SIAPS Quarterly Report

Project Year 5, Quarter 1

October-December 2015

This report is made possible by the generous support of the American people through the US Agency for International Development (USAID), under the terms of cooperative agreement number AID-OAA-A-11-00021. The contents are the responsibility of Management Sciences for Health and do not necessarily reflect the views of USAID or the United States Government.

About SIAPS

The goal of the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program is to assure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes. Toward this end, the SIAPS result areas include improving governance, building capacity for pharmaceutical management and services, addressing information needed for decision-making in the pharmaceutical sector, strengthening financing strategies and mechanisms to improve access to medicines, and increasing quality pharmaceutical services.

Recommended Citation

Systems for Improved Access to Pharmaceuticals and Services. 2015. *Systems for Improved Access to Pharmaceuticals and Services Program Quarterly Report: Project Year 5, Quarter 1: October-December 2015.* Submitted to the US Agency for International Development by the Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program. Arlington, VA: Management Sciences for Health.

Systems for Improved Access to Pharmaceuticals and Services
Center for Pharmaceutical Management
Management Sciences for Health
4301 North Fairfax Drive, Suite 400
Arlington, VA 22203 USA
Telephone: 703.524.6575
Fax: 703.524.7898
E-mail: siaps@msh.org
Website: www.siapsprogram.org

CONTENTS

ACRONYMS AND ABBREVIATIONS

AAH	Action Against Hunger
ACT	artemisinin-based combination therapy
AIDS	acquired immunodeficiency syndrome
AMI	Amazon Malaria Initiative
AMR	antimicrobial resistance
APTS	Auditable Pharmaceutical Transactions and Services (Ethiopia)
ART	antiretroviral therapy
ARV	antiretroviral
CAMEBU	Central Essential Medication Purchasing Agency (Burundi)
CDC	US Centers for Disease Control and Prevention
CECOMA	Central Medical Stores (Angola)
CENAME	National Essential Drugs Procurement Center (Cameroon)
CHAI	Clinton Health Access Initiative
CMS	central medicine store
CNLS	AIDS Control Program (Cameroon)
CRMS	Continuous Results Monitoring System
DGFP	Directorate General of Family Planning (Bangladesh)
DIGEMID	General Directorate of Drugs and Medical Supplies (Peru)
DNME	National Directorate of Medicines and Equipment (Angola)
DPML	Department of Pharmacy, Medicines, and Laboratory (Burundi)
DRA	drug regulation authority
DRC	Democratic Republic of the Congo
DTC	Drug and Therapeutics Committee
EDT	Electronic Dispensing Tool
EHRIG	Ethiopian Hospital Reform Implementation Guideline
EMF	Emergency Medicines Fund
EUV	end-use verification (survey)
FDA	US Food and Drug Administration
FMHACA	Food, Medicines and Health Care Administration and Control Authority (Ethiopia)
FP	family planning
FY	fiscal year
GDF	Global Drug Facility
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
HCW	healthcare worker
HIV	human immunodeficiency virus
IMCI	Integrated Management of Childhood Illness
JSI	John Snow, Inc.
LMIS	Logistics Management Information System
M&E	monitoring and evaluation
MCH	maternal and child health
MDG	Millennium Development Goal
MDR	multidrug resistant
MNCH	maternal, neonatal, and child health

MOH	Ministry of Health
MOHFW	Ministry of Health and Family Welfare
MOHSS	Ministry of Health and Social Services
MSH	Management Sciences for Health
NDoH	National Department of Health
NHTC	National Health Training Centre (Namibia)
NMCP	national malaria control program
NMRC	Namibia Medicines Regulatory Council
NTP	national TB program
PAHO	Pan American Health Organization
PEP	post-exposure phophylaxis
PEPFAR	US President's Emergency Plan for AIDS Relief
PFSA	Pharmaceutical Fund and Supply Agency (Ethiopia)
PMI	President's Malaria Initiative
PMIS	pharmaceutical management information system
PMTCT	prevention of mother-to-child transmission
PNILP	national malaria control program (Burundi)
PNLP	national malaria control program (Guinea)
PNLS	national AIDS control program (DRC and Togo
PNME	Program for Essential Medicines (Angola)
PPMRc	procurement planning and monitoring report for contraceptives
PPMRm	procurement planning and monitoring report for malaria
PSI	Population Services Inc.
PSM	procurement and supply management
PTCs	Pharmaceutical and Therapeutics Committees
PV	pharmacovigilance
RDT	rapid diagnostic test
SCMS	Supply Chain Management System (project)
SIAPS	Systems for Improved Access to Pharmaceutical Services
SOP	standard operating procedure
SPS	Strengthening Pharmaceutical Systems [Program]
STG	standard treatment guideline
SUGEMI	national pharmaceutical management system (Dominican Republic)
TB	tuberculosis
TIPC	Therapeutics Information and Pharmacovigilance Center (Namibia)
TOR	terms of reference
TOT	training of trainers
UCDC	Ukrainian Center for Disease Control
UNAM	University of Namibia
UNCoLSC	UN Commission on Life-Saving Commodities
UNICEF	United Nations Children's Fund
USAID	US Agency for International Development
WAHO	West Africa Health Organization
WHO	World Health Organization
XDR-TB	extensively drug-resistant tuberculosis

INTRODUCTION

The Systems for Improved Access to Pharmaceuticals and Services (SIAPS) Program, awarded by USAID in September 2011, strengthens the management of essential medicines and health supplies so that more people can access the health care they need. Now in its fifth year, SIAPS works with local counterparts and partners in 19 countries, and 2 regional programs in, Latin America and West Africa. SIAPS takes a comprehensive approach to improving pharmaceutical systems: enhancing countries' capacity to procure and distribute high-quality medicines and health technologies, while working with local partners to develop strong systems for pharmaceutical financing, human resources, governance, information, service delivery, and pharmacovigilance. By promoting local ownership of wide-ranging initiatives, stronger, more sustainable health systems overall are fostered.

The program's five result areas are as follows:

- Intermediate Result 1: Pharmaceutical sector governance strengthened
- Intermediate Result 2: Capacity for pharmaceutical supply management and services increased and enhanced
- Intermediate Result 3: Information for decision-making challenge in the pharmaceutical sector addressed
- Intermediate Result 4: Financing strategies and mechanisms strengthened to improve access to medicines
- Intermediate Result 5: Pharmaceutical services improved to achieve desired health outcomes

This report presents highlights of SIAPS's activities organized both by intermediate result area, representing multiple countries where we work, as well as by our global, regional, and country portfolios for the October through December 2015 period.

SELECT PROGRESS TOWARD RESULT AREAS

IR 1. Pharmaceutical Sector Governance Strengthened

The SIAPS approach to improving governance focuses on assisting countries to establish policies and legislation that are supported by rule of law; organizational structures that can exercise appropriate decision making, authority, and oversight; transparent, ethical, and accountable systems and processes that are based on best practice norms and guidelines; and human resource management systems that promote effective performance and ethical practices. One of SIAPS' primary strategies for improving governance in the pharmaceutical sector is to strengthen regulatory systems that ensure the safety, quality, and effectiveness of medicines by regulating pharmaceutical products, establishments, professionals, and practices. SIAPS provides support to national medicines regulatory authorities to build their technical capacity; reform processes to make them more efficient and transparent; and upgrade information management systems for improved transparency, oversight, and accountability to enable timely access to medicines and other health supplies.

Technical Leadership

In this quarter, the eLearning course "Good Governance in the Management of Medicines" developed by SIAPS using **cross bureau funding** was finalized and published on USAID's Global Health eLearning Center. Developed with assistance from the K4H Project, the course has been added to the certificate program, "Governance and Health," and complements the three health-related governance courses recently developed by the USAID Leadership, Management and Governance Project. This course is intended for health care workers, policy makers, program managers, government officials, and others interested in learning more about the factors that make pharmaceutical systems vulnerable to corruption, the problems that can occur as a result of poor governance, and how they influence the effectiveness of health programs. The course also discusses interventions that can promote good governance in the management of medicines.

Policy, Legislation, and Contractual Agreements

In June 2015, **Haiti** launched its first-ever national medicines policy, which established a framework for pharmaceutical regulation in the country. Long-term technical assistance provided by SIAPS to the Ministry of Public Health and Population in support of the policy's development, launch, and implementation concluded in this quarter with a workshop that provided guidance to departmental pharmacists on how to implement the national medicines policy.

- SIAPS has been providing technical assistance to the national medicines regulatory authority (DNPL) in **Guinea** to revise national pharmaceutical legislation. An important milestone was achieved this quarter when the DNPL national commission, with support from SIAPS, finalized all the composite sections and collated them to produce a complete draft bill. Next, the USAID Promoting Quality of Medicines Project will review the draft

bill, after which it will be checked for alignment with other legislation in Guinea and then presented to stakeholders for final validation.

- SIAPS is using anticorruption funding to assist the Government of **Ukraine** in establishing a national essential medicines list (NEML) that will be used nationwide as the sole list for public procurement and potentially for reimbursement. In this quarter, SIAPS helped address a regulatory hurdle to approving two regulations developed previously with assistance from SIAPS that provide for the establishment of the NEML committee and regulate the NEML development and adoption process. SIAPS helped draft an amendment to a Cabinet of Ministers of Ukraine decree and advocate for its approval.

SIAPS continued its long-term support in **Swaziland** for the approval and enactment of the Medicines and Related Substances Control Bill and the Pharmacy Bill, which will replace existing legislation that dates back to 1929. In this quarter, SIAPS helped the House of Assembly Health Portfolio Committee deliberate and prepare a report on amendments to the bills from the House session. Once the report has been debated by the House of Assembly, the outcome of these deliberations will then be presented to the king for his endorsement.

Standards, Guidelines, and Procedures

In the previous quarter in **South Africa**, SIAPS finalized a guidance document to support the development or review of terms of reference (TORs) for any committee responsible for making decisions or providing oversight to the pharmaceutical sector. SIAPS is now using this standardized template to help revise the TORs of the NEML committee and the committee responsible for evaluating bids for pharmaceutical and medical product tenders. In addition, staff from the department of correctional services, with assistance from SIAPS, used the template to draft TORs for the pharmaceutical and therapeutics committees that they plan to establish in six regions.

Other SIAPS-supported guidelines, lists, and standard operating procedures (SOPs) developed in this reporting period that provide the foundation for good governance and better practices in pharmaceutical systems include the following:

- **Swaziland's** Medicines Donation Guidelines were presented to the MOH for formal adoption and recommended revisions made. Next, the guidelines will be presented to the Cabinet for approval.
- In **Ethiopia**, SIAPS helped draft an SOP to standardize and guide the provision of drug information services at the health-facility level.
- **Mozambique's** Pharmacy Department developed the specialty medicines list to complement the recently approved general essential medicines list, also prepared with assistance from SIAPS.
- SIAPS collaborated with partners to help **Guinea's** national medicines regulatory authority revise the drug equivalence tables; once these are finalized, they will be incorporated into the NEML to facilitate generic substitution of medicines.

- In **Bangladesh,** the standardized table of medical equipment for 500-bed hospitals was finalized and the tables for 50- and 250-bed hospitals updated to include equipment for new specialties.

Transparency and Accountability

SIAPS continued to provide assistance to help institutionalize the Auditable Pharmaceuticals Transactions and Services (APTS) initiative in **Ethiopia,** which has been introduced to achieve greater transparency and accountability in the management of pharmaceuticals and related finances. Another significant milestone was achieved in this reporting period when two more regions—Oromia and Addis Ababa—enacted APTS regulations. This brings the number of regions that have enacted the regulations to seven (of eight that have developed these directives) and supports the further expansion and ultimately the sustainability of this initiative. Also, in the Amhara region, SIAPS helped the regional health bureau draft SOPs to standardize APTS implementation across the region. As part of efforts to clarify roles and responsibilities and enhance accountability, SIAPS helped develop standardized job descriptions for cashiers, auditors, pharmacy accountants, and pharmacy personnel involved in implementation of this initiative. APTS is now being implemented in 48 health facilities in the country.

In **Cameroon**, SIAPS has been collaborating with Positive-Generation, a local civil society organization (CSO) to leverage advocacy, monitoring, and reporting efforts to increase transparency and accountability, and ultimately improve patients' access to critical HIV-related medicines and products. Positive-Generation publishes reports on the availability of medicines and diagnostics at health facilities throughout the country in its weekly newsletter. In this quarter, SIAPS helped the CSO revamp its data storage technology following a computer crash. In the next quarter, SIAPS will work with Positive-Generation to conduct a joint analysis of indicators and compare data from selected PEPFAR and non-PEPFAR regions to assess the contribution of PEPFAR technical support, especially with regard to availability of ARVs and other related medicines.

In **Bangladesh**, the Directorate General of Family Planning (DGFP), with support from SIAPS, introduced the e-Government Procurement (e-GP) system at a launching ceremony in this reporting period. DGFP officials expressed strong support for e-GP as part of efforts to enhance transparency and promote good governance in public procurement. SIAPS also organized a discussion with Central Medical Stores Depot officials from the Directorate of Health Services (DGHS) on the introduction of the e-GP system.

Coordination, Partnership, and Advocacy

To sustain its ongoing effort of strengthening **Mali's** pharmaceutical system and fostering country ownership, SIAPS helped the directorate of pharmacy and medicines and the central medical stores convene a three-day annual review meeting of public supply chain stakeholders to discuss progress made and future priorities. The 83 participants included representatives from government, UN agencies, donors, and CSOs. The attendees heard presentations from regions on bottlenecks and solutions and central-level activities, including on the reports generated by OSPSANTE, the web-based portal developed with support from SIAPS to track, aggregate, and

disseminate reported logistic data. They also participated in working group sessions to discuss lessons learned and the use of data for better decision making to improve medicines availability. Also in this period, SIAPS helped organize routine coordination meetings at the central and regional levels to discuss and address supply chain issues and to validate forecasts and supply plans.

The **Democratic Republic of Congo (DRC)** has restructured its health provinces, thereby increasing the number of provinces from 11 to 26. SIAPS is helping the new provincial health divisions in USAID-supported provinces establish provincial medicine committees to ensure that MOH's partners' support is well coordinated in these new provinces. During this quarter, three new provincial health divisions in Tanganyika (Kalemie), Lomami (Mweneditu), and Haut-Lomami (Kamina) set up their provincial medicines committees with assistance from SIAPS.

Also in **DRC**, SIAPS supported a two-day workshop that bought together partners supporting the national malaria program as part of efforts to reduce diversion and illegal sales of subsidized antimalarial products. The partners discussed strategies for addressing these problems, specifically with regard to long-lasting insecticide-treated mosquito nets and finalized a memorandum of understanding to facilitate partner collaboration for agreed-on actions.

Other SIAPS contributions toward coordination and partnership this quarter include helping the Ebola national coordination unit and the MOH in **Guinea** convene a meeting to discuss reintegration of the emergency logistics systems set up during the Ebola epidemic into the national logistics system. Also, in **Cameroon**, CSOs and associations of persons living with HIV are helping with data entry in two PEPFAR regions, thereby markedly improving the availability of data for the OSPSIDA web-based dashboard for those regions. OSPSIDA is a tool developed by SIAPS that provides an early warning system to enable faster responses to ARV shortages or potential overstocks.

Strategic Planning

SIAPS is providing technical assistance to **South Africa's** National Department of Health (NDOH) to develop a national strategy for improved access to and availability of health products. In the previous quarter, SIAPS helped develop the strategic framework that identifies desired key outcomes for the strategy—improved selection, contracting, contract management, distribution, replenishment management, and the rational use of health products. SIAPS continued to work with NDOH and USAID SCMS project staff to develop the strategy, which is expected to be completed in the next quarter.

In addition, SIAPS contributed to the development and revision of the following national strategic plans:

- The final strategic paper for **Bangladesh's** next Sector Wide Program (2016-2021) recognized the contribution of the SIAPS Program to the development of the procurement and supply management component and results framework.
- In **Guinea**, SIAPS participated in discussions for the development of the National Health Information System Strategic Plan (2016-2020), specifically deliberations on the

integration of needs of the logistics management information system into the strategic framework for the national health information system.
- In a workshop held to develop **DRC's** national malaria strategic plan for 2016-2020, SIAPS drew attention to issues pertaining to supply chain management and indicators related to the availability of antimalarial drugs and related commodities.

Regulatory Systems Strengthening

In **Angola**, SIAPS supported the National Directorate of Medicines and Equipment's (DNME) efforts to become a semi-autonomous institution with greater authority to regulate medicines. SIAPS assisted the DNME in advocating for the necessary policy approval to become semi-autonomous at strategic meetings held at the MOH level, including a multi-institutional meeting to discuss the regulatory system weaknesses that are contributing to the circulation of substandard, falsified, and counterfeit medicines. This meeting, which brought together participants from the DNME, General Inspectorate of Health, Criminal Investigation Unit, Ministry of Commerce, customs, and the private sector, was organized after the discovery of a fake lot of artemether-lumefantrine (AL) that imitated the branding of the AL from Novartis (Coartem), which is distributed in the public sector. One of the meeting recommendations was to strengthen and expedite import controls for pharmaceutical products at the MOH, starting with pharmaceutical products for priority diseases, such as malaria, HIV and AIDS, TB, and neglected diseases. The meeting participants also concluded that greater attention and resources need to be devoted to implementing a formal medicine registration process.

To help build the capacity of the national regulatory authority in **Bangladesh** (DGDA) to regulate medicines according to international standards, SIAPS brokered a three-year partnership between DGDA and the Korean International Cooperation Agency (KOICA) that permits the Ministry of Food and Drug Safety (MFDS) of Korea to conduct training for DGDA officials. In preparation for the DGDA's first training with MFDS on biopharmaceutical regulation, SIAPS facilitated a one-day workshop to prepare the selected DGDA officials and familiarize them with the curriculum. At the workshop, the DGDA prepared and finalized their country report and presentation on medicine approval, GMP, and national lot release of biopharmaceuticals and drafted a preliminary action plan, as requested by MFDS. The DGDA's two-week training with MFDS took place at their offices in Seoul, Korea, November 12–26, 2015; 15 officials participated. During the two-week work study, the DGDA officials finalized their action plans, which will help them further identify their country's current issues and major challenges and propose appropriate alternatives and solutions.

In **Guinea**, SIAPS assisted the DNPL to review and revise its organogram to create a department for the inspection of pharmaceuticals that will allow it to fulfill its proposed inspection duties as set out in the draft pharmaceutical legislation. SIAPS also conducted a review of the existing medicines registration system, which found that the registration process does not meet minimum international standards in its design or implementation and may be approving medicines without sufficient evidence of safety and quality. As a first step toward strengthening the medicine registration system, SIAPS helped to develop a new manual of procedures to guide registration, which will be presented to the MOH to gain support for its implementation.

SIAPS continued to work with the Food, Medicines, and Health Care Administration and Control Authority (FMHACA) in **Ethiopia** to develop and implement its electronic medicines regulatory information system for medicine registration and associated process improvements. In an effort to more effectively manage all of the changes that are being made to their processes, an organizational change management document was developed and approved. Following two steering committee meetings, a team of experts from FMHACA was established to work as the change management team (CMT) in accordance with the documented plan. Three new sets of SOPs related to the medicine registration process were drafted, which are now under review by the CMT for finalization. In addition, the designated super users and select members of the technical working group reviewed the software to ensure their previous feedback was appropriately incorporated into the newest version. With guidance from SIAPS, FMHACA continued cleaning their legacy medicine registration data, which will be made available prior to the system going live. This quarter, SIAPS also supported the development and implementation of the electronic information system for medicine registration and associated process improvements in **Mozambique**, where the system has gone live and is being used on a limited basis as users build their skills and become more familiar with it.

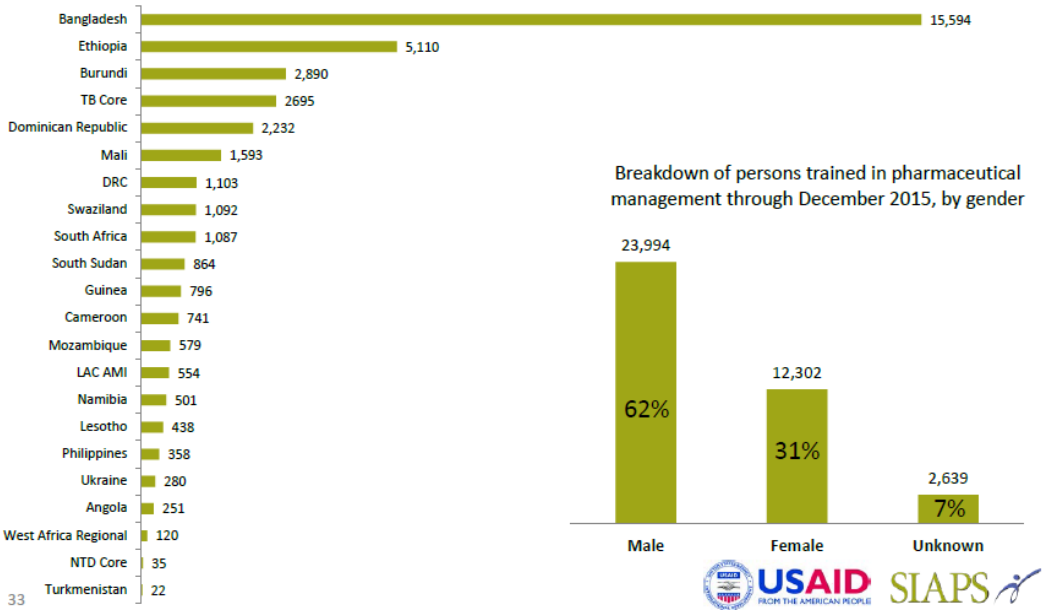
The national regulatory authority (DPM) in **DRC**, in collaboration with SIAPS, convened its quarterly product registration session. The registration committee members received 390 dossiers; of those, 38% were approved, 58% were deferred due to incomplete information, and 4% were put in the backlog for further evaluation at the next session. To further strengthen the registration system, SIAPS also helped the DPM install and set up the registration software, Integrated System of Computerized Management of regulatory process within a Drug Regulatory Authority (SIGIP-ARP), and bring in two experts from Burkina Faso to train 25 DRC-DRA staff on the use of the new software. The legacy data for previously registered products were imported and migrated to the new system.

With assistance from SIAPS, the **Namibia** Medicines Regulatory Council made further enhancements to the system for post-marketing surveillance of medicines that they established last year and conducted another round of sampling and testing in accordance with the medicine quality monitoring guidelines. During this quarter, officials collected 68 medicine samples—58.8% of which were ARVs and 42.2% of which were medicines for opportunistic infections—from 15 ART sites in 8 HIV high-burden regions. In addition, staff members at the ART sites were sensitized on the importance of routine medicine quality surveillance and trained on filling and submitting pharmaceutical product-quality reporting forms to the Quality Surveillance Laboratory. SIAPS also continued to work with the University of Namibia, School of Pharmacy to finalize the pharmaceutical regulatory affairs module for the BPharm course.

IR 2. Capacity for Pharmaceutical Supply Management and Services Increased and Enhanced

Pharmaceutical systems in resource constrained countries are challenged by a lack of qualified pharmaceutical professionals, institutions for pharmaceutical training and up-to-date training

curricula. SIAPS collaborates with stakeholders to assess their capacity to manage pharmaceuticals at all levels, identifies areas for improvement, and develops interventions to strengthen pharmaceutical systems and build capacity. To date, SIAPS has trained close to 39,000 professionals in several areas of pharmaceutical management (see figure below).



Pre-service training

SIAPS Dominican Republic finalized the educational modules for a certified course (diploma) on rational use of medicines, which will be implemented in partnership with the Universidad Central del Este. In December, SIAPS conducted a workshop to train the facilitators of the course, the implementation of which is scheduled for February 2016. Additionally, SIAPS supported the training of nine regional health services personnel in the analysis of SUGEMI pharmaceutical management reports. SIAPS continued supporting on-site trainings for the implementation of SUGEMI procedures in eight major hospitals.

SIAPS **Namibia** finalized and shared with the Ministry of Health and Social Services/National Health Training Center (MoHSS/NHTC) a technical report of the pharmacists' assistant (PA) graduate tracer study that was conducted in FY15. The report will be used to inform strategies for improving the PA training program and its re-accreditation by the Namibia Qualifications Authority (NQA). In Q1, information obtained from the assessment was used for the PA curriculum revision aimed at enhancing the quality of training at NHTC.

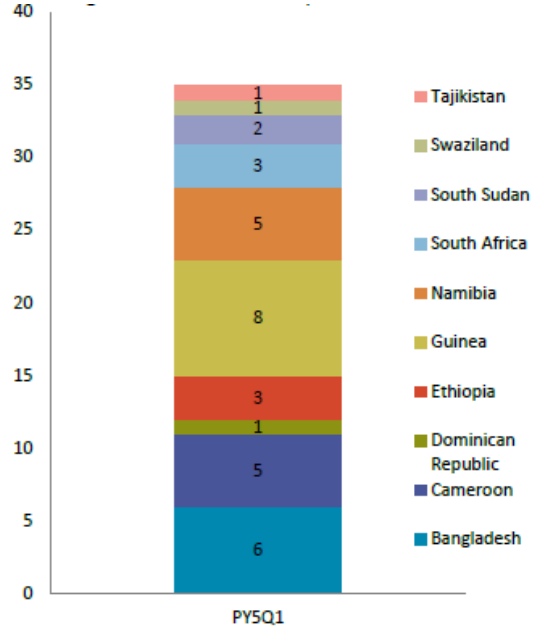
To date, SIAPS **South Africa** has worked with five tertiary institutions (Nelson Mandela Metropolitan University, Sefako Makgatho Health Sciences University, University of Fort Hare, University of KwaZulu-Natal, and the University of the Western Cape (UWC)). SIAPS Program's work with the universities included training and development of materials to address course gaps in pharmaceutical management, resulting in five pre-service health professional training curricula—surpassing the target of four. An online course on rational medicine use course was finalized and handed over to UWC, demonstrating the sustainability of SIAPS pre-

service capacity building efforts. Beginning in 2016, UWC will offer the course either as an elective or as a module for the Masters in Public Health (MPH) degree. SIAPS also finalized the online Medicine Supply Management course for use at UWC.

Moreover, SIAPS South Africa supported the University of KwaZulu-Natal (UKZN) in the successful delivery of the pharmacoeconomics course to 210 students (third- and fourth-year) in October 2015. Two lecturers and three graduate students were capacitated to deliver the course, thus facilitating the transition of the course to the university in 2016.

In-service training

By the end of December 2015, 10 countries had developed or revised 35 in-service health professional training curricula with SIAPS assistance (see figure below).



To improve patient and stock management of HIV and AIDS commodities, SIAPS **Angola** has successfully designed a mentorship program to capacitate the pharmacy personnel of the nine health facilities (HFs) and provincial warehouse of Luanda. The mentorship program recruited three pharmacists who will be working directly with six HFs, while another two pharmacists are being recruited to cover the rest of the HFs. At least one day per week, each selected HF is receiving direct support from one assigned mentor (a pharmacist) under the direct supervision of a full-time technical advisor. The program has developed individual reporting tools to monitor the progress of SIAPS interventions at the HF level, identifying the use and implementation of stock cards as a priority tool. As a result, the team updated the stock cards where they existed, and introduced new stock cards where there were not used. This resulted in more transparent and reliable stock information that could be used for improving monthly logistics reports and requisitions to get new stock from the Provincial Health Division of Luanda or the National Institute against HIV and AIDS.

SIAPS **Burundi** assisted the National Malaria Control Program/Programme National Intégré de Lutte contre le Paludisme (PNILP) in conducting an orientation session (TOT) for a national team on intermittent preventive treatment in pregnancy (IPTp) policy implementation in six health districts. In preparation for the training of trainers (TOT) at the provincial and district levels, SIAPS assisted the PNILP in conducting a two-day workshop to get the national team of eight trainers (seven females and one male) familiarized with the topic. This orientation session aimed to update the team on IPTp, review training materials, and develop the timeline for training trainers at the provincial and district levels, as well as to cascade training to health care providers. As for the TOT at the provincial and district levels, SIAPS assisted the PNILP in training 34 trainers (two females and 32 males) from six health districts of three health

provinces. The TOT covered one person from each health province office, four people from each health district, and one person from each hospital in the covered provinces. The output of the training was the coordinated development of specific IPTp implementation plans for the six health districts.

In **Ethiopia**, four different training events were organized: two on APTS, one on the standard operating procedures (SOP) manual, and one on AMR and RMNCH. A total of 174 professionals (81 females and 93 males) benefited from the training. Moreover, three health facilities received onsite training and mentoring to implement the APTS tools. During these events, 121 pharmacy professionals, accountants, cashiers and auditors benefited from the training. Additionally, a half-day training was dedicated to the Ethiopian Hospital reform implementation guidelines (EHRIG)-pharmacy chapter and APTS implementation packages during a training organized by the St. Peter Hospital training center. Nineteen staff members participated in the training.
SIAPS **Guinea** continued to support medicines management and supervision, particularly for malaria commodities. Following a request by the order of pharmacists of Guinea, a "medicines for all" training was conducted from October 13th-16th in Conakry, and attended by 30 private pharmacists. The training was carried out in collaboration with the departments of Pharmaceutical Inspection and General Health Inspection of the Ministry of Health. A second training was conducted for the heads of health units in the zones of Boké, Fria and Boffa, where a total of 27 people attended.

Starting in 2012, SIAPS **South Africa** implemented the Pharmaceutical Leadership Development Programme (PLDP) in KZN for two groups of pharmacists from each of the 12 districts and provincial pharmaceutical services. During last quarter, 12 district teams and one provincial team completed the sustainability phase of the PLDP. In October 2015, 26 professionals (10 pharmacists, eight operational managers, and eight clinical managers) from the Khayelitsha Eastern Substructure (KESS) in the Western Cape completed the LDP. Working in teams, the participants implemented quality improvement initiatives in each of 10 health facilities in the sub-structure. Selected results achieved by the teams during the period March to September 2015 include:

- Strand Clinic: Increased the proportion of chronic patient reviews conducted by a clinical nurse practitioner instead of a medical officer from 7% to 25%. This initiative aims to reduce the workload of medical officers so that their time can be utilized for more complicated cases.
- Khayelitsha Community Day Centre (CDC): Reduced the proportion of prescriptions rejected by the Central Dispensing Unit (CDU) for medico-legal or clinical reasons from 7.2% to 3.7%. This meant that fewer patients were at risk of not receiving their monthly medicine parcels.
- Gustrow CDC: The proportion of patients receiving their CDU parcels at a community venue increased from 16% to 30%.

In **South Sudan**, the SIAPS technical advisor in the Central Equatoria State and the SIAPS data coordinator conducted three pharmaceutical management trainings: one in Morobo for 13 health workers, one in Terekeka for 22 health workers, and one in Juba for 22 health workers. The training focused on the following topics: good storage practices, Emergency Medicines Fund

contents overview, correct use of Pharmaceutical Management Information System (PMIS) tools & reporting forms, and rational use of medicines.

Supportive supervision and mentoring

In **Mali**, a two-day training workshop on supportive supervision guidelines were provided to health services workers in the Koulikoro, Sikasso, Segou, and Mopti regions, as well as the Bamako district. A total of 181 supervisors (28 females and 153 males) were trained in districts of the four regions and the Bamako district on the use of supportive supervision guidelines. A total of 333 health workers (59 females and 274 males) were trained on pharmaceutical management. As result, the number of people trained on pharmaceutical management increased from 1260 to 1593 in this quarter, getting closer to the annual target of 1650. After each training session, trainees developed their post-training action plans to implement the gained knowledge and improve stock management and availability of medicines and commodities at facilities levels.

SIAPS **Mozambique** supported the strengthening of adverse drug reactions (ADRs) reporting by assisting the pharmaceutical department (PD) to conduct a supportive supervision visit in Tete Province on October 19th-23rd. During this visit, supervision of the pharmacovigilance activities in Tete Province was provided, health professionals were trained on ADRs reporting in the Tete and Songo Districts, and trained health facilities were provided with the ADRs report form. Tete Province has been improving its reporting in recent years. However, the reporting rate for this province continues to be extremely low compared to its estimated reporting numbers. It is expected that this exercise and the continuous follow-up will reduce the existing and prominent gap between the reporting targets and the actual reporting values.

SIAPS **Swaziland** provided mentorships at 21 SIAPS-supported sites (19 health facilities and two central warehouses). In summary:

- TA on Rx Solution was provided at nine sites (seven health facilities and two central warehouses) where 12 health care workers were mentored on inventory stocktaking, use and generation of custom system reports, and troubleshooting hardware related issues. Follow-up visits will be scheduled in the next quarter to ensure that MOH staff is fully capacitated on the tool for optimal usage of Rx Solution.
- 15 facilities received mentorships on facility supply chain management (i.e. stock card updates, reporting) and on pharmaceutical services management (i.e. dispensing, ADR management).

Institutional Capacity Building

SIAPS/**Bangladesh** continues to provide technical assistance to the Directorate of General Drug Administration (DGDA) to improve the performance of their regulatory systems. Specifically, SIAPS is building the capacity of DGDA and pharmaceutical manufacturers on how to develop and regulate medicines according to international standards. To achieve national ownership and sustainable results, SIAPS has facilitated a partnership between the DGDA and the Korea International Cooperation Agency (KOICA) for three years, permitting the Ministry of Food and

Drug Safety (MFDS) of Korea to conduct training/workshops for DGDA officials. Fifteen DGDA officials will participate in the first training on biopharmaceutical regulation. As a result of the training, the DGDA officials finalized their action plans, which will help Bangladesh identify and propose possible solutions to the country's current issues and major challenges.

SIAPS **Swaziland** collaborated with UN Office on Drugs and Crime (UNODC) to facilitate training on stock management and LMIS for 30 correctional services and Defense Force health workers. These trainings aim to assist the security force health workers conform to the supply chain system in the country as they report and order from Central Medical Stores (CMS) and therefore receive health products in right time and in the right condition.

Tools for Capacity Building

SIAPS/**Bangladesh** engaged the Directorate General of Health Services (DGHS) to train 955 storekeepers, statistician, SACMO and CHCP from four districts (Pabna, Khulna, Faridpur and Lakshmipur) in the use of the electronic logistics management information system (eLMIS).

SIAPS/**DRC** supported the training of health care workers in three USAID-supported provinces on the use of District Health Information System (DHIS2.0) software. DHIS2.0 is a comprehensive health information software that captures medical and pharmaceutical data, and it was adopted by the MoH to capture data at the health facility (HF) level. During the next quarter the DHIS2.0 software will be piloted in between eight and ten HFs to assess its performance before rolling out to other HFs in USAID-supported health zones.

SIAPS/**Namibia** continued to provide routine IT support to MoHSS' 50 main electronic dispensing tool (EDT) sites: Rx Solution at Intermediate Hospital Oshakati (IHO), as well as e-TB Manager and national database (NDB) servers to ensure optimal availability of data from these tools to improve pharmaceutical service delivery. SIAPS supported the training of second-year NHTC PA students on the use of the EDT through practical simulations at the training center. A total of 40 students were equipped with skills on dispensing ARVs to patients, compiling ART monthly reports and ordering medicines using the EDT.

Moreover, SIAPS/Namibia is supporting MoHSS in the decentralization of ART services to PHC facilities implementing the Nurse-Initiated and -Managed ART (NIMART) approach. The EDT mobile roll out is to support MoHSS to strengthen the efficiency and integration of the EDT Mobile at PHC facilities. A total of 27 mEDT installations were done in eight districts. Eight main ART sites were updated with new software for the EDT at the district hospital. A total of 17 health care workers (nurses and pharmacy staff) were trained on the use of the mEDT during the site level support.

IR 3. Utilization of Information for Decision Making Increased

SIAPS' approach to management information systems is to harmonize and integrate the collection and presentation of accurate, quality pharmaceutical and other commodities data, processed in a timely and consistent manner. This data is intended to assist decision makers and

health workers at all levels of a country's health system make evidence-based decisions, to manage health and laboratory commodities and pharmaceutical services, and to measure, monitor, and evaluate progress. SIAPS' approach includes careful assessment of interventions related to information systems to determine the feasibility and long-term effect of their implementation; striving to find the best solution to address health-related data collection, processing, reporting, and decision-making challenges; and supporting country ownership and sustainability. SIAPS' pharmaceutical management information tools, such as RxSolution, Pharmadex, e-TB Manager, QuanTB, OSPSANTE, OSPSIDA, EDT, and the Pharmacoviligance Data Collection and Analysis Tool (DCAT), and the recently launched Pharmacovigilance Monitoring System (PViMS), support both product and patient information. The demand for these tools in SIAPS and non-SIAPS countries continues to grow, and SIAPS works with various partners to expand the use of these tools.

Data Utilization

During the first quarter of SIAPS project year five, 87%of health facilities in Mali completed and submitted an LMIS report, a marked increase from the 34% that submitted a report during the first quarter of SIAPS project year four. The use of information generated by OSPSANTE enhanced the ability to make decisions to improve availability of key commodities in several of Bamako's communes; for example, 11,250 rapid diagnosis tests were transferred from commune 5 to commune 3, and 4,800 artemether-lumefantrine 6 X 1 tablets were transferred from commune 5 to commune 6. Planning and monitoring reports for malaria (PPMRm) and for contraceptives (PPMRc) were submitted to USAID/Washington. These reports were developed in close collaboration with the MOH and partners involved in health commodities management (PMI/Mali, PSI/GF, USAID/Keneya Jemu Kan project) who made recommendations on procurement, replenishment plans, and inventory management.

In October 2015, SIAPS/Angola submitted a quarterly PPMRm after collecting stock information data from national and provincial levels. This report allowed all the national and international stakeholders in malaria commodity security to analyze the availability and pipeline of these commodities, identify bottlenecks in the supply chain, and suggest action oriented solutions for improved prevention and management of malaria cases.

Direct uploading of logistics data through Upazila Inventory Management System (UIMS) has continued improving in Bangladesh (100% of upazilas directly uploaded data in November 2015 as compared to 97% in November 2014). Around 84% of total sites are maintaining high data quality standards (as measured by the timeliness, completeness, and accuracy of the reports). As a result, the stock-out rate for contraceptives at the service delivery point level continues to be less than 1%.

SIAPS continued to ensure optimal availability of data in Namibia by providing routine IT support to the MoHSS 50 main EDT sites. This support was also extended to the Intermediate Hospital Oshakati's RxSolution platform, and to the e-TB Manager and national database servers.

In Swaziland, during the first quarter of FY16, 98% (N = 42) of health facilities completed and

submitted an ART LMIS report for the most recent reporting period. This reflected an improvement in performance from 75% reported in the previous quarter. Figure 1 shows the evolution of this indicator since the first quarter of SIAPS year four, to date. Improvements were also observed for the laboratory reporting rate, increasing from 88% recorded during the previous quarter to 100% in the current quarter.

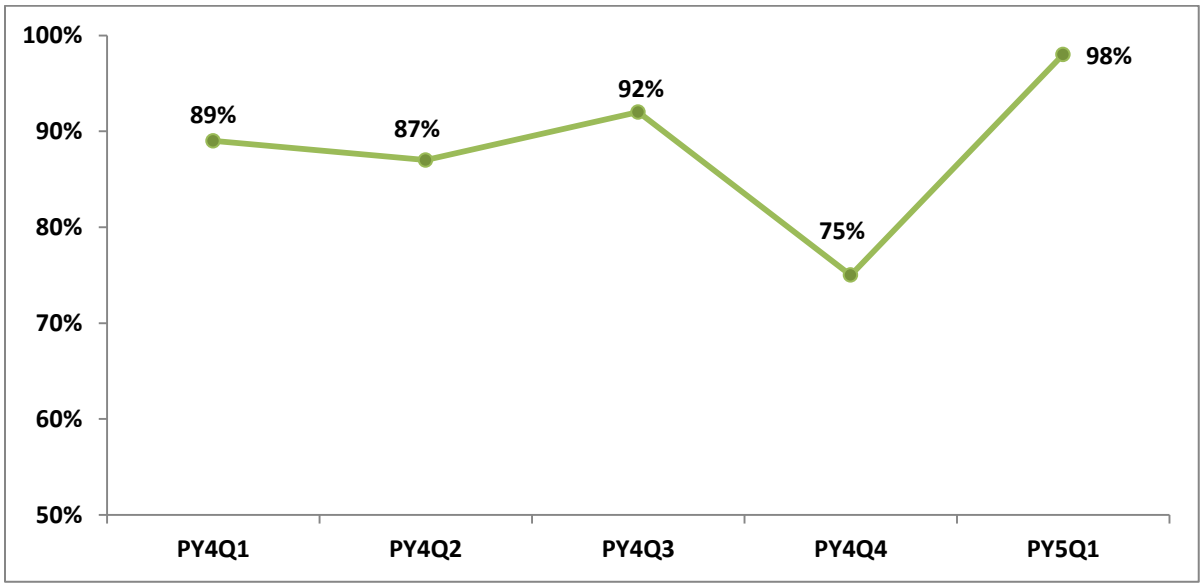


Figure 1. Percentage health facilities submitting LMIS report from the first quarter of SIAPS year 4 to date

Data Quality

In Namibia, SIAPS conducted a data quality audit (DQA) and compared EDT and ePMS ART active patient and enrollment data for the month of October in nine facilities selected from five PEPFAR priority regions. Gaps in data from the two tools were identified and an inter-implementing partner meeting was held among SIAPS, MoHSS onsite staff, and IntraHealth staff at the Onandjokwe District Hospital to identify strategies that would help to reduce those gaps. One strategy identified was using the EDT-Mobile at Nurse Initiated and Managed ART sites and ensuring patients recruited from those sites are reported back to main sites for capturing in the EDT. To sustain these audits, a similar inter-agency meeting has been planned for Nyangana District for Q2 of FY16.

In Mali, the percentage of stock records that corresponded with physical counts for a set of indicator drugs in MOH storage and health facilities has continued to improve. Since the beginning of FY15, and during the first quarter of FY16, the accuracy rate has increased from 43% to 80%, as shown in Figure 2.

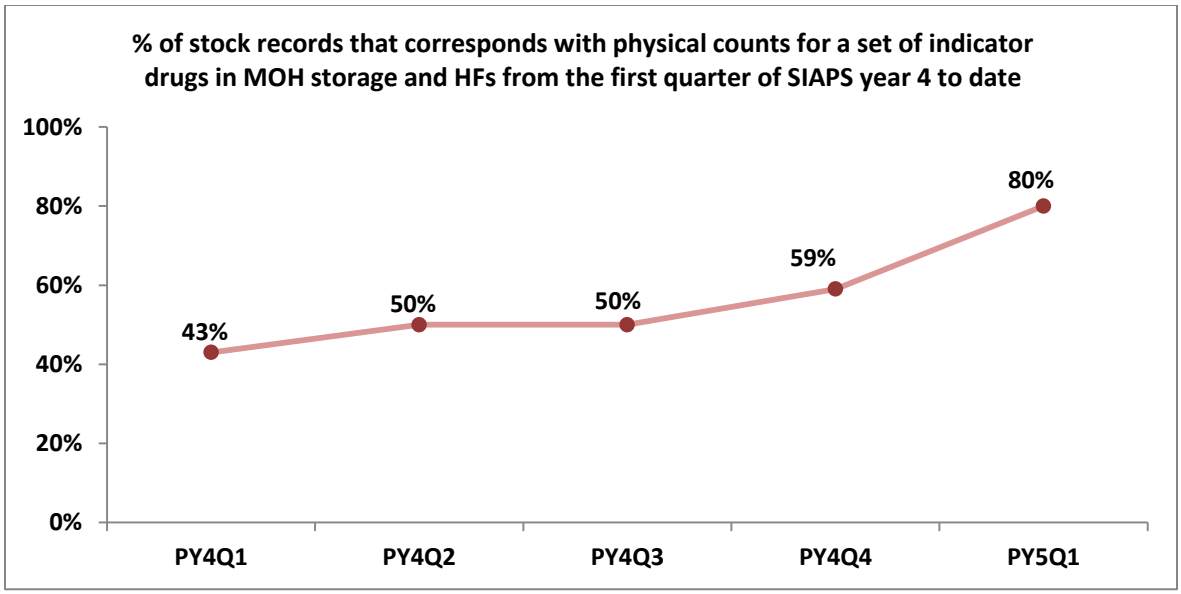


Figure 2. Percentage stock records that correspond with physical counts for indicator drugs from the first quarter of SIAPS year 4 to date

Information System Design and Collaboration

SIAPS Burundi assisted in the design of a facility feedback form that highlights key EUV findings and suggestions for improvement for each visited health district. The National Malaria Control Program used this tool during a supervision conducted in December to share findings with facilities, to coach districts and health centers, and to plan for the implementation of corrective actions.

In Bangladesh, SIAPS worked with Directorate General of Health Services (DGHS) to incorporate the eLMIS for priority MNCH medicines into DHiS2, while also collaborating with DGHS and GIZ so that data can be uploaded directly to the e-LMIS platform of DHiS2 in the central server. After beta testing in Gazipur, SIAPS trained 955 storekeepers, statisticians, sub-assistant community medical officers and community health care providers from four districts on priority MNCH medicines reporting to DHIS2.

Capacity building exercises continued in Namibia, where SIAPS supported the training of second-year National Health Training Centre Pharmacist's Assistant students on the use of the EDT through practical simulations at the training center. A total of 40 students acquired skills on dispensing ARVs to patients, compiling ART monthly reports, and ordering medicines using the EDT. SIAPS, in collaboration with IntraHealth, has been providing technical assistance to the MoHSS in improving interoperability of electronic systems used in the management of the ART program, including EDT, ePMS, MEDITECH, and RxSolution, among others.

Following the introduction of PViMS made in the previous quarter in the Philippines, SIAPS continued to advocate to the NTP, the Food and Drug Administration, and other partners on the use of this electronic drug safety monitoring tool which allows for systematic data collection, documentation, and analysis of adverse events, and presented the complete generic version with

its key clinical, reporting and analytical features. The partners expressed their interest in adopting the PViMS and looked at the adaptability and interoperability options with other platforms, such as Integrated TB Information System (ITIS), FDA's Vigiflow system, and the nine-month MDR-TB patient database.

SIAPS assisted Tajikistan's National Tuberculosis Program to optimize the use of existing paper-based reports and developed an automated tool to monitor and manage LMIS reporting. The tool is designed to receive and automatically aggregate the quarterly LMIS reports on consumption and stock levels of medicines. Through monitoring, it will help ensure that reports are submitted on time, and will potentially reduce the time needed for aggregating data received from the different facilities. SIAPS added the functionality of being able to generate reports on stock levels by expiration dates of the batches. It is expected that the system will be piloted in six districts of Tajikistan in early 2016.

In South Africa, SIAPS has installed RxSolution in 401 sites to date, which include hospitals, PHC facilities, sub-depots, district offices, and tertiary facilities. During PY5Q1, RxSolution was installed in six facilities (Nieu Bethesda clinic in the Eastern Cape; Amajuba Memorial Hospital in Mpumalanga; and Lebowakgomo, Sekororo, Siloam, and D Fraser Hospitals in Limpopo). Sixty-three departmental employees were trained to use the system in Gauteng (44), KwaZulu Natal (14), and Northern Cape (5).

The first quarter of FY16 was marked with the release of a new version of RxSolution which supports South Africa's Provincial Medicine Procurement Unit to strengthen its medicine supply management at the provincial level. The process of upgrading facilities to the new version is on course, and should be completed in quarter two.

During the 46th UNION World Conference on Lung Health, the QuanTB version 3.0 was released with enhanced user-friendliness and new features based on users' feedback. The new version was presented and discussed in various workshops, symposiums, at the MSH booth, and through flyers given out at the sessions. By the end of the quarter, QuanTB version 3.0 had been downloaded over 110 times from the SIAPS web site, in addition to more than 1,100 downloads of previous versions of the tool.

In Swaziland, SIAPS continues to provide support for the implementation of RxSolution both at central and facility level. Currently, at least 90% (N = 39) of facilities have a fully functional Rx-Solution. SIAPS continued to facilitate and support the testing of the web-based PViMS intended to improve data analysis, data cleaning, and integration of active surveillance data.

IR 4: Financing Strategies and Mechanisms Strengthened to Improve Access to Medicines

The SIAPS approach for strengthening financing strategies and mechanisms for medicines focuses primarily on making efficient use of existing financial resources, generating additional funding resources, and tackling key financial barriers to accessing medicines. During this quarter, SIAPS supported countries by updating technical grant documents and quantification

figures to access additional funding streams for medicines procurement. Furthermore, SIAPS supported the responsible use of existing financial resources by contributing to interventions that emphasize the importance of transparent financial transactions at health facilities, monitoring drug prices, and contributing to improved financial decision making by pharmacy managers. SIAPS is also contributing to discussions on health care financing and universal health coverage, particularly in the area of medicine benefits management.

Mobilizing Additional Financial Resources

SIAPS continues to support countries through the process of gathering key data to justify the need for additional funds to procure disease-specific commodities and other products. In the first quarter of PY5, SIAPS, in collaboration with **Angola**'s National Malaria Control Program (NMCP), analyzed stock levels of antimalarial commodities within the country. Key figures from the stock monitoring exercise informed NMCP's donation request to the Global Fund for additional quantities of artemisinin-based combination therapy (ACT) tablets and rapid diagnostic tests (RDTs). Commodities from the emergency order have been made accessible to patients residing in each province. SIAPS was also involved in the facilitation of the quantification technical working group (TWG) on HIV/AIDS commodities, which identified a funding gap between the country's actual needs and the Government's planned financial contribution to the procurement of pharmaceuticals in this disease area. The Global Fund will be notified of the results of the forecasting exercise for HIV/AIDS commodities.

Despite security concerns and violence in **Burundi**, SIAPS continues to advocate for the allocation of funding from the Global Fund for medicines. This quarter, SIAPS informed the Global Fund and USAID/Burundi of the current stock status of malaria commodities at CAMEBU (Centrale d'Achat des Medicaments Essentiels au Burundi), emphasizing that on time delivery of products to CAMEBU can avert central level stock-outs. Building on progress made last quarter on a Global Fund concept note for malaria activities, SIAPS assisted the National Malaria Control Program (Programme National Intégré de Lutte contre le Paludisme [PNILP]) in updating the supply plan for the procurement and stock management of malaria commodities with recent figures that forecast quantities needed over the next two years.

In partnership with **Cameroon**'s National AIDS Control Committee (NACC), SIAPS contributed extensively to the development and revision of grant making documents in response to the approval of a Global Fund HIV/TB concept note submitted by NACC. After identifying final targets for treatment coverage, SIAPS led a quantification exercise that incorporated inputs from the NACC and Center for Disease Control. The outcomes of the quantification exercise and a revised budget for procurement were summarized by SIAPS and subsequently submitted by NACC to the Global Fund for review. NACC also requested SIAPS' assistance to respond to questions from the Global Fund related to the quantification and management of products requested. SIAPS advocated for funds to properly store medicines procured by the grant. Furthermore, it was suggested that additional vehicles for medicine distribution, technical advisors to support regions not funded by PEPFAR, and support for the implementation of an electronic Logistics Management Information System be included in the budget.

Analyzing and Tracking Costs

This quarter, APTS (Auditable Pharmacy Transaction Services), SIAPS' intervention for improved financial accountability of medicines expenditure and availability in **Ethiopia**, was expanded to Dilla University Hospital in SNNP, Alamata Hospital in Tigray, and Haromaya Hospital in the Oromia region; 121 pharmacy professionals, accountants, cashiers, and auditors from the three hospitals were provided onsite training and mentoring, strengthening their knowledge of APTS tools and approaches. With the addition of these three new sites, APTS is currently being used at 48 health facilities throughout the country; 31 of the 48 health facilities implementing APTS are using the system to track their sales and report regularly to regional authorities and the Federal Ministry of Health (FMOH). Nine health facilities implementing APTS received suggestions from SIAPS on how to improve the pharmacies' appearance and storage capability. Four hospitals in the Amhara, SNNP, and Oromia regions conducted ABC/VEN analyses this quarter with SIAPS' guidance by using historic medicines-purchasing data over the last three years to conduct the analyses. The results of the analyses were communicated to each hospital's drug and therapeutics committee to inform prospective interventions, including prescription audits and drug use evaluations.

In **South Africa**, SIAPS is supporting Gauteng Province's Division of Pharmaceutical Services to explore strategies to improve the financial decision making by pharmacy managers in the province. In cooperation with SIAPS, Gauteng Province's Department of Health has drafted a proposal for SIAPS to mentor pharmacy managers with the objective of increasing capacity to interpret and analyze expenditures from procurements. Pharmacy managers in 30 facilities will learn how to make informed decisions on purchasing that will contribute to the financial sustainability of the Division of Pharmaceutical Services. Although the activity launches in January 2016, SIAPS has already oriented key stakeholders at the Division of Pharmaceutical Services on the use of Infomaker, software that extracts reports from inventory databases.

In collaboration with the Government of **Ukraine**, SIAPS advised working groups on health care financing and medicines procurement reforms. Additionally, this quarter marked the completion of tests by SIAPS for the web-based price-monitoring tool. The tool will be installed on the MOH's server next quarter.

Using SIAPS **West Africa** funding, SIAPS, along with USAID/West Africa and UNAIDS, co-facilitated a stakeholder meeting on the sustainability of **Togo**'s HIV/AIDS Program. It was highlighted that an estimated 10-49% of ARVs and rapid test kits are procured using Togolese Government funds. It was suggested that the country draft a national supply chain plan to guide investments in pharmaceutical system. Another possibility is for a comprehensive national supply chain assessment to be conducted using the capability maturity model diagnostic tool in Togo. Such strategies can encourage improved management of available government resources and encourage the government and its partners to activate alternative funding mechanisms when financial gaps are revealed.

Reducing Financial Barriers to Access of Medicines

In **Ethiopia**, SIAPS was recommended by the Ethiopian Health Insurance Agency (EHIA) for membership on the TWG advising the country as it implements new health insurance schemes. As a member of the TWG, SIAPS is collaborating with partners to oversee an assessment of how the pharmaceutical supply chain will be affected by potential health insurance schemes. SIAPS has participated in three meetings of the TWG and contributed to the proof of concept for the national assessment. The scope of the national assessment being conducted has been expanded by the EHIA and TWG to incorporate pharmacy benefit management and rational use of medicines at the recommendation of SIAPS. A concept note on the national assessment is forthcoming and will be shared with stakeholders as it is developed.

In **Ghana**, SIAPS held a number of meetings with stakeholders, such as the MOH, USAID Ghana, management and staff of the National Health Insurance Authority (NHIA), and the members of the Presidential Commission for the review of the national health insurance scheme to share the findings of the SIAPS-led NHIS medicines benefit management assessment. With USAID funding, SIAPS will support the NHIA to implement recommendations from the assessment, such as introducing medicines utilization indicators; tracking medicine prices and reviewing the current NHIS medicine reimbursement process; and undertaking operations research to understand the effects of the capitation payment mechanism on medicine utilization in Ashanti and the three northern regions of Ghana.

SIAPS also held a meeting with the Health Finance & Governance (HFG) Project to share information about their respective work related to malaria claims data with NHIA to prevent duplicative efforts and agree on how the two projects can complement each other in their support to NHIA. SIAPS is primarily focused on issues related to pharmaceutical management, including the NHIA's relationships with actors such as the MOH, providers, and suppliers. There are several opportunities for collaboration and triangulation of findings between SIAPS and HFG on insurance claims and access to medicines for specific diseases, such as malaria.

IR5a: Supply Chain Management

SIAPS has continued to ensure the availability of medicines and improved supply chain systems by using a holistic pharmaceutical system strengthening approach. The interventions related to supply management include human resource capacity building, streamlining logistics systems, timely redistribution and ordering plans, warehousing optimization, and standardizing logistics management tools. Illustrative supply chain management interventions that contributed to country-specific achievements in availability are described in the following paragraphs.

SIAPS/**Bangladesh** has worked closely with the Directorate General of Health Services on developing and using an electronic Logistics Management Information System (eLMIS). SIAPS trained logistics personnel from 19 districts on the paper-based inventory reporting tools, including issue vouchers, bin cards, indent and issue vouchers, and the inventory control register. Training on the piloted eLMIS was also conducted for 955 staff from four districts across the country. The director of CMSD reached out to civil surgeons to ensure the use of inventory tools

and to consistently report on stock status across their facilities. SIAPS has also completed CMSD's first-ever warehouse standard operating procedures manual incorporating feedback and reviews by CMSD staff and their newly created Technical Working Group. These measures have helped ensure that 86% of health facilities are using standard checklists to monitor medicine storage conditions. Reporting on logistics information for the Directorate General of Family Planning (DGFP) has reached 100%, which is the main contributing factor to the less-than-1% stock-out rate at the upazila level this quarter. This is a great success, given that the baseline rate for stock-outs at that level was 7%, and SIAPS has helped DGFP reach the life-of-project target of 1%. In terms of the National Tuberculosis Program (NTP), SIAPS has helped NTP quantify first- and second-line TB medicines by using QuanTB, and the budget has been approved and released by the Global Fund. SIAPS has also trained NTP staff on e-TB Manager to track and manage TB medicines. The program also worked with staff at Shyamoly's central TB warehouse to install environmental control devices, equipment, and safety measures throughout the facility. These combined interventions supported by SIAPS have ensured that the stock-out rate of TB commodities at the health-facility level remained low at 29% for TB medicines, getting closer to the program life target of 25%.

SIAPS/**Cameroon** has increased the number of health facilities to which it is providing supportive supervision by 27%, from 104 to 132 facilities. This increase was needed because of the expanded activities that will take place at PMTCT stand-alone sites to ensure access to Option B+. Supportive supervision visits and continued capacity building have been conducted at all facilities this quarter, which has helped to reduce the stock-out rate of ARVs, which fell from 34.6% to 28.6% in the past quarter. SIAPS has also initiated an approach to improve data availability on the OSPSIDA dashboard, the web-based HIV and AIDS data collection tool. This approach included volunteers from civil society organizations working on data entry, which has received a positive response. These combined interventions have led to the improvements in availability and use of logistics information, where the percentage of inventory records matching physical inventory has been maintained at a high rate of 82%. With the availability of better information for decision making and proper monitoring of stock levels, as well as making emergency ARV procurement and deliveries, SIAPS was able to assist the MOH to avert stock-out of HIV commodities in approximately 62.1% of health facilities. SIAPS is also supporting committees such as the PMTCT Taskforce, LMIS Committee, Regional Funds for Health Promotion (RFHP), and the Quantification and Stock Monitoring Committee to standardize reports to improve efficiency on reporting on logistics and stock information. A standard procedures manual is also being developed for RFHP, ART, and PMTCT sites. SIAPS is assisting with this, while ensuring the more efficient and streamlined processes for procurement, warehousing, and distribution are initiated. These initiatives will help Cameroon continue to maintain good storage practices, currently reported at 100% of warehouses and storage sites. This was achieved this quarter as well. One constraint to progress is the limited storage space of the RFHP, making it difficult to maintain both minimum and maximum supply levels. This is aggravated by the one-month supply lead time from CENAME, the central medical store. SIAPS is currently aiding the grant writing process for Global Fund's New Funding Model to include funding for an additional storage site for RFHP.

In **Ethiopia**, SIAPS has been diligently working to scale up and implement Auditable Pharmaceutical Transaction and Services (APTS) in two regional states. Along with training

programs, technical assistance was provided to nine health facilities to improve pharmacy storage areas, with these facilities providing their own financial resources for renovation and infrastructure improvements, according to SIAPS recommendations. SIAPS worked with the National Malaria Commodities Technical Working Group (MTWG), Pharmaceuticals Fund and Supply Agency (PFSA), and the Federal Ministry of Health (FMOH) to coordinate logistics for changing the supply chain structure, transitioning malaria commodities distribution from regional health bureaus to PFSA. This will help streamline processes and better track malaria stock. Additionally, draft TORs have been finalized for the establishment of MTWGs in all regions across the country. Furthermore, 61 pharmacy personnel were trained on SOPs for managing ARV medicines. The SOP manuals were disseminated for use as reference materials, and implementing these procedures will contribute to standardizing the management of product information in health facilities, further informing sources of data for forecasting and supply planning of ARVs. SIAPS also conducted integrated supportive supervision visits in the Amhara and Benishangul Gumuz regions, distributing 5,600 forms, 13 ART registration books, and antimalarial drug registration books and guidelines to three PMI sites. The efforts made by SIAPS/Ethiopia, alongside counterparts, has led to an increase in good storage practices in 92 health facilities across the country, exceeding the target of 50 for this quarter. These interventions have maintained the availability of medicines at warehouses, with a 54% stock-out rate that is an improvement from the baseline of 76%.

In the **Philippines**, SIAPS helped draft the TORs for the Pharmaceutical Working Group (PWG) at the central level. This group is responsible for the overall management of TB commodities, and these new TORs outline the structure, roles, and responsibilities of the group's members. With the establishment of the PWG with clear roles and responsibilities, TB product management efficiency is predicted to increase, improving availability of products. The new pediatric FDC formulation was adopted by the NTP and the Pharmaceutical Division and is now included in the Philippines National Drug Formulary and EML. SIAPS facilitated the introduction process of this new, dispersible, child-friendly formulation, ensuring smooth collaboration with the NTP, Pharmaceutical Division, Global Drug Facility, WHO, and the TB Alliance. The availability of this new FDC is foreseen to reduce logistics management burdens compared to the bottles of suspension used previously, in addition to reductions in cost of products. Furthermore, SIAPS provided technical assistance in the quantification and procurement of TB medicines. Using QuanTB for quantification, SIAPS facilitated NTP's discussions with the Global Drug Facility to expedite urgent deliveries of levofloxacin and kanamycin. These combined activities have contributed to the success of the Philippines program in reducing the stock-out rate of adult TB medicines, with only 9% of facilities being stocked out for a day in the past three months. The baseline measure of facility stock-out rates was 48%, and the achieved target for this same quarter was 12%.

IR5b. Pharmaceutical Services Improved to Achieve Desired Outcomes

SIAPS improves pharmaceutical services by using a holistic approach that ensures that patients receive medicines optimized to their clinical needs in doses that meet their individual requirements, for an adequate time, and at the lowest cost to them and their community. During this quarter, SIAPS provided support to countries through various technical areas and strategies

including pharmacovigilance (PV), rational medicine use (RMU), pharmaceutical care/community case management, essential medicines lists (EMLs), formularies, standard treatment guidelines (STGs), drug information and patient education, antimicrobial resistance (AMR) and infection prevention and control (IPC), drug and therapeutics committees (DTCs), and medicine use reviews.

Pharmacovigilance

SIAPS **Bangladesh,** in collaboration with Adverse Drug Reaction Monitoring (ADRM) cell of the Directorate General of Drug Administration (DGDA), has provided technical assistance to 30 public and private hospitals and pharmaceutical manufacturers in the past two years. During this quarter, SIAPS organized a one-day workshop for 60 representatives to follow up on the PV activities at these sites and to provide refresher training to the existing focal persons and staff reassigned to government hospitals. The workshop provided updates on the ongoing activities of the ADRM cell and created opportunities for six hospitals and pharmaceutical manufacturers' representatives to share the PV activities in their respective organizations. The workshop also helped identify the existing challenges and gaps in the system and finally explored practical solutions to underreporting. Additionally, a presentation was made to showcase best practices that could be adopted to strengthen PV all over the country and to describe data and its implications from more than 600 adverse drug event (ADE) reports received between October 2014 and October 2015. The ADE reporting rate has increased over time; the number of reports in October 2015 was four times more than the number in October 2014.

Based on requests from health facilities, SIAPS **Ethiopia** conducted face-to-face discussions at five health facilities regarding ADE reporting. These in-person consultations with service providers are contributing to increased commitment from health facilities (through their DTCs). As a result, between the end of last quarter and the end of this quarter, the cumulative number of health facilities that are reporting ADEs has increased by 16.4% (from 152 to 177) and the number of reports has increased by 8.1% (from 844 to 912). SIAPS also helped distribute 160 ADE reporting forms, 120 allergy cards, and 160 newsletters to the facilities where face-to-face discussions were conducted. As a result of regular ADE reports, one regulatory measure was taken on Ringer lactate IV infusion and the manufacturer was compelled to recall the product and investigate the quality concerns that were being reported repeatedly.

SIAPS **Mozambique** assisted the Pharmaceutical Department (PD) of MOH to conduct a supportive supervision visit in Tete Province from October 19-23, 2015, to strengthen ADE reporting. During the supervision visit, SIAPS and the PD provided on-the-job training to health professionals in the Tete Health Center No. 2, Rural Hospital of Songo, and Songo Health Center and also supplied ADE reporting forms (yellow form) to these facilities.

In Namibia, the SIAPS indicator "SIAPS-assisted sites that have implemented PV or medicines safety activities" increased from 20% (10/50) in the last quarter (PY4Q4) to 66% (33/50) this quarter.

SIAPS **Philippines** continued its work on enhancement of the Pharmacovigilance Monitoring System (PViMS), formerly called the Data Collection and Analysis Tool. SIAPS met with the

staff of the National TB Control Program (NTP), Food and Drug Administration, and Knowledge Management Information Technology Service and presented the generic version of the tool. Partners expressed their interest on the use of the tool and explored the interoperability options of PViMS with the information management systems of the Department of Health.

Also in the **Philippines**, implementation of the nine-month MDR-TB regimen operations research study started in the last quarter in four programmatic-management for drug-resistant TB treatment centers. During this quarter, the NTP, along with the Global Fund, National TB Reference Laboratory, Technical Assistance to Support Countries, Philippine Business for Social Progress, and SIAPS, visited the Xavier University treatment center in region 10 to gain an understanding of how the facility was managing the nine-month MDR-TB study implementation. Adverse events were reported in accordance with standard operating procedures (SOPs); however, there was a delay in submission of the supporting documents necessary for analysis at the FDA. In addition, the NTP, in collaboration with SIAPS and other TB partners, oriented ten study sites on the bedaquiline operational research study protocol. The implementation of the study is planned to start in February 2016. SIAPS supported the development of the presentation slides for the orientation and led the discussion on drug and supplies management and active drug safety monitoring and management topics during the orientation. To strengthen the governance capacity on PV affairs, SIAPS **Philippines** met with the FDA regarding the reformation of the National Drug Advisory Committee for PV. SIAPS assisted in the development of a draft scope of work for a senior consultant, which was reviewed and accepted by the FDA PV unit.

In November 2015, SIAPS **South Africa** contributed to a presentation by the SIAPS global team on building capacity in programmatic PV. The presentation was delivered at the African Society of Pharmacovigilance Conference in Ghana. SIAPS South Africa shared their experience in collaborating with Nelson Mandela Metropolitan University in the development of a PV elective course, thus sharing with other countries USAID-South Africa's investment in building PV capacity at the pre-service level as a sustainable approach. SIAPS also supported the National Pharmacovigilance Centre in the capture and review of 92 ADE reports from the Tuberculosis Electronic Drug Resistance register (EDR Web). Technical assistance was also provided for the management of a pregnancy registry and birth defect surveillance in Kwazulu-Natal in conjunction with the NDoH and other partners.

SIAPS **Swaziland** has worked with the Pharmacovigilance Unit to provide continuous support to the seven active surveillance sentinel sites. A total of 300 ADEs have been analyzed from the seven facilities since February 2015. Two abstracts were presented orally at the African Society for Pharmacovigilance in Ghana and the TB Union Conference in Cape Town, South Africa.

SIAPS **Swaziland** also provided technical assistance in conducting the causality assessment of adverse events reported to date. SIAPS supported the analysis of active surveillance data for the period June to October 2015. The data analysis showed that 3,006 patients were enrolled on the active surveillance system from May 2013 to October 2015 and that 1,069 ADEs have been reported. The most prevalent ADEs were gastrointestinal effects (19%), peripheral neuropathy (17%), and central nervous system effects (12%). From the findings of the active surveillance system, SIAPS has supported the following risk mitigation activities: development of an ADE

definition and severity grading job aid to facilitate the objective and uniform identification and severity grading of ADEs by all health care professionals so that the data are more consistent and accurate to enable quality decision making; development of an ADE reporting cascade for health care professionals; and development of an ADE identification and reporting job aid for patients. The next step for risk mitigation strategies is to develop an ADE management guideline that will be aligned to the Swaziland EML to ensure that the proposed ADE management protocols recommend medicines available in the public sector, thus improving the management and limiting out-of-pocket patient expenditures on medicines. SIAPS also supported the National TB Control Program (NTCP) to prepare for the implementation of bedaquiline for the management of XDR-TB patients. The support included testing and providing feedback on the redesigned web-based PViMS; and development of a PV module for the bedaquiline implementation guidelines for the Swaziland NTCP; this guideline is expected to be adapted and used in other SIAPS-supported countries that are also introducing bedaquiline. The passive surveillance reporting using the ADE reporting forms is on-going and facility mentorship continued in this quarter. Ninety reports for the period July–October 2015 were analyzed. SIAPS helped develop a job aid to encourage reporting to the National PV Unit. This job aid is currently being reviewed by MOH and is planned to be printed and disseminated in the next quarter.

Rational Medicine Use

SIAPS **South Africa** finalized and handed the RMU online course to the University of the Western Cape. As of 2016, the university will offer the course as an elective or as a module for the masters in public health.

Pharmaceutical Care/Community Case Management

SIAPS **Burundi** continued to help PNILP and partners strengthen case management. In this quarter, SIAPS assisted the PNILP in scaling up intermittent preventive treatment in pregnancy (IPTp) using SP. IPTp is a vital intervention for preventing maternal and neonatal mortality. With SIAPS support, the PNILP trained a national-level team of eight officials, 32 trainers, and 70 health care providers from two health districts. With SIAPS assistance through the PNILP, 30 health districts will implement IPTp using SP in this fiscal year. SIAPS collaborated with CARITAS to assist the PNILP and Direction d'Offre et Demande de Soins (Directorate of Offer and Demand of Health Services) to introduce malaria community case management for children under-five as part of the integrated community case management (iCCM) effort in five new health districts. With the support of SIAPS and CARITAS, the PNILP selected community health workers in the five health districts to support this process.

Through technical assistance of SIAPS **Ethiopia**, 14 new hospitals from seven regional states started providing clinical pharmacy services during this quarter; this brings the total number of health facilities that have started clinical pharmacy services to 75. There are two hospitals that practice clinical pharmacy in maternal wards, where 39 drug therapy problems (DPT) were identified; of these, interventions were made on 37 cases, 26 of which were fully accepted. Similarly, four hospitals practice clinical pharmacy services at pediatric wards, where 143 DPTs were identified; interventions were made on 114 of these DPTs, out of which 68 were fully accepted.

SIAPS headquarters made an oral presentation on iCCM at the 143rd American Public Health Association Annual Meeting and Expo held in Chicago, IL, from October 31 to November 4, 2015. The title of the presentation was "Ensuring Access to and Appropriate Use of Medicines for iCCM: It takes a system." The presentation can be downloaded from http://siapsprogram.org/publication/ensuring-access-to-and-appropriate-use-of-medicines-for-iccm-it-takes-a-system/

EMLs, Formularies, and STGs

During this reporting quarter, SIAPS **Dominican Republic** supported the revision and validation of the therapeutic guidelines and medicines formulary for primary health facilities. The final versions of both documents will be printed and distributed during next quarter.

Following the approval of the General Medicines Essential List, SIAPS **Mozambique** supported the finalization of the Specialties Medicines List. As part of the continuing support to establish the EML mechanism in the country, SIAPS also assisted the Pharmaceutical Department of MOH in drafting a new version of the terms of reference for the National Committee of Selection and Use of the EML, which has a new focus on monitoring and updating the EML.

SIAPS **Namibia** provided technical assistance to the Division of Pharmaceutical Services and the EML Committee in presenting proposed changes to the Namibia EML (Nemlist) to the Policy Management and Development Review Committee (PMDRC). PMDRC is the decision-making body in the MOHSS; it consists of the directors from the different health directorates and is headed by the permanent secretary. Based on the recent recommendations of the WHO expert committee on the selection and use of essential medicines, SIAPS contributed an article on adding new antiretroviral and anti-TB medicines to the Nemlist. All the proposed changes were approved by the PMDRC and will be incorporated into the Central Medical Store catalog and the sixth edition of the Nemlist. A total of 27 items were approved for addition to the Nemlist and 1 item was recommended for reclassification. SIAPS will continue to provide technical assistance in the production, printing, and dissemination of the sixth edition of the Nemlist.

During this reporting period, a new formulation for the following medicines was included in the **Philippines'** National Drug Formulary to support pediatric TB management: fixed-dose combination (FDC) of rifampicin 75 mg + isoniazid 50 mg + pyrazinamide 150 mg; FDC of rifampicin 75 mg + isoniazid 50 mg; and ethambutol 100 mg tablet. The new formulation is a dispersible, flavored tablet that is easy to administer to children and that reduces the logistics management burden of dealing with bottles of suspension. SIAPS **Philippines** contributed to this success by facilitating collaboration of the National TB Program (NTP) with the Pharmaceutical Division, WHO, and Global Drug Facility and assisted the NTP in the application process and presentation to the Formulary Executive Council.

SIAPS **South Africa** assisted the Essential Drugs Program (EDP) Unit in conducting workshops in the Western Cape (WC) in October and Kwazulu-Natal (KZN) in November to support the roll-out of the updated edition of the Primary Health Care Standard Treatment Guidelines (STGs) and the Essential Medicine List (EML) smart phone application; 81 participants attended

the sessions in the WC and 63 the KZN sessions. These workshops aimed to support the implementation and dissemination of the national STGs and EML. The sessions consisted of interactive discussions on EDP processes, downloading and use of the smart phone application, and review of changes in the STGs and EML. In addition, SIAPS South Africa supported the EDP in the development of a draft recruitment strategy and selection criteria for appointing members to the Primary Health Care Standard Treatment Guidelines (STGs) and Essential Medicines List (EML) Expert Review and Antimicrobial Resistance (AMR) Committees. A template for the submission of curricula vitae by prospective members of EDP committees was also developed.

SIAPS **Swaziland** presented two posters on pharmacy pre-service training and implementation of the EML at the International Pharmaceutical Federation (FIP) conference in Germany. These presentations served as opportunities for SIAPS to share successes in pharmaceutical systems strengthening in Swaziland and also learn new approaches to address emerging challenges in the field.

Drug Information and Patient Education

SIAPS **Ethiopia** continued to provide technical assistance to health facilities to strengthen medicine use education. During this reporting quarter, six health facilities from the East Amhara Region (Enat, Mehal Meda, Boru Meda, Hidar 11 Hospitals, and the Kombolcha Health Center) conducted 50 medicine use health education sessions, which were attended by 1,816 people (890 females [49%] and 926 males [51%]). The sessions focused mainly on RMU (32%), AMR (19%), RMNCH (14%), ADEs (12%), ART/opportunistic infections (8%), malaria and antimalarial drugs (6%), and medication adherence (8%). In addition, an SOP for the provision of drug information services at the health-facility level was developed this quarter. The SOP is expected to standardize and guide the establishment and provision of these services.

Antimicrobial Resistance and Infection Prevention and Control

During the quarter, the Global Health eLearning (GHeL) course on AMR (part 2) was finalized and published. Global viewers can now access, take the course, and get certificates. The second in the series, this SIAPS-authored course expands upon the concepts presented in the previously published AMR course (part 1) and explains the major factors that contribute to the development and spread of AMR. The course also explores some of the proven interventions and global strategies currently being used to combat AMR.

The course can be accessed through the GHeL website (http://www.globalhealthlearning.org/) and is also linked to GHeL's Health Systems track (http://www.globalhealthlearning.org/program/health-systems). The course was publicized through the K4H and SIAPS websites and through USAID HSS Network and HIPNet.

SIAPS headquarters made an oral presentation on AMR at the 143rd American Public Health Association Annual Meeting and Expo held in Chicago, IL, from October 31 to November 4, 2015. The title of the presentation was "Country and regional-level advocacy and coalition-building against antimicrobial resistance." The presentation can be downloaded from

http://siapsprogram.org/publication/country-and-regional-level-advocacy-and-coalition-building-against-antimicrobial-resistance/

To commemorate the first World Antibiotic Awareness Week held November 16-22, 2015, SIAPS headquarters published a blog on the USAID-supported work around advocacy and coalitions against AMR. It can be accessed at http://siapsprogram.org/2015/11/18/from-policies-to-patients-handling-antibiotics-with-care-across-the-pharmaceutical-system/

As a regional capacity-strengthening effort, SIAPS headquarters worked with the Ecumenical Pharmaceutical Network (EPN) headquarters in Nairobi to seek results-oriented intervention proposals from its member organizations on topics related to antimicrobial stewardship and AMR for possible support by SIAPS. EPN headquarters and SIAPS have provided feedback on the submitted proposals and are waiting to receive the revised proposals for consideration.

During the quarter, SIAPS **Ethiopia** provided training to journalists on topics related to prevention and containment of AMR; RMU; reproductive, maternal, and child health and medicines use; drug and substance abuse and the consequences; and medicines safety. Twenty-three participants from different mass media agencies and outlets, including radio, television, newspapers, and magazines as well as public relations officers from different organizations, attended the training. The journalists showed great interest in producing and disseminating articles. Three more print and mass media publications on AMR containment by the journalists were made this quarter, increasing the cumulative number from 218 to 221.

SIAPS **Namibia** continued to collaborate with the University of Namibia's School of Medicine (UNAM-SOM) in helping to coordinate activities related to IPC, including hospital-acquired infections. During this reporting quarter, SIAPS supported a meeting of the steering committee consisting of 14 members from UNAM-SOM and a German contingent from the University of Bonn's Institute for Hygiene. In addition, a two-day workshop was held focusing on hand hygiene and maintaining an infection-free environment around patients and during hospital procedures. The participants included four lecturers from UNAM-School of Pharmacy, three infection control nurses from hospitals in the Khomas Region, and one medical student from UNAM-SOM. In collaboration with the WHO consultant engaged at the Ministry from Tufts University, SIAPS also provided support to the MOHSS for the validation of the 2015 HIV-DR early warning indicators' findings and compilation of the report.

During this reporting quarter, SIAPS **South Africa** obtained the ethical approval for the research project "Using Electronic Pharmacy Dispensing Data for Surveillance of Outpatient Antibiotic Consumption and Monitoring of Antibiotic Prescribing Practices at District and Provincial Hospitals in the South African Public Sector: A Feasibility Study in North West Province." Data extraction will take place during the next quarter. SIAPS South Africa also worked with Gauteng Pharmaceutical Services to customize the clinical audit tool developed by EDP to assess the implementation of certain key antibiotic stewardship practices at intensive care units (ICUs) in central and tertiary hospitals. In the Gauteng Province, targeted facilities were expanded to include other hospital wards and secondary and primary health care facilities. The data collected will assist in describing antibiotic prescribing practices for inpatients in ICUs and medical and surgical wards at central, tertiary, and regional hospitals and for outpatients at district hospitals,

community health centers, and primary health care clinics. In November, SIAPS collaborated with Gauteng Pharmaceutical Services to present the use of the tool to pharmacy managers. A total of 26 hospitals and 77 clinics undertook assessment of the use of antibiotics during WHO antibiotics awareness week.

Drug and Therapeutics Committees

SIAPS **Mozambique** provided technical assistance to the focal point for pharmaceutical services of the Hospital Pharmacy Department (HPD) of MOH on how to classify and analyze medicine use information collected by four DTCs and how to give feedback to the DTCs. Mentoring sessions were organized with the HPD focal point from September 30 to December 4, 2015. The result of this analysis was presented at the national meeting of pharmacy on December 11, 2015.

SIAPS **South Africa** is assisting the Department of Correctional Services (DCS) to establish and strengthen Pharmaceutical and Therapeutics Committees (PTCs) within their six regions. A total of 34 participants attended a workshop held in November to capacitate the regions on establishing and strengthening PTCs. Regions were then tasked with developing their own TORs using the template developed by SIAPS. Draft TORs have been submitted to SIAPS for review. In addition SIAPS South Africa continued to provide input into decision-making processes of the Selection and Formulary Subcommittee of the KZN PTC as a way of enhancing RMU in the province. SIAPS also capacitated members of this PTC on basic pharmacoeconomic principles.

SIAPS **Swaziland** continued to monitor and support health facilities in implementing strategies to improve medicine use through PTCs. In the reporting quarter, 6 of 12 health facilities supported by SIAPS have had at least one PTC meeting.

Medicine (Drug) Use Review/Medicine Use Evaluation

SIAPS **Bangladesh** facilitated a workshop arranged by the NTP on drug use review (DUR) of anti-TB drugs used for DR-TB. SIAPS offered a systematic, ongoing, and indicator-based approach to maintain appropriate and effective use of TB medications. Three DR-TB treatment facilities (National Institute of Chest Disease and Hospital, Chest Disease Hospitals [CDH]-Sylhet, and CDH-Khulna) have been selected for this new intervention for the Bangladesh TB Program, and 15 staff (consultants, medical officers, and senior staff nurses) from these facilities participated in the workshop. A draft data collection form is expected to be developed and finalized for use in these facilities in January 2016.

With technical assistance of SIAPS **Ethiopia**, Felegehiwot Hospital in Amhara Region conducted a medicine use evaluation. The hospital DTC selected ceftriaxone as the candidate medicine and conducted a retrospective drug use evaluation on this antibiotic by using patient charts with full engagement of physicians and clinical pharmacists assigned to the task.

SIAPS **South Africa** provided technical assistance to the WC Provincial PTC to capture the data received from 254 facilities for a medicine use evaluation of aspirin. Approximately 4,500 aspirin cases have been captured onto the data collection forms. Preliminary results indicate that more than two-thirds of the patients given aspirin were treated inappropriately. SIAPS South

Africa also provided technical assistance to the EDP Unit to carry out pharmacoeconomic evaluations and technical medicine reviews to support the decision-making process in the review of the STGs and EML. During this quarter, a health economics model for rivaroxaban for the treatment of atrial fibrillation was finalized and a comprehensive sensitivity analysis carried out. A report for submission to the EDP Unit is being drafted.

In SIAPS **Ukraine**, the data collection for a drug utilization review in the HIV sector was conducted between October and November 2015 as planned. Data analysis started in December and is expected to be completed by the end of January. It will be followed by report writing and then development of training modules on drug utilization review for the DTC and coordinators of the National HIV and TB Programs.

SIAPS **Uzbekistan** supported the National TB Program (NTP) to pilot a drug use review program in three hospitals last quarter. During this quarter, SIAPS worked with the NTP of Uzbekistan to prepare and present the drug use review results in a poster titled "Drug Use Review Program in Uzbekistan: Pathway to Improved Rational Use of Anti-Tuberculosis Medicines" at the 46th UNION World Conference on Lung Health, held December 2–6, 2015, in South Africa.

Portfolios and SIAPS IRs in the Year 5, Quarter 1 Report

COUNTRY/PORTFOLIO	IR1	IR2	IR3	IR4	IR5
Africa					
Angola	•	•	•	•	•
Burundi	•	•	•	•	•
Cameroon	•		•	•	
Democratic Republic of Congo	•	•	•	•	•
Ethiopia	•	•	•		•
Guinea	•	•	•		•
Mali	•	•	•		•
Mozambique	•	•	•		
Namibia	•	•	•		•
Niger	•			•	•
South Africa	•	•	•	•	•
South Sudan	•	•	•		•
Swaziland	•	•	•		•
West Africa Regional	•	•	•	•	
Asia and Middle East					
Bangladesh	•	•			•
Philippines	•	•	•		•
Europe and Eurasia					
Tajikistan		•			
Ukraine	•		•	•	•
Uzbekistan	•		•		•
Latin America and the Caribbean					
Amazon Malaria Initiative	•		•		•
Dominican Republic	•	•	•	•	
Haiti	•				•
Core Portfolios					
Cross Bureau	•	•	•	•	•
Malaria Core			•		•
MCH Core	•		•		•
NTD Core		•			
TB Core	•	•	•		•
Total Portfolios	**24**	**19**	**21**	**10**	**21**

CROSS BUREAU

Objective 1. Strengthen pharmaceutical sector governance

The eLearning course "Good Governance in the Management of Medicines" developed by SIAPS with assistance from the Knowledge for Health (K4H) project, was finalized and launched on USAID's Global Health eLearning Center in this quarter. The course has been added to the certificate program, "Governance and Health," and complements the three health-related governance courses recently developed by the USAID Leadership, Management and Governance Project. SIAPS worked with K4H project staff and the SIAPS AOR team to develop dissemination materials, including a blog for the K4H website and announcements for websites and list serves. As of January 6, 2016, 18 people, including three USAID staff, have completed the course since its launch on December 2, 2015.

At the recommendation of the course reviewers who highly praised the two animated case scenarios, SIAPS is using cross bureau funding to develop two additional animations to replace the text versions currently included in the course. These will be finalized by the end of the next quarter.

SIAPS' further technical assistance to WHO Good Governance for Medicines (GGM), including the update of the GGM transparency assessment tool, is pending next steps to be carried out by the WHO. Work is expected to continue into the next quarter.

SIAPS participated in the third and final set of consultations in this quarter, thus concluding the program's contribution towards the development of a health governance assessment tool for health policy making in low- and middle-income countries. In response to a request from the Ministry of Health in Lebanon, SIAPS submitted comments on the rigor, relevance and conceptual organization of the assessment tool's questionnaire, as well as its practicality as part of a Delphi method consultation.

Work on the Year 5 activity related to the development of technical briefs that describe strategies for improving governance in pharmaceutical systems, and that provide case study examples to be used by countries will begin in the next quarter.

Constraints to progress

SIAPS' support to the WHO Good Governance for Medicines (GGM) Program activities is pending the completion of next steps by the WHO.

Deliverables

- eLearning course "Good Governance in the Management of Medicines", accessible here: https://www.globalhealthlearning.org/course/good-governance-management-medicines

- Dissemination materials (blog "Access to Medicines: Why Good Governance Matters" available on K4H website)

Partner contributions

The K4H Project contributed with formatting, editing, and dissemination of the eLearning course "Good Governance in the Management of Medicines."

Objective 2. Increase and enhance capacity for pharmaceutical management and services

During this quarter, the technical working group mandated to oversee the pooled procurement activity and in collaboration with Ecumenical Pharmaceutical Network (EPN) followed up on pending orders with suppliers who had not fulfilled the orders. The group also managed to recover funds from a supplier who failed to fulfill orders due to a fire that burned down its warehouse and the contained products. Progress was also made in preparation of the toolkit and reports towards the deliverables for the project.

The team will follow up on the remaining orders and work towards finalizing the project by the end of the quarter. Once the project is completed, the processes and lessons learned will be captured in the form of a guidance document for the implementation of pooled procurement in a similar setting.

Constraints to progress

One supplier's warehouse burned down with all their products inside. This led them to not being able to fulfill the order they won. After some discussion, they refunded the money, allowing EPN to place new orders with a different supplier.

Partner contributions

EPN continues to lead this activity as a SIAPS partner, and managed a number of barriers and setbacks this quarter as outlined above.

Objective 3. Increase the utilization of information for decision-making in the pharmaceutical sector

During this quarter, SIAPS worked to revise the manuscript that reviews the literature on pharmaceutical systems and on pharmaceutical systems strengthening, which proposes definitions and components deemed critical for tracking progress in systems strengthening. These were defined based on inputs from external reviewers, including experts from SIAPS partners Harvard Pilgrim Health Care Institute and Boston University School of Public Health. SIAPS will finalize the revision of the manuscript and submit it to a peer reviewed journal in the next quarter.

SIAPS revised the working draft of the framework for measurement of pharmaceutical systems strengthening that will guide the selection of indicators based on comments from internal reviewers. The process for identifying the candidate indicators, checking the availability of

existing data from different sources, developing the data collection tools, soliciting stakeholder feedback and field testing the metrics and tools will be implemented in the next quarter.

Constraints to progress

Some contractual delays held up the progress on the selection and field testing of pharmaceutical systems strengthening metrics that are to be conducted by the identified contractor.

Partner contributions

Harvard Pilgrim Health Care Institute and Boston University School of Public Health reviewed the manuscript that reviews the literature on pharmaceutical systems strengthening, and proposes definitions and the components deemed critical for tracking progress in system strengthening.

Objective 4. Strengthen pharmaceutical financing strategies and approaches

In this quarter, SIAPS started to review the pharmaceutical expenditure tracking activity. The review focuses on: a) identifying key policy questions that the pharmaceutical expenditure tracking will be expected to address; b) identifying key indicators to address these policy issues; c) the necessary data elements to fulfill these indicators; and d) potential data sources for these data elements. Once this review is completed by SIAPS technical staff, it will be shared with the Health Financing and Governance (HFG) Project and discussed at the next scheduled meeting planned for February 2016 to determine the best options for tracking such pharmaceutical expenditures and the required tools.

A very early draft for the paper that describes pharmaceutical management considerations in UHC was previously drafted. During this quarter, SIAPS technical leads provided additional inputs to this draft. The new version is currently scheduled for technical review to ensure adequate structure, flow, and completeness. Comments are expected early in the next quarter. Due to the current workload of existing staff, and to expedite the progress of this activity, it was decided to recruit a consultant to assist the team to finalize the production of this paper once the comments have been finalized.

Partner contributions

HFG is a key partner to this activity helping through the establishment of an institutionalized mechanism for tracking pharmaceutical expenditure.

Objective 5. Improve quality of pharmaceutical products and services

Regarding the Options Analysis Guidance Document, the first draft of the text has been reviewed and is being edited. Technical annexes that will accompany the paper are in development. Next steps include compiling the draft and technical annexes and having the complete document reviewed internally by relevant technical experts. The review process and subsequent version are anticipated during the second quarter.

During the quarter, the second part in a two-part series of GHeL courses on antimicrobial resistance (AMR Part 2) was finalized and published. Global viewers can now access the course and receive a certificate of completion. This SIAPS-authored course expands upon the concepts presented in the previously published AMR Part 1 course, and explains the major factors that contribute to the development and spread of AMR. The course also explores some of the proven interventions and global strategies currently being used to combat AMR.

The course can be accessed through the GHeL website (http://www.globalhealthlearning.org/) and is also linked to GHeL's Health Systems track (http://www.globalhealthlearning.org/program/health-systems). The course was publicized through the K4H and SIAPS websites and through USAID HSS Network and HIPNet.

Revision of the GHeL AMR Part 1 course continued. Extensive review of literature was conducted for the revision of the course, and relevant information is being used to update different sections.

As a regional capacity strengthening effort, SIAPS worked with Ecumenical Pharmaceutical Network (EPN) headquarters in Nairobi to seek results-oriented intervention proposals from its member organizations on topics related to antimicrobial stewardship and AMR for possible support by SIAPS. The EPN Secretariat and SIAPS have provided feedback on the submitted proposals and are waiting to receive the revised proposals for consideration.

Additionally, SIAPS made two oral presentations at the 143rd American Public Health Association (APHA) Annual Meeting and Expo held in Chicago, IL from October 31 to November 4, 2015. The two presentations were:

- Country- and regional-level advocacy and coalition-building against antimicrobial resistance
  (can be downloaded from: http://siapsprogram.org/publication/country-and-regional-level-advocacy-and-coalition-building-against-antimicrobial-resistance/)
- Ensuring Access to and Appropriate Use of Medicines for iCCM: It takes a system
  (can be downloaded from: http://siapsprogram.org/publication/ensuring-access-to-and-appropriate-use-of-medicines-for-iccm-it-takes-a-system/)

As in previous quarters, SIAPS continued to provide guidance and oversight to SIAPS field offices in implementing AMR-related activities.

To commemorate the first World Antibiotic Awareness Week held from 16 to 22 November 2015, SIAPS published a blog on the USAID-supported work around advocacy and coalitions against AMR. It can be accessed at: http://siapsprogram.org/2015/11/18/from-policies-to-patients-handling-antibiotics-with-care-across-the-pharmaceutical-system/

To better inform SIAPS' revision of the regulatory system assessment tool (RSAT) and position it appropriately vis-a-vis other existing assessment tools, SIAPS attended WHO's 2nd International Consultation on Regulatory System Strengthening in Geneva, Switzerland, December 1-4 2015, which focused on the comprehensive regulatory system assessment tool that

the WHO has been developing. The meeting provided an in-depth overview of the tool, including its components, intended application, and outputs and raised several key issues that still need to be addressed in subsequent versions. Based on the presentations and discussions, SIAPS was able to identify limitations of the WHO tool, which justify an alternative, complementary tool like RSAT that is oriented more towards less developed, low-functioning regulatory systems, and can be implemented more rapidly and with fewer resources (financial and human) in response to immediate needs for assessment results and on-going monitoring. SIAPS discussed these perceived needs with the WHO regulatory team, agreed to harmonize RSAT with the WHO indicators and assessment questions where appropriate, and share a draft of the revised RSAT for input. SIAPS will continue its revision of RSAT accordingly and share the draft in the next quarter. In addition to RSAT, SIAPS and WHO discussed other opportunities to improve collaboration and coordination of their respective RSS activities, particularly in countries where both organizations have on-going activities, and agreed to share their current work plans.

Deliverables

- USAID eLearning course on AMR (Part 2) finalized and published here: https://www.globalhealthlearning.org/course/antimicrobial-resistance-part-2
- Two oral presentations—one on advocacy against AMR and the other on iCCM—were made at the APHA conference in Chicago

Partner contributions

EPN has been assisting with the review and feedback for proposals from its members on antimicrobial stewardship.

Objective 6. Contribute to the generation of new knowledge and dissemination of evidence-based approaches and best practices

To support knowledge sharing through the WHO EMP Information Portal, SIAPS continued financial support to Human Info, the IT contractor responsible for the software platform. The documentation upload process continued to expand, and the collection has further increased from 5,112 to 5,207 documents. Also during this quarter, changes to the search function on the website were finalized. This will make it easier for site visitors to find what they are looking for, which was one of the main critiques of the Portal in a recently conducted user survey.

In this quarter, SIAPS met with the WHO to discuss next steps following the user survey. It was agreed that SIAPS would develop the objectives for a scope of work to conduct the planned gap analysis for the portal. A draft of the SOW for the gap analysis is currently under development. Once completed, SIAPS will forward to the WHO for review and consideration.

With the approval of the new work plan this quarter, SIAPS was able to start implementing the agreed-upon activities, including additional refinements to the Portal through Human Info. Towards the end of the quarter, SIAPS finalized another purchase order with the IT contractor. The changes in this purchase order, described below, not only address feedback from the user survey but will also make the Portal more cost-effective in preparation for the end of SIAPS:

- Adding functionality to the user interface, which will allow users to navigate between search hits and terms
- Implementing a module to allow WHO to import and export batches of publications in CSV and XML formats
- Strengthening the back-office software to allow lower costs for maintaining the Portal
- Implementing a mobile version of the Portal, which allows to access the entire collection on a mobile device

During this quarter, the activity was also transitioned to the recently appointed SIAPS Knowledge Management Specialist, who will now lead the coordination of this activity with WHO and relevant SIAPS staff.

Using cross bureau funds, SIAPS attended the East Central and Southern Africa Health Community Secretariat's (ECSAHC) TB experts meeting, held in Mauritius from November 28-29, 2015 as well as the health ministers' conference held the following week. Prior to this meeting, SIAPS supported ECSAHC in a number of activities related to strengthening TB commodities and data management. During the TB experts meeting, and building on previous assistance that SIAPS provided to ECSAHC in the area of TB medicine information, SIAPS staff presented an overview of the ECSA plan to improve access to data for decision making through the TB supply chain dashboard and presented the highlights of a proposed ECSAHC TB data and commodity management strategy. The strategy was endorsed by ECSA member states, and ECSA is now working towards funding the strategy.

In addition, during the meeting, SIAPS participated in the ECSA best practice forum discussions and planning sessions, as well as in the open sessions of the ECSA ministers conference that were facilitated by different experts in the region and international organizations such as WHO and USAID.

Also during this quarter, Cross Bureau funded SIAPS participation at the 8th Global Health Supply Chain Summit held in Dakar, Senegal on November 11-13, 2015. SIAPS presented the work being done in Ukraine to establish a web-based price monitoring tool to inform both the public and decision-makers on how prices of medicines vary within Ukraine, how they compare with international benchmarks, and how they evolve over time.

As mentioned last quarter, SIAPS staff presented at the FIP World Congress this year, which took place at the end of last quarter and the beginning of this quarter (September 29–October 3, 2015). The presentations were on the following topics "Implementation of National Standard Treatment Guidelines Leads to Small Improvements in Prescribing Patterns in Swaziland" and "Practical Difficulties of Delivering Medicines Where Infrastructure Does Not Exist." Discussions around the second presentation highlighted the need to explore collaboration between global health supply chain and humanitarian logistics professionals and to define the role of pharmacists in health supply chain management.

SIAPS supported and participated in the African Pharmacovigilance San Frontieres (PVSF) consultants meeting and African Society of Pharmacovigilance (ASoP) 2015 conference in Accra, Ghana, November 23-26. During the PVSF meeting, SIAPS presented on the Indicator-

based Pharmacovigilance Tool (IPAT), which helped pave the way for the next steps on PV metrics for the African region. The main conclusions and recommendations from the meeting included the need for clarification on the use of available PV metrics, specifically IPAT and the recently published WHO PV indicator manual. To this end, SIAPS and WHO agreed to draft a joint communiqué, as well as an article in the "Drug Safety Monitor" on the use of the two sets of indicators. At the ASoP conference, in addition to being one of the main sponsors, SIAPS gave opening remarks, two plenary presentations and three oral presentations from Ethiopia, DRC and Swaziland. The conference concluded by highlighting the opportunities for PV system strengthening in Africa and the challenges that need to be overcome. Opportunities exist for expanding the scope of PV, promoting active surveillance, using electronic and mobile technology, fostering stronger collaboration between regulators, industry and academia, improving regional harmonization, and increasing the use of social media and consumer reporting.

SIAPS also participated in the 2nd Biennial Scientific Conference on Medicines Regulation in Africa, "Regulatory Systems Strengthening for Advancing Research, Innovation and Local Pharmaceutical Production in Africa" in Addis Ababa, Ethiopia, November 30-December 1 2015, organized by the New Partnership for Africa's Development (NEPAD) Agency, the African Union Commission, and WHO, in collaboration with other partners. During the conference, SIAPS made three oral presentations in a session on strengthening product registration through the introduction of electronic information systems in conjunction with associated process improvements, which drew upon country-specific work in Ethiopia and Mozambique. In addition, SIAPS presented a poster on its work to promote local production of malaria medicines in DRC by improving product evaluation and registration procedures and management.

Regarding the Health Systems Assessment Approach (HSAA) Manual update, SIAPS, along with other implementing partners, participated in a kick-off meeting for the revision of the "HSAA Approach: A how- to manual" that is led by Abt Associates/HFG Project on December 8, 2015 at the USAID/W office. SIAPS is tasked with updating the health systems function module on medical products, vaccines and technologies. The key objective of the meeting was to discuss the framing of the revision of the manual around the health systems strengthening needs of the 24 EPCMD countries, whilst ensuring a balance between EPCMD-specific issues and those pertaining to more general health systems strengthening. It was agreed that HFG would coordinate with EPCMD specialists at USAID; implementing partners would review the EPCMD "Acting on the Call 2015" paper, following which implementing partners would reconvene again in January 2016 to concretize next steps towards revising the manual.

Deliverables

- Trip report for 8th Global Health Supply Chain Summit in Dakar, Senegal
- Trip report and presentations for FIP's World Congress of Pharmacy. PowerPoint presentation on "Practical Difficulties of Delivering Medicines Where Infrastructure Does Not Exist" is available online: http://siapsprogram.org/publication/practical-difficulties-of-delivering-medicines-where-infrastructure-does-not-exist/

Partner contributions

WHO continues to contribute to the management and improvement of the WHO EMP Information Portal.

Appended EAC update:

In line with SIAPS' agreed-upon work plan for the East African Community (EAC) Pharmacovigilance (PV) grant, which is part of the EAC's larger regional medicines regulation harmonization (MRH) initiative, SIAPS supported and facilitated a workshop November 9-13 2015, in Nairobi, Kenya to draft a harmonized PV assessment tool to be used for conducting a baseline assessment and ongoing monitoring in the region. Twenty-two participants, including members of the expert working group (EWG)—consisting of two representatives from each of the six EAC member states—and staff from the EAC, World Bank and SIAPS, attended the event. The workshop participants, working in small groups, presenting and discussing in plenary and reaching decisions through consensus-building, used two existing assessment tools—the Indicator-based Pharmacovigilance Assessment Tool (IPAT), developed by SIAPS' predecessor program, Strengthening Pharmaceutical Services Program, and WHO's "Practical Manual for the Assessment of Pharmacovigilance Systems"—to select a tailored list of appropriate indicators and corresponding assessment questions that reflect the EAC's PV goals both at the country and regional levels. The workshop produced a first draft of the EAC's harmonized PV assessment tool, which will undergo another round of revision by the EWG before being distributed to the EAC PV technical partners for review and feedback. Based on agreed-upon next steps and timelines, the tool is expected to be finalized by February 2016. Once the tool is finalized, SIAPS will support and facilitate another workshop to build the capacity of EWG members to use the tool using a training of trainers approach, so that participants can effectively train assessment teams in their respective countries for the baseline assessment.

Constraints to progress

Due to competing priorities among the EWG members, the second round of consultations and revisions planned for December 2015, which were expected to produce a final draft of the tool for distribution to technical partners for review, were postponed until January 2016. This delay pushes the timeline for all subsequent steps in the development, training and application of the tool back one month.

Deliverables

Trip report

Partner contributions

The University of Washington (UW) participated as a co-facilitator and subject matter technical expert at the workshop on behalf of SIAPS. UW will continue to be involved in the follow-up consultations and revisions of the tool up to finalization.

GLOBAL PROGRAMS

Malaria Core

Goal: Improve access to and appropriate use of quality-assured malaria commodities to reduce the malaria burden

Objective 1. Strengthen pharmaceutical sector governance

In November 2015, SIAPS participated in a four day meeting held in Abidjan, Ivory Coast. All senior technical advisors embedded in National Malaria Control Programs (NMCPs) of Burundi, Cameroon, Guinea, Ivory Coast, Laos, Liberia, Niger, and Sierra Leone attended the meeting. The meeting was also attended by LMG and SIAPS principal technical advisors from SIAPS headquarters in Arlington, VA. This annual coordination meeting was held to promote regional coordination between LMG and SIAPS projects, identify and document good practices for providing capacity building assistance to NMCPs, exchange information and experiences among senior technical advisors, and discuss strategies for ensuring sustainability of applied interventions. The meeting was also attended by LMG and SIAPS projects backstopping staff. During the quarter, SIAPS received an approval for the malaria core work plan.

Objective 2. Increase utilization of pharmaceutical information for decision making

To facilitate procurement decisions at PMI, SIAPS aggregated data and reported on stock status of malaria commodities from Angola, Burundi, Ethiopia, Guinea, Kenya, Mali, South Sudan, and Uganda. During the quarter, DRC, Guinea and Mali disseminated their end-use verification findings

Objective 3. Strengthen pharmaceutical financing strategies and mechanisms to improve access to medicines and services

No activity during this quarter.

NTD Core

Goal: Assure the availability of quality medicines and supplies and effective pharmaceutical services to increase efficiency of NTD control and elimination programs

Based on the results of the pilot NTD SCM workshop held in Addiss Ababa, Ethiopia in September 2015, SIAPS/NTD is now coordinating with FHI360 and Helen Keller Institute (HKI) to host the next NTD SCM workshop in Accra, Ghana, in early 2016. Initial contacts have been made and the names of participants, dates for the workshop, and specific topics for further discussions are currently being worked out.

The assessment of the Senegal NTD supply chain management (SCM) is complete and the final report drafted. It is currently with the editorial department to review and translate into French. Based on the review, next steps have been determined and SIAPS/NTD is currently developing SOPs and guidelines to assist Senegal in implementing the recommendations, such as completing the memorandum of understanding between the NTD program and Central Medical Store, and instituting a reverse logics standard operating procedure for NTD medications following the mass drug administration.

Objective 1. Strengthen NTD global coordination and oversight mechanisms

SIAPS attended the American Society for Tropical medicine and Hygiene annual conference and had discussions with partners to set plans for the next NTD SCM workshop.

Objective 2. Support NTD Capacity Building Initiatives

The SIAPS/NTD portfolio hosted the pilot SCM workshop in Addis Ababa in late September. Thirty-five people attended the workshop from Ethiopia, Tanzania, and Uganda. SIAPS completed the post-workshop report and submitted it to USAID and the participants with feedback from the workshop. SIAPS will follow-up with the participants in early 2016 to determine progress.

SIAPS/NTD is coordinating with FHI360 and HKI to host the next workshop in Accra, Ghana, in early 2016. Initial contacts have been made and the names of participants, dates for the workshop, and specific topics to be discussed are currently being worked on.

The assessment of the Senegal NTD SCM is complete and the final report drafted. It is currently with the editorial department to review and translate into French. Based on the review next steps have been determined and SIAPS/NTD is currently developing SOPs and guidelines to assist Senegal in implementing the recommendations.

Partner contributions

SIAPS met with members of FHI and USAID to discuss the Ghana workshop logistics and possible invitees who would benefit most from the workshop.

Objective 3. Support NTD medicine safety programs

This activity has been altered to develop SOPs and guidelines for NTD SCM. During this quarter, SIAPS/NTD has completed a first draft of the guidelines for waste management and began work on similar guidelines and SOPs for reverse logistics and storage.

MNCH Core

Goal: Assure the availability of quality medicines and supplies and effective pharmaceutical services to reduce maternal, newborn and child mortality

Overall Quarterly Progress

SIAPS/MNCH has been working at both the global and country level to assure the availability of quality medicines and supplies and effective pharmaceutical services to reduce maternal, newborn, and child mortality. On the global front, SIAPS presented at multiple conferences and meetings such as the American Public Health Association (APHA) conference, the Global Maternal and Newborn Health conference, and the Reproductive Health Supplies Coalition meeting. The MNCH team continued to be highly active in the UN Commission working groups and global partnerships and initiatives, such as the Community Case Management (CCM) Taskforce and the integrated Community Case Management (iCCM) Financing Task Team. For example, this quarter SIAPS finalized the study to validate the amoxicillin DT job aids, organized a webinar on "Supply Chain management for Community Case Management– private sector approaches," and is actively contributing to the development of new global implementation guidelines of the newborn sepsis management recommendations.

At the country level, SIAPS/MNCH has been supporting the integration of oxytocin in the cold chain in Mali and introducing chlorhexidine in DRC and Afghanistan. In Afghanistan, SIAPS/MNCH not only finalized the introduction strategy of chlorhexidine that will be endorsed by the Minister of Public Health but also further facilitated to start the initial procurement of 7.1% chlorhexidine by coordinating with the chlorhexidine working group (CWG) and MOPH Afghanistan. The product will be procured from Lomus pharmaceutical and made available to MOPH by early next year.

Objective 1. Global Awareness of the Importance of Pharmaceutical Management for MNCH Medicines and Supplies Increased

SIAPS/MNCH remained actively engaged in global partnerships, initiatives, and working groups to ensure that appropriate pharmaceutical management for medicines and supplies is included in the global MNCH agenda. In early October, the MNCH senior principal technical advisor attended the Reproductive Health Supplies Coalition annual membership meeting in Oslo, Norway. She participated in the Systems Strengthening Working Group meeting during which she led a discussion on stewardship for supply chain systems strengthening. She also facilitated the meeting of the Maternal Health Supplies Caucus, gave a presentation on maternal health supplies during the plenary, and joined other members of the Maternal Health Technical Resource Team to present a panel on the tools and resources developed by the group; her specific presentation was on RMNCH forecasting guidance.

SIAPS/MNCH also attended the Global Maternal and Newborn Health (GMNH) conference in Mexico City. SIAPS staff presented on the chlorhexidine introduction work in DRC, the sub-national procurement assessment in Bangladesh, the pharmaceutical management policies and practices paper developed in collaboration with WHO and Countdown to 2015, and participated

in the Maternal Health Technical Resource Team (MHTRT) panel. Also in Mexico, SIAPS/MNCH senior principal technical advisor participated in the Ending Eclampsia launch meetings.

This quarter, SIAPS/MNCH was asked by the USAID-funded Accelovate program to participate in the Maternal Health Commodities Technical Advisory Committee for the program's planned Pathways to Scale: Maternal Health Commodities activity. MNCH senior principal technical advisor met with Accevolate Program Officer, Shannon Egan, to discuss two data collection tools Accelovate intends to use for this activity: the magnesium sulfate regulatory evaluation tool and the oxytocin quality qualitative interview instrument.

On the child health front, SIAPS/MNCH chaired the Supply Chain Management (SCM) subgroup meeting of the CCM Taskforce. Further requests have been made in different meetings to get organizations to fill out the Procurement and Supply Management (PSM) mapping exercise but it is still incomplete. Next quarter, SIAPS will target key organizations to complete the SCM mapping on an individual basis through phone calls.

SIAPS MNCH principal technical advisor also presented at the APHA conference in Chicago on November 3, 2015 on the importance of systems strengthening for the implementation of iCCM. Also, the webinar "Supply Chain management for Community Case Management–private sector approaches" organized by the CCM taskforce supply chain management sub- group was held on December 8. The webinar, moderated by the SIAPS principal technical advisor and hosted by the Maternal and Child Survival Program (MCSP), featured speakers from PSI, MSH, and Living Goods.

SIAPS also participated in monthly meetings of the iCCM Finance Task Team's (FTT) PSM subgroup. SIAPS provided input to the planning of a regional meeting in Nairobi Kenya in February 2016 to bring together countries that are integrating iCCM into Global Fund grants to discuss challenges and strategies with a particular focus on PSM. SIAPS also presented the PSM subgroup update in the CCM Taskforce meeting and attended the ORS subgroup meeting to explore possible collaboration on ORS in SCM. A small group discussed the CCM SCM indicators and feedback was provided to the M&E group. Finally as chair of the subgroup, the SIAPS principal technical advisor (PTA) is working to set up an "ask the expert" page for SCM.

In December, the PSM subgroup of the iCCM FTT has now merged with the SCM subgroup of the CCM Taskforce. The first meeting was held on December 16, 2015 and was chaired by SIAPS PTA. Updates were provided on the Nairobi meeting and planning began for the next meeting where UNICEF will present on SCM data for decision making.

Finally this quarter, SIAPS received useful feedback from the WHO and members of the Health Systems and Policy working group of Countdown to 2015 on the draft of the review of current pharmaceutical management policies and systems that affect access to essential MNCH medicines and supplies. The draft was used to prepare the presentation for the oral presentation in the GMNH conference in Mexico. During a panel session, SIAPS principal technical advisor spoke about improving access and availability to commodities and medicines. The presentation highlighted key results from the draft paper and concluded that a tracking system and policy

factors is crucial as they are often forgotten and should be prioritized in the Sustainable Development Goals era. The draft paper is being finalized as an internal SIAPS document and also revised into a paper for peer review journal publication, taking into account the feedback received.

Objective 2. Guidance and Tools for Improving Pharmaceutical Management for MNCH Developed and Disseminated

The Intervention Guide for the Management of Childhood Illnesses was shared with USAID this quarter. The next steps will be to disseminate the guide as widely as possible through the CORE group, Diarrhea and Pneumonia working group, and other mechanisms as well as the SIAPS web site. SIAPS will follow up in at least three SIAPS countries and with participants from the from the CORE group's spring meeting, as well as continue to follow up with UNICEF HQ on the possible application of extracts of the guide in the DIVA (Diagnose-Intervene-Verify-Adjust) approach.

The assessment report on managing MNCH medicines under the National Health Insurance Scheme in Ghana was sent to the Ghana National Health Insurance Authority for review and feedback. The comments were incorporated into the report and it was sent to editorial. Next quarter, the report will be finalized and disseminated.

This quarter, the concept note for Kenya's sub-national procurement assessment was submitted to the MOH's Division of Reproductive Health (DRH). The assessment has been stalled due to delays in receiving approval and endorsement from the DRH to conduct the assessment in selected counties.

Finally, the internal review of the guidance for national program managers to introduce new and under-used medicines and supplies for MNCH has been completed. Once comments and feedback have been incorporated into the report, and it will be finalized and disseminated next quarter.

Constraints to Progress

Getting approval and endorsement from the Kenya DRH has been delayed due to competing priorities at DRH and has delayed conducting the sub-national procurement assessment in Kenya.

Objective 3. Evidence Base for Effective Strategies to Improve Access to MNCH Pharmaceuticals and Services Increased

SIAPS MNCH facilitated discussions between the SIAPS DRC team and MCSP Chief of Party on potential areas for collaboration with MCSP. However, the DRC mission was not very positive of the support being proposed by SIAPS to MCSP. Next quarter, SIAPS will review the work plan and determine if there are pivotal activities to improve the supply chain strategy for iCCM in DRC that SIAPS can assist with.

This quarter, reports on the landscape synthesis became available for Nepal, Mozambique, Ghana, and Kenya, and were circulated to the in-country data collection teams.

In support of the UN Commission of Life-Saving Commodities (UNCoLSC), SIAPS continued to participate in the following working groups meetings: the MHTRT, the Supply Chain Technical Resource Team, the CWG, the injectable antibiotics working group, and the diarrhea and pneumonia working group, which includes the amoxicillin and zinc subgroups. SIAPS provided country support for the UNCoLSC activities in Afghanistan, Angola, Bangladesh, DRC, and Mali.

As part of the MHTRT support, the SIAPS/MNCH senior technical advisor worked with the consultants in Mali to finalize the technical report on options analysis for integration of oxytocin into Mali's vaccine cold chain in. The technical report was submitted to the MOH General Secretariat by the Directorate of Pharmacy and Medicines. SIAPS assisted the DPM to draft the official integration letter to prepare for meeting with the MOH Secretary General to present the report and recommendations of the option analysis.

Additionally, SIAPS MNCH SPTA attended the MHTRT meeting. She provided feedback on the summary document that the MHTRT will be drafting. Next quarter, SIAPS MNCH will attend the International Conference for Family Planning to present on the RMNCH forecasting supplement, continue to plan for webinars and the mini-University session, and participate in MHTRT wrap-up activities.

This quarter, SIAPS SPTA presented the RMNCH forecasting guidance at the RHSC meeting and the GMNH conference and co-facilitated the December meeting of the SCTRT. SIAPS also provided technical inputs to the work JSI is undertaking in Tanzania to create the joint e-LMIS-DHIS2 dashboard and will continue to work with the JSI team on data visualization. SIAPS and JSI also made the final edits to the English and French versions of the RMNCH forecasting supplement. The team that worked on the supplement is planning a webinar on it for early February 2016. The team also continued to plan for the Mini-University session on the supplement scheduled for early March 2016.

SIAPS/MNCH senior technical advisors participated in the biweekly calls of the CWG and attended the in-person meeting on October 23, 2015, where they presented the country updates for DRC and Afghanistan. Also, in response to the inappropriate use incidents that happened in Nigeria, SIAPS MNCH senior technical advisor provided technical input to the cautionary note in French on the appropriate use of chlorhexidine (CHX) that will be put on the CWG website.

SIAPS MNCH also continued to support the development and adoption of CHX introduction strategies in Afghanistan, Angola, and DRC. In Afghanistan, SIAPS MNCH finalized the introduction strategy and the document is now available in English, Dari, and Pushto. The strategy has been reviewed by and will be endorsed by the Minister of Public Health. SIAPS further facilitated starting the initial procurement of 7.1% chlorhexidine for USD $20,000 by coordinating with the CWG and MOPH Afghanistan. The product will be procured from Lomus Pharmaceutical and made available to MOPH by early next year. In DRC, SIAPS has been coordinating discussions between the CWG, DRC, MOH, and the DRC Global Financing

Facility (GFF) focal point to make sure CHX procurement is included in DRC GFF investment case. Finally, SIAPS is trying to gauge interest of MOPH Angola to introduce chlorhexidine. A meeting is tentatively planned between SIAPS/MNCH, SIAPS/ngola, CWG, and the Reproductive Health Department MOPH Angola during the ICFP 2016 conference in January 2016.

In support of the Pneumonia and Diarrhea working group, SIAPS attended the amoxicillin sub-group meeting on November 2 and the pneumonia and diarrhea working group meeting on November 4 in Washington, DC. Update on the Pneumonia Day activities in DRC and the validation of the job aids and dispensing envelopes were presented during the amoxicillin sub-group meeting.

Also this quarter, the study to validate the amoxicillin DT job aids and product presentations in DRC conducted by the National Center for Pharmacovigilance received ethics clearance. Facility staff and community health workers in intervention areas were also trained in the use of the material after baseline interviews were held. The study was completed in December and it was found that the job aids and product presentations were well received and seemed to facilitate adherence. The results will be disseminated and shared with PATH next quarter. Finally, inputs to the lessons learned document on zinc ORS being developed by the Zinc/ORS subgroup were given through reviewing case studies.

On October 27, SIAPS PTA participated on the injectable antibiotics technical resource team's call, and the major topic was the presentation and formulations of commodities to be used to implement the new WHO recommendations for newborn sepsis where referral is not possible. SIAPS will participate in a smaller group that will examine issues related to gentamicin and amoxicillin formulations and presentations to provide concrete recommendations to countries. Next quarter, SIAPS/MNCH will continue to contribute to the development of global implementation guidelines of the new newborn sepsis management recommendations.

In DRC, with co-funding from Save the Children, the newborn antibiotic landscape analysis conducted through the Kinshasa School of Public Health was finalized. A dissemination meeting was held on December 17 in Kinshasa for stakeholders and a plan to implement the recommendations was developed.

TB Core

Goal: Assure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve global TB goals.

Overall Quarterly Progress

The past quarter was marked with significant progress in expanding SIAPS' technical leadership in tuberculosis. At the 46th UNION Conference this year, SIAPS conducted three full-day workshops, coordinated and presented at three symposia and one post-graduate course, and presented six abstracts/posters.

SIAPS launched the third version of QuanTB, our TB medicines quantification and forecasting software. To date, there have been 110 downloads of the new version and over 1,100 total downloads of QuanTB. SIAPS also launched the Pharmacovigilance Monitoring System (PViMS), a web-based application used by clinicians, regulatory bodies, and implementing partners to monitor the safety and effectiveness of medicines. During the past quarter, SIAPS unveiled the new website for rapid adoption of TB medicines (newtbdruginfo.org). This website serves as a resource for countries and showcases the SIAPS approach.

Continuing to build on our global technical leadership, SIAPS attended the members' meeting of WHO Global Task Force on Digital Health for TB, held during the UNION Conference. This meeting served to define the next steps of implementing the Target Products Profile of the WHO "Digital health for the End TB strategy: an agenda for action" publication. Both e-TB Manager and QuanTB tool are included in the publication as relevant innovative examples of matching TB needs with digital health solutions.

SIAPS continued its work in the private sector in Pakistan. Results of a pilot to engage private sector pharmacies to increase early TB case detection in Pakistan were presented to 25 participants from donor agencies, the National Tuberculosis Program (NTP), implementing partners, and a pharmacy school. As a result of the pilot and this meeting, plans are underway to expand the project to a national scale.

Objective 1. Pharmaceutical governance for TB strengthened at global level and country level

Activity 1.1.1: Provide technical leadership to global TB initiatives and donors

Providing technical leadership, SIAPS participated as a member of the WHO Guideline Development Group on the Guideline of Drug-Resistant TB Treatment Update meeting in Geneva, Switzerland. A follow-up meeting concerning susceptible TB and cross-cutting TB issues is planned for April 2016. The final document is anticipated to be published by WHO in July 2016.

SIAPS is providing ongoing support to the Global Drug Facility (GDF) to review, update, and, where necessary, develop the relevant standard operational procedures, forms, and documents for

various GDF teams as per the new hosting arrangements and the defined areas of work. During this quarter SIAPS was provided an inventory of the existing SOPs, forms and related documents. SIAPS then met and discussed with various GDF team members and management to gather more data to produce a draft of new and revised procedures, forms and documents. This activity is ongoing.

Activity 1.2.1: Conduct annual workshop/symposia at the 47th UNION World and Regional conferences on innovations and best practices in pharmaceutical management for TB

This year's 46th UNION conference had as its theme "A New Agenda: Lung Health Beyond 2015." The conference attracted more than 4,000 delegates from around the world and is a leading platform for researchers, implementers, private industry, and civil society to discuss new scientific research on tuberculosis.

SIAPS co-hosted three full-day workshops, three symposia, presented in two workshops and post-graduate courses and presented six posters/abstracts at this year's UNION conference. The interactive conference provided an opportunity to share SIAPS' expertise through participation in meetings, symposia, abstracts, and at the MSH exhibition booth. Additionally, SIAPS staff had the opportunity to network with colleagues on key global TB issues, such as implementing new medicines, treatment for pediatric TB, and patient-centered care. SIAPS also attended many side meetings with various country NTP mangers and staff to plan and strategize about in-country activities and plans for future progress.

The workshops were successful and were conducted in collaboration with a number of organizations including: USAID, Global Fund, UNITAID, CHAI, Global Drug Facility, MSF, WHO, End-TB Project, and KNCV TB Foundation. The workshops were attended by over 150 national TB program staff, TB medicines managers, and international and local partner organizations involved in TB programs from over 35 different countries.

During the conference, SIAPS attended the members' meeting of WHO Global Task Force on Digital Health for TB to define next steps of implementing the Target Products Profile, which both e-TB Manager and QuanTB tool have been considered as relevant examples of dashboard development. SIAPS attended a follow-up meeting of the project on improving quantification and access to quality-assured second-line TB drugs funded by Eli Lilly MDR-TB Foundation. The project implemented by KNCV and partners aim to introduce QuanTB and early warning system for drug resistant TB medicines in 13 countries to prevent stock-outs and reduce wastage of TB medicines. SIAPS attended a meeting organized by TB Alliance regarding the new TB pediatric formulations and its steps for implementation, which promotes QuanTB as the tool for quantification of the new medicines in countries.

Objective 2. Capacity for TB pharmaceutical supply management and services increased and enhanced

Activity 2.1.1: Conduct pharmaceutical management for TB and MDR-TB trainings for NTP managers, and WHO and Stop TB consultants and partners

During this quarter, SIAPS facilitated sessions on pharmaceutical management for TB at the WHO Course "Implementing New Stop TB Strategy: Skills for Managers and Consultants (TB, MDR-/XDR-TB, TB/HIV)" at the WHO collaborating center in Cepina, Italy from October 13th–17th. The daylong session on TB/TB-HIV pharmaceutical management was attended by 29 participants from 22 countries which included Brazil, Switzerland, Haiti, Japan, Swaziland, Republic of Armenia, France, republic of Moldovia, Romania, Kingdom of Bhutan, Zimbabwe, Nigeria, United Kingdom, Niger, Republic of Island of Fiji, Cambodia, Ukraine, Indonesia, Papua New Guinea, United States, Venezuela, and Russia.

Activity 2.2.1: Develop on-line training for QuanTB

Working to build capacity for TB pharmaceutical supply management and services, SIAPS conducted an evaluation of various online learning platforms, including LeaderNet, the MSH-supported platform, for hosting the QuanTB eLearning courses for an external audience. SIAPS developed a course outline and conducted discussions with the LeaderNet platform experts regarding the QuanTB eCourse and reviewing the course content to assess suitability for this type of technical content. SIAPS staff reviewed tools such as Articulate, Storyline, and iSpring and ultimately selected Articulate Storyline for authoring the QuanTB eCourse. SIAPS secured a consultant to serve as LeaderNet manager and to help develop the QuanTB eCourse. The consultant will work with the SIAPS team, the vendor, and the MSH/LeaderNet team during the design and upload the course content and related resources on LeaderNet. Working with the MSH procurement team, SIAPS developed a scope of work for the Articulate Storyline developer, and conducted interviews with potential vendors.

During the next quarter, SIAPS staff plans to complete the hiring process of a vendor to undertake the eCourse design, finalize technical training content, including the addition of knowledge checks to improve learners' experience, create scripts and make videos with narration to be inserted into the eCourse, and create storyboards for the Articulate Storyline developer. SIAPS also aims to assemble an advisory committee to progressively pilot the course modules as they are developed.

Constraints to Progress

- Getting approval and endorsement from the Kenya DRH has been delayed due to competing priorities at DRH and has delayed conducting the sub-national procurement assessment in Kenya.
- Taking into account MSH procurement procedures related to the hiring of the Articulate Storyline expert, SIAPS team now projects the completion of the QuanTB eCourse development at the end of May 2016, and not end of March 2016 as initially planned.

Objective 3. Improved utilization of information for TB control decision making

Activity 3.1.1: Improve and finalize e-TB Manager and QuanTB tools

During the previous quarter, e-TB Manager has been continuously improved with additional features and general fixes for increased use worldwide. Updated versions have been regularly released and shared with selected countries using previous versions of the system. e-TBM currently operates at 2,782 sites in 11 countries. Globally, 3,847 active users are managing 466,127 TB cases, DR-TB cases, and presumptive TB individuals.

The e-TB Manager Desktop (local case management application synchronizable with the web) generic version was finalized. In Bangladesh, it has been adapted to fit specific country needs identified during short-term technical assistance undertaken this quarter. SIAPS has continued with development and tests are planned to start the next quarter for the e-TBM generic new version prototype with enhanced functionalities and ability to run on any kind of device.

Technical assistance for adapting, reviewing, updating, monitoring and implementing e-TB Manager in Azerbaijan, Armenia, Brazil, Bangladesh, Cambodia, Indonesia, Namibia, Nigeria, Turkmenistan, Ukraine, and Vietnam has been continued.

The previous quarter saw additional improvements in the QuanTB tool. During the 46th UNION Conference, version 3.0 was released with enhanced user friendly and new features based on users' feedback. By the end of the quarter there were more than 110 downloads of QuanTB version 3.0 from the SIAPS website, in addition to more than 1,100 downloads of previous versions of the tool.

Activity 3.2.1: Measure and evaluate the impact of e-TB Manager as a system-strengthening tool for TB control

The e-TB manager user satisfaction survey was completed in Ukraine and Armenia. In Ukraine, SIAPS achieved a 52% response rate with over 300 respondents nationwide. An interim survey findings report with charts and compiled user comments was promptly shared with the NTP/Ukraine leadership. Based on the survey comments by users on the updated training and upgraded features of e-TB manager, the NTP have taken action to address user requests.

In Armenia, SIAPS received about 24 complete responses. This is reflective of the small size of the country. A compiled survey findings report with charts and user comments were shared with NTP leadership and with WHO/EURO.

In-depth assessment in Ukraine yielded 19 key informant interviews (31 people) and 4 focus group discussions (22 people) representing 15 rayons.

Plans for user satisfaction surveys were discussed with authorities in Azerbaijan, Bangladesh, Nigeria, and Vietnam. Plans for in-depth assessment were discussed with NTP leadership (Vietnam) and with USAID/Challenge TB staff (KNCV) for Indonesia.

Partner Contributions

Activity 3.1.1
In-country and international partners have provided important feedback for both e-TB Manager and QuanTB enhancements. In countries where SIAPS' presence is significant and strong linkages with partners exist, local support for system implementation and update, and monitoring and reporting of activities have been pivotal to achieve desired outputs.

Activity 3.2.1
There was commitment from Challenge TB/Indonesia project (KNCV) and NTP Vietnam for in-depth assessment and from the WHO/EURO to facilitate survey in Armenia and Azerbaijan.

Constraints to Progress

Activity 3.1.1
The deficiency of in-country champions to continue e-TBM implementation and monitoring of activities (e.g., high staff turnover; deficiency of local MIS, IT and TB specialists) remains a challenge in some countries.

Objective 5. Improved pharmaceutical services and access to TB products to achieve TB goals

Activity 5.1.1: Provide technical assistance to improve access to medicines for TB control through SIAPS regional and country TA mechanisms

Ongoing technical assistance to Uganda and Tanzania NTPs was provided to enhance quantification capacity and on issues related to TB procurement and supply chain management. As part of efforts to build TB medicines quantification capacity, SIAPS provided technical support to NTP Tanzania to develop standard operating procedures for TB medicines quantification. The support involved the preparation of workshop technical materials and facilitated a SOP development workshop organized by NTP from October 19th–23rd, 2015, with funding from the Global Fund. During this workshop, participants also received orientation on how QuanTB works before moving forward with the SOP development process. A number of important areas were covered by the SOP including: procedures for data collection, data requirements and data source, forecasting procedures, organizing and adjusting data, building forecasting assumptions, installation and customization of QuanTB, calculating forecasted quantities (summary of key activities in the QuanTB), and supply planning and ordering of TB medicines. SIAPS also participated in Tanzania's Annual National Tuberculosis stakeholders' meeting from November 2nd–6th, 2015, and made a presentation on verification of 2014 TB notifications versus distribution data. This was based on the analysis made in September 2015 to identify if there was any excess stock in the field or a mismatch between consumption data and TB notifications for further follow up. As an outcome of this analysis, NTP offered an official order to all regional TB and Leprosy coordinators to make sure health workers in their catchment areas adhere to the National TB Treatment Manual, which requires all pediatric patients to be managed by pediatric formulation to avoid low uptake of these medicines.

SIAPS continued to support the implementation of an early warning system to prevent stock-outs or wastage. In this quarter, SIAPS continued to provide support to Tanzania and Uganda in quarterly monitoring of TB medicines availability using QuanTB. Based on the results generated in November and December 2015, SIAPS alerted the Global Drug Facility (GDF) on impending stock-outs and requested them to expedite delivery of first-line TB medicines to both countries and second-line TB medicines to Uganda. GDF was able to bring forward delivery dates from March and February to early January 2016.

During this quarter, SIAPS facilitated a stock-related information exchange between Tanzania and Zimbabwe on potential cross boarder distribution. This enabled Tanzania to borrow 2,000 packs of RHZE which arrived in December 2015. The same support was offered to Uganda; however, the country opted to wait for GDF consignment to arrive which was initially expected in October but was delayed.

Activity 5.2.1: Expand and roll out models for the improvement of pharmaceutical services for TB in the private sector

SIAPS TB conducted a pilot to engage private sector pharmacies to increase early TB case detection in Pakistan. SIAPS staff traveled to Pakistan during the quarter to conduct a dissemination meeting on the pilot. On December 10, 2015, a national level dissemination meeting was held with 25 participants from donor agencies, implementing partners, NTP, Provincial TB Programs, and pharmacy school students. The Director of Ministry of Health Services Regulations and Coordination chaired the meeting. SIAPS staff presented the design and results of the pilot project. Pharmacy school faculty members involved in the pilot from Lahore and Peshawar presented on field experience and challenges faced during the pilot project. The research study results conducted by SIAPS in collaboration with Hamdard University School of Pharmacies entitled "Evaluating barriers and opportunities for retail pharmacies to be effectively engaged in DOTS for TB patients in Pakistan," was presented by a professor and the dean of Hamdard University School of Pharmacy. The group discussed the feasibility to expand the project to a national scale. Based on the findings from pilot project and the discussions held at the meeting, the group strongly favored a national level expansion. This was featured on the Pakistan NTP website (http://www.ntp.gov.pk/newsDetail.php?nID=29).

SIAPS staff also supported the Pakistan NTP to develop a concept note for a national expansion. SIAPS and the NTP Public-Private Mix coordinator developed the draft concept note for expansion plan along with a tentative budget to be submitted to Global Fund for their approval.

Activity 5.3.2: Promote active surveillance for monitoring the safety of TB/HIV co-medication; assist with implementation in selected countries

The development of the Pharmacovigilence Monitoring System (PViMS [formerly DCAT]) tool is still ongoing. During this quarter, PViMS was launched at the UNION meeting. SIAPS generated a lot of interest from countries, organizations, and individuals for PViMS. SIAPS is working with a developer to finalize development and testing. Plans are underway with countries for implementation of the tool.

SIAPS is undertaking a study to evaluate the impact of technical support provided to countries to prevent stock-outs. The study is designed to assess the economic (cost and benefits), as well as programmatic benefits to improve TB outcomes. For the economic arm, SIAPS adapted an existing MSH TB financial modeling tool to estimate the financial and economic impact. During this quarter, a visit was planned to the Philippines for the economic assessment, but was later postponed to next quarter by the NTP. Preparations are ongoing for this assessment. On the programmatic benefit arm, SIAPS is working with country field advisors to collect and review all documents and reports related to technical support to countries to prevent stock-outs. Both activities are ongoing.

TB Core Add-On

Goal: Assure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve global TB goals

Objective 5. Improved pharmaceutical services and access to TB products to achieve TB goals

Zimbabwe

SIAPS continued to provide technical support to Zimbabwe in managing TB medicines. Based on a quarterly TB stock analysis conducted in August 2015, some medicines were overstocked. To avoid wastage, SIAPS facilitated information exchange between countries that needed Zimbabwe's excess stock. Tanzania received 2,000 packs of overstocked RHZE. SIAPS technical support helped Zimbabwe avoid wasting the equivalent of $78,800 USD's worth of TB first line drugs (FLDs). SIAPS also linked Zimbabwe to Uganda for cross border transfer; however, this could not take place as Uganda decided to wait for Global Drug Facility (GDF) shipment. Zimbabwe was also able to transfer some pediatric TB medicines to Botswana. Next steps for quarter 2 include continuing to provide ongoing technical assistance to NTPs on issues related to TB procurement and supply chain management and implementing early warning systems (EWS) to prevent stock-out of TB medicines.

DRC

During quarter 1, SIAPS provided support to the NTP to monitor TB medicines stock and track order status through the QuanTB EWS. Additionally, SIAPS provided quarterly supervision for inventory management to ensure availability and accuracy of stock data. SIAPS also provided technical assistance with updating of PATIMED, the NTP reference tool for TB case management and treatment. SIAPS also provided technical support to the DRC National Tuberculosis Program (NTP) during the quantification exercise for anti-TB medicines needs (to be funded by the Global Fund) for 2016. The results of the quantification exercise, conducted by NTP and SIAPS, were presented to the quantification committee during the PATIMED meeting on November 27, 2015.

Nigeria

SIAPS created a mechanism and put systems in place for the use of QuanTB as the national anti-TB drug quantification and pipeline monitoring, supply planning tool, and as an EWS. During this quarter, the country Technical Advisor established a process for enhanced LMIS data quality through initiation and support of LMIS data tracking for all levels. SIAPS also engaged with stakeholders on anti-TB medicine patient safety issues to improve reporting and properly manage adverse drug reactions. In the past quarter, SIAPS facilitated stakeholder discussions and to address and find feasible solutions to drug management issues identified through QuanTB EWS. Discussions improved communication and relationships between stakeholders and provided responsive, timely and consistent support to NTP and partners. SIAPS also supported the Nigerian NTP in preparing for the introduction of new pediatric formulations in 2016. Through

participation in meetings and forums like the Pharmaceutical Supply Management technical working group (TWG) meeting and cartridge logistics management committee, SIAPS is helping to address gaps in drug management practices, improve patient management, and help the NTP to make national decisions to prevent stock-outs and wastage of expensive TB medicines. Next steps for Nigeria in quarter 2 includes following up with zonal pharmacists to ensure that LMIS data are submitted and used for pipeline monitoring in the six country zones and to support the Global Fund principal recipient with Global Fund New Funding Mechanism quantification and supply planning.

Myanmar

In the previous quarter, six QuanTB exercises on first and second-line drugs (SLDs) for the central level (whole country), Upper Myanmar Level and Lower Myanmar were generated. SIAPS helped the NTP in preparing Global Drug Facility product requested forms and supply planning of Global Fund Y6 drug shipments using the QuanTB output. A total of four split shipments were planned. SIAPS also successfully advocated for the NTP to collect and analyze the proportions of enrolled TB cases using PAS (TB medicine) and regimens not including PAS to support quantification. It was agreed that results will be used for the upcoming QuanTB exercises for EWS. Additionally, SIAPS facilitated and gave technical support to NTP central pharmacist to analyze PAS stock position for 2016 using the QuanTB tool; and to use analysis results to support decision making by NTP program manager. SIAPS attended the 7th National Supply Chain Task Force Meeting of Ministry of Health at Nay Pyi Taw. SIAPS collaborated with the SCMS-Myanmar Forecasting and Supply Planning team to implement activities to strengthen TB laboratory commodities quantification and provided technical support for the development of the national TB strategic plan for NTP Myanmar.

Next steps in quarter 2 in Myanmar include to continue technical support to Lower Myanmar TB pharmacist and data assistants to generate the QuanTB exercises for Q2 2016. SIAPS will also follow up with and continue to support the central NTP store pharmacist and Upper Myanmar pharmacists to collect data for Q2 2016 and to generate the QuanTB exercises.

Mozambique

As a result of alerts triggered by QuanTB in the previous quarter, a joint Global Fund and GDF mission was conducted in October to update QuanTB files with the shipments that had just arrived in Mozambique. Alerts detected during the quarter escalated and were addressed through regular communication between NTP staff, GDF, and SIAPS. The regular exchange of information has supported improvements in NTP's staff knowledge about QuanTB and confidence in the tools usage.

Next steps in Mozambique include continuing to support activities for ensuring better reporting quality from the peripheral levels. Also, SIAPS plans to provide refresher training to NTP staff demonstrating all new features implemented in version 3.0 of QuanTB that was just recently launched. SIAPS plans to hire a local consultant; the hiring process is on-going and should be concluded during February 2016 and the local consultant will support NTP QuanTB activities. Other planned activities include SIAPS and NTP updating the quantification part of the national

guidelines with all procedures for QuanTB and its usage as EWS; continuing to closely monitor the stock position, and to ensure prompt communication with donors and GDF to avoid possible stock-outs for first-line and second line medicines.

Kenya

SIAPS supports the Kenya NTP to generate and disseminate EWS reports on a monthly basis. During quarter 1, SIAPS documented and shared the recommended action points based on EWS alerts with stakeholders. A notable achievement during the quarter has been maintaining zero stock-outs of TB medicines within the country. SIAPS also participated in monthly commodity security committee meetings organized by NTP Kenya to discuss the national commodity pipeline and implementation of the action points agreed upon from the recommendations of the EWS reports.

SIAPS also endeavored to ensure that the right quantities of medicines are procured within the right time to prevent uninterrupted treatment. Toward this goal, SIAPS provided technical leadership and support to Kenya's TB program during the annual review of requirements of first-line and second-line medicines, laboratory, nutrition commodities, and LMIS tools for 2015/2016. The activity took place from September 29–October 2, 2015. Procurement is ongoing under the first year of the 2015–2017 Global Fund forecast.

As part of support to peripheral level pharmaceutical management capacity building initiatives, SIAPS participated in a national County TB and Leprosy Coordinator (CTLC) review meeting convened by NTP in September 2015,which brought together county TB coordinators, county laboratory technologists, and county pharmacists to review their performance and set targets. SIAPS provided technical assistance to the pharmacists' forum on improving reporting for LMIS. This support is expected to yield better quality data for decision making at both the central and peripheral levels. SIAPS also took led in developing a strategy for transitioning TB program LMIS to DHIS2 to improve data collection.

In October 2015, SIAPS provided participated in a review of multidrug resistant TB curriculum and treatment guidelines. The review aimed at strengthening the pharmaceutical management modules and introduction of new formulations.

South Sudan

During the quarter, SIAPS continued to support NTP South Sudan and other partners working in the country to strengthen the country capability to use the EWS to monitor TB medicine pipeline and make evidence -based decisions. An EWS report was generated in November 2015 and recommended action points were documented and shared with stakeholders for prompt implementation.

To ensure an uninterrupted supply of TB medicines, SIAPS provided support in quantification for a pediatric emergency order to be procured through the United Nations Development Programme. The accelerated order was made to ensure the country has enough supplies to last until the third-year pediatric grant from GDF is delivered. However, the supplier was unable to

deliver the accelerated order in time. SIAPS has been fundamental in the process of assisting NTP to secure pediatric medicines from Kenya to prevent stock-outs following the delivery delay. Stock from Kenya is expected to be received in January 2016. Through the provision of technical assistance, SIAPS has been able to achieve a zero stock out status for TB medicines this quarter.

To improve tracking of patients' adherence to treatment, SIAPS has been working with NTP, the Challenge TB program, and other partners to develop a plan for the introduction of patient kits in the country. The kits will be implemented in a phased approach beginning in the 2016/2017 procurement cycle.

Zambia

During the previous quarter, EWS reports were generated in October 2015 for first-line and second-line TB medicines and recommended action points were shared with NTP. One of the key results of the previous quarter EWS report recommendations were the timely initiation of procurement of first line and second line medicines for the first year Global Fund NFM 2015-2017.
SIAPS held discussions with the NTP pharmacist to identify key supply chain challenges that SIAPS could support. They included the implementing E100 (a TB medicine) based pediatric regimens, improving data quality, and addressing the coordination of procurement of medicines across the ministries involved. STTA is planned for the next quarter for a SIAPS senior technical advisor to provide support.

Constraints to Progress

DRC

There is need to improve how consumption and actual enrollment data is collected from lower levels to the central level so that QuanTB reports will be updated in a timely manner. The uncertainty about lead times in the past quarter has resulted in stock management issues along the supply chain and overstock, which would stress the NTP warehouse storage capacity at times. In addition, the NTP does not always have good knowledge of stock availability at provincial levels to inform better stock management and decisions for how much buffer stock remains.

Nigeria

There were a few constraints to progress in the previous quarter. Inadequate numbers of skilled/ qualified personnel at the NTP to carry out tasks and a slow pace of acquisition of skills and competences by the two new pharmacists in the logistics/PSM unit of the NTP have been challenges faced in the previous quarter.

Myanmar

The pre-existing work load of the NTP pharmacists, especially in Lower Myanmar sub-store,

makes it challenging to adopt and generate QuanTB exercises without SIAPS' assistance.

Mozambique

During the previous quarter, SIAPS TB Core had worked closely with NTP staff to ensure permanent support in all issues linked to the quantification process. However, challenges are still present. Reporting is still a significant problem from the provincial/district level; the reporting process and forms are not clearly understood from the peripheral levels and there are often delays in consolidating the data. There is a clear need to address these problems to ensure more efficiency and improve the quality of the reports received by NTP.

Additionally, shipments that arrived without being loaded on pallets in the previous quarter (in most of the cases, these are orders sent by air) generated delays at the main warehouse in the country (located in Zimpeto–Maputo) increasing the time period to receive medicines since shipment had to be put on pallets first before storage. This in turn delayed the availability of medicines for distribution and use at the facilities. This should be considered during next air shipment and arrangement made early to make pallets available for storage.

Kenya

The main constraint to progress towards zero stock-outs has been prolonged lead times that are often beyond the control of the program, such as government bureaucracy and delays by suppliers. SIAPS has been studying these trends and continues to advise the programs on increasing their safety stock levels, while also monitoring stocks to prevent overstock situations.

South Sudan

Delays by the supplier to deliver an accelerated order for pediatric medicines resulted in an emergency situation. Additional constraints in South Sudan are the inadequate numbers of qualified staff who can benefit from capacity building initiatives by SIAPS.

Zambia

Delays in procurement and delivery of pending supplies gave rise to unpredictable lead times and ultimately resulted in emergency situations. Since part of this is caused by the bureaucratic nature of the government operations, the NTP should consider such factors to increase safety stocks and start planning early for procurement. Data quality is an ongoing challenge; currently the data used for forecasting needs to be revised. Targets used for quantification are ambitious and beyond the capacity of the health system; thereby leading to expiries of medicines.

TB Bedaquiline Implementation Program

Goal: Assure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve global TB goals

Overall Quarterly Progress

SIAPS provided continuing technical support to first countries to introduce bedaquiline—Georgia in September 2015 and Swaziland in November 2015—under the bedaquiline donation program. In Swaziland, SIAPS supported the NTLD in drafting a letter to the registrar of the Pharmacy and Poisons Board to gain approval for use of bedaquiline. The letter has been submitted to the NTLD for review. A preliminary stock review in December showed that Swaziland had minimal quantity of linezolid with expiration in March 2016 and no clofazimine in stock. We are also supporting them in gaining access to linezolid and clofazimine from the GDF for use in conjunction with bedaquiline. Finally, a bedaquiline implementation taskforce has also been established with oversight from the NTLD TWG.

Implementation in the Philippines originally scheduled for the middle of December 2015, has been delayed until February 2016. Two consultants were recruited to replace the consultant who resigned her position in December.

A stakeholders meeting to kick-off Kenya pre-implementation activities took place on December 10, 2015. During the week, SIAPS staff met with stakeholders to follow-up on an action plan developed during the meeting. Additionally, SIAPS attended a stakeholders meeting in Bangladesh.

The SIAPS team launched a website (newtbdruginfo.org) that provides information and showcases our Direct Assistance to Countries Introducing New Medicines and Novel Regimens for Tuberculosis Treatment activity. This website serves as a resource for countries and highlights the SIAPS approach.

Next steps for the rapid response activity include finalizing the contracts for the two consultants and carrying out a number of implementation activities:

- Philippines—Training is planned for the first week of February, and the first patient is anticipated to start treatment around the time of the training.
- Kenya—Pre-implementation activities are underway (e.g., clinical capacity building, medicine procurement, documentation preparation).
- Uganda—A stakeholders meeting is planned for the week of January 11th, 2016. During this week stakeholders will assess the country's readiness to introduce bedaquiline, discuss activities that need to be implemented to ensure all WHO requirements are met, agree on roles and responsibilities of each key stakeholder, and plan the way forward.
- Bangladesh—Work with KNCV on introducing bedaquiline through the donation program to reach patients who do not have access through the EndTB project.

SIAPS will also provide technical assistance to KNCV with their implementation activities as requested.

Partner Contributions

Progress in Philippines was delayed when the consultant assigned to provide training in December resigned before the training took place. The training was rescheduled for February, and two consultants have been recruited to continue the consultancy for the remainder of the project.

Requests for SIAPS TA from USAID for Armenia (not enough patients), Ukraine (reassigned to PATH), and Tanzania (reassigned to KNCV) was withdrawn for the reasons noted. SIAPS will work with USAID to determine which other countries have a need for technical assistance with their programs to introduce new medicines and novel regimens.

REGIONAL PROGRAMS

LAC AMI

Goal: By the end of 2016, AMI countries will have institutionalized national and regional mechanisms to ensure a continuous supply of antimalarials as the key malaria control strategy, particularly in low-incidence locations and areas at risk for the emergence of ACT-resistant pathogens.

Eight countries reported stock levels for antimalarials this quarter. The availability of antimalarials in central warehouses remained at the same level (85%), as in the previous quarter. A few countries, however, are still facing problems with the local procurement of antimalarials. There is a risk of artemisinin mono-therapy in Peru, due to the short supply of mefloquine.

Objective 1. Pharmaceutical sector governance strengthened

SIAPS has proposed a performance evaluation of malaria control strategies in Colombian departamentos with high malaria incidence. During this quarter, SIAPS finalized the research protocol (data collection instruments included) and validated it with the Malaria Control Program Director. SIAPS will collect the information in three departamentos during next quarter. A follow-up monitoring exercise for the same evaluation approach in Brazil is scheduled for February 2016.

Objective 2. Pharmaceutical management information available and used for decision making at different levels of the health system

The technical report on the situation of malaria pharmaceutical management, and the impact of AMI-supported interventions in seven AMI countries was finalized. No additional activities were planned for this quarter. A regional meeting to analyze the implication of this study for the eradication of malaria in selected countries is scheduled for March next year. Through its local consultants, SIAPS supported the compilation of information and analysis for the Quarterly Bulletin on Availability and Consumption of Antimalarials, disseminated by PAHO in October 2015. Eight countries shared information. The availability of antimalarials in central warehouses was stable (85%) compared with the previous quarter, but certain countries still face problems with the availability of antimalarials. Guatemala has low stock levels of primaquine and cloroquine. An immediate procurement is needed to replenish stock levels at central and departmental levels. Honduras has low stock levels for primaquine at department level, and distribution from the central warehouse is needed.

Peru has low levels of mefloquine in Loreto. A distribution from the central to the departmental level is needed to prevent the risk of monotherapy. In October 2015, SIAPS participated in a regional meeting on revising the 2016 -2020 Malaria Action Plan for the Americas, held in Punta Cana, Dominican Republic. SIAPS facilitated the discussions in one of the technical groups. In Guatemala, SIAPS worked with the malaria grant team, malaria program, and Ministry of Health medicines logistics unit to develop a quantification and procurement manual based on the Ministry of Health norms for essential medicines but making it specific for malaria. This quarter,

SIAPS also helped the malaria program to finalize a procedures guide describing the flow of information and how to monitor at each level of the supply chain. The guide contains the forms to be used at each level with instructions on how to fill them in.

Objective 3. Pharmaceutical services improved to achieve desired health outcomes

During this quarter, SIAPS visited Loreto, Peru, to assess the progress in the introduction of mefloquine + artesunate fixed-dose combination. The situation is critical: mefloquine is in short supply (increasing the risk of monotherapy), and there is no local plan for the use of a limited stock of FDC received from a Brazilian laboratory. This batch of medicines will expire on April 2016. These concerns were shared with national counterparts and AMI partners. SIAPS continued working with local counterparts in Pará and Roraima (Brazil) in the systematization of interventions to improve access to malaria diagnosis and treatment in gold mining areas. The technical reports could not be completed due to difficulties accessing the mining areas during the rainy season. For next quarter, SIAPS will finalize the technical report on the systematization of these interventions, and will start monitoring the progress and preliminary results of the implementation.

In Guatemala, SIAPS provided technical assistance for the introduction of guidelines to support malaria pharmaceutical management in primary health facilities, and monitor the availability of antimalarials used by primary health volunteers. Standard operating procedures and training materials were reviewed, revised, and printed during this quarter. SIAPS visited Ecuador in October to assess the situation of malaria pharmaceutical management, and to discuss alternative interventions with national counterparts to transition malaria supply management from the National Control Program to the national pharmaceutical system. A trip report, including a situational analysis and proposed interventions, was distributed to national counterparts and AMI partners.

Partner contributions

PAHO facilitated the contact with Ecuadorian health authorities.

Constraints to progress

The systematization of interventions to improve access to malaria diagnosis and treatment in Brazil has been delayed, due to difficulties accessing mining communities during the rainy season, and conflicting agendas of the local malaria program.

West Africa Regional

Goal: Facilitate the availability of quality pharmaceutical products especially those related to HIV and AIDS to achieve high level desirable health outcomes in target West Africa countries.

Overall Quarter Progress

SIAPS completed adding new functionalities into the HIV and AIDS commodity management tool in West Africa (OSPSIDA) as requested by countries during the stakeholders meeting held in Accra, Ghana on April 2015.

SIAPS also supported the National AIDS Control Program (PNLS) of Togo to generate and analyze OSPSIDA reports to guide decisions on supply chain management during the monthly procurement and supply management technical committee. SIAPS also facilitated a meeting with dispensers and trainers in Togo's capital, Lomé, to review issues faced by users following the installation of the new version of the Electronic Dispensing Tool (EDT) in five pilot ARV dispensing sites.

SIAPS attended PEPFAR's Sustainability Index and Dashboard (SID) meeting held in Togo on November 30, 2015 to assess governance, leadership, and accountability; national health system and service delivery including commodity security and supply chain management, strategic investments, efficiency, and sustainable financing, and strategic information. The OSPSIDA dashboard revealed that supply chain management is still challenging.

SIAPS attended the 18th International Conference on AIDS and STIs in Africa held in Harare, Zimbabwe, from November 29 to December 4, 2015, where two abstracts on OSPSIDA were presented at poster exhibition.

SIAPS supported the PNLS to prepare the upcoming quantification capacity building and long-term forecasting of ARVs and other HIV and AIDS medicines.

Objective 1. Increase the use of pharmaceutical management information for decision making at national and regional levels

The recent updates to OSPSIDA included the management of products soon to expire to identify usable and non-usable products based on products remaining shelf life and linkage of OSPSIDA country profile to UNAIDS country profile. This new version can be used offline by allowing data to be imported from an Excel-based template. The risk categories have also been reviewed to record stock outs at the national level as an entire category. The pipeline information has also been reviewed to focus more on the exact dates a product will be arriving in-country to identify any gaps between product shortage date and product arrival date in country. Some national and facility level reports have been selected to be part of the monthly or quarterly report which will be shared with all stakeholders at national and regional level through a newsletter.

SIAPS supported the Togo PNLS in preparing for the technical meeting on HIV and AIDS

commodity management using the reports from OSPSIDA. As of October 30, 2015, no stock out had been detected at the national level and 10.5% of ARVs have less than six months of stock, putting only 1.2% patients at risk.

As requested by the PNLS Togo, SIAPS facilitated a meeting with five ARV dispensers and trainers to review issues raised after installing the new version of the EDT. All meeting participants agreed on critical actions such as redesigning some reports in line with National AIDS Program needs, implementing an "export to Excel" function for some reports to complete the pilot phase.

Objective 2. Improve coordination among regional and national stakeholders involved in ensuring ARVs and HIV and AIDS commodity availability

In October 2015, USAID West Africa in collaboration with UNAIDS Regional Support Team for West and Central Africa organized a meeting in Lomé, Togo to assess the sustainability of the HIV and AIDS program of Togo. SIAPS co-facilitated the group discussion around commodity security and supply chain management.

This group discussion was held to assess if the national health system's response to HIV and AIDS ensures a secure, reliable, and adequate supply and distribution of quality products, including drugs, lab and medical supplies, health items, and equipment required for effective and efficient HIV and AIDS prevention, diagnosis, and treatment. The group also considered if the host country was efficiently managing product selection, forecasting and supply planning, procurement, warehousing and inventory management, transportation, dispensing, and waste management; reducing costs in all areas while maintaining quality.

The meeting group noted that the estimated percentage of ARV and rapid test kit procurement funded by domestic revenue sources was 10–49%. The country does not have an agreed-upon national supply chain plan that guides investments in the supply chain, but the country is working to achieve that. The host country government manages processes and systems that ensure appropriate ARV stock levels. The procurement and supply management technical group making resupply decisions for ARVs has access to current accurate information on stock on hand at facilities level. Facilities are stocked with ARVs 90% of the time, according to the plan (above the minimum and below the maximum stock level). The Ministry of Health and other government personnel make re-supply decisions with minimal external assistance, and do not include seconded or implementing partner staff members. Supply chain data is maintained within the Ministry of Health and not solely stored by donor-funded projects; and the team that conducts analysis of facility data is made of up at least 50% host government.

However, Togo did not use the capability maturity model (CMM) diagnostic tool yet to perform a comprehensive National Supply Chain Assessment.

SIAPS presented two abstracts as posters at ICASA 2015 conference held in Harare. The first abstract "Nipping ARV Stock-Out in the Bud through the HIV and AIDS Commodity Management Tool" demonstrated SIAPS' support towards the HIV and AIDS Program in Togo to mitigate the stock out situation. Togo used this information to request to PEPFAR's

emergency commodity funds for a donation of ARVs to address the risk of the stock out situation.

The second abstract, entitled "Providing Stakeholders Monitoring Access to HIV and AIDS Commodities through the HIV and AIDS Commodities Management Tool in West and Central Africa" demonstrated how SIAPS supported strengthening coordination at the regional level to respond to the ARV shortage. The deployment of OSPSIDA showed that the availability of HIV and AIDS commodity in Niger is hampered by a weak LMIS. Deploying OPSIDA in the region has helped donors coordinate needed support to local partners. Niger has benefited from such an intervention in avoiding stock outs by conferring with members of the Procurement and Supply Management Technical Working Group of the Joint United Nation Regional Team on AIDS (JURTA), which was attended by UNAIDS, SOLTHIS, ESTHER, CHAI, USAID West Africa, and SIAPS.

Partner contributions

UNAIDS Regional Support Team for West and Central Africa and USAID-funded PACTE VIH worked together to organize the meeting to assess Togo Sustainability Index and Dashboard. The Global Fund strongly collaborated with SIAPS to respond to risk of stock out in Togo.

Objective 3. Enhance capacity for pharmaceutical supply management

SIAPS supported the Programme National de Lutte contre le Sida of Togo to develop terms of reference for upcoming quantification capacity building coupled with long-term forecast of ARVs and other HIV medicines. The list of national institutions invited has been reviewed with support from SIAPS to make this training as comprehensive as possible by inviting staff from other health programs, such as malaria and tuberculosis.

COUNTRY PROGRAMS

Angola

Goal: Improved availability of quality products for effective pharmaceutical service delivery and better health outcomes

Overall Quarter Progress

SIAPS continued to advocate for different coordinated mechanisms between all the players in supply chain to improve efficiency. A stock analysis at the national level conducted through the national quantification mechanism showed disparities between key products that needed a quick response. SIAPS worked with the National HIV/AIDS Control Institute (Instituto Nacional de Luta Contra o Sida [INLS]) and the Luanda provincial team to identify health facilities (HFs) in need and actively distribute these high-demand products to avoid their expiration.

The program supported organizing one of two planned bi-monthly Logistics, Operations, and Procurement Subcommittee (Sub-Comissão para a Logística, Aprovisionamento e Operações [SCLAO]) meetings; the drafting of the national formulary manual; and organizing a multi-institutional advocacy meeting to combat counterfeit medicines and to support the MOH's efforts in establishing a new medicine national regulatory authority.

An annual quantification of HIV/AIDS commodities that will cover July 2016 to June 2017 was conducted, and the results will be shared with all stakeholders in commodity procurement to leverage the necessary funds to reduce the gap between what is needed and what the Government of Angola can purchase. With the new directive from PEPFAR to all of its implementing partners (IPs) to provide direct support to nine selected health facilities, SIAPS participated with other IPs and individual, selected HFs to develop joint work plans to address identified gaps in HIV/AIDS services. Specifically, SIAPS successfully designed a mentorship program to directly capacitate the pharmacy personnel of the nine HFs and the provincial warehouse of Luanda to improve patient and stock management of HIV/AIDS commodities, as one of the identified priorities.

At the NMCP level, one full-time experienced data analyst was recruited to continue the compilation and analysis of all provincial malaria case management and logistics reports following the suspension of this support by the Global Fund. SIAPS continued its technical support to NMCP and to CECOMA to monitor antimalarial product stock levels at the national and provincial levels and recommended corrective actions to minimize stock shortages and wastage. An emergency order has been approved by the Global Fund, and these products are being distributed according to a plan prepared by NMCP. SIAPS supported PMI in requesting the necessary administrative letters from CECOMA that will be used to clear the 2016 shipments. The program also submitted the Angola quarterly procurement plan and monitoring report (PPMRm) to the global database managed by USAID | DELIVER. In November and December 2015, the program conducted end use verification (EUV) data collection in six provinces and the EUV report is due in January 2016.

In the reproductive health program, SIAPS had different meetings with USAID and Pathfinder to discuss and agree on the transition plan to be implemented by SIAPS after the closing of a USAID commodity security project in Angola implemented by Pathfinder and to ensure the continuity of this support to the National Reproductive Health Program (NRHP), the provincial directorate of health for Luanda and Huambo. A physical inventory of all FP commodities, a three-year forecasting plan, and a semi-annual distribution plan were prepared in collaboration with UNFPA, CECOMA, and NRHP. The program has also sponsored the participation of the deputy director of CECOMA and one technical staff from SIAPS in the 4th International Conference on Family Planning to be held in Nusa Dua, Indonesia, from January 25th-28th, 2016. The two participants will present an accepted abstract on strengthening the supply chain systems of FP commodities in CECOMA as a poster.

Finally, in order to strengthen CECOMA as a new institution and allow it to take the lead on national public medicines procurement, SIAPS recruited one experienced national consultant to work with CECOMA in developing the needed legal and guidance documents for procurement, in line with the existing laws and regulations, to fulfill CECOMA's new mandates.

Objective 1. Pharmaceutical supply chain system governance strengthened

During the reported quarter, the program worked with its national and HF counterparts to improve coordination among pharmaceutical supply chain stakeholders. In October 2015, SIAPS supported the National Directorate of Medicines and Equipment (Direcção Nacional de Medicamentos e Equipamentos [the DNME]) DNMEto organize a bi-monthly SCLAO meeting to jointly discuss and identify specific bottlenecks that affect public health supply chain services. Issues of generalized stock outs of key health commodities were discussed, which are primarily caused by the current financial crisis that Angola is facing. As a result of the meeting, recommendations were made to improve efficiency in pharmaceutical management.

Plans to transform the DNME into a semi-autonomous institute to serve as the national regulatory authority in the near future continued with strategic meetings held at the MOH level. SIAPS supported the DNME to continue the advocacy for policy approval of this new national medicines authority. In this regard, the DNME convened a multi-institutional meeting to discuss the current weaknesses that are affecting the medicine regulatory system in Angola, resulting in the introduction and circulation of some medicines with dubious quality, including counterfeit products. This meeting was organized after the discovery of a fake lot of artemether-lumefantrine (AL) that imitates the branding of AL from Novartis (Coartem) sold in the public sector. Participants were from the the DNME, General Inspectorate of Health, Criminal Investigation Unit, Ministry of Commerce, customs, and the private sector. One of the recommendations from this meeting was to speed up the process of regulating all importations of pharmaceutical products by the MOH as it has done for controlled medicines. the DNME is proposing to start with all pharmaceutical products for endemic illnesses, such as malaria, HIV/AIDS, tuberculosis, and neglected diseases. The meeting also recommended the implementation of medicine registration, starting with the identification of all primary and intermediate sources of medicines that are entering the country, to be captured in a dynamic database of all imported pharmaceutical products with their country of origin and manufacturing sites.

SIAPS continued to work with INLS to facilitate coordination between them and the provincial health directorate (Direcção Provincial de Saude [DPS]) of Luanda. After a thorough stock analysis of ARVs, rapid diagnostic kits, and other HIV/AIDS commodities and a field visit to the Luanda provincial warehouse, it has been noticed that some products with a high demand are not being properly requested by the HFs when they are at risk of getting expired at national level. A meeting was organized between SIAPS, the INLS, the DPS Luanda, and the provincial warehouse of Luanda to identify HFs that could quickly use some stocks that were approaching their expiration dates to avoid wastage and to organize an active distribution. SIAPS facilitated active distribution of these products to 26 HFs, among them seven PEPFAR-selected HFs.

SIAPS also facilitated meetings of the quantification technical working group to forecast ARVs, rapid diagnostic tests, and CD4 and viral load needs for July 2016 (the estimated time of arrival of the first products to be purchased with this quantification) to June 2017. The results of this forecasting exercise will be shared with all the key players in HIV/AIDS products procurement, especially the Global Fund, to leverage the necessary funds to reduce the gap between what is needed and what the Government of Angola can fund. It has also been deduced that an emergency order is needed to cover the waiting period up to July 2016, and the INLS is working with MOH and the Ministry of Finance to avail the necessary funds to buy this emergency order to avoid stock outs. Meanwhile, other medicines are at high risk of expiry. This technical working group recommended that communication between the INLS and the provincial teams be improved so that requisitions reflect the actual needs of the HFs.

Partner contributions

- The DNME's leadership role in organizing SCLAO and other meetings to advocate for strengthening medicine regulatory systems
- The INLS's role in coordinating the national quantification technical working group
- The DPS Luanda's role in the coordination in redistributing medicines that were about to expire

Constraints to progress

- Due to the current financial crisis, MOH has other burning priorities that affect the finalization of the national pharmaceutical supply chain strategy.
- Most of the visited HFs were experiencing stock outs of key HIV/AIDS products due to the provincial warehouse not responding to their needs because of staff changes In addition, the team had difficulties getting to some HFs due to poor road conditions during the rainy season.
- Most of the HFs were reluctant to accept products that were about to expire; they were also unsatisfied that the products were soon to expire when they were given to the HFs.

SIAPS is proposing to improve communication between the INLS and the DPS Luanda to avoid situations where the province is not requesting the actual needs of the HFs, or the INLS is not providing the requested quantities, even though sufficient quantities of products are available at the national level. The requisition form from the provincial level to national level should also be revised to reflect the compiled needs of all the HFs in their catchment area. In addition, SIAPS

will continue to strengthen individual capacity in the pharmaceutical management of HIV/AIDS commodities, with an emphasis on the proper use of stock management tools.

Objective 2. Local capacity for pharmaceutical management enhanced

During the reported period, no formal trainings were organized. However, SIAPS initiated a mentoring program in nine selected HFs that are slated to receive direct support from PEPFAR. The program recruited three pharmacists that will be working directly with six HFs, and two pharmacists are being recruited to cover the rest of the HFs. After consultations and integration of SIAPS interventions into the individual work plans of the nine PEPFAR supported HFs, SIAPS has already started to work with the selected HFs to address issues in pharmaceutical management of HIV/AIDS commodities. These pharmacists or mentors are working directly with pharmacy personnel at Divina Providencia Hospital, David Bernardino Pediatric Hospital, Cajueiros Hospital, the TB Dispensary of Luanda, Sanatorium Hospital, and Rangel Health Center. At least one day a week, each selected HF receives direct support from one assigned mentor with a direct supervision by a full-time technical advisor. Each Friday, the team meets at the SIAPS office to evaluate what has been done during the week, plan for the next week, and participate in internal capacity building sessions. The program has developed individual reporting tools to monitor the progress of our interventions at the HF level, in line with SIAPS and PEPFAR indicators. As one of the basic tools to manage any commodity, the team identified as a priority the implementation of stock cards for all HIV/AIDS pharmaceutical products. It was determined that no one among these HFs was using this important management tool, resulting in poor management and a lack of essential products, even though the national level had enough stock. The team conducted physical inventories and updated the stock cards where they existed or introduced new stock cards in other areas where there were no stock cards. This resulted in more transparent and reliable stock data that could be used to improve the monthly logistics reports and requisitions to get new stock from the DPS Luanda or the INLS.

Although it is recognized that CECOMA is the key medical procuring entity, issues such as the long lead time, inefficiencies in the adjudication process, and shortcomings in the operational planning processes have had a negative impact on timely procurement outcomes desired by CECOMA customers, including the public health programs. Moreover, CECOMA lacks the necessary human resources and tools to interpret and apply the public procurement law, especially during the tendering process. To capacitate CECOMA at the institutional level, the program recruited one experienced consultant to work with CECOMA to develop the necessary documents and tools and to build their procurement capacity, in line with the best medicine procurement practices and in accordance with the current Angolan public procurement regulations and procedures. The consultant has already produced an advanced draft of internal CECOMA regulations for acquisition of medicines and medical devices in line with the public tendering law 20/10 and bidding documents. These documents are currently being reviewed by CECOMA management.

Partner contributions

Individual management in selected PEPFAR HFs for their coordination in finalizing the joint work plans and integrating SIAPS mentors into their team

Constraints to progress

- Insufficient human resources at the pharmacy level, both in numbers and in skills. Most HFs have only one staff in charge of managing pharmaceutical products, often without proper training.
- None of the visited HFs used stock cards to record stock transactions or proper patient registers to record daily consumptions (not part of the professional culture). There is a lack of space and poor storage conditions at warehouses for all pharmaceutical products.
- There is heavy bureaucracy in finalizing individual HF work plans and mobilizing collaboration from all staff, including the management of HFs.
- Lack of most of the key products for HIV/AIDS, due to inadequate management and deficient requisitions, resulting in poor health care services.

SIAPS is advocating that HF management avail more staff, improve storage conditions of HIV/AIDS commodities, and conduct internal supervisions to reinforce the use of pharmaceutical management tools. In collaboration with the INLS and the DPS Luanda, SIAPS is also preparing a training session on pharmaceutical management and standard treatment guidelines for HIV/AIDS to enhance national, provincial, and HF staff skills and confidence to manage these commodities and improve their prescription and use.

Objective 3. Information for pharmaceutical management decision making improved

The program supported NMCP by seconding a full-time data analyst after the suspension of Global Fund support due to embezzlement of funds. The current staff is assisting NMCP in compiling all the provincial reports in collaboration with the SIAPS M&E officer and with all 18 provincial malaria control supervisors. This support has allowed for regular updates of the NMCP database for malaria case management and logistics data compiled at the national level. All 18 provinces have been receiving feedback on their reports to improve completeness and quality.

In November and December 2015, the program continued the implementation of the semiannual EUV in selected provinces in coordination with the DNME, the NMCP, and selected DPSs to provide a snapshot analysis of the availability and use of antimalarial products at the health facility level. In total, six provinces were visited to collect malaria case management and logistics data in six provincial warehouses, nine municipal warehouses, five provincial hospitals, ten municipal hospitals, and 24 health centers. Findings and recommendations will be presented in the EUV report to be published in January 2016. Meanwhile, the team observed serious constraints that negatively impacted national efforts to eliminate malaria in Angola, such as a weak HR force, poor management of malaria health commodities, absence of supervision visits to reinforce the compulsory use of pharmaceutical management tools, and stock outs of sulfadoxin and pyrimethamin that is used in intermittent preventive treatment of malaria in pregnancy.

The program also submitted a quarterly PPMRm in October 2015 after collecting stock

information data from the national and provincial levels. This report allowed all the national and international stakeholders in antimalarial commodity security to analyze the availability and pipeline of these commodities, identify bottlenecks in the supply chain, and suggest action-oriented solutions for improved prevention and management of malaria cases.

The program also participated in meetings organized by USAID and the NRHP to define and agree on the support that SIAPS will provide to ensure the smooth transition after the closure of the Pathfinder FP commodity security project in Angola. In this regard, the program participated in the preparation of a long-term forecasting exercise for FP commodities, in the receipt of UNFPA donations at the CECOMA level, and in following up the implementation of a bi-annual distribution plan.

Partner contributions

- the DNME and NMCP coordination roles in EUV data collection
- DPSs of Luanda, Kwanza sul, Zaire, Bengo, Bie, and Cunene in availing staff and transport to conduct EUV data collection
- All DPSs in collecting data for the PPMRm
- Pathfinder, UNFPA, CECOMA, and NRHP in preparing a long-term forecasting for FP commodities

Constraints to progress

- Not using adequate patient registers and stock cards at the HF level to capture all EUV indicators
- Remote stock status data collection using telephones or emails with less possibility of validating these data for PPMRm through field visits
- Insufficient human resources at NMCP, NRHP, and CECOMA due to the current financial crisis

SIAPS will continue to advocate for adequate staffing at the level of the national public health programs and to work with the available staff to capacitate them to sustain the gains of our interventions. The compulsory use of pharmaceutical management tools at all levels will also be reinforced, starting with internal supervision in the HF. Once the head of the facility understands and supports the importance of managing the commodities in his/her care, the staff could then comply, and external supervisions will be conducted to support their efforts. SIAPS is also organizing targeted field visits to support provincial teams that are having difficulties in producing quality and timely reports.

Objective 4. Pharmaceutical service to achieve desired health outcomes improved

During the reported period, the program worked with INLS and DPS Luanda to identify and distribute HIV/AIDS products that were about to expire at the national warehouse and send them to HFs that needed them. In this regard, SIAPS facilitated an active distribution of HIV rapid tests that were about to expire; ARV pediatric solid formulations in fixed-dose combinations

(FDCs) that are recommended by WHO because of their easy administration to children (dispersible pediatric tablets instead of liquid formulations), but are not used at HFs; and one new adult ARV FDC formulation (tenofovir/emtricitabine/ efavirenz or atripla) that was not being used at HFs, even though it offers the best option for adherence for new patients because it is only one tablet per day. We also included co-trimoxazole tablets that were stocked out at the HF level that were expiring at the INLS level. In total, 143 HIV rapid diagnostic tests; 1,000 treatments-months of tenofovir DF/emtricitabine/efavirenz (300 mg/200 mg/600 mg); 500 treatments-months of zidovudine/lamivudine (60 mg/30 mg) 60 dispersible tablets; 500 treatments-months of zidovudine/lamivudine/nevirapine (60 mg/50 mg/30 mg) 60 dispersible tablets; 50 boxes of co-trimoxazole 400 mg + 80 mg tablets, 250 tablets/box; and 50 boxes of co-trimoxazole 800 mg + 160 tablets, 250 tablets/box were distributed during December. The program is also working directly with the provincial warehouse of Luanda to prepare their quarterly requisitions that will incorporate actual estimations for all HFs in their catchment area to mitigate the recurrent situation of stock outs at HFs when there are enough products at the central level.

The program also facilitated the issuing of administrative letters to facilitate customs clearance of PMI-donated products. Stock monitoring of antimalarial commodities done by SIAPS in collaboration with the NMCP has also allowed the NMCP to request and obtain a donation of some ACTs and RDTs from the Global Fund that are being distributed in all 18 provinces to reduce the risk of stock outs.

The program has also started preparations for the forthcoming malaria health facility survey that will be conducted in two provinces (Uige and Huambo). The study protocol has been finalized, translated, and submitted to NMCP for approval by the MOH ethics committee. SIAPS is developing electronic tools that will be used during data collection to cut the time and cost of data entry and shorten the period for data analysis. The use of new technologies in this survey will allow the program to enhance the local experience and expertise in this flourishing domain and extend its implementation in other routine data collection exercises, such as EUVs and supervision visits. The two provinces have already been visited as part of preparations for the joint survey to be conducted by NMCP and CDC Atlanta.

Partner contributions

- INLS, DPS Luanda, and selected HFs in the active distribution of selected HIV/AIDS commodities to avoid their wastage because of imminent expiration if not distributed
- NMCP in stock monitoring of antimalarial commodities
- CDC Atlanta, NMCP, DPS Uige, and DPS Huambo in preparation for the malaria health facility survey

Constraints to progress

- The imbalance between what is needed by HFs and what is distributed by central and provincial levels caused by poor management at the HF level and lack of reliable data on consumption (poor logistics reporting and requisitions)

- Long administrative procedures to approve the study protocol for the malaria health facility survey and delays in identifying local data collectors in selected provinces
- Push system (rather than using the actual needs from HFs and provinces) for malaria commodities, resulting in imbalances in stock levels

SIAPS is planning to organize a five-day training for the provincial and national teams responsible for preparing and/or validating HF requisitions to capacitate them in proper estimation of actual needs to avoid the chronic stock outs of key commodities at the HF level while products are at a high risk of wastage due to expiration at the central level. SIAPS, in collaboration with PMI and CDC, are advocating that NMCP speed up the approval of the study protocol. SIAPS is also working with the respective provinces to speed up the process of identifying and communicating the selected data collectors to be hired during the survey.

Bangladesh

Goal: Improved availability of quality pharmaceuticals and effective pharmaceutical services to contribute achieving desired health outcomes

Overall Quarter Progress

In this quarter, SIAPS made significant progress on handing over the Supply Chain Management Portal (SCMP) to the Procurement and Logistics Management Cell (PLMC) in the Ministry of Health and Family Welfare (MOHFW). The hand over included technical documents; training for the selected persons from different entities has been planned.

The PLMC has increased its involvement in coordinating and monitoring to strengthen the procurement and logistics management in the MOHFW. With SIAPS assistance, the PLMC organized the annual conference with all procuring entities in November 2015 to review procurement performance. Due to conference's effectiveness, PLMC agreed to organize the same annual conference on its own in the future. This is a big milestone for sustainability. MOHFW also engaged Joint Secretary (Development) to advocate with other ministries for creating a permanent position for PLMC.

To strengthen the MOHFW procurement, SIAPS drafted some strategic documents during this period, e.g., table of equipment (TOE) for 500 beds, Pricing Guide (PG), standard operating procedures for Central Medical Store Depot (CMSD).

SIAPS engaged the Directorate General of Health Services (DGHS) to train 955 persons from 4 districts to use the electronic logistics management information system (eLMIS). In relation with the paper based inventory reporting system, DGHS have introduced the management part of the electronic inventory tools in the piloted sites with the support from SIAPS. DGHS authority requested district Civil Surgeons of piloted sites to provide report on the use of inventory tools.

SIAPS is a major partner for the National Tuberculosis Program (NTP) in terms of strengthening procurement and supply management system, data recording, and reporting for TB treatment and monitoring. SIAPS did the quantification for the MDR-TB medicines and also strengthen the central warehouse by providing necessary equipment and environmental control devices to ensure medicine quality. The reporting rate for e-TB Manager has increased to 89% compare to 65% in the last year.

The logistics reporting in Directorate General of Family Planning (DGFP) reached to 100 percent in this quarter, a great milestone. Reaching this goal also contributed to reducing stock-out (less than 1%) at upazila level.

SIAPS developed the concept of an asset management system and conducted a system study visiting three medical college and hospitals to assess the current practice. The study recommended that the MOHFW form a technical working group to manage and guide the system.

SIAPS was one of the USAID implementing partner program that has actively participated in the development of the result framework and procurement and supply management component of the next Sector Wide Program (2016–2021). SIAPS's contribution is recognized in the final strategic paper.

SIAPS assisted in increasing the Directorate General of Drug Administration (DGDA) officials' capacity building to strengthen the drug quality system in the country. Fifteen officials joined an international training in Korea through SIAPS' partnership with Korea International Cooperation Agency.

As part of strong collaboration and capacity building of USAID implementing partners, SIAPS developed the training curricula for the Social Marketing Company (SMC) and provided training to their warehouse officials. As part of global SIAPS program evaluation, an international evaluation team visited Bangladesh in October 2015. The team went through a rigorous process to evaluate the effectiveness of SIAPS systems strengthening approach meeting the key GOB officials, USAID partners, and civil society groups.

At the same time, they brought up issues with issues regarding SIAPS branding in the Mission; e-TB Manager roll-out; and PQM related activities.

Objective 1. Supply chain management systems of the MOHFW and component procuring entities strengthened

As part of sustainability of the Supply Chain Management Portal (SCMP), MOHFW's PLMC assigned 12 members (PLMC–4, DGFP–3, DGHS–3, and DGDA-2) for their capacity building according to approved hand-over plan. SIAPS prepared an extensive training package for them so that the designated government officials can adequately manage the operation of SCMP. SIAPS successfully completed the migration of Supply Chain Information Portal to SCMP in November and took necessary safety measures for averting any mishaps and ensuring the smooth transitioning of the users. SIAPS collected and conceptualized the requirements of PLMC in a procurement tracking module followed by a series of in-house sessions to incorporate those additional enhancements into SCMP to improve governance and accountability during procurement planning and implementation stage. SIAPS also cleaned, updated, and streamlined the product catalog, and facilitated a session with line directors to get inputs from them and reached consensus on the next steps. SIAPS also prepared and handed over the technical documentations of the progress report against the timeline mentioned in the policy and advocacy plan under SCMP sustainability plan to the MOHFW and the Additional Secretary (Development & ME) has reviewed and endorsed the complied progress report.

The quarterly coordination meeting of PLMC was held on October 14, 2015 with all the procuring entities in the MOHFW. Meeting results included a decision to expedite the process of procurement of medical products and to assign the Joint Secretary (Development) to expedite the process of creating permanent positions for PLMC. PLMC/MOHFW organized the first annual conference on the procuring entities performance within the MOHFW on November 5,

2015, with SIAPS technical assistance. There were 65 MHOFW officials who found the conference useful to helping to identify problems related to procurement and improve efficiency and performance.

The TOE of 500-bed hospitals has already been drafted and submitted to HQ for finalization. Also, the cross-checking of nomenclature with product catalog has been made and shared with stakeholders for review and feedback. The TOE of 50 and 250 beds already needed a revision— it was reviewed on December 10, 2015, in a technical session. One revision was to include some new equipment as there were some new specialists posted in those hospitals. Technical session attendees also discussed how TOE should be used by end users.

SIAPS continued to provide on the job training and guidance to the desk officers of DGFP on the bidding document, Terms of Reference, and a Bid Evaluation Report, which was sent to the World Bank for concurrence. This resulted in a drastic reduction of the WB observations on procurement documents.

A day-long workshop on Letter of Credit opening and management was held in October for the CMSD officials, including new director and assistant directors and desk officers. The workshop provided information of letter of credit procedures and recent changes in the bidding documents to perform efficient procurement through International Competitive Bidding. SIAPS also reviewed and incorporated initial feedback on the standard operating procedures for CMSD, which were then submitted to HQ for finalization.

SIAPS set up discussions on how e-GP system can move forward for CMSD/DGHS in this quarter. In this connection, DGFP introduced e-GP process with a launching ceremony on December 6, 2015, partnering with SIAPS. The honorable minister and state minister and the secretary were attended the ceremony and expressed their strong willingness to introduce the e-GP system in the MOHFW to ensure good governance in the procurement system.

As part of collaboration and strengthening capacity of the other implementing partners, SIAPS developed a training curriculum on basic logistics management and organized a two-day training for 20 SMC warehouse officials.

In the last quarter, SIAPS provided training on the newly introduced inventory tools, such as issue vouchers, bin cards, indent and issue vouchers, inventory control register, for 19 districts DGHS officials and users. As part of institutionalization, SIAPS engaged DGHS high officials in this process. The CMSD Director issued a letter on November 26, 2015, to 19 Civil Surgeons to ensure the use of the inventory tools and requested an update on the logistics reporting status.

In the last quarter, SIAPS submitted quantification and orders (first year of New Funding Model-NFM) for first- and second-line TB drugs using QuanTB to NTP; these were accepted by the Global Drug Facility and the Global Fund this quarter. Funds were released this quarter. SIAPS also adjusted the budget and medicine requirement for next two and half years (July 2015 to December 2017) using QuanTB. All these exercises were discussed in the procurement and supply management working group meeting in December.

SIAPS HQ colleagues visited Bangladesh in November and arranged training for NTP staff, DR-TB sites, and SIAPS team on the desktop version of e-TB Manager. After the training, SIAPS started piloting the desktop version in three DOT sites; Mohakhali Urban DOTS center, Kalikoir upazila health complex (UHC), and Singair UHC.

SIAPS provided shelving (steel racks and plastic palates), environmental control (air conditioning), equipment handling items (trolley, ladder) and cleaning and safety equipment (vacuum cleaner, fire extinguishers, and safety helmets) as part of strengthening warehousing management system in Shyamoly central TB warehouse.

SIAPS facilitated a workshop on drug use review (DUR) of DR-TB drugs, which was arranged by the NTP. SIAPS offered a systematic ongoing, indicator-based approach designed to maintain appropriate and effective use of TB treatment medications. Three DR-TB treatment facilities (National Institute of Chest Disease and Hospital, Chest Disease and Hospital-Sylhet, and CDH -Khulna) were selected for this new intervention for Bangladesh TB Program, and 15 staff members (consultants, medical officers, and senior staff nurses) from these facilities participated. A draft data collection form was developed and finalized to be used in these facilities starting in January 2016.

With SIAPS' technical assistance, the quarterly TB Partners Coordination Meeting was held on December 23. To streamline the meeting discussion and reporting system, a steering committee was formed by NTP where SIAPS helped to develop and introduce a common template for partners reporting.

SIAPS's TB team visited 15 UHCs of five districts and two chest disease hospitals of two different DR-TB sites to monitor the performance of the electronic recording and reporting, as well as feasibility of the sites to run the online system.

The SIAPS technical adviser in the PLMC has provided 15 written opinions on different procurement issues raised in the MOHFW to expedite the procurement process.

SIAPS sponsored Ms. Badrun Nessa, Joint Secretary (Development), MOHFW; and Dr. Abdus Sattar Mia, Deputy Director, CMSD; to attend a five-day international workshop on Materials and Supply Chain Management conducted by Administrative Staff College of India to enhance their capacity on strengthening public sector supply chain management (procurement and logistics) system in Bangladesh.

Partner contributions

PLMC agreed to organize the annual conference next year. Training for SMC was organized on cost sharing basis, i.e., training cost was borne by SIAPS and participants per diem and travel cost was provided by SMC.

Constraints to progress

- Coordination among several ministries, such as Public Administration; Finance; and Law, Justice, and Parliamentary Affairs delays the process of creating permanent position for PLMC.
- Turnover of procurement desk officers and director and other senior level positions at CMSD makes it a challenge to manage huge numbers of packages in CMSD/DGHS.
- Bangladesh is going to introduce the shorter nine-month regimen for the treatment of MDR-TB in 2016. At the same time, under the End TB program, selected patients will receive new second-line drugs. The timeline and monthly projected enrollment of DRTB patients are yet to be finalized. In the meantime, the order for the next year has already been placed and current rate of MDR-TB detection is consistently lower than expected for last four to six months. All these factors complicate patient enrollment and may have an effect on availability of SLD and potential overstock, which might lead to expired drugs if proper plans are not in place.
- There were delays in the required civil engineering for correcting water drainage/leakage and plastering/painting walls at TB central warehouse. In addition, inefficiently handling of disposable items (especially the lab consumables) by NTP store staff caused chemical inhalation hazard in CWH Shyamoly. Some of those exposed to the chemicals reported mild headaches and occasionally vertigo. The SIAPS country team has repeatedly followed up to ensure the good health of the NTP staff and has offered to assist the NTP in adhering to good storage and disposing practices.
- NTP was unable to provide relevant human resources to facilitate the quantification procedure for technical capacity development.

Objective 2. Systems for evidence-based decision making established

The Bangladesh Country Coordination Mechanism (BCCM) made the decision to host its website (www.bccmbd.org) with the Government server. The hosting was done on the DGHS server on December 6, 2015. SIAPS built the capacity of BCCM team and provided technical knowledge and documents for further management.

SIAPS together with USAID, the World Bank, and MOHFW developed the concept of asset management system and conducted a system study to assess the current practice, make recommendations, and outline the way forward. The team visited the following sites in October 2015 to see the existing practice of assets management to finalize the conceptual framework:

- Dhaka Medical College and Hospital
- Shaheed Suhrawardy Medical College and Hospital
- Mugda 500-bed General Hospital

SIAPS advocated for MOHFW to form a technical working group in planning, design, and implementation and sustainability of the asset management system on which MOHFW is currently acting on. Direct uploading of logistics data through Upazila Inventory Management System (UIMS) has improved (100% upazilas have directly uploaded by

November 2015 as compared to 97% in November 2014). As of September 2015, 84% of total sites were maintaining the high data quality standard (timeliness, completeness, and accuracy). At the service delivery point level, the stock out rate for contraceptives remains at less than 1% (data as of Nov 2015; source: www.scmpbd.org). SIAPS worked with DGHS to use DHIS2 to incorporate the electronic logistics reporting system (eLMIS) for priority MNCH medicines. After beta testing in Gazipur, SIAPS trained 955 storekeepers, statisticians, Sub-Assistant Community Medical Officer and Community Health Care Provider from 4 districts (Pabna, Khulna, Faridpur, and Lakshmipur) on reporting priority MNCH medicines to DHIS 2.

NTP notified 20 district authorities to generate reports (TB10, TB11, and TB12) through e-TBM. Since then, 33,227 cases were entered in 2015 (as of September 30, 2015) as opposed to the total registered cases (N = 37,968) in TB cards. The difference between paper-based and electronically generated reports is gradually decreasing (18% in first quarter versus 8% in third quarter) and electronic reporting e-TB Manager is increasing. Performance rate for data quality aspects (timeliness, completeness, accuracy) in these 20 districts has progressively improved. Of sites in third quarter of 2015, 89% fell under "A" Category (high performing), as compared to 62% in first quarter of 2015.

SIAPS successfully commissioned the oxygen plant and supply system in Khulna Shishu Hospital to be set up. A joint inspection team from SIAPS and National Electro-Medical Equipment Maintenance Workshop & Training Center (NEMEMW & TC) have visited the plant and approved the changes. SIAPS worked with six participants from KSH to participate in training on childhood TB management by Bangladesh Pediatric Association in December 2015. SIAPS visited the TB Central Warehouse to introduce the Warehouse Management System (WMS). SIAPS supported customizing the DGFP/WIMS tool to fit into TB Central Warehouse context, which will save project money.

Partner contributions

The DGHS management information systems group and Deutsche Gesellschaft für Internationale Zusammenarbeit have been working with SIAPS and the Java consultant regarding establishing the user profile; they provided authentication and creation of a demo server. In addition, the group is working to be able to upload data directly to the e-LMIS platform of DHIS 2 in the central server. The civil surgeons, Upazila Health and Family Planning officers, and medical officers from four training districts have volunteered as resource personnel for training on loading priority MNCH medicines reports into the DHIS 2 platform. An engineer from NEMEW conducted a joint quality inspection check of the oxygen plant and preparation for inaugurations for the Khulna Shishu hospital.

Constraints to progress

- Entering data directly in the central server/e-LMIS platform of DHIS 2 is a challenge. Also, some of the storekeeper/statistician/CHCP has yet to receive e-mail addresses and passwords to access DHIS2.

- Approval from Khulna Shishu Hospital for operational and implementation of HIS took time.

Objective 3. Pharmaceutical regulatory systems strengthened

At present, obtaining marketing authorization for the sale of medicines in Bangladesh is easy due to inadequacies in the technical documents submitted to DGDA to support registration. These inadequacies lead to unknown quality, safety, and effectiveness of the products in the market. Consequently, SIAPS is providing technical assistance to DGDA to improve the performance of their regulatory systems through a series of interventions. One intervention area is the capacity building of DGDA and pharmaceutical manufacturers on how to develop and regulate medicines according to international standards. To achieve national ownership and sustainable results, SIAPS has facilitated a partnership between DGDA and the Korea International Cooperation Agency for three years that permits the Ministry of Food and Drug Safety of Korea to conduct training/workshops for DGDA officials. A full-day workshop was facilitated on October 19, 2015 to prepare selected DGDA officials for the advanced biopharmaceuticals training in Korea and to familiarize them with the curriculum. At the workshop, DGDA was able to prepare and finalize their Country Report and Presentation on Medicine Approval, Good Manufacturing Practices, and National Lot Release of biopharmaceuticals as requested by Ministry of Food and Drug Safety (MFDS) of Korea before they traveled. In addition, a draft of the Action Plans was developed. DGDA staff traveled to Korea as planned and finalized their Action Plans that will benefit them in identifying their country's current issues, major challenges, and to propose appropriate alternatives and solutions to the identified issues and problems.

Through the technical assistance provided by SIAPS to the Adverse Drug Reaction Monitoring (ADRM) cell of DGDA, several trainings on strengthening the PV system in Bangladesh has been conducted for the focal point persons of the 30 public/private hospitals and pharmaceutical manufacturers, respectively. Therefore, to follow up on the PV activities at these sites and to provide refresher training for existing focal point persons and reassigned staff to government hospitals, a one-day workshop was facilitated on December 17, 2015, for 60 representatives. The workshop provided updates on the ongoing activities of the ADRM cell and created opportunities for six hospitals and pharmaceutical manufacturer's representatives to share the PV activities occurring in their respective organizations. The workshop also helped to identify the existing challenges/gaps in the system, and explored practical solutions to underreporting. Furthermore, a presentation was made to showcase best practices that could be adopted to strengthen PV all over the country and to describe data and their implications from more than 600 adverse event reports received between October 2014 and 2015, with four times increment within this period.

Partner contributions

The ADRM cell planned the training program on PV and invited all the guest and hospitals and pharmaceutical manufacturer representatives.

Constraints to progress

- The training in biopharmaceutical regulation in Korea may have benefited the DGDA officials more if a basic training had been conducted in-country, before the team travelled for the more advanced training.
- There was inadequate transfer of knowledge with regards to raising awareness on adverse event reporting and implementation by the training participants (focal point persons) to their colleagues, when they got back to their respective organizations.

Burundi

Goal: Contribute to a 75% reduction in malaria-related morbidity and mortality in Burundi by 2017

Overall Quarter Progress

SIAPS is working with the Programme National Intégré de Lutte contre le Paludisme (National Malaria Control Program, PNILP), other Ministry of Health entities, and stakeholders to decrease morbidity and mortality in Burundi—a shared goal of government, USAID, and the President's Malaria Initiative (PMI). To this end, SIAPS applies a systems strengthening approach to improve governance and coordination, supply chain management, and malaria case management.

Regarding governance and coordination, SIAPS assisted the PNILP in updating its organizational chart to include a Programme Management Unit (PMU) that will assist in managing the grant from the Global Fund (GF) under the new funding mechanism. Procedures have been updated to formalize these changes in internal governing documents and job descriptions have been developed for positions under the PMU. The PNILP upgraded the status of the existing subunit of Information, Education and Communication (IEC), which previously existed under the Communication and Public Relations unit, to be a separate unit. Related job descriptions were also updated. SIAPS also assisted the PNILP in conducting the RBM partners' quarterly meeting to monitor, evaluate and plan malaria activities.

Regarding supply chain strengthening, SIAPS continued to assist CAMEBU (Centrale d'Achat des Medicaments Essentiels au Burundi/Burundi's Central Medical Store) and the PNILP in carrying out physical inventory count and producing stock status reports to generate data for decision making. Information on overstocked products (injectable artesunate and sulfadoxine-pyrimethamine [SP]) has been used to boost the scale-up of the two products. A session on the use of injectable artesunate has been integrated into the training of health care providers on intermittent preventive treatment in pregnancy (IPTp) to speed up the use of this product. SIAPS informed donors (USAID and GF) on stock status of malaria commodities at the central medical store and highlighted the necessity for timely delivery at central level in order to ensure adequate levels of stocks are maintained at CAMEBU. SIAPS assisted in reviewing and updating supply plans for commodities to be funded by GF under the new funding mechanism.

SIAPS continued to help the PNILP and partners strengthen case management. In this quarter, SIAPS assisted the PNILP in scaling up IPTp using SP. IPTp is a vital intervention for preventing maternal and neonatal mortality. With SIAPS support, the PNILP trained a national level team of eight people, as well as 32 trainers of health care providers and 70 health care providers from two health districts. In FY16 30 health districts will implement the IPTp using SP with SIAPS' assistance through the PNILP. In addition, SIAPS collaborated with CARITAS to assist the PNILP and the Directorate for the Supply and Demand of Health Services (DODS) to introduce the community case management of malaria among children under five, using integrated community case management (iCCM) of major childhood diseases in five new health districts. The PNILP selected community health workers (CHWs) in the five health districts with the support of SIAPS and CARITAS.

Ongoing security concerns and a resurgence of violence in December 2015 have posed challenges for the pace of implementation. The SIAPS Country Project Director and the SCMS Deputy Director who oversees supply chain management for both projects will be working from outside the country until the security environment improves. The safety of all staff members remains of utmost importance in 2016.

Objective 1. Leadership and governance for key institutions (PNILP, DPML, CAMEBU, and districts) improved

Regarding governance and coordination, SIAPS assisted the PNILP in updating its organizational chart to integrate a PMU that will assist in managing the GF's grant. In relation to this, the PNILP updated internal procedures to reflect these changes and developed job descriptions for positions under the PMU that will be filled later. The PNILP upgraded the status of the existing subunit of Information, Education and Communication (IEC), which previously existed under the Communication and Public Relations unit. Related job descriptions were also updated. The new organizational structure will allow the PNILP to benefit from the expertise of the newly integrated PMU in managing the GF grant.

SIAPS assisted the PNILP in conducting the quarterly meeting of the RBM partners' forum in December 2015. Participants analyzed the epidemiological status of malaria in the country, evaluated the implementation of key malaria interventions, and received updates on negotiations with the GF and East Africa Roll Back Malaria Network/Southern Africa Roll Back Malaria Network (EARN/SARN) meeting held in Kampala, Uganda in November 2015. During the meeting, the PNILP presented priority activities for 2016, as well as programmatic and financial gaps.

In the coming quarter, SIAPS plans to assist the PNILP in conducting the RBM partners' quarterly meeting for Q2 of FY16, and to assist the PNILP in producing the annual malaria report for 2015.

Constraints to Progress

None

Partner Contributions

None

Objective 2. Ensure an uninterrupted supply chain mechanism for malaria commodities is in place

SIAPS assisted the PNILP and CAMEBU in producing monthly stock status reports for malaria commodities. Data have been shared with key stakeholders, including PMI, the previous GF principal recipient for malaria Secretariat Exécutif Permanent-Commission Nationale de Lutte contre le Sida/Permanent Executive Secretariat-National AIDS Control Commission (SEP-

CNLS_and the PNILP. A key recommendation for the PNILP was to use injectable artesunate 60 mg and sulfadoxine-pyrimethamine 500/25 mg tablets in the whole country. The two products were overstocked at CAMEBU because prior to October 2015, only five district pharmacies were ordering injectable artesunate 60 mg, and only nine district pharmacies were ordering sulfadoxine-pyrimethamine 500/25 mg tablets. By November 2015, 18 health district pharmacies had ordered injectable artesunate and 11 district pharmacies ordered SP. For the GF commodities, the recommendation was to abide with the planned delivery schedules for ACT in order to maintain adequate ACT stock levels in the country. The reduction of air flights to Burundi due to the current security situation was a constraint for the planned deliveries.

Stock status data have been used to produce procurement planning and monitoring reports for malaria commodities (PPMRm).

Within the framework of the concept note for malaria activities to be funded by the GF from 2015 to 2017, SIAPS assisted the PNILP to update supply plans for malaria commodities for the next two years (2016-17).

In the domain of commodity distribution, SIAPS continued to support the PNILP in analyzing requisition of malaria commodities from health districts and in encouraging districts to abide to the CAMEBU's distribution calendar.

During the quarter SIAPS assisted the PNILP in implementing recommendations from the June 2015 EUV survey. SIAPS assisted the PNILP in distributing copies of the malaria standard treatment guidelines (STGs) to the 11 health centers where malaria STGs were not available during the EUV visits. SIAPS also assisted in the design of a facility feedback form that highlights key EUV findings and suggestions for improvement for each visited health district. The PNILP has expressed its appreciation of this tool and used it during a supervision conducted in December to share findings with facilities, to coach districts and health centers, and to plan for the implementation of corrective actions. To respond to an additional recommendation from the June 2015 EUV, SIAPS assisted the PNILP to conduct a meeting with health districts and provinces in order to implement the distribution of clindamycin 300 mg as a measure to mitigate the expiry of an overstock at CAMEBU.

In the next quarter, SIAPS will monitor stock levels of ACTs and RDTs; assist the PNILP and CAMEBU in conducting the annual physical inventory count for malaria commodities; review malaria commodity supply plans; and implement an EUV survey in January 2016.

Constraints to progress

Security concerns continued to be a challenge in the country, particularly in December. PMI and GF deliveries of malaria commodities registered delays due to the reduction of air flights to Burundi caused by the current security situation. USAID/DELIVER is assessing the feasibility of unloading commodities in neighboring countries' airports and shipping them to Burundi by truck.

In December 2015, three health districts missed the distribution schedule due to security situation in the city of Bujumbura. Concerned districts were rescheduled and served by CAMEBU the following week.

Partner contributions

None

Objective 3. Pharmaceutical services are improved to ensure best practices in malaria case management

Building on previous work in 2014-2015 to develop the IPTp policy using SP, the IPTp implementation plan, and training materials; SIAPS is now assisting the PNILP in scaling up the policy in 12 of the country's 18 health provinces. These 12 provinces are comprised of 30 health districts. The aim is to prevent malaria in pregnancy thereby reducing the prevalence of severe maternal anemia and cases of low birth weight due to placental malaria and thus decrease maternal and neonatal deaths.

During FY16 Q1, SIAPS assisted the PNILP in conducting an orientation session on IPTp policy implementation for a national team, training the first group trainers of health care providers on IPTp policy implementation in six health districts, as well as the first batch of trainings of health care providers in two health districts. In preparation for the training-of-trainers (TOT) at the provincial and district levels, SIAPS assisted the PNILP in conducting a two-day workshop to orient the national team of eight (7 women and 1 man) trainers (six from PNILP and two from the Programme National de Santé de la Reproduction/National Reproductive Health Program [PNSR]). This orientation session aimed to update the team on IPTp, review training materials and develop the timeline for training trainers at provincial and district levels, as well as cascade training to health care providers.

As for the training of trainers for the provincial and district levels, SIAPS assisted the PNILP in training 34 trainers (two women and 32 men) from six health districts of three health provinces. The TOT covered one person from each health province office, four persons from each health district and one person from each hospital in the covered provinces. Trained personnel will assume the task of supervising health care providers on IPTp implementation. The output of the training was the coordinated development of specific IPTp implementation plans for the six health districts.

Concerning the training of health care providers, SIAPS assisted the PNILP to train 70 health care providers (18 women and 52 men) from two health districts on IPTp. Trainings covered service delivery facilities (30 health centers and two hospitals) and two district pharmacies. Overall, PNILP trained two healthcare providers for each service delivery facility and one district pharmacy manager per health district. Trainees include heads of health centers, nurses, midwifes and managers of district pharmacies. After the training an IPTp implementation plan was developed for each of the trained health service delivery facility.

SIAPS collaborated with CARITAS-Burundi (GF's PR for community case management of malaria) to assist the PNILP in introducing the treatment of malaria by CHW under the strategy

of integrated community case management of main child diseases in five health districts. SIAPS assisted the PNILP in conducting a two-day orientation session for a central level team of nine persons (two women and seven men) on iCCM. The team will train trainers of health care providers on iCCM. SIAPS collaborated with CARITAS to assist the PNILP and DODS in selecting and mobilizing CHW in the five health districts based on a test administered to assess candidates' capacities.

In the next quarter, SIAPS will train health care providers from four districts in two provinces on IPTp; organize sensitization events for community leaders on IPTp implementation in the two provinces; update the iCCM training materials; and train trainers of health care providers at the central and intermediate level (province and district).

Constraints to progress

None

Partner contributions

- CARITAS-Burundi
- PNSR

Cameroon

Goal: Ensure availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes

Overall Quarter Progress

During the first quarter of PY5, SIAPS/Cameroon continued to make progress toward achieving the main objective of the project, specifically ensuring access to HIV commodities. The main results are:

- The percentage of facilities that had ARVs stock-outs dropped from 34.6% in the last quarter of PY4 to 28.6% in this quarter.
- In addition, the percentage of products at risk of stock-out that were secured through appropriate emergency supply was 62.1%. This indicator provides an estimation of stock-outs that were prevented through adequate monitoring.
- Health facilities have significantly improved reporting on stock-outs, increasing the reporting rate from 55% in last quarter to 73.5%. This is consistent with the overall good compliance with reporting requirements: 63% of the facilities completed reports in a timely manner, and the overall availability of complete reports at the regional level was more than 85%.
- The completeness of information in OSPSIDA for the four PEPFAR-supported regions has also improved to 67%, as reported this quarter. Indeed, by the end of December 2015 it was expected that completeness had increased to more than 80%, regardless of the work in progress that would not be reflected in this reporting period.
- The percentage of stock records matching physical counts was still maintained around 82%, as in the last quarter.

During this quarter the SIAPS team has adapted the strategy of supervision, stock monitoring, and distribution of HIV commodities to the new PEPFAR guidelines, which calls for differentiated approaches to scale up and sustain facilities. Also, SIAPS has increased the number of health facilities that will receive direct support, from 104 in PY4 to 132 in PY5. This increase in number of sites was related to the need to expand activities into PMTCT stand-alone sites to increase access to Option B+. Supervision has been conducted to all sites during this quarter, while the organization of feedback meetings to discuss supervision results with ART and PMTCT site coordinators continued to represent a very important activity that motivate and empower counterparts involved into efforts to improve access to HIV commodities.

SIAPS/Cameroon used a differentiated approach for technical assistance to scale up and sustain ART and PMTCT sites as follows:

- ART scale-up sites (11 sites): Distribution is demand-driven; full package of capacity building and supervision; average two visits per quarter; monthly active stock monitoring
- PMTCT scale-up sites (34 sites): Distribution is demand-driven; full package of capacity building and supervision adapted to new sites; average two visits per quarter; monthly active stock monitoring

- ART sustained sites (87 sites): Distribution is demand-driven; target package of capacity building and supervision; one visit per quarter; monthly stock monitoring through existing reports
- PMTCT sustained sites (617 sites): Distribution model is by prepositioning of commodities; no capacity building and supervision; bi-annual stock monitoring

In addition, SIAPS initiated a new strategy to improve data availability into OSPSIDA web-based dashboard. SIAPS started piloting a new approach that consists in the use of civil society organizations and associations of people living with HIV and AIDS to assist in data entry. The first region that introduced this approach was the Center Region, and Positive Generation (PG) volunteered to assist in this experience, which was extremely encouraging. As such, SUNAIDS, which is an association of people living with HIV and AIDS (PLWHA), was selected in the Littoral, also showing promising results for this year.

Finally, the first shipment of PEPFAR-funded HIV commodities procured through SCMS arrived to the country on mid-December, and was directly delivered to the regions as previously agreed.

Objective 1: Pharmaceutical sector governance strengthened

For PY5 SIAPS/Cameroon aimed to improve pharmaceutical governance and transparency through three levels of intervention: First, by seeking strategic collaboration among national and international partners through the SIAPS-led medicines cluster and SIAPS' support to other committees, such as the PMTCT Task Force, the LMIS Committee, and the Regional Funds for Health Promotion (RFHP) Partners Committee; second, by improving the efficiency of the Quantification and Stock Monitoring Committee by standardizing reports, as per donors and partner requirements (though this committee continues to face leadership and governance issues which act as bottlenecks to make it efficient); third, by enhancing collaboration with the civil society organization Positive Generation in order to improve data quality of its Treatment Access Watch magazine and enhance the joint analysis of indicators.

As part of the Regional Funds for Health Promotion (RFHP) Partners Committee, SIAPS has actively contributed during this quarter to prepare a workshop aimed at analyzing two different models of sharing technical responsibilities between the RFHPs and the national central medical stores (CENAME). Administrators from the ten RFHPs, CENAME, the Directorate of Pharmacy, representatives of Health Facilities and other experts attended the workshop, which offered a unique opportunity to re-examine the nature of the relationship between CENAME, regional funds, and health facilities with regards to the management of essential medicines under different models. SIAPS made a presentation on procurement and supply management approaches from other countries which could inspire actions to solve bottlenecks in Cameroon. The workshop ended up with a unanimous agreement on the need to maintain the current system in place where CENAME centralizes procurement, and RFHPs ensuring storage and distribution at the regional level. It was also agreed that CENAME should strategically place its regional antennas to increase overall storage capacity and also improve the efficiency of the distribution. In addition, the RFHPs discussed during an internal meeting the option of creating a federation of RFHPs, an idea as inspired by a SIAPS presentation.

In an effort to improve the functioning of the Medicines Cluster, SIAPS has sought collaboration and additional expertise from UNICEF and the WHO to develop a strategic paper on reforming the Cameroon pharmaceutical system from all technical and financial partners working on the health committee. The paper would serve as baseline for future collaboration and financing in the pharmaceutical system, and also could be used as an advocacy document to the Ministry of Health. SIAPS had the opportunity to meet a representative of the Essential Medicines Department of WHO Geneva, which helped arrange a two-day meeting on this topic along with SIAPS. UNICEF also agreed to internally seek the expertise needed to provide comments during the elaboration of the document.

SIAPS collaborated to revise the reporting system of Positive Generation, a Cameroon Civil Society Organization partner that promotes the right to quality health care access to the Cameroonian population through its weekly *Treatment Access Watch* (TAW) magazine. PG suffered from a computer crash that affected its system in March 2015 with a total loss of electronic data produced from 2009 to March 2015, resulting in PG not producing TAW. These triggered the need for other data storage technology, such as the development of a dashboard or the use of Google Drive to store and eventually publish results. In addition, PG and SIAPS committed to conducting routine data comparison starting in January 2016 with the objective of analyzing the added value of PEPFAR technical support in the selected regions versus non-PEPFAR regions, especially for the indicators related to HIV commodities availability.

Partner contributions

Not applicable

Constraints to progress

During PY4 SIAPS deployed and reorganized the staff of Cameroon to prioritize the activities at regional and health facility level. This resulted in a significant improvement of SIAPS indicators, especially those related to the availability of HIV commodities and management capacity at ART and PMTCT sites. However, the consequence was also that the office in Yaoundé faced some difficulties to respond to unexpected meetings soliciting SIAPS expertise at central level, and especially those linked to pharmaceutical governance. While SIAPS has identified the committees and activities that may result in better outcomes, it may be missing some opportunities in influencing and advocating for better governance, especially in workshops organized by the Department of Pharmacy and Laboratories (DPML).

In addition, the Quantification and Stock Monitoring Committee did not meet this quarter due to the very busy agenda of NACC, which was developing the Grant Making Documents for the Global Fund's New Funding Model.

Objective 3: Use of information for decision making increased

SIAPS-supported health facilities have achieved good results in complying with reporting requirements. At least 80% of reports are now completed and submitted every month from ART

and PMTCT sites to the regional authorities. Data is reported monthly and is analyzed to improve stock monitoring, prevent stock-outs, and identify problems related to storage and distribution at the regional and facility level. Data and information reviews at the regional level are normally conducted each quarter at the Regional Feedback Meetings. The other intervention under this objective concerns the implementation of the dashboard OSPSIDA. After having experienced significant problems during the implementation of the tool in PY4, SIAPS will concentrate its efforts on making the tool fully operational in the four PEPFAR-supported regions (Center, Littoral, North West and South West) through the engagement of civil society organizations (CSOs) to help in data entry.

SIAPS-supported sites increased from 98 to 132 in PY5. These additional 34 sites are concentrated in two health districts: Djongolo (in the Center Region) and Deido (in the Littoral Region) are actually PMTCT standalone sites that PEPFAR has categorized as scaling-up sites, meaning they have a potential to significantly increase access to Option B+. Out of these 34 PMTCT sites, the team found that one facility in the Center Region did not exist (likely due to a mistake during data analysis) while two other facilities were indeed the same facility known by two different names. As such, the total number of new PMTCT sites supervised this quarter was 32 instead of 34.

In September 2015, the Regional Quarterly Feedback Meetings were organized to discuss the results of last quarter, and to some issues that required specific attention, including the use of minimum and maximum stock levels for internal monitoring and reordering, and also to discuss the adequacy of the internal supervision tools presented by SIAPS in April. In the Center and Littoral regions, one additional day was planned for new PMTCT sites to benefit from SIAPS support for the first time, and for district health coordinators to introduce the program and provide some basic training on pharmaceutical management.

In a change from PY4, the number of visits conducted to each site was customized following the PEPFAR priority categorization of sites (scale-up versus sustained sites). Some additional sites were added as priority if they were experiencing specific difficulties. As such, 35 facilities received at least two visits while the rest received only one.

SIAPS has explored the possibility of integrating the quarterly feedback meetings of PMTCT stand-alone site into other district activities with the Regional NACC and with the two District Authorities. The reason for this is that PMTCT clinics are integrated in maternal and child health programs, which are normally coordinated at the district level. During this quarter, following the supervision, feedback meetings were organized and conducted in the Center and the Littoral regrouping the PMTCT sites. The Regional Feedback Meetings for ART and ART/PMTCT sites are planned for the month of January.

In relation to the implementation of OSPSIDA, the availability of information in the four PEPAR-supported regions has significantly improved. By the end of December 2015, the Center and Littoral regions data were completed until the month of November 2015 by CSOs, and delays averaging two months were still present in the South West and North West. Using CSOs makes data entry cost minimal with payment of less than US$15 by person day, which represents between US$100-150 per month for data entry. If OSPSIDA was fully implemented

in the four PEPFAR-supported regions, this would represent between 70-75% of the patients on treatment which could provide sufficient information to monitor stocks at national level, and prevent major problems.

Partner contributions

Not applicable

Constraints to progress

Keeping the stock levels at health facility within minimum and maximum values remains still problematic, especially at the Center Region, given the lack of storage capacity of the RFHP to maintain its own minimum stock levels. This is aggravated by the long lead times of CENAME which requires at least one month delivering the products to the RFHP. SIAPS has facilitated the inclusion of a budget in the NFM Grant Making documents to allow the RFHP of the Center to hire additional storage space. However effective implementation may still need some additional months.

Objective 4: Financing strategies and mechanisms to improve access to medicines strengthened

Under this objective SIAPS/Cameroon PY5 reports on contributions that are made to strengthen the capacity of the National AIDS Control committee (NACC) to deal with pharmaceutical challenges than hamper access to funds from the Global Fund or other donors.

During this quarter SIAPS extensively participated in the Grant Making process which relates with the development of the documents that NACC will sign as Principal Recipient of the Global Fund Grant. SIAPS led in its office in Yaoundé the review of the health commodities quantification after having obtained the final targets for the program. Two representatives from the NACC, CDC and SIAPS collaboratively revised the full quantification exercise. SIAPS also put together the quantification report that needed to be submitted to the Global Fund, along with the quantification results and the budget for the procurement of health products.

SIAPS also supported the NACC in responding to the questions that had already arrived from the Global Fund Secretariat related to quantification and management of the products. SIAPS was associated in the estimation of the budget for activities aiming to reinforce the pharmaceutical system under the health systems strengthening module. Although the NACC had already attributed a budget to reinforce CENAME needs in vehicles and rental, SIAPS advocated for support to the RFHPs of the Center Region to receive some financial aid to rent a store medicines from the Global Fund programs. SIAPS obtained that a budget would be allocated to support the implementation of the electronic Logistics Management Information System (e-LMIS) which is supposed to be co-financed by different partners, but with some financial gaps still needed to be addressed. Finally, SIAPS requested the inclusion in the budget of additional vehicles and technical advisors at the non-PEPFAR supported regions, as a mirror to the strategy that SIAPS has implemented in the four PEPFAR regions.

Partner contributions

Cameroon is eligible to receive funding from the World Bank under the Global Financing Facility. GFF may be an additional source of financing to strengthening the pharmaceutical system. The Work Bank is currently looking into this area, as stock outs of medicines affect the effective implementation of the Performance Based Financing project in the Littoral, the South and the North West.

Cameroon is one of the countries currently benefiting from the European Commission funding to strengthen pharmaceutical systems. The program finishes in September 2016, and results to date have not been conclusive, which may put additional funding in the follow-on project at stake.

Constraints to progress

No particular constraints highlighted in this quarter.

Objective 5: Pharmaceutical products and services improved to achieve health outcomes

For PY5 this objective includes activities aiming at ensuring efficient distribution of PEPFAR-funded commodities to the Regional Funds for Health Promotion (RFHP) and to ART and PMTCT sites. In addition, SIAPS assists GIZ and national partners in an on-going initiative that intends to standardizing the procedures manual of the RFHPs. Although the consultants leading this process were funded by GIZ, SIAPS provides technical oversight to ensure quality of the chapters related to procurement, warehousing and distribution of health products.

During this quarter, SIAPS has worked closely with SCMS and USAID to finalize the procurement planning and ordering of ARVs for PMTCT Option B+ and pediatric ARVs. The final figures needed to be revised as the PEPFAR strategy in Cameroon for both PMTCT and the Accelerated Treatment Children (ACT) Initiative evolves. The first deliveries for PMTCT commodities arrived to the country in the second week of December 2015, and direct deliveries to the RFHPs were successfully conducted.

SIAPS will proceed to the distribution of the products mostly in January 2016, as there is a need to verify that the implementation of Option B+ is happening in the four PEPFAR regions as assumed during the development of COP15. According to SIAPS observations there may be a delay in the achievement of targets. For example, among the 32 PMTCT stand-alone sites visited in this quarter, four had not yet started implementation of Option B+, while in principle these were considered priority sites for PEPFAR. Therefore, it is also likely that sustained sites not directly supervised by SIAPS are also experiencing some delays, thus the need to verifying targets and current situation before deciding on where to preposition ARVs.

During this quarter, SIAPS also facilitated NACC approval for the procurement of Lopinavir/ritonavir pellets instead of syrups. Cameroon will be the first country procuring this new formulation that has obtained US FDA and WHO approval, and which has important advantages for administration to children and preservation. The product will likely arrive to the

country late January or February 2016.

In relation to the procedures manual of the RFHPs, the process was delayed due to the administrative barriers in the management of the funds by the government. As such, although this activity is financially supported by GIZ, the money will be managed by the government and will follow the same administrative procedures as public funding, which seems to be the cause of the slowness.

Partner contributions

No additional information this quarter.

Constraints to progress

Bottlenecks at CENAME continued to be a risky factor in the distribution system for non-PEPFAR commodities. RFHPs often do not receive the products or the quantities requested despite the confirmed availability at the central level.

Democratic Republic of the Congo

Goal: Assure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes

Overall Quarter Progress

SIAPS/DRC assisted the Faculty of Pharmaceutical Sciences (FOPS) to finalize its first five-year strategic plan (2016/20) and an annual operational plan to guide implementation. SIAPS also initiated the appointment process for a communication specialist to translate the strategic and operational plans from French to English to widen the audience for those tools. Previously, FOPS submitted the strategic plan to the World Bank as a first step (and a World Bank prerequisite) in applying for financial support. FOPS was the first training institution in DRC to meet this requirement.

SIAPS also supported the training of provincial health care workers on the use of the District Health Information System (DHIS 2.0) software that was adopted by the MOH to capture medical and pharmaceutical data at the health facility level for submission to the next level (health zone).

In this reporting quarter, SIAPS provided financial and technical support to the National Tuberculosis Control Program (PNLT) to train 142 health care workers on pharmaceutical management, use of management tools, and reporting.

Objective 1. Pharmaceutical sector governance strengthened

In October 2015, SIAPS participated in the NMCP workshop for elaboration of the 2016–2020 National Malaria Strategic Plan. SIAPS' focus was on issues pertaining to supply chain management and indicators related to the availability of antimalarial drugs and related commodities. In November 2015, SIAPS supported a two-day workshop on coordination of NMCP partners involved in the supply chain of malaria commodities. The topics of the workshop were strategies to tackle the theft and illegal sale of subsidized antimalarial commodities, especially long-lasting insecticide-treated mosquito nets; and finalizing the memorandum of understanding to allow collaboration between all of NMCP's partners.
In October 2015, SIAPS supported the DPM to hold the quarterly registration session in which 390 dossiers were received, 374 were analyzed, of which 148 (38%) were registered and authorized, 226 (58%) were deferred because of incomplete information, and 16 (4%) were put on the backlog and referred to next session. None were rejected. This brings the cumulative number of registered medicines in DRC to 4,350 from only about 400 in 2011 at the beginning of the SIAPS project.

The DRC provinces have been restructured from 11 to 26 health provinces, bringing new challenges. SIAPS is helping the new provincial health divisions (DPSs) in USAID-supported provinces establish Provincial Medicine Committees (CPMs) to ensure that MOH's partners' support is well coordinated in those new health provinces. During this quarter, SIAPS provided support to three new provincial health divisions in Tanganyika (Kalemie), Lomami (Mweneditu),

and Haut-Lomami (Kamina) to establish the CPMs to ensure that medicines are used and managed appropriately. During the next quarters, SIAPS will continue to provide support to other new DPSs to establish their respective CPMs to improve the use of medicines.

Objective 2. Capacity for pharmaceutical supply management and services increased and enhanced

SIAPS continued to provide support to the FOPS to revise its training curriculum in the areas of supply chain management, rational use of medicines, pharmacovigilance, antimicrobial resistance, and providing pharmaceutical care. SIAPS also worked with the FOPS to ensure that the revised training curriculum enables the graduated pharmacists to respond to the public's health needs, especially in the management of malaria, TB, HIV and AIDS, and maternal and child-related diseases. During this quarter, SIAPS also supported FOPS to finalize the competency framework for pharmacists, which will be the backbone for the revised curriculum and will guide the overhaul of the current curriculum.

SIAPS supported the training of health care workers in three USAID-supported provinces on the use of DHIS 2.0 software that was adopted by the MOH to capture data at the health facility level for submission to the next level (health zone), and DHIS 2.0 will be piloted during PY5Q2.

SIAPS continued to support the National Malaria Control Program (NMCP) in the training of health workers in malaria case and commodity management. During this quarter, 81 health workers were trained (15 females and 66 males) for a total of 965 health workers trained according to the current guidelines as recommended by NMCP between January and December 2015. Simultaneously, SIAPS disseminated the recent malaria STG that included the use of artesunate suppository and injectable for pre-referral treatment and effective treatment of severe malaria.

During this quarter, SIAPS provided technical assistance to the PNLT to conduct training for 142 health care workers (90 men and 52 women) on pharmaceuticals management, management tools, and reporting. The training workshop was financially supported by SANRU, a principal recipient of the Global Fund. The support consisted of providing training material and leading the training processes.

From November 23-27, SIAPS provided technical support to the MOH (PNLT) to conduct the quantification of anti-TB medicines to be purchased in 2016 by the Global Fund. The MOH used the QuanTB tool for this quantification exercise.

In the past quarter, SIAPS/DRC supported the DPM to install and set the registration software SIGIP-ARP (Integrated System of Computerized Management of regulatory process within a Drug Regulatory Authority). With SIAPS' financial support, two experts from Burkina Faso trained 25 DRC-DRA staff on the use of the SIGIP-ARP. This quarter, data of registered products was imported and migrated to the SIGIP-ARP software.

To facilitate the use of pharmaceutical management software (APISOFT) in the regional medicine stores in Katanga province (CDR CAMELU), SIAPS assisted in the development of a

basic and simplified APISOFT operating manual to ensure that all APISOFT users are comfortable using this important management tool in the regional depots.

Partner contributions

SANRU

Objective 3. Utilization of information for decision making increased

Following the training of DHIS 2.0 this quarter (see Objective 2), DHIS 2.0 will be piloted in eight to ten health facilities to assess its pharmaceutical component performance before rolling it out to other health facilities. Based on the findings of the pilot study, SIAPS will support the MOH to develop a pharmaceutical module for DHIS 2.0 to facilitate the use of the software by pharmacy staff.

During this quarter, SIAPS supported the NMCP to conduct malaria data validation sessions in four provinces (Kinshasa, Haut Katanga, Haut Lomami, and Kasai Oriental).

In November 2015, SIAPS finalized the report of the last EUV conducted in September 2015. This report summarized the key findings that were shared with all PMI stakeholders in the country. In addition, SIAPS/DRC shared the last EUV findings at the Central Africa Rollback Malaria Network meeting held in Kinshasa from November 25-27, 2015. The key findings are as follows:

- Less than 26% of health facilities had an appropriate level of stock according to established max/min policies for malaria commodities on the day of the visit. To improve this situation, SIAPS recommends that PMI implementing partners, jointly with MOH, improve the distribution system for malaria commodities from health zone offices to their respective health facilities.

- Only 31% (440/1,370) of health workers are trained in the most recent malaria case management guidelines, which include the use of rectal and injectable artesunate for severe cases. SIAPS recommends that health workers be trained on the guidelines in PMI-supported health facilities. SIAPS made this recommendation to IHP Plus, the interim project, which is a bridge between IHP (the main PMI project) and its follow-on project.

- Approximately 17% of malaria cases are not confirmed by malaria RDT or microscopy. SIAPS has recommended to both the MOH and PMI implementing partners that they conduct supportive supervision visits on a regular basis to improve this situation.

- On the other hand, on the basis of malaria commodity stock data provided by SIAPS, PMI implementing partners issued 1 million treatment courses of sulfadoxine–pyrimethamine (Fansidar) to the Global Fund principal recipients to be distributed in Global Fund-supported health zones experiencing stock outs.

Objective 4. Financing strategies and mechanisms strengthened to improve access to medicines

The DRC health financing remains weak because of insufficient budget allocation by the government, so health services depend heavily on global partners' support. However, when there is a delay in medicine supply by global partners or when these donor-funded projects close out, health facilities experience stock outs of pharmaceuticals due to the unavailability of funds to purchase medicines and supplies. To address this critical issue, the MOH recommended that medicines donated by partners should be dispensed to patients who are charged a fee of only 30% of the medicines Ex-work value. The 30% should be recovered at the health facility level and would be used as a source of revenue to back up the medicines capital fund used to purchase medicines in case of supply delays and project close-outs. During the previous quarter, SIAPS provided support to the five USAID-supported provinces to assess the level of funds generated so far, and it was revealed that health facilities under USAID-IHP Plus managed to recover up to 67% for some health facilities, with an average fund recovery rate of 37% in Sankuru province.

During this quarter, SIAPS supported the DPS of the Kasai Central province to audit the level of fund recovery in targeted health zones. The audit revealed that the lowest and highest recovery rates are 9% and 52% of the expected amount, with an average recovery rate of 25%.

So far, the audit has been conducted in three provinces (Sud Kivu, Sankuru, and Kasai Central) and findings from the three audits show that the average recovery rate remains quite low (under 50%). To address this issue, SIAPS plans to support DPS in conducting regular support supervision visits and audits at health zones and facilities to encourage good financial management practices and deter bad ones.

Objective 5. Pharmaceutical services to achieve desired health outcomes improved

During PY5, SIAPS received PEPFAR funds and was entrusted to support the HIV program (PNLS) in Katanga province to ensure good management and distribution of ARVs and related HIV commodities from the regional medicine depot (CDR CAMELU) to ART sites. Eleven PEPFAR saturation zones in the Haut Katanga province and maintenance PEPFAR zones in the Lwalaba province are included in the scope of this support. During this first quarter, SIAPS conducted a baseline study and situation analysis on the availability and management of ARV drugs at 153 ART sites under PEPFAR in the Haut Katanga province. The baseline will be used to quantify improvements and estimate the level of support needed for those PEPFAR ART sites. The findings and results of this study will be reported in a second quarterly report.

SIAPS/DRC received the first consignment of the printed STGs with support from SIAPS headquarters in Arlington, VA. The customs clearance processes have been finalized and a dissemination plan has been developed. During the next quarter, SIAPS will support the MOH to disseminate the STGs and train health care workers on their use.

In the last quarter, SIAPS DRC supported Tshopo (Province Orientale)'s DPS to establish five DTCs in the Tshopo District. These DTCs are the first in the previous Province Orientale and are

expected to play a critical role in improving medicine use, including prescribing and dispensing practices. SIAPS supported the DPS to conduct training for key members of the five DTCs to enable them to carry out DTC activities in their respective hospitals. In addition, a medicine use baseline study was conducted in two hospitals and the results were shared with all DTC committee members to show them the approach for conducting DTC activities.

Dominican Republic

Goal: Increase the availability of critical medicines and diagnostic materials, including the ones used for HIV, AIDS, and tuberculosis through the implementation of the different elements of the SUGEMI system and building the capacity of national counterparts to effectively and efficiently operate the integrated system.

The SUGEMI pharmaceutical management system continued to operate as expected in this quarter, with the majority of health facilities reporting their data and receiving feedback (1388/1400, 99%). ARV availability in health facilities remains high (92%). The estimation of needs for 2016 considers the progressive adoption of the 90/90/90 goals.

Objective 1. Pharmaceutical sector governance strengthened

SIAPS supported the adjustment of 2016 procurement plans for the MoH's medicines for hospitals and primary health facilities, ARVs, and high-cost medicines, taking into consideration the assigned budget. The priority criteria have been included in the National List of Essential Medicines and national protocols as a reference. SIAPS supported the revision and validation of the therapeutic guidelines and medicines formulary for primary health facilities, with the final edition of both documents to be printed and distributed during Q2 of FY16. In December, SIAPS organized a meeting to discuss with national counterparts and decision makers the preliminary results of a study on medicines consumption profiles in Dominican Republic. The feedback provided by the participants will be useful for the Certified Course on Rational Use of Medicines, set to be implemented in February 2016 in partnership with the Universidad Central del Este.

During the previous quarter, SIAPS finalized technical reports of the estimation of needs for 2016 national pooled procurement, and individual reports for the estimation of need for 2016 procurement of disease control programs: Maternal and Child Health; High Cost Medicines Program, HIV/AIDS and TB. During this quarter, a consolidated report was uploaded to the SIAPS webpage: http://siapsprogram.org/publication/procurement-planning-for-medicines-and-supplies-in-the-public-health-system-of-the-dominican-republic/

Partner contributions

There were no partner contributions this quarter.

Constraints to progress

There were no constraints to progress this quarter.

Objective 2. Capacity for pharmaceutical supply management and services increased and enhanced

During this quarter SIAPS finalized the educational modules for a certified course (diploma) on rational use of medicines. In December SIAPS conducted a workshop to train the facilitators of the certificate course. The implementation of the course is scheduled for February 2016. During

this quarter, SIAPS supported the training of nine regional health services personnel in the analysis of SUGEMI pharmaceutical management reports, and continued supporting on-site trainings for the implementation of SUGEMI procedures in eight major hospitals. For the next quarter, SIAPS will scale the implementation of SUGEMI to the rest of the hospital network through a training of trainers course and cascade trainings.

Partner contributions

The certified course on rational use of medicines will be implemented in partnership with the Universidad Central del Este.

Constraints to progress

There were no constraints to progress this quarter.

Objective 3. Pharmaceutical management information available and used for decision making at different levels of the health system

The July-September 2015 SUGEMI quarterly bulletin was disseminated to a wide audience in October 2015, and it is also available in the MoH website. SIAPS has supported the revision and update of the SUGEMI information and monitoring system. During this quarter, SIAPS trained nine regional health services personnel in the interpretation and use of pharmaceutical management indicators for decision making. SIAPS developed terms of reference to adjust the SUGEMI pharmaceutical information system and transfer the administration to national counterparts. During the previous quarter, SIAPS developed a proposal for a monthly report that PROMESE, the national logistics agency, must provide to its clients with data on procurement, requisition, dispatch and inventories. During this quarter, SIAPS presented and discussed the proposal with PROMESE authorities and technicians, and agreed on an implementation plan.

Partner contributions

There were no partner contributions this quarter.

Constraints to progress

There were no constraints to progress this quarter.

Objective 4. Improved allocation of resources for procurement and pharmaceutical management-related operations

During this quarter SIAPS consultants met with MoH counterparts and USAID officials to discuss the implications of the financial gap between the planned budget for the procurement of ARVs, and the resources that were finally assigned by the Ministry of Finance. SIAPS' support to improve HIV/AIDS financial strategies were presented at the International Society for Pharmacoeconomics and Outcomes Research Congress in Milan, Italy in November 2015. The two poster presentation were: "Closing the Financial Gap of Antiretroviral and HIV supplies for

Sustainability of HIV National Response in the Dominican Republic" and "Success story: Strategies- Based on Evidence- to Rationalize the National High Cost Drugs List in the Dominican Republic."

Partner contributions

There were no partner contributions this quarter.

Constraints to progress

There were no constraints to progress this quarter.

Objective 5. Pharmaceutical services improved to achieve desired health outcomes

During this quarter SIAPS continued supporting the integration of eight major hospitals to SUGEMI. A training of trainers to scale up and accelerate the implementation is scheduled for next quarter. SIAPS presented and discussed with MoH authorities the operational plan for the transfer of family planning commodities to SUGEMI. The transference of the inventory from provincial to regional warehouses is scheduled for the first quarter of 2016.

Partner contributions

Baseline study was technically and financially supported by UNFPA.

Constraints to progress

There were no constraints to progress this quarter.

Ethiopia

Goal: Strengthen pharmaceutical systems to ensure access to quality pharmacy services that will lead to improved health outcomes

Overall Quarter Progress

In Q1 of FY16, two regional states, Oromia and the Addis Ababa city administrations, have enacted Auditable Pharmaceutical Transaction and Services (APTS) regulations. During SIAPS' tenure, eight pieces of legislation have been drafted, of which seven have been enacted (Amhara; Dire Dawa; Tigray; Southern Nations, Nationalities, and Peoples Region [SNNPR]; Oromia; Addis Ababa regions; and Federal). The only regulation in the pipeline yet to be enacted is the one for Harari region.

In this quarter, APTS implementation started in three hospitals: Dilla University Hospital in SNNP, Alamata Hospital in Tigray, and Haromaya Hospital in Oromia. As of the end of this quarter, APTS is being implemented in 48 health facilities throughout the country.

Similarly, 14 new hospitals from seven regional states have started providing clinical pharmacy services during the quarter; this brings the number of health facilities that have started clinical pharmacy services to 75.

The support USAID/SIAPS provides to health facilities to strengthen medicine use education has continued. In this first quarter of FY16, for example, five health facilities from the East Amhara region (Enat, Mehal Meda, Boru Meda, Hidar 11 hospitals, as well as Kombolcha health center) have conducted 50 sessions on medicine use health education in which 1,816 people (890 females [49%] and 926 males [51%]) benefited. The sessions mainly focused on overall rational medicine use (RMU) (32%); antimicrobial resistance (AMR) (19%); reproductive, maternal, neonatal, and child health (RMNCH) (14%); adverse drug events (ADEs) (12%); ART/opportunistic infections (8%); malaria and antimalarials (6%); and adherence (8%).

The number of articles produced on AMR containment by journalists that were disseminated through print and electronic media has increased by 1.4% (221) in this quarter compared to the cumulative figure in the previous quarter (218). Journalists showed great interest in producing and disseminating articles. There are many more articles disseminated through different media outlets and this number represents only the ones SIAPS was able to capture by contacting the media personnel that were recently trained on AMR.

During the quarter, a medicine use evaluation was conducted in one health facility, Felegehiwot Hospital in Amhara region. The hospital DTC selected ceftriaxone as the candidate medicine and conducted the drug use evaluation retrospectively using patient charts with full engagement of physicians and clinical pharmacists assigned to the task.

Based on requests from health facilities, face-to-face discussions (in-person consultations) were conducted at five health facilities. These in-person consultations with service providers are contributing to increased commitment from health facilities (through their DTCs). As a result,

the cumulative number of health facilities that are reporting ADRs has increased by 16.4% (from 152 to 177) during the quarter and the number of reports has increased by 8.1% (from 844 to 912).

In this quarter, technical assistance was provided to nine health facilities to improve pharmacy premises and storage areas as part of SIAPS support to initiate implementation of APTS. Health facilities have used their own resources to conduct actual renovation and infrastructure improvements.

During the quarter, the D4T phase-out report was finalized and submitted to headquarters for further comment and review. The results of the report showed a successful transition of patients from stavudine-based combinations to safer regimens.

As a member of the technical working group (TWG) established to oversee the national assessment on the impact of the pharmaceutical supply chain on health insurance, SIAPS is contributing to the development of a proof of concept for the assessment, i.e., expanding the scope to incorporate RMU and pharmacy benefit management.

Objective 1. Pharmaceutical sector governance strengthened

During the quarter, the Tigray regional state APTS regulation dissemination workshop was conducted in coordination with the regional conference of hospitals. Representatives from all 17 hospitals (board members, chief executive officers, pharmacy heads, finance heads, matrons, clinical pharmacies, auditors, maternal and child unit heads) attended the workshop, as did regional regulatory experts; Pharmaceutical Fund and Supply Agency (PFSA) managers; Food, Medicines, and Healthcare Administration and Control Authority (FMHACA) regional experts; and Tigray Regional Health Bureau (RHB) experts and partners. The regulation was presented by a lawyer from Tigray RHB. The participants appreciated the RHB's efforts to develop the APTS regulation and had asked the bureau to facilitate the endorsement of a draft APTS directive that was distributed to all hospitals before the workshop. Parallel to the hospitals conference, APTS review meeting was conducted. All hospitals pharmacy heads and clinical pharmacies, Tigray-RHB experts, PFSA shire and Mekelle branch managers, north east FMHACA branch experts and partners attended the event. Issues raised and discussed included APTS implementation status, strength, weaknesses, challenges, and way forward. The participants appreciated the discussions and requested the bureau to have this kind of discussions at the end of each fiscal year.

In collaboration with Amhara RHB, SIAPS organized a workshop to standardize SOPs for implementation of APTS and develop job descriptions for cashiers, auditors, pharmacy accountants, and pharmacy professionals. The workshop was attended by 22 participants drawn from the RBHs, audit, finance, PFSA Bahirdar hub, seven hospitals (with the best performance in implementing APTS) and SIAPS experts. At the end of the workshop a draft document was produced.

To support the Federal Ministry of Health (FMOH) and PFSA to facilitate coordination among RHBs on antimalarial drug management (AMDM), the National Malaria Commodities TWG

(MTWG) (composed of PFSA, FMOH, USAID-PMI-Ethiopia, partner organizations working on logistic support, and SIAPS Ethiopia) held its review meeting in Bahirdar town; representatives of the TWG and malaria and logistics managers from all 11 regions and city administrations attended the meeting. The main agenda focused on planning the transitioning of malaria commodities distribution from the RHBs to PFSA. The meeting also finalized the draft terms of reference (TORs) for the establishment of MTWGs in all regions. Accordingly, the first regional MTWG was established in eastern Ethiopia during this quarter, one under Dire-Dawa PFSA hub and the second one under the Jigjiga hub in the Somali region (which was established with the assumption that the Jigjiga hub will be functional soon). SIAPS actively participated in all TWG meetings.

Partner contributions

- Efforts made by Addis Ababa RHB to facilitate approval of APTS regulation by city government council of cabinet
- Tigray RHB covered part of the expenses for the workshop
- Hospitals covered transport and fuel expenses
- PFSA, FMHACA, and Tigray RHB actively coordinated the workshop and review meeting

Constraints to progress

N/A

Objective 2. Pharmacy services at facility level improved

In Q1 of FY16, four different training events on APTS (2), an SOP manual (1), and AMR and RMNCH (1) were organized; 174 professionals benefited from the training, of which 81 (46.5%) were females.

Three health facilities received onsite training and mentoring to implement the APTS tools. During these events, 121 pharmacy professionals, accountants, cashiers, and auditors benefited from the training.

During this reporting quarter, training provided to journalists covered topics on the prevention and containment of AMR; RMU; RMNCH medicines use; drug and substance abuse and their consequences; and medicines safety. In this training, 23 participants from different mass media agencies and outlets including radio, television, newspapers, magazines, and public relations offices of different sector organizations attended. Unlike previous rounds of training, additional topics on RMU of RMNCH products were included.

In the reporting quarter, clinical pharmacy services were initiated and reports submitted from six hospitals (Ras Desta, Yekatit 12, Kuyu, Haromaya, Alamata, and Korem). Based on SIAPS' efforts to expand clinical pharmacy services to wards where mothers and children are treated, USAID/SIAPS received reports from four hospitals in the East Amhara region. These hospitals have a mechanism in place that disaggregates clinical pharmacy reports by ward. There are two

hospitals that practice clinical pharmacy at the maternity ward. During the reporting period, 39 drug therapy problems were identified, of which 37 interventions were made and 26 were fully accepted. Similarly, four hospitals practicing clinical pharmacy services at pediatric wards identified 143 drug therapy problems, for which 114 interventions were made; of these, 68 were fully accepted.

Onsite technical support and mentoring was provided to health facilities all over the country to improve the identification and management of treatment errors, adherence counseling, and pharmaceutical care activities for patients on ART and hospitalized patients. For example, eight hospitals in the West Amhara region (Gondar, Debark, Finote Selam, Debremarkos, Motta, Felege Hiwot, Debre tabor and Metema) were supported; the hospitals were able to serve 1,384 patients out of which 767 (55.4%) now have a documented patient medication profile form. Similarly, 442 drug therapy problems were identified; of those, 367 (83%) had an intervention and 301(82%) were fully accepted.

A number of RMU and AMR topics were broadcast through the different mass media outlets with substantial technical support from SIAPS during the quarter. These included television and radio spots (five each) on antibiotics and proper use of antimicrobials and panel discussions on antimicrobial use, resistance prevention, and containment in Ethiopia. In addition, the *Addis Admas Newspaper* and *The Ethiopian Herald* (both print media) disseminated similar information.

During the quarter, 160 ADE reporting forms, 120 allergy cards, and 160 newsletters were distributed to the facilities where face-to-face discussions were conducted. As a result of regular ADE reports, one regulatory measure was taken on Ringer's lactate IV infusion and the manufacturer was compelled to recall the product and investigate the quality concerns that were being reported repeatedly.

SOPs were developed during this quarter to standardize and guide the establishment and provision of drug information services at the health facility level.

In Q1, USAID/SIAPS produced and shared the baseline assessment of the availability of priority lifesaving RMNCH medicines and commodities that was conducted in 33 hospitals.

Partner contributions

- PFSA played a leading role in facilitating the DTC training materials development workshop and printing of the DTC manual
- WHO financially supported the printing of the DTC manual
- FMHACA facilitated journalists' training
- SIAPS collaborated and interacted with partners, such as health facilities, FMHACA, the Ethiopian Public Health Institute, WHO, CDC, FMOH, the Ministry of Livestock and Fish, the National Animal Health Diagnostic Investigation Center, Addis Ababa University, Ethiopian Society of Internal Medicine, researchers, AMR containment advisory committee members, and many others

Constraints to progress

- Health facilities are working hard to improve their service, but they are not well aware of documenting and communicating results through reports to partners and stakeholders; formats are supplied and supported on how to document and communicate results to concerned bodies
- Poor commitment from pharmacy professionals and weak management support
- Hospitals do not record and report drug information and clinical pharmacy services properly for different reasons, such as staff turnover, shortage of manpower, commitment problems, etc.; report quality is still another issue

Objective 3. Capacity to use information for decision making strengthened

Support to FMHACA to develop an automated regulatory information system that facilitates medicine registration continued during the reporting quarter. An organizational change management document was developed and approved. Two steering committee meetings were conducted and implementation of the change management started through a team of experts established to work as a change management team. In addition, three SOPs were drafted and are under review by the change management team for finalization. The super users and the TWG members have been involved in reviewing the medicines regulatory information system software to see the incorporation of feedback provided in the past. Legacy data is still under the cleaning process and FMHACA is expected to make it available before the system goes live, as this is a prerequisite for automating processes, such as issuing purchase orders, variations, and reregistration tracks.

During the quarter, the D4T phase-out report was finalized and submitted to headquarters for further comments and review. The results of the report showed that, as of September 2014, the proportion of patients on stavudine-based regimens decreased to 0.02% after a successful regimen switch program without incidence of treatment disruptions and wastage. This phase-out required well-coordinated transition plans that engaged multiple stakeholders. The program used nationally aggregated information generated from ARV drug dispensing pharmacies to monitor performance and guide actions.

Continued support was provided to health facilities to maintain patient medication records and submit reports every two months. In Q1, one patient uptake and regimen breakdown report was produced and shared. Patient uptake data were collected from 680 health facilities and regimen breakdown from 380 health facilities. According to the recent patient uptake report, 350,835 patients were on ART, of which 306,445 patients were covered in the regimen breakdown report (87.4% of those covered under the patient uptake report).

As a way of ensuring continuous patient information recording at health facilities and generation of various reports for decision making, computers were given to two health facilities in the Amhara region and one in Addis Ababa. Computer hardware and software maintenance support was provided to 22 ART electronic sites nationally. Onsite training was provided to 17 pharmacy professionals and 2 IT professionals. All three of the health facilities that were provided computers started using the electronic dispensing tool (EDT) after being provided the necessary

training and mentoring; also, one health facility in the Addis Ababa region started implementing EDT by using its own computer with only onsite training support from SIAPS.

A total of 61 pharmacy professionals were trained on SOPs for managing information on ARV drug dispensing and patient medication records in collaboration with ICAP (Columbia University), and the SOP manual was given to each trainee to be used as reference material. The SOPs will contribute to standardizing management of patient and product-related information in health facilities; this will be instrumental in the national effort to enforce standardization of treatment protocols and as an information source for forecasting and quantification of ARVs.

During integrated supportive supervision in the Amhara and Benishangul Gumuz regions, patient information sheets were distributed. A total of 5,600 yellow sheets and 13 ART registration books were distributed to Woreda health offices, health centers, and hospitals in the regions. Also antimalarial drug registration books and antimalarial guidelines were distributed for three PMI sites.

Partner contributions

- Health facility chief executive officers and dispensary staff have indicated interest in implementing EDT for real-time dispensing
- PFSA hubs support distribution of PMIS tools to remote and nearby health facilities

Constraints to progress

- Some of the challenges faced during this quarter are frequent turnover of trained staff at some health facilities, not doing data backup properly (which leads to lost data when the computer fails), data inconsistency, and shortage of pharmacy staff

To solve these problems, SIAPS provided on-the-job training for newly assigned staff, demonstrated how to do data backup correctly and its advantages, and mentored on how to update patient information properly.

Objective 4. Revenue from sales of medicines increased

In this quarter, APTS was implemented at three hospitals: Dilla University Hospital in the SNNPR, Alamata Hospital in the Tigray, and Haromaya Hospital in the Oromia regions. As of the end of this quarter, APTS is being implemented in 48 health facilities throughout the country. Out of these 48 health facilities, 31 (64%) track their sales of medicines by using APTS and report regularly to respective regions and FMOH. APTS-implementing health facilities regularly submit performance reports to the FMOH and RHBs through the email account dedicated for this purpose (apts@moh.gov.et). FMOH and RHBs give feedback through email, telephone, supportive supervision, and review meetings.

To strengthen pharmacy service in the Addis Ababa region, technical assistance was provided to hospitals, sub-cities and RHBs. A half-day training organized by the hospital training center in collaboration with PFSA was dedicated to the Ethiopian Hospital Reform Implementation

Guideline (EHRIG)-pharmacy chapter and APTS implementation packages; 19 staff from St. Peter Hospital participated. A half-day orientation on APTS regulation and advantages, requirements, and processes of implementation was provided to 35 health managers (sub-city and Woreda health office department heads, health center medical directors, and pharmacy heads). The orientation was organized to create awareness on APTS implementation packages and to cascade its application to health centers in the region following TOT provided in the previous quarter. All expenses (tea break and transportation) were covered by the sub-city health office.

Mentoring support was also provided to the pharmacy head and three pharmacy accountants at Amanuel Hospital to generate quality monthly financial and service reports for decision making. With the support provided, the mentees were able to identify and correct mistakes being made while generating reports for previous months.

During the reporting period four health facilities, Felegehiwot Hospital in Amhara, Hawassa University Referral Hospital in SNNP, and Ambo and Nekmpte Hospitals in Oromia region conducted ABC/VEN analyses. All hospitals analyzed three years of purchase data for the analysis and the results were communicated to the hospital DTCs to discuss future interventions. These results are considered one of the important documents for improving procurement of pharmaceuticals, conducting stock status analysis on specific pharmaceuticals, and guiding selection of candidate drugs for drug use evaluation. In total, 39 health facilities conducted ABC/VEN analyses during SIAPS tenure (88.6% of LOP target).

USAID/SIAPS has been recognized by the Ethiopian Health Insurance Agency as a member of the TWG established to oversee the national assessment of the impact of the pharmaceutical supply chain on the health insurance schemes scheduled to be launched soon. SIAPS participated in three TWG meetings and contributed to the proof of concept for the assessment. In these meetings, SIAPS strongly advocated the importance of addressing RMU and pharmacy benefit management in the national assessment, which is now accepted by the agency and the TWG. As part of the next steps, a concept note is under development which is to be shared with the Mission for review and approval.

Partner contributions

- ABC analyses conducted by hospital DTCs and pharmacy departments for decision making on optimal use of the medicines budget; they are also interested in conducting prescription audits and drug use evaluations, following the ABC analysis
- Hospitals have covered a portion of costs for APTS training
- Alamata Hospital inaugurated APTS implementation in a colorful event and used the opportunity to teach others about APTS and their roles in providing quality health services in the hospital

Constraints to progress

- Resistance to record and report APTS activities per the implementation procedure

- Knowledge gaps among pharmacy accountants in compiling daily summaries and generating monthly reports
- Lack of computers at health facilities to record and report financial and service reports
- Reporting time is not maintained because of internet connection problems and weak commitment from some pharmacy staff as well as pharmacy accountants
- The absence of incentive packages related to APTS and a shortage of pharmacy professionals in some district hospitals is compromising pharmacy service provision (counseling appropriate evaluation and documentation)

All gaps and challenges identified at each APTS implementing site were communicated to hospital management to take corrective measures. Site level mentoring support was provided to staff on how to generate daily summary and monthly reports.

Guinea

Goal: Ensure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes

Overall Quarter Progress

During this quarter, SIAPS/Guinea received confirmation from USAID of the award of a supplement of post-Ebola funds, effectively raising the ceiling and extending the period of performance until September 2017. The new focus of the project therefore will be strengthening supply chain management within the framework of the overall health system strengthening efforts currently underway in the country following the devastating Ebola epidemic.

The increased scope of the project will require recruiting new technical and administrative staff, and efforts to realize this are already underway, along with expansion of the office space to accommodate the new personnel.

During this quarter, SIAPS/Guinea achieved several of its key objectives, including strengthening of pharmaceutical sector governance (objective 1) by completing revisions to therapeutic flow charts for health centers; revising medicines equivalence tables to be used by physicians and pharmacists; finalizing input into the new Pharmacy Act draft; supporting the Direction Nationale de la Pharmacie et Laboratoires (DNPL) to revise its organogram to include key functions for pharmaceutical inspections; and revising procedures for medicine registration.

SIAPS/Guinea continued to provide support to improve governance of the Pharmacie Centrale de Guinee (PCG) with review and revision of internal procedure manuals for receipt, management, and distribution of stocks at central level and to regional depots.

To improve the capacity of institutions and individuals in pharmaceutical management (objective 2), SIAPS conducted trainings for private sector pharmacists and heads of health units on pharmaceutical management based on updated training manuals that include sections related to the management of Ebola and other emergency commodities.

To improve availability of pharmaceutical management information for decision making (objective 3), SIAPS/Guinea contributed to key discussions for the development of the national Health Management Information System (HMIS) strategic plan for 2016 to 2020 and integration of the needs of the Logistics Management Information System (LMIS) into the overall HMIS framework.

SIAPS/Guinea conducted the third nationwide end user verification (EUV) survey; key findings reflected the continued high facility reporting rates in PMI-supported districts, but the poor storage conditions and stock monitoring practices in several regions.

To meet the objective of improving pharmaceutical services to achieve desired health outcomes (objective 5), SIAPS/Guinea conducted a redistribution of malaria commodities within certain

districts as a result of the systematic inventory of commodity stocks in various health units countrywide.

Overall, SIAPS/Guinea technical staff supported and participated in various technical coordination meetings with other key partners to harmonize support provided to key institutions, like the PCG, and to identify bottlenecks to implementation of effective malaria interventions.

Office management

SIAPS/Guinea received additional USAID funds to support the development of a supply chain and a project extension until September 2017. In view of this, it was imperative that the project's finance and administrative sections be reorganized to better manage the additional funds and extended scope of the project. The following activities have taken place to support this change:

- The SIAPS deputy director for finance and operations, based in Arlington, made a visit from October 7 to 25 to support SIAPS/Guinea in its administrative and financial procedures and recruitment of a new finance and administration staff in view of the upcoming projects (SIAPS and post-Ebola funds). A meeting was held at the USAID Mission on October 22 to brief the Mission on activities during his visit.
- An administrative assistant was hired as a consultant to support the finance and administration department, given the upcoming heavy workload.
- A new rental agreement was signed to obtain a larger office space within the same building, doubling the original work space, beginning December 2015.

Objective 1. Pharmaceutical sector governance strengthened

Improved governance for the DNPL

All sections of the Guinea Pharmacy Act draft have been finalized and the draft is now ready for next steps including a review by a consultant that the USAID-funded USP/PQM project has planned to recruit in January 2016. Before a final validation exercise, the consultant's recommendations will be presented to a Government-appointed lawyer who will check for compliance with Guinea's judicial system.

The final version of the therapeutic flowcharts for health centers has been completed and validated and is ready for printing and dissemination. This dissemination exercise and health worker training on the revision is planned from January-March 2016 in the form of regional workshops. A post-dissemination test will follow to verify use and improvement in rational prescription practice.

Revisions of the medicines equivalence tables have been completed. These tables are intended to facilitate substitution of medications from brand names to generic formulations for practitioners, in line with currently registered medications in Guinea. A small team of practitioners supported the DNPL to complete these tables. Following an inquiry into users' needs, the team is currently finalizing the tables in a format that will best serve users. The tables will reflect international

non-proprietary names of medicines alongside the branded names and will be fed into the National Essential Medicines List to be completed February/March 2016.

During this quarter, a consultant hired by SIAPS to support the DNPL completed a review and revision of the DNP's organogram and subsequently made recommendations that will require approval by the MOH and its partners before implementation. He also reviewed the existing process for the medicines registration in order to ensure that all approved medicines for registration are of good quality and are manufactured according to internationally approved standards. The key finding was that the current medicine registration system is not sufficiently elaborated. To remedy this situation, a draft of a new manual of procedures was developed to guide future registration which will be presented to the DNPL and MOH as a whole for approval and implementation.

Finally, SIAPS and its partners participated in a workshop to support development of a national manual of procedures for destruction of expired medicines as recommended by a consultant hired by OMS to support DNPL. This is a work in progress as key aspects of financing destruction procedures and implementation mechanisms have yet to be finalized, which requires a substantial commitment from the government.

Support for improved governance for the PCG

Within the overarching framework of support for governance and transparent management of the PCG, SIAPS continued to work with departments within the PCG to revise the internal manual of procedures on receipt, storage, and distribution of pharmaceutical products at the central level and regional depots.

SIAPS participated in and supported the PCG to prepare a national workshop on the integration of the emergency logistics systems used during the Ebola outbreak into the national logistics system. This workshop was requested by the MOH and the National Ebola Coordination Unit. This workshop took place November 10-13 2015 with technical and financial support from SIAPS and with participation of several partners, including WHO, UNICEF, Projet d'Appui a la Santé (PASA), UNFPA, and Catholic Relief Services (CRS).

Objective 2. Capacity for pharmaceutical supply management and services increased and enhanced

During this quarter SIAPS/Guinea continued to support the capacity building of individuals and organizations on pharmaceutical management and supervision, particularly for malaria commodities.

Following a request by the Guinea Pharmacists Council, a training on pharmaceutical management was conducted October 13-16 in Conakry for 30 private pharmacists in collaboration with MOH's departments of Pharmaceutical Inspection and General Health Inspection. A second training was conducted for the heads of health units in Boke, Fria, and Boffa on December 14-19 for 27 personnel.

At the request of the MOH, a module on the management of Ebola commodities was added to the original pharmaceutical management training module in view of the close epidemiologic surveillance that the MOH is trying to put in place. This is also in line with USAID's request for specific logistic requirements for epidemic protection commodities to facilitate infection prevention.

Additionally, SIAPS continued regular support for on-site training (supervision visits) on pharmaceutical management of malaria commodities in the PMI-supported zone (Conakry, Coyah, Forecariah, Dubreka, Labé, Boké and Boffa).

Objective 3. Pharmaceutical management information available and used for decision making

Preparation for the introduction of LMIS (or PMIS)

One of the key activities within the scope of the SIAPS/Guinea post-Ebola supplementary funds is the placing of a LMIS beginning in 2016. At the same time, the MOH has received significant funding from USAID, PASA/UE, and Global Fund to renew the national Health Management Information System (HMIS).

Development of a LMIS must be coordinated with and be part of the HMIS. The SIAPS consultant hired to support the DNPL was mandated to participate in two workshops organized by the Bureau des Strategies et Développement (BSD) of MOH to discuss the analysis of the state of the HMIS, development of the five-year HMIS strategic plan, and key indicators for the monitoring of health commodities in the HMIS.

The workshops used the Health Metric Network (HMN) tool for the development of the national HMIS strategic plan that will be operationalized through annual plans. HMN is an assessment tool that provides guidance on how to assess health system information in the country. It explains the objectives of the evaluation, determines the key actors, and teaches how to facilitate the evaluation. Its purpose therefore is to lead to a strengthening of the health information system.

Another key consideration during the workshop was the use of LMIS to integrate information about medicines and other health products and equipment alongside all common indicators. But following discussions reinforced by SIAPS/Guinea, it was agreed to maintain separate information on medicines and other health product indicators (to be supervised by the DNPL) and on equipment and infrastructure (to be supervised by the Directorate of Equipment and Maintenance).

EUV

The sixth EUV survey was performed from October 26 to November 5, 2015. For the third time, the survey included data from both PMI and Global Fund-supported districts in Guinea, with an increase in the number of health facilities and pharmaceutical warehouses surveyed; 52 units were surveyed (36 health centers, 9 hospitals, 7 warehouses). Key findings include:

- Reporting rates continue to be high, especially in PMI zones. As a result, PMI health facilities surveyed sent their last monthly report on time (versus 82% on average countrywide).

- Only 45% of facilities countrywide had adequate storage conditions and only 33% used a standardized checklist for monitoring storage conditions. SIAPS will continue to fund comprehensive trainings in pharmaceutical management for health workers in PMI zones through Medicines for All Project, led by the MOH.

- 87% of all health facilities surveyed received supervisions on drug management (92% for the PMI zone) and 67% of facilities received supervision on case management (96% for PMI zones)

- The latest malaria treatment guidelines issued in 2014 are available in many health facilities (84% countrywide or 96% in the PMI zone); however, only slightly more than half of facilities (53% overall or 64% in the PMI zone) have reference guides for stock management on-site.

- Testing practices continue to improve, given increased RDT availability, with only 20% of patients receiving a clinical diagnosis.

- In regard to the supply chain, the percentage of facilities stocked out of AS-AQ on the day of the visit in the PMI zone were:
  - Infant: 18.8%
  - Small child: 0%
  - Child: 0%
  - Adult: 5.9%

- The final EUV report was timely submitted to USAID Washington in December 2015, providing key information on patients and antimalarials supply chain including the percentages of facilities that were under-, appropriately, or overstocked according to established max/min policies in various products.

Partner contributions

Global Fund contributed to the EUV survey.

Constraints to progress

- Data quality and control
- Lack of coordination between DNPL, PCG, and BSD for the implementation of an efficient reporting system

Objective 5. Pharmaceutical services improved to achieve desired health outcomes

Distribution of malaria commodities

In the preceding quarter, reports on the average monthly consumption of malaria commodities indicated an overstock in several health facilities. A systematic formal inventory of stocks was conducted countrywide in addition to the review of monthly consumption of health products. This inventory was completed in this quarter. The results revealed overstock in certain districts and stock-outs in others with malaria rapid diagnostic tests (RDTs) kits being the most affected (due to their short shelf-life).

Based on the results of the inventory and the average monthly consumption, a reallocation of stocks within the same region and a distribution of stocked out commodities was conducted in the regions of Labe, Dubreka, Forecariah, Cohia, Conakry, Dinguiraye, and Boke. However, districts currently receiving seasonal malaria chemo prevention and districts where the treatment of cases has shifted from AS-AQ to AL have seen an increase in the consumption of AL. This will be followed up to understand the reasons that consumption of AL is going up and to plan for an adjustment in distribution.

Distribution of commodities for Ebola epidemic protection

In an effort to ensure a permanent availability of Ebola infection prevention and control (IPC) materials, the USAID Mission requested that SIAPS/Guinea support a distribution of these materials. A first shipment of Ebola IPC materials purchased by WHO with USAID funds reached the country during this quarter, allowing SIAPS to strategize their incoming distribution with the World Food Program (WFP) and the PCG-led Ebola Logistics Unit. An initial meeting took place between USAID, WFP, and SIAPS on December 16, 2015 to define the modalities of distribution of these commodities and their inclusion into the SIAPS Ebola Supplemental Funds (ESF) work plan.

Technical coordination

On October 2, 2015, SIAPS organized meetings with partners supporting the PCG with the goal of harmonizing all support activities proposed by their agendas including PASA, CRS, Population Service International (PSI), UNICEF, and WHO.

SIAPS also participated in a meeting of health development partners, held by UNICEF on October 30, at which key discussions included sessions on a) repositioning the PCG within the overall framework of the health system revival, b) the national poliomyelitis response, and c) the current initiatives to support the national health management information system.

A working session to harmonize interventions supporting the pharmaceutical sector was held with WHO Geneva staff responsible for pharmaceutical policy in Francophone African countries on December 14-17.

SIAPS participated in a workshop organized by CRS, a Global Fund principal recipient on December 2 to review current bottlenecks in the fight against malaria.

On the invitation of the National Malaria Control Program (PNLP), SIAPS participated in the recruitment of a new pharmacist who will work on commodity supply chain within the PNLP with support from the Global Fund.

A cost-benefit study of seasonal malaria prophylaxis within the ACCESS project was conducted during a visit from headquarters. In view of the quality and rigorousness of the data collected in Guinea, the preliminary results of this study will be presented at a partners' meeting in Uganda in January 2016. This study will demonstrate to partners the use of cost data and also contribute to the overall discussion of improving access and effectiveness in the implementation of seasonal malaria prophylaxis.

Finally, SIAPS participated in the monitoring of malaria activities through various meetings and working sessions during the PMI supervisory mission December 7-13. During this mission, a special session was held to analyze monthly malaria commodity consumption data provided by health units.

Haiti

Goal: To ensure availability of quality health products and effective pharmaceutical services to the Haitian population

Overall Quarter Progress

In PY5Q1, SIAPS continued providing technical assistance to the Haiti Ministry of Health (MSPP) and its partners in two major areas: (1) the roll-out of the new national medicines policy developed through technical assistance provided by SIAPS, and (2) the finalization and dissemination of the supply chain options analysis results to help determine a suitable "integrated health supply chain" network and capabilities. The analysis includes costing of warehousing and transportation operations for central and subnational health products supply management.

Objective 1. Pharmaceutical Sector Governance Strengthened

This activity came to a successful end in October 2015 marked by SIAPS providing guidance to departmental pharmacists on how to implement the national medicines policy and develop a plan for their respective department. This took place during a workshop co-organized with MSPP's pharmacy department, during which each departmental pharmacists presented an overview of the status of the delivery of pharmaceutical services and their challenges.

Objective 2. Strengthening National Supply Chain System

Regarding the second activity on supply network analysis, SIAPS presented the results to members of the technical committee that oversees the process for establishing an integrated health supply system (SNADI). Following discussions of the results, the SNADI Technical Committee members expressed satisfaction with the analysis results. The members requested that SIAPS update one of the analyzed options by using actual transportation cost data collected by the Supply Chain Management System project between April and September 2015, which was not accessible to SIAPS during data collection. Therefore, SIAPS is presently updating the analysis to include this transportation cost data. SIAPS plans to present the updated analysis results to the SNADI Steering Committee in January 2016.

Mali

Goal: Assure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes.

Overall Quarter Progress

During the first quarter of project year five (PY5), SIAPS supported the Ministry of Health (MOH) and its partners to implement several activities from the PY4 work plan and some activities planned for PY5 first quarter with the aim to strengthen pharmaceutical governance, to build capacity of individuals and institutions in pharmaceutical management, to make logistics data available to make decisions on improving supply of commodities, and to strengthen pharmaceutical services.

To reinforce pharmaceutical governance, SIAPS supported the MOH through the Direction de la Pharmacie et du Médicament (DPM) and the Direction Regionale de la Santé (DRS) to organize a central level quarterly meeting of the Comite National de Coordination (CNC) and quarterly meetings at five regional locations. The CNC validated family planning and malaria commodities quantification results and analyzed essential medicines stock status from October 7–8, 2015. Participants from the MOH, USAID implementing partners, UN agencies, and civil society organizations (CSOs) attended these meetings. Coordination meetings were held in five regions and Bamako district; stock managers from district and regional levels, as well as USAID implementing partners and CSOs, attended these meetings to discuss LMIS reports and decide on supply chain issues.

To sustain its ongoing effort of strengthening Mali pharmaceutical system, and improving country ownership, from December 7–9, 2015, SIAPS supported the MOH through the DPM and Pharmacie Populaire du Mali (PPM) to organize an annual national review conference with public pharmaceutical sector supply chain stakeholders. A total of 83 people attended the review meeting, which was held to discuss the new LMIS and tools implementation progress and its impact on the strengthening the Malian pharmaceutical sector, to give and receive feedback on current interventions, and to provide guidance and orientation to the DPM for 2016.

SIAPS also supported the NMCP to develop two distribution plans of malaria commodities, which raised the total of distribution plans developed with SIAPS support to 20. Based on its ongoing effort to build sustainable capacity in the pharmaceutical management area and on USAID/Mali mission's request, SIAPS supported training on the use of the LMIS SOPs to152 facilities health workers and stock managers of Kita and Kayes districts. After each training session, trainees developed their post-action training plans to implement what they have learned to improve stock management and availability of medicines at facility levels. Trainings on supportive supervision guide were also provided to 181 supervisors from regional and district levels in four regions (Koulikoro, Sikasso, Segou, and Mopti,) and Bamako district. To reinforce and make sure that trainees are using their skills in their daily work, SIAPS provided technical assistance to six DRS and 50 districts to conduct supportive supervision from regional levels to district levels and from district to health facilities levels.

During this quarter, SIAPS/Mali also assisted the MOH to render data available for decision making on pharmaceutical management by developing and submitting planning and monitoring reports for malaria and to USAID/Washington. In addition, specific support was provided by SIAPS to MOH through health districts to support data entry process in OSPANTE.

Objective 1. Pharmaceutical sector governance strengthened

To reinforce pharmaceutical governance, SIAPS supported the DPM and the DRS to organize coordination meetings around key commodities stock status and management. These meetings were held to discuss and address issues related to health commodities availability and management at all levels. At the central level, the DPM organized two CNC meetings held on October 7 and 8, 2015; these meetings were chaired by the MOH Medicines Technical Advisor, and included representatives from the MOH, nongovernmental organizations, USAID implementing partners, donors such as USAID, UNFPA, and CSOs. During the meeting the CNC validated malaria and family planning commodities forecasting results and the updated malaria and family planning supply plans based on assumptions and logistic data presented by the technical working groups—increasing the number of supply plans updated under SIAPS from 13 to 15 out of 18 (project target). The main challenges faced during the meetings were related to the financial gap of the supply plans and stock out of products. Several recommendations were made to address these challenges and a technical note signed by the MOH medicines advisor that summarized all recommendations was sent to all partners. The next step is tracking the implementation of recommendations. During the second day of the meeting, the committee discussed malaria, family planning, and MNCH commodities stock status.

Additionally, SIAPS supported five regions—Kayes, Koulikoro, Sikasso, Segou, and Mopti; and the Bamako District to hold quarterly coordination meetings to address supply chain issues and bottlenecks by making decisions based on LMIS data and reports submitted by health facilities. During these meetings, each district team presented its logistic data report and the regional Health Directorate team presented the compiled data report for the region and gave feedback to the health districts' managers. After discussions, the participants validated the LMIS data report for each region and the compiled regional report was submitted to the central level. The main challenges discussed during the workshops were stock outs or overstock of some commodities at the health facility level and the fact that some health facilities did not meet their deadline on submitting LMIS reports. The number of CSOs that monitored pharmaceutical management operation reaches 24 out of 24 project targets.

During this reporting period, SIAPS also provided support to the MOH through the DPM and the PPM to organize an annual national review conference with public pharmaceutical sector stakeholders. The three-day meeting held December 7–9, 2015, in Bamako was to identify specific bottlenecks that affect the public health services in general and the pharmaceutical sector in particular. The 83 participants included representatives of the Inspection de la Santé, NMCP, DNS, DRS, Bamako district,

implementing partners, USAID, donors and UN agencies, attended the meeting. It also involved CSOs such as health professional's boards and associations and private pharmacies. The workshop was chaired by the deputy director of DPM and the President Director of PPM. During the meeting, each DRS presented their annual pharmaceutical activities and identified bottlenecks and proposed solutions. The DPM also presented central level activities and the national LMIS report generated by OSPSANTE.

Attendees discussed lessons learned, and how to use data to make better decisions to make medicines available at all levels. They also received feedback and orientation from theDPM.

Partner contributions

- All the above partners participated to national and or regional coordination meetings on supply chain and they contributed to identify bottlenecks and solution—MOH, DPM, Comité National de Coordination
- Donors: USAID, Global Fund, UNFPA
- CSOs: Fédération Nationale des Associations de Santé Communautaire, PSI, Keneya Jemu Kan, Marie Stopes International, Futures Group, USAID ASSIST

Constraints to progress

Stakeholders have not abided by SDADME and LMIS SOPs, and have not availed themselves of the data generated by OSPSANTE to make decisions regarding commodities management.

Objective 2. Capacity for pharmaceutical supply management and services increased and enhanced

SIAPS supported Kayes DRS to provide trainings on pharmaceutical management to the health facilities stock and facilities managers in the Kita and Kayes districts. A total of 152 participants (31 females and 121 males) have been trained on pharmaceuticals management, storage, tools such as stocks cards and logistic reporting tools including requisition forms, and how to calculate commodities needs as included in the new LMIS SOPs.

Additionally, a two-day training workshop on supportive supervision guidelines were provided to health services workers in Koulikoro, Sikasso, Segou, and Mopti regions and Bamako district. These workshops were facilitated by DRS teams. A total of 181 (153 males/28 females) supervisors have been trained in the districts of four regions (Koulikoro, Sikasso, Segou, Mopti) and Bamako district on the use of supportive supervision guidelines and 333 (274 males and 59 females) health workers were trained on pharmaceutical management. The number of people trained on pharmaceutical management increased from 1,260 to 1,593 out of a project target of 1,650. After each training session, trainees developed their post-training action plans to implement what they have learned to improve stock management and availability of medicines and commodities at facilities levels.

Partner contributions

- Direction Régionale de la Santé of Kayes, Koulikoro Sikasso Segou, Mopti, and Bamako

- 50 Health Districts of Kayes, Koulikoro, Sikasso Segou, Mopti, and Bamako regions (including six districts of Bamako)

Constraints to progress

The post-training action plans were not implemented.

Objective 3. Pharmaceutical management information available and used for decision making at different levels of the health

During this quarter, SIAPS/Mali assisted the MOH to supply data for decision making on pharmaceutical management. One planning and monitoring report for malaria and one planning and monitoring report for the contraceptives were developed and submitted to USAID/Washington. These reports were developed in close collaboration with the MOH and key partners involved in health commodities management (PMI/Mali, PSI/GF, USAID/KJK) who made recommendations in terms of procurement, replenishment plan and inventory management. SIAPS continued to provide assistance to 50 districts to support the LMIS data entry process in OSPANTE.

This activity has significant impact on data available for decision making. Using information generated by OSPSANTE guided decisions to make available key commodities at the lowest level. For example, in Bamako, 11,250 rapid diagnostic tests was transferred from Commune 5 to Commune 3 and 4,800 artemether-lumefantrine 6 X 1 presentations were transferred from Commune 5 to Commune 6. As a result, the number of health facilities that completed and submitted an LMIS report for the most recent months increased from 85% to 87% and the percentage of health facilities with stock outs of a pre-selected group of medicines (tracer drugs list) for 3 days or more in the last three months remained at 31%.

Partner contributions

- PPM, PSI, DPM, DSR, USAID, KJK and UNFPA provided data and participated in data analysis and validation for the malaria and contraceptives reports.
- DRS, PPM regional warehouses, and 50 health districts of Kayes, Koulikoro, Sikasso, Segou, Mopti regions, and Bamako participated to data collection and entry in OSPSANTE.

Constraints to progress

- Lack of ownership and leadership by DPM and DRS to analyze data and make relevant decisions.
- Limited use of OSPSANTE-generated data at all levels.

Objective 4. Pharmaceutical services improved to achieve desired health outcomes

To ensure rational use of medicines and improve pharmaceuticals management, SIAPS provided technical and logistics assistance to six DRS and 50 health districts to conduct supportive supervision visits from the regional level to the district and from the district to health facility levels.

Under DRS leadership, supervisors have been identified and selected in each district according to the supportive supervision guide. These supervisors received a two-day refresher training on the new supportive supervision guide. After the training, regional teams conducted supportive supervision in 48 health districts out of 50 and districts teams to 1,112 health facilities. The supportive supervision focused on identifying and solving supply chain issues by strengthening relationships between supervisors and supervisees. Findings of this ongoing supervision will help address medicine management issues.

Mozambique

Goal: To assure access to safe, efficacious and quality pharmaceutical products and to effective pharmaceutical services to help achieve desired health outcomes.

Overall Quarter Progress

During the past quarter, Country Operations Management Unit (COMU) continued to facilitate the completion of administrative, operational, and finance services for the portfolio. To assure technical quality of the project, technical assistance was provided from the home office in the areas of regulations, pharmaceutical services, and monitoring and evaluation (M&E). To strengthen the pharmaceutical department (PD) regulatory capacity, SIAPS assisted with improving the use of electronic registration system as well as drafting a new medicines registration application form to be used by the local applicants. Following the approval of the General Medicines Essential List, as categorized by the Ministry of Health (MOH), in this quarter SIAPS supported the finalization of Specialties Medicines List. Continuing to support establishing the essential medicines list (EML) mechanism in the country, SIAPS also assisted the PD to draft a new version of the terms of reference of the National Committee of Selection and Use of EML, considering the new focus on monitoring and updating the EML.

Support for implementing PD M&E plan was also provided—29 key indicators were selected and of them, 13 were selected as pilot indicators. Performance Indicators Reference Sheets were updated for the pilot indicators followed by updating the PD Performance Monitoring Plan, after general agreement by senior management staff, SIAPS and the PD started to collect data for the pilot indicators. SIAPS supported building the capacity of hospital pharmacies staff in pharmaceutical management by giving technical support to them on how to collect, classify, and analyze information from Drug Therapeutic Committees (DTCs) and provide feedback. SIAPS support was extended to strengthen adverse drug reactions reporting by assisting the PD to conduct a supportive supervision visit in Tete Province from October 19–23, 2015.

Objective 1. Governance in the pharmaceutical sector strengthened

USAID/SIAPS continued to orient the PD Registration staff on use of PharmaDex and improve their skills on working with the tool and entering the newly submitted data. It was apparent that some of the staff already have the ability to use PharmaDex easily and were able to finalize the review of medicine dossiers. SIAPS continued the procurement process to identify companies for the tender for the registration legacy data collection and initiated the procurement for a proper internet service to improve the electronic medicines registration system and allow for the remote intervention of the HQ IT team. However, both processes were delayed because coordination requirements with the MOH. SIAPS has worked with the Head of the Registration Sector to develop a presentation to be shown at the MOH technical meeting. Technical support was provided for the PD to present Mozambique's experience of on strengthening medicine regulatory system by implementing PharmaDex at 2nd Biennial Scientific Conference on Medicines Regulation in Africa, November 30–December 1, 2015, in Addis Ababa, Ethiopia. SIAPS supported the development of a new medicines registration application form to be used by the local applicants. This was designed to comply with the PharmaDex requirements and

will ensure that the main information needed to submit a medicine application can be found in one place. To develop this form, SIAPS supported a consensus workshop at Pharmacy Department. These was done in two phases—first, discuss the whole document to explain what were the objectives and the need of each specific section, and second, compare the form with the content of the application form in PharmaDex and agree on the final format. Next steps will include translating the form into Portuguese, getting a final review from PD, sending the form t for approval by the MOH, and then launch and disseminate the forms and train applicants on how to use the forms.. It is expected the initiation of the legacy data collection will be initiated and the new Internet Service for PharmaDex will be installed next quarter.

SIAPS continue supporting the PD to finalize the EML revision. Phase I was completed in August 2015 with the list of medicines at levels prescription 0, 1, 2, and 3 (up to general practice) being approved. In this quarter, Phase II was initiated for the finalization of level 4 medicines (medicines prescribed by specialists)— and a technical working group composed by PD, SIAPS staff, and one SIAPS local consultant was assembled and conducted several working discussions: the final list was sent to a SIAPS international consultant for revision. SIAPS drafted the proposal of the NEML monitoring plan and initiated work on the terms of reference for the Committee of Selection and Use of Essential Medicines, which is expected to be accountable for the review and monitoring of the use of NEML and specialty medicines, and for rational use analysis and acquisition of required specialist medication and other medicine subjects that will be defined by the MOH. Next steps will include publication of both lists in the Bulletin da República; compilation, editing, and printing of the NEML book, including the NEML policy, procedures, and standards; and setting up a training committee on how to select and use essential medicines.

To continuing to support adverse drug reactions reporting, SIAPS supported the organization of Pharmacovigilance National Workshop at Sofala Province December 9–11, 2015. Among the 115 participant were included the Vice Minister of Health, National Directors, Province Directors, Heads of Province Pharmaceutical Sections, Heads of Province Medicines Central Warehouses, and Province MOH partners. Workshop activities included the presentation of pharmacovigilance activities conducted in each province during 2015, discussion of the main challenges faced by the provinces, presentation of vaccines pharmacovigilance status in the country, and recommendations for the way forward.

Partner contributions

- PD registration sector staff collaborated with SIAPS
- PD essential medicines list secretariat team put in significant efforts in the collaboration to the finalization of the level 4 medicines
- Two PD staff were active members of the TWG and contributed for the update of the PIRS and PMPs

Constraints to progress

- It took a long time to do specific tasks on PharmaDex because of:
  - Slow uptake on use of the tool

  - Absence of an application form
  - Delay on the legacy data collection and on improvement of some functions of PharmaDex due to the length and nature of this kind of procurement
  - Registration sector staff continue to be overloaded with work

- The MOH expressed the intention of publishing the specialty products separated from the other essential medicines in the Boletim da República (the official government journal) opposing the technical advice of having both published together, as is the WHO standard. After discussion with the MOH, a compromise solution was reached where the list will be published in the Bulletin separately, but will be printed together as one in hard copy book that will be distributed to health facilities.

- If data sources have incomplete or nonexistent data, alternative data sources should be sought and the data collection methodology in the Performance Indicators Reference Sheet should change whenever there was verified variability between planned data collection methodology and the actual data collection methodology. This process raised the urgency to improve data management at the PD, resulting in the implementation of a excel data base in the reception unit.

Objective 2. Capacity in pharmaceutical management increased and enhanced

SIAPS supported capacity building for staff at hospital pharmacies in pharmaceutical management by giving the staff with technical support on how to collect, classify, and analyze information from Drug Therapeutic Committees and provide feedback to them. This was performed by organizing mentoring sessions with the HPD focal point for pharmaceutical services from September 30, 2015, to December 4, 2015. The results of this analysis were presented in the national pharmacy meeting on December 11, 2015.

In terms of rational use of medicines, four hospitals were analyzed and results showed that the average number of medicines per prescription is below the recommended value in all health facilities (the recommended value is 3, average encountered is 2.6, maximum 3), the percentage of medicines prescribed by generic name, the percentage of prescription with one antibiotic, and the percentage of medicines prescribed that are in NEML do not comply with the recommended values for the four health facilities, and half of the health facilities do not meet the recommended values for the percentage of medicines prescribed that are dispensed. These results led to discussions and consensus of the importance of scale up these studies for other health facilities.

Partner contributions

HPD prepared a Power Point presentation with the main findings of the reports and presented it at the national pharmacy meeting.

Constraints to progress

It was agreed that this orientation should be provided to a minimum of two HPD staff; however, only one HPD staff was available for the orientation. SIAPS is seeking to organize a second orientation for a larger group of technical staff.

Objective 3. Pharmaceutical Services improved to achieve health outcomes

SIAPS supported strengthening adverse drug reactions reporting by assisting the PD to conduct a supportive supervision visit in Tete Province from October 19–23, 2015. The following activities took place during this visit:

- Supervision of the pharmacovigilance activities in Tete Province and worked with the pharmacovigilance representative in the Province Pharmacy Division
- 19 health professionals were trained in adverse reactions reporting in Tete Health Center No. 2, Rural Hospital of Songo, and Songo Health Center
- Supplied the trained health facilities staff with the adverse reactions report form

Tete province has improved its reporting in the last few years; however, the reporting rate for this province continues to be extremely low compared to its estimated reporting numbers. It is expect that this exercise and the continuous follow-up will reduce the gap between the reporting targets and the actual reporting values.

	ADR in Tete Province/year		
Year	**2012**	**2013**	**2014**
Goal	557	557	557
Achieved	13	20	46
Gap	544	537	511

SIAPS also continues to revise the SOPs for medicine use studies; this is handled by the SIAPS Pharmaceutical Services Senior Technical Advisor, followed by weekly Skype meetings with Mozambique staff to discuss the revised document and determine action points.

Partner contributions

Pharmacy Department and Central Medical Stores prepared all the logistics for the meetings, with logistical help from SIAPS. The national pharmacy meeting was cost shared with the UNFPA.

Namibia

Goal: To improve the quality and safety of pharmaceutical products and services for sustained HIV epidemic control in Namibia

Overall Quarter Progress

SIAPS continued to provide technical assistance (TA) to the Namibia Medicines Regulatory Council (NMRC) to set up a system for post market quality surveillance of medicines in the country. Using this system, the NMRC has become vigilant on medicine quality surveillance at both central and facility levels. Site level staff members were trained on routine medicine quality surveillance and on completing and submitting pharmaceutical product quality reporting forms to the Quality Surveillance Laboratory of the Ministry of Health and Social Services (MoHSS). Continuous post-market surveillance will ensure quality and safety of ARVs and related commodities that are integral in HIV/AIDS treatment including those for treatment of opportunistic infections (OIs).

SIAPS continued to work with the University of Namibia (UNAM) School of Pharmacy (SoP) to finalize the Pharmaceutical Regulatory Affairs Module for the B. Pharm course. Stakeholder consultation will be conducted in Q2 of FY16 for consensus and finalization. To support the National Health Training Center (NHTC) documentation of successes and support from USAID, SIAPS finalized interviews with stakeholders and video recordings were edited in Q1 to ensure flow and consistency. The video highlighting USAID's support to human resources for health (HRH) capacity enhancement will be finalized in Q2 of FY16.

SIAPS continued to provide routine IT support to MoHSS' 50 main electronic dispensing tool (EDT) sites, the RxSolution at Intermediate Hospital Oshakati, the e-TB Manager and national database servers to ensure optimal availability of data from these tools to improve pharmaceutical service delivery especially for people living with HIV/AIDS. A data quality audit (DQA) was conducted comparing EDT and electronic patient management system (ePMS) active patient and enrollment data for the month of October 2015 in nine ART health facilities selected from five PEPFAR priority regions. Gaps in data from the two tools were identified and a meeting was held between SIAPS, IntraHealth and MoHSS staff members at the sites to address the data gaps. The DQA was conducted during site level visits following up on the decentralization of the mobile EDT (mEDT) and ART services to Primary Health Care (PHC) facilities.

With SIAPS support, the first version of the MoHSS Pharmaceutical Information System Dashboard was developed and presented to the MoHSS leadership, directors and senior management. The Ministry leadership recommended that a taskforce be formed to oversee the implementation of the first ever electronic dashboard in Namibia with SIAPS involvement. The dashboard will provide reports on patient and stock information in Namibia and will enhance the use of ART and pharmaceutical data for decision making.

SIAPS continued to collaborate with the UNAM School of Medicine (SoM) in coordinating hospital acquired infections and infection prevention and control activities. SIAPS supported a

meeting of the steering committee consisting of 14 members from the UNAM SoM and a German contingent from the University of Bonn's Institute for Hygiene.

SIAPS/Namibia participated in a joint SIAPS-Harvard Pilgrim Health Care Institute workshop, focused on ART data analysis using information from electronic logistics and patient data management tools. The workshop was held in Pretoria, South Africa from October 20–21, 2015.

SIAPS provided support to the MoHSS to validate the findings of the 2015 HIV drug resistance (DR) early warning indicators (EWIs) and compile the report. This was done collaboratively with the WHO consultant engaged by the MoHSS from the Tufts University.

Objective 1. Quality and safety of ARVs and medicines for OIs assured

SIAPS continued to provide TA to NMRC to enhance the system for post-market quality surveillance (PMS) of medicines in the country. SIAPS provided TA to the NMRC for establishment of the system in FY14 and supported its operationalization in FY15. Medicine quality monitoring guidelines were used in the sampling and testing of 68 medicines samples (58.8% ARVs and 42. 2% OI medicines) that were collected from 15 ART sites in eight HIV high burden regions—Ohangwena, Khomas, Omusati, Oshana, Oshikoto, Zambezi, Kavango, and Otjozondjupa. Using this post-market quality surveillance system, the NMRC has increased vigilance on medicine quality surveillance at both central and facility levels.

Site level staff members were also sensitized on the importance of routine medicine quality surveillance and on filling and submitting pharmaceutical product quality reporting forms to the Quality Surveillance Laboratory. Continuous post-market surveillance will ensure quality and safety of ARVs and related commodities that are integral in HIV/AIDS treatment, including those for OIs.

Partner contributions

NMRC led the planning and conducting of post-market quality surveillance of medicines in the country.

Constraints to progress

The implementation of the web-based Pharmadex has not progressed as anticipated. Staff members are still waiting for instructions and setup links from the programmer to deploy the tool at NMRC and start user testing of the tool.

Objective 2. HR capacity in pharmaceutical management and service delivery strengthened for improved HIV/AIDS treatment outcomes

SIAPS continued to work with the UNAM's SoP to finalize the pharmaceutical regulatory affairs module for the B. Pharm course. Stakeholder consultation will be conducted in Q2 of FY16 for consensus and finalization of the module teaching materials.

To support NHTC's documentation of successes and support from USAID, SIAPS finalized interviews with stakeholders and video recordings were edited in Q1 to ensure flow and consistency. The video will be finalized in Q2 of FY16

SIAPS finalized and shared with the MoHSS/NHTC a technical report of the Pharmacists' Assistant (PA) graduate tracer study that was conducted in FY15. The report will be used to inform strategies for improving the PA training program and its re-accreditation by the Namibia Qualifications Authority. In Q1, information obtained from the assessment was used for the PA curriculum revision aimed at enhancing the quality of training at NHTC.

Partner contributions

- UNAM SoP on providing feedback on pharmaceutical regulatory affairs course materials for pharmaceutical management
- NHTC on finalizing the PA tracer study report

Objective 3. Availability and use of pharmaceutical service data is enhanced for improved quality of ART services

SIAPS continued to provide routine IT support to MoHSS' 50 main electronic dispensing tool (EDT) sites, the Rx Solution at Intermediate Hospital Oshakati, the e-TB Manager and national database servers to ensure optimal availability of data from these tools to improve pharmaceutical service delivery. SIAPS supported the training of second-year NHTC PA students on the use of the EDT through practical simulations at the training center. A total of 40 students were equipped with skills on dispensing ARVs to patients, compiling ART monthly reports, and ordering medicines using the EDT.

SIAPS conducted a DQA and compared EDT and ePMS ART active patient and enrollment data for October 2015 in nine facilities selected from five PEPFAR priority regions. Gaps in data from the two tools were identified and an inter-implementing partner meeting held among SIAPS, MoHSS onsite staff members, and IntraHealth staff at the Onandjokwe District Hospital. In the meeting, strategies were identified to reduce the gap and these included using the EDT-Mobile at Nurse Initiated and Managed ART (NIMART) sites and ensuring patients recruited from NIMART sites are reported back to main sites for capturing in the EDT. In an effort to sustain these DQAs, a similar inter-agency meeting has been planned for Nyangana District for Q2 of FY16.

SIAPS developed the MoHSS Pharmaceutical Information System Dashboard after consultations with key Directorates and Divisions in MoHSS that routinely use information on pharmaceuticals and ART data. SIAPS presented the dashboard to the MoHSS Permanent Secretary (PS), Deputy PS, senior staff in the Directorates of Tertiary Health Care & Clinical Support Services (THC&CSS), PHC, Special Programs, and IT. The MoHSS leadership recommended that a taskforce be formed to oversee the implementation of the dashboard in Namibia with SIAPS' support. The dashboard will provide reports on patient and medicines stock information in Namibia and will enhance the use of data for decision making. The routine pharmaceutical management information system has also been included in the dashboard.

SIAPS was nominated to be part of the Health Management Information System (HMIS) technical working group of the MoHSS. SIAPS in collaboration with IntraHealth, a USAID implementing partner, has been providing TA to MoHSS in improving interoperability of electronic systems used in the management of the ART program. These tools include the EDT, ePMS, MEDITECH, Rx Solution among others. Three meetings were held this quarter.

SIAPS supported MoHSS Division: Pharmaceutical Services to compile the consolidated ART-pharmaceutical management information system feedback report for the period July to September 2015 which includes information on ART patient adherence and retention in care. According to the report, the total number of patients active on ART was 143,890 with 133,602 adults and 10,287 pediatric patients accounting for 92.9% and 7.1% respectively. Several EWIs for HIV drug resistance were also reported. For example, ARV pill pick-up improved to 71.5% from 70% in the previous quarter but is below the 80% target. The proportion of patients achieving adherence of more than 75% significantly rose to 83% compared to 73% in the last quarter. Retention in care for ART patients in cohorts started a year ago remained high at 95.2%.

Partner contributions

- MoHSS Division: Pharmaceutical Services, subdivision National Medicines Policy Coordination (NMPC) on support to health facilities using the EDT
- MoHSS-DSP on support to PHC facilities using the EDT mobiles for ART data capture

Objective 4. Quality, efficiency and accessibility of pharmaceutical services strengthened to attain 90% treatment coverage and 90% viral suppression

SIAPS is supporting MoHSS in the decentralization of ART services to PHC facilities implementing the NIMART approach. The EDT mobile rollout is to support MoHSS to strengthen the efficiency and integration of the EDT Mobile at PHC facilities. Site level visits were conducted in PHC facilities in the Oshikoto, Omusati, Ohangwena, Kavango, and Oshana regions and to two PHC facilities that were equipped with EDT computers and equipment in the October visits. Three new mEDT installations that were made at Ondobe Clinic, Ekoka, and Omboloka clinics bring the total of 27 mEDT installations in eight districts. Eight main ART sites were updated with new software for the EDT at the district hospital. Seventeen health care workers (nurses and pharmacy staff) were trained on the use of the mEDT during the site level support. The SIAPS technical team also manually entered approximately 1,500 patients who had been lost to follow-up in the Engela EDT database due to patients who had been transferred to decentralized NIMART sites before implementation of EDT mobile.

SIAPS provided TA to the Div:PhSs and the Essential Medicine List Committee in presenting proposed changes to the Namibia Essential Medicines List (Nemlist) to the Policy Management Development and Review Committee which is the decision making body in the MoHSS consisting of directors of the different health directorates and headed by the Permanent Secretary. All the proposed changes were approved by the Policy Management Committee and will be incorporated into the Central Medical Store (CMS) catalogue and the 6th Edition of the Nemlist. A total of 27 items were approved for addition to the Nemlist and one item was

recommended to be re-classified from Nemlist class A to AB. SIAPS will continue to provide TA in the production, printing, and dissemination of the 6th edition of the Nemlist. SIAPS contributed an article on addition of new antiretroviral and anti-TB medicines to the 6th edition of the Nemlist based on recent recommendations of the WHO expert committee on the selection and use of essential medicines

SIAPS is supporting the UNAM SoM in coordinating hospital-acquired infections and infection prevention and control activities. SIAPS supported a meeting of the steering committee consisting of 14 members from the UNAM SoM and a German contingent from the University of Bonn's Institute for Hygiene. A two-day workshop was held focusing on aspects of infection control—hand hygiene and maintaining an infection-free environment around patients and during hospital procedures. The group included four lecturers from UNAM SoP, three infection control nurses from hospitals in Khomas region, and one medical student from UNAM SoM.

SIAPS contributed to a presentation of an abstract on "Country and regional level advocacy and coalition-building against antimicrobial resistance." The abstract was orally presented at the 143rd American Public Health Association Annual Meeting and Expo October 31 to November 4, 2015. The presentation was delivered to explain the value of advocacy and stakeholder coalitions to help contain antimicrobial resistance (AMR) and to describe the results of a USAID-supported advocacy and coalition-building initiative against AMR, using regional-, country-, and facility-level examples. The presentation demonstrated how SIAPS' experiences show that with initial jump-starting support, in-country stakeholders can create sustainable coalitions and advocacy to fight AMR.

SIAPS Namibia participated in a joint-SIAPS and Harvard Pilgrim Health Care Institute workshop, focused on operational research and data analysis using information from electronic logistics and patient data management tools in Pretoria, South Africa from October 20–21, 2015.

SIAPS provided support to the MoHSS to validate the 2015 HIV-DR EWI findings and compilation of the report. This was done collaboratively with the WHO consultant engaged at the Ministry from the Tufts University.

Partner contributions

- MoHSS' HIV case management unit and Directorate of Special Programs on ART adherence and retention initiatives
- Harvard Pilgrim Health Care Institute on systematic process for review of EDT data elements and queries to assist in the strengthening of ART EWI data use for decision making
- Tufts University in the compilation of the 2015 HIV-DR EWI report

Niger

Goal: To improve the management of malaria commodities to increase availability of products and to build capacity of NMCP supply chain staff

Overall Quarter Progress

Highlights of activities this quarter include the completion of the third and fourth rounds of seasonal malaria chemoprevention (SMC) distribution campaign in the selected 11 districts; the first national quantification of malaria commodities; and a regional quantification workshop to estimate the needs of SMC commodities for next year.

As results of these and other activities, the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) approved emergency procurement of malaria commodities (for an approximate amount of 4.5 million Euros) to avoid stock-out and treatment interruption. Additionally, about 75% of targeted 823,031 children aged 3 to 59 months in Niger received sulfadoxine/pyrimethamine and amodiaquine (SP + AQ) during the 2015 SMC distribution campaign.

Objective 1: Improve NMCP Supply Chain Unit organization

On July 17, 2015, the Global Fund notified Niger that the technical review panel (TRP) approved the concept note for the amount of USD $36,735,493 and an additional USD $2,449,465. Catholic Relief Services (CRS) has been officially designed as principal recipient for this new grant, and negotiations with the Global Fund will start in January 2016.

Partner contributions

There were no partner contributions this quarter.

Constraints to progress

No constraints this quarter

Objective 2: Improve malaria supply chain coordination

During this quarter, SIAPS supported the NMCP in conducting meetings with partners involved in malaria management. Coordination meetings with CRS mitigated the risk of stock-out of malaria commodities during the first two quarters of 2016. Working together, NMCP and CRS provided explanations and clarification after the quantification for the possible risk and obtained Global Fund's approval to place an emergency order in a situation where the government order would not be available before the June of 2016.

Objective 4: Improve the availability of malaria commodities through an improved quantification process

During this quarter, the SIAPS technical advisor collaborated with the NMCP and CRS (Global Fund's principal recipient) to organize the first national quantification workshop for malaria commodities. Other participants included the National Drug Authority, CRS, WHO, UNICEF, World Vision, Save the Children, Médicins sans Frontières (MSF) Belgium, and SOLTHIS. This is the first time that all malaria partners in Niger have met to conduct this exercise. Results of this joint effort were presented to the Global Fund and resulted in the Global Fund agreeing to procure malaria commodities to cover the country's needs until September 2016. It is expected that the order will be delivered by February 2016 once forward funding is approved. The commitment by the Global Fund is particularly important as the 2016–18 malaria grants have not been signed yet.

The SIAPS technical advisor was fully involved in the discussions, provided necessary explanations, and coordinated the communication between Global Fund, the principal recipient (CRS), and the NMCP.

Partner contributions

The quantification workshop has been financially supported by Global Fund and the technical assistance of SIAPS.

Constraints to progress

There is a lack of staff at NMCP having competency in quantification and supply planning. As this activity was not in the NMCP work plan, it was not sure to obtain the funding from the Global Fund.

Objective 6: Support the implementation of seasonal malaria chemoprevention activity

The NMCP is implementing SMC in 11 districts in Niger with funding from the Achieving Catalytic Expansion of Seasonal Malaria Chemoprevention in the Sahel (ACCESS-SMC) project. The project implementation is led by the malaria consortium in partnership with CRS. The senior technical advisor participated in a meeting held on November 3, 2015, at which the second and third rounds of SMC distribution campaigns were evaluated, and plans for the fourth round of distribution were discussed. The second, third, and fourth rounds of the SMC distribution campaign were held from September to November 2015.

At the end of the 2015, the SMC campaign, a total of 620,647 out of 823,031 children (75.4%) aged 3 to 59 months received treatment of SP + AQ. SMC coverage rate increased from 64% in the first round to 81% in the fourth round. This is a result of commitments and efforts made by all stakeholders. A meeting to present results and lessons learned from the 2015 campaign is planned for January 2016.

To ensure a better implementation of the SMC in 2016, the SIAPS technical advisor advised the NMCP manager and the SMC focal point to hold a planning meeting in December 2015 to discuss 2016 targets, coverage area, and funding gaps. The country has targeted covering 3,880,590 eligible children (aged from 3 to 59 months) in 2016. This is a threefold increase from year 2015 target, therefore, better quantification and planning are needed.

The NMCP stock manager, CRS supply chain person, and the SIAPS technical advisor participated in a regional quantification workshop for the seven ACCESS-SMC countries December 8-11 in Accra, Ghana. The workshop was an opportunity for country teams to better understand the quantification process and strengthen their capacity. SIAPS is also working closely with NMCP to revise quantification figures and adjust orders made by partners.

Partner contributions

The SMC activities in 2015 are financially supported by many partners such UNITAID through the ACCESS-SMC project, Doctors without borders (MSF), and UNICEF.

Constraints to progress

Current funding is insufficient to cover all 2016 SMC targets.

Philippines

Goal: To strengthen key institutions in reducing TB burden through increased access to quality and effective pharmaceutical and laboratory services.

Overall Quarterly Progress

SIAPS continued working with the National TB Program (NTP) and other partners in ensuring access to effective and sustainable pharmaceutical services necessary for TB control in the Philippines.

In this quarter, SIAPS provided technical assistance to the National TB Reference Laboratory (NTRL) to help develop their 2016 work plans, and has started the preparatory activities in the conduct of NTP's Laboratory Network's Performance Assessment.

As part of the technical support to the central level organized pharmaceutical working group that is responsible for governing the overall management of TB supplies and commodities, SIAPS has drafted a terms of reference (TOR) with information on organizational structure and roles and responsibilities of members. NTP Drugs and Supplies Management (DSM) unit has already reviewed the drafted TOR, and this document will be shared to other partners, including the Pharmaceutical Division (PD).

During this reporting period, the new pediatric fixed-dose combination (FDC) formulation was included in the Philippine National Formulary (PNF), the country's essential medicines list. The new formulation is a dispersible, flavored tablet that can be easily dissolved in water. It can be simply administered to children, as well as it reduces logistics management burden of the previous bottles of suspension. SIAPS contributed to this success through facilitating collaboration of NTP with the PD, WHO, and Global Drug Facility (GDF), and assisted NTP in the application process and presentation to the Formulary Executive Council.

SIAPS also continued its work in the enhancement of the Pharmacovigilance Monitoring System (PViMS), formerly called the Data Collection and Analysis Tool. SIAPS met with NTP, Food and Drug Administration (FDA), and the Knowledge Management Information Technology Service (KMITS) and presented the generic version of the tool. Partners expressed their interest on the use of tool, and explored the interoperability options of PViMS with DOH information management systems.

Objective 1. Capacity for pharmaceutical and laboratory leadership, governance, and management improved

SIAPS continued to assist the NTRL in strengthening its leadership and management capacity. SIAPS provided technical assistance to NTRL's technical units on developing their 2016 work plans, incorporating SIAPS's developed strategy on the decentralization of laboratory trainings to regions and provinces.

In collaboration with NTRL, SIAPS is the lead in conducting NTP's Laboratory Network's Performance Assessment, of which the results will be used for regional laboratory strengthening activities. This activity will continue in the succeeding months. SIAPS also provided technical inputs to NTRL management on enhancing NTRL Staff Performance Review System.

SIAPS continued to support the Quezon City Health Department (QCHD) in drafting the implementing rules and regulations for the ordinance establishing guidelines for the creation of a Barangay Health Management Council (BHMC) for the Quezon City Ordinance No. 2419 S 2015. BHMCs have been instrumental in mobilizing local resources to improve TB case finding and success rates.

SIAPS provided technical assistance to NTP in the quantification of the medicine requirements of Programmatic Management of Drug-Resistant Tuberculosis (PMDT) facilities. During this quarter, SIAPS supervised the completion of procurement forms for second-line drugs (SLDs) for the years 2016–2018, and assisted in reviewing consolidated reports of PMDT facilities from which the quantification data inputs in QuanTB is based. Using the QuanTB outputs, NTP communicated with Global Drug Facility (GDF) to facilitate the urgent deliveries of critical stocks (i.e., levofloxacin and kanamycin).

Due to the poor quality of pediatric TB suspensions that are being procured locally, SIAPS collaborated with the NTP, PD, WHO, and the GDF to facilitate including new pediatric TB fixed-dose combination (FDC) formulation in the Philippine National Formulary (PNF), the country's essential medicines list. SIAPS provided technical assistance to NTP to prepare application documents and presentation materials to the Formulary Executive Council, and will continue supporting NTP on forecasting, quantification, and procurement processes. SIAPS is also assisting NTP in completing application forms for the SLDs that are not included in the PNF.

Continuing the work on pharmaceutical regulatory systems, SIAPS also helped the NTP and PD in ensuring access to accurate manufacturing information of SLDs. Five additional medicine dossiers (moxifloxacin, cycloserine, levofloxacin, para-aminosalicylate sodium, and pyrazinamide) were received by the NTP from manufacturers this quarter, which now makes dossiers for 10 out of 16 SLDs. SIAPS is actively supporting the NTP in ensuring the registration of these SLDs while the identification of market authorization holder is in progress.

Partner contributions

- SIAPS's partnership with GDF and TB Alliance facilitated faster collaboration, completion of application forms, and helped with the submission of required documents for the inclusion of new pediatric formulation in the national drug formulary. TB Alliance provided related literature and price information.
- USAID Innovations and Multi-Sectoral Partnerships to Achieve Control of TB (IMPACT) project collaborated with SIAPS in providing additional technical assistance to Quezon City in the development of the implementing rules and regulations for the BHMC city ordinance.

Constraints to progress

Meeting of the DSM technical working group for this quarter was delayed due to competing priorities of the NTP and key partners. However, the next meeting is already scheduled for January 2016.

Objective 2. Capacity for transparent and evidence-based decision making improved

SIAPS continued to advocate to NTP, FDA, and other partners on the use of the PViMS, an electronic drug safety monitoring tool which allows for systematic data collection, documentation, and analysis of adverse events.

Following the introduction of PViMS in the previous quarter, SIAPS presented the complete generic version with its clinical, reporting and analytical features to NTP, FDA, KMITS, and other TB partners. In these meetings, the partners expressed their interest in adopting the PViMS and explored the adaptability and interoperability options with Integrated TB Information System (ITIS), FDA's Vigiflow system, and the nine month MDR-TB patient database. Several issues were clarified in the meetings including: (1) duplication in recording at the health facility level, (2) sustainability issues, and (3) how it will be linked with the current information systems of KMITS and FDA. A comprehensive implementation plan will be developed by SIAPS should the NTP adopt the PViMS.

Partner contributions

KMITS shared the ITIS patient demographics file as one of the preparatory steps in the interoperability process between PViMS and ITIS.

Constraints to progress

Due to competing priorities and activities of NTP, there had been delays in the adoption of the PViMS. In the interim, Philippine Business for Social Progress (PBSP) is using a patient database for the nine month MDR-TB operational research study.

Objective 3. Capacity of NTP to deliver pharmaceutical and laboratory services improved

In the previous quarter, the nine month MDR-TB regimen operations research study has commenced its implementation in four PMDT treatment centers.

NTP, with the Global Fund, NTRL, Technical Assistance to Support Countries (TASC), PBSP, and SIAPS visited the Xavier University treatment center in Region 10 to ascertain how the facility manages the nine month MDR-TB study implementation. Important issues raised during the monitoring visit were: (1) reasons for patient enrollment refusal which include: delays in line probe assay (LPA) turnaround time, (2) arrangement of meeting with NTP, PBSP, and Global

Fund to mitigate impending stock outs of medicines, and (3) compliance with the reporting guidelines in the SOPs for active PV surveillance. The second batch of treatment sites is targeted to receive training in January 2016. To reduce turnaround time, NTRL is proposing a two line probe assay (LPA) test per week instead of only one test. Issues on medicine stock outs are also being addressed by expediting the delivery of medicines from the central level and thorough follow up. Adverse events were reported in accordance with SOPs; however, submission of the supporting documents necessary for analysis at FDA was delayed. These documents have now been submitted to FDA.

In this reporting period, NTP, in collaboration with SIAPS, PBSP, and other TB partners oriented the ten study sites on the bedaquiline operational research study protocol. The study is set to start implementation in February 2016. During the orientation, SIAPS supported in developing the presentation slides, and led the discussion on the DSM and active drug safety monitoring and management topics.

During the World Lung Health Conference in South Africa, SIAPS facilitated a meeting with WHO, NTP, and partners to discuss proposed WHO recommendations for changes to the MDR-TB treatment regimens, particularly the inclusion of linezolid in the pre-extensively drug resistant TB regimen, and how these changes might affect existing operations research protocols in the Philippines.

To strengthen the governance capacity on pharmacovigilance affairs, SIAPS met with FDA on the reformation of the National Drug Advisory Committee for PV. A draft scope of work for a senior consultant was developed by SIAPS and was already reviewed and accepted by FDA PV unit.

At the request of NTP, SIAPS participated in planning activities for the NTP Joint Program Review which will be held on March 2016, and provided technical inputs in the laboratory and pharmaceutical supply chain components. SIAPS also worked with PMDT of the NTP to write the PMDT implementing guideline sections on pharmaceutical management and pharmacovigilance.

South Africa

Goal: Strengthen the capacity of pharmaceutical systems at all levels to support the South African Government's priority health programs and initiatives to improve health outcomes

Overall Quarterly Progress

During the quarter, SIAPS made steady progress with some activities transitioning to partners, while in other areas, sustainable results are apparent. Overall progress is summarized below.

To date, SIAPS has worked with five tertiary institutions (Nelson Mandela Metropolitan University [NMMU], Sefako Makgatho Health Sciences University [SMU], University of Fort Hare [UFH], University of KwaZulu-Natal [UKZN], and the University of the Western Cape [UWC]). SIAPS' work with the universities included training and development of materials to address course gaps in pharmaceutical management (e.g., rational medicine use, pharmacoeconomics, pharmacovigilance, and leadership development), resulting in five pre-service health professional training curricula against a target of four. The rational medicine online course was finalized and handed over to UWC, demonstrating the sustainability of SIAPS pre-service capacity building efforts.

The outcomes of SIAPS Pharmaceutical Leadership Development Program (PLDP) work is visible in successes reported by teams. In MSH's *Leadership and Management Intervention Assessment Report* (September 2015), SIAPS South Africa's partners commented on how PLDP principles have been institutionalized. For example, the head of Pharmaceutical Services for KwaZulu-Natal (KZN), said, "The challenges taken up by the teams are all linked to our performance as a district and these are the issues that we report to our principals ... the PLDP projects became part of our regular reports. This was not seen as something on the side. It was integrated with our work ... complemented our work ... it got positive acceptance from the principals..."

PLDP teams continued to make positive changes in the work place. These sustained changes were highlighted in a success story completed in PY5Q1 on the KZN Provincial Pharmaceutical Supply Depot. In 2013, it took an average of 27 days for the main order for medicine from a facility to be processed and provided to the courier for dispatch. After the PLDP team intervention, this time was reduced to 13 days, and by 2015 it was further reduced to 10 days. One of the Khayelitsha Eastern Sub-structure (KESS) teams based at Gustrow Community Day Centre (CDC) that completed the LDP during PY5Q1 improved the proportion of patients receiving their parcels of chronic medicine at a community venue from 16% to 30%. By PY5Q1, 320 health care professionals were trained on PLDP, far exceeding the target of 200 individuals.

SIAPS assisted the Essential Drugs Program (EDP) Unit with the roll-out of the updated edition of the Primary Health Care Standard Treatment Guidelines (STGs) and the Essential Medicine List (EML) smartphone application to the WC in October and KZN in November. These sessions consisted of interactive discussions on EDP processes, download and use of the smart phone application, and a review of changes in the STGs and EML.

SIAPS has installed RxSolution in 401 of the PY4 target of 495 sites. During the reporting period, six new sites were installed in the Eastern Cape (EC), Limpopo (LP), and Mpumalanga (MP) provinces and started using RxSolution; 63 RxSolution users were trained to use the system. RxSolution sites have maintained a 79% usage level, based on a target of 80%.

SIAPS continued to provide assistance to the Provincial Medicine Procurement Units (PMPU) in LP, North West (NW), Gauteng, and KZN. SIAPS developed a plan to upgrade the RxSolution version for PMPU priority facilities for Free State (FS) and EC. The National Department of Health (NDOH) plans to implement a dashboard for early detection of stock-outs of medicines at hospitals. The dashboard will import relevant stock data from the various source systems in the central, tertiary, regional, and district hospitals. To date, 51 of 52 of the identified facilities have been assessed.

Ethical approval for the research project entitled "Using Electronic Pharmacy Dispensing Data for Surveillance of Outpatient Antibiotic Consumption and Monitoring of Antibiotic Prescribing Practices at District and Provincial Hospitals in the South African Public Sector: A Feasibility Study in North West Province" was obtained.

Objective 1. Pharmaceutical Sector Governance Strengthened

SIAPS is working with the NDOH to strengthen pharmaceutical system governance through the development of key policies, guidelines, norms, and contractual documents. In 2015, SIAPS began working with the NDOH to develop a national strategy for improved access to and availability of health products. The starting point is a strategic framework that describes key outcomes—improved selection, contracting, contract management, distribution, replenishment management, and the rational use of health products. During the quarter, SIAPS continued to work with NDOH and SCMS on components of the strategy, including the concept note on pick-up points for the Central Chronic Medicine Dispensing and Distribution (CCMDD) Program, which was finalized. Work commenced on the final strategy document which will be completed in the next quarter.

SIAPS assisted with the preparation of the medium-term expenditure framework request and budget bid submitted to the National Treasury by the Affordable Medicines Directorate (AMD) of NDOH. SIAPS also assisted with the drafting of the Global Fund proposal. This work included the development of a revised organogram for AMD, drafting of key functions for the posts requested, narratives, indicators, and a flow diagram representing organizational structures, reporting lines, and flow of products and data.

SIAPS continued to act as the secretariat for the ministerial advisory task team on security of medicines and health commodities. SIAPS supported a two-day stakeholder engagement meeting convened in November to discuss the recommendations of the task team. A total of 48 participants from the national and provincial departments of health, professional bodies, private hospitals, and non-governmental organizations attended the consultation aimed at engaging stakeholders to discuss recommendations made. SIAPS assisted with facilitation of the workshop and drafted the workshop report which was submitted to the NDOH for review and dissemination.

Further work was done on the national Pharmaceutical Services Management Dashboard that supports monitoring and oversight of the quality of pharmaceutical service delivery in the provinces. The manual describing the standards and indicators was revised and adopted at the meeting of the Pharmaceutical Services Subcommittee of the National Health Council (NHC) held in November. SIAPS assisted NDOH with capturing input from the provinces for the last two quarters. In the next quarter, SIAPS will work with NDOH to develop a web-based tool to promote effective utilization of the dashboard. Indicators for the hospital dashboard for the early warning system for medicine availability were developed.

SIAPS had previously assisted in drafting revised criteria for licensing pharmacies. A revised document was published in the Government Gazette for further public comment. SIAPS also worked with NDOH on the development of contractual documents for the Stock Visibility System (SVS) being introduced to monitor medicine availability at primary health care (PHC) clinics. Using the standardized template for terms of reference (TORs) of committees designed by SIAPS in the last quarter, work continued on the revision of the TORs for the National Essential Medicines List Committee (NEMLC) and the Bid Evaluation Committee (BEC) responsible for evaluating bids for tenders for pharmaceutical and medical-related items. Work also commenced on drafting policies relating to prescribing by nurses and the procurement of medicines that are not registered in South Africa.

Technical assistance was provided for the Pharmaceutical Services Subcommittee of the NHC to draft the agenda and hold after-action reviews after the meetings. SIAPS subsequently facilitated a one-day internal planning workshop for senior staff of AMD. SIAPS worked with SCMS to facilitate a workshop convened for pharmacy schools and other stakeholders to discuss a research agenda for pharmaceutical services.

SIAPS supported the Central Procurement Unit (CPU) in drafting the July-September quarterly report to the Global Fund NDOH principal recipient. In addition, SIAPS supported the CPU in the development of a standard operating procedure (SOP) that outlines report generation.

During this quarter, the Implementation Plan for the Antimicrobial Resistance Strategy Framework in South Africa: 2014-2019 was edited and submitted to NDOH for signature. The plan underscores that targeted communication to the public and health care prescribers is necessary to build awareness of the impact of inappropriate antimicrobial use. Through the development of the strategic framework, the government has made antimicrobial resistance (AMR) a priority area and included World Antibiotic Awareness Week (WAAW) in the 2015 health calendar.

SIAPS continued to assist with implementation of the M&E framework for the CCMDD Program. Workshops were held in the districts to introduce the M&E framework and indicators to district teams and map the way forward in each district. Weekly and monthly reports were prepared and provided to key stakeholders. Dashboards were also prepared to facilitate data visualization and decision making.

Support in tender management is important to ensure timely award of tenders and improve

medicines availability. In this quarter, SIAPS provided technical assistance to the NDOH for the administrative review and management of tenders. SIAPS also provided technical assistance with the tender award process, up to preparation of bid award documentation for two new pharmaceutical contracts for oncology items and diagnostic agents as well as two supplementary tenders for antimicrobials and large-volume intravenous fluids. SIAPS gave particular support to strengthening the bid evaluation process. SOPs for technical evaluation and a template for minutes of meetings are being finalized in cooperation with NDOH staff.

SIAPS assisted MP to commence the development of a formulary/catalog of medical-related products at the request of a subcommittee of the MP Pharmacy and Therapeutics Committee (PTC). This activity has the potential to benefit the whole country. SIAPS also cooperated with SCMS on the development of a catalog of medical-related items on national contract.

SIAPS is assisting the Department of Correctional Services (DCS) to establish and strengthen PTCs within their six regions; 34 participants attended a workshop held in November to capacitate the regions on establishing and strengthening PTCs. Regions were then tasked with developing their own TORs using the template developed by SIAPS. Draft TORs have been submitted to SIAPS for review.

Partner contributions

- SCMS–Team providing quantification support to NDOH, work on strategy document and workshop on pharmaceutical services research.
- CHAI–Developed and implemented web-based contract management software.

Constraints to progress

- Conflicting priorities resulted in delays in finalizing the NDOH strategy document.
- Because of the large volume of work involved with the awarding of medical-related contracts and the unavailability of NDOH staff, SIAPS staff were required to provide substantial operational and technical support in the tendering process.

Objective 2. Capacity of personnel for the provision of pharmaceutical services enhanced

The rational medicine online course was finalized and handed over to the UWC. As of 2016, the UWC will offer the course either as an elective or as a module for the masters in public health degree. SIAPS also finalized the online medicine supply management course for use at UWC.

SIAPS supported the UKZN in the successful delivery of the pharmacoeconomics course to 210 students (third and fourth year) in October 2015. Two lecturers and three graduate students were capacitated to deliver the course, thus facilitating transition of the course to the university in 2016. Course material developed by SIAPS included basic and essential principles of pharmacoeconomics, two articles for review, and the pharmacoeconomics guidelines.

In November 2015, SIAPS South Africa contributed to a presentation by the SIAPS global team on building capacity in programmatic pharmacovigilance. The presentation was delivered at the African Society of Pharmacovigilance Conference in Ghana. SIAPS South Africa shared their experience in collaborating with NMMU in the development of a pharmacovigilance elective course, thus sharing with other countries USAID/South Africa's investment in building pharmacovigilance capacity at the pre-service level as a sustainable approach.

SIAPS conducted medicines supply management (MSM) training for 28 UFH masters of public health students and 45 DCS pharmacists and pharmacist's assistants.

A memorandum of understanding (MOU) was entered between the Department of Pharmacy, SMU, and SIAPS. One of the activities in the MOU is the integration of the challenge model and other tools from the LDP into the management of pharmaceutical services module of the masters' program (public health pharmacy and management); 14 students are enrolled in the program. A coaching workshop was held during this quarter to guide and coach students as they implement quality improvement initiatives in their work place to improve health outcomes. The final presentation will take place in January.

Starting in 2012, SIAPS implemented the PLDP in KZN for two groups of pharmacists from each of the 12 districts and provincial pharmaceutical services. During the last quarter, 12 district teams and one provincial team completed the sustainability phase of the PLDP. With the aim of harnessing achievements from the PLDP to improve access and availability of medicines across the province, the Pharmaceutical Services Directorate in KZN, with assistance from SIAPS, embarked on the Medicine Access Initiative (MAI). SIAPS assisted the province to hold a three-day workshop to review district performance on the provincial pharmaceutical services indicators and launch the MAI. Through the review, priority areas for intervention were identified. These included reporting on medicine availability, pharmacy supervision at PHC clinics, and budgeting and expenditure monitoring. Each district selected a priority area on which they would focus their interventions over the next six months by using the LDP approach. The aim is to develop best practice models and tools that will be rolled out across the province. By the end of the workshop, measurable results and action plans had been drafted. SIAPS will continue assisting the teams through support visits and follow-up workshops.

In October 2015, 26 individuals (10 pharmacists, 8 operational managers, and 8 clinical managers) from the KESS in the WC completed the LDP. Working in teams, the participants implemented quality improvement initiatives in each of 10 health facilities in the sub-structure.

Results achieved by the teams during the period March to September 2015 included:

- Strand Clinic: Increased the proportion of chronic patient reviews conducted by a clinical nurse practitioner instead of a medical officer from 7% to 25%. This initiative aims to reduce the workload of medical officers so that their time can be utilized for more complicated cases.
- Khayelitsha CDC: Reduced the proportion of prescriptions rejected by the Central Dispensing Unit (CDU) for medico-legal or clinical reasons from 7.2% to 3.7%. This

meant that fewer patients (on average 3,200 patients receive medicine via the CDU monthly), were at risk of not receiving their monthly medicine parcels.
- Mfuleni CDC: The team increased the proportion of stable ARV patients registered in CDU from 18% to 26%.
- Gustrow CDC: The proportion of patients receiving their CDU parcels at a community venue increased from 16% to 30%.
- Helderberg Hospital: Implemented a system for pharmacist's assistants to support inventory management in four wards. The initiative resulted in a reduction in the average number of items on the ward stock lists from 144 to 100.

In FS, SIAPS continued to work with the Pharmaceutical Services Directorate to address various challenges identified by an audit conducted by the auditor general. Key challenges identified were the availability of medicine and the need to improve medicine supply management processes. SIAPS developed the Pharmaceutical Leadership & Governance Initiative (PLGI) to meet capacity building needs identified for pharmacists, particularly with respect to fostering good governance to improve medicine availability. A total of 33 participants (roving pharmacists, district and regional hospital pharmacists, and medical depot staff) are in the advanced stages of completing the PLGI. During the quarter, workshops 2 and 3 were held and coaching visits conducted to assist teams in reviewing progress toward achieving their measurable results.

During this period, technical reports on implementation of the PLDP in NW, LP, and KZN and implementation of the LDP in Klipfontein/Mitchell's Plain were completed. A report on implementation of PLDP and LDP in South Africa was also completed. The Leadership, Management, and Governance (LMG) project completed an assessment of the PLDP in KZN. This assessment found that the facilitated capacity development, accompanying TA, and mentoring and coaching provided by the PLDP have strengthened institutional capacity. Beneficiaries shared that the interventions resulted in a wide range of individual, organizational, and health service delivery outcomes, including improved reach and quality of services and the achievement of time savings. A success story was written that highlighted how an intervention introduced by a PLDP team in KZN has resulted in sustained improvements in the time taken to process an order at the provincial warehouse in KZN.

Partner contributions

- UWC collaboration in the development and marking of the final assignment of the online rational medicine use course.
- Worked with the USAID-funded LMG project on an assessment of PLDP in KZN.
- Worked with SCMS to draft KZN depot success story.

Constraints to progress

Request for support with final and supplementary examination papers for the pharmacoeconomics course was submitted late due to unrest at UKZN. SIAPS provided a final year examination paper with solution and encouraged the lecturer who attended the course to

extract and revise questions for a supplementary version of the paper to meet the short (24 hour) deadline.

Objective 3. Use of Information for Decision Making in Pharmaceutical Services Improved

SIAPS released a new version of RxSolution that supports PMPU ordering processes to strengthen medicine supply management at the provincial level. The process of upgrading facilities on the new version is on course and should be completed in PY5Q2. Priority facilities in EC and FS were identified by the PMPU.

During the quarter, SIAPS worked with AMD to map the EDP process steps and define the required functions of the proposed Essential Medicines List Tool (EMLT). The purpose of the tool is to provide the foundation for business intelligence, promote transparency in EDP processes, and serve as a repository for master data. This will contribute to improved access to information on products on the EML and national contracts. The development of the system will be outsourced. Seven service providers were preselected, attended a briefing session and will submit proposals in January.

NDOH requested that SIAPS interface RxSolution with the Health Patient Record System, a national registry for patient data. The system will generate unique patient identifiers to enable patient records retrieval from any public health facility in the country and assist in tracking patient movement within the health care system. In PY5Q1, SIAPS discussed the interface development process with the Council for Scientific & Industrial Research. The implementation plan will be drafted in PY5Q2.

SIAPS worked with the Licensing Unit of AMD to map and document licensing processes. The development of the licensing system will be completed by SCMS. SIAPS continued to support AMD to refine the tender module. The business analyst (currently being recruited) will assist with mapping the required processes and documentation of user requirements and specifications.

SIAPS updated RxSolution reports to the latest report builder that has new features, such as drop down menus; 12 pharmacists attended a report workshop in October in Bojanala District, NW. Two RxSolution super users were trained to cascade the training to other districts in the province.

To date, SIAPS has installed RxSolution in 401 sites, including hospitals, PHC facilities, sub-depots, district offices and tertiary institutions. During PY5Q1, SIAPS provided implementation support in five provinces; 21 facilities were assessed to determine readiness to implement RxSolution (10 in KZN, 2 in MP, and 9 in Northern Cape [NC]). RxSolution was installed in 6 facilities (Nieu Bethesda clinic in the EC; Amajuba Memorial Hospital in MP; and Lebowakgomo, Sekororo, Siloam, and D Fraser Hospitals in LP); 63 departmental staff from Gauteng (GP) (44), KZN (14) and NC (5) were trained to use the system.

SIAPS attended six technical meetings in GP, KZN, LP, and NC to ensure effective roll-out planning in the provinces, discuss the use of RxPMPU, and review process flows and installation at sites designated for roll-out in terms of NDOH's annual performance plan.

SIAPS discussed implementation and progress of a mechanism for a standardized provincial approach to stock management-and-demand planning using RxSolution with the GP provincial pharmaceutical services staff. An agreement was reached on the process for aligning the provincial database with the master procurement catalogue, standardizing bin location, and assigning and using VEN classification for all items.

SIAPS began planning with Aurum Institute and the DCS on the process of rolling out RxSolution in DCS prisons. The proposed approach will be refined and implemented in March 2016. This collaborative approach to expanding and implementing RxSolution demonstrates the potential to accelerate scale-up and sustainable deployment of RxSolution.

During PY5Q1, SIAPS had further engagement with NDOH on the signing of the MOU between NDOH and SIAPS. The lack of a signed MOU results in provinces being unable to allocate adequate resources for the roll-out of RxSolution. Provinces and SIAPS have developed project charters detailing how the roll-out process will be managed.

SIAPS received ethical approval for a research protocol on using dispensing data to monitor antibiotic consumption and prescribing practices at hospitals in NW. SIAPS has requested permission to conduct the study from the Provincial Department of Health Research Committee. Data extraction will take place during PY5Q2. In October 2015, investigators from SIAPS and NW participated in a workshop with Harvard Pilgrim Health Care Institute in Pretoria. The team identified the data quality checks and refined the data analyses plan.

In FS, SIAPS supported eight facilities in Thabo Mofutsanyane district on the appropriate use of RxSolution, including assessment of expired-stock reports, stock and risk-of-expiry reports, usage reports, and checking system updates. In Waterberg district in LP, SIAPS trained 34 pharmacy personnel to generate reports and update information on existing reports (e.g., tracer medicine list) to ensure optimal use of RxSolution.

SIAPS developed an RxSolution early detection of stock-out (EDOSO) report to allow facilities to identify and print or view products that are at risk of stock-out, in support of NDOH's initiative to implement an early warning system. The EDOSO report was piloted at two facilities in Thabo Mofutsanyane district and introduced in the Waterberg district in LP.

SIAPS is assisting the NDOH in implementing a dashboard for the early detection of stock-outs of medicines at 52 health facilities across all provinces. Stakeholders will be able to access the populated dashboard to view up-to-date stock status. To date, 51 of 52 of the identified facilities were assessed. Universitas Hospital will be assessed in PY5Q2. During this reporting period, SIAPS prepared a revised set of indicators for presentation on the dashboard.

In GP, SIAPS is supporting pharmaceutical services to assist pharmacy managers in expenditure analyses and procurement practices by using the stock system to support decision making on financial sustainability and medicine availability in 30 facilities. The work will commence in January 2016. A proposal has been drafted by the province in collaboration with SIAPS and submitted to the Operational Research Committee. SIAPS also provided an orientation to the

provincial head office staff and new depot staff members on the use of the Infomaker tool to extract reports from the depot inventory database.

Partner contributions

- SCMS supported the implementation of the direct delivery strategy.
- Harvard Pilgrim Health Care Institute provided guidance on the data analyses to be performed in RxSolution antibiotic study in NW.
- Partner support for implementation of RxSolution including assessments, training, and installation of the system in the following districts:
  - HST: Thabo Mofutsanyane district in FS
  - FPD: Tshwane Metro in GP
  - BroadReach: Ekurhuleni district in GP
  - ANOVA: Mopani district in LP

Constraints to progress

- Delay in the finalization of the MOU between SIAPS and NDOH hinders RxSolution implementation; SIAPS continues to follow up with NDOH.
- Outdated or complete lack of infrastructure affected the pace of the roll-out of RxSolution; to address this, MOUs are being developed to enable provinces to allocate resources to address the infrastructure challenges.
- Lack of secure electronic tools for the transfer of data due to non-compatible heritage systems in use at different levels.

Objective 5. Pharmaceutical services improved to achieve desired health outcomes

SIAPS supported the EDP in the development of a draft recruitment strategy and selection criteria for the appointment of members to the Primary Health Care Standard Treatment Guidelines and Essential Medicines List Expert Review and Antimicrobial Resistance Committees. A template for the submission of curricula vitae by prospective members of the EDP committees was also developed.

SIAPS assisted the EDP Unit with the roll-out of the updated edition of the Primary Health Care Standard Treatment Guidelines and the Essential Medicine List smartphone application. Workshops were held in the WC in October and KZN in November. These sessions consisted of interactive discussions on EDP processes, download and use of the smart phone application, review of changes in the STGs and EML, and a survey of impressions of the workshop; 63 participants attended the KZN sessions and 81 attended the WC sessions. These workshops aimed to support the implementation and dissemination of the national STGs and EML.

SIAPS continued to provide input into decision-making processes of the Selection and Formulary Subcommittee of the KZN PTC as a way to improve and strengthen the rational use of medicines in the province. In addition SIAPS has capacitated members of this PTC on basic pharmacoeconomic principles.

SIAPS provided technical assistance to the WC Provincial PTC to capture the data for the aspirin medicine use evaluation received from 254 facilities. Approximately 4,500 aspirin cases have been captured onto the data collection forms. Preliminary results indicate that more than two-thirds of patients treated with aspirin are treated inappropriately.

Technical assistance was provided to the EDP Unit by carrying out pharmacoeconomic evaluations and technical medicine reviews to support the decision-making process in the review of the STGs and EML. During this quarter a health economics model for rivaroxaban in the treatment of atrial fibrillation was finalized and a more comprehensive sensitivity analysis carried out. A report for submission to the EDP Unit is being drafted.

The lack of available data on antibiotic prescribing practices at the facility level is one of the challenges faced in the fight against AMR in South Africa. The antibiotic study that SIAPS will conduct in NW in 2016 will be useful in identifying a potential solution to sourcing such data in the future (refer to objective 3). During this quarter, SIAPS also worked with GP Pharmaceutical Services to customize the clinical audit tool developed by EDP to assess the implementation of certain key antibiotic stewardship practices in intensive care units (ICUs) at central and tertiary hospitals. In GP, targeted facilities were expanded to include other hospital wards and secondary and PHC facilities. The data collected will assist in analyzing antibiotic prescribing practices for inpatients in ICU, medical, and surgical wards at central, tertiary, and regional hospitals and outpatients at district hospitals, community health centers, and PHC clinics. In November, SIAPS collaborated with GP Pharmaceutical Services to present the use of the tools to pharmacy managers; 26 hospitals and 77 clinics undertook to assess the use of antibiotics during WAAW.

SIAPS supported the National Pharmacovigilance Centre in the capture and review of 92 ADR reports from the tuberculosis electronic drug resistance register (EDR Web). Technical assistance is also being provided for the management of a pregnancy registry and birth defect surveillance in KZN in conjunction with NDOH and other partners.

Partner contributions

Right to Care: PHC STG and EML smartphone app launch workshops in the provinces

South Sudan

Goal: Assure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes

Overall Quarter Progress

SIAPS' work is guided by the USAID operational framework of ensuring that critical areas of the pharmaceutical sector are improved while maintaining the developmental gains achieved over the period, with the focus on the two states of in Western Equatoria (WES) and Central Equatoria (CES) States. SIAPS continues to collaborate and leverage resources with partners such as the Health Pooled Fund (HPF), Interchurch Medical Aid (IMA), and the World Health Organization (WHO) to expand the pharmaceutical and malaria interventions across the entire country.

During Q1, SIAPS supported the distribution of essential medicines and Emergency Medicines Fund (EMF) commodities to facilities in various states including CES and WES, partnering with the Integrated Service Delivery Project (ISDP) and USAID | DELIVER. The support involves providing security assessment reports and access in counties in WES and CES. The distribution to facilities that reported stock outs in Yei County (Morsak and Ombasi Primary Health Care Centers [PHCCs]) and Morobo County (Rodba and Kimba Primary Health Care Units [PHCUs]) took place in December 2015. For facilities in WES and others in CES, distribution is planned for the second quarter.

SIAPS provided storage space for the USAID-procured 400,000 long-lasting insecticide-treated nets (LLINS) and 635,000 doses of ACTs and distributed them to all counties in CES and WES through the implementing partners working in these states. The LLINs are intended for routine distribution, i.e., antenatal care (ANC) and the Expanded Program on Immunization (EPI). Of the ACTs, 100,000 doses were allocated to EMF buffer stock in November 2015. The LLINs and ACTs are meant to prevent and treat malaria to reduce malaria morbidity and mortality.

SIAPS provided regular technical support to the State Ministry of Health (SMOH) warehouses in CES and WES to ensure smooth operations and address bottlenecks.

SIAPS conducted supportive supervision visits to half the counties in CES. During the visit, three county health departments (CHDs) (Lainya, Yei, and Morobo) and 17 health facilities were supervised. As part of the activity, the supervision team (consisting of SIAPS, the National Malaria Control Program [NMCP], SMOH, and CHD staff) collected Continuous Results Monitoring System (CRMS) data and provided on-the-job training to improve the capacity of health workers serving at the health facilities.

SIAPS had regular technical discussions on key pharmaceutical interventions in the country to ensure smooth operations and address bottlenecks in pharmaceutical information management. A key intervention to address the information gap during the quarter is the installation of the Electronic Dispensing Tool (EDT) at the Juba ART center, in addition to the previously introduced Logistics Management Unit (LMU) at health facilities in CES and WES. The EDT

(intended for people managing products used in the fight against epidemics, such as HIV and AIDS, malaria, and other complicating opportunistic infections) helps maintain basic patient profile information, medication history, and other data that are essential for the dispenser to know at the time of dispensing, thus generating the required information for calculating pharmaceutical needs and informed decision making.

SIAPS provides regular updates to the national Ministry of Health (MOH)/Republic of South Sudan (RSS) and partners on progress in implementation of the LMU and plans to do the same for the EDT in upcoming quarters. These updates are shared during the Pharmaceutical Technical Working Group (PTWG) meetings and also during consultative meetings and discussions with stakeholders including the Mission and MOH/RSS. Apart from other informed decision making, the updates shared were used to identify priority areas of intervention given that SIAPS closes in September 2016. As such, most of the activities planned and budgeted for in FY15 should be visible to the public and ensure country ownership as an exit strategy. The work plan and budget were submitted to USAID, feedback was sent, and final changes to be made and approved by the USAID Mission.

The portfolio manager, based in Arlington, visited South Sudan to provide technical support in developing the FY15 work plan and managing some transition processes by meeting with USAID and partners to align project activities with the intended goal in the final year.

SIAPS received a technical support visit from the regional HR partner based in Nairobi who met with staff, addressed issues pertaining to national staff benefits, handled some pending recruitments (Country Operation Management Unit [COMU] manager and contracts analyst), and oriented new staff hired for SIAPS and the Challenge TB Program.

In October 2015 following departure of the COMU lead, short-term technical support was provided by an interim COMU lead from the Nigeria office until December 9, 2015. The interim COMU had a short period of overlap with the new COMU manager.

In December 2015, the new SIAPS country project director (CPD) made a 10-day orientation visit to the country, following departure of the former SIAPS CPD in November 2015. During the visit, various MoH/RSS directorates and partners were met. The change in SIAPS leadership was communicated, introduction of the new CPD was made and emphasis made on key roles that SIAPS has played and will continue to play in improving pharmaceutical services in South Sudan while working with MoH/RSS in collaboration with other partners.

Objective 1. Pharmaceutical services improved to achieve desired health outcomes

SIAPS coordinated with USAID | DELIVER to ensure that all six counties in CES received their EMF supplies, which included antimalarial and other essential commodities. SIAPS communicated through the SMOH medical warehouse controller to ensure that available space was created to receive the consignment and that proper documentation was done to ensure accountability for the supplies received.

Currently, Juba County and El Sabbah Children's Hospital have received their EMF supplies for quarter 5, and SIAPS is supporting partners to ensure the onward distribution of these much needed supplies to facilities.

SIAPS worked with Crown Agents and International Procurement Agency (CAIPA) to discuss plans and options for the next procurement of essential medicines as the EMF comes to a close. SIAPS supported CAIPA to develop a distribution plan for 1.6 million doses of ACTs to help with the malaria upsurge; the plan was approved by MOH/RSS and realized by EMF and USAID | DELIVER.

SIAPS worked closely with all six CHDs in CES[1] to ensure minimal stock outs by implementing a pull system at the CHD level and encouraging redistribution of excess stock to other facilities that needed it.

SIAPS supported the in-country customs clearance and transport of PEPFAR-procured commodities, such test kits, laboratory items, and ARVs. Currently, SIAPS is following up on five tax exemptions.

SIAPS took delivery of and stored 400,000 LLINS procured by USAID for use in WES and CES at the rented warehouse in Gumbo.

SIAPS has also procured 250 shelves for 16 county stores. Distribution will occur in February 2016 following approval of the distribution plan by USAID.

SIAPS received 635,000 ACTs procured by USAID for distribution in CES and WES, of which 100,000 doses were given to EMF buffer supplies. A draft distribution plan for the ACTs, storage shelves, and LLINs was shared with USAID for input and approval.

In WES, SIAPS carried out supportive supervision in Yambio County, but activities were curtailed due to the increased insecurity in the county. In all, in the last quarter, six health workers (four males and two females) were trained on accurate updating of stock cards and monthly reports in WES. As part of improving access to maternal and child health commodities, SIAPS also conducted an assessment on contraceptive products in Yambio and Nzara Hospitals.

Partner contributions

The project has collaborated with ISDP, HPF, WHO, UNICEF, and USAID | DELIVER to ensure that issues related to drug supply and pharmaceutical management are addressed. In addition, the SMOH in WES and CES have been supportive in conducting field visits and supervision.

[1]CES is divided into six counties. In each county, there is a CHD led by a director, who is in charge of all health activities in the respective county. SIAPS works closely with all six CHDs. During the last supportive supervision, five out of the six counties were visited.

Constraints to progress

- The general insecurities continue to greatly affect drug supply and management in the country, especially in WES, where nearly half of the counties remained inaccessible for most of the quarter.
- Some counties in WES and CES do not have store keepers and pharmacists who can manage medicines, which the drug supply and capacity building efforts by the program.
- Selected counties and health facilities have challenges with shelves and pallets, which results in poor storage and management of supplies.
- SIAPS is also having challenges securing a tax exemption for a new vehicle because the MOH requires a letter stating that the vehicle has been donated.

Objective 2. Capacity for pharmaceutical supply management and services increased and enhanced

To increase and enhance the capacity for pharmaceutical supply management and services, SIAPS provided technical assistance through embedded staff for the day-to-day management of the CES medical store, ensuring smooth operation and appropriate medicine storage and inventory practices, including arrangement of medicines in the store, stock card update, and receipts and issues of medicines. SIAPS provided computers and basic training on the use of computers to help the staff carry out the day-to-day tasks of warehouse management.

SIAPS conducted supportive supervision visit to the following three counties and 17 health facilities in CES: Morobo County (Morobo Hospital, Kaya PHCC, Aboroto PHCC, and Aloto PHCC), Lainya County (Kenyi PHCC, Jamara PHCC, Limbe PHCC, Wuji PHCC, Panyme PHCC, and Lainya Hospital), and Yei County (Yei Civil Hospital, Mugwo PHCC, Lasu PHCC, Ombasi PHCC, Gimunu PHCU, Kimba PHCU, and Bereka PHCU). The remaining three counties (Terekeka, Kajokeji, and Juba) and their respective health facilities have yet to be visited.

The SIAPS technical advisor and CES data coordinator conducted three pharmaceutical management trainings: one in Morobo for 13 heath workers, one in Terekeka for 22 health workers, and one in Juba for 22 health workers. The trainings covered good storage practices, EMF contents overview, correct use of the Pharmaceutical Management Information System (PMIS) tools, reporting forms, and rational use of medicines.

In November 2015, and in line with the visit of the SIAPS portfolio manager, the SIAPS team met in Juba to review the work plan development process for FY15 in a bid to prioritize activities for the quarter and also usher in new staff into the work planning process for the final year of SIAPS.

On October 27, 2015, the SIAPS team and the director for pharmaceuticals in WES travelled to Ezo County for a supportive supervision visit to collect the monthly consumption report and to observe CRMS activities, rearrange facility stores, and update stock cards. The SIAPS team visited 13 out of 28 health facilities, and a key finding was that PMIS tools were not in use. The SIAPS team and the director provided an introduction on the use of the tools.

In December 2015, supportive supervision visits were made to Nzara County in WES, during which Yabua PHCU, Nzara PHCC, and the Nzara County store were visited. In these facilities, stores were rearranged, information for CRMS reports was collected, stock cards were updated.

Partner contributions

The project collaborated with ISDP, IMA, CAIPA, WHO, SMOH, and HPF to ensure that pharmaceutical management trainings were rolled out throughout the country.

Constraints to progress

- Availability of skilled human resources to undertake pharmaceutical management tasks remains a challenge at the facilities. This, coupled with the increased insecurity and high staff attrition, impedes program activity implementation.
- SIAPS canceled a supervision visit to WES because of increased violence and insecurity.

Objective 3. Information for decision-making challenges in the pharmaceutical sector addressed

To ensure the availability of information for decision making, SIAPS continued to provide monthly stock status reports through the LMU for CES and WES. During the quarter, feedback on stock status of essential medicines was provided to the counties and to members of the Pharmaceutical Technical Working Group (PTWG). There has been a continuous decline in the rate of stock outs of tracer medicines in all 16 counties. This can be attributed to the effective distribution of EMF throughout the country.

The LMU is now fully functional and has a newly appointed director. In November 2015, with support from the SIAPS portfolio manager and the director general in charge of pharmaceutical and medical supplies, the new LMU director made a presentation to the PTWG on the LMU, its function and uses; and obtained buy-in for the LMU from various stakeholders.

At the Juba Teaching Hospital ART center, the EDT program, which is now in its sixth month after installation, was observed to be well functioning with minimal daily support from SIAPS staff. The EDT now has a database of over 3,000 patient records. It is anticipated the EDT stock status and patient usage reports will be generated on a monthly basis in the current quarter. The IT support provided at the center has been an effective means of ensuring that technical issues are resolved as soon as they are identified, which has enhanced efficient operations at the site.

Constraints to progress

The LMU is functional, but partner support from IMA and the World Bank is still lacking, especially in getting information sent to the team from the field.

At the ART center, availability of human resources remains a challenge. The capacity to undertake inventory management tasks is minimal. The staff at the center have not all grasped

the various sections of the EDT program; in addition, not all staff were trained at the initial set-up of the program, however, efforts have been directed at ensuring that the remaining staff are provided with effective on-the-job training during patient interactions. This challenge leads to delays in receiving prompt and accurate reports for analysis.

Various parts of the program have also been delayed because of an inconsistent supply of electricity. There has been a general delay in serving patients as the system only operates when the local area network is switched on (powered by electricity). Sometimes the power is switched on several hours after patients have arrived at the center. As a consequence of the delays resulting from lack of power, there is a large quantity of files that need to be entered into the database. The work piles up because staff reverts to manual means to serve patients faster.

Objective 4. Scale-up of malaria interventions accelerated, better coordinated, and documented

SIAPS participated in the Malaria Upsurge Response Taskforce set by the MOH and chaired by the director general of Preventive Health Services. SIAPS provided support as technical lead in Malaria Case Management and Surveillance and Data Management Sub-Working Groups and provided the venue for about six task force meetings. The outcome was a detailed response plan, with a nationwide quantification of antimalarial commodities need-and-gap analysis, on the basis of which CAIPA procured additional supplies to cover the country until the end of January 2016.

SIAPS presented the country malaria situation at a donor meeting, focusing on antimalarial stock availability and response to the malaria upsurge. As a recommendation, commodities' gaps and needs were quantified and DFID-funded CAIPA to ship in 1.6 million doses of ACTs. A presentation was made at a health forum meeting, and partners were updated on malaria epidemiology and commodities' security status, on-going responses, and plans for 2016 procurements and pipelines.

SIAPS supported two Malaria Technical Working Group meetings held in the MSH boardroom to discuss issues regarding the malaria situation and response plans, including MIS 2016/17.

SIAPS supports NMCP to develop a national malaria policy. A presentation on the process roadmap, outline, and expected inputs was made to the M&E TWG for consensus building. Completion is expected next quarter.

SIAPS, the CES malaria coordinator, and the NMCP regional M&E officer conducted supportive supervision visits to health facilities in CES, together with respective CHDs and malaria focal persons from Terekeka, Lainya, Yei, and Morobo Counties.

The SIAPS senior M&E advisor and the NMCP program manager participated in a malaria surveillance, data management capacity building, and peer review meeting organized by WHO. The challenge for South Sudan was the unavailability of data representative of the country. The recommendation is to improve the Health Management Information System (HMIS) malaria indicators. Later, SIAPS held a meeting with WHO to discuss, review, and update the malaria indicators. The updated indicator list was shared with MOH's M&E Department and uploaded

into the DHIS 2.0 (yet to be rolled out). All stakeholders are expected to use HMIS and avoid parallel systems.

SIAPS supported the NMCP to plan and conduct regular team and capacity building biweekly meetings to review progress, share updates, and identify next tasks as per the malaria annual work plan. SIAPS also supported the NMCP and partners to finalize and obtain approval for MIS 2013 report printing; the procurement process to print 1,000 copies has been initiated. Discussions on MIS 2016/17 are ongoing.

SIAPS participated in the Global Fund guided review meeting to discuss low fund absorption by programs (HIV, TB, and malaria), as this may lead to loss of impact and affect future fund replenishments. SIAPS participated in discussions to identify and address bottlenecks, focusing on malaria.

SIAPS supported the NMCP plan and preparation of a budget for the bi-annual malaria review meeting scheduled for December 2015, but other priority activities (e.g., response to the malaria upsurge) led to postponement.

Technical support and capacity building for NMCP regional M&E officers is on-going; activity plans have been reviewed.

NMCP was supported to prepare a budget for training 40 sentinel surveillance site staff, funded by WHO. Delay in funding led to postponement of the training.

SIAPS supported an NMCP behavior change communication specialist to review malaria messages with the BCC TWG.

Partner contributions

The Global Fund, through PSI, WHO, and USAID, has been supporting malaria activities through the engagement of technical assistance consultants and advisors. For malaria case management, USAID has procured 635,000 doses of ACTs and CAIPA has procured 1.6 million doses of ACTs. These ACTs are meant for treatment of malaria cases in the whole country.

Constraints to progress

The human resource capacity at the national, state, and county levels to fully implement malaria interventions is limited. This has limited the ability of the malaria program to fully roll-out its strategies at the lower levels. Embedded advisors from SIAPS and WHO are supporting the national program to develop the necessary policies and tools for effective implementation of malaria activities; however, there is delayed fund release from PSI/Global Fund to the NMCP which hinders some key activities, such as a therapeutic efficacy testing study, vector mapping study, etc.

Swaziland

Goal: The goal of the SIAPS program in Swaziland is to assure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes for HIV/TB care and treatment

Overall Quarter Progress

SIAPS has continued to strengthen the pharmaceutical sector to ensure uninterrupted supply of HIV and TB commodities at all levels (central warehouses and health facilities). During the quarter, 48% (N = 42) of ART-supported sites were able to maintain required minimum-maximum stock levels for ART tracer drugs. This was an improvement from the 39% reported the previous quarter. No facility has had a stock-out of ART tracer products for at least 3 days or more in the last 3 months. The same was also noted for the central warehouses. However, there was a recorded low stock of lopinavir/ritonavir 200/50 mg tablets which led to rationing supply of medicines to patients and resulting in patients being given shorter refill dates. The USAID Swaziland mission assisted with the procurement of 15,000 bottles of this product to ensure uninterrupted supplies.

In an effort to support efficient procurement of commodities, SIAPS assisted the MOH to develop three-year quantification forecasts for ART, family planning (FP), and TB medicines. A total budget request of 293 million Swaziland lilangeni (SZL), SZL 47 million, SZL 3.9 million for ARV, TB, and FP commodities, respectively, was submitted to the Ministry of Finance for the FY2016/17 budget cycle. SIAPS has also conducted the quarter 3 supply planning for ART and TB medicines.

SIAPS further provided trainings to 77 health care workers (HCWs) on inventory management and quantification. Mentorships were provided to 42 health workers from 21 SIAPS supported sites (19 health facilities and the two central warehouses).

Availability of quality and accurate logistics data is essential toward assuring uninterrupted availability of essential commodities. SIAPS continues to work with MOH and other PEPFAR partners to address challenges of poor reporting and errors which affect the maintenance of the recommended minimum-maximum stock levels. SIAPS supported the review and printing of stock cards, the ART LMIS report and order forms, and TB first and second-line drugs LMIS report and order forms. SIAPS has updated the essential medicines clinic LMIS report and order forms for key health commodities. Mentorship activities have been carried out to assist health workers in accurate and timely reporting of logistics information to the central level.

As a result of these efforts on information management, 98% (N = 42) of facilities completed and submitted an ART LMIS report for the period ending October 2015. This reflected an improvement in performance from 75% reported in the previous quarter. A slight improvement was noticed in timely reporting by ART facilities (i.e., 52% this quarter, compared with 51% last quarter).

SIAPS has worked with the pharmacovigilance unit to provide continuous support to the seven

active surveillance sentinel sites. A total of 300 adverse drug events (ADEs) have been analyzed from the facilities. Two abstracts were presented at the African Society for Pharmacovigilance in Ghana, and the TB Union Conference in Cape Town, South Africa. SIAPS/Swaziland also presented two abstracts on pharmacy pre-service training and the implementation of the Essential Medicines List at the International Pharmaceutical Federation (FIP) conference in Germany. These presentations served as opportunities for SIAPS to share successes in pharmaceutical systems strengthening in Swaziland and also to learn new approaches to address emerging challenges in the field.

SIAPS also has prioritized working with local PEPFAR partners who have been assigned to the regions in areas of inventory management. A partner committee for inventory management has been established to coordinate interventions on inventory management and standardize tools and approaches throughout the country.

Objective 1. Strengthen Governance in the Pharmaceutical Sector

SIAPS has supported the Pharmaceutical Services Department in areas of pharmaceutical services governance. Technical assistance was provided in two meetings of the House of Assembly (HOA) Health Portfolio Committee to deliberate the amendments on the bills from the house sitting. SIAPS assisted the parliamentary committee clerk to prepare and finalize the committee report, which was subsequently tabled before the HOA on November 24, 2015. The next step is for the committee report to be debated by the HOA and the results of their deliberations will then be presented to the King for his endorsement.

SIAPS developed the terms of reference (TORs) for the newly established national quantification committee, which were approved by the MOH Senior Management. Committee members were appointed by the Principal Secretary for Health and the first committee meeting was convened in November. The objective of the national quantification committee is to coordinate annual quantification activities and quarterly supply plan reviews to inform the national health budget and minimize interruptions in medicines and health commodity availability. This committee will be a subcommittee of the Supply Chain Technical Working Group.

SIAPS also facilitated the finalization and adoption of the Swaziland Medicines Donation Guidelines by presenting the guidelines to MOH Senior Management for formal adoption and revising the guidelines according to the management's input. The next step is for the guidelines to be presented to the Cabinet for approval.

Moreover, SIAPS facilitated the drafting of TORs to establish a National Pharmacovigilance Advisory Committee that will be responsible for supporting the National Pharmacovigilance Unit and validating its decisions. In the next quarter, SIAPS will help complete formal adoption of the TORs and the formal appointment of the committee members, which will have representatives from the pharmacovigilance unit, SIAPS, representatives from key programs (Swaziland National AIDS Programme, National Tuberculosis (TB) Control Programme [NTCP], and National Malaria Control Program and Extended Programme on Immunization), as well as national partners for HIV and TB.

Constraints to progress

The HOA Portfolio Committee report debate was postponed to April 2016 because there were concerns that the decision might lapse before the King can endorse it. (The HOA recommendations on the bills have to be endorsed by the King within 90 days, given ongoing and upcoming recesses and national activities, there was concern that the bills may not be considered by the King within the stipulated 90 days, meaning that the Parliamentary approval process would then need to be re-started.)

Objective 2. Increase capacity for pharmaceutical supply management and services

Trainings

In collaboration with other local organizations, SIAPS provided trainings to 77 health care workers (HCW). A total of 17 participants (12 females, 5 males) received a six-day training on quantification principles, processes, methodologies, and tools, focusing on:

- Quantification concepts, applications, processes and steps, challenges and lessons learned
- The establishment and roles of coordination mechanisms for effective and efficient quantification
- Quantification data, assumptions, methodologies, and calculations with practical exercises;
- Supply planning concepts and processes
- Practical training and exercises on Quantimed, Reality√® and PipeLine.

Furthermore, SIAPS collaborated with United Nations Office on Drugs and Crime (UNODC) to facilitate training on stock management and LMIS for 30 correctional services and Defense Force health workers. These trainings aim to assist the security force health workers conform to the supply chain system in the country as they report and order from Central Medical Stores (CMS) and therefore receive health products in right time and in the right condition.

SIAPS also collaborated with International Centre for AIDS Care and Treatment Programs (ICAP) and USAID's AIDSFree to conduct trainings for 15 ICAP and 15 AIDSFree regional mentors on supply chain. This was done to capacitate the mentors on supply chain and enable them to mentor health care workers in clinics as part of the PEPFAR regionalization approach.

SIAPS provided mentorships at 21 SIAPS supported sites (19 health facilities and the two central warehouses) during the quarter:

- TA on RxSolution was provided at nine sites, i.e., seven health facilities and two central warehouses, where 12 HCWs were mentored on inventory stocktaking, use and generation of custom system reports, and troubleshooting hardware-related issues. Follow-up visits will be scheduled in the next quarter to ensure that MOH staff is fully capacitated on the tool for optimal usage of RxSolution.

- Fifteen facilities received mentorships in facility supply chain management, i.e., stock card updates, reporting, and also on pharmaceutical services management, i.e., dispensing and ADR management.

During the quarter, SIAPS participated in Site Improvement through Monitoring Systems visits organized by PEPFARS at six health facilities. During the visits, it was observed that no facility performed below national expectations on supply chain management, thereby reflecting successful mentorship from SIAPS that improved facility based inventory management practices by health workers. The facilities maintained required stock levels of pharmaceuticals and used stock cards correctly. SIAPS also provided onsite training for 13 HCW on good inventory management.

Constraints to progress

There is a need to address infrastructure challenges at facility dispensaries and storerooms. The majority of facilities are in desperate need of air conditioners, proper shelving material to store bulk stock, bins for proper storage of pre-packed medicines in the dispensary, thermometers to monitor room and fridge temperatures, and medicinal refrigerators with in-built thermometers to store cold chain health commodities. MOH has been alerted to these challenges and PEPFAR partners are considering how they can assist.

Objective 3. Address Information Utilization for Pharmaceutical Management Decision Making

The Commodity Tracking System (CTS) is currently being implemented across all public health programs (TB, malaria, sexual reproductive health, ARVs, and laboratory) at the central level.

Building on the successes seen during implementation of CTS at the Central Laboratory, SIAPS is planning to roll out CTS to facility level laboratories. Data entry personnel responsible for data capturing for CTS at the central laboratory were also supporting the facility rollout of CTS. During the quarter, SIAPS made presentations on CTS to the MOH Senior Management, Laboratory Managers, and stakeholders. Laboratory management was also given access rights to CTS reports module to view stock data from the main laboratories for informed decisions on management of laboratory supplies.

SIAPS also remains active in supporting the implementation of RxSolution at both central and facility levels, and troubleshooting support has been provided to all sites. Currently at least 90% (N = 39) facilities have a fully functional RxSolution.

SIAPS continued to facilitate and support the testing of the web-based pharmacovigilance information management system (PViMS) for improving data analysis, data cleaning and integration, preliminary analysis, and exploratory analysis of active surveillance data. The system was tested for functionality with reference to the Use and Test Case documentation. The results were shared with the PViMS development team.

SIAPS supported the review and printing of 20,000 tock cards for medicines, ART LMIS report and order forms, and first and second-line TB LMIS report and order forms. The essential

medicines clinic LMIS report and order form was reviewed to be in line with the national essential medicines list. The next step involves approval of the tool by the senior pharmacist at CMS, printing the report and forms, and training health care workers on how to properly record and report using this new version.

During the quarter, 98% (N = 42) of ART facilities completed and submitted an ART LMIS report for the most recent reporting period. This reflected an improvement in performance from 75% reported in the previous quarter. An improvement was seen in timely reporting by ART facilities (i.e., 52% this quarter, compared with 51% last quarter). Improvements were also observed for the laboratory reporting rate from 88% recorded previous quarter to 100% in the current quarter.

SIAPS also supported the logistics Data Management Unit (DMU) to develop an action plan to address logistics quality and challenges relating to use. A draft plan has been compiled and the next steps will be to share plan with other regional PEPFAR partners for their support in addressing supply chain information issues. Furthermore, SIAPS continues to advocate for a more active use of data to ensure uninterrupted availability of commodities. In this regard, SIAPS has engaged CMS on the introduction of supply chain early warning indicators to assist in early detection of imminent drug or supplies shortages.

Constraints to progress

As a strategic entity within MOH for handling procurement, storage, and distribution of pharmaceuticals, the CMS has interests in procuring a Warehouse Management System which will likely replace RxSolution at central level. This is causing some uncertainty on the future of RxSolution as an MOH-approved inventory management tool in the country. SIAPS has engaged both MOH and the Global Fund Principal Recipient (funder of the activity) to plan together and develop a sustainable solution without compromising on established inventory management practices.

Objective 4. Improve Pharmaceutical Services to Achieve Desired Health Outcomes

During the quarter under review, 48% (42) of ART supported sites were able to maintain required minimum-maximum stock levels for tracer ARV medicines. This is a slight improvement from the 39% reported in the previous quarter. No facility has had a stock-out of tracer ARV medicine for at least three days or more in the last three months. The same was also noted for the CMS.

SIAPS has provided technical assistance in conducting the causality assessment of the adverse events reported to date. SIAPS also supported the data analysis for active surveillance data for the reporting period of June–October 2015. The data analysis showed that 3,006 patients have been enrolled in the active surveillance system from May 2013 to October 2015, and there have been 1,069 ADEs have been reported. The most prevalent ADEs amongst all the enrolled patients were gastrointestinal effects (19%), peripheral neuropathy (17%), and central nervous system effects (12%).

A job aid has been developed to encourage reporting to the National Pharmacovigilance Unit. This job aid is currently being reviewed by MOH, and is then scheduled to be printed and disseminated in the next quarter. The passive surveillance reporting using the ADR reporting forms is ongoing and facility mentorship continued in this quarter. Ninety reports for the period July–October 2015 were analyzed.

From the findings of the active surveillance system, SIAPS has supported the following risk mitigation activities:

- The data on ADEs for patients on second-line treatment was used to assist the NTCP and CMS quantify the number of patients who will require bedaquiline. This informed the quantity of the new medicine ordered by Swaziland through the Janssen/USAID donation program.
- Development of an ADE definition and severity grading job aid to facilitate the objective, uniform identification, and severity grading of ADEs by all health care professionals so that the data is more consistent and accurate to enable quality decision making.
- Development of ADE reporting cascade for health care professionals
- Development of ADE identification and reporting job aid for patients

The next steps for risk mitigation strategies are to develop an ADE management guideline that is aligned to the Swaziland Essential Medicines List to ensure that proposed ADE management protocols recommend medicines available in the public sector to improve the management and limit out-of-pocket patient expenditure on medicines.

Technical support was provided to the National TB Control Program in preparation for the implementation of bedaquiline for the management of XDR-TB patients. The support included:

- Testing and providing feedback on the redesigned web-based PViMS.
- Development of a pharmacovigilance module for the bedaquiline implementation guidelines for the Swaziland NTCP, which shall be adapted and used in other SIAPS-supported countries that are introducing bedaquiline.
- Facilitation of resource allocation for the importation of bedaquiline into Swaziland; the first consignment arrived on December 4, 2015.

SIAPS continued to monitor and support health facilities in implementing strategies to improve medicines use through hospital pharmaceutical and therapeutics committees. For the health facility, PTCs are established to ensure documented evidence-based improvement in medicine use and also implement AMR advocacy or containment-related activities where they exist. In the review period, six health facilities have had at least one PTC meeting.

Constraints to progress

Although all the targeted health facilities have been sensitized on ADR reporting and have been supplied with ADR reporting forms, there is still a big challenge in health facilities of passively

reporting adverse events experienced by patients on medicines, especially long-term therapy, such as TB and HIV medicines. SIAPS will continue to encourage health facilities to monitor and report ADEs experienced by patients from the medication they are taking to improve adherence and improve medicines use.

Half of the targeted health facilities seem to be having challenges hosting PTC meetings, citing issues such as not being able to form a quorum when the scheduled date of meeting arrives, lack of key department presentation, and lack of commitment of senior medical officers and matrons.

Tajikistan

Overall Quarter Progress

SIAPS continued providing support to Tajikistan's National Tuberculosis Program (NTP) in building the TB pharmaceutical management capacity. The final version of the TB pharmaceutical management manual, which was reviewed and agreed on with the national counterparts, was translated into the Tajik. The document is ready for approval by the MOH.

An automated electronic tool for collecting and managing LMIS data is being tested by the NTP. Based on the testing results, the NTP requested some improvements. The improvements to the system are being implemented and it will be ready for piloting in January 2016.

SIAPS continued support of the early warning and quantification system established in the previous quarters. The lessons learned and results of use of the system were presented at the 46th UNION World Conference on Lung Health, held December 26, 2015 in Cape Town, South Africa.

Objective 1. Increase and enhance capacity for pharmaceutical management of NTP of Tajikistan

SIAPS continued to support the National TB Pharmaceutical Manager in building capacity. In October, the manager conducted forecasting and quantification of second-line drugs (SLDs) for the entire country with the use of QuanTB and created distribution plan based on those calculations. SIAPS reviewed the QuanTB quantification files and provided comments.

Constraints to progress

N/A

Partner contributions

The National TB Pharmaceutical Manager provided the quarterly report on the use of QuanTB to SIAPS in a timely manner.

Objective 2. Increase use of information for decision making in TB pharmaceutical management

SIAPS assisted the NTP in optimizing the use of existing paper-based reporting and developed an automated tool to monitor and manage LMIS reporting in electronic system. The electronic system is designed to receive and automatically aggregate the quarterly LMIS reports on consumption and stock levels of medicines. Using the system will allow monitoring to ensure that reports are being submitted on time, improve their accuracy, and dramatically reduce the time needed for aggregating data received from the different facilities. This is important for improving the supply planning of anti-TB medicines within the country and minimizing stock-outs or overstocks of medicines. During the reporting period, SIAPS worked on the sophistication of the electronic tool based on the testing results and requests from NTP. In

particular SIAPS added a function to generate reports on stock levels by expiration dates of the batches. Also, the stock data can be imported by QuanTB. It is expected that the system will be piloted in six districts of Tajikistan (Rudaki, Vahdat, Hisor, Shahrinaw, Tursunzoda, and Faizobod) starting in January 2016. Representatives of these districts are already trained in use of the tool.

Constraints to progress

Lack of access and limited internet and insufficient human resource capacity at TB facilities will be a key limitation to the rollout of the automated tool.

Partner contributions

SIAPS collaborated closely with KNCV Tajikistan Branch office. KNCV will support countrywide rollout of the reporting with the automated tool.

Objective 3. Strengthen Supply system of anti-TB medicines

Currently, information for QuanTB early warning and quantification system is collected on a quarterly basis throughout the country. Then quantification for supply planning purposes is done at the NTP central level. The system is managed by the NTP's pharmaceutical management coordinator. Quarterly reports on use of QuanTB and its files were provided to SIAPS for a review, and SIAPS provided respective comments. SIAPS presented Tajikistan's experience on use of QuanTB early warning and quantification system at the 46th UNION World Conference on Lung Health Workshop "Access to TB medicines beyond 2015: The dynamics of demand and supply."

Constraints to progress

N/A

Partner contributions

It was agreed, that Project HOPE, the principal recipient of the Global Fund TB grant and KNCV Tajikistan Branch implementing USAID-funded TB programs, would take over support to the early warning and quantification system after SIAPS is closed out in Tajikistan.

Ukraine

Goal: Assure availability of affordable quality pharmaceutical products and effective pharmaceutical services to achieve the desired outcomes for HIV and patients.

Overall Quarter Progress

For Objective 2, data collection for the Drug Utilization Review (DUR) in the HIV sector was completed and the data analysis has started.

For Objective 3, the approval of the Regulations on the National Essential Medicines List (EML) and EML Expert Committee is to be unblocked by amendments, drafted for the relevant Decree of Cabinet of Ministers of Ukraine. Additionally, the testing of the web-based price monitoring tool has completed successfully, and it is expected to be installed on the end user's server in January 2016.

The verification of the data protection system developed for the Pharmacovigilance Automated Information System (PAIS) has started. It is anticipated that Security Service of Ukraine will receive the results of the data security verification by the end of February 2016 and the data security certificate will be issued. At that point, PAIS will be handed over to State Expert Center.

SIAPS Ukraine also continues to provide technical assistance (TA) to the government of Ukraine by contributing to the working groups on how to reform medicines procurement reform and health care financing outside of the MOH.

Objective 1. Support improvements in national supply chain management

Preparation for the National Supply Chain Assessment (NSCA) continued in this reporting quarter. Following the meeting with the Deputy Minister of Health, SIAPS Ukraine has taken a leading role in organizing the stakeholders into a working group. So far, two meetings have been held to agree on the methodological and technical aspects of the assessment. As a result, the sample of oblasts to be assessed was finalized, as well as the list of tracers.

Computer tablets were procured in November to facilitate the assessment.

The SIAPS Ukraine technical advisor on M&E has participated in a training in Arlington (November 12–17, 2015), organized jointly by SCMS and SIAPS programs. During the training, the experts in National Supply Chain Assessment (NSCA) from SCMS project shared their knowledge with SIAPS team, which helped speed up the preparation work for the NSCA in Ukraine, including the adaptation of the methodology.

The list of health facilities from the sampled oblasts was retrieved from the MOH, and the sampling of facilities is expected to be finalized before the end of December. The draft MOH order on NSCA is expected to be signed in January.

The scope of work for data collectors was developed, and the online form will be set up to take applications from candidates later in December.

Partner contributions

MSH and SCMS head offices organized and hosted the training on NSCA to support the assessment in Ukraine. Working group members contributed to finalization of oblast sample and tracers list. National logistic state enterprises and MOH statistics service provided data inputs which enabled sampling of assessment sites.

Objective 2. Improve pharmaceutical services for HIV and TB Programs

The timeframe for finalization of the report on drug utilization review (DUR) in the HIV sector (DUR/HIV) was rescheduled because the main report writer was fully engaged in the activities related to Essential Medicines List, which were assigned a higher priority. As of the end of December, the final draft report is still being edited before it is sent for review to SIAPS HQ.

The data collection for DUR in the HIV sector started in October 2015 as planned. By the end of November the data collection was completed. The vendor was selected in open competition for performing the data analysis. The vendor supporting the implementation of the activity is the same (for protocol development and data collection). In December, the data analysis started and is expected to be completed by the end of January 2016. Then the report preparation will start, incorporating the results of the data analysis. Later, the training module on DUR will be developed for the Drug Therapeutic Committees and coordinators of national HIV and TB programs.

Partner contributions

Major contributors for implementing DUR in HIV area are AIDS facilities, Ukrainian Centers for Disease Control, and State Expert Center.

Constraints to progress

Since the main report writer was fully engaged in activities related to Essential Medicines List, the preparation of the DUR TB report had to be rescheduled.

Objective 3. Improve pharmaceutical management and governance

SIAPS Ukraine has identified a need to make amendments to Cabinet of Ministers of Ukraine (CMU) Decree #333, which approves the current National Essential Medicines List. Working closely with Ministry of Health, Ministry of Justice, State Expert Center, and other stakeholders, SIAPS Ukraine has drafted an amendment to the CMU Decree #333. The amended Decree #333 will make it incumbent upon the MOH to develop and approve two regulatory documents—Regulations on the National List of Essential Medicines and Regulations on the Expert Committee on Selection and Use of Essential Medicines. Once approved, these documents will allow the current regulations to be in force. The official publication of the amended decree is expected before the end of December.

Because of other priority commitments, the Pharmacovigiliance Guideline Working Group did not meet. The group plans to submit four developed modules (5–8) in February, and then the group will continue with development of next modules (9–16).

Partner contributions

Ministry of Health, Ministry of Justice, State Expert Center, and NGOs (Patients of Ukraine and Anticorruption Action Center) collaborated on finding a solution on advancement of the approval of regulatory documents on EML by amending the CMU Decree #333.

Constraints to progress

Decree #333 regulates two areas: the National List of Essential Medicines and Health Products and the Margins for price top-ups for Essential Medicines and Health Products. Bringing about changes to the Decree #333 took a long time and was challenged with a pullback because other changes, not related to the National List of Essential Medicines, had to deal with some vested interests.

Uzbekistan

Goal: The primary goal of the project is to strengthen the TB control system to address the threat of increased MDR-TB.

Overall Quarter Progress

SIAPS supported the National TB Program of Uzbekistan in preparing for and presenting the results of the Drug Use Review (DUR) program at the 46th UNION World Conference on Lung Health, held December 2nd–6th, 2015, in Cape Town, South Africa. Lessons learned and results of the early warning and quantification system, which is supported by SIAPS, were also presented at the conference.

Based on the request of the Ministry of Health and USAID mission in Uzbekistan, SIAPS will continue to support the NTP in rolling out the early warning and quantification system (QuanTB) in 2016.

Objective 2. Strengthen pharmaceutical services for the NTP of Uzbekistan

The "Drug Use Review Program in Uzbekistan: Pathway to Improved Rational Use of Anti-Tuberculosis Medicines" abstract was approved for a poster presentation at the UNION Conference. SIAPS supported the national counterparts in in developing the poster presentation for the conference. SIAPS also supported the participation of the chair of the TB Pharmaceutical Working Group. The results of the DUR program piloted in three TB facilities of Tashkent city was presented jointly by SIAPS and the NTP of Uzbekistan during the poster presentation session.

Partner contributions

The NTP of Uzbekistan was the main partner in developing and presenting the poster.

Constraints to progress

N/A

Objective 3. Strengthen supply system of anti-TB medicines

Since January 2015, an information management system using QuanTB for quantification and early warning has been piloted in 3 regions (Samarkand, Khorezm, and Fergana oblasts) and Tashkent City, which is managed and coordinated by the central level. The system allows detecting the problems (stock outs or overstock) in the supply of anti-TB medicines and taking remedial actions at the district levels. The lessons learned and findings of the pilot were presented at the 46th UNION World Conference on Lung Health Workshop "Access to TB medicines beyond 2015: The dynamics of demand and supply."

In December 2105, SIAPS was requested by the USAID mission in Uzbekistan to support the NTP in rolling out the early warning and quantification system with the use of QuanTB in 2016 and ensuring its sustainability. It was approved that SIAPS will support the NTP to develop and endorse the national guidelines on pharmaceutical management which would include guidance on use of the QuanTB early warning system and support monitoring visits and on-the-job training in 10 regions of Uzbekistan.

Partner contributions

Project Hope staff members trained by SIAPS support use of early warning and quantification system in four regions of Uzbekistan.

Constraints to progress

A turnover of the trained staff may jeopardize use of the early warning and quantification system.