commodities; and (3) to improve global supply and the availability of antimalarial commodities. The level of effort varies across the objectives: 50 to 60 percent for Objective 1, 30 to 40 percent for Objective 2, and 5 to 7 percent for Objective 3. To achieve these objectives, TO Malaria works in partnership with PATH; Crown Agents Consultancy, Inc.; Imperial Health Science (IHS, formerly called RTT); UPS Supply Chain Solutions (UPS SCS); Logenix International, LLC; MEBS Global Reach, LLC; FHI 360; the Manoff Group, Inc.; 3i Infotech; Foundation for Innovative New Diagnostics (FIND); Social Sectors Development Strategies, Inc. (SSDS); VillageReach; and Population Services International (PSI).

Objective I: Improve, Implement, and Expand USAID's Provision of Malaria and Related Commodities to Programs Worldwide

Timely, Transparent, Cost-Effective Procurement of Quality Malaria Products

A principal activity of Task Order 7 (TO7) is to support the President's Malaria Initiative (PMI) by procuring malaria commodities in response to requests placed by the U.S. Agency for International Development (USAID) Missions; the requests are based on the needs outlined in the yearly Malaria Operational Plans (MOPs). During the first half of FY15, we processed requests for procurement assistance from 24 countries: Angola, Benin, Burkina Faso, Burundi, Cambodia, the Democratic Republic of the Congo (DRC), Ghana, Guinea, Kenya, Laos, Liberia, Madagascar, Malawi, Mali, Mozambique,

Myanmar, Nigeria, Rwanda, Senegal, Tanzania, Thailand, Uganda, Zambia, and Zimbabwe. A total of 274 orders were placed with vendors for a total value of U.S. \$174 million (commodity cost only).



A box of malaria rapid diagnostic tests.

Photo Credit: Arturo Sanabria for USAID | DELIVER PROJECT, 2014.

From October 1, 2014 – March 31, 2015 The USAID | DELIVER PROJECT procured

- 55 million sulphadoxine pyrimethamine (SP) tablets for IPTp (intermittent preventative treatment in pregnancy)
- 33.7 million long lasting insecticide treated bed nets (LLINs)
- 49.4 million artemisinin based combination therapy (ACT) treatments
- 15.4 million treatments of Coartem®, 2.3 million treatments of generic artemether lumefantrine (ALu), 26.4 million treatments of artesunate/amodiaquine (AS/AQ) and 5.3 million treatments of generic artesunate/amodiaquine (AS/AQ Generic)
- 37 million rapid diagnostic tests (RDTs)
- 317 thousand rectal artesunate suppositories for malaria
- 50 microscopes for malaria

For a complete list of commodities procured, see Appendix A.



Photo Credit: Arturo Sanabria for USAID | DELIVER PROJECT, 2012.

A staff member counts Coartem® 6x4 artemisinin-based combination therapies for malaria, at the provincial warehouse in Nampula Province, Mozambique.

Efficient and Secure Delivery of Procured Commodities

From October 2014 to March 2015, the Task Order successfully forwarded commodities to support malaria programs in 23 countries. Countries shipped to include: Angola, Benin, Burkina Faso, Burundi, Cambodia, DRC, Ghana, Guinea, Kenya, Laos, Liberia, Madagascar, Malawi, Mali, Mozambique, Nigeria, Rwanda, Senegal, South Sudan, Tanzania, Uganda, Zambia, and Zimbabwe.

The freight team coordinated the in-country distribution of artemisinin-based combination therapy (ACTs) and long lasting insecticide treated nets (LLINs) to

several states in Nigeria, ACTs in DRC, ACTs, laboratory malaria kits (LMKs) and rapid diagnostic tests (RDTs) in Angola and ACTs, RDTs and severe malaria kits (SMKs) in South Sudan. The freight team also coordinated warehousing in Angola, Ghana and South Sudan.

Provision of High-Quality, Safe, and Effective Malaria Products

The project, through the quality assurance (QA) team, consistently works to ensure that high-quality, safe, and effective malaria products are provided. During the reporting period, the QA team managed pre-shipment inspection and testing for 40 LLIN orders and 25 orders of RDTs. TO7 contracted with FIND to support lot testing of RDTs through World Health Organization (WHO) laboratories. The QA team reviewed the manufacturer's certificates of analysis (COA) for all batches of Coartem® that were procured by the project (285 batches over 42 orders). They subjected batches to analysis using near-infrared technology to further ensure the delivery of good-quality products. FHI 360 reviewed COA for every batch of artesunate/amodiaquine (AS/AQ) procured from Sanofi-Aventis, performed chemical assay testing, and also subjected these batches to near-infrared technology analysis before releasing the orders for shipment. Eighty three batches were tested for 20 orders. FHI 360 managed sampling, inspection, and testing of a total of 274 batches for 46 orders of generic artemether/lumefantrine, severe malaria drugs and various essential medicines.

Management Information Systems

The management information systems (MIS) team supported the ongoing operations of TO7 in FY15 through continual MIS availability and providing up-to-date and accurate procurement and shipment information. Day-to-day operations were supported by recording and providing commodity needs for management review by country and recipient program, shipment requests by country and recipient program, financial accounts by country and funding source, and the status of shipments.

Objective 2: Strengthen In-Country Supply Systems and Capacity for Effective Management of Malaria Commodities

Strengthening in-country supply systems and building greater capacity for improved management of malaria commodities at the local level are critical to the success of TO Malaria and to reach PMI's goal of working with PMI-supported countries and partners to further reduce malaria deaths and substantially decrease malaria morbidity toward the long-term goal of elimination goal.

Improve System Performance Ensuring That Malaria Products Are Available When and Where They Are Needed

TO Malaria strengthens routine logistics systems in several countries (Burkina Faso, Mozambique, Nigeria, Tanzania, Zambia, Zimbabwe); supports augmented systems in Angola, Liberia, Malawi, and South Sudan; and supports a system targeting non-governmental (NGO) and faith-based organizations in Madagascar. The TO also supports LLIN distribution in both large-scale, national-level campaigns and via routine distribution in Angola, Burundi, DRC, Ghana, Liberia, Mali, Mozambique, Nigeria, Rwanda, S. Sudan, Tanzania and Zambia.

In **Burkina Faso**, the National Malaria Program (NMCP) began implementing Seasonal Malaria Chemoprophylaxis (SMC) in seven districts during the September to October 2014 rainy season. The project provided technical assistance for this activity, which sees the intermittent administration of full treatment courses of an antimalarial medicine to children during the malaria season in areas of highly seasonal transmission.

In July 2014, the project in **Burma** received its first request from the National Malaria Control Program for commodity support. This request came via a commodity procurement information request (CPIR) for procurement of 553,500 LLINs and support for distribution of the nets to 47 targeted townships. These nets will be distributed in Stratum 1B townships that are outside of the priority area covered by the Global Fund.

In **Ghana**, a total of 700,700 LLINs were allocated and transported to Northern, Upper East, Upper West, Ashanti, Brong Ahafo and Western regions for the distribution through health facilities

To date, five rounds of commodities distribution in **Liberia** have taken place through the Interim Approach (IA) system. The first three rounds under the IA showed significant improvements in key indicators: stock-out rates for tracer products decreased in all five USAID counties—Bong, Lofa, Margibi, Montserrado, and Nimba—while the quantity of products requested align with the quantities approved, issued, and received.

Madagascar recently faced a shortage of all artesunate/amodiaquine (AS/AQ) formulations, and the project facilitated a quantification exercise in September, findings of which prompted an emergency order from PMI.

The facility reporting rate for malaria products in **Malawi** averaged 89.5% during the reporting period reaching a maximum of 95% in October and November 2014. This performance has been a result of proactive data collection efforts and supportive supervision by the Ministry of Health with support from the project and other partners. As a result of this improved reporting, more data have been available for use in making better informed commodity distribution decisions.

The project supported the National Malaria Elimination Program (NMEP) in **Nigeria** in the coordination of the 2015 national malaria commodities quantification exercise across the six geopolitical zones.

In **Rwanda**, the project initiated and supported the distribution of 1.4 million PMI donated long-lasting insecticide-treated bed nets (LLINs) to the Government of Rwanda. The distribution was completed in 11 working days, successfully distributing 1.35 million LLINs to 13 high malaria endemic districts and 157 health centers.

The project continues to work with the World Food Program, National and State Ministry of Health, Implementing Partners (IP) and Lead NGOs working on the ground in **South Sudan** to distribute the EMF anti-malaria medicines and test kits to the County Health Department (CHD) medical stores in the three conflict affected states.

The USAID | DELIVER PROJECT supported quarterly deliveries of malaria medicines and Rapid Diagnostic Tests (RDTs) to all provinces in **Zimbabwe**. The project continues to provide distribution and logistics management information system (LMIS) support to the ZIP system.

Improve Visibility at All Levels of the Supply Chain from Central Down to the Facility and Community Health Worker Levels

End use verification activity

The PMI End Use Verification (EUV) activity is a health facility survey that regularly captures information about the malaria supply chain and malaria diagnosis and treatment at public health facilities.

The data generated by this activity provide visibility of important logistics and case management information that is otherwise unavailable to decisionmakers. The EUV is routinely implemented by the project in Burkina Faso, Ghana, Liberia, Malawi, Mozambique, Nigeria, Tanzania, Zambia, and Zimbabwe, and reports are internally available on a rolling basis.



A staff member of the Liberian Ministry of Health discusses routine LLIN distribution through antenatal care services in Margibi County, Liberia.

Photo Credit: Tenly Snow for USAID | DELIVER PROJECT, 2015.

Procurement Planning and Monitoring Report for malaria (PPMRm)

The PPMRm provides quarterly visibility of stock levels of ACTs, SP, and RDTs in 22 countries and 11 Nigerian states. The report details stock levels in the country (central-level and, if available, further levels of the supply chain), regardless of the source of supply, e.g., Global Fund to Fight human immunodeficiency virus (HIV) and acquired immune deficiency syndrome (AIDS), Tuberculosis and Malaria (GFATM) or PMI. The report also covers key commodity security updates in-country, including reporting on finance and capital, forecasting, procurement, logistics committees, etc., providing a detailed quarterly snapshot of activities and accomplishments in each country during the quarter vis-à-vis key malaria commodities.

Country Highlights

The project has continued its support to the Centre for Malaria, Parasitology and Entomology (CMPE) in **Laos** over the last six months, including technical assistance and commodity support. At the end of 2014, the international consultant formerly supporting project work in Laos transitioned to a new position in the region.

The Parallel Supply Chain (PSC) in **Malawi** has continued to conduct 100% on-time delivery since 2012. The project retained 100% of the signed proofs of delivery (PODs) with specific batch numbers for the commodities distributed to enhance commodity tracking. Health Technical Services and Support (HTSS), with support from the project, also continued to produce and share with stakeholders various reports such as the National Monthly LMIS Inventory Performance reports.

The project supported the NMEP in **Nigeria** in conducting its monthly malaria commodities stock verification exercise at the Federal Medical Store in Oshodi. Six months of project support to this activity has now strengthened the NMEP's ability to maintain inventory visibility and stock data accuracy to the point where this can now be done independently from the project.

In **Rwanda**, the reporting rate for malaria commodities was 89.21% at health facilities level and 100% at district pharmacies level during the month of February, 2015.

In line with USAID and PMI's focus on improving data use for health information systems strengthening, the project completed the rollout of the eLMIS to improve logistics data visibility at all levels of **Tanzania's** health system.

Strengthen the Accountability of In-Country Supply Chains That Manage Malaria Products

Country Highlights

In collaboration with the Supply Chain Management Unit (SCMU) and the County Health Teams (CHTs), the project in **Liberia** has inaugurated county-level Supply Chain Technical Working Groups (SCTWG) in Bong, Lofa, Margibi, Montserrado, and Nimba counties. The SCTWGs support and strengthen CHT supply chain activities. Their activities include meeting regularly to identify key issues in supply chain performance and visibility, and in March 2015, the SCTWG held its first meeting.

The project continued to conduct spot checks in **Malawi** during and after the distributions to ensure that commodities are being distributed according to schedule to the intended facilities. There was 100% compliance by Cargo Management Logistics and Imperial Health Sciences (IHS), the project's distribution and warehousing subcontractors, respectively.

In **Nigeria**, the project supported and participated in the National Supply Chain Assessment of all health commodities in 252 HFs, state Central Medical Stores and Regional warehouses across 12 states.

In collaboration with the Malaria and Other Parasitic Disease Department (MOPDD) in **Rwanda**, the project conducted the annual physical inventory of malaria commodities from December 1-12, 2014. Two teams of data collectors—32 (14 women and 18 men) and 21 (17 women and 4 men)—conducted the physical inventory, capturing stock-on-hand data of malaria commodities for the 580 facilities they visited, including district pharmacies, district hospitals, and health centers.

The project in **South Sudan**, in collaboration with MOH, USAID and other partners organized an Emergency Medicines Fund Technical Working Group (EMFTWG). The EMFTWG is a critical forum for bringing partners and stakeholders together to share information regarding EMF and ensure visibility into the supply chain process.

The project participated in the quarterly procurement and supplies management (PSM) sub-committee meetings in **Zimbabwe**. The PSM sub-committee coordinates procurement and supply management activities of various partners supporting the Ministry of Health and Child care malaria, tuberculosis (TB), HIV and other programs. It integrates the coordination functions of the former Medicines and Medical Supplies Coordination Team (MMSCT) and the Procurement and Logistics Sub-Committee of the HIV partnership.

Bridge the Gap between NMCPs and Supply Chain Operators to Improve Core Supply Chain Functions

Country Highlights

In close coordination with partners in **Cambodia**, the USAID | DELIVER PROJECT has worked to scale up dissemination and sharing of commodity information among malaria partners. With a growing familiarity of the information available in the PPMRM, partners are leveraging this data to coordinate in country, cover unexpected gaps, and ensure that commodities are available when needed across the public and private sectors.

The USAID | DELIVER PROJECT in **Ghana** collaborated with the national quantification team and other in-country stakeholders including the NMCP to complete the 2015 annual quantification for malaria commodities. The exercise resulted in a three-year (2015-2017) forecast of malaria commodity requirements and two-year (2015-2016) supply plan for the delivery of commodities.

In **Madagascar** in December, the project assisted the Ministry of Public Health to design a Logistics Management Unit (LMU). The Ministry of Public Health recognizes that it is essential to have an LMU which will organize, monitor, and support all supply chain activities within the country.

In **Malawi**, the project supported the annual, national quantification exercise in March 2015. The project noted high participant commitment and engagement throughout the week of the quantification workshop which contributed to the quality of the final deliverables.

In early March 2015, the project's Field Support Team in **Mozambique** conducted a five-day quarterly meeting in Maputo with one provincial, 2 regional logistics advisors (RLAs), and two antenatal care (ANC) LLIN advisors. Participants agreed on the need to build the supply chain management skills of provincial warehouse staff and provincial HIV/TB/Malaria coordinators to reduce their dependence on the RLAs to resolve supply chain issues.

The capacity in **Nigeria** of 116 local government Roll Back Malaria officers and logisticians on local government areas (LGA) data collation and completion of bimonthly consumption data was enhanced through hands-on training in Bauchi, Ebonyi and Oyo states carried out by the project. Trained staff have commenced the collection of logistics data in the three states.

The project in **Zambia**, in collaboration with MOH/Ministry of Community Development Mother and Child Health (MCDMCH)/National Malaria Control Center (NMCC) and stakeholders, provided technical and material support for the 2015 - 2016 Annual National Forecasting and Quantification meeting for anti-malarial commodities. The output from the quantification meeting was used as the basis to formulate the 2015 supply plans and to establish funding gap for commodity procurement. The gap analysis was used by MOH for resource mobilization to procure commodities and avoid stockouts.

With support from the project and SCMS in **Zimbabwe**, the MOH Directorate of Pharmacy Services conducted the annual national quantification in February 2015. The exercises generated twenty-four month forecasts and eighteen month supply plans for malaria medicines and many other selected commodities, essential medicines, and medical supplies.

After Systems Meet Performance Levels, Build Local Capacity to Sustain System Performance

Country Highlights

The TO conducts a variety of capacity building activities, including establishing and supporting LMUs and conducting pre-service and in-service training activities.

In November and December, 2014, the project facilitated two six-day trainings of supply chain management of health commodities in **DRC** for 19 participants from the central level and 17 participants from the provincial level who work for the National Malaria Control Program (NMCP), National Medical Supply (PNAM) public-private federation of drug stores and other national programs such as the Expanded Program on Immunization (EPI), Reproductive Health Program (PNRS), National Program for Combating Tuberculosis, and National Program for Combating HIV/AIDS (PNLS). A large portion of the training was dedicated to LMIS and Inventory Management, with the intention of supporting these.

Following efforts started in the previous year in **Ghana**, the USAID | DELIVER PROJECT supported the MOH to formally launch the Ghana-specific guidelines for national quantification. The guidelines are a systematic, step-by-step approach to quantifying health commodity requirements and costs, with guidance on how to conduct quantification, disseminate the findings and update results with the relevant data. It also provides specific guidance on how to use the results of quantification.

In **Liberia**, the project completed the third round of the EUV activity. The project began implementing EUV in Liberia in 2014, capturing information about the malaria supply chain and malaria diagnosis and treatment at public health facilities. The EUV is a valuable tool, providing visibility in PMI-supported counties where data is scarce.

The project conducted training in ACT Commodities Assessment for 39 health personnel in **Malawi** of various cadres in November 2014, and also in End Use Verification for 19 health personnel in February 2015.

A total of 99 officers in **Nigeria** drawn from the Malaria Action Program for States (MAPS), the Targeted States High Impact Project (TSHIP) and 11 PMI focus states MOH personnel were trained on overview of supply chain management to enable them to take the lead in the efficient management of malaria commodities, logistics data collection, collation and analysis in addition to effectively anchor the monitoring and supervision activities at the states.

Objective 3: Improve the Global Supply of Malaria Commodities

Strengthen International Collaboration

TO Malaria is an active member of the Roll Back Malaria Procurement and Supply Chain Management Working Group (RBM PSM WG). During the reporting period, TO7 attended the Vector Control Working Group (VCWG) Annual Meeting in January. The purpose of the VCWG is to align RBM partners on best practices to reach and maintain universal coverage with effective vector control interventions. The technical advisor focused his attendance there on the continuous distribution and net durability work stream meetings.

Conduct Analysis of Demand, Supply, and Pricing Issues Affecting the Global Market for Malaria Products

Task Order Malaria continues to analyze the malaria marketplace and based on the analysis adjusts its procurement strategy. Though the market for malaria commodities has seen many technical breakthroughs in the past five years, it has also been affected by instability and supply shortages which have had a direct impact on in-country programs. Analyses include LLIN vendor production capacity and anticipated demand, trends in commodity pricing, and vendor performance. In addition, an analysis of SP was completed. The project continues to update these analyses with current market information.

Objective I: Improve, Implement, and Expand USAID's Provision of Malaria and Related Commodities to Programs Worldwide

Timely, Transparent, Cost-Effective Procurement of Quality Malaria Products

Procurement

A principal activity of Task Order 7 (TO7) is to support PMI by procuring malaria commodities in response to requests placed by the U.S. Agency for International Development (USAID) Missions; the requests are based on the needs outlined in the yearly Malaria Operational Plans (MOPs). During the first half of FY15, the project processed orders for 24 countries: Angola, Benin, Burkina Faso, Burundi, Cambodia, the Democratic Republic of the Congo (DRC), Ghana, Guinea, Kenya, Laos, Liberia, Madagascar, Malawi, Mali, Mozambique, Myanmar, Nigeria, Rwanda, Senegal, Tanzania, Thailand, Uganda, Zambia, and Zimbabwe.

Review and Refine Procurement Systems and Procedures

To officially place an order, the project must receive a commodity procurement information request form. The CPIR contains the relevant information needed to initiate an order, including product specifications, requested delivery dates, consignee information, etc.

There are now seven CPIR forms in use, each designed to cover a specific commodity, i.e, ACTs, rapid diagnostic tests and long-lasting insecticide treated nets. The forms remain “live” documents that can be modified to reflect the nature of our procurement business model with PMI.

Operational Scale

During the first half of FY2015, the project received 45 CPIRs from 16 countries. In the first half of FY 2015, a total of 274 orders were placed with vendors for a total value of U.S. \$174 million (commodity cost only). This amount is 86% of the total value procured in all of FY 2014 (\$203.7 million commodity cost only).

Major procurement items included:

- 55 million sulphadoxine-pyrimethamine (SP) tablets for IPTp (intermittent preventative treatment in pregnancy)
- 33.7 million long-lasting insecticide-treated bed nets (LLINs)
- 49.4 million artemisinin-based combination therapy (ACT) treatments— 15.4 million treatments of branded artemether lumefantrine (AL), 2.3 million treatments of generic AL and 26.4 million treatments of branded artesunate/amodiaquine (AS/AQ) and 5.3 million treatments of generic artesunate/amodiaquine

- 37 million rapid diagnostic tests (RDTs)
- 317,000 rectal artesunate suppositories
- 50 microscopes for malaria

For a complete list of commodities procured, see Appendix A.

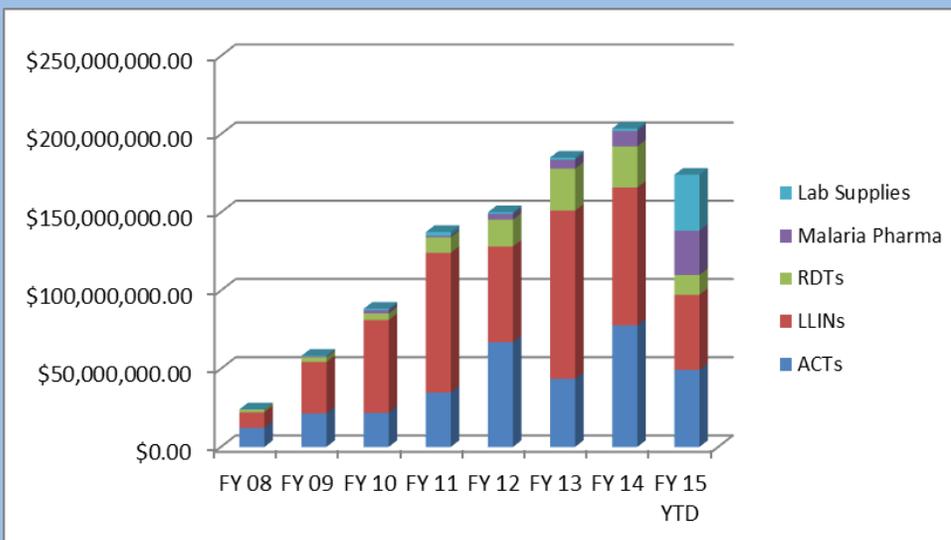
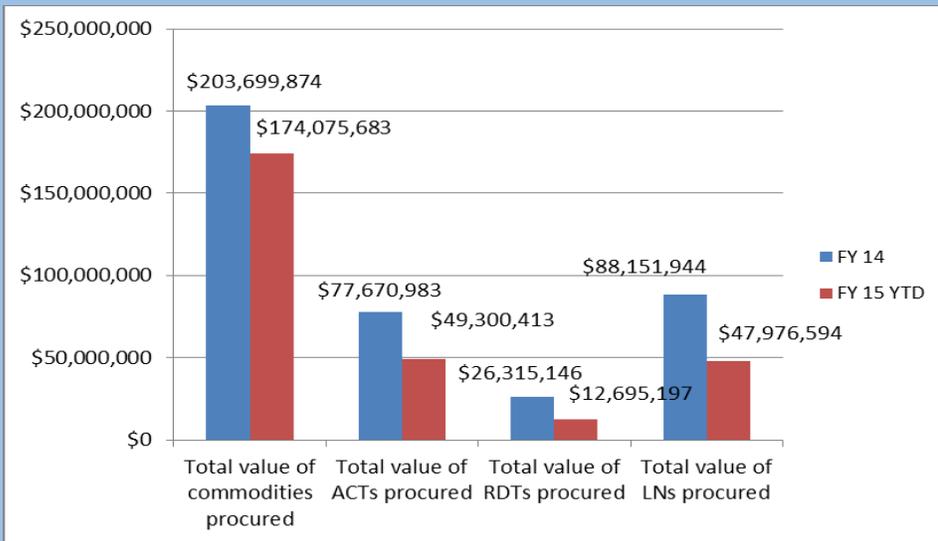
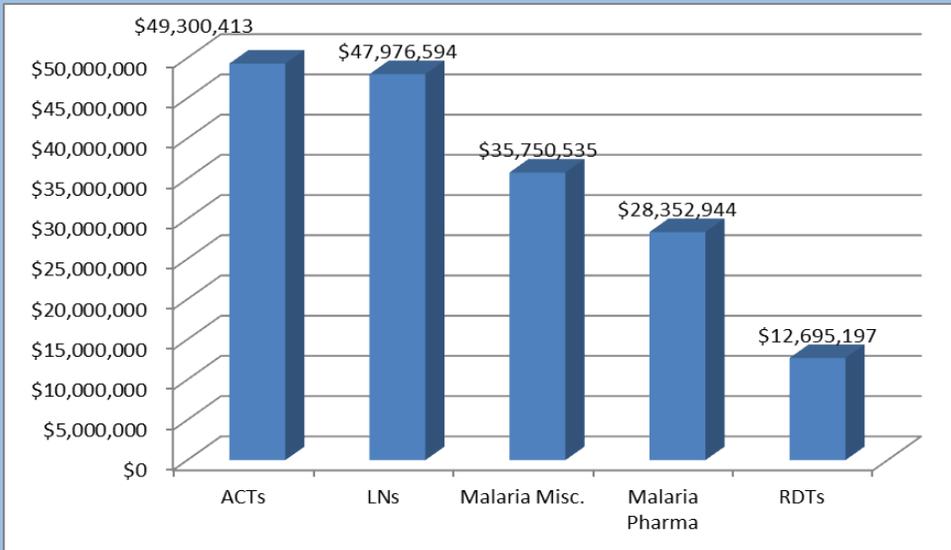
During this period, the project also continued procuring commodities for Zambia using funding from the U.K. Department for International Development (DFID). With DFID funding in the first half of FY15, the project procured: 2 million RDTs for a total value of \$420,000; and various essential medicines for a total value of U.S. \$6.5 million (commodity cost only). These figures are included in the total procurement figures above. A complete report of DFID-funded procurement is included in Appendix B.

Sources and Suppliers of Commodities

The selection of a vendor/manufacturer is based on one or more of the following criteria, in response to the Request for Quotation (RFQ):

- overall responsiveness
- conformance to product specifications
- conformance to quality certifications (ISO, WHO PQ, SRA approved) and standards
- conformance to packing and marking requirements (ie. country-specific artwork)
- product price
- timeliness of deliveries
- quality of product
- product registration in-country (if applicable)

Only vendors and manufacturers that meet a set of previously determined criteria (e.g., adherence to current good manufacturing practices, availability of product stability data, previous supply record, etc.) and/or are included on the PMI preselected list (pre-selected after an expression of interest (EOI) for LLINs, and request for proposal (RFP) for RDTs), are invited to bid or quote. The current list of selected manufacturers for RDTs and LLINs can be found in Appendices C and D.



To continue the provision of procuring cost-effective, high quality, antimalarial pharmaceuticals, two members of the procurement team and one member of the QA team went to India in March 2015 to visit various current and potential ACT/pharmaceutical suppliers, production facilities as well as several quality assurance laboratories. The main conclusions of this trip are that more companies are receiving approval through the WHO Prequalification Program for malaria products, family planning and essential medicines; a better insight into in-country product registrations; and new products in development that will be on the market in the next couple of years. Another topic of interest addressed in this trip was active pharmaceutical ingredient (API)



Photo Credit: Todd Shapera, Courtesy of Photoshare, 2013.

Warehouse workers in Matola, Mozambique, package Artemisinin-based Combination Therapy (ACT) drugs with Rapid Diagnostic Tests (RDTs) for distribution to health facilities.

sourcing. It is important to understand if the manufacturers are sourcing API in-house or sourcing from external suppliers to understand the potential impacts on product quality and availability in the event of disruptions in availability. As this is a new area of focus for the procurement team, the project is still in the information gathering stages and will work with necessary partners to make this a priority in the coming year.

LLINs

Tana Netting's new manufacturing process

The current policy of the project regarding LLINs is to have concurrent lab testing against WHOPES specifications, testing for insecticide content, burst strength, mesh size, dimensional stability and mass per unit area. When LLINs from a particular manufacturer show different variances of insecticide content, burst strength, mesh size or dimensional stability during QA Testing, the LLIN manufacturer will be suspended from concurrent testing. This means that the LLINs will not be able to ship until the QA testing results have been completed. During the reporting period, Tana Netting was suspended from concurrent testing due to relatively high levels of insecticide variability in LLINs tested.

Tana's former manufacturing process involved treating sewn nets in a Washex™-based process, leading to this relatively high level of insecticide variability, both intra- and inter lot. Recently, however, they have changed their

process to a more continuous treatment of knitted panels, where nets are sewn after insecticide application. The change to the new process has yielded a much more consistent level of insecticide from the project’s analysis, which was based on the testing of x batches of the Tana LLIN product. Based on this data, a recommendation to allow Tana to return to a concurrent testing status could be considered by USAID. However, any lot failures would likely result in a return to a pre-shipment testing status.

Lab EOI

As part of a periodic review of the market, the USAID | DELIVER PROJECT issued the Request for Proposal (RFP) on October 22, 2014 to identify potential lab testing service providers for pre-selection under the Malaria Task Order that are either WHO pre-qualified or ISO 17025 certified. Twelve (12) laboratories responded to the RFP and provided their proposals along with documentation and answers to the questionnaire contained in the RFP as requested. The technical documentation review was conducted by the QA team and recommended five (5) suitably qualified QA laboratories be short-listed based on the results of the first round of the evaluation. Then, the project conducted a business evaluation based on the QA team’s recommendations. Based on the findings from the evaluation, it was recommended to continue to utilize KABS and NWU. Both KABS and NWU are highly experienced with testing the requested products, have been pre-qualified by WHO and certified in accordance with ISO 17025 General requirements for the “competence of testing and calibration laboratories” and both laboratories are technically compliant and have provided all the required documentation and information as requested under the RFP.

Procurement Scorecard and PMP Indicators

During the reporting period, the project continued to monitor system performance monthly using the scorecard to show results. The targets this year are reflected as follows: 85 percent or higher (green), from 69 to 84 percent (yellow) and from 68 percent or lower (red). The received in-country by desired receipt date was at the target performance level (84 percent). The project will continue to review its internal procedures that are used to set these with missions and field offices to set realistic dates for deliveries based on standard lead times.

The project compiles and reports scorecard results monthly and provides summaries in the semi-annual and annual reports.

Table I. PMP for the Procurement Process, October 1, 2014–March 31, 2015

Operational Area	Indicator	Status
Monthly system scorecard implemented	Monthly scorecard available	Available monthly
Orders shipped and received on time (data from October 2014 to March 2015)	% of orders received by countries within a month of agreed date with the Mission	84%
Suppliers deliver ordered commodities to satisfy contractual requirements	Supplier fill rate (contracted quantity on time)	84%
Respond to emergency orders	Percentage of emergency orders responded to during the previous twelve months	4/4 = 100%

Efficient and Secure Delivery of Procured Commodities

Freight Forwarding

From October 2014 to March 2015, the Task Order successfully forwarded commodities to support malaria programs in 23 countries. Countries shipped to include: Angola, Benin, Burkina Faso, Burundi, Cambodia, DRC, Ghana, Guinea, Kenya, Laos, Liberia, Madagascar, Malawi, Mali, Mozambique, Nigeria, Rwanda, Senegal, South Sudan, Tanzania, Uganda, Zambia, and Zimbabwe. The freight team coordinated the in-country distribution of ACTs and LLINs to several states in Nigeria, ACTs in DRC, ACTs, LMKs and RDTs in Angola and ACTs, RDTs and SMKs in South Sudan. The freight team also coordinated warehousing in Angola, Ghana and South Sudan.

Shipment execution tasks include freight quote preparation, vendor door pickup, freight booking, shipment tracking, customs clearance, and final recipient delivery. The Freight Team, along with the Customer Order Management Team, updates the country-specific shipping instructions in ORION, which is part of the project's management information system (MIS). The project continues to use and improve the electronic data interface with the contracted freight forwarders (Logenix, MEBS, and UPS SCS) in order to update shipment milestones in ORION. Shipment milestones provide shipment visibility to users of the MIS website.

Per the freight strategy for TO7, shipments are being competed and bids provided by the contracted freight forwarders for all shipments except those in which the vendor is expected to provide freight services, for shipments from a vendor to a UPS warehouse (these shipments will be handled exclusively by UPS), for shipments where USAID/Washington concurs with the project's recommendation and justification for exclusive use of a freight forwarder to a specific country, and for "emergency" shipments.

Customs clearance and pre-clearance delays continue to be a challenge for the project; the Freight Team worked with all involved parties and implemented solutions that should ensure more on-time deliveries for this year. For example, the freight team is working much more closely with the field office in DRC to assure that they are proactively moving the pre-clearance process forward, and also working with the USAID Mission and UPS' agent in country. This has helped reduce lead times for products and expedited clearance processes.

Table 2 shows the freight analysis. Figures are calculated based on the difference between the highest bid received and the lowest bid received. Through continued bidding of shipments, the project obtained a cost savings of \$690,791.56 during the first half of FY15.

Table 2. Savings from Bidding Out Shipments to Vendors, Oct, 2014 – March, 2015

Time Period	Total Savings	Percentage Savings Over All
October–December 2014	\$519,373.63	25%
January–March 2015	\$171,417.93	26%

Quality Assurance

RDTs

During the reporting period, the QA team managed pre-shipment inspection and testing for 25 orders, representing over 34 million RDTs from Orchid Biomedical Systems, Premier Medical, and Standard Diagnostics. The QA team reviewed all test results before clearing an order for shipment. TO7 contracted with FIND to support all lot testing of RDTs through the WHO laboratories. Lot testing for PMI included initial testing of 158 batches and 18-month stability of 200 batches, and was conducted by the Malaria RDT Quality Assurance Laboratory at the Research Institute for Tropical Medicine (Philippines) and the Laboratory of Molecular Epidemiology at the Institut Pasteur du Cambodge (Cambodia). Results of initial pre-shipment testing were available after 7-32 days from sampling (median 16 days). The laboratories typically finish testing within 5 working days of sample receipt. The longest delays were caused by sample shipment and customs delays. One lot of First Response combo failed the testing for detection of *P. vivax* and was rejected.

FIND reported the occurrence of buffer loss in individual buffer ampoules in samples that have been stored for stability testing. This issue is not limited to one manufacturer; it has been observed for all manufacturers. The manufacturers are working with the WHO prequalification team to address the issue. In the meantime, WHO recommends to not procure point of care tests. Where point of care tests are still necessary, TO7 has agreed with the manufacturers to supply an extra ampoule of buffer to reduce the risk no buffer will be available to the health care workers that use the tests.

After review of the WHO/FIND Round 5 test results by the project's QA team, panel detection scores for *Plasmodium falciparum* at low parasite densities were well above the threshold at 85%, which is also consistent with past results. Results for *P. vivax*, however, did not meet the WHO procurement criteria, based on a detection score of 74.3%, which falls below the WHO criteria panel detection score limit of 75% at 200 parasite/ul. The project's QA policy requires the temporary suspension of any RDT that is non-compliant with WHO RDT procurement from the project's pre-qualified RDTs list.

After further discussions with WHO and PMI, however, it was confirmed the WHO Round 5 failure was minimal and it would not have any public health impact of the population in the country of destination where the presence of *P.v* has a lower density. Therefore, PMI gave the project pre-approval to proceed with giving the countries with First Response combo RDT orders on hold, the option to either move forward with the orders with NMCP's approval or cancel the orders. The project was also instructed by PMI not to proceed with any new procurement for First Response combo pLDH/HRP2 RDTs until further notice.



A health worker tests a child for malaria in Nhamatanda, Mozambique.

Photo Credit: Artirp Samabroa for USAID | DELIVER PROJECT, 2012.

There was a report in Nigeria about a high number of CareStart RDTs that gave invalid results. Samples from the involved batches that were procured by PMI were taken from various locations and sent to the WHO/FIND laboratory in Cambodia which confirmed a high number of tests gave invalid results. It is suspected that environmental conditions play a role. Discussion with the manufacturer to replace the product, and the technical investigation to the cause of the problem are ongoing.

LLINs

From October 2014 to March 2015, the QA team managed pre-shipment inspection and testing for 40 orders representing 24 million nets from BASF, Bestnet, Sumitomo, Tana Netting, and Vestergaard Frandsen. The freight team performed sampling and inspection of all consignments at the manufacturing sites. The QA team reviewed the inspection reports and orders from BASF, Sumitomo, and Vestergaard were released for shipment concurrently with laboratory testing. All test results for these manufacturers were compliant with USAID and WHO specifications.

Because nets from Tana Netting had shown highly variable insecticide levels in previous testing, nets from Tana were tested pre-shipment. In December Tana Netting introduced a new method of applying the insecticide. Test results since then showed a more consistent insecticide level. All test results for Tana Netting were compliant with USAID and WHO specifications.

Test results for two orders from Bestnet showed insecticide levels well below the lower WHO specification limit. The explanation from Bestnet is that samples were mistakenly taken from the quarantined area. Bestnet produced new nets for Zimbabwe, samples of which gave compliant test results. Re-testing of the other rejected order (for Kenya) is in progress. No sub-quality nets were shipped, because this testing all occurred pre-shipment.

No product complaints were reported for orders that were completed in the reporting period.

Complete test results were available within 10 to 39 days after sampling (median 23 days). FHI 360 created Certificates of Conformance for each consignment after final review of all results.



A mother with her three-week old newborn under their bed net in Batamuliza Hururo village, near Rukumo Health Center, Rwanda.

Photo Credit: Todd Shapera, Courtesy of Photoshare, 2013.

Pharmaceuticals

Pharmaceuticals regulated by a Stringent Regulatory Authority

Pharmaceuticals that are regulated by an Stringent Regulatory Authority (SRA) did not require laboratory testing, according to approved standard operating procedures, developed by FHI 360 and PMI's in-house clinical pharmacist. The QA team reviewed the manufacturer's COA before shipment.

During this reporting period, the QA team reviewed COAs of 285 batches of Coartem®, for over 42 orders. The QA team continued to perform identity testing using Near-Infrared Spectroscopy. Of note, although Coartem® is approved by an SRA and does not necessitate additional quality testing, use of these data points from the NIR technology on retain samples from every batch provide another layer of confidence around the product.

The QA team also reviewed the COAs of 5 batches of atropine injections, manufactured by Martindale, UK and 1 batch of malarone from Glaxo-Smith-Kline.

Pharmaceuticals Tested Concurrently

Artesunate/amodiaquine (AS/AQ) from Sanofi-Aventis was tested concurrently with shipping although the QA team did review manufacturer-issued COAs for of every batch before releasing the order for shipment. The supplier sent samples of every batch to the QA team, who then performed concurrent testing, using the manufacturer's test method. Eight-three unique batches were tested across 20 orders. Test results were available between 4 and 31 days from sample receipt (median 12 days). All results were compliant with the specifications. Other WHO prequalified drugs that were tested concurrently include Sanofi's ASAQ.

Pharmaceuticals Tested Non-Concurrently Before Shipment

Other pharmaceuticals procured by the project included amoxicillin, generic artemether/lumefantrine, artemether injections, artesunate injections, artesunate suppositories, chloramphenicol, ciprofloxacin, dextrose, paracetamol injections, quinine injections, quinine sulfate tablets and sulfadoxine/pyrimethamine tablets. These products were tested pre-shipment by independent laboratories. Some wholesalers arranged for testing and shared their test reports. For orders from other wholesalers, the freight team performed sampling and inspection and the QA team arranged for testing at KABS Laboratories or North-west University. The QA team reviewed all results before releasing the orders for shipment, consistent with approved SOPs regarding pharmaceuticals without either SRA approval or WHO prequalification. A total of 274 batches were tested. One batch of artesunate injection was rejected because it failed the test for weight variation: the variation of the amount of artesunate powder in different vials was too large. Four batches of artemether/lumefantrine tablets were rejected because they failed the test for dissolution of lumefantrine. Investigation in cooperation with the manufacturer indicated there is a significant drop in dissolution results as the product ages, even after only a few months. The manufacturer hopes to solve this by tightening the specification for particle size of the active ingredient. A validation batch will be produced and a stability study will be performed to show better stability. No product will be procured from this manufacturer until the stability study has shown good results. The artemether lumefantrine from this order was replaced by shipping Coartem® from the stockpile. The QA team is still communicating with the manufacturer about improvements that are made in production of the artemether/lumefantrine. Test results were available 16-67 days (median 40 days) after sampling.

Table 3. PMP Indicators for the QA Process October 1, 2014–March 31, 2015

Support Area	Operational Area	Indicator	Status
Quality assurance and	Quality assurance and	% of LN shipments with pre-	100%

quality control	quality control procedures established and implemented	shipment test reports available	
		Median time and range (in days from sampling) required for pre-shipment LN test reports	23 days Range: 10 – 39 days
		% of RDT shipments with pre-shipment test reports available	100%
		Median time and range (in days from sampling) for up-to-date RDT test reports	16 days Range: 7 - 32 days
		% of AS/AQ shipments with pre-shipment certificates of conformance	100%
		Median time and range (in days from sample receipt) required for pre-shipment AS/AQ test reports	12 days Range: 4 - 31 days
		% of other pharmaceutical shipments with pre-shipment certificates of conformance	100%
		Median time and range (in days from sampling) required for pre-shipment test reports for other pharmaceuticals	40 days Range: 14-67 days

Other QA Activities

The QA team coordinated a test method transfer from IPCA Laboratory to KABS Laboratory so that KABS is able to perform testing of AS/AQ manufactured by IPCA. There is no publicly available test method for this product, so the manufacturer’s internal test method has to be used. During a method transfer, the laboratory and the manufacturer analyze samples of the same batches. The results are statistically compared to verify the laboratory is able to produce reliable results and there are no underlying problems when applying this test method.

Management Information Systems

The MIS team supported the ongoing operations of Task Order 7 in the first half of FY15 by making sure the MIS was continuously available and providing up-to-date, accurate procurement and shipment information. This included providing access to Task Order publications and information, shipment requests by country and recipient program, financial accounts by country and funding source, and the status of shipments. The MIS is available to authorized users from JSI, the USG and partners, both centrally and in the field, via a secure web-based user interface known as the USAID | DELIVER PROJECT website.

The MIS is managed according to project management standards as identified by the Project Management Institute using a standard System Development Life Cycle (SDLC). Periodic updates of the MIS are provided to ensure customer satisfaction based on requests from internal and USG sources. These periodic updates are

directed and prioritized by the CCB (Change Control Board). The CCB process provides for input from USAID and other stakeholders and assesses the impacts of individual issues and prioritizes resource allocation.

MIS reliability, availability, and ease of secure access are measured against a service level agreement, and the project met or exceeded all standards in the first half of the current fiscal year. Following are a set of graphs showing key MIS measurements from the past six months.

Performance and Key Statistics

This section includes key statistics on the performance of the MIS. Figure 4 shows the log-ons to the USAID | DELIVER PROJECT website by month. The USAID | DELIVER PROJECT website had an average of 606 unique login sessions per month. In FY2014 the average was 576.

Figure 4. Log-Ons to the USAID | DELIVER PROJECT Website

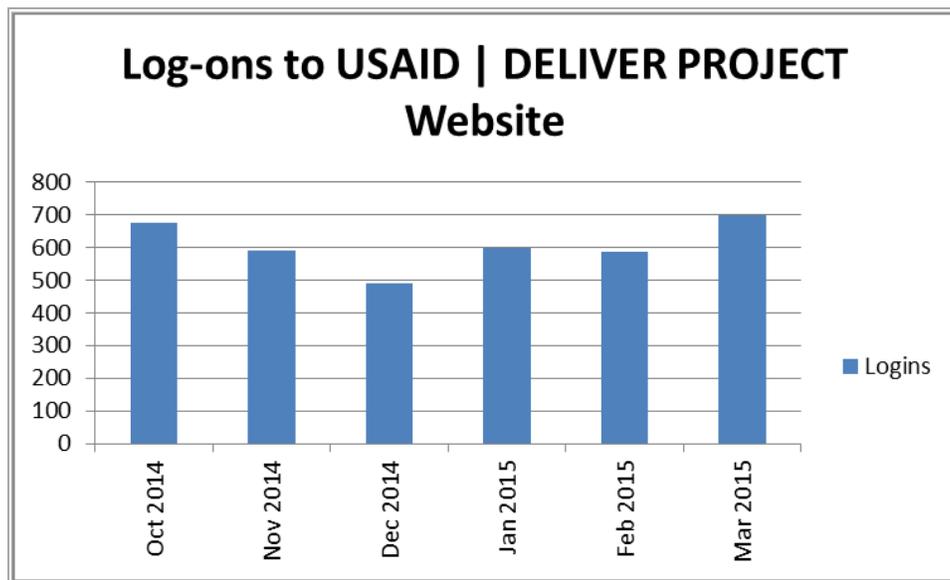


Figure 5 shows the number of times per month that users have visited the My Commodities section of the website. The My Commodities visits show the number of times per month that authorized users have accessed the USAID | DELIVER PROJECT website My Commodities web page in order to obtain project, shipment or financial information. The average monthly visits were 6,982 compared with 7,541 in FY2014. The shipment data displayed on the My Commodities portion of the website is updated 3 times during each business day in order to provide the most current status.

Figure 5. My Commodities Visits

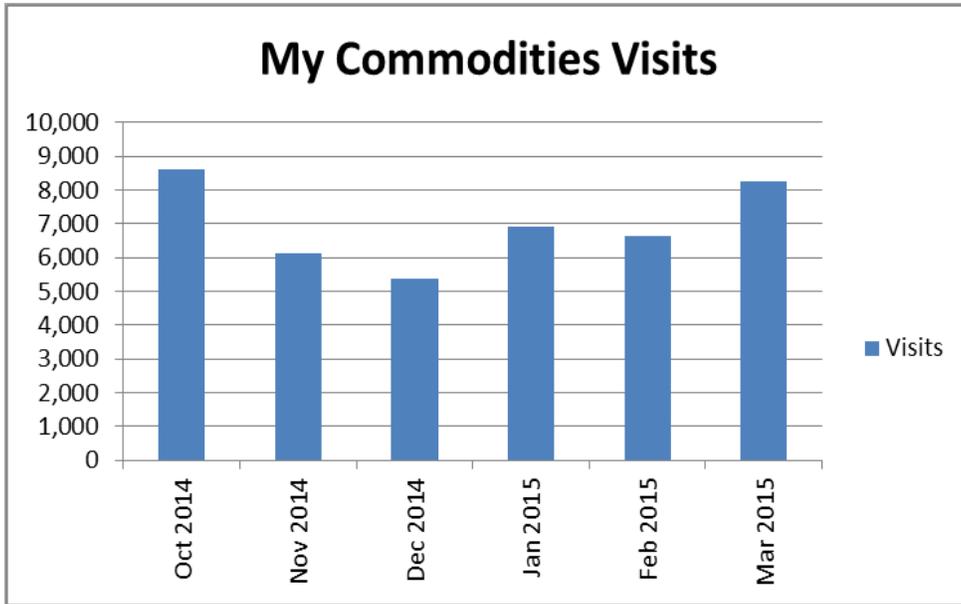
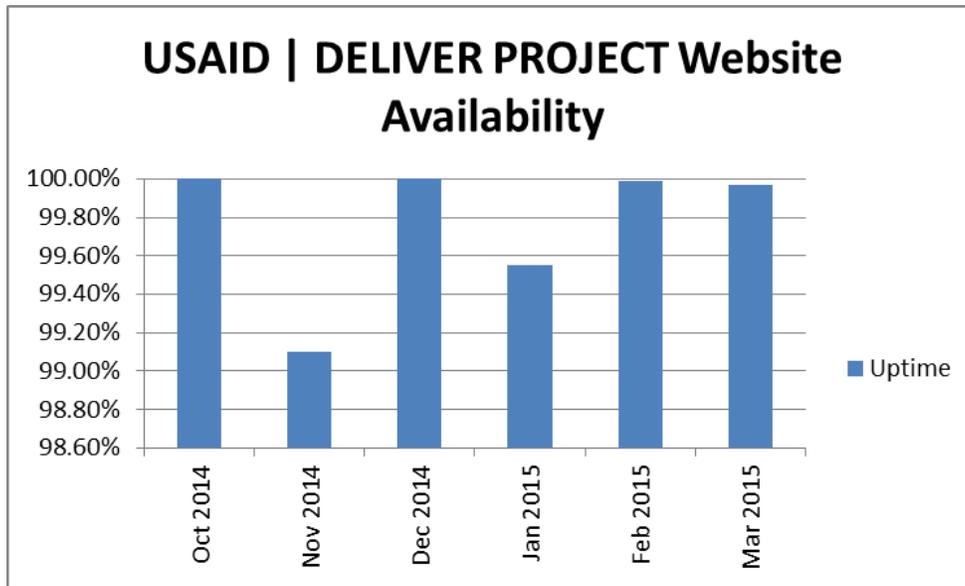


Figure 6 shows the availability of the USAID | DELIVER PROJECT website to users. This graph is a measurement of the amount of time per month that the USAID | DELIVER PROJECT website is available for access, excluding scheduled maintenance on the weekends. The standard is 99.50% availability and was exceeded each month but one during the reporting period with the six-month average being 99.77% availability.

Figure 6. USAID | DELIVER PROJECT Website Availability



Maintenance Work Completed

The MIS team modified the ORION Enterprise Resource Planning (ERP) system and the USAID | DELIVER PROJECT website in order to improve data availability and operational productivity. This is an ongoing effort and is completed along with day-to-day maintenance support of operations including ad hoc queries, user assistance, anomaly research and resolution, and pre-project definition and estimation. The following are the highlights of the past six month’s enhancements.

Standardize Country Names in Web Reports

The project modified all web reports showing recipient information to display the country short name for consistency. This should make it easier for users to interpret the reports. Previously some countries were displayed as short names and others were displayed as country codes. This affected the following reports: View Shipments, Quantity Summary by Subcategory, Value Summary by Subcategory, Shipping Information -> Client Profiles, and Shipping Information -> Recipient Profiles.

Financial Reporting System Strengthening

The project implemented significant improvements to the financial management systems and reports allowing reversals of key transactions. In addition, the project completed a balance sheet report for malaria. The balance sheet report is helpful in determining the overall financial status of the task order (from a commodity funding perspective) because it gives a snapshot of the liabilities (client balance including orders in transit) and assets on hand (cash on hand, contract accruals and inventory). Net liabilities which is inclusive of any equity always tallies with net assets and is shown on the balance sheet report. The finance team will find this report helpful in determining if there are any financial transactions that are miscoded, thereby creating an imbalance in the line items in the balance sheet. These can then be corrected.

Operational Reporting System Strengthening

The project improved operational planning by allowing the system to suggest a new Desired Receipt Date based on the Vendor suggested “Goods available date” and a newly implemented Average Lead Time feature at the time of creation of Purchase Order. The project implemented several improvements to the Tickler Reports which track and report exceptions related to missing or incorrect shipment milestone dates and port information.

The project also implemented a Coordinated Shipment Planning Report which allows the freight and logistics team to more easily communicate planned and upcoming shipments to the respective freight forwarders.

System Performance Improvements

The project implemented several system performance improvement patches to improve the speed of the operational and financial transactions and reporting. The system performance improvements improved the speed of processing of several transactions (approval or amendment) and reports. Previously, the slow performance of approvals or amendments increased the likelihood of database dead locks, which would slow down user processing while the user waited for the locks to clear. With the improvement in transaction processing speed, the chances of database dead locks has virtually disappeared, reducing the overall user transaction processing time.

Upgraded ORION ERP and USAID | DELIVER PROJECT Website Management Reports

Numerous small improvements were made to My Commodities reports based on user requests in order to provide better management information in the various formats required and to ORION ERP reports to improve productivity for the procurement and supply operations teams.

The MIS provides essential support to Task Order Malaria delivering management information and detailed reports to aid in procurement, supply chain management, and all other aspects of ensuring the correct commodity is in the correct place, at the correct time, and at the lowest possible price.

Table 4. PMP Indicators for the MIS, October 1, 2014– March 31, 2015

Support Area	Operational Area	Indicator	Status
MIS	Availability of USAID DELIVER PROJECT website	Percentage of time the USAID DELIVER PROJECT website is available	99.77%
	Total number of visits	Total number of visits to the USAID DELIVER PROJECT website	41,893
	Number of logins	Total number of logins to the USAID DELIVER PROJECT website	3,638

Objective 2: Strengthen In-Country Supply Systems and Capacity for Effective Management of Malaria Commodities

Strengthening in-country supply systems and building greater capacity for improved management of malaria commodities at the local level are critical to the success of TO Malaria and to reaching the goals of PMI. These actions ensure that commodities procured and delivered under Objective 1 activities, and through other key malaria partners, reach those in need. This section focuses on the critical areas of supply chain assistance: improving system performance, improving visibility of data at all levels, strengthening accountability for the products managed, bridging the gap between programs and key supply chain entities, such as national malaria control programs (NMCPs) and central medical stores (CMS), and building capacity to sustain performance. Other ongoing core-funded activities include: country stories, supply chain costing, and the procurement planning and monitoring reports for malaria products (PPMRm).

Improve System Performance Ensuring That Malaria Products Are Available When and Where They Are Needed

Country Highlights

Angola

In Angola the project continues to adhere to the PMI mandate to have the RDTs, ACTs, LLINs and MMKs it procures bypass MOH warehousing and distribution components at the central level. The project has been tasked with delivering all of these commodities directly to the provincial level. In order to meet this responsibility, the project provides



Photo Credit: Scott Dubin for USAID | DELIVER PROJECT, 2014.

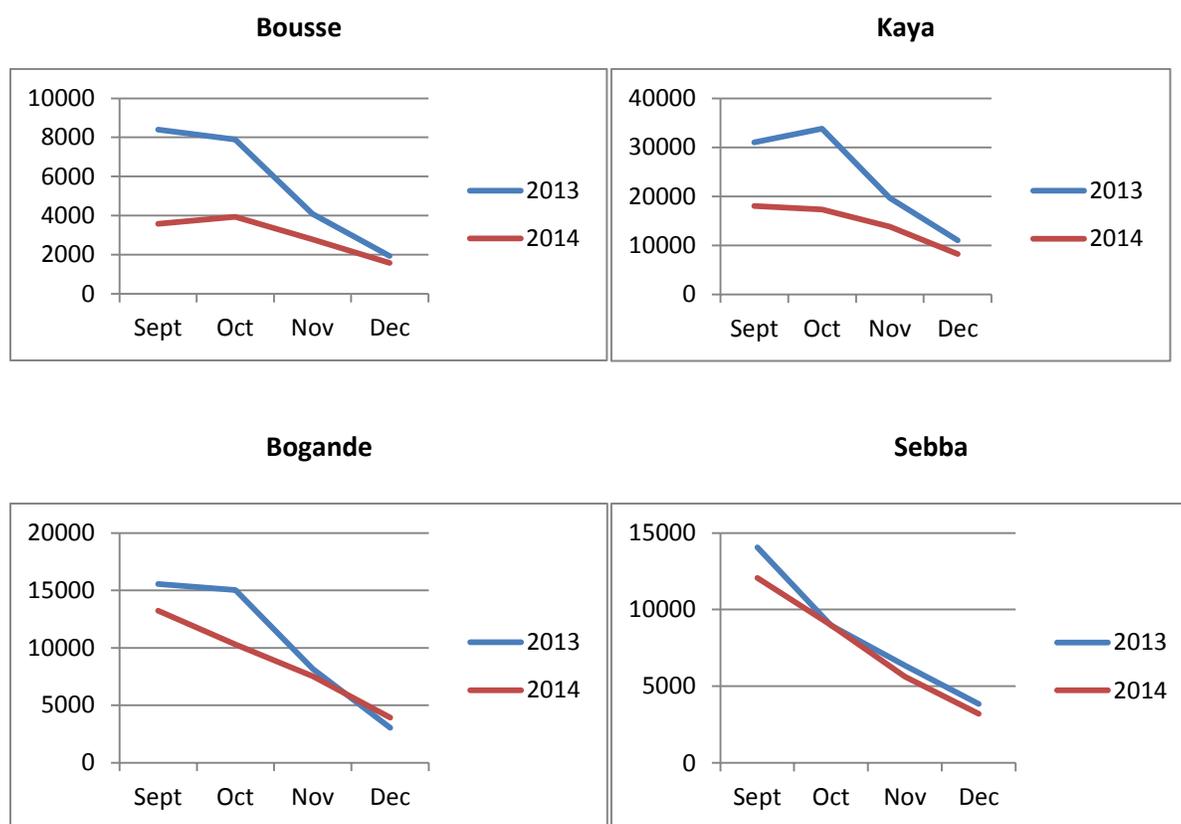
PMI commodities for Angola are consolidated and packaged in Belgium according to province and sent to Angola in a dedicated charter.

technical assistance and support for receipt, storage and distribution of these commodities. In January 2015 a dedicated charter of these malaria commodities arrived in Angola from Belgium where they had been consolidated. The commodities were delivered to all 18 Angolan provinces directly from the charter to avoid risk of theft from being placed within a warehouse. All deliveries to the Ministry of Health provincial warehouses were confirmed within a week of the charter's arrival.

Burkina Faso

Burkina Faso's NMCP began implementing Seasonal Malaria Chemoprophylaxis (SMC) in seven districts during the September to October 2014 rainy season. In October, the project provided technical assistance to the supervision and distribution teams in Sebba district in the Sahel region. The supervision team worked with the community distribution team, providing commodities to children in households and conducting a household survey to assess the population's opinion of SMC. Nearly all health facilities visited have recognized the positive impact of the SMC campaign. The number of malaria cases registered for children under five has been reduced during the period of the SMC campaign in 2014 in the SMC pilot districts as shown in the graphs below.

Figure 7. Number of malaria cases for children under five, September-December 2013 and 2014 in SMC districts: Burkina Faso



In February 2015, the project with the NMCP and Pharmacy Department hosted a workshop where the NMCP presented the impact of the 2014 SMC campaign. Bousse district registered 10,149 malaria cases in 2014 versus 23,625 cases in 2013; 108 cases were hospitalized in 2014 versus 435 cases in 2013. The NMCP presented the plan for gradual expansion of SMC strategy to all 63 districts, which would entail expansion to 19 districts in 2015, and the remaining districts starting in 2016, with financial support from the Malaria Consortium, the World Bank and the Government of Burkina Faso.



Photo Credit: USAID | DELIVER PROJECT, 2015.

A mother provides the first dose of SP/AQ to her child in the presence of the community distribution team & under the supervision of the Country Director of USAID | DELIVER PROJECT in Titabe, Sebba district, Burkina

Burma

In July 2014, the project received its first request from the National Malaria Control Program for commodity support. This request came via a CPIR for procurement of 553,500 LLINs and support for distribution of the nets to 47 targeted townships. These nets will be distributed in Stratum 1B townships that are outside of the priority area covered by the Global Fund. This is the largest procurement the project has undertaken in the region to date, and one of the few times there has been a request for delivery to lower levels.

Democratic Republic of the Congo (DRC)

In January, the project coordinated the distribution plan of LLINs with UPS and its subcontractor GTM in Katanga Province, located in the southern part of DRC. A total of 26,700 LLNs were delivered to eleven new health zones to protect pregnant women and children under 12 months of age against malaria. The project supported the distribution with an orientation for health workers on LLINs.



Photo Credit: USAID | DELIVER PROJECT, 2015.

A Lubumbashi health zone pharmacist receives LLINs from the project in January, 2015.



Photo Credit: USAID | DELIVER PROJECT, 2015.

Workers demonstrate the LLINs that are for sale during a communication activity to increase sales of LLINs in Burundi.

Ghana

The project, in collaboration with NMCP, facilitated the distribution of LLINs from the CMS to six regions for health facility-based distribution through clinics providing antenatal care (ANC) services, and child welfare clinics (CWCs). A total of 700,700 LLINs were allocated and transported to Northern, Upper East, Upper West, Ashanti, Brong Ahafo and Western regions for the distribution through health facilities. The project further supported NMCP to monitor and supervise the distribution of 5,252,000 LLINs through mass campaigns in all districts in the Eastern and Volta regions through a point distribution, targeting universal coverage.

Mitigating the consequences of the Central Medical Stores fire incident

In January 2015, the stocks of health commodities, equipment and warehouses of the CMS located in Accra were lost in a fire accident. Following this incident, the MOH nominated a crisis management team to manage the crisis and report with recommendations to the senior management of the Ministry to guide a national response and ensure continuity in service delivery across the country.

As a member of the crisis management team, the project worked with the MOH to develop action plans for an interim warehousing and distribution solution to ensure availability of program commodities. A list of all urgently needed program commodities and shipments arriving in-country between March and June of 2015 was compiled and a warehouse was secured with one of the project's subcontractors to support the storage of commodities procured by USAID.

The project through collaboration and consultation with key development partners (DFID and UNFPA) completed and provided recommendation to the Mission on alternative warehousing and distribution arrangement for program commodities in the short term.

Request for proposals (RFP) for warehousing and distribution of public health commodities for USAID incoming shipments (July through September 2015) has been issued with a RFP to be released for a July and September distribution to all ten RMSs and three teaching hospitals. Initial distribution has been planned for May 2015 through the project's subcontractors.

Liberia

The Interim Approach (IA) was designed to address weaknesses in the management of and accountability for products managed through the public sector supply chain. The SCMU of the MOHSW coordinates the IA with technical assistance from the project, who supports the distribution of commodities to counties supported by USAID. To date, five rounds of distribution have taken place. Distribution under the IA showcased significant improvements in key indicators: stockout rates for tracer products decreased in all five USAID counties—Bong, Lofa, Margibi, Montserrado, and Nimba—while the quantity of products requested matched the quantities approved, issued, and received, indicating optimal order fulfillment rates, and increased commodity security in the supply chain.

The fourth round of distribution occurred a month later than scheduled due to the outbreak of Ebola in Liberia. Analysis from field data collected during the fourth round of distribution indicates that stock out rates of tracer products from Bong, Lofa, Margibi, and Nimba continue to show a steady decrease (see Figure 8 below). In Montserrado County, however, which was highly affected by the Ebola outbreak, stock out rates saw a small increase. (see Figure 9 below). In addition, delivery coverage in Montserrado county also declined, from 99 percent in the third round to 76 percent in the fourth, as health workers abandoned their posts and shuttered the doors of the health facilities they worked in. The fourth round distribution resupplied 153 of 202 facilities (76% coverage), with the balance of facilities (43) inaccessible to resupply and data capture. Stock out rates were based only on data collected from facilities that were open; closed facilities only affected the coverage rate. Figures 8 and 9 compare stock out rates in all counties, and in Montserrado.

Figure 8. Comparison of Stockout Rates in USAID Counties-Liberia

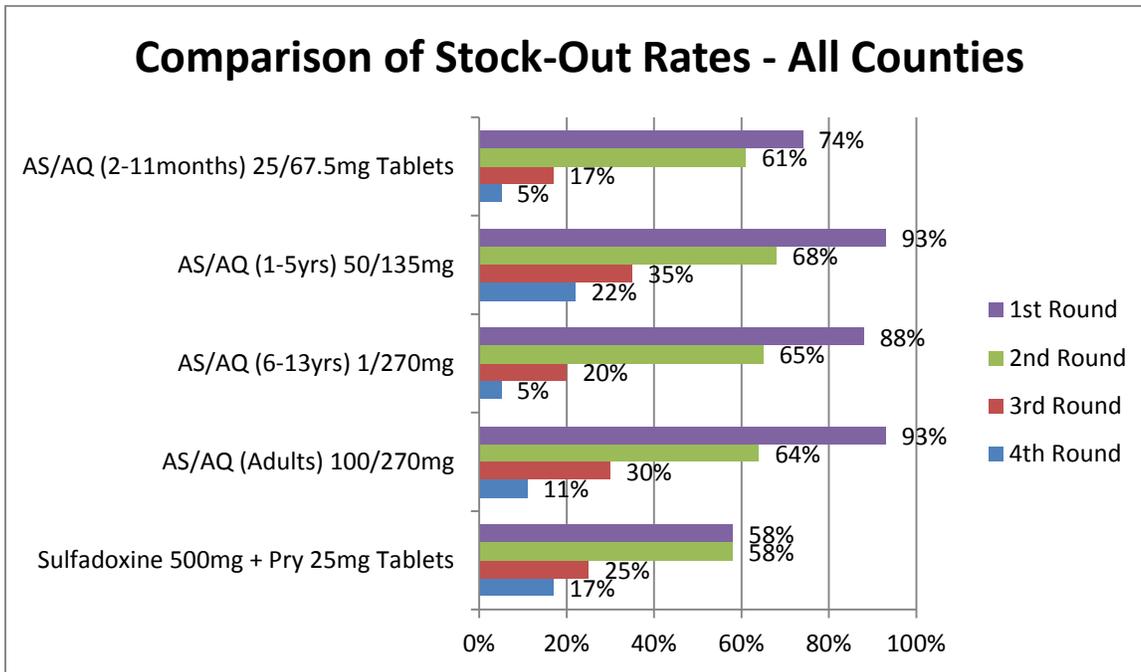
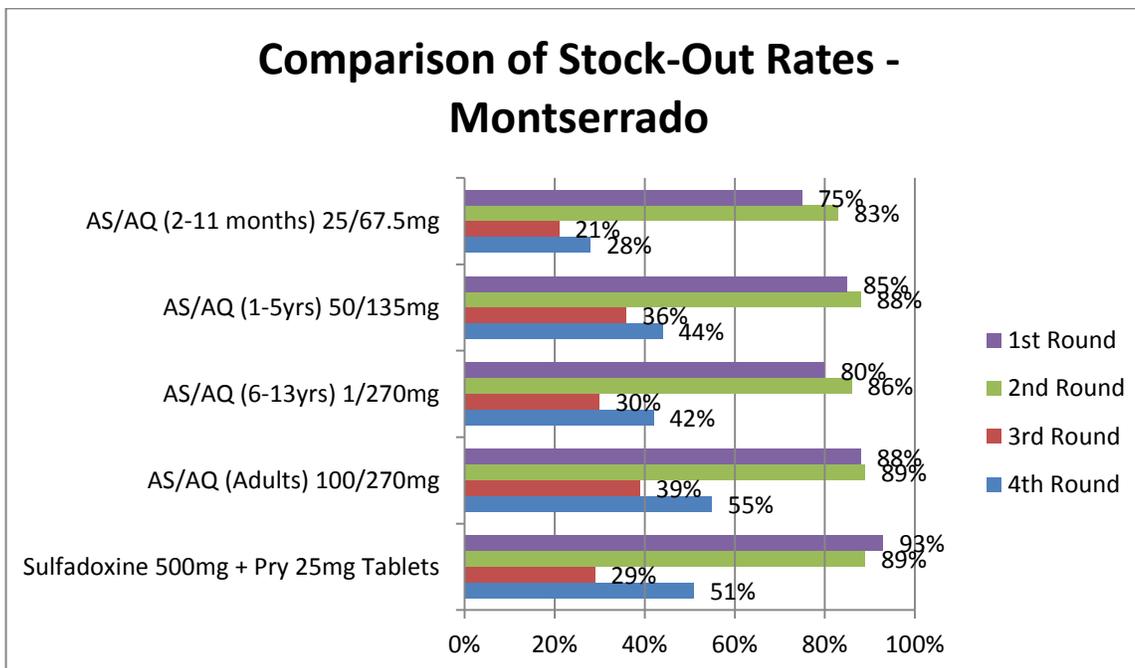


Figure 9. Comparison of Stockout Rates in Montserrado County-Liberia

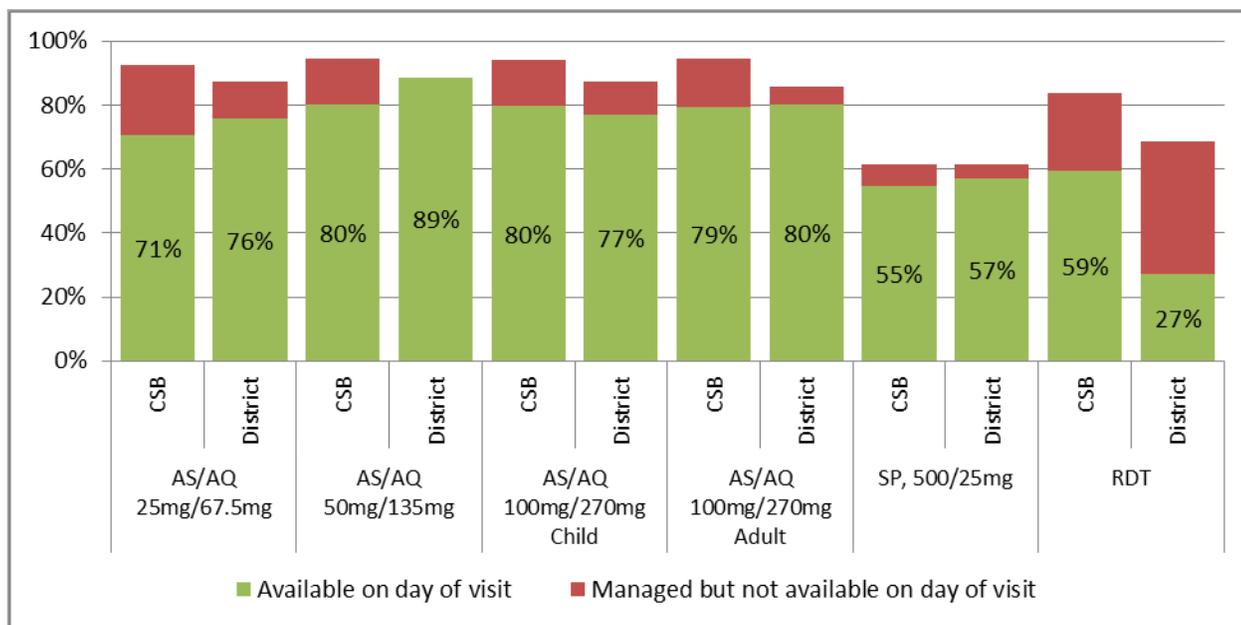


Madagascar

From July to September 2014, Madagascar faced a shortage of all AS/AQ formulations. PMI Madagascar then authorized a nationwide distribution of the AS/AQ initially procured for four NGOs and community health workers. The USAID | DELIVER PROJECT facilitated a quantification exercise in September whose findings

prompted an emergency order from PMI. In November and December 2014, the project led an assessment of the national supply chain using the Logistics Indicator Assessment Tool (LIAT) and DataWinners, a smart phone data collection application, to measure performance and availability of health products at the facility level. The study targeted 532 health facilities, including SALAMA's central level warehouse, 71 district warehouses, 71 district reference hospitals, 186 basic health centers, level 1 (CSB 1) and 203 basic health centers, level 2 (CSB 2). With the exception of the hospital level, stock availability was generally high (over 80%) for all four AS/AQ formulations across levels, though availability of SP and RDTs was relatively low across all levels, as shown in Figure 10.

Figure 10. Availability and Management of Malaria Products by Level, Madagascar



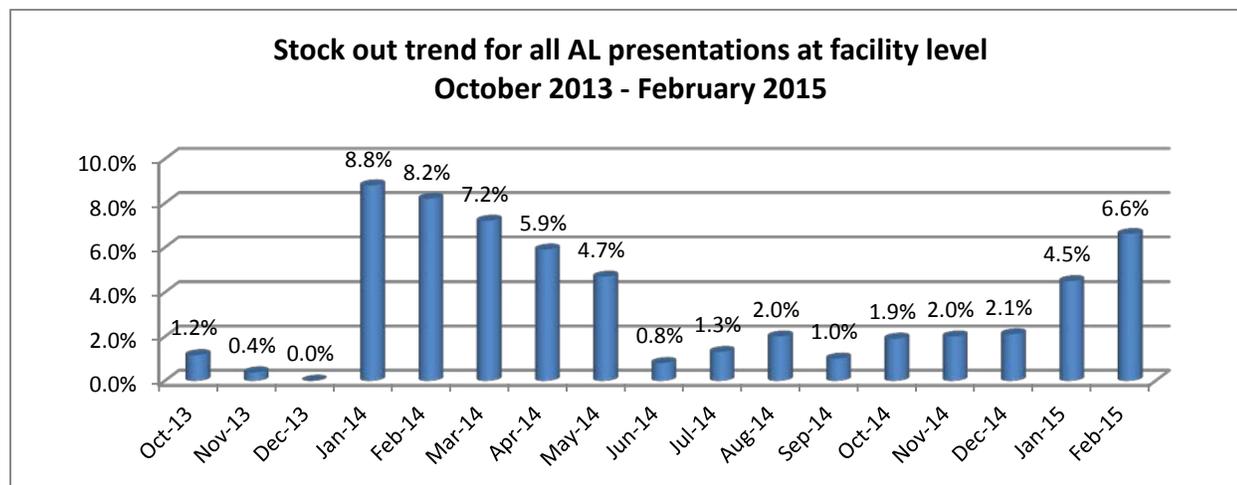
Malawi

In October 2010, the project took responsibility for the storage and distribution to all health facilities for all USG-procured commodities for the public sector. With help from RTT Intelligent Logistics (now called Imperial Health Sciences [IHS]) and Cargo Management Logistics (delivery services), the project developed and rolled out the parallel supply chain (PSC), which was fully operational as of December 2010. Currently, the PSC is managing the storage and distribution of U.S.-government-supplied malaria and family planning commodities. In the past the PSC also managed malaria commodities financed through the Global Fund and essential medicine kits.

The country has had constant availability of stock at central level during the reporting period with the months of stock (MOS) ranging from 1.2 to 5.1 for selected presentations. Although some facilities experienced stock imbalances, the overall facility stock status over the period was mostly within the established minimum-maximum levels of 1-3 MOS for service delivery points.

The stockout rate for all AL presentations increased from an average of 2% during Q1 to 5.6% during Q2, reaching a maximum of 6.6% in February 2015. The second quarter is peak malaria season in Malawi, which increases consumption of AL and contributes to the higher stockout rates.

Figure 11. Facility Stock-out Trend of All AL from October 2013 to February 2015 (Malawi)



The facility reporting rate for malaria products averaged 92% during the reporting period reaching a high of 95% in September, October, and November 2014. This performance has been a result of proactive data collection efforts and supportive supervision by the Ministry of Health with support from the project and other partners. As a result of this improved reporting, more data have been available for use in making better informed commodity distribution decisions.

Mozambique

Project staff participated in the National Supply Chain Assessment (NSCA) carried out by SCMS in every province November 23 to December 5, 2014. A total of 97 locations (66 Service Delivery Points (SDPs) and 31 provincial and district depots) were included in the assessment. Project staff responsible for data collection took advantage of the visits to facilities in each level to also collect end-use verification data. NSCA results will be available in April 2015.

Nigeria

In collaboration with the NMEP, Global Fund/World Bank, and State Ministries of Health, the project supported the implementation of the LLINs mass replacement campaigns in Bauchi, Kebbi and Nasarawa states. Routine distribution of LLINs through the Ante and Post Natal Clinics, schools and community directed distribution was also carried out. At the request of PMI USAID Nigeria Mission, the project delivered 21,320 LLINs for distribution to Internally Displaced Persons (IDPs) as a result of insurgents/communal conflicts in North East and Middle Belt Regions of Nigeria.

South Sudan

The project continues to work with the World Food Program (WFP), National and State Ministry of Health, Implementing Partners (IP) and Lead NGOs working on the ground to distribute the EMF anti-malaria medicines and test kits to the County Health Department (CHD) medical stores in the three conflict-affected states of South Sudan, Jonglei, Upper Nile, and Unity. As a result of this extensive coordination with all stakeholders, the project managed to distribute anti-malaria commodities to beneficiaries in the three states.

Rwanda Campaign Delivers 1.35 million LLINs to Communities

In January 2015 the project, together with the Medical Procurement and Production Division (MPPD) and Malaria and Other Parasitic Diseases Division (MOPDD) of Rwanda laid out a plan for the receipt and distribution of 1.4 million PMI-procured LLINs to the community level. To move the nets to the last mile, the LLINs first had to be transported from the central warehouse to the health facilities. As such, the project developed and floated an RFP, evaluating eleven proposals and selecting the technically most-sound one. On March 11, 2015, the distribution began. However because of the urgency expressed by the Ministry of Health, the distribution company, in collaboration with MPPD and with support from the USAID | DELIVER PROJECT, accelerated the execution and finished the distribution in 11 working days, successfully distributing 1.35 million LLINs to **13** high malaria endemic districts and **157** health centers.



Photo Credit: USAID | DELIVER PROJECT, 2015.

The United States Chief of Mission to Rwanda presents an LLIN to a member of the community.

To distribute the LLINs from the health centers to the community level, the project and MOPDD developed a concept note that outlined the community level distribution: number of participants, trainings, distribution plans, and costs. Ultimately, the project hired **26** district coordinators, **13** senior coordinators, and **one** overall coordinator, who organized and oversaw the LLIN distribution in the community.

On March 30, 2015, the USAID|DELIVER PROJECT supported the inauguration of the LLIN distribution campaign. Held in Bugesera District at the Gashora Health Center in the Eastern province, the Minister of State in charge of primary Health care in the Ministry of Health and the provincial governor, among other dignitaries, represented the Government of Rwanda, while the US Deputy Chief of Mission, the USAID Deputy Mission Director, and other US government implementing partners rounded out the malaria partnership. The LLIN community distribution ended on April 3, 2015.

Tanzania

The project facilitated a distribution optimization exercise for the Medical Stores Department (MSD) in Mtwara Region with an objective of generating optimized routes required for improved service and reduced costs for MSD and their customers. Initial findings from the exercise indicate a reduction in fuel costs from ~\$11,111/quarter to \$4,333/quarter. The number of days for delivery routes (and associated per-diems) also reduced substantially by 3-4 days in certain districts. The project also began the design of a results based financing (RBF) scheme aimed at improving performance in a number of areas including order fulfillment, on time delivery, fleet efficiency utilization and inventory management.

Zambia

The project continued supporting the MOH in the rollout of the Essential Medicines Logistics Improvement Program (EMLIP) Hybrid System to health facilities in three provinces. Rollout trainings were completed for all health facilities serviced by the Southern, Eastern and Western Medical Stores Limited (MSL) regional hubs during this period. The project also conducted trainings in Central Province targeting the Saving Mothers Giving Lives-supported districts. The project also provided technical and material support to the National EMLIP Steering Committee to conduct the EMLIP Hybrid Assessment. The results of the assessment are still being reviewed by MOH and the final report will be shared once the Steering Committee approves it. Preliminary data shows stock availability of 18 indicator products at 87%.

Zimbabwe

When the pilot was rolled out in 2009, the Zimbabwe Informed Push (ZIP) brought supplies to more than 90 percent of facilities and significantly lowered stockout rates from over 30 percent to less than five percent. As a result, the Ministry of Health and Child Care (MOHCC) decided to roll out the ZIP system to all the country's ten provinces by the end of 2009 with significant support from GFATM Round 5 and partly from the USAID | DELIVER PROJECT. For the first time in many years, essential logistics data became available for decision-making, including quantification and redistribution of commodities.

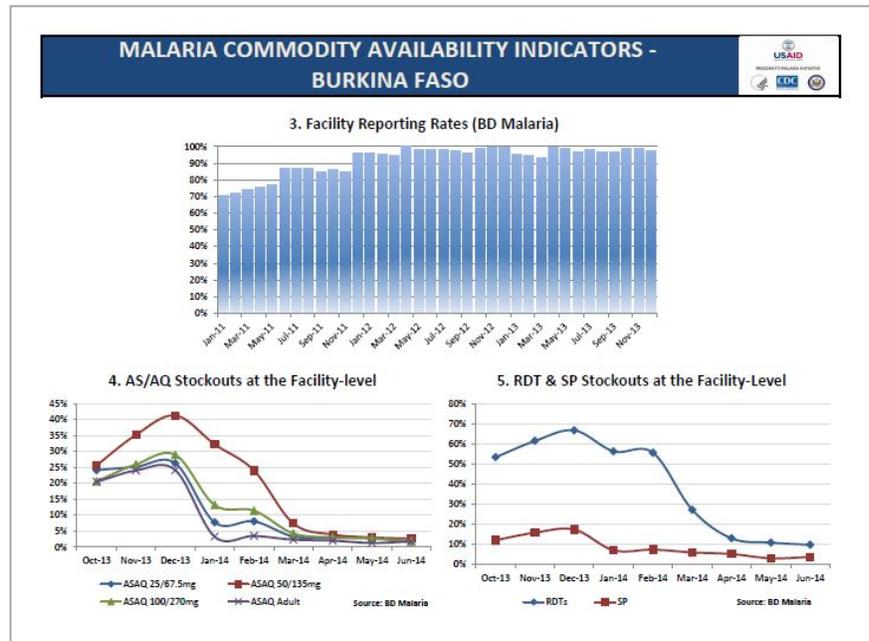
Beginning September 2010, the ZIP system was harmonized with the physical distribution of essential medicines and medical supplies included in Primary Health Care Packages (PHCP) procured by UNICEF with funding from a consortium of donors including DFID, EC and ECHO. The main partners currently supporting implementation of the ZIP/PHCP system are MOHCC, NatPharm, UNICEF, USAID through the USAID | DELIVER PROJECT and DFID through Crown Agents Zimbabwe.

Improve Visibility at All Levels of the Supply Chain from Central Down to the Facility and Community Health Worker Levels

Core-Funded Activities

Data Dashboards

As part of the project's data analysis and synthesis activities, "data dashboards" are available for each country on a semi-annual basis. The dashboards provide longitudinal data analysis from various data sources, presented in a concise, user-friendly, largely graphical data dashboard. Dashboards have been completed and updated for 10 countries: Burkina Faso, Ghana, Liberia, Malawi, Madagascar, Nigeria, Rwanda, Tanzania, Zambia, and Zimbabwe.



Sample data dashboard for Burkina Faso, 2014.

Country Stories

The Task Order is continuing to document the key activities accomplished for each country with the Country Stories series. Country stories are impact-oriented, data driven, and rely on country specific data sources which demonstrate the accomplishments of the project. Supply chain as well as malaria indicators are included to show the link between investments in supply chain and improvements in malaria prevention, diagnosis and treatments.

For example, in Malawi, since the project began implementing the parallel supply chain (PSC), facility-level stockout rates of malaria products have declined from a national average of around 85 percent to around 10 percent. In FY14, Country Stories were produced for Burkina Faso, Malawi, and Zambia. In the first half of FY15, the Task Order is developing 11 Country Stories, for each country with project presence.

Malawi
Improving Malaria Prevention, Diagnosis, and Treatment by Investing in Supply Chains: Support under the USAID | DELIVER PROJECT

From 2007-2011, USAID invested \$64.7 Million
to procure commodities and strengthen in-country supply chains

In this time
The USAID | DELIVER PROJECT has procured:

- 5.5 Million LLNs
- 6.2 Million tablets of SP
- 19.5 Million RDTs
- 36.2 Million ACTs

FIGURE 1: THE LOGISTICS CYCLE

End use verification activity: continuing support to countries and conducting quantitative analysis

The PMI EUV activity is a health facility survey that regularly captures information about the malaria supply chain and malaria diagnosis and treatment at public health facilities. The data generated by this activity provide visibility of important logistics and case management information that is otherwise unavailable to decisionmakers. The EUV is routinely implemented by the project in Burkina Faso, Ghana, Liberia, Malawi, Mozambique, Nigeria, Tanzania, Zambia, and Zimbabwe, and reports are available on a rolling basis.

Procurement Planning and Monitoring Report for malaria (PPMRm)

The Procurement Planning and Monitoring Report for malaria provides quarterly visibility of central-level stock levels of ACTs, SP, and RDTs in 22 countries and 11 Nigerian states. The report details stock levels in the country (if available, further levels of the supply chain beyond central may be included), regardless of the source of supply, e.g., GFATM or PMI. The report also covers key commodity security updates in-country, including reporting on finance and capital, procurement, logistics committees, etc., providing a detailed quarterly snapshot of activities and accomplishments in each country during the quarter. Data are reported from 22 countries and 11 Nigerian states, including data from eight countries on the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) project, as well as 12 countries supported by project staff. Two countries report through USAID bilateral projects.

The PPMRm is a valuable tool that can be used to address stockout situations or other critical commodity-related issues by providing key in-country stock status data for quick decision-making. In addition, countries may highlight particular actions or issues requiring attention, thus providing a further avenue for early detection of potential situations, and expediting a possible response.

Upgrades to the PPMRm have been concluded, including new features designed to make analysis of the data more intuitive and comprehensive. Data are now exportable in Excel format for all users, with expanded access to multiple countries for key individuals within the project. Additional upgrades include comprehensive graphs presenting variables such as stock on hand, months of stock, and stockouts. A graph has been developed which allows users to view future predicted SOH levels for individual countries based on the last average monthly consumption (AMC) for the country and upcoming shipment data from any/all donors. Users may customize graphs, providing analysis over time or at a single point in time, and with information presented by single country or multiple countries. As the use of the PPMRm continues, the project is incorporating suggestions from PMI and other users regarding methods for improving its functionality and usability.

Figures 12 and 13 show central-level stockouts of AL and AS/AQ, by calendar year, as reported through the PPMRm. When interpreting these data, it is important to note that central-level stockouts do not necessarily translate to stockouts at lower levels of the supply chain, where patients are actually seeking healthcare services and receiving medicines. A country with zero product at the central level may have pushed product out to meet country needs, leading to available stock at regional warehouses and health facilities. For a general snapshot of availability at lower levels of the supply chain, please see appendix F (facility stockout rates).

USAID | DELIVER PROJECT

PPMRm GRAPHS

Stockouts

by country, program, and product

Historical months of stock (MOS) and average monthly consumption (AMC)

Provides 8 quarters of historical MOS and AMC data, starting with most recent quarter

Future MOS

Uses AMC and shipment data to show potential future stock requirements

Figure 12. Number of Countries and Nigerian States Reporting Stockouts of AL Products

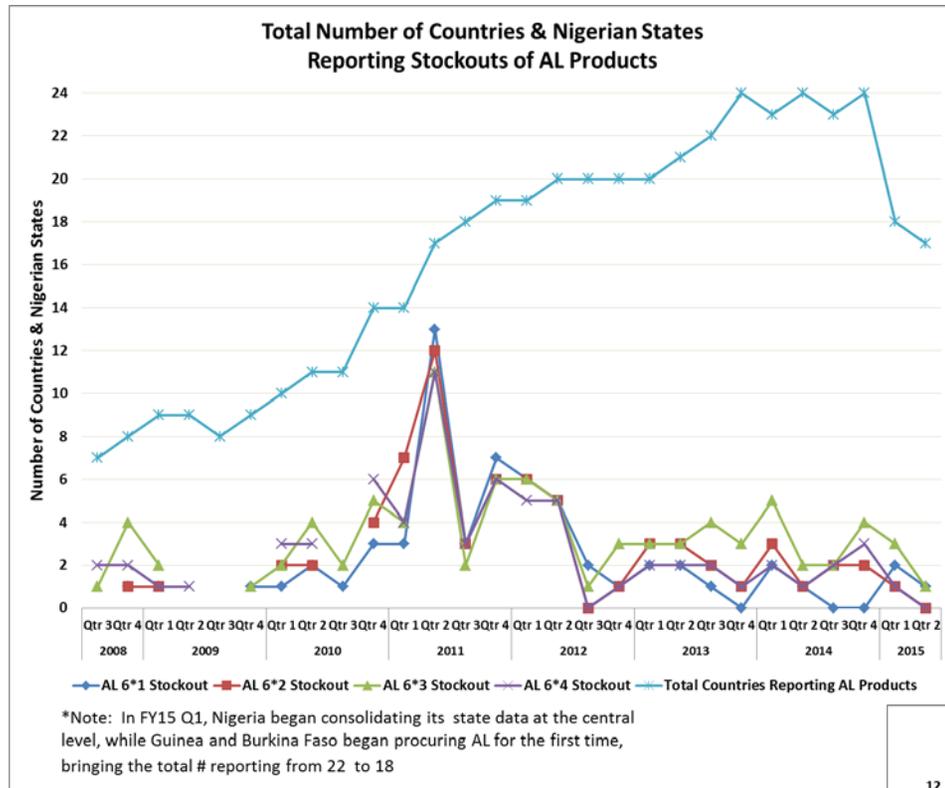
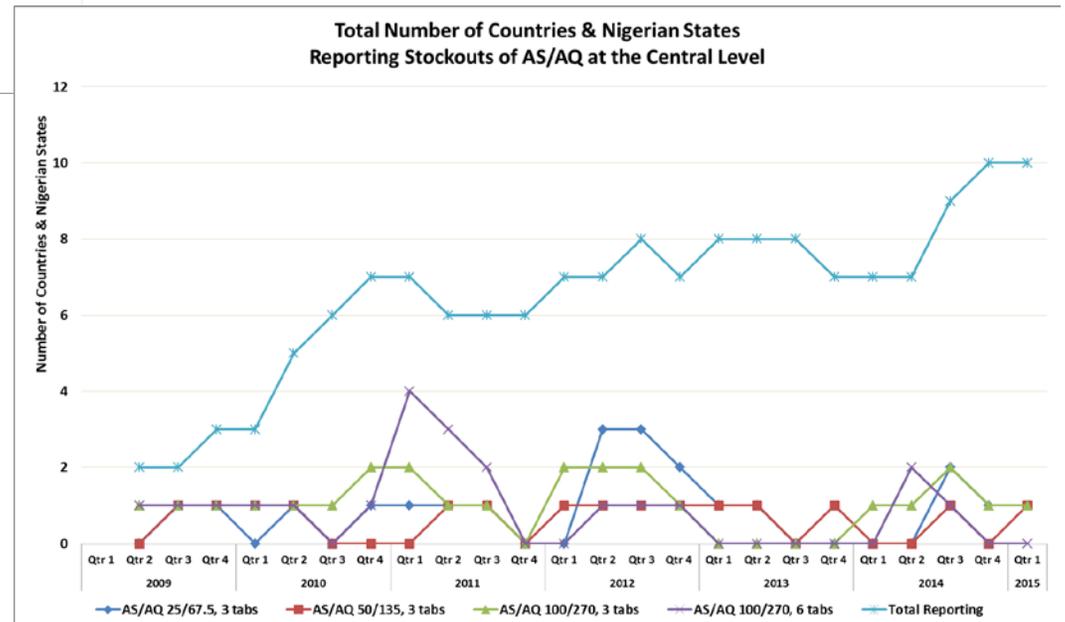


Figure 13. Number of Countries and Nigerian States Reporting Stockouts of AS/AQ



For AL, the percentage of countries (and Nigerian states) stocked out reached a high at the start of 2011, with significantly reduced central-level stockouts reported from mid-2012 onward. Figures 14 and 15 show the number of countries with more than three months of stock at the central level for AL and FDC AS/AQ, by calendar year, as reported through the PPMRm. For AL, the figures illustrate a general upward trend, following a low point at the start of 2011. With the exception of a dip during 2012, AS/AQ has also experienced a general increase overall since 2011.

Figure 14. Number of Countries and Nigerian States with More Than Three Months of AL

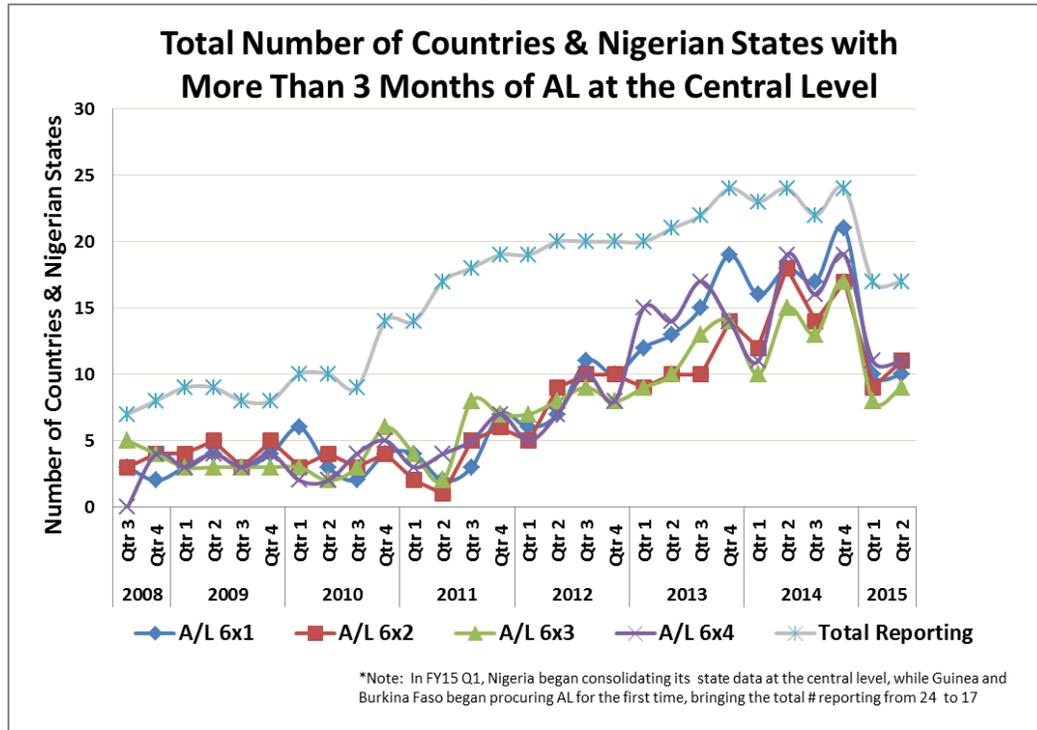
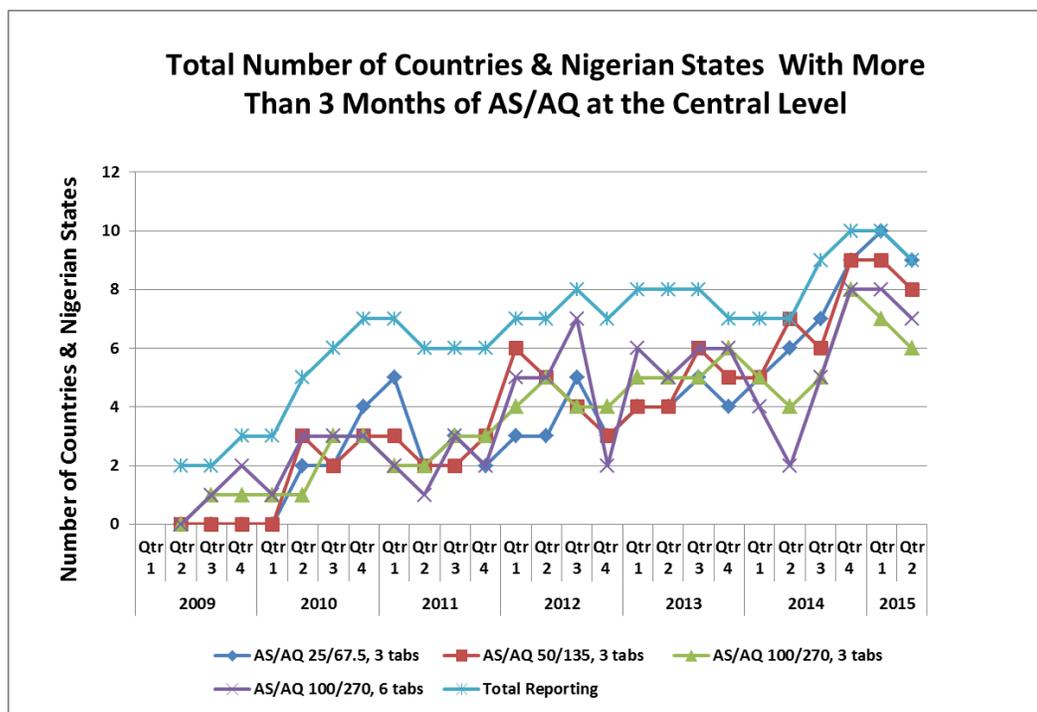


Figure 15. Number of Countries and Nigerian States with More Than Three Months of AS/AQ



Country Highlights

Burkina Faso

The project has been supporting a pilot of the CommCare mobile phone application to improve malaria data reporting and case management at the community level catchment of one health facility in Kaya District since May 2014. When fully implemented, the platform will help to improve data reporting between community health workers and health facilities, and to ensure that stock of vital malaria commodities is continuously available at the community level. In March, the project met with the NMCP new coordinator and his staff to provide an update and forum for discussion on the CommCare pilot. A key takeaway from the discussion was to evaluate the pilot and make available an assessment report demonstrating the difficulties encountered and the suggested recommendations to help community health workers succeed at using CommCare at the community level. The project together with NMCP will continue monitoring this pilot through May 2015, when this assessment will be conducted and findings shared with NMCP and partners, to arrive at a decision regarding the way forward.

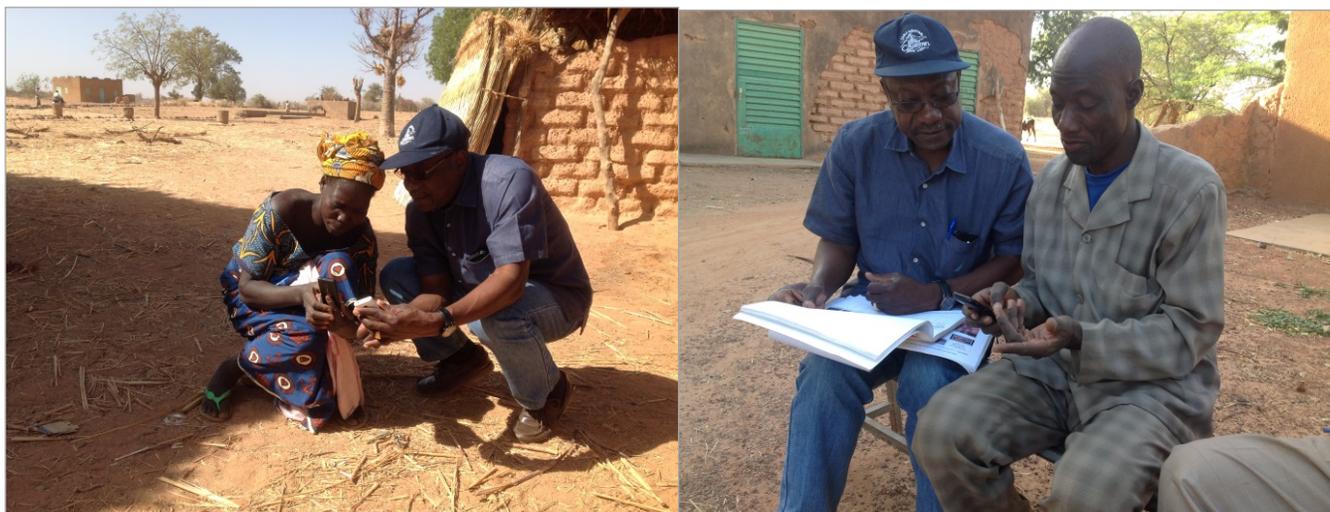


Photo Credit: USAID | DELIVER PROJECT, 2015.

Parfait Edah, Country Director of the USAID | DELIVER PROJECT in Burkina Faso, assists community health workers (CHWs) to submit monthly reports using their mobile phone with the CommCare application.

Malawi

The Parallel Supply Chain (PSC) has continued to conduct 100% on-time delivery since 2012. The project retained 100% of the signed proofs of delivery (PODs) with specific batch numbers for the commodities distributed to enhance commodity tracking. HTSS, with support from the project, also continued to produce and share with stakeholders various reports such as the National Monthly LMIS Inventory Performance reports. The other reports include the monthly stock status reports, distribution schedules, distribution updates, and reconciliations of the distribution list against PODs. The average reporting rate from October 2014 to March 2015 was 89.5%, reaching a high in October and November 2014, of 95%.

Nigeria

The project supported the NMEP in conducting its monthly malaria commodities stock verification exercise at the Federal Medical Store in Oshodi. Six months of project support to this activity has now strengthened the NMEP's ability to maintain inventory visibility and stock data accuracy to the point where this can now be done independently from the project.

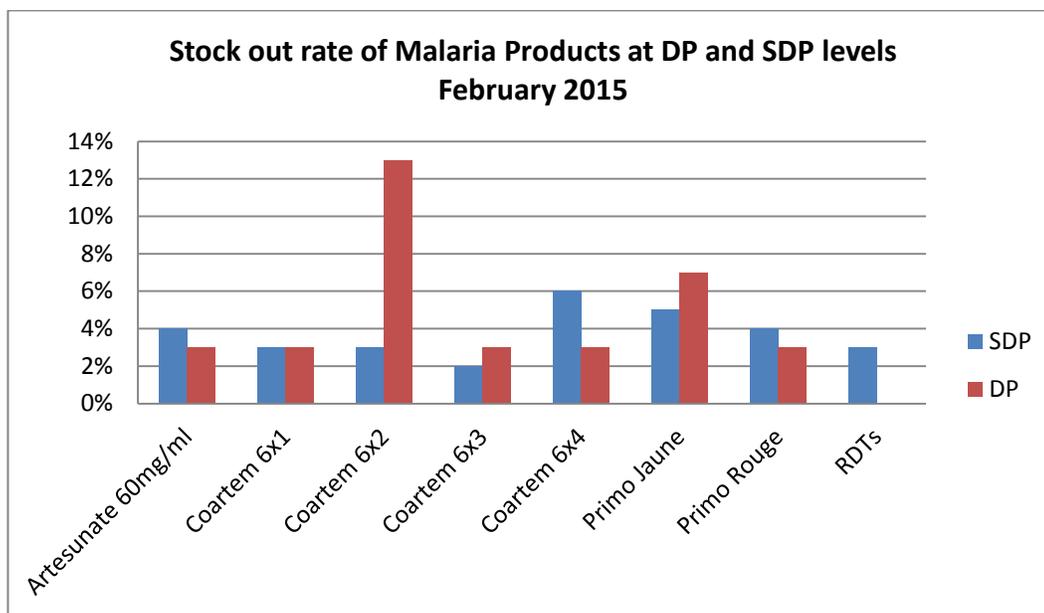
The project, through the PSM Advisor embedded in NMEP, provided technical assistance to NMEP/GF on the development of contractual frame work for Third Party Logistics (3PLs) for long haul and last mile distribution of malaria commodities. This support enabled the GF to approve the engagement of 3PLs and the final signing of the contracts by NMEP and the 3PLs, leading to the commencement of malaria commodities distribution. To

ensure best logistics practice in LLINs long haul receipt, documentation and storage, a day-long training and hands-on practice was conducted for 22 participants from the 11 PMI focus states. The outcome of the training is evident in the smooth deliveries and documentation of 1,300,000 pieces of up country deliveries of routine LLINs to 11 PMI focus states.

Rwanda

The February 2015 LMIS reports show marked improvements in stockout rates. As part of routine data collection, the USAID | DELIVER PROJECT received the February monthly reports from 529 health facilities and 30 districts pharmacies. The reporting rate for malaria commodities was 89.21% at health facilities level and 100% at district pharmacies level. Figure 16 below shows the stockout rates reported in SDPs and DPs in February 2015 for malaria commodities.

Figure 16. Stockout Rate for Malaria Commodities, February 2015 - Rwanda



Tanzania

In line with USAID | Tanzania’s focus on improving data use for health information systems strengthening, the project completed the rollout of the eLMIS to improve logistics data visibility at all levels of Tanzania’s health system. The eLMIS was also implemented in all 10 districts of Zanzibar. The eLMIS is already enhancing the performance of various logistics systems, including the Integrated Logistics System (ILS) and Zanzibar Integrated Logistics System (ZILS) by increasing data visibility to support targeted supply chain decision making. Reporting rates in Zanzibar for the past two reporting periods have been 100% while those in the mainland exceeded 90%.

Zambia

The project successfully supported the MOH to rollout the electronic Logistics Management Information System (eLMIS) Central Version to MSL, Churches Health Association of Zambia, and all provincial and district eLMIS users to enable these staff members to enter and approve facility orders (instead of submitting to MSL for data entry). These participants were also trained on the use of data from the system for key logistics supervision and decision making, as the system offers visibility at all levels of the supply chain. Migration from Supply Chain Manager (SCMgr) has since started and all data will now be entered in eLMIS Central Edition.

Strengthen the Accountability of In-Country Supply Chains That Manage Malaria Products

Country Highlights

Liberia

In Liberia, coverage by LLINs has historically only been obtained by mass campaign distribution, the last occurring in 2012. In collaboration with the NMCP and supply chain management unit (SCMU) of Liberia, the project finalized roll-out plans for a country-wide routine LLIN distribution through ANC clinics. Following a plan developed in July 2014, the distribution covers all health facilities, public and private, providing ANC or institutional delivery (ID) services in the country. This plan for routine, continuous distribution of LLINs to pregnant women at both their first ANC visit, and facility delivery, targets these high-risk populations, aiding efforts to provide a consistent source of protection throughout the year.

Efforts during the reporting period have concentrated on positioning the LLINs in the counties where, despite advance planning, storage has been compromised by the large number of personal protective equipment (PPEs) deployed to county depots in response to the Ebola epidemic. To prepare for distribution, a one-day planning and training-of-trainers meeting is scheduled for the first week of April for participants from key stakeholders and members of the teams who will conduct the county level roll-out. The roll-out plans include teams visiting each county, conducting one-day training, and implementing the last mile distribution of the nets.

Malawi

In January, Malawi experienced severe flooding which disrupted the routine distribution of commodities through the PSC. Half of the country, 15 of 28 districts, was affected, including the two hardest hit districts, Nsanje and Chikwawa. In these districts, a handful of facilities located on the Shire River East bank were completely cut off when bridges were washed away. Project vehicles were able to deliver commodities after the Malawi Defense Forces (MDF) set up a temporary bridge to allow transport of emergency relief.



Rescue workers attempt to help residents in the Nsanje district of Malawi.

Photo Credit: Malawi Voice, 2015.

The MOH/National Malaria Control Program and District Health Offices (DHOs) instructed the project to leave commodities at the districts where health facilities could not be reached to be airlifted to the facilities by MDF helicopters along with other emergency supplies. The project maintained close communication with DHOs on the road conditions in each district to be able to re-direct trucks carrying commodities. The transport sub-contractor was able to respond by shifting to the use of smaller 4 X 4 vehicles when needed.

Despite these extreme conditions, the January distribution was completed on time and the project was able to distribute to all the health facilities in these hard hit districts. Only five facilities on the distribution list for January ended up having their commodities left at the District Health Office.

The project continued to conduct spot checks during and after distributions to ensure that commodities are being distributed according to schedule to the intended facilities. There was 100% compliance by Cargo Management Logistics and Imperial Health Sciences, the project's distribution and warehousing subcontractors, respectively.

Nigeria

Two cycles of Monitoring and Supportive Supervisory Visits (MSV) were conducted in 221 health facilities across 58 local government areas (LGAs) in 11 PMI focus states using the national toolkit. During the two cycles of MSV, it was observed that 90% of the health facilities have trained staff in inventory management, while 56% have an SOP that can be readily accessible in the stores. The health facility personnel were provided with on-the-job training and technical assistance to improve inventory management, storage practices and other weak areas observed during the visits.

The project supported and participated in the National Supply Chain Assessment of all health commodities in 252 HFs, state Central Medical Stores and Regional warehouses across 12 states. A draft report is ready, which has been shared with key stakeholders, and is awaiting finalization in the coming months. The following lessons were learned from the activity: The assessment was cross-sectoral and covered different program areas, therefore it was important to have the MOH actively buy into and drive the process and coordinate stakeholders, with additional TA from the project. In addition, it was critical to provide sufficient information about the assessment, the benefit to country programs, and how this work feeds into the overall plans of the Government of Nigeria. Finally, utilizing a project management team led by the MOH for planning the assessment worked well.

Rwanda

In collaboration with the MOPDD, the project conducted the annual physical inventory of malaria commodities December 1-12, 2014. Two teams of data collectors conducted the physical inventory, capturing stock-on-hand data of malaria commodities for the 580 facilities they visited, including district pharmacies, district hospitals, and health centers. Data were also collected on consumption for the previous three months (September, October and November 2014), stockouts, and drugs expired in 2014. Almost all of the targeted facilities (580 out of 586 or about 99%) were visited.

Subsequently, the MOPDD held a data analysis workshop, which the project supported technically and financially. The goals of the workshop were to clean and analyze the data collected during the physical inventory exercise. Technical staff from both the project and the malaria program attended the workshop and organized the database to ensure that all data and comments from the physical inventory were captured appropriately. The final report is being drafted by the MOPDD, and it will be shared with the project once it's completed.

Tanzania

To enhance accountability within the respective supply chains of Mainland Tanzania and Zanzibar, the project continued its advocacy for and support of the supply chain strategic plans that were implemented in the last fiscal year. In the Pharmaceutical Sector Action Plan 2020 and the Zanzibar Supply Chain Action Plan 2014-2017, the improvement of existing oversight and coordination mechanisms were highlighted as key strategies to pursue in an effort to strengthen governance and accountability in addition to creating transparency in terms of political and financial commitments for the pharmaceutical sector. Operationalization of existing governance and accountability systems at council and health facility levels; establishing two-way service/performance agreements between MSD, CMS and districts; and the inclusion of pharmaceutical management criteria in a results based financing scheme at the facility level and MSD, are all key interventions that the project has begun to embark on in this fiscal year.

In collaboration with SCMS, the project has also facilitated the roll out of the mentoring tool kit for best practices in health commodities management and governance to five districts. The intervention is in response to a number of challenges brought forth in the joint health sector review meetings including frequent stockouts, inadequate district funding, poor coordination of supply chain activities and inadequate human resource capacity in medicines management and governance.

South Sudan

The project in collaboration with MOH, USAID and other partners organized an EMFTWG. The EMFTWG is a critical forum for bringing partners and stakeholders together to share information regarding EMF and ensure visibility into the supply chain process. The project provides updates on the status of import verification and tax exemption for incoming shipments, anti-malaria kits pipeline information and in country distribution of anti-malaria medicines and test kits. Chaired by the MOH, the EMFTWG is a forum to share supply chain information and solicits assistance from various parties, as needed, to ensure seamless distribution of EMF commodities to the CHD level. USAID, MOH, SIAPS, the implementing partners (Interchurch Medical Assistance, Health Pooled Fund & the Integrated Service Delivery Project) are members of the EMFTWG.

Zambia

In the last six months, the project has supported the MOH and the NMCC in conducting joint monitoring supportive supervisory visits to health facilities in the supply chain. The visits were targeted so that facility staff are able to effectively use the logistics system, thus ensuring malaria commodities are available at the facility level. The visits included a review of LMIS forms and commodity management to establish if facilities are stocking according to the established minimum and maximum levels. Facilities found to have challenges are provided with the necessary support to improve their system performance by conducting on-job-training. Any staff lacking logistics management skills are recommended to participate in upcoming trainings. A total of 388 monitoring and supportive visits were conducted during this period.



Malaria diagnostic kits sit on the counter in a clinic of Lichinga, Niassa, Mozambique.

Photo Credit: Arturo Sanabria for USAID | DELIVER PROJECT, 2014.

Regional Development Mission Asia (RDMA)

Cambodia

In close coordination with partners, the USAID | DELIVER PROJECT has worked to scale up dissemination and sharing of commodity information among malaria partners in Cambodia. With a growing familiarity of the information available in the PPMRM, partners are leveraging this data to coordinate in country, cover unexpected gaps, and ensure that commodities are available when needed across the public and private sectors.

To help build awareness about quantification as a critical supply chain function, the project conducted a two day Quantification Overview Workshop for the government and NGO partners to introduce a standardized quantification methodology for malaria commodities. This workshop functioned as a sensitization at the national level of what a coordinated forecasting and supply planning exercise would look like. The first day focused on forecasting methods, data sources and challenges, and the second day on the key elements and best practices for supply planning. The workshop highlighted the need to have many voices involved to help make the most accurate assumptions, and to ensure that there is buy in to both the process and the outputs of the quantification.

With the positive response to the Quantification Workshop, the project has been requested to provide quantification support to Cambodia and plans to hold a full National Quantification Workshop prior to project close out. A comprehensive quantification exercise would provide a good foundation that could be built on by the follow on project or partners in Cambodia, and would be strategically timed as the country moves towards a five year Malaria Elimination Strategy.

Laos

The project continues its support to the Centre for Malaria, Parasitology and Entomology (CMPE) over the last six months, including technical assistance and commodity support. At the end of 2014, the international consultant formerly supporting project work in Laos transitioned to a new position in the region. In February, at the request of the USAID Representative and partners, the project hired a national consultant to continue the work started by the international consultant. The new consultant has seamlessly stepped into the position and continues to facilitate collaboration and coordination between CMPE, donors and partners.

With the advantage of the embedded technical assistance in CMPE, the project continues to be engaged in a wide variety of activities. With the support of the national consultant, supply chain management tools developed by the international consultant are being translated and more broadly disseminated to provincial and district levels.

To date, the Supervision and Commodity Distribution Plan and Report, a Provincial Quantification tool, and Provincial LMIS feedback form are all in the process of being finalized or disseminated. The project has also continued to support the development of various proposals for the Global Fund (GF), as well as participation and presentation at WHO Emergency Response to Artemisinin Resistance (ERAR) workshops, Procurement and Supply Management (PSM) team meetings, and participation in pre elimination workshops.

In addition to the embedded technical assistance, the project has supported the country with multiple commodity procurements throughout the year. Many of these procurements are just now arriving in the country with more scheduled in the coming months. The project has procured LLINs, ACTs, RDTs, Latex Gloves and Safety Boxes for CMPE in Laos. Of all the PMI supported countries in the region, the project continues to have the most consistent engagement with the national malaria program in Laos and looks forward to continuing this support.

Bridge the Gap between NMCPs and Supply Chain Operators (e.g., Central Medical Stores) to Improve Core Supply Chain Functions

Country Highlights

Quantification Activities

In almost all project countries, the project supports routine quantifications and quantification updates. Quantifications are a key activity that brings NMCPs and CMS together to review available data, make necessary adjustments, agree on assumptions, and develop a forecast and supply plan designed to keep the program between minimum and maximum stock levels.

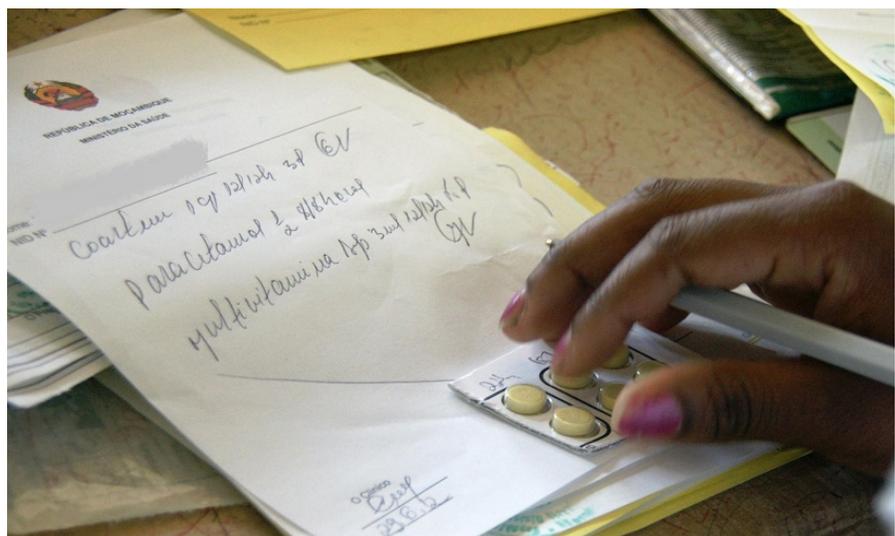
Ghana

The USAID | DELIVER PROJECT collaborated with the national quantification team and other in-country stakeholders including the NMCP to complete the 2015 annual quantification for malaria commodities. The exercise resulted in a three-year (2015-2017) forecast of malaria commodity requirements and two-year (2015-2016) supply plan for the delivery of commodities. The output of the quantification will be used by the Ministry of Health (MOH) and NMCP/Ghana Health Service (GHS) to program resource allocations and advise country shipments within the periods specified. Following the destruction of commodities at the Central Medical Store (CMS) due to a fire, the project had earlier assisted the NMCP to conduct an emergency quantification to determine emergency commodity requirements for malaria. This emergency quantification and advocacy for resources was necessary to ensure an uninterrupted delivery of health services at service delivery points across the country, while a full a scale quantification was to be conducted.

Additionally, the project supported the NMCP and the Family Health Division of the GHS to conduct a national quantification of commodities for the Integrated Community Case Management (iCCM) of malaria, diarrhea and acute respiratory tract infections. The exercise forecasted commodity requirement from 2015 to 2018 and produced a supply plan for 2015 to 2016. Commodities covered during the exercise included AS/AQ 25mg/67.5mg (2-11 months), AS/AQ 50mg/150mg (1-5 years), AL20mg/120mg 1x6 (0-3 years), AL20mg/120mg 2x6 (3-8 years), ORS, zinc tablets, amoxicillin suspension, amoxicillin tablets, malaria rapid diagnostic test kits and rectal artesunate. The report will inform advocacy for donor support for the iCCM program.

Malawi

The project supported the annual, national quantification exercise in March 2015. LMIS data on malaria commodities was readily available as these data are shared by HTSS monthly. HMIS data was also available from the Central Monitoring and Evaluation Division (CMED) of the MOH. The project



A health provider in Natite, Mozambique, writes up the drug dosage for uncomplicated malaria.

Photo Credit: Arturo Sanabria for USAID | DELIVER PROJECT, 2014

noted high participant commitment and engagement throughout the week of the quantification workshop which contributed to the quality of the final deliverables. Participants were able to quickly identify missing data variables on patient data and come to agreement not to include approaches involving such data (e.g. number of malaria cases by age/ weight category as per treatment guidelines).

Nigeria

The project supported the NMEP in the coordination of the 2015 national malaria commodities quantification exercise across the six geopolitical zones. The state specific forecast for malaria commodities has been aggregated to define the 2015 – 2016 national malaria commodities needs and the draft quantification report has been shared with all stakeholders.

Zambia

The project, in collaboration with MOH/MCDMCH/NMCC and stakeholders, provided technical and material support for the 2015 - 2016 Annual National Forecasting and Quantification meeting for anti-malarial commodities. Prior to the meeting, a core forecasting and quantification team was constituted and the project conducted pre-quantification orientation and data review meetings with MOH/NMCC and other stakeholders with the aim to build capacity in MOH/NMCC in forecasting and quantification.

The output from the quantification meeting was used as the basis to formulate the 2015 supply plans and to establish the funding gap for commodity procurements. The gap analysis was used by MOH for resource mobilization to procure commodities and avoid stockouts.

Zimbabwe

MOHCC DPS, with support from the project, conducted the annual national quantification in February 2015. The malaria medicines quantified include: AL, artesunate amodiaquine, primaquine tablets, clindamycin capsules, artesunate injection and suppositories in line with the new malaria treatment policy. The supply plans inform procurements funded by the MOHCC and all partners including PMI and GFATM. RDTs, artemether/lumefantrine combinations, AS/AQ combinations, artesunate injection and suppositories are adequately funded by PMI and the GFATM NFM in 2015 and 2016. Funding gaps were identified for primaquine tablets and clindamycin capsules in 2015 and 2016. The MOHCC presented the results of the quantification including funding gaps to all stakeholders including funding partners at the close of the quantification week, and during subsequent partner meetings. The Ministry has also followed up with funding partners individually, sharing the supply plan and soliciting support to cover identified gaps. The procurement of primaquine and clindamycin was also highlighted by the project as potential areas for support during the recent MOP16 visit.

Coordination and Collaboration Groups

Coordination and collaboration groups, or supply chain technical working groups (TWGs), are another key activity in which both program staff and supply chain staff participate. These groups are a regular forum that brings together relevant stakeholders with the explicit purpose of coordination and collaboration in all aspects of supply chain decisionmaking and management. Such a forum is instrumental in effectively managing commodity-related resources across the programs and ensuring product availability. At these forums, information on stock status is shared, status of planned shipments is discussed, quantification results are presented, resources are mobilized, upcoming supply chain activities are highlighted, technical capacity building needs are identified, and solutions for common supply bottlenecks or challenges are developed.

Mozambique

In early March 2015, the Field Support Team conducted a five-day quarterly meeting in Maputo with the RLAs and the ANC LLINs advisors. Participants agreed on the need to build the supply chain management skills of provincial warehouse staff and provincial HIV/TB/malaria coordinators to reduce their dependence on the RLAs to resolve supply chain issues. Quarterly meeting participants also discuss the need to train provincial,

district, and health facility level staff in the 3rd Edition SOPs, and in response to specific provincial needs and weaknesses such as the ability to correctly fill out requisition forms. SOP training will focus on Inventory Control, Warehousing and Storage, Distribution, and Supply Chain Monitoring and Evaluation.

Zimbabwe

The project participated in the quarterly procurement and supplies management (PSM) sub-committee meetings. The PSM sub-committee has the overall mandate to coordinate procurement and supply management activities of various partners supporting the Ministry of Health and Child care malaria, TB, HIV and other programs. It integrates the coordination functions of the former MMSCT and the Procurement and Logistics Sub-Committee of the HIV partnership. As the PSM sub-committee was formed fairly recently, it is too early to make an objective assessment of the effectiveness of the harmonised coordination body compared to the former arrangement. The harmonisation has, however, reduced some redundancy considering it was the same supply chain funding and implementing partners attending both meetings.

Logistics Management Units

Key to building sustainable logistics systems is recognition of and investments in the human resources and the necessary management structures required to effectively and efficiently manage these systems. An LMU is a management structure responsible for organizing, monitoring, and supporting all supply chain activities within the logistics system. Through a pattern of continuous improvement, the LMU identifies supply chain problems, develops interventions to address those problems, and implements those interventions.

Madagascar

In December, the project assisted the Ministry of Public Health to design a LMU. The Ministry of Public Health recognizes that it is essential to have an LMU which will organize, monitor, and support all supply chain activities within the country. The Directorate of Pharmacy, Laboratories and Traditional Medicine (DPLMT) needs organizational and logistical support to strengthen its efforts to make available and accessible health products to users, to which the establishment of an LMU would contribute.

Nigeria

The project supported and provided technical assistance to LGA officers to retrieve, review and aggregate bimonthly logistics data in Akwa Ibom, Oyo and Kogi states. This new strategy was implemented through the newly established LMCU. In Oyo state, data were collected from all health facilities irrespective of donor, resulting in an improved state wide logistics data report rate from 18% to 93%.

The logistics management coordination union (LMCU), the focal point for attracting dedicated supply chain resources has been established in 9 PMI focus states in collaboration with SCMS and TO4 USAID | DELIVER PROJECT.

Tanzania

In collaboration with the MOHSW, the project is supporting the implementation of an LMU. This management structure is responsible for coordinating logistics management activities of different commodity categories under one unit. LMU staff will identify supply chain problems, develop solutions for those problems, and implement those interventions. The training and orientation of LMU staff began in earnest in October 2013. In January 2014, the project, in collaboration with the SCMS project, Procurement Services Section, and MSD conducted basic logistics training to a total of 23 participants comprising 15 MOHSW newly recruited LMU staff supported by GFATM and 8 newly recruited LMU staff supported by the project. Other phases of LMU training and orientation, which include intervention planning, quantification, supportive supervision, and quantification, were completed in February. Trained LMU staff will next be deployed to their assigned MSD zones.

In Zanzibar, an LMU was designed to promote supply chain sustainability and strengthens the commodity management capacity of the MOH and CMS. The LMU will aid in entrenching and building capacity in key supply chain activities— from planning, data use, coordination, performance management, and quantification—

within the MOH and CMS. In Mainland Tanzania, the project continued to support the functioning and development of the LMU, which conducted over 2000 supportive supervision visits.

After Systems Meet Performance Levels, Build Local Capacity to Sustain System Performance

Country Highlights

Democratic Republic of the Congo (DRC)

In November and December, the project facilitated two six-day trainings of supply chain management of health commodities for 19 participants from the central level and 17 participants from the provincial level who work for the NMCP, National Medical Supply (PNAM) public-private federation of drug stores (FEDECAME), and other national programs such as the Expanded Program on Immunization (EPI), Reproductive Health Program (PNRS), National Program for Combating Tuberculosis (PNT), and National Program for Combating HIV/AIDS (PNLS). Many improvements especially in the logistics management information system (LMIS) area are still needed. Lack of essential logistics data and low reporting rates persist throughout the system. A large portion of the training was dedicated to LMIS and inventory management, with the intention of supporting these improvements. Sessions were innovative in terms of sharing experiences and best practices among programs at the central and provincial levels.



Central level officials participate in a simulation exercise during the training in DRC.

The two most important outcomes of this training were the development of some key indicators for the monitoring and evaluation of the supply, which were used later by participants to formulate related action plans. On the post-training competency self-evaluation taken by 34 out of the 36, all participants indicated that they are able to determine months of stock at the central and lower levels of their supply chain; 29 out of 34 could describe health commodity security and the role of a logistic system in ensuring the latter, and 26 of the 34 could identify the main components of an LMIS, analyze an LMIS, and make recommendations for improvements of an LMIS (the remaining 8 out of 34 explained they could do this with limited assistance).

Photo Credit: USAID | DELIVER PROJECT, 2014

Ghana

Following efforts started in the previous year, the USAID | DELIVER PROJECT supported the MOH to formally launch the Ghana-specific guidelines for national quantification. The guidelines are a systematic, step-by-step approach to quantifying health commodity requirements and costs, with guidance on how to conduct quantification, disseminate the findings and update results with the relevant data. It also provides specific guidance on how to use the results of quantification to:

- Identify funding needs and gaps for procurement of the required commodities;
- Coordinate procurements and shipment delivery schedules to ensure a sustained and effective supply of commodities; and
- Implement a process for reviewing and updating the results of the quantification to maintain and improve the validity, accuracy, and usefulness of current and future quantifications.

Subsequently, the project developed a curriculum based on the guidelines and organized a training for members of the national quantification team and other stakeholders on the application of the guidelines. Twenty-one (21) personnel (13 males and 8 females) comprised of representatives from the MOH, GHS, the national health programs of the GHS and staff of the project who were trained, are now using their skills to assist in various national quantification exercises.

Pre-Service Training (PST) in Supply Chain Management (SCM)

As part of the MOH's efforts to introduce PST in SCM in Schools of Pharmacy nationwide, the project conducted a training of trainer's workshop for 13 lecturers of the University of Ghana (UG) - School of Pharmacy. The training equipped the lecturers with an understanding of the fundamentals of logistics management and commodity security to enable them to teach modules on health commodities supply chain to their students using a curriculum based on adult education theories and practices.

The UG-School of Pharmacy is expected to commence teaching supply chain modules in the current 2014/2015 academic year and join the two other schools of pharmacy in Ghana that are currently running SCM course as part of their curriculum. Additionally, the project supported the Nurses and Midwifery Council (NMC) and MOH to conduct Quality Assurance (QA) on the teaching and learning of SCM courses in 60 selected Nursing and Midwifery colleges across the country.

Findings from the exercise indicate a successful roll-out of the course in a majority (90%) of the institutions visited without any challenges or constraints. The institutions recommended continuous monitoring and regular communication of directives on the course by the NMC to ensure sustainability.

Liberia

In collaboration with the SCMU and the County Health Teams, the project has inaugurated county level Supply Chain Technical Working Groups (SCTWG) in Bong, Lofa, Margibi, Montserrado, and Nimba. The purpose of the SCTWGs is to support and strengthen county health team supply chain activities. Their activities include meeting regularly to identify key issues in supply chain performance and visibility. At the central level, the SCTWG meets every two weeks. In counties, the group meets once a month.

Malawi

The project conducted training in ACT Commodities Assessment for 39 health personnel of various cadres in November 2014, and also in End Use Verification for 19 health personnel in February 2015.

Nigeria

A total of 99 officers drawn from MAPS, TSHIP and 11 PMI focus states Ministry of Health personnel were trained on overview of supply chain management to enable them take the lead in the efficient management of malaria commodities, logistics data collection, collation and analysis in addition to effectively anchor the MSV activities at the states.

To further support capacity building, the project also conducted a human resource for supply chain management assessment which unearthed various interventions to improve human resources in mainland and Zanzibar.

Furthermore, the project continued its support to the Institute of Allied Health Sciences to integrate a supply chain module in the pre-service training. The curriculum now includes a separate course on supply chain management; as a result, the school produced their first graduates with supply chain skills.

Zambia

In addition, the project has provided targeted support to NMCC to increase their ability to manage central-level malaria commodities and ensure commodity security at facility level. The objective of this effort is to build capacity of the logistics officer and the malaria case management officer to be able to execute specific functions that promote commodity security. Apart from sending staff to a formal logistics and forecasting and quantification training, the project provided one-on-one sessions on pipeline management and focusing on monitoring central level stock status of malaria commodities, shipment tracking and procurement plan fulfilment monitoring. Other tasks include forecasting and quantification for malaria commodities and supply plan development. This also included conducting gap analysis to establish additional funding needs for unmet need. This also involved coaching NMCC staff in forecasting and quantification to build their capacity in data analysis in preparation for the forecast and facilitating the exercise.

Table 5. PMP Indicators for Objective 2, October 1, 2014 – March 31, 2015

Support Area	Operational Area	Indicator	Status
Monitoring of in-country supply chain performance	Providing information about in-country supply chain performance	Facility stockout rate: the % of facilities that had a stockout of a product expected to be provided or issued by that site on the day of the visit	See appendix F
		Country stockout rate: the % of countries with a stockout at the central warehouse(s) at the time of reporting	See appendix F
		Functioning LMIS: % of countries where an LMIS routinely collects and reports stock status data (i.e., stock on hand and consumption data) from all service delivery points in the country	7/12 = 58% For a full list of the countries and further explanation about the LMIS, see appendix F.
Short-term technical assistance (STTA)	Respond to STTA needs as per Mission request to strengthen in-country SCM for antimalarial commodities	Timely response to ad hoc TA needs: % of STTA trips per Mission/PMI Washington ad hoc request conducted on time	Total: 1/1* = 100% *RDMA travel
Long-term technical assistance	In-country supply chain strengthened or improved	Quantity of antimalarial commodities (LLINs, SP tablets, ACT treatments, RDTs) distributed in-country using funds obligated to USAID DELIVER PROJECT	Angola: -720,390 ACT treatments -1,156 RDTs -180 MMKs

Support Area	Operational Area	Indicator	Status
			<p>-2 Microscopes</p> <p>-600,000 LLINs</p> <p>Burundi:</p> <p>-368,900 LLINs routine distribution</p> <p>-4,507 sold through social marketing program</p> <p>Burkina Faso: N/A – The USAID-funded malaria commodities are distributed in country using government funds</p> <p>Cambodia: N/A</p> <p>DRC:</p> <p>-1,718,300 LLINs</p> <p>-1,744,155 ACT treatments</p> <p>-8,000,000 RDTs</p> <p>-10,560 Artesunate suppository 200mg</p> <p>-1,540,000 Quinine tablet 300mg</p> <p>Ghana:</p> <p>-3,657,457 ACT treatments</p> <p>-1,340,000 LLINs</p> <p>-2,700,000 RDTs</p> <p>-54,900 Rectal Artesunate</p> <p>-450,000 Art. Injectable</p> <p>Guinea:</p> <p>-560,094 RDTs</p> <p>-80,625 treatments AS/AQ (2 to 11 months)</p> <p>-209,275 treatments AS/AQ (1 to 5 years)</p> <p>-158,285 treatments AS/AQ (6 to 13 years)</p> <p>-77,050 treatments AS/AQ (14 years +)</p> <p>-16,750 Art. injectable</p> <p>-584,000 tablets SP</p> <p>-106,900 boxes of gloves</p> <p>Laos: N/A</p> <p>Liberia:</p> <p>-1,975,887 ACT Treatments</p> <p>-6,665,000 SP tablets</p>

Support Area	Operational Area	Indicator	Status
			<p>-398,270 RDTs</p> <p>Madagascar:</p> <p>-450,000 SP tablets</p> <p>-21,575 ACT treatments (2 to 11 months)</p> <p>-261,025 ACT treatments (1 to 5 years)</p> <p>-95,925 ACT treatments (6 to 13 years)</p> <p>-89,775 ACT treatments (14 years +)</p> <p>-1,956,171 RDTs</p> <p>-3,912,342 Gloves</p> <p>-23,000 LLINs</p> <p>Malawi:</p> <p>-2,453,760 ACT treatments</p> <p>-1,940,900 RDTs</p> <p>-1,835,000 SP tablets</p> <p>-3,876,600 Gloves</p> <p>-248,157 vials of Art. Injectable</p> <p>Mali:*</p> <p>- 1,350,000 LLINs</p> <p>- 400,000 Art. Inj.</p> <p>*Quantities for Mali represent shipments arrived only</p> <p>Mozambique:</p> <p>-1,162,675 LLINs</p> <p>-1,868,085 ACT treatments</p> <p>-3,843,875 RDTs</p> <p>Nigeria:</p> <p>-320,680 LLINs (Routine)</p> <p>- 6,687,329 LLINs (Campaigns)</p> <p>-3,845,700 SP tablets</p> <p>-9,458,994 ACTs</p> <p>-4,225 Art Injectable</p> <p>-2,319,975 RDTs</p> <p>Rwanda:</p>

Support Area	Operational Area	Indicator	Status
			-855,164 ACT treatments -64,216 Art. Injectable -195,480 RDTs -1,352,650 LLINs from Central level to Health Centers -1,382,050 LLINs from Health Centers to community South Sudan: -350,000 LLINS -2,179,610 ACT treatments -1,728,600 SP tablets -292,680 Artemether injection 20mg/ml, ampoule -146,340 Artemether injection 80mg/ml, ampoule -394,800 ampoule Quinine dihydrochloride inj 300mg/mL -1,637,000 Quinine sulphate 300mg film coated tablets -1,581,725 RDTs Tanzania: -1,335,450 ACT treatments -3,531,825 RDTs -50,000 LLIN's Uganda: N/A Zambia -1,755,870 ACTs (PMI) -1,290,600 ACTs (DFID) -120,000 Art Injectable (PMI) -4,000,000 RDTs (PMI) -3,500,000 RDTs (DFID) -1,065,000 LLINs (PMI) Zimbabwe :* -328,174 ACT treatments -623,978 RDTs -295,290 SP tablets -348,290 Quinine tablets -29,538 ampoules of Quinine injection

Support Area	Operational Area	Indicator	Status
			*Quantities for Zimbabwe are not 100% attributable to DELIVER
		% of countries receiving field support TA funds reporting on supply chain performance via EUV activity	9/12 = 75% Burkina Faso: yes DRC: no (implemented by SIAPS) Liberia: yes Ghana: yes Guinea: no (implemented by SIAPS) Madagascar: no Malawi: yes Mozambique: yes Nigeria: yes Rwanda: no South Sudan: no Tanzania: yes Zambia : yes Zimbabwe: yes For further explanation, see appendix F.
		Number of individuals trained in the SCM of malaria commodities	TOTAL: 3,948 Burkina Faso: 0 Cambodia: 18 DRC: 58 Ghana: 67 Guinea: 0 Laos: 6 Liberia: 0 Madagascar: 0 Malawi: 58 Mozambique: 0 Nigeria: 626 Rwanda: 30 South Sudan: 0 Tanzania: 2,058 Zambia: 1,027

Support Area	Operational Area	Indicator	Status
			Zimbabwe: 0
		% of countries with field support TA funds reporting central-level stock levels of select malaria products in quarterly stock monitoring reports (PPMRm)	12/14 = 86% Burkina Faso: yes DRC: yes Ghana: yes Laos: yes Liberia: yes Madagascar: no Malawi: yes Mozambique: yes Nigeria: yes RDMA: yes Rwanda: no Tanzania: yes Zambia : yes Zimbabwe: yes
		Functioning Coordination Committee: % of countries that have a logistics coordination mechanism in place that includes participation of NMCP and CMS (or their equivalents), with a meeting that takes place at a specifically appointed time (e.g., during a reporting quarter)	TOTAL: 15/17 = 88% Burkina Faso: yes Burma/Myanmar: no Cambodia: no DRC: yes Ghana: yes Guinea: yes Laos: yes Liberia: yes Madagascar: yes Malawi: yes Mozambique: yes Nigeria: yes Rwanda: yes South Sudan: yes Tanzania: yes Zambia: yes Zimbabwe: yes
		Available supply plans: % of countries that have developed supply plans for PMI-funded commodities	TOTAL: 13/17 = 76% Burkina Faso: yes Burma/Myanmar: no Cambodia: no DRC: no Ghana: yes

Support Area	Operational Area	Indicator	Status
			Guinea: yes Laos: yes Liberia: yes Madagascar: yes Malawi: yes Mozambique: yes Nigeria: yes Rwanda: yes South Sudan: no Tanzania: yes Zambia: yes Zimbabwe: yes
		Number of technical reports or tools developed to support malaria supply chain performance	TOTAL: 51 Burkina Faso: 3 Cambodia: 0 DRC: 12 Ghana: 3 Guinea: 0 Laos: 2 Liberia: 5 Madagascar: 1 Malawi: 3 Mozambique: 2 Nigeria: 3 Rwanda: 2 South Sudan: 3 Tanzania: 7 Zambia: 4 Zimbabwe: 1

Objective 3: Improve the Global Supply of Malaria Commodities

Strengthen International Collaboration

Support to the Roll Back Malaria Partnership

TO Malaria is an active member of the PSM WG, Malaria in Pregnancy Working Group (MIP WG), and the Vector Control Working Group (VCWG).

The PSM WG, was established by the Board in April 2007 to convene and coordinate partners to address Procurement and Supply Chain issues related to malaria control. It will meet in May to plan activities and share information across partners.

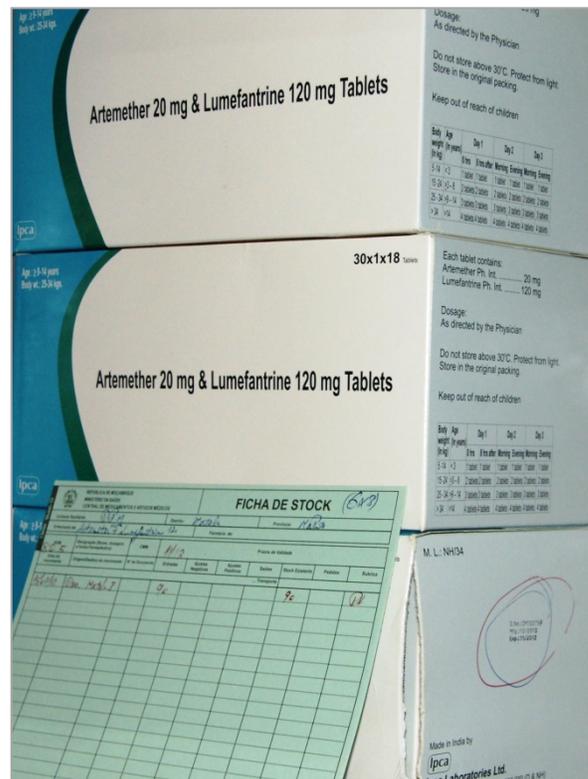
The project attended the VCWG Annual Meeting in January. The purpose of the VCWG is to align RBM partners on best practices to reach and maintain universal coverage with effective vector control interventions. The VCWG disseminates the normative and policy-setting guidelines of the World Health Organization (WHO) by helping to translate these norms and standards to international and country-level partners. The technical advisor focused his attendance there on the continuous distribution and net durability work stream meetings.

During the reporting period, TO Malaria also participated in a MIP WG meeting held during the Tropical Medicine conference in New Orleans. The project also participates in MIP WG conference calls.

Alliance for Malaria Prevention

As a partner in the Alliance for Malaria Prevention (AMP) the project collaborates with government agencies, private sector businesses, public sector organizations, faith-based organizations, and humanitarian organizations in supporting work to scale up LLIN ownership and use and build national capacity to sustain the fight against malaria. In January 2015 technical advisors from the US as well as Nigeria attended the AMP annual meeting which brings partners together to listen to, and share their collective efforts at contributing toward the support of countries in reaching their respective RBM targets through increased LLIN ownership and use.

At the AMP meeting the project's advisor from Nigeria presented on the level of effort required to operate LLIN campaigns there. The US-based advisor also provided an update to the Emerging Issues Work Group (EIWG). The EIWG provides support to AMP by identifying and addressing emergent issues related to scaling up LLIN ownership and use before, during, and after mass distribution campaigns. TO Malaria also participates in quarterly teleconferences of the EIWG.



A stock card for the antimalarial drug artemether/lumefantrine, at a health facility in Matola, Mozambique.

Photo Credit: Arturo Sanabria for USAID | DELIVER PROJECT, 2012

WHO/Global Malaria Program (GMP) Consultation on malaria RDT harmonization and implications for procurement recommendations

TO7 participated in the RDT harmonization consultation. Over the last two years, WHO/GMP in collaboration with RBM and other technical groups (Institute of Tropical Medicine and Antwerp) has been working on the comparability of malaria RDTs in terms of design, packaging, labelling, and instructions for use as well as the diagnostic procedures such as blood volume and buffer packaging. Efforts to harmonize malaria RDT formats available in the market will help contribute to cost reductions in the training of the health workers and will facilitate malaria RDT procurement. Standardizing RDT format and presentations could facilitate competitive procurement by limiting the need to sole source products. The working group has published a report (<http://www.rollbackmalaria.org/mechanisms/psmwg.html>) in December 2013. An amended version is also available in (<http://www.malariajournal.com/content/13/1/505>).

The objective of the meeting was to define which of the previous recommendation listed in the past publications will be included in the WHO malaria RDT procurement criteria requirements and how to implement these new harmonized specifications.

Conduct Analysis of Demand, Supply, and Pricing Issues Affecting the Global Market for Malaria Products

Analysis of Malaria Market

Task Order Malaria continues to analyze the malaria marketplace and based on the analysis adjusts its procurement strategy. Though the market for malaria commodities has seen many technical breakthroughs in the past five years, it has also been affected by instability and supply shortages which have had a direct impact on in-country programs. Analyses include LLIN vendor production capacity and anticipated demand, trends in commodity pricing, and vendor performance. The project also completed an analysis of SP. The project continues to update these analyses with current market information.

Table 6. PMP Indicators for Supporting Global Supply and Availability Initiatives

Operational Area	Indicators	Status
Support global and regional stakeholders/forums of SCM technical issues	Number of global and regional malaria initiatives with USAID DELIVER PROJECT technical participation	5 (AMP meeting, VCWG meeting, MIP WG meeting, MSF SMC meeting, WHO RDT Harmonization meeting)

Performance Monitoring

TO7 monitors performance using a set of indicators outlined in the PMP and detailed in the QA Surveillance Plan and Environmental Mitigation Monitoring Plan (EMMP). All indicators calculated for this reporting period are included in the relevant sections throughout this document. For additional information, see appendices A through K.

In addition to the PMP indicators, a set of deliverables have been agreed to during the work planning process for the fiscal year, including dates of submission. During the reporting period, the project routinely assessed the status of these deliverables at weekly TO7/USAID meetings, and provided regular updates to PMI/USAID.

Other less formal methods for performance monitoring and management are also in place, such as weekly TO7/USAID meetings and the distribution of an updated Current Actions Table, which outlines the current status of all TO7 procurements. During weekly meetings with USAID personnel and principal project staff, the TO7 team discusses all issues related to upcoming procurements and technical activities and determines the best way to address any problems. The project conducts a country-by-country review of all ongoing procurement actions; their status is updated on the Current Actions Table, which is made available every week to all PMI and project managers.

Over the past six months, the project has faced several implementation challenges, which have been addressed in a variety of ways. The overarching challenge has been to actively manage transition planning. As the project was originally scheduled to end in September 2015, an extensive plan to manage both procurements and technical activities had been put in place. However the project was granted a one-year extension through September 2016, bringing about significant changes in procurement planning and work planning. The project continues to actively manage this transition.

Nigeria LLINs

Last year some LLIN shipments to Nigeria had variances between what was documented as being shipped by the supplier and what was counted at destination. In most of these incidents, the container seals put in place by the manufacturer were still intact at destination.

As part of a review process, project freight forwarding and security staff travelled to Nigeria. The security assessment looked both retrospectively to determine potential weaknesses in past shipments and prospectively for options to tighten security moving forward.

This comprehensive review led to a significant change in the handling of shipments from the point of origin to final delivery point. This change transferred responsibility for container loading and ocean freight from the seller, who now merely has to make the goods available, suitably packaged at origin, to the project. The project has now become responsible for loading, for all export procedures, for onward transport, security escorting, and for all costs arising after collection of the goods. This has tightened the chain of custody, improved visibility through the supply chain and has subsequently assisted in strengthening the communications between the freight forwarders, customs clearance agents, transporters and contracted security.

During December 2014 and January 2015, the first shipment of LLINs to be managed under this change arrived in Nigeria. This shipment of 1.3 million LLINs arrived in the port, was cleared by customs and was dispatched to 11 different states under security escort where they arrived with no losses reported.

Ghana Central Medical Store (CMS) Fire

The Ministry of Health's (MOH) Central Medical Stores (CMS) in Ghana has responsibilities that include central level health commodity storage and onwards distribution. A fire on January 13th destroyed the CMS and all stored commodities, disabled the MOH commodity supply function, and plunged the health sector into a crisis.

As the first part of its two-pronged approach to re-establishing the supply chain for program commodities, the project has put in place the following:

- short-term warehousing through its subcontractors
- Long-term warehousing secured through a competitive process.
- Distribution of commodities from central level to each of the 10 regions and three teaching hospitals

There is still considerable work required among multiple stakeholders and multiple levels to report, collect, and aggregate and analyze the data required to coordinate resupply from across multiple sources of central level supply. The project is planning to work closely with the GHS/MOH leadership, partners and programs to develop distribution plans and to guide the movement of commodities from the central level to the regional level. Ultimately, consensus must be reached to achieve a system that minimizes steps and processing time while insuring a high degree of accountability and visibility. Clear communications from development partners to other stakeholders would support this process.

DRC Customs Clearance

DRC customs clearance remains a challenge for the project. While several advances have previously shortened the time from submission of documentation to full shipment exoneration, current lead times hover around three months. Delays in receiving clearance for shipments have resulted in shortened shelf life for ACTs and RDTs, and in demurrage charges when LLIN shipments arrive at the border before clearance is authorized. The project continues to develop strategies to improve upon the process.

Address the Shortage of the SP/AQ Blister

Following an announcement by the WHO in March 2012 promoting the use of seasonal malaria chemoprevention in the Sahel region of Africa, several PMI countries began discussions around implementation of SMC through the administration of SP/AQ to children 3 to 59 months. At the moment, there is only one WHO prequalified, co-blistered SP-amodiaquine tablet available, manufactured by Guilin, located in China. This manufacturer is also facing API supply challenges with both amodiaquine and sulfadoxine. The amodiaquine need was quickly met, but as Guilin's main source of sulfadoxine stopped their activity, Guilin began planning to produce their own API. Guilin's sulfadoxine WHO prequalification was screened and accepted for assessment in May 2015 with WHO PQ expected before the end of 2015. As far as current SP/AQ production, Guilin has continued production with stock API and our first shipment is expected to be ready for QA- testing/shipping by September 2015.

The USAID | DELIVER PROJECT had already placed orders of SP/AQ for Senegal and Mali with an original delivery date of March 2015, but now the delivery date has been pushed back to February 2016. In order to respond to this challenge, the USAID | PROJECT is procuring loose SP and AQ from other non-WHO-prequalified vendors in some cases, and expects to deliver these pharmaceuticals before the beginning of the rainy season to Senegal and Mali. As with all non-SRA approved products, laboratory testing at a qualified facility will be conducted to ensure only good quality products are used in PMI programs.

Due to the global supply shortages of SP/AQ co-blister tablets, UNICEF convened a conference call February 18, 2015 inviting the main stakeholders to discuss options to address the shortage of the SP/AQ co-blister. This product has only one WHO pre-qualified vendor, which experienced API issues, which meant that it was not able to meet global demand for SP/AQ. During the call it was agreed that WHO would send out an information note asking that countries prioritize SMC coverage in areas that had been served previously and to consider procuring loose tablets of SP and AQ given the shortage of the co-blister. The project participated in the call and provided key information to WHO to include in the information note.

During the call, MSF shared that they were hosting a meeting on SMC and invited TO7 to participate. The meeting was held on February 25th and 26th at the MSF facilities in Geneva. The objectives were to evaluate the situation of the SP/AQ global demand and supply and review the current SMC projects. In February 2015, the Deputy Director of Procurement attended the meeting on the "Supply of Sulfadoxine-Pyrimethamine + Amodiaquine for Seasonal Malaria Chemoprevention (SMC)" in Geneva, Switzerland to address the current supply shortage of Sulfadoxine-Pyrimethamine (SP) and Amodiaquine (AQ).

Rectal Artesunate

The project is also facing significant challenges in the procurement of Rectal Artesunate (RA). The global demand of RA has been increasing from the last three years. Currently, there is only one supplier, Acino Pharma, located in Switzerland. They do not have WHO prequalification approval for the RA product at this time. In addition to the global demand increase, the manufacturer has experienced serious delays in the production of RA. Acino Pharma faced challenges to obtain the API to produce the RA, and then they did not have the production capacity to respond to the increasing demand. Consequently, the production lead time has passed

from 4 to 7 months after order placement, and total lead time to receive the product in-country is around 14 months.

Further down in the supply chain, the RA from Acino Pharma is not registered in all the PMI countries which make it more difficult and time consuming to obtain importation waivers. There are several vendors that will be submitting documentation to the WHO prequalification program in 2015, but prequalified product from these vendors is unlikely to be available until 2016. The project continues to work closely with vendors and other stakeholders to look for long-term solutions to this challenge.

Political Transition in Madagascar

Following the political crisis and coup d'état in March 2009, all U. S. Government support to the Madagascar government, in all levels of the health system, was suspended. As such, PMI's Malaria Operational Plans had been developed based on the assumption that U.S. Government suspensions will remain in place. During that period, USAID | DELIVER PROJECT worked with NGOs and at community level to support malaria activities which mainly consisted in diagnosis and treatment of uncomplicated malaria cases in NGOs' clinics and at community level in intervention areas. Following presidential elections in 2014, the U.S. Government lifted the restrictions on working directly with the Government of Madagascar. Immediately, USAID/Madagascar, in collaboration with THE PROJECT and MOH/NMCP, diverted the commodities destined for community level and NGOs to government health facilities with the aim of reducing the stockouts of antimalarial drugs in the public sector. A nationwide quantitative study carried out by the project in December 2015 had shown that the availability of AS/AQ into the sampled service delivery points ranked from 68% (for AS/AQ Infant) to 78% (for AS/AQ Toddler). In addition, the project was tasked with quantifying malaria commodity needs for the public sector nationally.

The main challenge of the quantification exercise was the scarcity and inaccuracy of morbidity and logistics data in the public sector - mainly due to the fact that health information system and the supervision systems were very weak, almost absent in some areas during the last five years. However, as a result of quantification, the team recommended - and PMI agreed - an emergency procurement of AS/AQ, which arrived in country in January 2015, four months after the quantification exercise. In the meantime, the follow-on grant of GF has been signed, and the first shipment procured by the GF under that grant is expected to arrive in country around July 2015. Despite the emergency procurement, the country is facing stock out of antimalarial drugs again: at the end of March 2015, based on available data, it appears that the stock on hand at country level won't last until the delivery of the next GF shipment in July 2015. Many health districts are reporting stock out starting March 2015, perhaps as a result of increased malaria cases following severe rains. NMCP decided to carry out a rapid assessment at health district level to better understand the situation but is still looking for financial resources. Discussion is ongoing among the USAID | DELIVER PROJECT, the mission, and RBM partners on the best way to solve the problem. RBM partners acknowledge the need for another emergency procurement; but so far it is hard to tell when it will occur and from which donor.

Appendix A. Commodities Procured October 1, 2014– March 31, 2015

Commodities Procured October 1, 2014 - March 31, 2015

Item Description	Country	PO Date	Sub Category	PO#	Quantity (Packs)	Quantity (Tx)	Total Commodity Value
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	Burundi	2-Oct-2014	AS/AQ FDC	PO-PUC-1691	5904	147600	80100
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	Burundi	14-Nov-2014	AS/AQ FDC	PO-PUC-1841	6120	153000	792000
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	Burundi	14-Nov-2014	AS/AQ FDC	PO-PUC-1842	10476	261900	360800
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	Burundi	14-Nov-2014	AS/AQ FDC	PO-PUC-1839	29256	731400	1057786.4
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	Burundi	14-Nov-2014	AS/AQ FDC	PO-PUC-1839	8096	202400	318500
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	Burundi	2-Oct-2014	AS/AQ FDC	PO-PUC-1691	33444	836100	1739459.64
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	Burundi	14-Nov-2014	AS/AQ FDC	PO-PUC-1840	18540	463500	760.32
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	Burundi	14-Nov-2014	AS/AQ FDC	PO-PUC-1842	23940	598500	2550
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	DRC	20-Oct-2014	AS/AQ FDC	PO-PUC-1705	41832	1045800	2550
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	DRC	20-Oct-2014	AS/AQ FDC	PO-PUC-1706	41832	1045800	2550
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	DRC	20-Oct-2014	AS/AQ FDC	PO-PUC-1705	33864	846600	15300
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	DRC	20-Oct-2014	AS/AQ FDC	PO-PUC-1706	33864	846600	337.6
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	DRC	20-Oct-2014	AS/AQ FDC	PO-PUC-1705	8184	204600	19562.4
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	DRC	20-Oct-2014	AS/AQ FDC	PO-PUC-1706	8184	204600	10533.6
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	DRC	20-Oct-2014	AS/AQ FDC	PO-PUC-1705	56232	1405800	9028.8
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	DRC	20-Oct-2014	AS/AQ FDC	PO-PUC-1706	56232	1405800	19562.4
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	DRC	14-Oct-2014	AS/AQ FDC	RO-5793	1034	25850	2893.85
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	DRC	15-Oct-2014	AS/AQ FDC	RO-5794	1500	37500	293348
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	DRC	16-Oct-2014	AS/AQ FDC	RO-5795	300	7500	42636
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	DRC	17-Oct-2014	AS/AQ FDC	RO-5796	1600	40000	121162.5
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	DRC	18-Oct-2014	AS/AQ FDC	RO-5797	700	17500	348300
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	DRC	19-Oct-2014	AS/AQ FDC	RO-5798	250	6250	225112.5
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	DRC	20-Oct-2014	AS/AQ FDC	RO-5799	900	22500	206424
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	DRC	21-Oct-2014	AS/AQ FDC	RO-5800	500	12500	462294
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	DRC	22-Oct-2014	AS/AQ FDC	RO-5801	750	18750	378000
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	DRC	23-Oct-2014	AS/AQ FDC	RO-5802	650	16250	282141
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	DRC	24-Oct-2014	AS/AQ FDC	RO-5793	7032	175800	165375
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	DRC	25-Oct-2014	AS/AQ FDC	RO-5794	10500	262500	330075
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	DRC	26-Oct-2014	AS/AQ FDC	RO-5795	2000	50000	254137.5
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	DRC	27-Oct-2014	AS/AQ FDC	RO-5796	10750	268750	49491
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	DRC	28-Oct-2014	AS/AQ FDC	RO-5797	5000	125000	96686
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	DRC	29-Oct-2014	AS/AQ FDC	RO-5798	1750	43750	583828
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	DRC	30-Oct-2014	AS/AQ FDC	RO-5799	6400	160000	272832
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	DRC	31-Oct-2014	AS/AQ FDC	RO-5800	3000	75000	528000
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	DRC	1-Nov-2014	AS/AQ FDC	RO-5801	5250	131250	420000
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	DRC	2-Nov-2014	AS/AQ FDC	RO-5802	4550	113750	482380.8
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	DRC	3-Nov-2014	AS/AQ FDC	RO-5793	5532	138300	792422.4
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	DRC	4-Nov-2014	AS/AQ FDC	RO-5794	7750	193750	667584
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	DRC	5-Nov-2014	AS/AQ FDC	RO-5795	1500	37500	705408
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	DRC	6-Nov-2014	AS/AQ FDC	RO-5796	8150	203750	168000
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	DRC	7-Nov-2014	AS/AQ FDC	RO-5797	3700	92500	336000
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	DRC	8-Nov-2014	AS/AQ FDC	RO-5798	1350	33750	643104
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	DRC	9-Nov-2014	AS/AQ FDC	RO-5799	4750	118750	303283.2
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	DRC	10-Nov-2014	AS/AQ FDC	RO-5800	2250	56250	76876.8
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	DRC	11-Nov-2014	AS/AQ FDC	RO-5801	3750	93750	75015
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	DRC	12-Nov-2014	AS/AQ FDC	RO-5802	3100	77500	71775
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	DRC	13-Nov-2014	AS/AQ FDC	RO-5793	4514	112850	118243.2
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	DRC	14-Nov-2014	AS/AQ FDC	RO-5794	6250	156250	197769.6
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	DRC	15-Nov-2014	AS/AQ FDC	RO-5795	1200	30000	272587.2
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	DRC	16-Nov-2014	AS/AQ FDC	RO-5796	6500	162500	130560

Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	DRC	17-Nov-2014	AS/AQ FDC	RO-5797	3000	75000	285273.6
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	DRC	18-Nov-2014	AS/AQ FDC	RO-5798	1050	26250	378000
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	DRC	19-Nov-2014	AS/AQ FDC	RO-5799	3750	93750	121382.4
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	DRC	20-Nov-2014	AS/AQ FDC	RO-5800	1850	46250	241718.4
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	DRC	21-Nov-2014	AS/AQ FDC	RO-5801	3250	81250	143880
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	DRC	22-Nov-2014	AS/AQ FDC	RO-5802	2500	62500	378000
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	Ghana	31-Dec-2014	AS/AQ FDC	PO-PUC-1936	36936	923400	67626
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	Ghana	31-Dec-2014	AS/AQ FDC	PO-PUC-1936	53892	1347300	21481.2
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	Guinea	11-Nov-2014	AS/AQ FDC	PO-PUC-1831	20016	500400	380904.48
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	Liberia	16-Dec-2014	AS/AQ FDC	PO-PUC-1902	12000	300000	1534500
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	Liberia	16-Dec-2014	AS/AQ FDC	PO-PUC-1902	16488	412200	517584.5
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	Liberia	22-Oct-2014	AS/AQ FDC	RO-5960	2420	60500	1631000
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	Liberia	22-Oct-2014	AS/AQ FDC	RO-5960	4932	123300	2500
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	Madagascar	6-Jan-2015	AS/AQ FDC	RO-6206	3168	79200	19305
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	Madagascar	6-Jan-2015	AS/AQ FDC	RO-6206	2352	58800	10098
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	Madagascar	6-Jan-2015	AS/AQ FDC	RO-6206	748	18700	14553
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	Madagascar	6-Jan-2015	AS/AQ FDC	RO-6206	10080	252000	91179
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	Stockpile	16-Dec-2014	AS/AQ FDC	PO-PUC-1899	1944	48600	102480
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	Stockpile	16-Dec-2014	AS/AQ FDC	PO-PUC-1900	1944	48600	342914.55
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	Stockpile	17-Dec-2014	AS/AQ FDC	PO-PUC-1903	48024	1200600	464640
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	Stockpile	17-Dec-2014	AS/AQ FDC	PO-PUC-1904	48024	1200600	593630.4
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	Stockpile	16-Dec-2014	AS/AQ FDC	PO-PUC-1899	1800	45000	294400
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	Stockpile	16-Dec-2014	AS/AQ FDC	PO-PUC-1900	1800	45000	51484.8
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	Stockpile	17-Dec-2014	AS/AQ FDC	PO-PUC-1903	32016	800400	35220.96
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	Stockpile	17-Dec-2014	AS/AQ FDC	PO-PUC-1904	32016	800400	81553.92
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	Stockpile	16-Dec-2014	AS/AQ FDC	PO-PUC-1899	2552	63800	59512.32
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	Stockpile	16-Dec-2014	AS/AQ FDC	PO-PUC-1900	2552	63800	45819.54
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	Stockpile	17-Dec-2014	AS/AQ FDC	PO-PUC-1903	16016	400400	173545.5
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	Stockpile	17-Dec-2014	AS/AQ FDC	PO-PUC-1904	16016	400400	173589.95
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	Stockpile	16-Dec-2014	AS/AQ FDC	PO-PUC-1899	1980	49500	30933
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	Stockpile	16-Dec-2014	AS/AQ FDC	PO-PUC-1900	1980	49500	72177
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	Stockpile	17-Dec-2014	AS/AQ FDC	PO-PUC-1903	64008	1600200	40086.8
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	Stockpile	17-Dec-2014	AS/AQ FDC	PO-PUC-1904	64008	1600200	51480
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	Burkina Faso	12-Nov-2014	AS/AQ FDC Generic	PO-PUC-1833	16000	400000	187620
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	Burkina Faso	12-Nov-2014	AS/AQ FDC Generic	PO-PUC-1833	23000	575000	18300
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	Ghana	6-Nov-2014	AS/AQ FDC Generic	PO-PUC-1816	22180	554500	115759.8
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	Guinea	12-Nov-2014	AS/AQ FDC Generic	PO-PUC-1835	11200	280000	644431.92
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	Guinea	12-Nov-2014	AS/AQ FDC Generic	PO-PUC-1835	11200	280000	556741.68
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	Guinea	12-Nov-2014	AS/AQ FDC Generic	PO-PUC-1835	8400	210000	34254
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	Guinea	12-Nov-2014	AS/AQ FDC Generic	PO-PUC-1835	25200	630000	34254
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	Liberia	6-Nov-2014	AS/AQ FDC Generic	PO-PUC-1815	23652	591300	739344
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	Liberia	16-Dec-2014	AS/AQ FDC Generic	PO-PUC-1901	4221	105525	1534500
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	Liberia	6-Nov-2014	AS/AQ FDC Generic	PO-PUC-1815	21235	530875	1503810
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	Liberia	6-Nov-2014	AS/AQ FDC Generic	PO-PUC-1815	12980	324500	1670625
Artesunate/Amodiaquine, FDC, 25mg/67.5mg, tablet, 3 per blister, 25 blisters per pack	Liberia	16-Dec-2014	AS/AQ FDC Generic	PO-PUC-1901	1457	36425	1465000
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 3 per blister, 25 blisters per pack	Nigeria	12-Nov-2014	AS/AQ FDC Generic	PO-PUC-1834	8000	200000	28920
Artesunate/Amodiaquine, FDC, 100mg/270mg, tablet, 6 per blister, 25 blisters per pack	Nigeria	12-Nov-2014	AS/AQ FDC Generic	PO-PUC-1834	12000	300000	38560
Artesunate/Amodiaquine, FDC, 50mg/135mg, tablet, 3 per blister, 25 blisters per pack	Nigeria	12-Nov-2014	AS/AQ FDC Generic	PO-PUC-1834	12000	300000	4072.25
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Angola	30-Dec-2014	Coartem	PO-PUP-2073	8505	255150	150007.5
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Angola	30-Dec-2014	Coartem	PO-PUP-2073	11295	338850	223717.5
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Angola	30-Dec-2014	Coartem	PO-PUP-2073	15312	459360	105727.5
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Angola	30-Dec-2014	Coartem	PO-PUP-2073	4400	132000	193806

Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Benin	8-Oct-2014	Coartem	PO-PUP-1848	9525	285750	219618
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Benin	8-Oct-2014	Coartem	PO-PUP-1848	5385	161550	103230
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Benin	8-Oct-2014	Coartem	PO-PUP-1848	6496	194880	206460
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Benin	8-Oct-2014	Coartem	PO-PUP-1848	3616	108480	94405.5
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Ghana	27-Oct-2014	Coartem	PO-PUP-1914	17460	523800	35904
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Ghana	27-Oct-2014	Coartem	PO-PUP-1914	15480	464400	462243.6
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Ghana	27-Oct-2014	Coartem	PO-PUP-1913	6048	181440	462243.6
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Guinea	2-Mar-2015	Coartem	PO-PUP-2147	1755	52650	530665.2
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Guinea	2-Mar-2015	Coartem	PO-PUP-2147	1755	52650	108304
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Guinea	2-Mar-2015	Coartem	PO-PUP-2147	1456	43680	40817.07
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Guinea	2-Mar-2015	Coartem	PO-PUP-2147	880	26400	644431.92
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Kenya	27-Oct-2014	Coartem	PO-PUP-1912	10000	300000	219000
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Malawi	12-Nov-2014	Coartem	PO-PUP-1935	13710	411300	1756250
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Malawi	12-Nov-2014	Coartem	PO-PUP-1935	7320	219600	1173750
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Malawi	12-Nov-2014	Coartem	PO-PUP-1935	9136	274080	9240
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Malawi	12-Nov-2014	Coartem	PO-PUP-1935	3200	96000	431575
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Malawi	20-Jan-2015	Coartem	RO-6295	21210	636300	935124
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Malawi	20-Jan-2015	Coartem	RO-6295	19980	599400	29300
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Malawi	20-Jan-2015	Coartem	RO-6295	7264	217920	5860
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Malawi	20-Jan-2015	Coartem	RO-6295	6400	192000	293
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Mali	12-Nov-2014	Coartem	PO-PUP-1934	11670	350100	1465
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Mali	12-Nov-2014	Coartem	PO-PUP-1934	10005	300150	49663.5
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Mali	12-Nov-2014	Coartem	PO-PUP-1934	10000	300000	10255
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Mali	12-Nov-2014	Coartem	PO-PUP-1934	8336	250080	1318.5
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Mozambique	4-Dec-2014	Coartem	PO-PUP-2017	27315	819450	2093000
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Mozambique	4-Dec-2014	Coartem	PO-PUP-2018	17430	522900	1097775
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Mozambique	4-Dec-2014	Coartem	PO-PUP-2017	13360	400800	120000
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Mozambique	4-Dec-2014	Coartem	PO-PUP-2018	10000	300000	399000
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Mozambique	5-Jan-2015	Coartem	PO-PUP-2080	10000	300000	1645000
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Rwanda	16-Jan-2015	Coartem	PO-PUP-2099	5744	172320	416.7
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Rwanda	12-Jan-2015	Coartem	RO-6220	6240	187200	21700
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Rwanda	12-Jan-2015	Coartem	RO-6220	5250	157500	15546.96
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Rwanda	12-Jan-2015	Coartem	RO-6220	4000	120000	13861.8
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Rwanda	12-Jan-2015	Coartem	RO-6220	544	16320	89836.5
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Stockpile	12-Dec-2014	Coartem	PO-PUC-1897	9300	279000	7907.4
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Stockpile	12-Dec-2014	Coartem	PO-PUC-1898	18600	558000	21671.4
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Stockpile	12-Dec-2014	Coartem	PO-PUC-1897	7350	220500	17100
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Stockpile	12-Dec-2014	Coartem	PO-PUC-1898	14670	440100	4487.4
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Stockpile	12-Dec-2014	Coartem	PO-PUC-1897	4000	120000	84000
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Stockpile	12-Dec-2014	Coartem	PO-PUC-1898	8000	240000	1117.5
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Stockpile	12-Dec-2014	Coartem	PO-PUC-1897	3712	111360	792.05
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Stockpile	12-Dec-2014	Coartem	PO-PUC-1898	7392	221760	1584
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Tanzania	26-Nov-2014	Coartem	PO-PUP-1978	3405	102150	256500
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Tanzania	26-Nov-2014	Coartem	PO-PUP-1979	10005	300150	294210
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Tanzania	26-Nov-2014	Coartem	PO-PUP-1979	15008	450240	62466.39
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Tanzania	26-Nov-2014	Coartem	PO-PUP-1980	14640	439200	33530
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Tanzania	26-Nov-2014	Coartem	PO-PUP-1978	6992	209760	22050
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Tanzania	4-Feb-2015	Coartem	RO-6331	8032	240960	319189
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Zambia	13-Nov-2014	Coartem	PO-PUP-1936	18345	550350	462294
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Zambia	13-Nov-2014	Coartem	PO-PUP-1937	15000	450000	378000
Acetylsalicylic Acid 300mg, 1000 tablets	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2161	13000	13000000	39780
Adrenaline Injection (Epinephrine), 1mg/1ml ampoule, 100 ampoules per pack	Zambia DfID	14-Oct-2014	Essential Medicines Malaria	PO-PUP-1864	1400	140000	17920

Amoxicillin 125 mg/5 ml powder for suspension, 100 ml, each	Zambia DfID	13-Oct-2014	Essential Medicines Malaria	PO-PUP-1858	410000	410000	196800
Amoxicillin 125 mg/5 ml powder for suspension, 100 ml, each	Zambia DfID	3-Feb-2015	Essential Medicines Malaria	PO-PUP-2116	495000	495000	237600
Amoxicillin 125 mg/5 ml powder for suspension, 100 ml, each	Zambia DfID	3-Feb-2015	Essential Medicines Malaria	PO-PUP-2118	495000	495000	237600
Amoxicillin 125 mg/5 ml powder for suspension, 100 ml, each	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2165	495000	495000	237600
Amoxicillin 125 mg/5 ml powder for suspension, 100 ml, each	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2166	505000	505000	242400
Benzylpenicillin 5mu/vial	Zambia DfID	13-Oct-2014	Essential Medicines Malaria	PO-PUP-1861	4400	4400	40656
Cephalexin 125 mg/5 ml powder for suspension, 100 ml bottle, each	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2162	250000	250000	228650
Cephalexin 250 mg, 10 x 10 blister capsules, each	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2162	120000	120000	415608
Chloramphenicol 125 mg/5 ml liquid suspension, 100 ml	Zambia DfID	14-Oct-2014	Essential Medicines Malaria	PO-PUP-1865	2500	2500	17525
Chloramphenicol 1g as Sodium Succinate, powder for injection	Zambia DfID	14-Oct-2014	Essential Medicines Malaria	PO-PUP-1863	1700	1700	39083
Chloramphenicol 1g as Sodium Succinate, powder for injection	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2157	1600	1600	36784
Chlorphenamine Maleate 4mg, 1000 tablets	Zambia DfID	13-Oct-2014	Essential Medicines Malaria	PO-PUP-1859	17000	17000	34000
Ciprofloxacin 250mg tabs	Zambia DfID	15-Oct-2014	Essential Medicines Malaria	PO-PUP-1866	60000	60000	85800
Ciprofloxacin 250mg tabs	Zambia DfID	10-Feb-2015	Essential Medicines Malaria	PO-PUP-2131	70000	70000	99400
Cloxacillin 125 mg/5 ml powder for suspension, 100 ml, each	Zambia DfID	13-Oct-2014	Essential Medicines Malaria	PO-PUP-1860	90000	90000	64287
Cloxacillin 125 mg/5 ml powder for suspension, 100 ml, each	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2163	100000	100000	71430
Cloxacillin 250mg caps	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2162	30000	30000	628941
Cloxacillin 500mg, powder for injection	Zambia DfID	13-Oct-2014	Essential Medicines Malaria	PO-PUP-1860	3000	3000	28920
Cloxacillin 500mg, powder for injection	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2163	4000	4000	38560
Doxycycline 100 mg (as hyclate), caps	Zambia DfID	13-Oct-2014	Essential Medicines Malaria	PO-PUP-1857	3000	3000	45870
Doxycycline 100 mg (as hyclate), caps	Zambia DfID	10-Feb-2015	Essential Medicines Malaria	PO-PUP-2132	6000	6000	83220
Erythromycin 125 mg/5 ml powder for suspension, 100 ml bottle	Zambia DfID	13-Oct-2014	Essential Medicines Malaria	PO-PUP-1855	1200	1200	399036
Erythromycin 125 mg/5 ml powder for suspension, 100 ml bottle, each	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2158	400000	400000	564000
Erythromycin 250mg, as Stearate	Zambia DfID	13-Oct-2014	Essential Medicines Malaria	PO-PUP-1856	30000	30000	878100
Erythromycin 250mg, as Stearate	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2159	25000	25000	687750
Ferrous Sulphate 200mg, sugar-coated, 1000 tablets	Zambia DfID	13-Oct-2014	Essential Medicines Malaria	PO-PUP-1859	14000	14000000	34300
Ferrous Sulphate 50 mg, sugar-coated, 1000 tablets	Zambia DfID	13-Oct-2014	Essential Medicines Malaria	PO-PUP-1859	3400	3400000	6120
Nalidixic Acid 300 mg/5 ml liquid for suspension, 100 ml, each	Zambia DfID	13-Oct-2014	Essential Medicines Malaria	PO-PUP-1860	30000	30000	52200
Nalidixic Acid 300 mg/5 ml liquid for suspension, 100 ml, each	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2163	25000	25000	43500
Phenoxymethylpenicillin 250mg	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2164	20000	20000	309400
Phenoxymethylpenicillin 250mg tabs	Zambia DfID	13-Oct-2014	Essential Medicines Malaria	PO-PUP-1861	20000	20000	309400
Salbutamol Inhaler, 0.1mg/dose, each	Zambia DfID	6-Mar-2015	Essential Medicines Malaria	PO-PUP-2160	60000	60000	84000
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Malawi	11-Feb-2015	Generic Alu	PO-PUC-2031	19886	596580	1756250
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Malawi	11-Feb-2015	Generic Alu	PO-PUC-2031	1938	58140	12320
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Malawi	11-Feb-2015	Generic Alu	PO-PUC-2031	20132	603960	9240
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Malawi	11-Feb-2015	Generic Alu	PO-PUC-2031	3190	95700	268850
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x1 Blister Pack, 30 Treatments	Mali	5-Feb-2015	Generic Alu	PO-PUC-2029	13334	400020	1172
Artemether/Lumefantrine 20mg/120mg, Pill, Dispersible, 6x2 Blister Pack, 30 Treatments	Mali	5-Feb-2015	Generic Alu	PO-PUC-2029	13334	400020	1465
Artemether/Lumefantrine 20mg/120mg, tablets, 6x4 Blister Pack, 30 treatments	Mali	5-Feb-2015	Generic Alu	PO-PUC-2029	3334	100020	14650
Artemether/Lumefantrine 20mg/120mg, tablets, 6x3 Blister Pack, 30 treatments	Mali	5-Feb-2015	Generic Alu	PO-PUC-2029	3334	100020	4981
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Angola	24-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1954	625000	625000	129537
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Angola	24-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1955	625000	625000	193311
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Angola	24-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1956	625000	625000	48010.5
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Angola	24-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1957	625000	625000	385141.5
Bed Net, Polyester, Deltamethrin, 100 dn, (160 x 195 x 200 cm), Light Blue, Rectangular, Each	Benin	29-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2054	500000	500000	24745.5
Bed Net, Polyester, Deltamethrin, 100 dn, (160 x 195 x 200 cm), Light Blue, Rectangular, Each	Benin	29-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2055	300000	300000	11132.24
Bed Net, Polyester, Deltamethrin, 100 Denier (180(W) x 160(L) x 150(H) cm), Rectangular, White	Burundi	9-Mar-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2167	700000	700000	2550
Bed Net, Polyester, Deltamethrin, 100 dn, (240 x 120 x 150 cm) Hammock, light blue, piece	Cambodia	5-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1930	30000	30000	2550
Bed Net, Polyester, Deltamethrin, 100 Denier (180(W) x 160(L) x 150(H) cm), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2136	142500	142500	10533.6
Bed Net, Polyester, Deltamethrin, 100 Denier (180(W) x 160(L) x 150(H) cm), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2137	230000	230000	9028.8
Bed Net, Polyester, Deltamethrin, 100 Denier (180(W) x 160(L) x 150(H) cm), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2138	170000	170000	1686.75
Bed Net, Polyester, Deltamethrin, 100 Denier (180(W) x 160(L) x 150(H) cm), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2139	77500	77500	427.92

Bed Net, Polyester, Deltamethrin, 100 Denier (180(W) x 160(L) x 150(H) cm), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2141	225000	225000	39780
Bed Net, Polyester, Deltamethrin, 100 Denier (180(W) x 160(L) x 150(H) cm), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2142	57500	57500	17920
Bed Net, Polyester, Deltamethrin, 100 Denier (180(W) x 160(L) x 150(H) cm), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2143	165000	165000	274138
Bed Net, Polyester, Deltamethrin, 100 Denier (180(W) x 160(L) x 150(H) cm), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2144	97500	97500	196800
Bed Net, Polyester, Deltamethrin, 100 Denier (180(W) x 160(L) x 150(H) cm), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2145	170000	170000	237600
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H)), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2136	95000	95000	237600
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H)), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2137	152500	152500	237600
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H)), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2138	115000	115000	242400
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H)), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2139	52500	52500	11319.9
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H)), Rectangular, White	DRC	25-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2140	50000	50000	22008
Bed Net, Polyester, Deltamethrin, 100 dn, (1250 x 65 x 250 cm), White, Conical, Each	Guinea	10-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1933	235000	235000	228360
Bed Net, Polyethylene, Permethrin, [FREENET] 150dn, (160x190x210cm), blue, rectangular, each	Kenya	13-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2134	650000	650000	210000
Bed Net, Polyethylene, Permethrin, [FREENET] 150dn, (160x190x210cm), blue, rectangular, each	Kenya	13-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2135	650000	650000	38874
Bed Net, Polyester, Deltamethrin, 100 Denier, (190(L) x 160(W) x 210(H) cm), Rectangular, Blue	Kenya	5-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2120	650000	650000	38874
Bed Net, Polyester, Deltamethrin, 100 Denier, (190(L) x 160(W) x 210(H) cm), Rectangular, Blue	Kenya	5-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2121	650000	650000	38456
Bed Net, Polyethylene, Alpha-cypermethrin, 150 Denier, FREENET (190(L) x 160(W) x 210(H) cm), Rectangular, Blue	Kenya	22-Jan-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2101	550000	550000	12122
Bed Net, Polyethylene, Alpha-cypermethrin, 150 Denier, FREENET (190(L) x 160(W) x 210(H) cm), Rectangular, Blue	Kenya	5-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2112	650000	650000	12122
Bed Net, Polyethylene, Alpha-cypermethrin, 150 Denier, FREENET (190(L) x 160(W) x 210(H) cm), Rectangular, Blue	Kenya	5-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2113	650000	650000	76076
Bed Net, Polyethylene, Alpha-cypermethrin, 150 Denier, FREENET (190(L) x 160(W) x 210(H) cm), Rectangular, Blue	Kenya	5-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2114	650000	650000	76076
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Liberia	19-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1942	15900	15900	361415.5
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Liberia	19-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1943	10600	10600	1585000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Liberia	19-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1944	6050	6050	1166560
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Liberia	19-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1945	6000	6000	2037108
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Liberia	19-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1946	2750	2750	2037108
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Liberia	19-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1947	13200	13200	1490000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Liberia	19-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1948	6500	6500	2112750
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Liberia	19-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1949	3400	3400	2112750
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Liberia	19-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1950	4900	4900	333450
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Rectangular, White	Liberia	19-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1951	30700	30700	538200
Bed Net, Polyester, Deltamethrin, 100 dn, (1250 x 65 x 250 cm), White, Conical, Each	Liberia	19-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1951	25000	25000	397800
Bed Net, Polyester, Deltamethrin, 100dn, (190x180x150), white, rectangular, piece	Liberia	1-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1983	163850	163850	181350
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H)), Rectangular, White	Madagascar	17-Oct-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1870	700000	700000	47223
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H)), Rectangular, White	Madagascar	17-Oct-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1871	700000	700000	31482
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H)), Rectangular, White	Madagascar	30-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2075	700000	700000	17968.5
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H)), Rectangular, White	Madagascar	30-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2076	700000	700000	17820
Bed Net, Polyester, Deltamethrin, 100 Denier (180(L) x 190(W) x 170(H) cm), Rectangular, White	Mali	13-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1938	675000	675000	1465
Bed Net, Polyester, Deltamethrin, 100 Denier (180(L) x 190(W) x 170(H) cm), Rectangular, White	Mali	13-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1939	675000	675000	4102
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H) cm), Rectangular, Light Blue	Mozambique	10-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2124	382500	382500	987000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H) cm), Rectangular, Light Blue	Mozambique	10-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2125	215000	215000	60600
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H) cm), Rectangular, Light Blue	Mozambique	10-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2126	185000	185000	445672
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H) cm), Rectangular, Light Blue	Mozambique	10-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2127	382500	382500	2212500
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H) cm), Rectangular, Light Blue	Mozambique	10-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2128	215000	215000	2212500
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H) cm), Rectangular, Light Blue	Mozambique	10-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2129	185000	185000	2037250
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Blue, Rectangular	Myanmar	29-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2053	553500	553500	40656
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 150(H) cm), Blue, Rectangular	Myanmar	25-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1977	240000	240000	1785
Bed Net, Polyester, Deltamethrin, 100dn, (190x180x160), blue, rectangular, each	Nigeria	20-Oct-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1881	750000	750000	5160.2
Bed Net, Polyester, Deltamethrin, 100dn, (190x180x160), blue, rectangular, each	Nigeria	20-Oct-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1882	750000	750000	295.7
Bed Net, Polyester, Deltamethrin, 100dn, (190x180x160), white, rectangular, each	Nigeria	25-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1958	725000	725000	105.3
Bed Net, Polyester, Deltamethrin, 100dn, (190x180x160), white, rectangular, each	Nigeria	25-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1959	725000	725000	92.6
Bed Net, Polyester, Deltamethrin, 100dn, (190x180x160), white, rectangular, each	Nigeria	25-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1960	750000	750000	30.2
Bed Net, Polyester, Deltamethrin, 100dn, (190x180x160), white, rectangular, each	Nigeria	25-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1969	575000	575000	45870

Bed Net, Polyester, Deltamethrin, 100dn, (190x180x160), white, rectangular, each	Nigeria	25-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1970	575000	575000	83220
Bed Net, Polyester, Deltamethrin, 100dn, (190x180x160), white, rectangular, each	Nigeria	25-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1971	550000	550000	399036
Bed Net, Polyester, Deltamethrin, 100dn, (190x180x160), white, rectangular, each	Nigeria	25-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1972	650000	650000	564000
Bed Net, Polyester, Deltamethrin, 100dn, (190x180x160), white, rectangular, each	Nigeria	25-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1973	650000	650000	878100
Bed Net, Polyester, Deltamethrin, 100dn, (190x180x160), white, rectangular, each	Nigeria	25-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1974	650000	650000	687750
Bed Net, Polyester, Deltamethrin, 100dn, (190x180x160), white, rectangular, each	Nigeria	25-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1975	650000	650000	1399.5
Bed Net, Polyethylene, Permethrin, 150dn, (1250x65x250), white, conical, each	Rwanda	6-Jan-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2084	375000	375000	46.8
Bed Net, Polyester, Deltamethrin, 100 Denier (1250 x 65 x 250 cm), Conical, Blue	Senegal	6-Jan-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2082	168800	168800	16467.4
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 100(W) x 170(H) cm), Rectangular, Light Blue	Senegal	6-Jan-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2082	1000	1000	16467.4
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, Blue	Senegal	2-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1988	375000	375000	8233.7
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Senegal	2-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1988	313800	313800	3502.8
Bed Net, Polyester, Deltamethrin, 100 dn, (1250 x 65 x 250 cm), White, Conical, Each	Senegal	6-Jan-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2082	95000	95000	115.3
Bed Net, Polyethylene, Alphacypermethrin, 150 Denier (190(L) x 180(W) x 170(H) cm), Rectangular, Blue	Senegal	2-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1989	50000	50000	2134.58
Bed Net, Polyester, Deltamethrin, 100 Denier (180(L) x 160(W) x 180(H) cm), Rectangular, Blue	Tanzania	5-Jan-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2078	500000	500000	348837.5
Bed Net, Polyester, Deltamethrin, 100 Denier (180(L) x 160(W) x 180(H) cm), Rectangular, Blue	Tanzania	5-Jan-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2079	368000	368000	175000
Bed Net, Polyester, Deltamethrin, 100 Denier (180(L) x 160(W) x 180(H) cm), Rectangular, Blue	Tanzania	6-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2122	640600	640600	175000
Bed Net, Polyester, Deltamethrin, 100 Denier (180(L) x 160(W) x 180(H) cm), Rectangular, Blue	Tanzania	6-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2123	640600	640600	146880
Bed Net, Polyester, Deltamethrin, 100 Denier (180(L) x 160(W) x 180(H) cm), Rectangular, Blue	Tanzania	10-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2130	500000	500000	267300
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, Blue	Thailand	25-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1963	4000	4000	478783.5
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, Blue	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2019	3000	3000	420000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, Blue	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2032	3000	3000	860000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	25-Nov-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1961	1000	1000	860000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2019	10000	10000	430000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2020	2000	2000	301000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2021	100	100	957000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2022	400	400	215000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2023	500	500	1260000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2024	500	500	600000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2025	16950	16950	1034000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2026	5000	5000	5700
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2027	3500	3500	96000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2028	1700	1700	900000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2029	450	450	300000
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2030	500	500	153818.75
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2031	1400	1400	1047.5
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2032	500	500	5.9
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2033	500	500	1465
Bed Net, Polyester, Deltamethrin, 100 Denier (190(L) x 180(W) x 170(H), Rectangular, White	Thailand	10-Dec-2014	Long-Lasting Insecticide Treated Net	PO-PUP-2034	5000	5000	14650
Bed Net, Polyester, Deltamethrin, 100 Denier (160(W) x 180(L) x 170(H) cm), Rectangular, white	Uganda	20-Oct-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1883	550000	550000	1534500
Bed Net, Polyester, Deltamethrin, 100 Denier (160(W) x 180(L) x 170(H) cm), Rectangular, white	Uganda	20-Oct-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1884	550000	550000	1534500
Bed Net, Polyester, Deltamethrin, 100 Denier (160(W) x 180(L) x 170(H) cm), Rectangular, white	Uganda	20-Oct-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1885	539000	539000	1503810
Bed Net, Polyester, Deltamethrin, 100 Denier (160(W) x 180(L) x 170(H) cm), Rectangular, white	Uganda	12-Feb-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2133	687500	687500	1670625
Bed Net, Polyester, Deltamethrin, 100 Denier (180(L) x 160(W) x 170(H) cm), Rectangular, Light Blue	Zambia	31-Oct-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1927	500000	500000	1465000
Bed Net, Polyester, Deltamethrin, 100 Denier (180(L) x 160(W) x 170(H) cm), Rectangular, Light Blue	Zambia	31-Oct-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1928	176650	176650	517584.5
Bed Net, Polyester, Deltamethrin, 100 Denier (180(L) x 160(W) x 170(H) cm), Rectangular, Light Blue	Zambia	31-Oct-2014	Long-Lasting Insecticide Treated Net	PO-PUP-1929	123350	123350	361415.5
Bed Net, Polyethylene, Alphacypermethrin, 150 Denier (1050 x 56 x 220(H) cm), Conical, Blue	Zimbabwe	6-Jan-2015	Long-Lasting Insecticide Treated Net	PO-PUP-2083	340000	340000	1132200
Gloves; Latex, Examination, Powder-free, Disposable, Ambidextrous, Non-Sterile, Large, Beige, Box of 100	Guinea	2-Mar-2015	Malaria Misc. Commodities	PO-PUP-2148	5436	543600	609264.48
Gloves; Latex, Examination, Powder-free, Disposable, Ambidextrous, Non-Sterile, Medium, Beige, Box of 100	Guinea	2-Mar-2015	Malaria Misc. Commodities	PO-PUP-2148	5436	543600	609264.48
Gloves, Latex; Powder-free; White; Single-use; Ambidextrous, Medium, pack of 100	Laos	27-Oct-2014	Malaria Misc. Commodities	PO-PUP-1919	7000	700000	33600
Safety boxes, Square, 5 liter, for disposal of used sharps, Box of 100	Laos	19-Nov-2014	Malaria Misc. Commodities	PO-PUP-1952	8310	831000	5828
20 foot standard ocean container, each	Liberia	19-Nov-2014	Malaria Misc. Commodities	PO-PUP-1942	1	1	372818.16
20 foot standard ocean container, each	Liberia	19-Nov-2014	Malaria Misc. Commodities	PO-PUP-1943	1	1	372818.16

20 foot standard ocean container, each	Liberia	19-Nov-2014	Malaria Misc. Commodities	PO-PUP-1944	1	1	122920.2
20 foot standard ocean container, each	Liberia	19-Nov-2014	Malaria Misc. Commodities	PO-PUP-1945	1	1	158722.2
20 foot standard ocean container, each	Liberia	19-Nov-2014	Malaria Misc. Commodities	PO-PUP-1946	1	1	13127.4
20 foot standard ocean container, each	Liberia	19-Nov-2014	Malaria Misc. Commodities	PO-PUP-1947	1	1	13127.4
20 foot standard ocean container, each	Liberia	19-Nov-2014	Malaria Misc. Commodities	PO-PUP-1948	1	1	109315.44
20 foot standard ocean container, each	Liberia	19-Nov-2014	Malaria Misc. Commodities	PO-PUP-1949	1	1	424373.04
20 foot standard ocean container, each	Liberia	19-Nov-2014	Malaria Misc. Commodities	PO-PUP-1950	1	1	424373.04
20 foot standard ocean container, each	Liberia	19-Nov-2014	Malaria Misc. Commodities	PO-PUP-1951	6	6	357303.96
Abbe Condenser, for Microscope BX53, NA 1.1, 4X-100X Coverage, [6-U111], each	Liberia	12-Dec-2014	Malaria Misc. Commodities	PO-PUP-2043	2	2	81000
Safety boxes, Hexagonal, 5 liter, for disposal of used sharps, each	Madagascar	27-Jan-2015	Malaria Misc. Commodities	PO-PUP-2105	38020	38020	8167.5
Gloves, Latex; Examination; Powder-Free; Disposable; Ambidextrous; Non-Sterile; Medium; Case of 1,000 pcs	Malawi	30-Dec-2014	Malaria Misc. Commodities	PO-PUP-2074	4000	4000000	325450
Gloves; Latex, Examination, Powder-free, Disposable, Ambidextrous, Non-Sterile, Medium, Beige, Case of 1,000 pcs	Malawi	16-Jan-2015	Malaria Misc. Commodities	PO-PUP-2100	3523	3523000	148575
Safety box, disposable plastic, autoclavable, incinerator safe, puncture-resistant,locking lids, 5L, each	Malawi	13-Mar-2015	Malaria Misc. Commodities	PO-PUP-2168	5730	5730	141500
Safety boxes, Hexagonal, 5 liter, for disposal of used sharps, each	Malawi	28-Jan-2015	Malaria Misc. Commodities	PO-PUP-2106	30000	30000	424500
Box, Wooden, for Microscope CX22, each	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2155	10	30000	2037250
Camera, Digital, DP73 for use with BX53 Microscope, each	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2155	2	30000	2107500
Cord Hanger for CX22LED microscope, each	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2155	10	30000	1575500
Dark Field Stop for CX22LED microscope, each	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2155	10	30000	1575500
Eyepiece for microscope CX22LED, 15x each	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2155	10	30000	1507000
Filar micrometer with reticle holder for CX22LED microscope, each	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2155	10	30000	1781000
Filter Holder for CX22LED microscope, each	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2155	10	30000	1781000
Microscope slide box, holds 50 slides, each	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2156	200	30000	1781000
Microscope slide mailer, holds 5 slides (75 x 25 mm), case of 1,200	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2156	1	1200	1781000
Microscope, CX22LED, with objectives 4x, 10x, 40x, and 100x Plan OB, each	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2155	10	10	1132200
Mirror Unit, for Microscope CX22, each	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2155	10	10	159500
Mobile Healthcare Printer model# QLn320, each	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2155	2	2	2028000
Slides for microscopes, beveled edges, frosted, 75 x 25 mm, pack of 144	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2156	35	5040	2028000
Wire Pointer for CX22LED microscope, each	Mozambique	3-Mar-2015	Malaria Misc. Commodities	PO-PUP-2155	10	10	1809500
12 Volt DC Battery pack with Charger, each	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1844	4	4	2138500
6 Volt Gel Cell Battery, each	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1844	65	65	2138500
Automatic Charger for two 6 Volt Batteries	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1842	14	14	2138500
Collapsible Cage, 12 x 12 x 12, each	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1844	25	25	1785
Collapsible Cage, 18 x 18 x 18, each	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1844	20	20	892.5
Collecting Cups with lids, 20 x 20, 10 per set	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1843	5	50	13969.24
Insect Mounting Kit, each	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1843	5	5	228650
Microplate Absorbance reader with software, each	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1845	1	1	415608
Miniature Insect Light Trap, each	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1844	30	30	17525
No-See-Um Catch bag with cup, each	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1844	65	65	39083
Printer Paper for Microplate Absorbance Reader, 3 rolls	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1845	2	6	36784
Replacement Battery, 12 Volt DC, each	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1844	4	4	34000
Sealed, Gelled-Electrolyte Battery, 6V, 10 amp/hr, each	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1842	30	30	85800
Trap Mounted two D-Cell Battery Holders, pair	Myanmar	2-Oct-2014	Malaria Misc. Commodities	PO-PUP-1842	50	50	64287
360 degree Flexible LED Light for Microscope, Each	Senegal	2-Feb-2015	Malaria Misc. Commodities	PO-PUP-2109	20	20	3088
Box, Wooden, for Microscope CX22, each	Senegal	15-Dec-2014	Malaria Misc. Commodities	PO-PUP-2045	20	20	52200
Cover, Dust, Hood Type for CX Microscopes, each	Senegal	15-Dec-2014	Malaria Misc. Commodities	PO-PUP-2045	20	20	43500
Microscope, CX22LED, with objectives 4x, 10x, 40x, and 100x Plan OB, each	Senegal	27-Feb-2015	Malaria Misc. Commodities	PO-PUP-2146	20	20	1284.4
Slides for Microscopes, frosted, 76.2 x 25.4 mm, 20 x Box 50 Slides, each	Senegal	15-Dec-2014	Malaria Misc. Commodities	PO-PUP-2045	165	165	309400
Syringe 5ml, 2-part, luer slip, eccentric luer nozzle, with by-packed needle 21Gx1.5" (0.8 x 38-40mm) with protection cap, sterile, disposable., box of 100	Singapore	10-Dec-2014	Malaria Misc. Commodities	PO-PUP-2036	7000	7000	398.32
Box, Wooden, for Microscope CX22, each	Tanzania	14-Oct-2014	Malaria Misc. Commodities	PO-PUP-1862	20	20	43992
Microscope, CX22LED, with objectives 4x, 10x, 40x, and 100x Plan OB, each	Tanzania	14-Oct-2014	Malaria Misc. Commodities	PO-PUP-1862	20	20	102790
Sulfadoxine/Pyrimethamine 500mg/25mg, 50x3 tablets, 150 tablets	Benin	23-Jan-2015	Malaria Pharmaceuticals	PO-PUP-2102	12136	1820400	6798
Sulfadoxine/Pyrimethamine 500mg/25mg, 50x3 tablets, 150 tablets	Benin	27-Jan-2015	Malaria Pharmaceuticals	PO-PUP-2104	8856	1328400	41412

Sulfadoxine/Pyrimethamine 500mg/25mg, pack of 150 tablets	Benin	29-Jan-2015	Malaria Pharmaceuticals	PO-PUP-2107	6300	945000	20600
Sulfadoxine/Pyrimethamine 500mg/25mg, pack of 150 tablets	Benin	29-Jan-2015	Malaria Pharmaceuticals	PO-PUP-2108	14700	2205000	494840
Sulfadoxine/Pyrimethamine 500mg/25mg, Pill, Bottle, 100 tablets	Burundi	25-Nov-2014	Malaria Pharmaceuticals	PO-PUP-1962	11860	1186000	2550
Quinine sulphate (tablets) 300mg, bottle of 1,000	DRC	25-Nov-2014	Malaria Pharmaceuticals	PO-PUP-1967	1540	1540000	22800
Sulfadoxine/Pyrimethamine 500mg/25mg, Pill, Bottle, 1000 tablets	DRC	8-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1850	8550	8550000	90033.82
Rectal Artesunate suppository 50 mg, pack of 6	Ghana	17-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1869	5404	32424	65239.2
Rectal Artesunate suppository 200 mg, pack of 6	Ghana	17-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1869	3746	22476	21481.2
Rectal Artesunate suppository 50 mg, pack of 6	Guinea	25-Nov-2014	Malaria Pharmaceuticals	PO-PUP-1966	10000	60000	530665.2
1 vial Artesunate injection 60mg + 1 sodium bicarbonate solvent + 1 sodium chloride solvent, each	Guinea	2-Dec-2014	Malaria Pharmaceuticals	PO-PUP-1987	106000	106000	228714.84
Artemether 40mg/ml, 1ml inj. Pack of 6	Guinea	23-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2049	2667	16002	154720
Artemether 80mg/ml, 1ml inj. Pack of 6	Guinea	23-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2046	1867	11202	77360
Quinine sulphate (tablets) 300mg, bottle of 1,000	Guinea	25-Nov-2014	Malaria Pharmaceuticals	PO-PUP-1965	4000	4000000	702892.08
Rectal Artesunate suppository 200 mg, pack of 6	Guinea	25-Nov-2014	Malaria Pharmaceuticals	PO-PUP-1966	5000	30000	387538.75
Sulfadoxine/Pyrimethamine 500mg/25mg, Pill, Bottle, 1000 tablets	Guinea	23-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2047	1863	1863000	431250
1 vial Artesunate injection 60mg + 1 sodium bicarbonate solvent + 1 sodium chloride solvent, each	Laos	15-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2044	10000	10000	88720
1 vial Artesunate injection 60mg + 1 sodium bicarbonate solvent + 1 sodium chloride solvent, each	Liberia	7-Nov-2014	Malaria Pharmaceuticals	PO-PUP-1932	175000	175000	221733.72
Artemether 20mg/ml, 1ml inj., Pack of 30 ampoules	Liberia	2-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2008	1167	35010	189000
Artemether 20mg/ml, 1ml inj., Pack of 30 ampoules	Liberia	2-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2016	2400	72000	3412.5
Artemether 80mg/ml, 1ml inj. Pack of 6	Liberia	2-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2012	15000	90000	1477845
Artemether 80mg/ml, 1ml inj. Pack of 6	Liberia	2-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2013	61667	370002	672000
Quinine sulphate (tablets) 300mg, bottle of 1,000	Liberia	2-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2015	8750	8750000	526500
Quinine sulphate (tablets) 300mg, bottle of 1,000	Liberia	2-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2011	2500	2500000	134550
Sulfadoxine/Pyrimethamine 500mg/25mg, Pill, Bottle, 1000 tablets	Liberia	2-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2014	470	470000	386100
Rectal Artesunate suppository 50 mg, pack of 6	Malawi	20-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1879	20300	121800	1756250
1 vial Artesunate injection 60mg + 1 sodium bicarbonate solvent + 1 sodium chloride solvent, each	Malawi	9-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1854	278000	278000	1756250
Sulfadoxine/Pyrimethamine 250mg/12.5mg + amodiaquine (75mg), Pack of 25 co-blisters	Mali	11-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2037	11200	280000	1465
Sulfadoxine/Pyrimethamine 500mg/25mg + amodiaquine (150mg), Pack of 50 co-blisters	Mali	12-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2040	26400	1320000	1465
Sulfadoxine/Pyrimethamine 500mg/25mg, Pill, Bottle, 1000 tablets	Mali	20-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1874	4400	4400000	14650
40 foot standard ocean container	Mozambique	10-Feb-2015	Malaria Pharmaceuticals	PO-PUP-2124	13	13	617050
40 foot standard ocean container	Mozambique	10-Feb-2015	Malaria Pharmaceuticals	PO-PUP-2125	7	7	530950
40 foot standard ocean container	Mozambique	10-Feb-2015	Malaria Pharmaceuticals	PO-PUP-2126	6	6	1097775
40 foot standard ocean container	Mozambique	10-Feb-2015	Malaria Pharmaceuticals	PO-PUP-2127	13	13	617050
40 foot standard ocean container	Mozambique	10-Feb-2015	Malaria Pharmaceuticals	PO-PUP-2128	7	7	530950
40 foot standard ocean container	Mozambique	10-Feb-2015	Malaria Pharmaceuticals	PO-PUP-2129	6	6	996400
Sulfadoxine/Pyrimethamine 500mg/25mg, pack of 150 tablets	Mozambique	17-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1872	27330	4099500	1575000
Sulfadoxine/Pyrimethamine 500mg/25mg, pack of 150 tablets	Mozambique	17-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1873	27337	4100550	2138500
1 vial Artesunate injection 60mg + 1 sodium bicarbonate solvent + 1 sodium chloride solvent, each	Nigeria	8-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1851	24200	24200	71430
1 vial Artesunate injection 60mg + 1 sodium bicarbonate solvent + 1 sodium chloride solvent, each	Nigeria	8-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1852	20000	20000	628941
Sulfadoxine/Pyrimethamine 500mg/25mg, 50x3 tablets, 150 tablets	Nigeria	20-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1880	40000	6000000	34300
1 vial Artesunate injection 60mg + 1 sodium bicarbonate solvent + 1 sodium chloride solvent, each	Rwanda	20-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1875	45000	45000	6120
Rectal Artesunate suppository 50 mg, pack of 6	Senegal	20-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1878	3300	19800	318.4
1 vial Artesunate injection 60mg + 1 sodium bicarbonate solvent + 1 sodium chloride solvent, each	Senegal	20-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1876	25000	25000	6171.88
Amodiaquine, 150 mg, Tablet, 1 x 6 Blister	Senegal	12-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2039	1213000	7278000	283.05
Rectal Artesunate suppository 200 mg, pack of 6	Senegal	20-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1878	5100	30600	309400
Sulfadoxine/Pyrimethamine 250mg/12.5mg + amodiaquine (75mg), Pack of 25 co-blisters	Senegal	12-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2042	37477	936925	140
Sulfadoxine/Pyrimethamine 500mg/25mg + amodiaquine (150mg), Pack of 50 co-blisters	Senegal	12-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2041	33729	1686450	402150
Sulfadoxine/Pyrimethamine 500mg/25mg, Pill, Bottle, 100 tablets	Senegal	12-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2038	14300	1430000	184800
Sulfadoxine/Pyrimethamine 500mg/25mg, Pill, Bottle, 1000 tablets	Senegal	23-Mar-2015	Malaria Pharmaceuticals	PO-PUP-2170	1000	1000000	72457
1 vial Artesunate injection 60mg + 1 sodium bicarbonate solvent + 1 sodium chloride solvent, each	Singapore	10-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2036	350000	350000	20196
Sulfadoxine/Pyrimethamine 500mg/25mg, Pill, Bottle, 1000 tablets	Singapore	10-Dec-2014	Malaria Pharmaceuticals	PO-PUP-2035	9000	9000000	19800
1 vial Artesunate injection 60mg + 1 sodium bicarbonate solvent + 1 sodium chloride solvent, each	Tanzania	30-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1923	601015	601015	147532
1 vial Artesunate injection 60mg + 1 sodium bicarbonate solvent + 1 sodium chloride solvent, each	Tanzania	25-Nov-2014	Malaria Pharmaceuticals	PO-PUP-1964	1005468	1005468	14828.5

1 vial Artesunate injection 60mg + 1 sodium bicarbonate solvent + 1 sodium chloride solvent, each	Uganda	2-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1840	450000	450000	792000
1 vial Artesunate injection 60mg + 1 sodium bicarbonate solvent + 1 sodium chloride solvent, each	Uganda	2-Oct-2014	Malaria Pharmaceuticals	PO-PUP-1841	205000	205000	360800
Sulfadoxine/Pyrimethamine 500mg/25mg, 50x3 tablets, 150 tablets	Zimbabwe	1-Dec-2014	Malaria Pharmaceuticals	PO-PUP-1984	6920	1038000	51484.8
Sulfadoxine/Pyrimethamine 500mg/25mg, 50x3 tablets, 150 tablets	Zimbabwe	1-Dec-2014	Malaria Pharmaceuticals	PO-PUP-1985	4734	710100	35220.96
Sulfadoxine/Pyrimethamine 500mg/25mg, 50x3 tablets, 150 tablets	Zimbabwe	5-Nov-2014	Malaria Pharmaceuticals	PO-PUP-1931	4173	625950	45819.54
Test, Rapid Diagnostic Malaria, Ag Pf , Cassette,[SD Bioline] Kit 25 tests	Benin	8-Jan-2015	Rapid Diagnostic Test Kit	PO-PUC-1947	40000	1000000	602000
Test, Rapid Diagnostic Malaria, Ag Pf , Cassette,[SD Bioline] Kit 25 tests	Benin	8-Jan-2015	Rapid Diagnostic Test Kit	PO-PUC-1948	28000	700000	44250
Test, Rapid Diagnostic Malaria, Ag Pf , Cassette,[SD Bioline] Kit 25 tests	Burkina Faso	14-Nov-2014	Rapid Diagnostic Test Kit	PO-PUC-1843	80000	2000000	43076
Test, Rapid Diagnostic Malaria, Ag Pf , Cassette,[SD Bioline] Kit 25 tests	Burkina Faso	14-Nov-2014	Rapid Diagnostic Test Kit	PO-PUC-1845	80000	2000000	35600
Test, Rapid Diagnostic Malaria, Ag Pf/PAN , [SD Bioline], Kit 25 tests	Burundi	25-Nov-2014	Rapid Diagnostic Test Kit	PO-PUC-1861	88000	2200000	2550
Test, Rapid Diagnostic Malaria, Ag P.f/pv Device, [SD Bioline] 25 tests	Cambodia	8-Dec-2014	Rapid Diagnostic Test Kit	PO-PUC-1888	10820	270500	2550
Test, Rapid Diagnostic Malaria, Ag Pf/Pv, POCT [SD Bioline] Kit 25 tests,	Cambodia	16-Oct-2014	Rapid Diagnostic Test Kit	PO-PUC-1701	600	15000	2550
Test, Rapid Diagnostic Malaria, Ag Pf (HRP2/pLDH) POCT [SD Bioline Malaria] kit, 25 tests	Kenya	17-Mar-2015	Rapid Diagnostic Test Kit	PO-PUC-2044	136000	3400000	51920
Test, Rapid Diagnostic Malaria, Ag HRP2 [First Response Malaria] kit, 25 tests	Liberia	13-Jan-2015	Rapid Diagnostic Test Kit	PO-PUC-1951	35000	875000	228150
Test, Rapid Diagnostic Malaria, Ag HRP2 [First Response Malaria] kit, 25 tests	Liberia	13-Jan-2015	Rapid Diagnostic Test Kit	PO-PUC-1952	35000	875000	397800
Test, Rapid Diagnostic Malaria, Ag Pf/Pan POCT [SD Bioline Malaria] kit, 25 tests	Madagascar	19-Feb-2015	Rapid Diagnostic Test Kit	PO-PUC-2034	80000	2000000	39204
Test, Rapid Diagnostic Malaria, Ag Pf , Cassette,[SD Bioline] Kit 25 tests	Malawi	26-Jan-2015	Rapid Diagnostic Test Kit	PO-PUC-1958	132000	3300000	2093000
Test, Rapid Diagnostic Malaria, Pf HPRII [ParaCheck], Kit 25 tests	Malawi	1-Oct-2014	Rapid Diagnostic Test Kit	PO-PUC-1689	120000	3000000	2093000
Test, Rapid Diagnostic Malaria, Pf HPRII [ParaCheck], Kit 25 tests	Malawi	1-Oct-2014	Rapid Diagnostic Test Kit	PO-PUC-1690	40000	1000000	2930
Test, Rapid Diagnostic Malaria, Ag Pf , Cassette,[SD Bioline] Kit 25 tests	Mali	3-Feb-2015	Rapid Diagnostic Test Kit	PO-PUC-2023	20000	500000	2093000
Test, Rapid Diagnostic Malaria, Ag Pf , Cassette,[SD Bioline] Kit 25 tests	Mozambique	19-Mar-2015	Rapid Diagnostic Test Kit	PO-PUC-2046	240000	6000000	2138500
Test, Rapid Diagnostic Malaria, Ag Pf/Pv, POCT [SD Bioline] Kit 25 tests,	Myanmar	19-Feb-2015	Rapid Diagnostic Test Kit	PO-PUC-2033	8000	200000	99400
Test, Rapid Diagnostic Malaria, Ag HRP2/pLDH Single Pack POCT [First Response Malaria] kit, 30 tests	Rwanda	14-Nov-2014	Rapid Diagnostic Test Kit	PO-PUC-1847	3120	93600	118240
Test, Rapid Diagnostic Malaria, Ag Pf , Cassette,[SD Bioline] Kit 25 tests	Senegal	12-Nov-2014	Rapid Diagnostic Test Kit	PO-PUC-1836	29692	742300	117625
Test, Rapid Diagnostic Malaria, Ag Pf , Cassette,[SD Bioline] Kit 25 tests	Senegal	12-Nov-2014	Rapid Diagnostic Test Kit	PO-PUC-1837	44538	1113450	14834.16
Test, Rapid Diagnostic, First Response Malaria Ag Combo, HRP2/pLDH, kits of 25	Tanzania	13-Jan-2015	Rapid Diagnostic Test Kit	PO-PUC-1953	24611	615275	1292000
Test, Rapid Diagnostic Malaria, Ag HRP2 [First Response Malaria] kit, 25 tests	Zambia	31-Dec-2014	Rapid Diagnostic Test Kit	PO-PUC-1938	64900	1622500	348837.5
Test, Rapid Diagnostic Malaria, Ag Pf , Cassette,[SD Bioline] Kit 25 tests	Zambia DfID	13-Nov-2014	Rapid Diagnostic Test Kit	PO-PUC-1838	80000	2000000	420000
Test, Rapid Diagnostic Malaria, Ag HRP2 Single Pack POCT [First Response Malaria] kit, 25 tests	Zimbabwe	15-Oct-2014	Rapid Diagnostic Test Kit	PO-PUC-1699	21760	544000	146880
Test, Rapid Diagnostic Malaria, Ag HRP2 Single Pack POCT [First Response Malaria] kit, 25 tests	Zimbabwe	15-Oct-2014	Rapid Diagnostic Test Kit	PO-PUC-1700	39600	990000	267300

Appendix B. DFID-Funded Procurement, October 1, 2014 – March 31, 2015

Zambia DFID Funded procurement October 2014 - March 2015

Country	Item Description	PO#	Quantity (Packs)	Total Commodity Value	Procurement Status
Zambia DfID	Test, Rapid Diagnostic Malaria, Ag Pf , Cassette,[SD Bioline] Kit 25 tests	PO-PUC-1838	80,000.00	\$ 420,000.00	Delivered on December 2014
Zambia DfID	Erythromycin 125 mg/5 ml powder for suspension, 100 ml bottle	PO-PUP-1855	1,200.00	\$ 399,036.00	Expected to be delivered in June 2015
Zambia DfID	Erythromycin 250mg, as Stearate	PO-PUP-1856	30,000.00	\$ 878,100.00	Expected to be delivered in June 2015
Zambia DfID	Doxycycline 100 mg (as hyclate), caps	PO-PUP-1857	3,000.00	\$ 45,870.00	Expected to be delivered in June 2015
Zambia DfID	Amoxicillin 125 mg/5 ml powder for suspension, 100 ml, each	PO-PUP-1858	410,000.00	\$ 196,800.00	Expected to be delivered in May 2015
Zambia DfID	Chlorphenamine Maleate 4mg, 1000 tablets	PO-PUP-1859	17,000.00	\$ 34,000.00	Expected to be delivered in April 2015
Zambia DfID	Ferrous Sulphate 200mg, sugar-coated, 1000 tablets	PO-PUP-1859	14,000.00	\$ 34,300.00	Expected to be delivered in April 2015
Zambia DfID	Ferrous Sulphate 50 mg, sugar-coated, 1000 tablets	PO-PUP-1859	3,400.00	\$ 6,120.00	Expected to be delivered in April 2015
Zambia DfID	Cloxacillin 125 mg/5 ml powder for suspension, 100 ml, each	PO-PUP-1860	90,000.00	\$ 64,287.00	Expected to be delivered in June 2015
Zambia DfID	Cloxacillin 500mg, powder for injection	PO-PUP-1860	3,000.00	\$ 28,920.00	Expected to be delivered in June 2015
Zambia DfID	Nalidixic Acid 300 mg/5 ml liquid for suspension, 100 ml, each	PO-PUP-1860	30,000.00	\$ 52,200.00	Expected to be delivered in June 2015
Zambia DfID	Benzylpenicillin 5mu/vial	PO-PUP-1861	4,400.00	\$ 40,656.00	Expected to be delivered in May 2015
Zambia DfID	Phenoxyethylpenicillin 250mg tabs	PO-PUP-1861	20,000.00	\$ 309,400.00	Expected to be delivered in May 2015
Zambia DfID	Chloramphenicol 1g as Sodium Succinate, powder for injection	PO-PUP-1863	1,700.00	\$ 39,083.00	Delivered on March 2015
Zambia DfID	Adrenaline Injection (Epinephrine), 1mg/1ml ampoule, 100 ampoules per	PO-PUP-1864	1,400.00	\$ 17,920.00	Expected to be delivered in May 2015
Zambia DfID	Chloramphenicol 125 mg/5 ml liquid suspension, 100 ml	PO-PUP-1865	2,500.00	\$ 17,525.00	Delivered on February 2015
Zambia DfID	Ciprofloxacin 250mg tabs	PO-PUP-1866	60,000.00	\$ 85,800.00	Delivered on March 2015
Zambia DfID	Amoxicillin 125 mg/5 ml powder for suspension, 100 ml, each	PO-PUP-2116	495,000.00	\$ 237,600.00	Delivered on March 2015
Zambia DfID	Amoxicillin 125 mg/5 ml powder for suspension, 100 ml, each	PO-PUP-2118	495,000.00	\$ 237,600.00	Expected to be delivered in May 2015
Zambia DfID	Ciprofloxacin 250mg tabs	PO-PUP-2131	70,000.00	\$ 99,400.00	Expected to be delivered in August 2015
Zambia DfID	Doxycycline 100 mg (as hyclate), caps	PO-PUP-2132	6,000.00	\$ 83,220.00	Expected to be delivered in September 2015
Zambia DfID	Chloramphenicol 1g as Sodium Succinate, powder for injection	PO-PUP-2157	1,600.00	\$ 36,784.00	Expected to be delivered in October 2015
Zambia DfID	Erythromycin 125 mg/5 ml powder for suspension, 100 ml bottle, each	PO-PUP-2158	400,000.00	\$ 564,000.00	Expected to be delivered in November 2015
Zambia DfID	Erythromycin 250mg, as Stearate	PO-PUP-2159	25,000.00	\$ 687,750.00	Expected to be delivered in October 2015
Zambia DfID	Salbutamol Inhaler, 0.1mg/dose, each	PO-PUP-2160	60,000.00	\$ 84,000.00	Expected to be delivered in September 2015
Zambia DfID	Acetylsalicylic Acid 300mg, 1000 tablets	PO-PUP-2161	13,000.00	\$ 39,780.00	Expected to be delivered in September 2015
Zambia DfID	Cephalexin 125 mg/5 ml powder for suspension, 100 ml bottle, each	PO-PUP-2162	250,000.00	\$ 228,650.00	Expected to be delivered in November 2015
Zambia DfID	Cephalexin 250 mg, 10 x 10 blister capsules, each	PO-PUP-2162	120,000.00	\$ 415,608.00	Expected to be delivered in November 2015
Zambia DfID	Cloxacillin 250mg caps	PO-PUP-2162	30,000.00	\$ 628,941.00	Expected to be delivered in November 2015
Zambia DfID	Cloxacillin 125 mg/5 ml powder for suspension, 100 ml, each	PO-PUP-2163	100,000.00	\$ 71,430.00	Expected to be delivered in September 2015
Zambia DfID	Cloxacillin 500mg, powder for injection	PO-PUP-2163	4,000.00	\$ 38,560.00	Expected to be delivered in September 2015
Zambia DfID	Nalidixic Acid 300 mg/5 ml liquid for suspension, 100 ml, each	PO-PUP-2163	25,000.00	\$ 43,500.00	Expected to be delivered in September 2015
Zambia DfID	Phenoxyethylpenicillin 250mg	PO-PUP-2164	20,000.00	\$ 309,400.00	Expected to be delivered in October 2015
Zambia DfID	Amoxicillin 125 mg/5 ml powder for suspension, 100 ml, each	PO-PUP-2165	495,000.00	\$ 237,600.00	Expected to be delivered in October 2015
Zambia DfID	Amoxicillin 125 mg/5 ml powder for suspension, 100 ml, each	PO-PUP-2166	505,000.00	\$ 242,400.00	Expected to be delivered in November 2015

37,124,898.00	Essential Medicines
2,000,000.00	RDTs

Appendix C. Pre-Selected RDT Manufacturers

Manufacturer	Test Name	Target Antigen	Species	Comments
Access Bio	CareStart™ Malaria	pLDH	PAN	
	CareStart™ Malaria Single Kit	pLDH	PAN	
	CareStart™ Malaria 3 line	pLDH	Pf/PAN	
	CareStart™ Malaria 3 line Single Kit	pLDH	Pf/PAN	
	CareStart™ Malaria Combo	HRP2/pLDH	Pf/PAN	
	CareStart™ Malaria Combo Single Kit	HRP2/pLDH	Pf/PAN	
	CareStart™ Malaria	HRP2	Pf	
	CareStart™ Malaria Single Kit	HRP2	Pf	
	CareStart™ Malaria (Pf/Pv) Combo	HRP2/pLDH	Pf/Pv	
	CareStart™ Malaria Combo Single Kit	HRP2/pLDH	Pf/Pv	
	CareStart™ Malaria Combo	HRP2/pLDH	Pf/VOM	VOM = Vivax, Ovale, Malariae,
	CareStart™ Malaria Combo Single Kit	HRP2/pLDH	Pf/VOM	
	CareStart™ Malaria	HRP2/pLDH	Pf	
	CareStart™ Malaria Single Kit	HRP2/pLDH	Pf	
	CareStart™ Malaria SCREEN			
	CareStart™ Malaria SCREEN Single Kit			
ICT	Malaria Pf Cassette	HRP2	Pf	
Orchid Biomedical	Paracheck Pf Device	HRP2	Pf	
Premier Medical	First Response Malaria Ag -Bulk	HRP2	Pf	
	First Response Malaria Ag – POCT	HRP2	Pf	
Span	ParaHIT f Device	HRP2	Pf	
	ParaHIT f Dipstick	HRP2	Pf/Pan	
	ParaHIT Total Device	HRP2	Pf/Pan	
Standard Diagnostics	Bioline Malaria Ag Pf	HRP2	Pf	
	Bioline Malaria Ag Pf/PAN	HRP2/pLDH	Pf/PAN	
	Bioline Malaria Ag Pf/Pv	HRP2/pLDH	Pf/Pv	
	Bioline Malaria Ag Pf	HRP2/pLDH	Pf	
	Bioline Malaria Ag Pf -individual	HRP2	Pf	
	Bioline Malaria Ag Pf/PAN-individual	HRP2/pLDH	Pf/PAN	
	Bioline Malaria Ag Pf/Pv - individual	HRP2/pLDH	Pf/Pv	
	Bioline Malaria Ag Pf-individual	HRP2/pLDH	Pf	

Appendix D. Pre-Selected LLIN Manufacturers

Brand	Manufacturer	Polyester	Polyethylene	Polypropelene	Denier	Pesticide	Whopes Status
Interceptor®	BASF	√			75 & 100	Alpha-cypermethrin	Interim
DuraNet®	Shobikaa Impex Private Ltd		√		145+/- 5% (138 – 152)	Alpha-cypermethrin	Full
DuraNet®	Bestnet A/S		√		145+/- 5% (138 – 152)	Alpha-cypermethrin	Full
Olyset®	Sumitomo Chemical		√		150	Permethrin	Full
Olyset®	A-Z Textile Mills Ltd		√		150	Permethrin	Full
DawaPlus®2.0	Tana Netting	√			75 & 100	Deltamethrin	Interim
Permanet®2.0	Vestergaard Frandsen	√			75 & 100	Deltamethrin	Full
Permanet®3.0	Vestergaard Frandsen	√	√		100 (roof) / 100 (sides - no border) / 75 (sides with 70cm lower border)	Deltamethrin	Interim
LifeNet®	Bayer			√	100	Deltamethrin	Interim

Appendix E. WHO Pre-Qualified ACT Manufacturers

Manufacturer	Product	Details
Novartis Pharma AG	Coartem® FDC	Artemether/Lumefantrine, 20mg/120mg, four dosage presentations
Sanofi Aventis/Africasoins	Winthrop® FDC AS/AQ	Artesunate+Amodiaquine, four dosage presentations
IPCA Laboratories Ltd	Generic FDC AS/AQ	Artesunate+Amodiaquine, four dosage presentations
Ajanta Pharma Limited	Generic ALu	Artemether/Lumefantrine, 20mg/120mg, six dosage presentations
Strides Arcolab Limited	Generic ALu	Artemether/Lumefantrine, 20mg/120mg, four dosage presentations
Sigma Tau	Eurartesim® - PQP+DHA	Piperaquine tetraphosphate + dihydroartemisinin 160/20 mg, 320/40 mg

Appendix F. Obj. 2 PMP Indicators Supplemental Information

INDICATOR 1: Facility Stockout Rate (the percentage of facilities that experienced a stockout of a product expected to be provided or issued by that site on the day of visit) (Source: EUV)

Country	Date Submitted	% Stocked out of All ACTs	N	Comments
Burkina Faso	Oct-Dec 2014	0%	39	
	Jan-Mar 2015	0%	41	
Ghana	Oct-Dec 2014	6.2%	48	
	Jan-Mar 2015	5.4%	37	
Liberia	Oct-Dec 2014	NA	NA	The project did not have responsibility to produce the EUV report during this quarter
	Jan-Mar 2015	0%	68	
Malawi	Oct-Dec 2014	NA	NA	A report was produced in August, prior to the reporting period
	Jan -Mar 2014	2%	59	
Mozambique	Oct 2014 – Mar 2015	3%	91	
Nigeria	Oct-Dec 2014	0%	117	Nigeria conducts EUV on a semiannual basis
	Jan-Mar 2015	NA	NA	The project did not have responsibility to produce the EUV report during this quarter
Tanzania	Oct-Dec 2013	NA	NA	The project did not have responsibility to produce the EUV report during this quarter
	Jan -Mar 2014	3%	200	
Zambia	Oct-Dec 2014	0%	40	
	Jan -Mar 2014	2%	42	
Zimbabwe	Oct-Dec 2014	3%	37	
	Jan-Mar 2015	3%	37	

Note: "Stocked out of all ACTs" indicates an absence of all four AL presentations: AL 6x1, AL 6x2, AL 6x3, and AL 6x4. Data for Ghana and Nigeria are an exception, as they reflect the absence of only WHO pre-qualified ACTs for all AL and AS/AQ presentations (FDC and co-blister)

Nigeria collects EUV data only on a semiannual basis, and reports separately for states receiving support from the MAPS project, and those that are not.

This indicator could not be calculated for the following TO7 presence countries, as the requisite data are not reported through an LMIS and/or these countries did not implement the End-Use Verification activity: Burkina Faso, Burundi, Liberia, Madagascar, and Rwanda.

INDICATOR 2: Country stockout rate: the percentage of countries experiencing a stockout at the central warehouse(s) at the time of reporting (Source: PPMRm)

October – December 2014

Commodity	% stocked out	N	Countries stocked out
AL 6x1	0%	18	
AL 6x2	5%	18	Kenya
AL 6x3	16%	18	Benin, Ghana, Kenya
AL 6x4	5%	18	Kenya
FDC AS/AQ 25/67.5mg	11%	9	Ghana
FDC AS/AQ 50/135mg	11%	9	Liberia
FDC AS/AQ 100/270mg, 3 tabs	12%	8	Ghana
FDC AS/AQ 100/270mg, 6 tabs	12%	8	Burundi
SP	0%	17	
RDTs	0%	23	

January – March 2015

Commodity	% stocked out	N	Countries/States stocked out
AL 6x1	5%	19	Mali
AL 6x2	0%	18	
AL 6x3	5%	17	Malawi
AL 6x4	0%	17	
FDC AS/AQ 25/67.5mg	0%	9	
FDC AS/AQ 50/135mg	0%	9	
FDC AS/AQ 100/270mg, 3 tabs	0%	9	

Commodity	% stocked out	N	Countries/States stocked out
FDC AS/AQ 100/270mg, 6 tabs	0%	8	
SP	0%	17	
RDTs	0%	25	

INDICATOR 3: Functioning LMIS: Percentage of countries where an LMIS is present that routinely collects and reports stock status data (i.e., stock on hand and consumption data) from all SDPs in the country

Country	Functioning LMIS	Note
Burkina Faso	Yes	<p>There is a combined logistics and statistics data reporting system for malaria activities in Burkina. The stock on hand and consumption data are reported on a monthly basis from the health facilities (HF) and the Community Health Workers (CHW). At the district level, the district data manager enters the HF monthly report data into a database designed for reporting malaria activities, and sends the quarterly report file to the central level through the region by internet.</p> <p>The development of the database was funded by the Global Fund and implemented in all districts since December 2010 with technical and financial support from the project.</p> <p>The project provided technical and financial support to the NMCP for monitoring the use of the database in the field, and data analysis at the central level. The NMCP with technical and financial support from the project conducted one monitoring visit (in December 2014).</p>
DRC	No	<p>The LMIS Roadmap tool was adopted during the last LMIS working group meeting by in country supply chain stakeholders.</p> <p>As a next step in April, the USAID DELIVER PROJECT will organize a system design workshop.</p>
Ghana	No	<p>Presently, data does not arrive at the central level through the defined channels for decision making. Through the Global Fund sponsored Logistics Support Project, stock reports from the 10 regional medical stores (RMS) and central level are collated and shared with partners to update pipelines and inform decision making.</p> <p>On January 13, 2015 a fire incident at the central medical stores (CMS) led to the loss of the stocks, available records and warehouses. Consequently, central level stocks are being kept at three (3) separate warehouses for Global Fund, USAID, UNFPA and Government of Ghana. Stock information from these three warehouses are thus collated on a monthly basis to represent central level stocks.</p> <p>It is expected that the decision by the GOG to initiate supply chain reforms with a cabinet memo for the implementation of the supply chain master plan by September 2015 will help improve the functionality of the LIMS.</p>
Guinea	No	<p>In agreement with NMCP, USAID, and SIAPS, no data from the existing LMIS had been used for the January 2015 distribution because implementing partners were not comfortable about the</p>

Country	Functioning LMIS	Note
		validity and accuracy of the data. The same distribution list utilized in August 2014 was also used for the January 2015 distribution.
Liberia	Yes	Liberia has a functional LMIS that is used at all Government health facilities and few private facilities. Health facilities are reporting data on stock on hand, consumption data and requisition for resupply on monthly basis. Data are received and analyzed first at the county level by the County Pharmacists and then submitted to the National Supply Chain Management Unit at the Ministry of Health and Social Welfare. However, there are challenges with availability of these tools at some facilities, the effective use of the tools and submission of reports on a timely basis.
Madagascar	Yes	The Ministry of Public Health has developed with partners the CHANNEL software for data collection and commodity management. So far, it has only been used in 7 out of 22 regions.
Malawi	Yes	100 % of health facilities in Malawi are integrated into LMIS. Reporting rate for service delivery points has been maintained at an average of 92% from September 2014 to February, 2015, reaching a maximum of 95% for September, October and November, 2014. This remains significant improvement from 54% as of March, 2013.
Mozambique	Yes	<p>Mozambique has an LMIS, but it does not provide data from all SDPs in the country. There is a paper-based LMIS that includes standard data points such as stock on hand, quantity distributed, quantity requested, etc., and is used by facilities to reorder from the districts monthly. The districts aggregate these orders and order monthly from the provinces. District reporting rates are above 90%. Individual SDP data remains at the district level. Provinces order quarterly from the central level. The percentage of facilities not included in the district aggregations is unknown, as is the percentage of districts not included in the provincial aggregations.</p> <p>The Information System for Management of Medicines and Medical Supplies (SIMAM), has been implemented at the central and provincial levels. The system allows users to enter district data (SOH, quantity requisitioned, quantity received) as well as the same data from the provincial level. These data are posted to Drop Boxes visible at the central level. All provinces now use the system when making their quarterly requisitions; however, all provinces do not yet post complete data from the districts.</p>
Nigeria	Yes	Yes, all PMI supported SDPs (1, 274 SDPs to date) in the country report through the Malaria Commodity Logistics System (MCLS) using the Bimonthly Facility Stock Report Card. The following specific tools are available: National Inventory Control Card; Bimonthly Facility Stock Report (BFSR) and Local Government Data Aggregation tool.
RDMA		<p>Cambodia: Yes. The LMIS system collects data down to the health facility and Village Malaria Worker (VMW) level however this data gets aggregated at a district level so stock status from individual SDPs is not accessible to the NMCP at the central level. Support for the existing eLIMS has been cut so the system is becoming less reliable.</p> <p>Laos: Yes. The LMIS tool gathers two separate streams of data on essential malaria commodities (ACTs, RDTs and Artesunate.)</p> <p>Burma: Yes. Burma has an LMIS system for malaria that is supported by PR-UNOPS however this system is predominantly paper based so the data is difficult to access and not timely.</p>

Country	Functioning LMIS	Note
Rwanda	Yes	The country is using Harmonized LMIS since 2011. The project also had eLMIS recently implemented which will fully replace the paper based LMIS from July 1, 2015
Tanzania	Yes	<p>In this fiscal year, Tanzania began the implementation of the electronic Logistics Management Information System (eLMIS) at the district level. To date 100% of the districts have been trained and they report and request commodities for health facilities on routine basis through the eLMIS. The latest reporting rates for the ILS, through which ACTs, Artesunate Injection, SP and mRDTs are managed, is 90%.</p> <p>The ILSGateway rollout training has been completed across the country. This is a complementary SMS based data collection tool developed under the USAID DELIVER PROJECT that has been implemented in 4,603 health facilities and is collecting monthly information on stock on hand data, status of Report and Request submission and status of deliveries receipt.</p>
Zambia	Yes	With technical and material support from USAID DELIVER PROJECT, the Ministry of Health and the Ministry of Community Development Mother and Child Health has conducted roll out trainings in EMLIP Hybrid in additional provinces. A total number of 29 districts have been trained from October 2014 to March 2015 bringing the total number of districts with active EMLIP hybrid to 62 out of a total of 102 districts in the country. At the end of the period a total of 3,457 health facility staff were trained.
Zimbabwe	Yes	Automated (AutoDRV/AutoOrder) system exists for routine collection of LMIS data from SDPs. Central LMIS (TOP UP) exists for routine analysis and reporting stock status data.

INDICATOR 6: Percentage of countries receiving field support TA funds reporting on supply chain performance via the End-Use Verification activity

Country	End-Use carried out by the project	Note
Burkina Faso	Yes	The project conducted two rounds of EUV activity during the first semester of this fiscal year (November/December 2014 and February/March 2015).
DRC	No	This activity is carried out by SIAPS. The last one occurred in September 2014 and the next is planned for April 2015.
Ghana	Yes	Ghana has implemented and currently share reports on the End-Use Verification activity on quarterly basis since July 2009. The EUV covers the entire country and the reports produced have informed decisions regarding commodity procurement, distribution and redistribution, supportive supervision and training.
Guinea	No	Guinea is not currently receiving field support TA funds to conduct an EUV activity at this time.

Liberia	Yes	The project conducted two rounds of EUV on quarterly basis in the USAID supported counties (Montserrado, Bong, Nimba, Margibi, and Lofa). The EUV has been combined with data verification activity of the Interim Approach, following each distribution round.
Madagascar	No	The End-Use activity has been unable to proceed in Madagascar, as per the prohibition on partnering with the host government.
Malawi	Yes	The project assumed responsibility for the End-Use activity in FY2011, and has carried out quarterly data collection since that time. One EUV exercise was conducted during the semi-annual period of October 2014 to March, 2015.
Mozambique	Yes	The project has completed End Use Verification data collection visits to Niassa, Maputo Province, Maputo City.
Nigeria	Yes	The first EUV activity was conducted in November/December of 2012 in Nigeria. So far, 5 cycles of EUV have been carried out in country. Latest EUV was conducted in 11 PMI focus states.
RDMA	N/A	No countries in RDMA have been selected to execute EUV surveys by PMI Malaria Operational Plans.
Rwanda	N/A	Although Rwanda is a TO7 presence country, responsibility for the End-Use activity was transferred to the SPS project, as per the FY10 MOP; it is thus not included in the denominator for this indicator.
Tanzania	Yes	Tanzania has been carrying out the End-Use Verification (EUV) survey since January 2009. During the reporting period, Tanzania implemented a new PMP Zanzibar, in addition to supporting the development of a LMU PMP. Two EUV surveys were also conducted in Mainland and Zanzibar during the reporting period.
Zambia	Yes	<p>During this period, the malaria case management EUV exercise has been conducted twice (December 2014 and February 2015). NMCP was involved in the data analysis prior to report writing. This was conducted in an effort to build capacity in NMCP to ensure sustainability of the EUV exercise and to allow them an opportunity to appreciate the process.</p> <p>The results of the two EUV exercises were shared with NMCP and other stakeholders. Of all cases sampled, 51% were malaria cases. The results also showed that of all malaria cases, 81% were diagnosed using RDTs while 17% were diagnosed using clinical method. Further results showed that 81% of under-5 children diagnosed with malaria were treated with ACTs.</p> <p>The next EUV exercise is scheduled for May 2015.</p>
Zimbabwe	Yes	Zimbabwe has been carrying out End-use activity quarterly since January 2012.

INDICATOR 9: Functioning Coordination Committee: percentage of countries that have a logistics coordination mechanism in place that includes participation of NMCP and CMS (or their equivalents), with a meeting that takes place at a specifically appointed time (e.g., during a reporting quarter)

Country	Functioning Coordination Committee	Note
Burkina Faso	Yes	In Burkina, there is a malaria commodities coordination body (ACT Committee) led by the Director General of the Pharmacy Department. During the first semester of this fiscal year, the ACT Committee has met once (in March 2015). The introduction of Artemeter-Lumefantrine to replace the Artesunate/Amodiaquine in the districts where SMC will be implemented in 2015 for treatment of uncomplicated malaria for under five years has been discussed and addressed. The USAID DELIVER PROJECT provides technical and financial support to the ACT Committee to ensure donor and government coordination around malaria commodity supply. CAMEG (Central Medical Stores), NMCP, Pharmacy Department, Financial Department of the MOH, UNICEF, USAID, WHO, USAID DELIVER PROJECT and other partners involved in malaria activities are committee members.
DRC	Yes	This committee meets quarterly. The last meeting occurred in January. One of the key recommendations was to report data from health zones supported by the Global Fund and DFID via the PPMRm.
Ghana	Yes	There is a central level integrated procurement and supply chain management (PSM) coordination committee for all programs including malaria. Meetings are held regularly on a quarterly basis.
Guinea	Yes	The newly designed LMU has been integrated into the organogram of CMS after the necessary approvals by the MOH and the CMS Board of Directors. After being on hiatus, the LMU development recently restarted, but is not yet fully functional: NMCP is still receiving LMIS data directly from the field
Liberia	Yes	There is a National Supply Chain Technical Working Group and in the USAID supported county there is a functional County Health Team Supply Chain Technical Working Group.
Madagascar	Yes	Four functioning coordination committees related to logistics: Logistics Management Committee (LMC) for strategic action; Logistics Management Technical Unit (LMTU) for technical activity; Roll Back Malaria / Malaria Acquisition, Supply & Stock Management Committee (PSM/RBM); Logistics Subcommittee / LLIN Campaign National Coordination Committee (CNC).
Malawi	Yes	The meeting did not take place in the period under review because NMCP was very busy during the period and could not convene a meeting (GFATM Concept note production and other obligations). However one was scheduled for April, 2015
Mozambique	Yes	The Malaria Commodities Working Group continues to meet regularly and reports quarterly on pipeline status and potential stock status issues
Nigeria	Yes	During this reporting period 5cycles of National Procurement and Supply Management (PSM) coordination group were held while a total of 23 cycles in 9 out of the 11 PMI focus states were also held. 2Cycles of zonal PSM meetings were held.
RDMA	No	Cambodia: No. At this time there is no formal logistics coordination mechanism in place.

Country	Functioning Coordination Committee	Note
		<p>Laos: Yes. The monthly PSM Technical Team Meeting that technical staff attends with overall project updates have been started in 2014 (6 meetings so far). NMCP and Medical Product Supply Center (MPSC) staff have an opportunity to exchange information and coordinate actions during these meetings.</p> <p>Burma: Yes. SCMS has established a National Supply Chain Task Force that meets regularly and are in the process of establishing sub groups to the Task Force for various supply chain activities to facilitate greater focus on certain areas. The LMIS sub group to the National Supply Chain Task Force is the first to be developed; the SOW for the group is still being finalized. The USAID DELIVER PROJECT also held its first Malaria Partners Supply Chain meeting in February with plans to support this activity quarterly.</p>
Rwanda	Yes	<p>Yes there is a technical committee including NMCP, Central Medical store and the project. This committee performs the annual quantification exercise and meets on a quarterly basis to review consumption levels, stock status, ongoing shipments and to update the supply plan accordingly</p>
Tanzania	Yes	<p>In Mainland, the NMCP's 'ACT working group' meets on a quarterly basis to discuss all areas around malaria programming and procurements, interventions. This meeting includes MSD. Also a managerial MOHSW and SC stakeholders group known as Pharmaceutical Infrastructure Food Safety Working Group (PIFWG) meets on a monthly basis to discuss all the supply chain challenges and strategies to improve overall commodity availability at all levels.</p> <p>In Zanzibar, the Technical Working Group (TWG) meets on a quarterly basis and includes participation of the CMS Zanzibar and the Zanzibar Malaria Elimination Program (ZAMEP).</p>
Zambia	Yes	<p>Project staff attended the Malaria supply chain TWG chaired by NMCC whose main focus is supply chain strengthening through coordination of all partners involved in the provision of malaria commodities. The TWG provides a permanent linkage between MOH senior management and stakeholders. The meetings provide a fora to review supply plans from all stakeholders and updating the national pipeline. Using this coordinated approach, the funding gap was established and officially submitted to MoH for resource mobilization.</p> <p>The project is also represented on the EMLIP Steering committee which oversees and provides technical support to MOH/MCDMCH/NMCC and MSL on all EMLIP related activities. This technical subcommittee has been meeting at least twice a month on an ad-hoc basis.</p> <p>The project is also represented on the Supply Chain Management and Coordination Committee hosted by MOH /MSL. The objective of the committee is to oversee commodity management for all commodity areas and ensuring that identified supply plan challenges are resolved. The committee was established in 2013 with a focus on ARVs but it has been expanded to other commodity areas. The expansion has necessitated the development of TOR which are currently being finalized.</p>
Zimbabwe	Yes	<p>In an attempt to streamline coordination mechanisms at a technical level, MMSCT technical committee has been harmonized with the</p>

Country	Functioning Coordination Committee	Note
		Procurement and Logistics Subcommittee to form the Procurement and Supply Management (PSM) Committee, with meetings held bi-monthly to discuss procurement and logistics issues for medicines and medical supplies across all program areas

INDICATOR 10: Available supply plans: Percentage of countries that have developed supply plans for PMI funded commodities

Country	Available supply plans	Note
Burkina Faso	Yes	There is a quantification team for malaria commodities. The quantification exercise is completed every year with a development of a coordinated supply plan integrating all the partners involved in malaria commodities funding/procurement such as USAID/PMI, UNICEF, Principal Recipients of Global Funds, CAMEG, etc. A yearly supply plan is developed for each malaria commodity. The 2015 supply plan has been reviewed in January and March 2015. The last updated supply plan was presented and discussed at the ACT Committee meeting held on March 27th, 2015 in presence of all donors involved in funding malaria commodities.
DRC	No	Even though there is no formalized supply plan for PMI funded commodities, a national supply plan is now available. The project plans to develop a supply plan for PMI funded commodities by the end of May, following the quantification workshop and MOP process.
Ghana	Yes	A supply plan was developed from the malaria quantification in May 2013 and updated in December 2013. Another quantification was conducted in August 2014 with an accompanying supply plan. Following the destruction of commodities at the CMS, a new quantification has been conducted for 2015 to 2017, and the report and supply is being finalized for subsequent distribution.
Guinea	Yes	The supply plans for PMI funded commodities were under SIAPS mandate, not the project.
Liberia	Yes	There is a supply plan in place. It was reviewed to address the effect of the Ebola Virus Disease (EVD) in Liberia and stock status updated.
Madagascar	Yes	A 2015 supply plan was developed during the quantification exercise done in Sept 2014, and RBM partners update it periodically during their regular meeting.
Malawi	Yes	A supply plan was developed following the annual quantification exercise which took place in March 2015. The supply plan took into account donor commitment to supply the country with quantified commodities.
Mozambique	Yes	The quantification for the period 2012 to 2016 for antimalarials and RDTs and the corresponding supply plans continue to be adjusted as additional consumption and shipping information becomes available.
Nigeria	Yes	There is a malaria commodities supply plan in place for FY15. It was recently reviewed and updated.
RDMA	Cambodia: No Laos: Yes Burma: No	Cambodia: No. The Cambodia CNM does not regularly prepare and monitor supply plans for procurement and delivery of PMI commodities. To date, CNM has only received Malarone from PMI, which is not currently being used.

		Laos: Yes. There is a supply plan for PMI funded commodities Burma: No. At this time PMI is just in the process of procuring malaria commodities for the first time for the national program in Burma.
Rwanda	Yes	Rwanda has a national malaria supply plan that is prepared internally
Tanzania	Yes	Tanzania has a national malaria supply plan. The supply plan for mainland was updated in March 2015. The PPMRm is updated regularly, product and funding are tracked and gaps are identified.
Zambia	Yes	The project, in collaboration with MoH/NMCC, held an annual forecasting and quantification for malaria commodities in November 2014. A national supply plan for 2015 was developed and shared with stakeholder supporting MOH/MCDMCH/NMCC with the procurement of anti-malaria commodities. The supply plans are for ACTs, RDTs, Artesunate injection, SP and LLINs using PMI, DFID, GF and MOH funds. The project continues to support MOH/NMCC in ensuring that procurement plans are fulfilled. The project further collaborated with MOH/ NMCC in preparation for the forecast review meeting for malaria commodities held in April 2015.
Zimbabwe	Yes	Updated national forecasts and supply plans that inform all MOHCC and partner (including PMI & GFATM) supported procurements are available through 2016.

INDICATOR 11: Number of technical reports or tools developed to support malaria supply chain performance

Country	Number of technical tools	Note
Burkina Faso	3	EUV reports Quarterly report on malaria data (malaria database analysis)
DRC	12	Supportive supervision reports; PPMRm; adopted LMIS roadmap; SCM training reports; identification form for health zone personnel in charge of product reception; needs assessment checklist for new PMI-supported health zones.
Ghana	3	Quarterly EUV and supportive supervision reports National Quantification Guidelines for Health Commodities (including malaria) National malaria quantification reports
Guinea	0	
Liberia	5	Interim Approach Distribution Reports End Use Verification and Data Verification Reports Quantification Report
Madagascar	1	The integrated monthly activity report was developed in FY15. Pipeline software and malaria commodity tracking USG funding (2 tools) were developed in previous fiscal years.

Country	Number of technical tools	Note
Malawi	3	ACT Assessment Report Data Quality Assessment Report Trend Analysis on Reporting rates for AL vs stockout rates.
Mozambique	2	Annual report (Relatório Anual) and quarterly EUV reports.
Nigeria	3	Malaria Commodities distribution plan template LLINs re-conciliation tool Malaria Commodities Inventory Control System (MCICS)
RDMA	2	Tool for automatized mapping and plot generation for the epidemiological team Tool for Supervision and reporting of commodity distribution. Translated in to Lao language and approved for use by NMCP
Rwanda	2	Malaria quantification report, Annual Physical inventory report
Tanzania	7	Performance Management Plans (Total of 2, 1 each for Mainland and Zanzibar), Quantification Review, End Use Verification Reports (Total of 4, 2 each for Mainland and Zanzibar)
Zambia	4	Tools: SCMgr, PipeLine, eLIMS and Magpi. Reports: PPMRm, EUV, Forecasting and Quantification reports, Months of stock maps, National gap analysis
Zimbabwe	1	One malaria end-use verification report was compiled and disseminated to malaria stakeholders including MOHCC NMCP and PMI. The next EUV is scheduled for 06 – 10 April 2015.

Appendix G. Environmental Monitoring and Mitigation Plan (EMMP)

List each Mitigation Measure from column 3 in the EMMP Mitigation Plan (EMMP Part 2 of 3)	Indicator	Status	List any outstanding issues relating to required conditions	Remarks
In cases where the project's role is limited to procurement and delivery to the port of entry, environmental considerations related to the generation and disposal of medical waste will be within the scope of the USAID Mission rather than the Bureau for Global Health. In such instances, the project will seek confirmation of local USAID Mission IEE on file	1. Documented verification of Mission IEE on file	Complete	None	
Consignees for all pharmaceutical drugs and other public health commodities procured under this funding will be advised to store the product according to the information provided on the manufacturer's MSDS	2. Percentage of orders that included product-specific information documenting disposal requirements	100%	None	
Any grants or monetary transfers of USAID funds (e.g., subgrants) to support TO7 procurement, storage, management and disposal activities will incorporate provisions that the activities to be undertaken will comply with the environmental determinations and recommendations of the PIEE	3. Number of instances when DELIVER TO7 has been requested to provide guidelines or training.	0		

<p>If disposal of any pharmaceutical drugs under project control is required, due to expiration date or any other reason, the project will first pursue the preferred method of disposal of returning the product to the manufacturer. If this is not possible, the project will follow the guidelines in the WHO document <i>Guidelines for Safe Disposal of Unwanted Pharmaceuticals During and After Emergencies</i></p>	<p>4. Percentage of disposed products under project control returned to supplier or dealt with according to WHO guidelines</p>	<p>100%</p>	<p>None</p>	
<p>The project will adhere to WHOPEP recommendations and established QA/QC policies when procuring LLINs. If there is a change or addition to the class of insecticides (currently pyrethroids) acceptable for use with nets, the project EMMP will be adapted to respond to any changes necessary from the PIEE.</p>	<p>5. Percentage of LLIN shipments with pre-shipment test reports available</p>	<p>100%</p>	<p>None</p>	
<p>In countries that required that LLINs are registered, all nets procured through TO7 will be registered in the country in which the nets are distributed.</p>	<p>6. Percentage of LLINs procured that are registered in accordance with country policies (if required by the country)</p>	<p>100%</p>	<p>None</p>	
<p>The project will work with manufacturers to ensure appropriate BCC information concerning proper use and disposal of LLINs will be included when nets are provided, including flyers or other information for individuals during distribution campaigns.</p>	<p>7. Recorded instances of assistance provided for development/distribution of BCC materials</p>	<p>2</p>		<p>Burkina Faso, Angola</p>
<p>The project will adhere to the recommendations identified in the Programmatic Environmental Assessment for Malaria Vector control, dated January 2007, for:</p> <ul style="list-style-type: none"> ○ Procurement ○ Storage 	<p>8. Completion of EMMP Report on a semi-annual and annual basis</p>	<p>Complete as of this semi-annual report for FY2015</p>	<p>None</p>	

- | | | | | |
|--|--|--|--|--|
| <ul style="list-style-type: none">○ Inventory Control○ Use○ Waste Disposal | | | | |
|--|--|--|--|--|

Appendix H. Performance Monitoring Plan (PMP)

USAID | DELIVER PROJECT Task Order Malaria
Performance Monitoring Plan

Outcome	Indicators	Numerator / Denominator	Source	Frequency	Comments	Measures project performance	Measures factors beyond project control
Objective 1. Improve and expand USAID's provision of malaria commodities to programs (50-60 percent LOE)							
Direct procurement services							
Monthly procurement scorecard implemented	Monthly scorecard available which includes the following the indicators: Orders available for shipping on time; Orders shipped on time; Orders received on time; Supplier fill rates; Right quantity received; Goods arrived in right condition	Number of scorecards with 80% of the indicators available / number of months	DelPHi, Management reports	Monthly		X	
Orders shipped on time	Percentage of orders available for shipping within 10 working days of contracted date with the vendors	Number of orders available for shipping within 10 working days of contracted date with the vendor / Total number of orders placed to the vendor	DelPHi	Semi-annual		X	X
Orders received on time	Percentage of orders received by consignee countries within a month of agreed date with the mission	Number of orders received by consignee countries within a month of agreed date with the mission / Total number of orders placed by consignee countries	DelPHi	Semi-annual	The CPIR has been received and the money is available for the order	X	X
Suppliers deliver ordered commodities to satisfy contractual requirements	Supplier fill rate (contracted quantity on time) (by products)	Number of on-time delivery of the agreed upon quantity / Total number of orders placed	DelPHi	Semi-annual	Full quantity means agreed upon quantity with mission at the time of order placement		X
Respond to emergency orders as per PMI/USAID requests	Percentage of emergency orders responded to during the previous 6 months	Number of emergency orders for which a purchase order was placed / number of emergency orders	DelPHi	Semi-annual	The PMI/USAID team must formally acknowledge a request as an "emergency, " which signifies initiation of the request	X	
Management information system							
Availability of functioning MIS to USAID PMI staff	Percentage of time the USAID DELIVER PROJECT website is available	Amount of time the USAID DELIVER PROJECT website was available/Total amount of service hours	Performance Metrics Report	Monthly	For service hours see Service Level Agreement	X	
Total number of visits	Total number of visits to the USAID DELIVER PROJECT website	N/A	Performance Metrics Report	Monthly		X	X
Number of logins	Total number of logins for the Oracle Portal	N/A	Performance Metrics Report	Monthly	Logins include MMIS and SDG websites.	X	
Quality assurance and quality control							
Quality assurance and quality control procedures established and implemented	Percentage of LN shipments with pre-shipment test reports available	Number of LN shipments with pre-shipment test report available / Number of LN shipments for which a pre-shipment test report should be available	QA/QC Report Cards, inspection reports, certificates of conformation	Semi-annual		X	
	Median time (in days) and range required for pre-shipment LN tests reports	N/A					X
	Percentage of RDT shipments with up-to-date post-shipment test reports available	Number of RDT shipments with up to date post-shipment test reports available / Number of RDT shipments	QA/QC Report Cards, RDT post-shipment test report, certificates of conformation	Semi-annual	Based on SOPs	X	
	Median time (in days) and range required for up to date post-shipment RDT test reports	N/A		Semi-annual		X	X
	Percentage of pharmaceutical shipments with pre-shipment certificates of conformance	Number of pharmaceutical shipments with pre-shipment certificates of onformance / Number of pharmaceutical shipments	QA/QC Report Cards, certificates of conformation	Semi-annual		X	X
	Median time (in days) and range required for pre-shipment pharmaceutical test reports	N/A		Semi-annual		X	X

Outcome	Indicators	Numerator / Denominator	Source	Frequency	Comments	Measures project performance	Measures factors beyond project control
Objective 2: Strengthen in-country supply systems and capacity for management of malaria commodities (30-40 percent LOE)							
Monitoring of in-country supply chain performance	Facility stockout rate: by product, the percentage of facilities that experienced a stockout on the day of the visit/report	In TO7 presence countries, number of facilities experiencing a stockout of a given product on the date of visit or at the time of reporting / In TO3 presence countries, the total number of facilities reporting via LMIS, or End-Use reports	LMIS, End-Use Verification reports	Semi-annual			X
	Country stockout rate: by product, the percentage of countries experiencing a stockout at the central warehouse(s) at the time of reporting	In TO7 presence countries, number of countries experiencing a stockout of a given product at the central warehouse(s) at time of reporting / In TO3 presence countries, the total number of facilities reporting data for the PPMRm	PPMRm	Semi-annual			X
	Functioning LMIS: Proportion of project-presence countries with an LMIS that routinely reports stock status from SDP level	In TO7 presence countries, number of countries with a functioning LMIS / Total number of TO7 presence countries	Country reports	Semi-annual			X
Respond to STTA needs as per mission requests	Percentage of STTA trips per Mission's or PMI Washington ad hoc request conducted on time (within 14 days of the requested date)	Number of ad hoc STTA requests filled within 14 days of requested date/ Total number of ad hoc STTA requests	Program documents	Semi-annual	Ad hoc is outside of workplan	X	
In-country supply chain data management system developed or improved	Quantity of malaria commodities (LNs, SP tablets, ACT treatments, RDTs) distributed in country using funds obligated to USAID DELIVER PROJECT	N/A	Management reports, Delphi3, LMIS, program records/reports	Semi-annual		X	
	Percentage of countries receiving field support TA funds reporting on supply chain performance via the End-Use Verification Activity	Number of TO7 presence countries participating in the end-use monitoring activities / TO3 presence countries that have been tasked with leading the End-Use activity	End use verification reports	Semi-annual	Countries where the project is leading PMI's end use monitoring	X	X
	Number of individuals trained on the supply chain management of malaria commodities	N/A	Activity reports	Semi-annual	Anyone who was trained other than USAID DELIVER PROJECT staff	X	
	Percentage of countries with field support TA funds reporting central level stock levels of select malaria products in quarterly stock monitoring reports	Number of TO7 presence countries providing data for the PPMRm/Number of TO7 presence countries	Quarterly stock monitoring report	Semi-annual	Countries where the project is leading PMI's PPMRm reporting	X	
	Functioning Coordination Committee: Percentage of countries that have a logistics coordination mechanism in place that includes participation of NMCP and CMS (or their equivalents), with a meeting that takes place at a specifically appointed time (e.g. during a reporting quarter)	Number of TO7 presence countries with a functioning malaria logistics coordination committee / TO7 presence countries	Quarterly country reports	Semi-annual		X	X
	Available supply plans: Percentage of countries that have developed supply plans for PMI funded commodities	Number of TO7 presence countries that have developed supply plans for PMI-funded commodities / TO7 presence countries	Quarterly country reports	Semi-annual		X	X
	Number of technical reports or tools developed to support malaria supply chain performance	N/A	Program reports	Semi-annual		X	
Objective 3: Improve global supply and availability of malaria commodities (5-7 percent LOE)							
Support global and regional stakeholders/forums of SCM technical issues	Number of global, regional and country level malaria initiatives with DELIVER technical contributions	N/A	Program reports	Semi-annual		X	

Appendix I. TO7-Funded Short Term Technical Assistance (STTA) October 1, 2014–March 31, 2015

Task Order 7 Short Term Technical Assistance (STTA) October 1, 2014-March 31, 2015		
Name	Destination	Travel Dates
Dimitri Peffer	South Africa	10/1/2014-10/2/2014
Yusef Babaye	Nigeria	10/2/2014-10/18/2014
Erin Broekhuysen	Zambia	10/6/2014-10/17/2014
Olivier Celhay	Thailand	10/10/2014-10/15/2014
Elizabeth Kelly	Nigeria	10/11/2014-11/7/2014
Imelda Moise	Nigeria	10/11/2014-11/7/2014
Herbert Rwabugahya	South Sudan,	10/11/2014-10/12/2014
Alexis Strader	Nigeria	10/12/2014-10/24/2014
Tadius Chimombre	South Africa	10/14/2014-11/1/2014
Chris Warren	Nigeria	10/20/2014-11/7/2014
Bernard Fabre	R&R	10/22/2014-11/11/2014
Vincent Kabanda	South Africa	10/23/2014-11/9/2014
Greg Roche	Zimbabwe	10/25/2014-11/22/2014
Lauren Alexanderson	Tanzania	10/25/2014-11/15/2014
Loren Bausell	Malawi	10/25/2014-11/8/2014
Juvenal Majoro	Washington, D.C.	10/26/2014-10/26/2014
Ryan Purcell	Washington, D.C.	10/27/2014-11/7/2014
David Bagonza	Uganda	10/31/2014-10/31/2014
Melissa Levenger	Nigeria	11/1/2014-11/28/2014
Kinsy Hood	Burma	11/3/2014-11/6/2014
Ben Hatch	Madagascar	11/3/2014-11/14/2014
Ariella Bock	Madagascar	11/4/2014-11/21/2014
Scott Dubin	Burma	11/7/2014-11/26/2014
Naomi Printz	Tanzania	11/7/2014-11/22/2014
Bob Duncan	Rwanda	11/8/2014-11/26/2014
Pardon Moyo	Rwanda	11/10/2014-12/2/2014
Kinsy Hood	Burma	11/11/2014-11/22/2014
Johnnie Amenyah	Indonesia	11/11/2014-11/21/2014
Siana Gideon Mapunjo	Denmark	11/15/2014-11/20/2014
Marsai Mwencha	Denmark	11/15/2014-11/20/2014
Noela Kisoka	Denmark	11/15/2014-11/20/2014
Reginald Laud Baddoo	Denmark	11/15/2014-11/20/2014
Motomoke Eomba	DR congo	11/17/2014-12/12/2014
Therese Muyingo	DR congo	11/17/2014-12/11/2014
Eleonore Rabelahasa	Zambia	11/22/2014-12/6/2014
Abdurhaman Shifa	South Sudan,	11/27/2014-12/12/2014
Youssof Ouedraogo	Madagascar	11/30/2014-12/12/2014
Barbara Knittel	Washington, D.C.	12/1/2014-2/10/2015
Kinsy Hood	R&R	12/4/2014-12/14/2014
Alfred Mchau	Washington, D.C.	12/5/2014-12/12/2014

Greg Roche	Zimbabwe	12/6/2014-1/11/2015
Eleonore Rabelahasa	Guinea	12/6/2014-12/20/2014
Scott Dubin	Angola	12/8/2014-12/21/2014
Alexandra Sanabria	R&R	12/12/2014-1/15/2015
Stella Anito	R&R	12/12/2014-1/15/2015
Arturo Sanabria	R&R	12/12/2014-1/15/2015
Kinsy Hood	Laos	12/15/2014-12/20/2014
Esperance Edah	R&R	12/18/2014-1/4/2015
Parfait Edah	R&R	12/18/2014-1/4/2015
Claire Kimera	R&R	12/19/2014-1/5/2015
Cleopatra Kimera	R&R	12/19/2014-1/5/2015
Cynthia Kimera	R&R	12/19/2014-1/4/2015
Cissy Kimera	R&R	12/19/2014-1/4/2015
Deo Kimera	R&R	12/19/2014-1/4/2015
Herbert Rwabugahya	R&R	12/20/2014-1/4/2015
Scott Dubin	Angola	1/7/2015-1/16/2015
Lisa Hare	Nigeria	1/7/2015-1/17/2015
Kim Peacock	Ghana	1/7/2015-1/19/2015
Motomoke Eomba	Ghana	1/12/2015-2/7/2015
Vidya Mahadevan	Washington, D.C.	1/12/2015-2/9/2015
Loren Bausell	Malawi	1/13/2015-1/27/2015
Lea Teclemariam	Washington, D.C.	1/15/2015-4/9/2015
Saul Kidde	Uganda	1/16/2015-1/20/2015
Abdourahmane Diallo	Madagascar	1/17/2015-2/6/2015
Norbert Pehe	Madagascar	1/17/2015-2/6/2015
Johnnie Amenyah	Ghana	1/18/2015-1/30/2015
Claudia Allers	asia	1/23/2015-2/12/2015
Hamisu Hassan	Switzerland	1/24/2015-1/30/2015
Kinsy Hood	asia	1/25/2015-2/13/2015
Saul Kidde	Uganda	1/30/2015-2/2/2015
Greg Roche	Zimbabwe	1/31/2015-3/1/2015
Pardon Moyo	Rwanda	2/1/2015-2/28/2015
Naomi Printz	Rwanda	2/4/2015-2/17/2015
Kinsy Hood	Laos	2/15/2015-2/20/2015
Ayatullah Baig	Liberia	2/15/2015-7/1/2015
Eleonore Rabelahasa	Malawi	2/16/2015-3/13/2015
Kinsy Hood	Burma	2/24/2015-2/28/2015
Rudolph Peltier	Switzerland	2/24/2015-3/1/2015
Roger Peck	Switzerland	2/25/2015-3/1/2015
Ellen Clancy	Mozambique	2/25/2015-5/11/2015
Chris Warren	Ghana	2/2/2015-3/20/2015
Michael Egharevba	Malawi	2/28/2015-3/21/2015
Patrick Msipa	Malawi	2/28/2015-3/21/2015
Mickey Vanden Bossche	Nigeria	3/1/2015-3/13/2015
Safia Ahsan	Malawi	3/6/2015-3/20/2015
Jeff Sanderson	Ghana	3/7/2015-3/13/2015
Johnnie Amenyah	Ghana	3/8/2015-3/8/2015
John Harris	South Africa	3/13/2015-3/25/2015
Mickey Vanden Bossche	Ghana	3/13/2015-3/21/2015
Kinsy Hood	Burma	3/18/2015-3/25/2015

Alexandra Tammariello	India	3/19/2015-4/6/2015
Rudolph Peltier	India	3/19/2015-4/6/2015
Arturo Sanabria	Mexico	3/19/2015-3/28/2015
David Jenkins	India	3/20/2015-4/4/2015
Iyeme Efem	Washington, D.C.	3/23/2015-4/11/2015
Kpakama Kromah	South Africa	3/24/2015-4/3/2015
Audrey Sullivan	Liberia	3/30/2015-4/15/2015

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