SIAPS Quarterly Report

Project Year 4, Quarter 3

April-June 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

This report may be reproduced if credit is given to SIAPS. Please use the following citation.

Systems for Improved Access to Pharmaceuticals and Services. 2015. *Systems for Improved Access to Pharmaceuticals and Services Program Quarterly Report: Project Year 4, Quarter 3: April-June 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 fourth year, SIAPS works with local counterparts and partners in 23 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' 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 January through March 2015 period.

SELECT PROGRESS TOWARD RESULT AREAS

Intermediate Result 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 are able to exercise appropriate decision making, authority, and oversight; transparent, ethical, 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, which 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.

Policy, Legislation, and Contractual Agreements

SIAPS has been providing technical assistance to the National Medicines Regulatory Authority (DNPL) in **Guinea** to revise the national pharmaceutical law and regulations. Last quarter, in February and March 2015, SIAPS helped the DNPL organize preparatory sessions to identify existing legislative acts and regulatory documents, collect and use international reference documents to identify inadequacies in the existing legislation, and summarize key recommendations and best practices. This quarter, with assistance from SIAPS, DNPL convened a three-day workshop with representatives from international and local partners, including the World Health Organization (WHO), to draft a new law to regulate the pharmaceutical sector in Guinea. As a next step, DNPL will establish a committee to finalize the draft bill.

SIAPS continued work in **Ukraine** to assist provincial-level (oblast) procurement authorities to establish framework contracts for the public procurement of health products with anticorruption funding. Framework contracts are long-term arrangements used to decrease purchase prices by establishing a safer and more stable commercial relationship for the supplier without committing to concrete quantities, thus adding flexibility for the procurement agent. These long-term contracts are widely used by governments in industrialized countries because they foster a competitive and transparent market environment. This activity supports Ukraine's goals of convergence towards European Union (EU) operating principles and containing costs, while reducing opportunities for kickbacks, which can occur with separate tenders for multiple, small, and frequent medicine and medical supply purchases. In Poltava oblast, SIAPS provided technical assistance that included training on framework contracts and meetings with oblast officials and key stakeholders, culminating in the first successful tender and award of framework contracts to three bidders to supply antibiotics valued at over USD 21,000 to a children's hospital.

In **Swaziland**, an important milestone was achieved this quarter when the House of Assembly debated and approved, with amendments, the Medicines and Related Substances Control Bill and

the Pharmacy Bill, which will replace existing legislation dating back to 1929. SIAPS helped the chief pharmacist's office to meet with the Health Portfolio Committee to prepare for the debate. Next, the bills will be debated by the House of Senate and, once approved, will be enacted into law.

Standards, Guidelines, and Procedures

To facilitate access to medicines to treat pediatric tuberculosis (TB) and multi-drug resistant TB in the **Philippines**, SIAPS is assisting the Pharmaceutical Division of the Department of Health (DOH) to update the national essential medicines list (NEML), called the Philippine National Drug Formulary, to include new pediatric dispersible formulations of TB medicines that are easier for caregivers to use and to include bedaquiline for treatment of drug-resistant TB in adults. Because Philippine regulations restrict government procurement to formulations listed in the national drug formulary, this is a critical step to improving availability of these products in the country. Also in **Mozambique**, SIAPS worked with the Pharmacy Department to draft and submit guidelines and procedures for using the newly developed NEML for approval.

With assistance from SIAPS, **Bangladesh** developed a standardized table of medical equipment for tertiary-tier hospitals in the country to complement the tables developed for primary- and second-tier hospitals in the previous quarter. These tables will serve as a guide for planners, policy makers, and health managers for planning and acquisition of medical equipment in health facilities.

In this reporting period, SIAPS assisted several countries to develop, revise, and implement a wide variety of standard operating procedures (SOPs) that promote good governance and better practices in pharmaceutical management.

- In **Namibia**, SIAPS prepared SOPs to enable the Ministry of Health and Social Services (MoHSS) to abstract data from the National Database (NDB) and generate the early warning indicators (EWIs) of HIV drug resistance (HIV-DR) without assistance from SIAPS. This is an important step in transitioning and institutionalizing the generation of these EWIs in Namibia.
- To promote efficiency, transparency, and accountability in **Mali's** Central Medical Store (PPM), SIAPS helped to develop SOPs for key distribution functions. Next, SIAPS will provide training on how to support implementation and monitor adherence to the new procedures.
- SIAPS collaborated with other partners to assist **Guinea's** national malaria control program (PNLP) to validate SOPs developed for its monitoring and evaluation unit.
- As part of continuing efforts to improve efficiency of the tender process for pharmaceuticals and medical supplies in **South Africa**, SIAPS provided technical assistance to the National Department of Health (NDOH) to revise two SOPs for preparation of the tender estimate and preparation and management of a sample evaluation. SIAPS also continued to develop a model set of pharmaceutical management SOPs for use at the facility level. To date, 34 of the planned 56 SOPs have been drafted and once completed, the set will be posted to the NDOH website to serve as a reference countrywide.

Transparency and Accountability

In **Cameroon**, SIAPS partnered with Positive-Generation, a local civil society organization (CSO), to jointly launch the Positive-Generation 2014 report of its HIV observatory. Through its Treatment Access Watch Program, the CSO reports weekly on the availability of antiretroviral medicines (ARVs) and HIV rapid test kits at 74 health facilities across all 10 of Cameroon's regions as well as notable incidents, such as when health workers demand inappropriate or elevated fees. SIAPS presented key indicator data on stock-outs of ARVs and HIV rapid test kits generated from the national logistics reporting system, which SIAPS is helping to strengthen, while Positive-Generation reported stock-out data and observations of volunteers and patients on barriers that compromise patients' access to HIV diagnostics and treatment. Both sources of information indicate that, overall, access to ARVs is improving across the country. However, access to HIV testing continues to be hampered by fees charged to patients that come for testing. SIAPS and Positive-Generation will continue to explore further opportunities for collaboration, including leveraging advocacy, monitoring, and reporting efforts to improve patients' access to critical HIV-related medicines and products.

SIAPS long-term technical assistance to help the **Ethiopian** Government institutionalize the Auditable Pharmaceuticals Transactions and Services (APTS) initiative achieved another milestone this quarter, when the Tigray regional state cabinet enacted APTS regulations. In addition, the Tigray regional health bureau (RHB) printed all APTS tools and vouchers with its own budget. This brings the number of regions that have enacted APTS regulations to five and supports the further expansion and ultimate sustainability of APTS, which has been introduced to achieve greater transparency and accountability in the management of pharmaceuticals and related finances in Ethiopia.

In **Ukraine**, the Ukrainian Center for Disease Control (UCDC) signed a memorandum with SIAPS that formally transferred ownership of e-TB Manager and responsibility for its maintenance to UCDC. This is an important step in institutionalizing and sustaining this web-based tool, which integrates data and provides visibility across all aspects of TB control, including information on suspected cases, patients, medicine supply, laboratory testing, diagnosis, treatment, and outcomes.

In this reporting period, **South Africa's** NDOH implemented electronic submission of bids to improve management of the bid information database, enhance transparency, and reduce errors in the data entry process and make it more efficient. Building on previous work to create the tender database, develop templates for the pack of bid submission documents, and revise the special conditions of contract for medical-related items, SIAPS assisted in the electronic bid submission process for the four tenders awarded in this quarter.

Coordination, Partnership, and Advocacy

In the **Philippines**, SIAPS continued to assist the Quezon City Health Department to introduce Barangay Health Management Councils (BHMCs), which bring together community-based groups, officials, and health providers to improve TB control program management and results to new barangays (urban poor settlements). In this reporting period, SIAPS assisted the Health

Department to refine their scale-up plans and establish four additional BHMCs by using a new cluster model, where each new council will serve multiple barangays. SIAPS also facilitated a workshop to support the three existing and four new BHMCs to develop community action plans for 2015-16 that focus on addressing low TB case findings, increasing access to diagnostic services, improving case holding, and maintaining zero stock-outs of TB medicines among other goals. As a result of efforts that have improved governance and management in the TB control program, Old Balara BHMC mobilized an additional USD 8,835 of funding for equipment and medicines and increased case detection through intensified community-based services and information education campaigns. During a recent community TB assembly of 447 participants, 52 (12%) walk-in TB cases were identified, 80 children were screened, and treatment was initiated in 12 children who tested positive.

SIAPS helped **Mali's** Central Medical Stores (DPM) convene meetings of its malaria and family planning technical working groups to update the malaria and family planning commodity supply plans, which prompted the DPM to initiate an emergency order for two contraceptives to address shortages. Representatives from two CSOs attended the meetings for the first time, bringing the number of local and national CSOs that participated in pharmaceutical management decision making this quarter to 11.

In **Cameroon**, SIAPS supported the second meeting of the newly established Medicines Cluster, a taskforce of financial and technical partners working on health, which includes WHO, US Centers for Disease Control and Prevention (CDC), USAID, and French and German development agencies. As a result of the meeting, the cluster members submitted a letter to the Ministry of Health (MOH) requesting involvement in the development of the terms of reference for the audit, which is to be conducted in the Central Medical Stores (CENAME) and is expected to trigger the reform of CENAME to address governance and other concerns. The MOH agreed to this request and consequently the financial and technical partners will have the opportunity to comment on the terms of reference and will be engaged in the audit implementation as well as the discussion of recommendations.

To improve access to pediatric fixed-dose combinations (FDCs) of ARVs in **Angola** that are easier for caregivers to administer, SIAPS met with the clinical department of the National Institute for the fight against HIV and AIDS (INLS) to advocate for the use of FDCs in preference to individual oral solutions in accordance with WHO recommendations.

Strategic Planning

Technical assistance provided by SIAPS in the **Democratic Republic of Congo (DRC)** to the Faculty of Pharmaceutical Sciences (FOPS) culminated in the development and finalization of the faculty's first-ever strategic plan. This is a notable achievement as FOPS is the first faculty in DRC to develop a strategic plan to enable it to better govern its operations and work toward achieving its objectives of ensuring that pharmacists are well trained and ready to support the public health needs of the country. USAID's Mission Director for DRC officially presented the plan to the Minister of Higher Education on June 10, 2015, who endorsed the Ministry's ownership of the plan by committing to contributing funding for its implementation. The Minister also urged other training institutions to develop their own plans using FOPS as a model

and stated that, going forward, the Ministry will enter into contracts with training faculties on the basis of their respective strategic plans.

As part of ongoing assistance to **Guinea's** Central Medical Stores (PCG), SIAPS helped PCG staff develop an annual operational plan based on the five-year strategic plan that SIAPS helped to prepare and validate in the first quarter of this work plan period.

Regulatory Systems Strengthening

As part of its on-going effort to strengthen medicine registration in **Bangladesh** and implement the new Common Technical Document (CTD) guidelines for applications, the DGDA selected seven officers to become master trainers on reviewing CTD-based dossiers as part of the establishment of an in-house training program. SIAPS conducted a one-day orientation for the master trainers to provide them with the necessary knowledge and skills to train other officers. During this quarter, SIAPS also facilitated a four-day interactive workshop on advanced topics in Good Manufacturing Practices (GMP) for 56 field inspectors representing all districts in the country to improve their GMP inspection procedures; 15 DGDA inspectors participated in one-day site visits to three pharmaceutical manufacturing facilities as part of their training, and a training of trainers (TOTs) and debriefing workshop was conducted to establish and sustain GMP capacity building activities within DGDA. In addition, SIAPS worked with the DGDA to establish a Content Management Team (CMT) to ensure effective maintenance and management of the DGDA web portal. The five designated members of CMT participated in a two-day intensive workshop on routine data analysis for informed decision making and the dissemination of recent news and updates on the website.

SIAPS provided technical assistance to the **Namibia** Medicines Regulatory Council (NMRC) in the MoHSS to identify medicines on the Namibia Essential Medicines List (Nemlist) that did not yet have corresponding registered products. This information will be used to prioritize and expedite the registration of ARVs and other essential medicines. The annual analysis of NMRC medicines register showed that 66% of the 668 items on the Nemlist now have registered products, up from 61% in 2014. SIAPS also helped Namibia improve the dissemination of regulatory information to NMRC clients by helping NMRC upload and test its redesigned website. Once it is officially launched, the improved website will serve as a platform for timely dissemination and maintenance of an up-to-date list of registered medicines. In addition, SIAPS provided technical assistance to NMRC to compile the laboratory test results of medicines samples collected from the public sector in 2014 for post-marketing surveillance. Out of the 144 samples tested, 21 (15%) samples did not conform to the pharmaceutical quality compendia standards, including one product that was not registered for use in the country. Based on these findings, the NMRC is taking measures to address the quality issues identified and drafting a protocol for 2015 post-market surveillance and medicine quality monitoring. The protocol will target public health facilities in 4 of the country's 14 regions in the north and sample categories including new FDCs of ARVs and co-trimoxazole oral suspensions for prevention and treatment of infections in infants and children.

In **DRC**, SIAPS continued to provide support to the national drug registration committees' review of applications. Out of 411 dossiers submitted, 402 were reviewed this quarter and 274

(68%) were granted marketing authorization, bringing the total number of registered medicines in the country to 4,009, up from 200 in 2010. SIAPS also assisted the MOH to disseminate the second edition of the registered medicines directory to all pharmacist inspectors as well as customs officers at the border posts at the four main points of entry for pharmaceuticals in the country. SIAPS will continue supporting the MOH to conduct quarterly supervision visits to assess the use and impact of the directory within provinces and at the border posts. In addition, SIAPS helped the provincial pharmaceutical inspection departments assess the functionality of GPHF-Minilabs in USAID-supported provinces to ensure they are being used appropriately and contributing to the detection of poor-quality medicines in the supply system. The assessment showed that the Minilabs are not fully functional due to the inconsistent supply of reagents and, in some provinces, inadequate space for Minilabs to be installed. SIAPS will help train the pharmacist inspectors on Minilab SOPs and the survey protocol to guide medicine selection and sampling.

In **Angola**, SIAPS conducted on-the-job training sessions on medicine registration for the eight staff members of the Department of Registration in the MOH/National Directorate of Medicines and Medical Equipment (DNME). The training was grounded in international standards with consideration of DNME's existing tools and procedures. SIAPS also worked with the registration department to review the existing legal framework and guidance documents to identify current issues and bottlenecks in the registration system and make recommendations for improvement.

During this quarter, SIAPS collaborated with New Partnership for Africa's Development (NEPAD) to organize a meeting in Accra, Ghana, for the **African Medicine Regulation Harmonization** (AMRH) program's two Regional Centers of Regulatory Excellence (RCOREs) for Pharmacovigilance (PV). During the meeting, RCORE participants as well as technical partners, including the World Bank, WHO, and USAID, discussed the PV agenda for Africa, capacity-building priorities, the framework for governance and coordination of PV RCORE activities, and work plans for the upcoming two years. In addition, this quarter SIAPS developed and shared a memorandum of understanding with the **East African Community Medicines Regulation Harmonization** (EAC-MRH) Program, including a draft work plan, to support the EAC-MRH's PV agenda. It is expected to be approved and signed next quarter.

Intermediate Result 2. Capacity for pharmaceutical supply management and services increased and enhanced

Lack of qualified pharmaceutical professionals, institutions for pharmaceutical training, and updated curricula are challenges faced by resource-constrained countries. SIAPS collaborates with stakeholders to assess their capacity to manage pharmaceuticals at all levels, identifies areas for improvement, and develops interventions to strengthen the system and build capacity.

Pre-service training

SIAPS **Dominican Republic** continues to assist the Universidad Central del Este (UCE) in finalizing the administrative proposal for the certified course (diploma) on RMU. A short-term

consultant was hired to draft the educational modules. Next quarter, SIAPS will conduct a meeting to revise and validate the modules. Implementation is scheduled for last quarter of 2015.

During this quarter, the first group of 14 pharmacists graduated from **Namibia'**s first and only School of Pharmacy (SOP) at the University of Namibia (UNAM) and 26 pharmacists' assistants (PAs) graduated from the MoHSS's National Health Training Center (NHTC). The 40 new graduates increased the number of new health care workers who graduated from a pre-service training institution from 74 in FY 2014 to 114 in FY 2015, in line with the targeted 114 for FY 2015. The recent graduates will serve in private and public health facilities, increasing the number of competent pharmacy personnel providing ART services in Namibia, where a generalized HIV and AIDS epidemic creates great demand for antiretroviral services.

SIAPS **South Africa** provided PV training for 22 final-year BPharm elective students at the Nelson Mandela Metropolitan University (NMMU). To showcase the collaboration between SIAPS and NMMU, an abstract entitled Building Capacity in Data Mining and Large Database Analysis to Support Informed Decision Making was submitted and accepted for a podium presentation at the South African Association of Health Educationalists Conference to be held in Gauteng in September 2015. Additionally, another abstract entitled Reporting of Adverse Drug Reactions in Private Sector Pharmacies in the Nelson Mandela Metropole, South Africa was accepted for a poster presentation at the First Training Workshop and Symposium MURIA Group to be held in July at the University of Botswana in Gaborone.

In-service training

As of the end of June 2015, 30 in-service health professional training curricula from 9 countries have been developed or revised with SIAPS assistance.

Highlights from past quarter include the ongoing work of SIAPS **Ethiopia** and its implementation of APTS, now implemented in 41 health facilities throughout the country. To assist new implementing sites, three rounds of on-site training were provided to the 95 finance and pharmacy professionals drawn from Durame, Bonga, and Jinka Hospitals. Additionally, a TOT was provided to 41 participants (11 female and 30 male) including pharmacists (from SNNP RHB, Health science Colleges of SNNPR and 9 hospitals in the region), hospital CEOs, and finance officers at Arbaminch General Hospital.

Using the Supply Chain Management Leadership Development Program (SCMLDP) approach, SIAPS **Lesotho** conducted in-service training workshops in the districts of Maseru and Mokhotlong. To improve staff capacity in inventory and logistics management systems, SIAPS trained 26 health care workers (18 females and 8 males) in the supply chain management of laboratory and pharmaceutical commodities.

Additionally, SIAPS Lesotho provided RxSolution training to two pharmaceutical department staff (one female and one male) at the National University of Lesotho. This training is a part of pharmaceutical management training for increasing institutional capacity. In the training, an electronic pharmacy management system was used to simulate the latest technologies that students are expected to use once they join the workforce.

To improve the identification and monitoring of medication errors in **Mozambique**, the SOPs for evaluating medicines use were developed in consultation with the Hospital Pharmacy Department (HPD) of MOH. Three HPD staff were trained to serve as master trainers for the hospital staff on the use of the SOPs. Subsequently, a four-day training workshop was conducted at Maputo Provincial Hospital (MPH) in Matola City for four DTC members and one HPD staff.

SIAPS **Philippines** assisted a laboratory network monitoring training attended by six staff from NTRL (three from the Program Support and Quality Assurance Monitoring Unit and three from the Monitoring and Evaluation Unit), and the region IV-A medical technologist coordinator. The training aimed to develop the laboratory network monitoring skills, including how to collate and organize data and write and disseminate reports to laboratory managers and staff. Furthermore, the training included field visits to TB microscopy and GeneXpert laboratories where the trainees gained experience in monitoring activities.

As previously reported, SIAPS **South Africa** has collaborated with the University of the Western Cape, Schools of Public Health and Pharmacy, and Boston University to develop online elective modules on RMU and medicine supply management (MSM) for the masters of public health program. During this quarter, SIAPS was involved in the final stages of development of content, design of assessments, and plans for roll-out of the RMU module. In addition, SIAPS updated the material for the RMU and MSM courses for the Winter School which is planned for the end of June/early July. Attendees will be local and international medical practitioners and pharmacists. SIAPS will facilitate sessions for the last time, where after the facilitation role and updating of training materials will be handed over to the university.

SIAPS **South Sudan** conducted a three-day pharmaceutical management training in Yei. The training focused on aspects of pharmaceutical management, including improving participants' knowledge of pharmaceutical management; review of the Pharmaceutical Management Information System (PMIS); and pharmaceutical management of challenges encountered on a regular basis in the work place; 30 participants (29 males and 1 female) were drawn from all the Payams of the Yei County/Town and county health department staffs. The participants were composed of health workers of different backgrounds (clinical/officers, nurses, lab technicians, medical storekeepers, midwives/ANC, and community health workers).

SIAPS **Swaziland** conducted trainings for 151 (90 female and 61 male) health care workers on pharmaceutical management of HIV commodities and implementation of the 2014 integrated HIV management guidelines. Participants included 18 pharmacists, 48 pharmacy technicians, 29 pharmacy assistants, and 32 nurses. The health care workers developed post-training action plans, and 21 of these were developed into quality improvement projects in the respective facilities.

Supportive supervision and mentoring

During this quarter, SIAPS **Lesotho** conducted 77 supportive supervision and mentoring visits to health facilities in all 10 districts of Lesotho. Additionally, using both the cluster system and health facility visit approaches, 150 health care workers (123 female and 27 male) were

mentored in inventory management and PMIS. As result of SIAPS support, 93% of health facilities keep complete patient information as per national standards (target set to 90%); 98% of health facilities are using country-appropriate tools to report logistic and patient data by districts (target set to 90%); 38% of SIAPS-supported sites stock ARVs according to plan (that is, within the 2-month minimum and 3-month maximum stock levels [target set to 39%]); and the number of health facilities experiencing stock-out of ARVs for more than 3 days has been reduced to 11% (target set to 10%).

In efforts to improve adherence to the logistics management information system (LMIS) SOPs, SIAPS **Mali** and MOH conducted coaching and mentoring activities in the health districts of Tominian (Segou Region) and Bandiagara (Mopti Region). Similar activities were initiated and are still ongoing in six additional health districts in Bamako. Data showed that the percentage of staff trained on LMIS SOPs that successfully completed their post-training action plan increased from 36% to 46%.

The joint effort of SIAPS technical assistance and the NHTC and UNAM-SOP ongoing trainings has led to a reduced staff vacancy rate in **Namibia**. As of June 2015, 35 (97%) of 36 public health facilities visited during annual pharmaceutical supportive supervision visits had at least a qualified PA (certified pharmacy personnel) to manage pharmaceutical services. As of today, all 36 facilities offer ART services. The 97% is an improvement from the 80% level of 2014.

SIAPS **Swaziland** continues to provide supportive supervision and mentorships in all four regions. Supportive supervisions were conducted in 66 health facilities and 2 central warehouses. In addition, SIAPS supported the MOH-Central Medical Stores to conduct "deep dive" supportive supervision visits to 37 health facilities in Manzini and Shiselweni regions. In the Manzini region, facilities showed an improvement in stock card updates from 56% in 2014 to 74% in 2015.

Institutional Capacity Building

SIAPS **Angola** facilitated capacity-building activity in the areas of medicine registration to eight staff (three female and five male) of the MOH/National Directorate of Medicines and Medical Equipment in the Department of Registration and Homologation.

SIAPS facilitated a four-day interactive workshop on advanced topics on Good Manufacturing Practices (GMP) for 56 field inspectors of the Directorate General of Drug Administration (DGDA) from all districts in **Bangladesh.** The workshop aimed to improve their GMP inspection procedures, which ultimately will enhance the regulatory oversight and compel more pharmaceutical companies to manufacture medicines according to GMP standards. Furthermore, three-day site visits to three different pharmaceutical manufacturing facilities were organized for 15 selected DGDA inspectors in June. To sustain this capacity-building activity on GMP, a TOT and debriefing workshop was also conducted in June for the 15 field inspectors. The objective was to train these officers to become future trainers within DGDA and to regularly conduct in-house training.

SIAPS **Cameroon** provided training to 18 stock keepers and 2 supervisors of the Central Medical Stores (CENAME) on stock management and supervision. These trainings were requested by CENAME in an effort to improve the operational capacity of CENAME staff. Training materials were adapted to cover specific procedures and roles of the central stores. The trainings were co-facilitated by SIAPS and two technical managers of CENAME. The training was focused on the role of a supervisor and management skills development.

To build capacity in the pharmaceutical management areas, SIAPS **Mali** supported 18 local institutions to provide training and support on pharmaceutical management. SIAPS supported the Department of Pharmacy and Medicines (DPM) to design and organize four comprehensive three-day workshops to train MOH staff and others stakeholders on the use of "OSP-SANTE" (Outil de Suivi des Produits de la Santé), a web system for management and tracking of antimalarial and family planning commodities. During these workshops, 139 participants (37 female and 102 male) were trained on data entry and other related transactions. As result, the total number of trained professionals on pharmaceutical management countrywide increased from 836 to 975 (235 female and 740 male).The next step will be to expand this training to 11 additional health districts in 6 regions.

During this term, the Intervention Guide for the Management of Childhood Illnesses was presented in the New Information Circuit of round tables at the **MCH CORE** Group meeting. Potential users for the guide include NGOs with district projects and donors looking for resources for the implementers of their district projects and students. The guide is undergoing its final editing and electronic packaging for dissemination and will be finalized the next quarter. Additionally, SIAPS will draft the interventions section for review and discussion with UNICEF as a possible complement to their DIVA (diagnose, intervene, verify, adjust) district strengthening approach, organize a webinar for the country officers for UNICEF, and then develop a strategy for each country on how to disseminate.

SIAPS **Philippines** continues to work closely with the Quezon City Health Department to expand the Barangay Health Management Council (BHMC). SIAPS provided technical assistance to amend the city ordinance on BHMC scale-up and to develop community action plans for the three currently assisted BHMCs and four new expansion BHMCs for 2015-2016. The plans focus on addressing low TB case finding among adults and children, increasing access to microscopy and radiologic diagnostic services, increasing the number of treatment partners, and improving case holding. The plans also address the need to maintain zero stock-outs of TB category II adult kits, and improving M&E and data analysis for TB.

SIAPS **South Africa** continued to further build the capacity of district and provincial teams currently engaged in activities aimed at sustaining quality improvement initiatives implemented as part of the Pharmaceutical Leadership Development Program (PLDP) in KwaZulu-Natal. A coaching visit for all the teams was held during the quarter to monitor progress and assist teams to refine their challenge models and action plans.

Additionally**,** in the Khayelitsha Eastern Sub-Structure (KESS) in the WC, SIAPS provided LDP to a group of 27 pharmacy, clinical, and operational managers. Each of the 10 facility teams have developed a measurable result and are in the process of implementing priority actions toward

achieving it. During the quarter, a coaching visit and workshop were held. Participants are expected to complete the LDP and present their achievements to management in the following quarter.

SIAPS **South Sudan** provided technical assistance to World Vision through facilitation of pharmaceutical management training June 15-19, 2015, for their health care providers. Ten health workers were trained (eight male and two female), including clinical officers, midwives, and nurses from the refugees' camps and health facilities which include Mapudu PHCC and Napere PHCU. This forms part of SIAPS support in rolling out the pharmaceutical management interventions to the health-facility level to improve medicines availability and use.

During May-June 2015, SIAPS **Uzbekistan** supported the NTP in conducting nationwide refresher trainings in LMIS for all designated drug management staff in TB facilities. Training materials were developed and trainers from the central and oblast levels were provided with training techniques. There were a total of 236 TB drug management specialists from 186 districts and 14 regional-level TB facilities that were trained.

Tools for capacity building

The outbreak of Ebola virus disease has negatively impacted consumption of ACTs and discontinued the use of RDTs in Guinea. As result, overstock and stock-out of malaria commodities have been reported. To address this challenge, PMI requested **SIAPS Guinea** to work with PNLP to collect data from health facilities countrywide on the stock status of ACTs and RDTs and to reallocate overstock where needs are identified. Therefore, SIAPS assisted the development of a scope of work for this activity along with a collection tool used to record commodity stock status. Moreover, SIAPS participated in training sessions that took place on Labe, Guinea, targeted for data collectors.

Both SIAPS **Namibia** and SIAPS **South Sudan** facilitated training on the use of the Electronic Dispensing Tool (EDT). The EDT is used in ART clinics to manage ART patients and ARV medicines. Sites without the EDT (i.e., PHC facilities) use the EDT mobile to collect dispensing data at ART sites. **Namibia** assisted the three-day training event of the Directorate: Special Programs (DSP) where 44 pharmacists, PAs, and nurses from all of Namibia's 14 regions were trained on EDT and EDT mobile. **South Sudan** trained seven health workers (five male and two female) on basic computer skills for staff at the Juba ART site. The training focused on how to use the key board and its functional keys, Word, and Excel. As result of the training, it is expected that health workers will build confidence in using the computer and will become familiar with the use of EDT.

To strengthen capacity in quantification, SIAPS **Philippines** provided a basic QuanTB orientation for the National TB Control Program (NTP) and partners; 16 national staff (5 male and 11 female) attended the training. Participants were mostly managers from NTP, NCPR-LCP, NTRL, the IMPACT Project, TASC, and PBSP (the Global Fund principal recipient). At the end of the training, participants suggested that the tool be expanded to also quantify first-line drugs and ancillary medicines.

The **TB Core portfolio** also conducted a 5-day training on TB medicines quantification for 12 national quantification team members in Zimbabwe. The trainees included representatives from the National Pharmaceutical Company, NTP, provincial level, and Directorate of Pharmacy Services. After the training, the team was later supported to use real country data to conduct quantification of both first-line and second-line TB medicines and a stock status analysis. The support is expected to help the country to effectively institutionalize the QuanTB tool as a quantification and early warning system for both first-line and second-line TB medicines.

SIAPS **Swaziland** conducted onsite training on completion of active surveillance tools and use of the electronic sentinel site database (SSASSA) for health workers at three facilities earmarked for active surveillance. Consequently, two of the three facilities initiated the active surveillance activity. The next steps are to deploy SSASSA at the National TB Hospital Data Unit. This brings the number of facilities implementing the HIV/TB active surveillance to seven.

SIAPS has deployed the OSP-SIDA in Guinea/Conakry by providing training and finally completing the deployment of the tool in the six focus countries of the **West African region**. Guinea-Conakry was the last country where the tool was not deployed yet because of the Ebola outbreak; 17 participants from various entities have been trained on data entry and use of OSP-SIDA reports for faster decision making on HIV and AIDS commodity management. All the participants are members of the HIV and AIDS PSM technical committee of Guinea. Unfortunately, the lack of paper-based LMIS data at the central level was a big challenge to enter all required data into OSP-SIDA.

Intermediate Result 3. Utilization of information for decision-making increased

SIAPS' approach is to harmonize and/or integrate the collection and presentation of accurate, quality data on pharmaceuticals and other commodities and to process it in a timely and consistent manner to assist decision makers and health workers at all levels of a country's health system make evidence-based decisions; manage health and laboratory commodities and pharmaceutical services; and 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 and, when required, strives to find the best solution to address health-related data collection, processing, reporting, and decision-making challenges, at the same time supporting country ownership and sustainability. SIAPS pharmaceutical management information tools such as RxSolution, Pharmadex, e-TB Manager, QuanTB, OSP-Sante, OSP SIDA, and EDT support both product and patient information. The demand for these tools in SIAPS and non-SIAPS countries keeps growing**.** The new OSP SIDA dashboard is now in use in Benin, Burkina Faso, Cameroon, Guinea, Niger, and Togo.

SIAPS indicator data for quarter 3 shows significant progress with the use of systems and improvement in data quality and reporting. The total number of health facilities providing feedback on submitted reports has increased from 1% to 71% in reported countries. The percentage of health facilities that completed patient information increased from 66% to 76% in quarter 3 (year target: 87%).

Data Utilization

SIAPS tools, technical assistance, and overall systems strengthening approach allow for effective use of data for analysis and evidence-based decision making.

In **Cameroon**, the reporting system was strengthened by deploying technical advisors to ART sites. The approach incorporates supervision and capacity building for ART site coordinators to use data for decision making and improve the quality of pharmaceutical services. In **Ethiopia,** the patient uptake and regimen breakdown reports were submitted by 680 health facilities. The reports showed that 339,471 patients were on ART, of which 296,433 patients were covered in the regimen breakdown report. The phase-out of the D4T regimen is continuously monitored and shows a dramatic decline; less than 3% of pediatric patients are taking D4T-based regimens. **Lesotho** showed impressive results across several IR 3 indicators; 93% of health facilities keep complete patient information as per national standards (target is 90%) and 98% of health facilities use country-appropriate tools for reporting logistic and patient data by districts (target is 90%). However, 11% of health facilities experienced stock-out of ARVs for more than three days (target is 10%).

In **LAC** countries, SIAPS supported the compilation of information and analysis for the *Quarterly Bulletin on the Availability and Consumption of Antimalarials*, disseminated by the Pan-American Health Organization (PAHO). The report showed that availability of antimalarials in central warehouses decreased from 79% last quarter to 71% due to the depletion of chloroquine and primaquine in certain countries.
In the context of **TB Core,** QuanTB has been adopted as the national tool for quantification and monitoring of TB medicines in 14 countries. QuanTB has been used during Global Drug Facility (GDF) monitoring missions to collect and analyze data for decisions on forecasting and procurement of TB medicines in countries supported by GDF.

Data Quality

In the **Philippines**, SIAPS provided technical assistance through a laboratory network monitoring training, which included how to collate and organize data and write and disseminate reports to laboratory managers and staff. The didactic training included field visits to TB microscopy and GeneXpert laboratories where the trainees gained experience in monitoring activities including development of a monitoring checklist, review of laboratory records, interviewing staff on laboratory practices, and use of laboratory network indicators to evaluate laboratory performance. The National TB Program (NTP), with SIAPS' technical assistance, conducted joint medicines supply management (MSM) monitoring visits to four multidrug-resistance TB facilities and one warehouse in the national capital region. During the visits, SIAPS mentored the NTP MSM staff on data collection, interpretation, and providing recommendations on improvement of pharmaceutical management. In **Mali**, SIAPS conducted a user acceptance testing and oriented warehouse managers and HIMS managers on data entry and other transactions for the OSP-Santé dashboard.

Information System Design and Collaboration

SIAPS completed a pilot-testing of the text-message-based adherence reminder service in **Namibia.** Based on feedback from previous EDT trainings, SIAPS updated the EDT to support automatic generation of ART IDs for patients. The revised EDT version is being pilot-tested before deployment to all ART sites to further improve the quality of data captured. In **Bangladesh,** SIAPS worked with DGHS, GIZ, and MNCH team to design an e-LMIS using the DHIS2 platform and performed analysis. The system will be implemented in selected districts under the Dhaka division. SIAPS also facilitated an assessment to review the implementation status of e-TB Manager functionality by engaging NTP, USAID, DFID, WHO, World Bank, and Challenge TB.

In **Mali**, SIAPS provided support to the MOH for implementation of OSP-Santé, a web-based dashboard that captures, aggregates, tracks, and makes information available and accessible for malaria and family planning commodities. In **South Africa**, SIAPS continued to develop and implement, RxPMPU, a customized ordering system to support the direct delivery procurement model currently being implemented by NDOH. SIAPS added barcode functionality to RxPMPU purchase orders. The added barcode functionality allows additional variables to be captured automatically.

In **Tajikistan**, SIAPS developed and introduced a Java-based LMIS tool to the NTP, which will collect and process data in line with the existing LMIS in the country. The planned system will allow the use of Excel forms based on the existing LMIS for quarterly reporting of stocks on all levels of the TB network; the reports will then be submitted via email to the upper level and aggregated by the newly developed tool. The national TB pharmaceutical management coordinator will have access to the tool and, therefore, stock data. The system is expected to improve the quality and completeness of the reports. Currently, the tool is in testing mode and will be piloted in TB facilities in selected districts. In **Uzbekistan**, Project Hope, the implementer of the USAID-funded TB control program in the country, expressed their commitment to implement QuanTB in the regions that are under their program coverage. The LMIS trainings organized by SIAPS were conducted in cooperation with the National Tuberculosis and Lung Diseases Center, National DOTS Center, WHO, Global Fund TB Grant Project Implementation Unit, and MSF.

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 the key financial barriers in accessing medicines. During this quarter, SIAPS supported the countries by assisting in the development and revision of concept notes for submission to donor agencies and participating in exercises to estimate procurement levels and consultative meetings with partners to prepare for accessing future streams of funding. In addition, SIAPS worked with countries to identify gaps in the allocation of financial

resources, assisted in developing district and national budgets, and expanded the use of tools for transparent financial transactions.

Mobilizing Additional Financial Resources

SIAPS continued to provide assistance to countries in raising additional funds to acquire pharmaceuticals and supplies. In this quarter of PY4, SIAPS supported **Burundi**'s NMCP (National Malaria Control Program) to submit a concept note to support malaria activities over the next three years. The Global Fund approved the concept note for a total amount of USD 24,921,561. After the approval, SIAPS assisted the NMCP to align the supply plans for malaria commodities for 2016 and 2017 with the new funding model (NFM). Updated supply plans will enable the NMCP to develop a procurement and stock management plan as required by the Global Fund.

In **Cameroon**, SIAPS continued to provide technical assistance to the CNLS (National AIDS Control Committee), a Global Fund principal recipient for HIV, and CENAME-selected regional medical stores and health facilities to ensure compliance with Global Fund requirements for the management and forecasting of HIV and AIDS commodities. This quarter, the country coordinating mechanism (CCM) was requested to resubmit the HIV/TB concept note to the Global Fund. The CNLS requested that SIAPS be involved in the revision of the narrative section and to adjust the quantification to align with new targets and overall programmatic strategies. Incorporating input from SIAPS and other key partners, the HIV/TB concept note was submitted to the Global Fund in May 2015. SIAPS will continue to support the CNLS as they respond to questions from the Global Fund in the next stage of the grant process.

SIAPS participated in a one-day NFM grant orientation in **South Sudan**, which focused on the Global Fund and principal recipient structure. The orientation introduced participants to the specific considerations that will need to be addressed by the NMCP when requesting funds and provided an overview of activities that can be funded, available funding allotments, and how to respond to accountability requirements within the NFM. This goal of this orientation was to improve the capability of NMCP to prepare grant proposals to access future streams of funding.

Working together with the Center for Disease Control (UCDC) in **Ukraine**, SIAPS engaged in several discussions on accessing an additional supply of ARVs and lab commodities for the country's programs through PEPFAR's Emergency Commodity Fund (ECF) with Global Fund principal recipients, UNAIDS, and the USG. At the request of the USG, SIAPS will continue to support UCDC in completing the ECF toolkit as part of an application for funding.

Because of insufficient budget allocations for medicines in the **DRC**, procurements of medicines are limited to when donor funding is accessible. After donor-funded projects end, health facilities face stock-outs due to an inability to finance procurements. To avert stock-outs, the MOH recommended that donated medicines be dispensed at a user fee representing only 30% of the medicine's value. The fee is recovered by health facilities and can be used to offset administrative costs and mobilize additional financial resources within the system to procure medicines. During the previous quarter, SIAPS supported provinces to assess the level of funds generated since the user fee was instituted. The study revealed that health facilities under the

USAID-funded Integrated Health Project (IHP) managed to recover a total of USD 333,560. This quarter, SIAPS assisted Sankuru District's Department of Health to track the level of funds recovered when charging user fees at health facilities, revealing recovery rates as high as 67% and as low as 21%. Health facilities in the Sankuru District had an average fee recovery rate of 37%. After identifying best practices in collecting user fees, SIAPS will facilitate the transfer of knowledge and experiences from high- to low-performing health zones.

Analyzing and Tracking Costs

In the **Dominican Republic**, SIAPS began collecting information to contribute to the analysis of the financial gap related to the procurement of medicines and supplies for the MOH. The financial gap was identified by comparing a realistic projection of the country's usage of medicines to figures in the MOH's proposed budget. During the next quarter, SIAPS will present a technical report on the level of finances needed to meet the country's procurement needs, which will include a detailed analysis of requisitions and dispatches. MOH authorities will use this intelligence to lobby for additional resources to be allocated for medicines procurements before the national budget is approved by the Congress.

In **Ethiopia**, SIAPS has expanded the implementation and use of APTS to Durame, Jinka, and Bonga Hospitals in the Southern Nations, Nationalities, and Peoples' Region (SNNPR). Currently, 41 health facilities are using APTS to ensure proper financial and programmatic oversight of medicines usage at the facility level. During this quarter, 95 finance and pharmacy professionals received on-site training on APTS. Additionally, SIAPS assisted health facilities in the Amhara region to monitor medicines expiry and wastage. The medicines expiry rate for hospitals in the region implementing APTS ranged from 1.34% to 0.09%, which falls below the national target for expiry. In the Amhara and SNNP regions, SIAPS conducted ABC/VEN analyses for five hospitals. Findings from those studies were presented to DTCs from which intervention plans were developed.

In collaboration with **Benin's** MOH, SIAPS used **Malaria Core** funds to support the dissemination of the finding and recommendations from SIAPS and the WDI's 2013 retrospective costing exercise, which highlighted that the distribution costs of malaria commodities, such as ACTs and RDTs, are not regularly budgeted. Participants were introduced to the costing tool used in Benin and Kenya, which will encourage appropriate budget allocations for the distribution of malaria commodities.

From both a technical and financial perspective, SIAPS is providing assistance to health zones in the **DRC** to create annual operation plans that appropriately identify and quantify pharmaceutical needs for their respective health facilities. SIAPS input will ensure that pharmaceutical budgets are allocated for within annual operational plans. Furthermore, SIAPS provided technical assistance to the health zone management teams to conduct a comparative analysis of medicines quantification using both morbidity and consumption-based approaches, ensuring that the budgetary estimate reflects the real medicines need.

Reducing Financial Barriers to Access of Medicines

Following the Universal Health Coverage: Considerations in Designing Medicines Benefits Policies and Programs conference held in October 2014 in Cape Town, South Africa, SIAPS in collaboration with MSH's Center for Pharmaceutical Management, finalized two new documents "*Medicines Benefit Program Assessment Tool – for Low-Income Settings*" and "Management *of Medicines Benefit Programs – Adapting approaches from High-Income Countries*" in this quarter. The documents will be available for dissemination in the coming quarter.

IR 5a: Supply Chain Management

SIAPS' technical assistance for strengthening health supply chains encompasses a wide range of interventions, including human resource capacity building, warehousing improvement, supply chain coordination (oversight), optimizing distribution, streamlining logistics management information systems, quantification of demand, and improving procurement. In quarter 3 of PY 4, implementation of these interventions in SIAPS-supported countries resulted in 7% improvement, on aggregate, in service delivery point (facility) availability of medicines and other health commodities. Illustrative supply chain management interventions that contributed to this achievement are described in the following paragraphs.

In this quarter, SIAPS **Angola** supported the MOH National Directorate of Medicines and Medical Equipment to organize meetings to bring supply chain stakeholders together to discuss logistics, share information, reach consensus on decisions, and analyze and monitor stock status of HIV and AIDS, malaria, and FP commodities, thereby sharing information and triggering actions that ensure continuous availability of medicines. For example, one outcome of this exercise was an emergency order submitted to the Global Fund to avert imminent stock-outs, reduce lead time, and closely follow up with the supplier for prompt delivery of the order. SIAPS Angola has also supported a regular monthly physical inventory and close monitoring of the stock status of antimalarial medicines in the central and 18 provincial warehouses. SIAPS has provided recommendations to NMCP to immediately distribute ACTs, which are stored at the central warehouse, to ensure continuous availability and accessibility at service delivery points. SIAPS has also advised to revise RDT priority distribution plans to facilities and closely follow-up utilization of overstocked RDTs that have a short shelf-life by using first expiry first out (FEFO) inventory management practices. These interventions contributed to maintaining improved availability of medicines at facilities at about 52%.

SIAPS **Bangladesh** facilitated a workshop on annual forecasting of RMNCH commodities in Directorate General of Family Planning (DGFP) FY 2015-2016 procurement planning. This workshop helped prepare a quantification report that informed budgeting and procurement plans. SIAPS also facilitated two procurement and supply management (PSM) meetings to make important supply planning decisions. For the first time, the TB quantification exercise (using QuanTB) was conducted utilizing data generated at the central TB warehouse through SIAPS assistance. The results of this exercise informed decisions on quantities of TB medicines to be procured. Because of these interventions, approximately 70% of treatment sites had TB medicines this quarter.

In the **Dominican Republic**, with the support of SIAPS, the SUGEMI pharmaceutical management information system continued to operate as expected with the majority of health facilities reporting on their data and receiving feedback (1,392/1,400; 99%). The SUGEMI quarterly bulletin was disseminated to a wide range of audiences in May 2015, and it is also available on the MOH website, thereby increasing information availability and visibility. The high reporting rates and sharing of information for decision making contributed to the high availability rate reported at 94%, surpassing the target of 90%. SIAPS also supported a decentralized estimation of needs for 2016 procurement for medicines and other health commodities. This is expected to help coordinate supply planning decisions across the country for the next year.

SIAPS **Mali** facilitated two supply planning exercises for malaria and FP commodities, which helped to inform procurement decisions in this quarter. SIAPS has also supported the development of two distribution plans for malaria commodities. In collaboration with SIAPS' partner Imperial Health Sciences (IHS), SIAPS supported the development of four pharmaceutical management SOPs for the Central Medical Store (PPM), which will be used by SIAPS to train PPM staff. The implementation of these SOPs is expected to improve operational performance in the central warehouse, ensuring good storage practices, safe medicines, better reporting, and subsequently improved availability of life-saving commodities. In this quarter, SIAPS and its partner the William Davidson Institute (WDI) conducted a qualitative assessment and strategic review of supply chain management technical assistance provided by SIAPS to date in Mali. The objective is to evaluate the impact of interventions and identify possible areas of improvement in supply chain management in Mali. In addition, support was provided to MOH to validate LMIS data and disseminate findings and recommendations from the last EUV survey in six regions. LMIS data showed that the overall reporting rate of health facilities increased from 53% to 67%. These interventions have contributed to a significant reduction in stock-out rates for tracer medicines at warehouses from 66% in October 2014 to 31% this quarter. The stock-out rate at the facility level also decreased from 84% in October 2014 to 48% this quarter.

SIAPS **Cameroon** has capacitated ART site coordinators to conduct supervision of ARV management through regional feedback meetings. These meetings helped coordinators to interpret the results obtained through supervision visits and to agree on management actions to improve supply management for enhanced availability of medicines. SIAPS has also supported the MOH by deploying two regional technical advisors and purchasing two pickup trucks for distribution of antiretrovirals. These interventions have contributed to an increase of approximately 5% increase in facility-level availability of medicines in this quarter.

SIAPS **Lesotho** continued providing technical assistance to strengthen laboratory and HIV products' supply chain management through supportive supervision and mentoring (SSM) visits in all 10 districts. In four districts, the SSM was incorporated into the Supply Chain Management Leadership Development Program to ensure ownership, sustainability, and a continuous supply of medicines at service delivery points. SIAPS has also provided technical assistance through facilitating monthly stock status analysis and monitoring meetings which inform supply chain decisions and actions. The overall SIAPS support to these districts has shown that only 11% of health facilities experienced stock-out of ARVs for more than three days which is approaching

the set target (10%).

In **Philippines**, SIAPS supported the MOH's national TB program (NTP) in quantifying medicine requirements by using QuanTB and expedited delivery of second-line TB medicines to avoid imminent stock-outs at the facility level, in collaboration with partners and donors such as the Global Fund. Given the success of QuanTB for forecasting medicine requirements, stakeholders and partners have recommended the expansion of the use of this tool for forecasting requirements for first-line anti-TB medicines. This recommendation will be reviewed with the expansion of trainings on the tool. The interventions helped to achieve a 0% stock-out rate, decreased from 33% in the last quarter at warehouse level; and maintained a 0% stock-out rate at service delivery points.

In **Swaziland**, SIAPS facilitated the redistribution of ARV and TB medicines among health facilities to prevent stock-outs and patient treatment interruptions that have been caused by financial challenges for procurement of medicines. SIAPS has facilitated SSM visits, focusing on strengthening inventory management and LMIS at 66 facilities and 2 warehouses. Given this intervention, in one of the four regions, health facilities showed an improvement in stock card updates from 56% in 2014 to 74% in 2015. Furthermore, ART LMIS reporting rates have increased to 92% in this quarter, from 87% last quarter, while laboratory LMIS maintained a consistent 100% reporting rate. With the updated and available data, SIAPS also supported the forecasting and supply planning of laboratory, TB, and HIV commodities. The resulting supply plan informed USAID's decision to procure $407,013 worth of condoms for 2016. Confirmation has been received for consignment delivery in August and October 2015 as part of this procurement. Additionally, a consignment equivalent to two months of tenofovir/lamivudine/ efavirenz was received through the USAID procurement mechanism. SIAPS interventions have helped to reduce the stock-out rate of tracer products at the warehouse level to 0% this quarter compared to 100% last quarter. Stock-out rates at facilities were also reduced to 12% this quarter, from 17% last quarter.

Intermediate Result 5b. 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 PV, rational medicine use (RMU), essential medicines lists (EMLs), formularies, standard treatment guidelines (STGs), treatment adherence, drug information and patient education, antimicrobial resistance (AMR) and infection prevention and control, drug and therapeutics committees, and medicine use reviews.

Pharmacovigilance

During this quarter, SIAPS continued to strengthen the PV system in **Bangladesh**. SIAPS provided training to 86 Directorate General of Drug Administration (DGDA) and pharmaceutical

industry officials on Good Manufacturing Practices (GMP) and adverse drug event (ADE) data analysis.

In **Ethiopia**, SIAPS continued to support efforts to raise awareness on PV among health care providers. During this quarter, 140 health providers participated in face-to-face discussions at seven health facilities (four in Addis Ababa and three in Oromia). Various PV tools and documents were also distributed to health facilities and regional health bureaus (RHBs), which included 172 adverse drug event reporting forms, 100 allergy cards, 80 national PV framework documents, 140 newsletters, and 70 preventable adverse event bulletins. Data for 81 ADEs were entered into the national database, and acknowledgment was provided to 75 ADE reporters. A consultative workshop was conducted with representatives of 35 private and public training institutions to follow up on the inclusion of PV-related topics in their curriculum.

SIAPS **Namibia**, together with the University of Washington, provided technical guidance to the Therapeutics Information and Pharmacovigilance Centre (TIPC) to conduct a pharmacoeconomics analysis of potential costs and cost-effectiveness of a national active surveillance program compared to the existing spontaneous adverse drug reaction (ADR) reporting system. MoHSS is reviewing the report whose content will inform Namibia's PV strategies going forward. Regarding ADR reporting, TIPC reported that they had reviewed all 55 ADR reports received in January-March 2015.

In the **Philippines**, SIAPS continued to support the bedaquiline study. SIAPS participated in discussions with NTP, FDA of the Philippines, and Janssen Pharmaceuticals (the marketing authorization holder of bedaquiline) to determine Janssen's role and processes for monitoring medicine safety. Additionally, NTP and partners, including SIAPS, participated in a 'writeshop' to develop the national implementing guidelines for the bedaquiline study. SIAPS contributed by writing safety monitoring and ethical considerations guidelines. In addition, during the joint monitoring visits to NTP's Programmatic Management of Drug-Resistant TB (PMDT) and Directly Observed Treatment, Short-Course (DOTS) facilities, SIAPS encouraged the health workers to perform spontaneous reporting of serious adverse events to FDA of the Philippines.

In **South Africa**, the SIAPS indicator "percentage of SIAPS-assisted sites that have implemented PV or medicines safety activities" improved from 76% (425/559) in the last quarter to 100% (560/560) this quarter. The SIAPS country office in South Africa collaborated with the Nelson Mandela Metropolitan University (NMMU) to provide PV training to 22 NMMU final-year BPharm elective students. This consisted of formal contact training as well as support for the design of five research projects. SIAPS also continued to provide technical assistance to the NDOH Pharmacovigilance Centre (NPC) to implement the decentralized PV system in Northern Cape (phase 3), Eastern Cape (phase 1), and Mpumalanga and North West (NW) Province (phase 4). SIAPS provides ongoing technical assistance in the interpretation of data collected from the reporting sites. A remarkable falloff in reporting has been identified in NW. To respond to this situation, one of the interventions identified is that NPC sets up intervention meetings with the district clusters. SIAPS has been invited to attend and assist with the intervention which will occur in July 2015 at four sites in NW.

SIAPS **Swaziland**, working with the MOH PV focal person, continued to support the five active surveillance sentinel sites through mentorship and data collection visits. During the mentorship visits, SIAPS conducted audits of selected files to address gaps found during causality analysis; provided facilities with job aids for grading adverse events and completing the surveillance tools; and verified data quality in specific patient files for data analysis. Two new facilities were added to the five active surveillance sentinel sites. This brings the number of facilities implementing the HIV/TB active surveillance to seven. Due to the impending adoption of bedaquiline, SIAPS provided onsite training on PV at the National TB Hospital for all health professionals managing MDR-TB patients in order to revive the active surveillance system and establish a patient safety monitoring system. SIAPS also facilitated the formation of a PV core team to develop the national medicines safety monitoring committee. In addition, SIAPS continued to provide technical assistance in drafting the causality assessment of the adverse events, and over 150 adverse events have since been analyzed. The PV data analysis showed that, thus far, a total of 2,080 patients have been enrolled in the active surveillance system and 939 adverse events reported; 58% of the ADRs were reported from female patients, while male patients accounted for 42% of the reports. The most common ADR among patients on ARVs were rash (21%), peripheral neuropathy (16%), and vomiting (11%). Patients on TB treatment mostly complained of peripheral neuropathy (14%), ototoxicity (12%), and rash (8%). In this quarter, 50 ADR reporting forms were printed and disseminated to facilities. The reporting rate for passive surveillance has increased from 20 ADR reports in the previous quarter to 46 in this quarter. Analysis of the reports received in the last two quarters revealed that efavirenz was a suspected medicine in 38% of the reports, nevirapine in 14%, and isoniazid in 11%. The findings were documented in the Medicines Safety Watch Newsletter, and were shared at the semi-annual National ART semi-annual review meeting. The improvement in reporting of ADRs has propelled Swaziland from being a provisional member to a full member of the WHO Uppsala Monitoring Center. The next steps are to disseminate the Medicines Safety Watch Newsletter, including printing of 50 copies of the newsletter for hardcopy dissemination to MOH senior staff and other selected stakeholders.

During this quarter, SIAPS **TB Core** developed a user-friendly look-up guide to help doctors easily grade and report TB ADE severity. This guide will help standardize adverse event severity reporting using the international standard—common terminology criteria for reporting adverse events (CTCAE)—and support more effective analysis of events. The job aids were also customized for caregivers to facilitate effective identification and reporting of ADEs. In addition, SIAPS attended the WHO joint partners' forum for strengthening and aligning TB diagnosis and treatment in Geneva, April 27-30. This is the first meeting held jointly by the Global Drug-Resistant TB Initiative (GDI) and Global Laboratory Initiative (GLI) working groups (both hosted by WHO) to deliberate on TB diagnosis and treatment challenges and learn from country experiences. During this meeting, SIAPS continued dialogue with relevant partners on PV activities planned in other countries and had an opportunity to discuss possible collaboration in the implementation of PV for new TB medicines/regimens through a one-on-one meeting with stakeholders from USAID-priority TB countries, such as Philippines, Nigeria, and Kenya.

In **Ukraine**, noticeable progress in this quarter is related to the development of the national PV guidelines. Of the six modules already developed, four were approved by the MOH on May 21. Two more modules of the national PV guidelines are being developed. In addition, SIAPS

continued to provide support in developing and implementing the Pharmacovigilance Automated Information System (PAIS). During this quarter, 52 ADR/lack of efficacy (LOE) cases were entered into the PAIS. The development of a data protection system for PAIS has also started.

Rational medicine use

In **Burundi**, SIAPS assisted the NMCP logistically and technically to conduct trainings of lab technicians on malaria diagnosis and two refresher trainings for health care providers on malaria STGs. The intervention targeted the three eastern health provinces of Ruyigi, Rutana, and Cankuzo. NMCP, in collaboration with SIAPS, trained 55 lab technicians on malaria diagnosis (5 women and 50 men). Trainees' theoretical knowledge was increased by 34 percentage points and practice by 29 percentage points. A refresher training on malaria diagnosis was also conducted, which targeted lab technicians trained by NMPC in 2012. A total of 90 persons were refreshed on malaria diagnosis techniques, 14% being women. Participants in the refresher training increased their theoretical knowledge by 24 percentage points and practice by 19 percentage points. NMCP and SIAPS envision conducting supervision visits to further assist trained staff on practical aspects of malaria diagnosis. As for the refresher training of health care providers on malaria STGs, 97 persons have been trained, 23% being women. The average knowledge improvement of trainees was 26 percentage points, from a pre-test score of 46% to a post-test score of 72%. The training focused on malaria epidemiology, clinical signs of uncomplicated malaria, recognition of severe malaria and its specific signs, diagnosis of malaria, and appropriate treatment of uncomplicated and severe malaria. The training also focused on good dispensing practices with more emphasis on the use of the combination of quinine and clindamycin for second-line treatment of uncomplicated malaria cases and administration of injectable artesunate prior to the transfer of severe malaria cases to hospital, as the NMCP is going to introduce clindamycin and injectable artesunate in 7 out of 28 health districts in the above-mentioned 3 provinces.

During this quarter, SIAPS **Ethiopia** coordinated with the Pharmaceutical Fund and Supply Agency (PFSA), RHBs, and universities to conduct the first national assessment and supportive supervision on the implementation of clinical pharmacy services at 43 public hospitals in 5 regions and 2 city administrations. SIAPS also provided technical support to various hospitals to document, aggregate, and communicate results of the clinical pharmacy activities. Six hospitals in Amhara regional states reported that 127 ward rounds and 57 morning rounds were conducted with a multidisciplinary team (MDT); nine pharmacy-only morning rounds and one pharmacy-only ward round were conducted by pharmacists. A total of 1,307 patients received clinical pharmacy services; 842 (64.4%) of them had documented patient medication profiles. Pharmacists identified 375 drug therapy problems and recommended interventions on 371 (99%) of them; 307 (83%) of the recommended interventions were fully accepted by the clinicians. The SOPs document for the provision of clinical pharmacy services was printed and made ready for distribution. The ART SOPs document is also printed and is being circulated through the same distribution system.

In the **Dominican Republic**, SIAPS supported the Universidad Central del Este (UCE) to finalize the administrative proposal for the certified course (diploma) on RMU and to draft the training modules. SIAPS will conduct a meeting for the revision and validation of the training

modules next quarter. Implementation of the training course is scheduled for the last quarter of 2015.

During this quarter, the Schools of Public Health and Pharmacy of University of the Western Cape (UWC) collaborated with SIAPS **South Africa** and the Boston University to finalize the online elective module on RMU for the masters of public health program. This activity was the culmination of assistance SIAPS has provided since 2014 to develop course materials that are offered to local and international health care professionals. During this quarter, SIAPS was involved in the final stages of development of content and design of assessments and plans for the roll out of the RMU module. In addition, SIAPS updated the material for the RMU and medicine supply management courses for the Winter School which is planned for the end of June/early July. Attendees are local and international medical practitioners and pharmacists. SIAPS will facilitate sessions for the last time; the facilitation role and updating of training materials will be handed over to the university.

In the previous quarter, SIAPS **South Africa** assisted the NDOH in facilitating a stakeholder engagement meeting to obtain collective input on proposed amendments to the Good Pharmacy Practice rules relating to mobile pharmaceutical services, pharmacies operating Internet sites, collection and the delivery of medicines to patients, and operation of remote automated dispensing units. As a follow-up, SIAPS provided technical assistance in consolidating all the inputs on behalf of NDOH for submission to the South African Pharmacy Council.

Essential medicines lists, formularies, and standard treatment guidelines

In **Angola,** SIAPS participated in the initiation of the drafting of the national formulary manual as a member of an ad hoc committee of redaction, under the leadership of a consultant hired by the Global Fund through the United Nations Development Fund (UNDP). This document will complement the NEML that is still pending approval. Once finalized and disseminated, they will both assist in the promotion of RMU through good prescribing practices and good dispensing practices for better health outcomes.

In **Bangladesh**, SIAPS provided technical assistance to the Directorate General of Drug Administration (DGDA) for publishing the updated Bangladesh National Drug Formulary (BDNF). BDNF provides the key information necessary for prescribing, dispensing, and administration of drugs that are registered and approved by the DGDA. SIAPS facilitated printing of 10,000 copies of the BDNF as a reference book for physicians, pharmacists, and other health care providers.

SIAPS **MNCH** is supporting chlorhexidine introduction activities in Afghanistan, Angola, DRC, Pakistan, and South Sudan and shared the new product introduction guide for health program managers to the relevant MOHs. SIAPS/MNCH facilitated the introduction of chlorhexidine in Afghanistan in May 2015. A stakeholders meeting was organized on May 17, 2015, with 50 participants representing Ministry of Public Health staff, donor agencies, implementing partners, the private sector, and neonatal care specialists. The group collectively agreed on including chlorhexidine for umbilical cord care and decisions made during the workshop are the basis of the introduction strategy for chlorhexidine in Afghanistan. SIAPS also developed a guide for

planning introduction of new RMNCH medicines and supplies. The guideline has been field-tested in Afghanistan for chlorhexidine introduction and it is also part of the introduction strategy.

In **Ethiopia**, SIAPS distributed 1,298 copies of the Ethiopian Formulary 2013 and 52 copies of the STGs via PFSA, RHBs, and zonal health offices to various hospitals and health centers in Amhara, Afar and Dire-Dawa Regions; the majority of these went to the health centers.

SIAPS **Mozambique** supported the NEML Working Group (WG). During this quarter, SIAPS helped capture the recommendations from the WG and updated all fields in the NEML matrix for the level of use. The final list and the draft of policies and procedures for use of the NEML were presented to the chair of the NEML committee for final review and approval by the MOH.

In **Namibia**, SIAPS is supporting the Division of Pharmaceutical Services to revise the 5th edition of Nemlist, which is the EML of Namibia; 26 requests for changes to the Nemlist were reviewed; recommendations will be presented to the Essential Medicines List Committee (EMLC) in quarter 4 of FY15.

During this quarter, SIAPS **South Africa** assisted the Essential Drugs Program (EDP) on the completion, publication, and implementation of primary health care (PHC) STGs and EML. The input from SIAPS helps improve transparency and governance in the process of selecting essential medicines. The EDP Unit announced the publication of the PDF version of the revised PHC STGs and EML (21 chapters). SIAPS continued to provide assistance to the EDP with the publication of the revised guidelines. In June 2015, SIAPS helped the NDOH host a meeting with Gauteng, Eastern Cape, Free State, KwaZulu Natal, Western Cape, and Correctional Services regarding implementation of the guidelines. Meetings with the North West, Northern Cape, Mpumulanga, and Limpopo will take place in the upcoming quarter. SIAPS is working with the EDP and Right to Care to develop plans for implementing the PHC guidelines once published. SIAPS also developed an SMS tag line for NDOH to advertise the PHC STGs and EML. In parallel, SIAPS was asked to test a smart phone application of the PHC STGs and EML. SIAPS provided input for improvement of the application to the NDOH and Open Medicine Project supported by the Medical Research Council, who was charged with developing the application. In May 2015, an article on "Essential Medicines – A Work in Progress" was published in the South African Pharmaceutical Journal (SAPJ). The article was co-authored by NDOH, SIAPS, and a University of KwaZulu Natal lecturer. This was the first of a series of intended articles.

In **Ukraine**, support for establishing a NEML was received from three parliamentary committees last quarter. During this quarter, progress was attained in reaching agreement with key stakeholders on the course of actions with regard to drafting the legislation. One of the drafted documents, the provisions on the NEML, has successfully passed public discussion, and is currently under review by the Ministry of Justice. Approval is expected in early July.

Treatment adherence

During this quarter, SIAPS **Namibia** supported the Directorate of Special Programs (DSP) to pilot-test the SMS-based adherence reminder system at two ART sites. The SMS service includes sending automated short messages to ART patients to remind them about their pharmacy appointments and to encourage adherence to ART. The system will be rolled out to 10 more ART sites after the pilot. SIAPS participated in the ART adherence technical working group meeting and shared a SIAPS-developed adherence strategy document.

The SIAPS indicator "number of facilities implementing activities to monitor and/or promote adherence to recommended treatments" figure also improved in Namibia from 41 in the last quarter to 44 this quarter.

Drug information and patient education

To strengthen the function of Drug Information Service (DIS) Units to provide evidence-based medicines information to health care providers and patients, SIAPS **Ethiopia** provided computers, printers, and electronic accessories to two hospitals in the Amhara Region and one hospital in the Oromia Region. Four hospitals in the Oromia Region were provided with guest chairs, notice boards, and sign boards for their DIS Units. All the above-mentioned facilities and three other hospitals received different reference materials for their DIS Units.

Antimicrobial resistance and infection prevention and control

Cross Bureau: To coincide with this year's World Health Assembly decision to pass a resolution on the WHO Global Action Plan on AMR, SIAPS dedicated May and June 2015 to AMR. In line with this theme, SIAPS posted several AMR-related blogs and presentations to the SIAPS website and Facebook and Twitter pages. In addition, five SIAPS representatives, including those from the DRC, Namibia, and South Africa offices, attended the Uppsala Health Summit 2015 on the theme "A World Without Antibiotics." The summit was held in Uppsala, Sweden, on June 2-3, 2015. SIAPS participated in and contributed to the discussions on strategies to contain AMR, including implementation of the newly endorsed WHO Global Action Plan on AMR. During this quarter, two abstracts, one on AMR advocacy and the other on community case management, which were submitted to the American Public Health Association annual conference, were accepted for oral presentation.

During this quarter, SIAPS **Ethiopia** produced and posted a technical report entitled Outcomes of Journalists' Capacity-Building Intervention in the Prevention and Containment of Antimicrobial Resistance in Ethiopia, 2012-2014 and an AMR blog entitled Containing AMR in Ethiopia: What Role Does Media Play? on the SIAPS website to support SIAPS AMR Month in May 2015. In Ethiopia, AMR day was commemorated on June 16, 2015, under the theme "AMR: A Global Health and Economic Threat!" SIAPS presented a paper entitled Current Status of Microbial Resistance in Ethiopia: Updates on National AMR Containment Strategy: Implementation and Challenges to support this important national event.

SIAPS **Namibia** participated in the preparations for an information exchange program between UNAM-School of Medicine and the University of Bonn. SIAPS is a member of the steering committee that is coordinating the partnership on infection prevention and control (IPC) and activities to combat hospital-acquired infections (HAI) between the two universities.

SIAPS **South Africa** continued to support the national strategy on AMR. SIAPS conducted a one-day Infection Control Assessment Tool (ICAT) refresher course in the Nkangala health district in Mpumalanga Province; 38 quality control managers, IPC coordinators, and occupational and environmental health managers attended the training. In addition, SIAPS South Africa prepared a blog on AMR and IPC activities achieved in the country to support SIAPS AMR Month in May 2015. Two articles on AMR were published in the quarterly newsletter. In addition, SIAPS submitted an abstract entitled Reporting of Adverse Drug Reactions in Private Sector Pharmacies in the Nelson Mandela Metropole, South Africa to the First Training Workshop and Symposium MURIA Group to be held in July at the University of Botswana in Gaborone. It was accepted for a poster presentation. In addition, a three-country (South Africa, Namibia, and Swaziland) survey of using early warning indicators as a potential predictor of HIV drug-resistance risk was initiated. The South African protocol was developed on the South African scenario in terms of challenges of retaining patients on therapy and access to ARTs, and the use of RxSolution as an information source for various indicators. Once the three countries agree on the proposal (including ethics and access approval) the data collection tools will be validated and data collection will be started.

Drug and therapeutics committees

In **Mozambique**, according to the recommendations of the 2nd National Drug Therapeutic Committee Seminar on building the capacity of hospital pharmacies' staff in pharmaceutical management, SIAPS provided technical assistance to the Hospital Pharmacy Department (HPD) of MOH to prepare training for the Hospital Drug and Therapeutic Committees (DTCs). The objectives of the training are to improve the identification and monitoring of medication errors and to develop interventions to monitor compliance with best practices for the acquisition, storage, distribution, and dispensing of medicines. The HPD has approved its DTC's support plan which includes trainings for Mavalane, Inhambane, Nampula, and Niassa Hospitals, and requested SIAPS to provide support in the implementation of this DTC support plan.

In **South Africa**, SIAPS helped the Gauteng Provincial Pharmacy and Therapeutic Committee (PPTC) conduct an ABC analysis to identify antibiotic usage patterns in the Ekurhuleni District. The analysis will form the basis for operational research that will be conducted in the district. In Western Cape (WC), SIAPS assisted the WC PPTC to develop terms of reference for the Medicine Use Evaluation (MUE) Sub-Committee. SIAPS assisted the WC PPTC to conduct their first province-wide MUE. Through an ABC analysis, a potential medicine use problem for aspirin was identified. The newly formed MUE Sub-Committee developed a data collection tool for a province-wide MUE for aspirin. During an RMU training conducted previously, participants had developed criteria for aspirin use in the province. The criteria and data collection tools were finalized by SIAPS and the University of the Western Cape. Data collection will be performed in July/August after obtaining ethics clearance. SIAPS also provided training to new and existing PTC members in Eastern Cape and Limpopo to orient them on the issues of

governance and the roles and functions of PTCs. SIAPS also introduced tools to be used by PTCs to enhance RMU.

In **Swaziland**, following the PTC training conducted in the previous quarter, eight facilities have had at least one meeting in this quarter. Issues discussed included the use of STG, triplicate prescriptions for the pharmacy, refilling of chronic medications, development of an antibiotic policy, and implementation of the new integrated HIV guidelines.

Cross Bureau: During the reporting quarter, an abstract on DTCs was submitted by SIAPS and was accepted for poster presentation at this year's International Pharmaceutical Federation World Congress.

Medicine use review /medicine use evaluation

In **Ethiopia**, SIAPS has supported Woldia General and Mettu Karl Hospitals to conduct MUEs on artemether and lumefantrine (Coartem). The results from Woldia showed that blood tests were ordered for 87.5% (196/224) of fever cases; 36.7% (72/196) of the cases were confirmed malaria and combined infections and were deemed appropriate indications for AL. However, the remaining 124 cases were also given AL with negative blood test results. Woldia's DTC then developed an implementation plan to address the gaps identified from the MUE.

In **Mozambique**, SIAPS collaborated with the HPD of MOH to provide technical assistance to develop SOPs for MUEs. SIAPS oriented three HPD staff to train the Hospital DTC members on use of the SOPs. The HPD staff then trained four hospital DTC members and one HPD staff at Maputo Provincial Hospital in Matola City during this quarter. The participants also tested the SOPs during the training. After the training, SIAPS supported the HPD to revise the SOPs, which included input from Maputo Provincial Hospital.

In **Namibia**, SIAPS supported the Kunene Region therapeutic committee to conduct an MUE in Opuwo District. SIAPS is providing technical assistance in ensuring high-data quality and aggregating the data to compile an informative report. SIAPS also supported the School of Pharmacy at the University of Namibia (UNAM-SOP) to disseminate results of an assessment of dispensing practices done by pharmacy students during their rural public health facility attachment in June/July 2013. SIAPS provided technical assistance to UNAM-SOP in developing a manuscript on evaluating compliance with good dispensing practices in public health facilities in rural Namibia. Clearance is being sought from the MoHSS to disseminate the findings and recommendations in relevant journals.

During this quarter, SIAPS **South Africa** assisted EDP on medicine reviews. SIAPS helped extract prices of labetalol tablets and injection from internal and local price indicator websites and documents. A basic costing exercise and a motivational review on the use of labetolol in eclampsia were conducted. It was found that there was no evidence of superiority to the standard medicines available on the EDL. Additionally, SIAPS completed a medicine review on the use of levonorgestrel intrauterine device in chronic pelvic pain in patients with endometriosis.

In **Ukraine**, SIAPS continued supporting the drug use review (DUR) pilot project at the Kyiv Oblast TB dispensary. During this quarter, the DUR data analysis in the TB facility was successfully completed, and the report will be drafted in July. The protocol for DUR in HIV facilities is in the final stage of development, and the pilot is planned to start in early August 2015.

During this quarter, SIAPS **Uzbekistan** supported the TB Pharmaceutical Management Working Group to analyze data collected during a DUR that was conducted with SIAPS assistance in February/March 2015 in three TB facilities in Tashkent. The draft report was developed, which is currently under finalization. It is expected that the findings and recommendations will be disseminated next quarter to the respective TB facilities, where detailed improvement plans are expected to be elaborated. With support from SIAPS, a presentation of the findings of DUR was developed and presented at the VIII Congress of Phthisiatricians and Pulmonologists of Uzbekistan in May 2015 in Tashkent. In addition, an abstract for the DUR was developed and submitted to the 46th World Conference on Lung Health, which will be held in December 2015 in South Africa. The abstract was approved for a poster presentation.

Portfolios and SIAPS IRs in the Year 4, Quarter 3 Report

COUNTRY/PORTFOLIO	IR1	IR2	IR3	IR4	IR5
Africa					
Angola	•	•	•		•
Burundi	•	•	•	•	•
Cameroon	•	•	•	•	
Democratic Republic of Congo	•	•	•	•	•
Ethiopia	•	•	•		•
Guinea	•	•	•		•
Lesotho	•	•	•	•	•
Mali	•	•	•		•
Mozambique	•	•			•
Namibia	•	•	•	•	•
South Africa	•	•	•	•	•
South Sudan	•	•	•	•	•
Swaziland	•	•	•	•	•
West Africa Regional	•		•		
Asia and Middle East					
Bangladesh	•	•	•		•
Philippines	•	•	•		•
Europe and Eurasia					
Tajikistan		•			
Turkmenistan		•			
Ukraine	•	•	•	•	•
Uzbekistan	•				
Latin America and the Caribbean					
Dominican Republic	•	•	•	•	•
Amazon Malaria Initiative	•	•	•	•	•
Core Portfolios					
Cross-Bureau	•	•	•	•	•
Malaria Core		•		•	
MCH Core	•	•	•		•
NTD Core	•	•			
TB Core	•	•	•		•
Total Portfolios	**24**	**25**	**21**	**13**	**20**

CROSS BUREAU

Objective 1. Strengthen Pharmaceutical Sector Governance

In this quarter, the USAID e-Learning module on good governance in pharmaceutical systems was sent out for review. The Knowledge for Health (K4H) project staff reviewed and uploaded the questions developed by SIAPS in the previous quarter and SIAPS then invited five reviewers to submit comments on the course. Comments were received from three of the five reviewers including USAID staff in Global Health eLearning Center (GHeL) and the Office of Health Systems (OHS), as well as the Technical Officer who leads WHO's Good Governance for Medicines (GGM) program who submitted positive comments and indicated that the World Health Organization (WHO) would like to list the course as a resource for WHO GGM countries. Once comments are received from the other two reviewers, SIAPS will finalize the course and disseminate it.

Also, SIAPS is participating in a working group to assist the WHO GGM Program to update and expand the scope of their assessment instrument for measuring transparency in the public pharmaceutical sector. This quarter, WHO invited selected experts, including SIAPS program staff members who were asked to review the revised tool, which has now been expanded to assess accountability in addition to transparency; SIAPS submitted detailed comments on all eight modules of the tool. SIAPS then attended a two-day consultation meeting in Geneva at the invitation of WHO headquarters to review the feedback received from all reviewers, agree on changes to be made, discuss methodological issues, and decide on structure and design. At the request of GGM staff, SIAPS facilitated two of the sessions at this consultation meeting — "Procurement and Inspection and Enforcement. SIAPS also met with WHO staff prior to this meeting to discuss other potential collaborative activities. Based on subsequent discussion with USAID, SIAPS will continue to contribute to finalizing the revised assessment tool as well as support developing other WHO governance-related guidance documents and training materials.

Constraints to Progress

Finalization of the eLearning course is pending comments from two reviewers at USAID.

Partner Contributions

- The K4H project continues to make valuable contributions to this development of the eLearning course.
- WHO GGM staff reviewed the eLearning course.

Objective 2. Increase and Enhance Capacity for Pharmaceutical Management and Services

During the quarter, progress was made on the pilot pooled procurement activity in Cameroon. EPN has now coordinated the procurement contracts that were signed between EPN participating members and the suppliers that were awarded the tenders. These contracts were drawn up by the

TWG responsible to oversee the pooled procurement activity and were signed by a representative from each of the institutions participating in the pooled procurement activity. The contracts include terms for payment, delivery schedules, quantities to be supplied, and default clauses. Guidelines were also developed for processing and handling of tenders among participating institutions through an adjudication process, also for the receipt of products and for effecting payments. In addition, a bank account to support the payments for these procurements was opened with each participating institution having a signatory authority. Also during the quarter, the first consignment of procured medicines was confirmed for May 26th 2015, at which time the three organizations celebrated this milestone by hosting a reception Given that one third of the orders were received on that day.

In support to the East Africa Community Medicine Regulatory Harmonization (EAC-MRH) agenda, SIAPS developed and presented to the EAC senior management an MOU and draft work plan in support of the EAC-MRH's PV agenda as defined in their grant proposal to the World Bank. SIAPS expects a signed MOU and agreement on the proposed activities by August 2015. SIAPS will present the draft work plan outlining SIAPS' proposed technical support for the EAC's priority PV activities during a meeting with EAC next quarter.

Constraints to Progress

- It took a long time to open the bank account. This was resolved after interventions from the EPN consultant providing the technical assistance.
- Some suppliers to the pilot activity on pooled procurement did not fulfill their obligations in meeting the delivery dates. They kept promising new delivery dates but did not meet those either. EPN will provide support to its members on how to address such situations.

Objective 3. Increase the Utilization of Information for Decision Making in the Pharmaceutical Sector

In this quarter, SIAPS continued work to develop a framework for measuring pharmaceutical systems strengthening. The framework, based on the definitions, components, and elements that were identified at the SIAPS Partner Consultative Meeting, would then guide the selection of indicators. SIAPS validated the components and elements selected with seminal publications and frameworks in the literature to identify anomalies or important omissions. The draft framework was shared with staff attending the SIAPS Global Technical Summit for their inputs on the elements that are critical for measuring progress in pharmaceutical systems strengthening and the feasibility of obtaining data. SIAPS also reviewed the literature on health systems resilience to identify relevant definitions, characteristics of resilient (health) systems, and approaches to measurement to refine the selection of indicators. Additionally, SIAPS continued to work on developing the background discussion paper and also working on a meeting outcomes paper for peer-reviewed publication. The second draft is now undergoing an internal review.

On the other hand, the report on "Decreasing the Data Burden at the Last Mile to Improve Data Management and Use for Stronger Pharmaceutical Systems" was finalized this quarter and sent to the editorial team for editing and format. Due to competing priorities, the report is expected to be finalized and disseminated early next quarter.

Constraints to Progress

Due to competing priorities with editorial, the editing and design of the data burden report was delayed.

Objective 4. Strengthen Pharmaceutical Financing Strategies and Approaches

Following the "Universal Health Coverage: Considerations in Designing Medicines Benefits Policies and Programs" conference held in October 2014, a technical overview brief articulating pharmaceutical management considerations within a Universal Health Coverage (UHC) program was initiated this quarter and is expected to be completed next quarter and to undergo an internal review. The brief examines the different pharmaceutical functions within UHC programs and addresses the policies, approaches, and regulatory requirements needed to develop equitable and transparent systems. Given the importance of Medicine Benefit Management (MBM) schemes within UHC programs, the brief will also provide a number of recent MBM case studies drawn from low-, middle- and high-income countries, including one based on a recent evaluation of the Ghanaian insurance program, with the others based on prior assessments of the Namibian and South African MBM systems.

In collaboration with MSH's Pharmaceuticals and Health Technologies Group, two new documents: "Medicines Benefit Program Assessment Tool for Low Income Settings" and "Management of Medicines Benefit Programs—Adapting Approaches from High Income Countries" have been finalized with cross bureau funding support. The documents will be available for dissemination in the coming quarter.

Objective 5. Improve Quality of Pharmaceutical Products and Services

During the quarter, five SIAPS representatives, including those from DRC, Namibia, and South Africa country offices, attended the June 2015 Uppsala Health Summit on "A World Without Antibiotics." SIAPS engaged in discussions on strategies to contain AMR, including implementing the newly endorsed WHO Global Action Plan on AMR.

During the reporting quarter, three abstracts submitted by SIAPS to the American Public Health Association (APHA) and to the International Pharmaceutical Federation (FIP) annual conferences were all accepted. APHA accepted two submissions—one on AMR advocacy and the second on community case management – both for oral presentations. FIP accepted a drug and therapeutics committees-related submission for poster presentation.

To coincide with this year's World Health Assembly's resolution for WHO to support a Global Action Plan on AMR, SIAPS chose May and June 2015 to also highlight AMR. In line with this theme, the SIAPS website featured several AMR-related blogs and presentations that were also noted through social media pages (Facebook and Twitter).

A draft of a guidance document on improving medication adherence through a systems-based approach was extensively revised this quarter based on initial feedback from a technical

reviewer. Following the revision, the advanced draft was sent to six additional peer reviewers. The next step is to receive and address their feedback and finalize the document.

As previously mentioned, the finalized "how-to-manual for the establishment of standard treatment guidelines development and implementation system" was submitted to the editorial team. They are currently working on the document to finalize the layout and design and then publish it.

Also during the quarter, K4H and SIAPS reviewed the comments provided by Jim Shelton on the draft GHeL course on antimicrobial resistance (AMR) (part 2) and developed a plan to address the comments. During the quarter, another reviewer also provided comments and edits on the course. K4H and SIAPS will collaborate to address the comments and suggestions of this second review. Additionally, SIAPS plans to further update this draft so to incorporate the significant new information relating to the recent May 2015 World Health Assembly Resolution on the Global Action Plan on AMR.

In this quarter, and in relation to the regulatory assessment tool support, SIAPS initiated a call with WHO to discuss the two agencies' respective regulatory assessment tools and to explore opportunities for collaboration and coordination. SIAPS learned from these discussions that WHO had recently conducted a systematic review of existing regulatory assessment tools and found extensive commonalities between their tool and the SIAPS tool (RSAT). WHO agreed to share an electronic copy of the tool, as well as the comparison report for SIAPS to review and validate, and SIAPS agreed to share an updated version of RSAT once the planned internal review was complete. A follow-up meeting will be scheduled next quarter to define specific areas for collaboration and coordination, including opportunities for increasing interoperability of the tools in the database WHO is constructing for regulatory assessment data. SIAPS started its internal technical review of RSAT this quarter, which will be completed next quarter and submitted for final editing. In addition, following discussions with NEPAD at the AMRH meeting in Ghana, SIAPS developed a SOW for the adaptation of RSAT for the use of AMRH, which will also draw on the revised WHO assessment tool to ensure compatibility. SIAPS and NEPAD/AMRH will collaboratively develop the tool, including indicators, as well as plans for piloting and implementation, by September 2015.

Partner Contributions

K4H continues to help move the GHeL course forward.

Objective 6. Contribute to the Generation of New Knowledge and Dissemination of Evidenced-Based Approaches and Best Practices

To support knowledge sharing through the WHO EMP Information Portal, SIAPS continued financial support to the IT contractor responsible for the software platform. The documentation upload process continued—the collection has increased from 4,735 to 4,964 documents. As planned, a big push was made to work through the backlog of SIAPS documents to be submitted to the portal for consideration. This quarter, 44 SIAPS documents were submitted for cataloguing.

Also this quarter, the staff person managing this activity left MSH. A new activity lead was assigned and brought up to speed on this activity.

Towards the end of the quarter, SIAPS staff had a phone meeting with WHO EMP Information Portal staff to discuss progress and next steps, and to introduce the new Activity Lead who will be managing this activity going forward. During this meeting, several topics were discussed and included (1) need to carry out a gap analysis for the portal collection; (2) the upcoming WHO user feedback survey; (3) how to expand representation of USAID documents on the portal;(4) need to consider alternative source(s) of funding at the end of SIAPS; and (5) how to increase the use of and submission to the Portal on the long term. Before the end of the quarter, a list of all USAID-funded documents in the Portal was extracted. In the following quarter, the list will be refined and basic analysis will be conducted to ascertain the current source of information.

Partner Contributions

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

GLOBAL PROGRAMS

Malaria Core

Goal: Improve the supply, quality, and use of malaria commodities to reduce malaria burden

Under the first objective, SIAPS began documenting its contribution towards reducing malaria morbidity and mortality through systems-strengthening approaches in Kenya and South Sudan.

Under the second objective, SIAPS facilitated PMI procurement decisions by reporting on stock status of malaria commodities (PPMRm) from Angola, Burundi, DRC, Ethiopia, Kenya, Mali, and Uganda.

Significant progress was made towards reaching the third objective where a workshop was held in Benin to disseminate the findings of a 2013 costing study to estimate the cost of distribution of malaria commodities including ACTs and RDTs in Kenya and Benin.

SIAPS continued to update the year four work plan as per PMI recommendations.

Objective 1. Improve Coverage of Malaria Interventions

During this quarter, a team of two people travelled to Kenya and South Sudan (May–June 2015) to document the countries' contribution toward reducing malaria morbidity and mortality through systems-strengthening approaches and other interventions. The team interviewed key stakeholders including the ministry of health, health workers, community leaders, and other NGOs. Whenever possible, interviews were videotaped for future reference and corresponding qualitative and quantitative data, reports, or other materials were collected to support evidence of SIAPS' achievements. In South Sudan, the team held 10 interviews and discussions with a number of stakeholders. Overall SIAPS is acknowledged for:

- Building the capacity and continuous mentorship of the National Malaria Control Program (NMCP) in addition to day-to-day support Developing key policies and guidelines (Malaria Strategic Plan, 2014-2021; malaria treatment guidelines, etc.)
- Coordinating with partners through the pharmaceutical and malaria technical working groups.
- De-junking county-level pharmaceutical stores and warehouses
- Developing pharmaceutical curriculum and trainings
- Supportive supervision
- Establishment of the Logistics Management Unit

The malaria team was represented at the SIAPS global meeting in Arlington, Virginia, June

2013. A malaria session was held where a case study from Guinea was presented. Participants also discussed gaps, challenges, and opportunities in malaria programming.

To celebrate the 2015 World malaria day, an infographic was produced "SIAPS Commemorates World Malaria Day: Selected Activities and Results from around the Globe" and shared at the SIAPS global summit.

Objective 2. Improve Metrics and Monitoring and Evaluation of Malaria Interventions

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

Objective 3. Strengthen Financing Strategies and Mechanisms to Improve Access to Medicines

In 2013, SIAPS, in collaboration with its core partner the William Davison Institute (WDI), conducted a retrospective costing exercise to estimate the cost of distribution of malaria commodities including ACTs and RDTs in Kenya and Benin. This study indicated that distribution costs play a significant role in the cost of delivering ACTs and RDTs and that countries often under-budget this function.

During the quarter, a dissemination workshop was held on June 3, 2015, in at the Ministry of Health in Cotonou, Benin. The workshop was organized by the NMCP and the Central Medical Store (CAME). Twenty-five participants from the Global Fund Principal Recipients (Africare and Catholic Relief Services), RBM partners, UNICEF, USAID, and PMI implementing partners were in attendance. The findings and recommendations of the study were presented and discussed In addition to the study finds, the costing tool developed by SIAPS using Benin and Kenya data was also presented. Participants were interested in using the tool and requested that the tool be shared with them once it is validated. This tool will help countries better understand and appropriately budget for commodities distribution.

At the end of the meeting, a hard copy of the study was shared with participants.

Neglected Tropical Diseases

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

Objective 1. Strengthen global NTD coordination and oversight mechanisms

SIAPS participated in a telephone working group on soil-transmitted helminth control run by the Centers for Disease Control. During the sessions SIAPS provided input on issues related to supply chain management of diagnostics for surveillance and M&E. This is an important aspect of the entire NTD control and elimination program that needs to be addressed as programs begin to scale down.

Quarterly Progress:

SIAPS finalized plans to host a NTD SCM workshop in Ethiopia. Preparations are underway to send invitations and finalize meeting logistics.

Partner contributions:

SIAPS met with members of RTI and USAID to discuss the workshop logistics and decide on the invitees.

MNCH Core

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

Overall Quarter Progress

The Maternal, Neonatal, and Child Health (MNCH) Core portfolio remained actively engaged in global partnerships and key initiatives aimed at ending preventable child and maternal deaths. The portfolio staff members were actively involved in the various working groups of the UN Commission on Life-Saving Commodities (UNCoLSC), especially the chlorhexidine working group. SIAPS/MNCH is supporting chlorhexidine introduction activities in Afghanistan, Angola, DRC, Pakistan, and South Sudan, and shared the new product introduction guide for health program managers to the relevant ministries of health. In Afghanistan specifically, SIAPS/MNCH facilitated the introduction of chlorhexidine in Afghanistan in May 2015. A stakeholders meeting was organized on May 17, 2015, with 50 participants representing Ministry of Public Health staff, donor agencies, implementing partners, private sector, and neonatal care specialists. The group collectively agreed on including chlorhexidine for umbilical cord care and decisions made during the workshop have formed the basis of the introduction strategy of chlorhexidine in Afghanistan.

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. This quarter, SIAPS/MNCH submitted multiple abstracts to the International Conference on Family Planning (ICFP) and the Global Maternal Health Conference (GMHC).

For the GMHC, SIAPS submitted three abstracts for individual presentations and three abstracts for preformed panels. The three individual abstracts were related to the pharmacy benefits management assessment in Ghana, the analysis of WHO data for the paper on medicine policy, and the subnational procurement assessment in Bangladesh. The three panels were related to UNCoLSC work.

This quarter, SIAPS also developed the guide for planning introduction of new RMNCH medicines and supplies. The guideline has been field-tested in Afghanistan where it formed the basis for designing the chlorhexidine introduction strategy for Afghanistan.

SIAPS/MNCH is working with Ecumenical Pharmaceutical Network (EPN) to facilitate a workshop on quantification of 13 RMNCH commodities in the Democratic Republic of the Congo (DRC) for the EPN participating organizations—the Baptist Church in Central Africa (CBCA) and Sois de Sante Primaire En Milieu Rural (SANRU).

During this quarter, SIAPS remained active in many child health global forums such as the CCM

Task force and the Integrated Community Case Management (iCCM) Financing Task Team (FTT). SIAPS played an active role in the finalization of a two-page document aimed at convincing malaria program managers of the benefits of iCCM to malaria, which is now being disseminated. SIAPS finalized the mapping of PSM activities started as a resource to the UNICEF/UNFPA/Global Fund meeting on Procurement and Supply Management (PSM) integration as a deliverable of the meeting after the unexpected departure of the UNICEF consultant and circulated the document to the iCCM FTT group. SIAPS further participated in all three meetings of the iCCM FTT this quarter and in two of the three PSM subgroup meetings.

As part of the CORE group spring meeting in April, SIAPS made a presentation representing the Supply Chain Management (SCM) subgroup in a session of the CCM Task force group on scaling up of iCCM. The session was well attended with about 30 participants present and generated some interest in the documents and guides which are available on the CCM central website. SIAPS additionally chaired the two meetings of the SCM subgroup of the iCCM Task force, presented the SCM subgroup update in the iCCM task force quarterly meeting, and led a mapping of SCM activities in CCM of the iCCM task force membership. Next quarter, SIAPS/ MNCH will continue to play an active role at the global level and participate in the two sub groups of the iCCM FTT and the iCCM task force as well as provide assistance to the MSH team in Uganda and the SIAPS team in DRC in supporting the GF grant iCCM implementation.

USAID, as a partner to UNCoLSC, is interested in using a tool developed by UNCoLSC to gather reproductive maternal, neonatal, and child health (RMNCH) information in five MNCH priority countries—Ghana, Kenya, Mozambique, Nepal, and Rwanda. The tool will be used to profile the current status of RMNCH programs, particularly for factors that affect access to the 13 priority commodities. This quarter, SIAPS finalized data collection in these five countries and was asked to also collect data in Bangladesh. SIAPS identified and contracted with consultants in each country, including Bangladesh, and trained them in the data collection tools and modules. Next quarter, SIAPS will finalize pending data collection and respond to any queries about the data from the UNCoLSC's RMNCH Strategy and Coordination team.

Finally, SIAPS compiled the data from both WHO databases and started to analyze it in terms of the initial indicators agreed upon by during the meeting in Geneva. Next quarter, SIAPS will draft the paper and incorporate comments after a peer review.

In addition, SIAPS/MNCH was requested by the Department of Maternal, Newborn, Child and Adolescent Health at WHO to review a document summarizing the UNCoLSC's work to date to be circulated among WHO country offices. SIAPS provided comments in a timely fashion that will be taken into account in the final version of the guidance document. The request for SIAPS input is a reflection of the appreciation of the global technical leadership that SIAPS is recognized for.

On March 30-31, SIAPS/MNCH senior technical advisor participated in a meeting of the Health Systems and Policy Working Group of the Countdown initiative in Geneva. The costs of her trip were covered by the Countdown group. During the meeting, she presented the progress on the paper on MNCH pharmaceutical management policies and systems and received useful feedback from the group discussion to shape the paper. It was agreed that the paper would focus on a

subset of Countdown countries and would present and analyze only data relevant to assuring availability of three tracer commodities. SIAPS felt that a report of the full set of data would still be valuable and so will continue to work on that. SIAPS will continue to analyze the data set and determine which countries and commodities to highlight in the paper and will aim to submit the first draft of the paper for review by the end of May.

SIAPS and WHO also continued to review data relevant to the paper that was included in two recent WHO surveys. SIAPS and WHO also discussed potential ways in which the data not included in the surveys but necessary for the paper could be collected. A draft literature review on the same topic was developed and will be integrated into the background section of the paper. Co-authors of the WHO review were contacted to assess their willingness to be involved and to see if they have existing data, or if they can support data collection especially on the proposed financing indicators to be included in the paper. Additionally, SIAPS is also reviewing the information on the inclusion of key MNCH commodities in national essential medicines lists.

The Supply Chain Management (SCM) subgroup of the iCCM task force, which SIAPS/MNCH now chairs, met twice this quarter and discussed its annual action plan. The role of the SCM sub group will be widened to include the role of the PSM of the iCCM FTT as the group is essentially the same people. The SCM subgroup will present on the challenges of scaling up SCM interventions to national programs at the CORE group spring meeting.

As a partner to UNCoLSC, USAID is interested in using a tool developed by the UNCoLSC to gather RMNCH information in five of its MNCH priority countries: Ghana, Kenya, Mozambique, Nepal, and Rwanda. The tool will be used to profile the current status of RMNCH programs, particularly those factors that affect access to the 13 priority commodities. This quarter, SIAPS was asked to conduct the landscape synthesis of RMNCH and life-saving interventions and commodities in these five countries. SIAPS identified and contracted with consultants in each of the countries and trained them in the data collection tools and modules. Data collection has also begun in the five countries. Next quarter, SIAPS aims to finish the data collection, review the data, and send it to the UNCoLSC's RMNCH Strategy and Coordination team.

Constraints to progress:

The co-funding for drafting the review of current pharmaceutical management policies and systems that affect access to essential RMNCH medicines and supplies from the Health Systems and Policy working group of the Countdown Group was delayed due to administrative procedures in WHO. It is expected to be received at the beginning of the next quarter.

Objective 2: Guidance and tools for improving pharmaceutical management for MNCH developed and disseminated

The Intervention Guide for the Management of Childhood Illnesses was presented in the New Information Circuit of round tables at the CORE Group meeting. While only five people attended the session, they represented the range of potential users for the guide: NGOs with district projects, donors looking for resources for the implementers of their district projects, and

students. Much interest was generated. The guide is undergoing its final editing and electronic packaging for dissemination.

To explore how to disseminate the guide through universities and other education institutions, a meeting was held with all SIAPS country project directors who have links with universities or schools of other health disciplines to brief them on the intervention guide as a useful academic resource and to recruit their help to disseminate the guide. Next quarter, SIAPS will finalize the guide, draft the interventions section for review and discussion with UNICEF as a possible complement to their DIVA district strengthening approach, and organize a webinar for the country officers for UNICEF about the Guide as a resource for DIVA, and then develop a strategy for each country on how to disseminate.

SIAPS MNCH senior technical advisor, along with other staff from SIAPS, conducted an assessment on medicine benefit management under the National Health Insurance Authority in Ghana. The team assessed how essential maternal health medicines are managed at all levels of the health system under the country's current insurance program. The team also investigated prescribing and dispensing practices, availability of medicines (in both public and private sector facilities) and providers' attitude towards use of these medicines. The report on management and availability of maternal health medicines in Ghana under the National Health Insurance Authority is being drafted.

Discussions were held with MSH's Health Commodities Supply Management project (HCSM) in Kenya to discuss the feasibility of conducting the sub-national procurement assessment for maternal health commodities. Data was collected from Kenya for the landscape synthesis exercise; one of the challenges identified was local procurement of these commodities. As a result, Kenya was selected as a possible country due to the decentralization of the procurement system. During the SIAPS technical summit in June, the HCSM and SIAPS/MNCH teams met and agreed to conduct the assessment in two to three counties in Kenya. Next quarter, SIAPS/MNCH will draft a concept note and SOW to hire a local consultant to assist with this assessment.

Constraints to progress

The challenge in finalizing the Intervention Guide has been obtaining permissions to disseminate the reference documents as part of the guide package.

Partner contributions

Harvard Pilgrim Health Care completed the final deliverables in the previous quarter and is just waiting for the final version of the guide once the editing and reference packaging is complete.

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

This quarter, the SIAPS Guinea team has not been able to plan the workshop to revise the quantification for iCCM and validate the community LMIS with the MoH because the IMCI

coordinator has not been available due to Ebola-related activities, but this remains a priority for SIAPS. The LMIS diagnostic assessment is tentatively planned for the end of July. Next quarter, the diagnostic assessment of the national LMIS will be conducted by VillageReach. The workshop to validate the Community -LMIS guide and revise the quantification for iCCM is still being discussed with the MOH.

SIAPS/MNCH continued to discuss potential collaboration between with the Maternal and Child Survival Program (MCSP) and SIAPS DRC to strengthen supply chain management for iCCM. There are preliminary ideas to replicate the SIAPS work on resupply of community health workers from the IHP areas to the new zones where MCSP will work. The focus will likely be on the resupply mechanism, monitoring of stock and consumption, and promoting rational medicines use. Next quarter, SIAPS will continue discussions to finalize the scope of SIAPS and MCSP collaboration in DRC.

SIAPS/Mali is in process of putting in place a dashboard for tracking use and availability of malaria, family planning and MNCH key products. SIAPS senior technical advisor has been providing support to the country team to make sure CCM medicines and key FP and MNCH indicators are included in the design of the dashboard.

SIAPS/MNCH further provided technical assistance to SIAPS/DRC and the MoH to develop terms of references for the dissemination of treatment guidelines for chlorhexidine for umbilical cord care and misoprostol for the prevention and treatment of post-partum hemorrhage. MNCH senior technical advisor further provided guidance on service providers 'orientation on the use of these guidelines.

Also this quarter, SIAPS proceeded to participate in the following working groups' meetings: the Maternal Health Technical Resource Team, the Supply Chain Technical Resource Team, the chlorhexidine working group, 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, Ethiopia, Mali, Pakistan, and South Sudan.

SIAPS/MNCH continued to support the Maternal Health Technical Resource Team (MHTRT) and participated in the monthly calls. The scope of work and a power point presentation summarizing the options analysis for oxytocin integration in the EPI cold chain for SIAPS was translated and shared with the SIAPS Mali team to discuss with the Mali MOH. The MOH finally agreed on the activity and potential dates. A scope of work was then developed and consultants were hired to support this option analysis with the SIAPS/Mali team. The field work will be completed next quarter.

This quarter SIAPS staff attended the quarterly Supply Chain technical resource team (SCTRT) meeting on June 11, 2015. The meeting was held to provide updates on activities and shape the discussion and way forward for 2016. SIAPS, along with JSI, presented updates on the quantification guidance document. SIAPS also reached out to the commodity technical resource teams to ask for final comments on each of the commodity forecasting algorithm sections of the forecasting supplement. The supplement will be revised taking into account these updates as well

as feedback from country experiences next quarter. The SCTRT also began discussing the possibility of conducting a workshop similar to the one conducted last year after the Global Health Supply Chain Summit. SIAPS, VillageReach, and JSI are coordinating with the Reproductive Health Supplies coalition to conduct this workshop after the francophone forum of the RHSC holds its annual member' meeting in Dakar in September.
During Q2, MNCH senior technical advisors participated in and contributed to the biweekly calls of the CWG and prepared country activity updates for DRC, Afghanistan, and Angola for the quarterly CWG in-person meetings.

On request from the CWG, SIAPS MNCH facilitated the introduction of chlorhexidine in Afghanistan in May. Under the leadership of Ministry of Public Health (MOPH), a stakeholders meeting was organized on May 17, 2015. Fifty participants attended the meeting which had representation of staff from the MOPH, donor agencies, implementing partners, private sector, and neonatal care specialists. After extensive deliberations among the participants, the group collectively agreed on including chlorhexidine for umbilical cord care and the decisions guided the drafting of the introduction guideline. In DRC, SIAPS senior technical advisor coordinated and facilitated communications between SIAPS/DRC, DRC MOH, and GlaxoSmithKline for chlorhexidine registration in DRC. Finally, a senior technical advisor coordinated with the SIAPS/DRC team and wrote an abstract on DRC CHX work for the CWG panel presentation at the Global Maternal Newborn Health Conference in Mexico City in October.

During this quarter, SIAPS participated in one teleconference of the Injectable Antibiotics technical reference team (IATRT) in May and two teleconferences in June of a subgroup of the team on implementation of the new possible severe bacterial infections recommendations to discuss the likely dose bands for amoxicillin. In DRC, SIAPS is preparing for a landscape assessment on access to medicines for newborn sepsis, using joint funding from USAID under SIAPS and from the IATRT. The protocol is being finalized and the study planned. The MSH team will provide assistance to the MOH to plan implementation of the new treatment regimen at the demonstration sites. Next quarter, SIAPS will review and finalize the study protocol in DRC and finalize the MSH contract with Save the Children and the sub-contract in country to conduct the study.

Partner Contributions

VillageReach will carry out a diagnostic assessment of the LMIS in Guinea to generate recommendations for the country on how to best integrate all the multiple LMIS and how to assure good quality information from community.

Addendum. Support to Medicines Regulatory Harmonization Programs in Africa

SIAPS received funding to support medicines regulatory harmonization efforts in Africa. These funds were channeled through SIAPS MCH core portfolio although they are not specifically MCH core activities.

To date, progress on these activities has been slow due to a lack of consensus on the scope of the support to be provided by SIAPS. During this quarter, SIAPS was able to meet with partners

from WHO, the World Bank, and the US Food and Drug Administration in Washington, DC, to discuss support for one of these initiatives, the New Partnership for Africa's Development (NEPAD)/African Medicines Regulatory Harmonization (AMRH). SIAPS collaborated with NEPAD/AMRH to organize a regional meeting of the two selected Regional Centers of Regulatory Excellence (RCORE) for pharmacovigilance (PV) in Accra, Ghana, during which all participants discussed the RCORE's purpose and role, Africa's PV agenda, capacity building activities, and the framework for governance and coordination of PV RCORE activities.

TB Core

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

Overall Quarter Progress

With the selection of SIAPS by USAID as its key technical resource for active pharmacovigilance for countries accessing the Janssen-USAID bedaquiline donation program, SIAPS continued to strengthen pharmaceutical governance and provide technical leadership to global players involved in bedaquiline introduction. The past quarter was marked by setting a strong foundation for start-up activities for the bedaquiline donation program. SIAPS TB Core assembled a team including a full-time consultant with clinical expertise to complement SIAPS' pharmacovigilance and pharmaceutical management expertise, and developed a preliminary work plan and a website. To facilitate quick pharmacovigilance implementation in countries receiving bedaquiline donations, a web-based rapid situational country preparedness assessment was developed and field tested. Comments and suggestions for improvement are being collected and will be incorporated into the final version of the assessment tool by the beginning of the next quarter.

Building the platform for future work, consensus among USAID, our implementing partner KNCV, and SIAPS was reached regarding country assignments, implementation assignments, and ensuring adequate communication among the groups to ensure harmonized country support. Discussions continue among the bedaquiline donation program partners, and a meeting has been arranged by the World Health Organization (WHO) for all parties involved in Geneva at the end of July.

The next quarter will focus on the bedaquiline implementation phase, providing technical support to the first priority countries—Georgia, Philippines, and Swaziland (as well as to KNCV assigned countries as requested)—ensuring their readiness to start patients on bedaquiline in a timely and appropriate manner before the end of the calendar year. The remaining SIAPS assigned countries—Armenia, Ukraine, Uzbekistan, DRC, Tanzania, and Uganda—will follow the next calendar year.

During this quarter SIAPS contributed to strengthening the performance of the global TB medicines procurement mechanism, the Global Drug Facility (GDF). SIAPS provided key technical leadership and assistance to produce a GDF position paper on the New Pricing Model (NPM), an approach that is expected to reduce lead times associated with price negotiations and quotation approvals.

One of the key achievements for the portfolio for the past quarter was in our work in Tanzania. Through targeted SIAPS technical assistance for TB medicine early warning systems, Tanzania had no stock-outs of TB medicines for the past 12 months.

Objective 1: Pharmaceutical Governance for TB Strengthened at Global and Country Levels

Quarterly Progress

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

SIAPS continued its engagement with global TB initiatives as a technical leader and assistance provider for strengthening TB policies in support of the WHO's EndTB Strategy. One of the most important activities was participation at a Global Workshop on Implementing the End TB Strategy Geneva, Switzerland, facilitated by the WHO. This three-day workshop composed of working groups provided a chapter-by-chapter review of the draft *Essentials of Implementing the End TB Strategy*, a key comprehensive document that will guide the implementation of End-TB Strategy for the next decade. It is expected that the document will be made public at the 46th UNION World Conference on Lung Health in Cape Town in December 2015. SIAPS has also been invited to contribute to the development of other new WHO and StopTB documents, including chapters of WHO TB Guidelines and StopTB Partnership Strategy in line with End-TB Strategy.

SIAPS also contributed to strengthening the performance of the GDF. . With the leadership and direct assistance of SIAPS, the GDF Position Paper: the New Pricing Model (NPM) was developed and finalized. This document will allow setting up a pricing mechanism that best suits the GDF TB medicines supply approaches and is expected to expedite deliveries by reducing lead times associated with price negotiations and quotation approvals.

SIAPS has also been selected by USAID as its key technical resource for active pharmacovigilance for countries accessing the Janssen-USAID bedaquiline donation. The initial activities in support of the USAID bedaquiline donation started with existing funding in in the beginning of 2015, and will now be continued with additional targeted funding received from USAID in late March.

Constraints to Progress

The additional 2014 and 2015 funding from USAID has left SIAPS understaffed for the new work.

Objective 2: Capacity for TB Pharmaceutical Supply Management and Services Increased and Enhanced

No capacity building activities were planned for this quarter.

Objective 3: Improved Use of Information for TB Control Decision Making

Activity 3.1.1: Improve and maintain e-TB Manager and QuanTB as a system-strengthening and early warning tools for TB.

e-TB Manager has been continuously improved with general fixes and additional features for increased use worldwide. New versions have been regularly released and have included all latest recommendations published by WHO for TB and DR-TB management. e-TB Manager is currently operating at a total of 2,689 sites in 10 countries. Globally, 3,480 active users are managing 382,361 TB and drug-resistant (DR) TB cases and presumptive TB individuals. Progress has been made in developing the e-TB Manager desk-top application for case management synchronizable with the web version. The generic version has been tested for consistency and accuracy, and is expected to be finished by the next quarter. Additionally, the e-TB Manager e-TB Manager stand-alone downloadable version (non-web synchronizable) has been under development; testing for the generic version prototype is planned to start next quarter. SIAPS has continued to provide technical assistance support (via funding from SIAPS, Challenge TB, and country funds) for adapting, reviewing, monitoring and implementing the tool in Azerbaijan, Brazil, Bangladesh, Cambodia, Indonesia, Namibia, Nigeria, Turkmenistan, Ukraine, and Vietnam.

The QuanTB tool (downloadable application for forecasting, quantification, and early warning system of TB medicines) version 2.0.0 has been regularly used under SIAPS support as the national tool for quantification and monitoring of TB medicines in 14 countries. The tool is integrated with the early stock-out warning system of Stop TB Partnership GDF. QuanTB has been used in countries supported by GDF during monitoring missions to collect and analyze data for decisions around forecasting and procurement of TB medicines. Others partners, such as KNCV, have announced plans to implement QuanTB and the early warning system in additional countries that they support. To strengthen its partnerships, SIAPS will facilitate two workshops for participants of GDF, Global Fund, KNCV, the Pan American Health Organization, and national tuberculosis programs (NTP) of Latin American countries in the next quarter. By the end of this quarter, there were more than 340 downloads of version 2.0.0 from the SIAPS web site, in addition to more than 600 downloads of previous versions.

Local partners have provided important feedback for MIS enhancement and development of new features and derivative tools. In countries where SIAPS presence is significant and strong linkage with partners exists, local support for system implementation, monitoring and reporting of key activities have been crucial to achieve successful outputs.

Constraints to Progress:

One significant constraint is a lack of strengthened in-country staff to carry on implementation and monitoring of e-TB Manager activities (e.g., high turnover, deficiency of local MIS, IT, and TB specialists). A lack of or unreliable data about TB cases and TB medicines inventory at country level to feed into QuanTB tool is also a challenge. Another challenge this quarter is the difficulty countries faced in following recommendations to improve TB pharmaceutical management based on QuanTB results and early warning system due to factors unrelated to the quantification and forecasting processes.

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

During this quarter, SIAPS continued to provide technical support to NTPs in Tanzania and Uganda in implementing EWS to prevent stock-outs and wastage of TB medicines. The support included facilitating stock status analysis, tracking medicines availability using selected indicators, and documenting quarterly stock status for February and March 2015. Based on the stock position, SIAPS recommended appropriate actions to improve TB medicines availability and jointly agreed with the respective countries. In addition to Tanzania achieving no stock-outs for a year, SIAPS will continue to support Uganda to ensure the same progress is achieved.

Also this quarter, SIAPS supported the GDF in reviewing TB medicine orders submitted by Uganda and Tanzania based on the supply plan developed during the GDF mission and the Global Fund bridge fund application, where SIAPS was part of the process in both countries. SIAPS' input helped to facilitate procurement decisions by clarifying different issues raised by the Global Fund/GDF and ensured appropriate guidance is provided to the respective countries related to requested quantities and proposed delivery schedules.

SIAPS continued to work with GDF in planning for monitoring missions in the Anglophone Africa. The next mission to be conducted with SIAPS support is scheduled to take place in Zimbabwe July 27 to 31, 2015. In addition, this past quarter SIAPS continued to provide ad hoc remote support to other GDF/PSM consultants on TB medicines quantification using QuanTB as requested.

SIAPS attended the WHO joint partners' forum for strengthening and aligning TB diagnosis and treatment in Geneva April 27–30. This is the first meeting held jointly by the Global Drug-Resistant TB Initiative (GDI) and Global Laboratory Initiative (GLI) working groups (both hosted by WHO) to deliberate on TB diagnosis and treatment challenges and learn from country experiences. During this meeting, SIAPS discussed pharmacovigilance activities planned in other countries with relevant partners and had an opportunity to look at possible collaboration in in implementing pharmacovigilance for new TB medicines/regimens through a one-on-one meeting with stakeholders from USAID priority TB countries such as the Philippines, Nigeria, and Kenya.

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

SIAPS continued to work daily with the developers who are changing the Data Collection and Analysis Tool (DCAT) platform to add new features and to make sure it meets WHO requirements for bedaquiline implementation. So far, all plans are still on track for in-country testing in September 2015. Support to sites implementing the old version of DCAT in Swaziland

still continued throughout the quarter. Data collection and analysis were done this quarter to assess and document reported adverse drug events and their frequency. SIAPS plans to continue support to sites and DCAT re-platforming over the next quarter. In addition, developer testing of the tool feature and rules is planned to begin mid-July in preparation for the September in-country pilot.

Activity 5.3.1: Support medicines use reviews and active surveillance pharmacovigilance in MDR-TB and new TB treatment programs

SIAPS developed a user-friendly provider adverse drug event severity grading guide to help doctors easily assess and report the severity of adverse TB drug events to enable more effective analysis of events. This guide uses the international standard Common Terminology Criteria for reporting adverse events. Job aids were also customized for the care givers to help them effectively identify and report adverse drug events.

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

Democratic Republic of the Congo (DRC)

Following the recruitment of the Senior Technical Advisor for TB in the DRC in mid-March 2015, SIAPS held a technical meeting in the DRC to introduce the QuanTB tool as an Early Warning System (EWS) to strengthen the NTP capacity and key partners involved in procurement and supply planning for TB medicines. Also addressed was ensuring good forecasting of TB medicine needs and monitoring the pipeline to prevent stock-outs or wastage due to overstock.

The technical meeting was held May 4–8, 2015, in Kinshasa, for 17 participants drawn from the NTP, the MOH Pharmacy Division, and key NTP partners such as Action Damien and Caritas, the two Global Fund principal recipients in charge of TB medicines procurement and supply management. The main output from the meeting was a national quantification for first and second line TB medicines. At the end of the meeting, the NTP and its partners developed an action plan for effective QuanTB implementation as an EWS to alert the NTP about supply chain management risks early enough to take actions to avert or minimize them. They also agreed on the revitalization and formalization of the existing quantification subcommittee.

During next quarter, SIAPS will continue to work closely with the NTP to ensure that effective stock data is captured in QuanTB; to monitor TB medicines stock and order status through the QuanTB EWS; and, to produce QuanTB quarterly reports and share them with relevant partners for informed decision making. SIAPS will also provide technical support in the development of

SOPs for the TB quantification subcommittee and facilitate initial meetings for the subcommittee.

Nigeria

To technically support the NTPs with strengthening drug management practices and establishing EWS to avoid stock-outs, the SIAPS Technical Advisor for TB in Nigeria supported the National Tuberculosis and Leprosy Control Program (NTLCP) to quantify anti-TB medicines for the Global Fund new funding model for first- and second-line drugs. The SIAPS advisor also provided direct technical support to the Procurement and Supply Chain Management/logistics team of the NTLCP, National Pharmaceutical Supply Management (PSM) team, and the National Supply Chain Integration Program (NSCIP) to build capacity of in-country staff on current treatment guidelines, drug management, and LMIS. In the past quarter, SIAPS supported the national TB program to track and collect consumption data and physical inventory reports from TB facilities and State stores. As a result, the reporting rate greatly improved to more than 95% as compared to 33% prior to the intervention. The technical advisor also attended PSM technical working groups to help address gaps in drug management practices and make national decisions to prevent stock-outs and wastages in the pipeline. A training on QuanTB for NTLCP staff and partners is planned for the next quarter to continue to build skills and competencies of logistics team members. Planning is underway to develop job aids, information and communication education materials on TB drug management, adverse drug reactions reports, anti-microbial resistance, and rational medicine use in the next quarter.

Kenya

SIAPS supported generation and dissemination of two Early Warning System (EWS) reports in April and May 2015. Recommended action points were documented and shared with stakeholders. Additionally, SIAPS actively engaged NTP and other stakeholders to follow up on medicines alert action points as highlighted in quarter two EWS reports. The National Tuberculosis, Leprosy and Lung Disease Program (NTLD) through GDF made an appeal to countries to take up an excess 2,750 packs of 100 cycloserine capsules to avert wastage. They received a response from seven countries, though none expressed a need for it. In the past quarter the NTLD donated 14,000 vials of kanamycin to Uganda to avoid wastage. The March 2015 report had indicated that the program had excess kanamycin with 4,950 vials likely to expire. NTLD also reached an agreement with GDF to act as a guarantor to IDA Foundation so that the pending second-line medicines could be delivered. A fresh order has been put together and the first delivery is expected in country by end of July 2015. This is expected to avert total stock-out of levofloxacin, which has been out of stock at the national level, although limited stocks have been available at the regional level. NTLD also conducted stock assessments in the regional KEMSA depots which yielded an extra three months of levofloxacin stock, which has since been redistributed to counties with low stocks. This ensured no stock-outs of levofloxacin was reported in the periphery.

During the quarter, SIAPS provided technical leadership and support to the TB program in Kenya during forecasting and quantification of annual requirements of first- and second-line medicines, laboratory and nutrition commodities, and LMIS tools for 2015/2016. The activity

took place in April 2015. The draft technical report has been submitted to the NTLD for their review.

SIAPS also provided support to NTLD during the grant making process for Global Fund new funding model 2015–2017. This was in the form of technical assistance to generate multi-year projections for the three-year grant making period for first-line and second-line medicines. SIAPS also supported the PSM plan development.

SIAPS participated in two commodity security committee meetings organized by NTLD Kenya during which the national commodity pipeline was reviewed and action points agreed upon. During these meetings, planning commenced on countrywide sensitization of county pharmacists on use of the electronic LMIS tool developed by KEMSA.

There were a number of key challenges in the past quarter. Unexpected delays in delivery of medicines from suppliers resulted in stock-outs despite timely procurements and the NTLD shifted its priorities away from a planned drug utilization review because of other priority demands. In addition, data quality remains a big challenge. Inconsistencies in stock data provided by programs for feeding into EWS have been observed.

Zambia

In the previous quarter, two EWS reports were generated, one in April 2015 for second-line medicines and one in May 2015 for both first line- and second-line medicines— the recommendations were shared with the NTP. SIAPS worked with the NTP to implement recommendations and medicines alert action points highlighted in the quarter 2 report. For example, the NTP initiated emergency procurement of injectable streptomycin which was getting low. Discussion with the supplier of levofloxacin 250 mg to fast track the medicines delivery was fruitful, ensuring no stock-out of the products at the facility level. Key challenges in the past quarter included unexpected delays in delivery of medicines from suppliers resulting in stock outs despite timely procurements and data quality. Inconsistencies in stock data provided by programs for feeding into EWS continue to arise.

Zimbabwe

Quarter 3 was marked by efforts to improve country capacity in forecasting and quantification. SIAPS facilitated stock status monitoring for both first- line and second- line TB medicines using QuanTB and helped to produce a TB medicines EWS report based on April stock data. A key observation from this quarter is that the country continues to maintain an uninterrupted supply of both first line- and second-line TB medicines. However, recommendations were made to ensure immediate actions are taken to avoid wastage of TB medicines, which were identified by SIAPS to be overstocked or likely to be overstocked once pending consignments are received. In addition, the country was advised to consider reviewing their patient targets based on the current enrolment to avoid underestimating stock levels.

SIAPS staff met with a representative of Directorate of Pharmacy Services (DPS) to discuss the medicines availability monitoring report generated in May 2015. The meeting helped to clarify

pending issues related to generated stock reports and discuss actions that need to be taken to avoid imminent wastage of TB medicines. During the meeting, SIAPS also emphasized the need verify data quality and validity before using it for stock analysis as this is a continual problem for many countries including Zimbabwe.

As part of on-going efforts to improve countries' forecasting capacity, SIAPS travelled to Harare, Zimbabwe, May 21–31, 2015, to support the Ministry of Health in conducting a five-day training on TB medicines quantification for 12 national quantification team members. The trainees included representatives from the National Pharmaceutical Company, NTP, provincial level TB coordinators and Directorate of Pharmacy Services. The team was trained on how to use QuanTB software and was later supported to use real country data to conduct quantification of both first- and second-line TB medicines and a stock status analysis. The support helped to expand the number of stakeholders trained on QuanTB software and is expected to help the country to effectively institutionalize the QuanTB tool as a quantification and EWS for ne TB medicines.

Plans for the next quarter include continuing to provide ongoing technical assistance to NTPs on TB procurement and supply chain management issues and to help implement an EWS to prevent stock-outs. Additionally, SIAPS plans to provide support a GDF mission in Zimbabwe, help monitoring and documenting TB stock status based on June stocks data, and provide support in addressing TB-stock related challenges.

South Sudan

SIAPS supported NTP South Sudan to generate an EWS report in June 2015. The action points from the report were documented and shared with stakeholders. SIAPS engaged with the NTP to follow up on the recommendations in the quarter 2 EWS report, which included an emergency procurement of streptomycin which was highlighted last quarter as likely to go out of stock within six months. The consignment is expected to arrive in mid-July in time to prevent a stock out. Preparations for a quantification meeting for South Sudan were initiated. The meeting is expected to take place in quarter 4. Challenges in the past quarter included unexpected delays in delivery of medicines and data quality on stock status.

Constraints to Progress

- Key challenges in the past quarter included delays by target countries in submitting QuanTB files to facilitate early EWS reporting, and inadequate distribution systems leading to artificial stock-outs at the central level.

- Constraints to progress in Nigeria included inadequate number of personnel to carry out unit tasks in the NTP, a need for funding to address the health care staff skills and competencies gaps on bedaquiline management, and inadequate skills and competencies for the new head of logistics unit of NTP.

REGIONAL PROGRAMS

LAC AMI

Goal: The key malaria control strategy is for AMI countries to institutionalize national and regional mechanisms to assure a continuous supply of antimalarials, particularly in low-incidence areas.

Of the nine countries that reported stock levels for antimalarials this quarter, the availability of antimalarials in central warehouses decreased (71%) compared to the previous quarters (79%). This was largely because central warehouses distributed the limited inventories they had to the periphery locations. A regional study distributed by SIAPS this quarter shows that most countries have faced difficulties procuring low quantities of antimalarials to local providers.

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, the evaluation criteria and the data collection forms were drafted. For the next quarter, SIAPS will discuss alternative strategies for the implementation of this activity with local counterparts in Colombia. A follow-on monitoring exercise for the same evaluation approach in Brazil is scheduled for February 2016.

Constraints to Progress

National counterparts in Colombia have been dealing with other technical and administrative priorities. For this reason, the implementation of an evaluation of malaria control strategies has been delayed.

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. During this quarter, SIAPS uploaded the report to its website (Situacion del Suminitro de Antimalaricos en Paises AMI) and distributed to all AMI partners, along with a synthesis of the main conclusions.

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 on May 2015. Nine countries shared information. The availability of antimalarials in central warehouses has slightly decreased (from 79% last quarter to 71%), due to the depletion of cloroquine and primaquine in some countries. For the next quarter, SIAPS consultants will continue to support this activity.

In Colombia, major inaccuracies in the estimation of needs and distribution are a consequence of a poorly estimated percentage of unregistered malaria cases. Along with national counterparts,

SIAPS developed the first draft of a research protocol to estimate under registry percentages in high burden departamentos. For the next quarter, the data collection instruments will be pilot-tested in a few health facilities.

Constraints to Progress

National counterparts in Colombia have been dealing with technical and administrative priorities. For this reason, the finalization of the research protocol was delayed.

Partner Contributions

The elaboration of the research protocol in Colombia has been supported by the National Health Institute.

Objective 3. Pharmaceutical Services Improved to Achieve Desired Health Outcomes

SIAPS participated in a meeting organized in Iquitos, Loreto, Peru (March 2–5) to analyze the conditions and factors leading to the recent increase in malaria incidence in Loreto, and agree on alternative strategies to confront the epidemic. Based on these agreements, SIAPS supported developing a plan for the introduction of artemisinin-based fixed-dose combinations. For the next quarter, this plan will be revised and validated with national counterpart and partners. If technical assistance is requested, SIAPS will support the estimation of needs and the operative distribution plans. SIAPS will also assess the progress in the introduction of rapid diagnostic tests. If requested by national counterparts, SIAPS along with other AMI partners will support the development, of a plan for the systematic introduction of the tests.

With the technical assistance of SIAPS, the Loreto medical store was certified in good storage practices (only the second medical store in Peru with such certification). For the next and following quarters, SIAPS will continue providing limited technical assistance to keep the certification valid.

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. For next quarter, SIAPS will finalize the technical report on the systematization of these interventions, and will start monitoring the implementation progress and preliminary results, based on a monitoring plan to be completed by August 2015.

Constraints to Progress

The introduction of guidelines to support malaria pharmaceutical management in primary health facilities in Guatemala, and monitor the availability of antimalarials used by primary health volunteers has been delayed, due to a conflicting agenda of national counterparts.

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 targeted West and Central Africa countries.

Overall Quarter Progress

The SIAPS West Africa regional project organized a stakeholders meeting on the use of HIV and AIDS pharmaceutical management information for faster decision making. The stakeholders meeting was organized as a platform for discussing the performance and issues encountered during the implementation of HIV and AIDS regional web-based dashboard (OSPSIDA) and generating feedback from the focal countries and other stakeholders on the way forward.

With training, SIAPS helped Guinea/Conakry employ OSPSIDA —this completes the deployment of the tool in the six focus countries.

SIAPS provided technical assistance to the National AIDS Control Program of Togo to monitor the deployment of the Electronic Dispensing Tool (EDT) in the five pilot sites and assess national stock status to prevent a stock-out situation.

SIAPS attended the meeting for strengthening collaboration with partners regarding the buffer stock of ARVs for ECOWAS countries organized by West African Health Organization in Bobodioulasso/Burkina Faso. During the meeting, SIAPS presented its strategy to strengthen WAHO buffer stock policy with emphasis on the use of HIV and AIDS dashboard as a tool to monitor product availability in the region.

Objective 1. Increase the Use of Pharmaceutical Management Information for Decision Making at National and Regional Levels

OSPSIDA is now in use in the six focus countries. Recently, SIAPS staff travelled to Guinea-Conakry which was the last country in which the tool had not deployed yet because of the Ebola outbreak. Seventeen (17) participants from Central Medical Stores (PCG), Headquarter and regional offices of the Executive secretariat of National AIDS Control Commission (SE/CNLS), HIV and AIDS Control Program (PNPCSP), Pharmacy Department (DPNL), Medical Doctors without Borders (MSF), SOLTHIS, and three major ART sites located in Conakry (DREAM, DEAN, CTA Donka) were trained on data entry and use of OSPSIDA reports for faster decision making on HIV and AIDS commodity management. All the participants are members of the HIV and AIDS PSM technical committee of Guinea. Unfortunately, the lack of paper-based LMIS data at Guinea's central level was a challenge to entering all required data into OSPSIDA.

SIAPS provided technical support to each of the five focus countries to enter data into the dashboard. Niger, Burkina Faso, and Cameroon continue to face challenges to keep the tool up to date.

SIAPS staff member has travelled to Lome/Togo to review progress on EDT implementation in five pilot sites. Together with HIV and AIDS Control Program, SIAPS reviewed the quality of data put in EDT by calculating two indicators which are "concordance between EDT record and prescription" and the "concordance between stock in EDT and physical count." We found during the first visit, 89% and 88% of EDT records matched with prescriptions respectively at Hopital de Be and AMC Lome whereas the other sites showed 100% agreement. From second to third visit, all the five ART sites showed 100% concordance between EDT record and prescription. Regarding the second indicator, none of five ART sites have shown 100% agreement between stock in EDT and physical count.

Partner Contributions

Médicins Sans Frontières (MSF), DREAM, and SOLTHIS made significant contribution during the deployment of the HIV and AIDS Dashboard in Guinea-Conakry.

Constraints to Progress

Niger and Guinea are still faces challenges to updating the tool because of low reporting rates. Patients and commodities data are not transmitted by ART sites to the central level to allow OSPSIDA country operators and managers to enter and validate data into the tool.

In Burkina Faso, patients and commodity data collected from ART sites are available at National AIDS Control Program, but the HIV program is suffering because of lack of time to dedicate to data entry into the tool.

Objective 2. Improve Coordination among Regional and National Stakeholders Involved in Ensuring ARVs and HIV and AIDS Commodity Availability

The HIV and AIDS Program managers and Procurement and Supply Management (PSM) officers from the six focus countries (Benin, Burkina Faso, Cameroon, Guinea, Niger, and Togo) and from other countries in ECOWAS region (Cote d'Ivoire, Ghana, Mali, and Senegal) attended the regional stakeholders meeting organized in April in Accra, Ghana, by SIAPS. The meeting was an opportunity for SIAPS to present the annual report of how OSPSIDA has been deployed in five focus countries (excluding Guinea). Each of the five focus countries presented challenges faced during implementation of OSPSIDA and recommended actions. This meeting has been organized by SIAPS in close collaboration with the West African Health Organization (WAHO). Togo and Benin have been identified by all participants as the better performing countries . Identified challenges are unavailability of paper-based Logistics Management Information System (LMIS) forms at central level to input data into the tool (Niger, Cameroon) and the lack of human resources at central level to enter data into the tool (Burkina Faso).

SIAPS travelled to Bobodioulasso to attend a collaborative meeting with partners on strengthening the operation of the ECOWAS security of ARVs and to present a road map of SIAPS support to WAHO on buffer stock management and how the OSPSIDA tool has been expanded to support the rest of ECOWAS member countries. In preparation for this meeting,

SIAPS has been mandated by USAID/West Africa to develop proposal to strengthen WAHO buffer stock that have been shared with all stakeholders before the meeting.

Partner Contributions

Participants from Global Fund, CHAI, ESTHERAID, UNAIDS, FHI360/PACTE-VIH attended the regional stakeholders meeting organized by SIAPS and have made relevant inputs during the debate around regional initiative to improve availability of HIV and AIDS pharmaceutical management information system.

Participants from UNAIDS, USAID/PEPFAR Cote d'Ivoire, Nouvelle PSP-Cote d'Ivoire made relevant inputs on the presentation of SIAPS's proposal to strengthen WAHO buffer stock policy and use of OSPSIDA as decision-making tool for management of HIV and AIDS products.

COUNTRY PROGRAMS

Angola

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

Overall Quarter Progress

During the reporting period, the program assisted MOH's National Directorate of Medicines and Medical Equipment (Direcção Nacional de Medicamentos e Equipamentos, DNME in Portuguese) to organize an Inter-Agency Coordination Committee for Municipal Revitalization's (ICC/R) Logistics, Procurement, and Operations Sub-Committee (Sub-Comissão para a Logística, Aprovisionamento e Operações, SCLAO in Portuguese) meeting as an effective mechanism for coordination, information sharing, and consensus building among local public health logistics stakeholders.

SIAPS also participated in the initiation of the drafting of the national formulary manual as a member of an ad hoc committee of redaction, under the leadership of a consultant hired by the Global Fund through the United Nations Development Fund (UNDP). This document will complement the national essential medicines list (NEML) that is still pending approval. Once finalized and disseminated, they will both assist in promotion of RMU through good prescribing and dispensing practices.

After the development of a policy brief on the establishment of the new medicine regulatory authority that will replace the current structure, DNME requested that SIAPS modify the planned activity of an options analysis of the most viable models of a National Medicine Regulatory Authority suitable to the Angolan context and organize capacity-building sessions for its staff in medicine regulatory functions, especially medicine registration. An internal consultant from SIAPS headquarters travelled to Angola to provide on-the-job training on the roles and responsibilities related to medicines registration, based on the available tools and procedures developed by DNME and using SIAPS training materials in medicine registration. The consultant was also able to identify the current issues/bottlenecks to establishing a functional medicine registration system, including a review of the current legal framework and guidance documents and suggested recommendations for the way forward. SIAPS continued to support CECOMA management to collect and monitor daily and monthly key performance indicators for its operations and to organize weekly technical meetings to identify the bottlenecks and suggest corrective measures.

Under the coordination of DNME and the National Malaria Control Program (NMCP), the program conducted EUV visits in Luanda, Cabinda, Huila, Moxico, and Namibe provinces). The quarterly PPMRm for malaria commodities was submitted to PMI through USAID | DELIVER, with clear recommendations to address the growing risk of stock-outs of ACTs as the government is yet to procure its promised portion to fill the gap left, even after the reception of PMI donations. This gap has been worsened by the suspension of Global Fund support to NMCP

after funds were embezzled at the local level. The country was, however, able to submit a revised concept note for the new funding mechanism at the Global Fund for malaria, HIV and AIDS, TB, and health system strengthening.
SIAPS continued to closely follow up the stock status of HIV and AIDS, malaria, and FP commodities and provide its technical support to the respective programs to tackle the identified issues. For example, an emergency order was submitted to the Global Fund to minimize the risk of stock-out of some antiretrovirals and a close follow-up with suppliers was done to reduce the lead time. Regular monthly physical inventory was done for FP commodities.

An abstract prepared by CECOMA and SIAPS was submitted and accepted for presentation as a poster for the forthcoming 4th International Family Planning Conference.

Objective 1. Pharmaceutical supply chain system governance strengthened

SIAPS continued to provide technical and logistical support to DNME to organize the bi-monthly SCLAO to facilitate information sharing, utilization of resources, and follow-up on the recommendations of the previous meeting. In this quarter, one of two meetings was organized. In the same period, SIAPS was invited to participate in the drafting of the national formulary manual as a member of an ad-hoc commission constituted by DNME that is in charge of redaction of this important document. A meeting with the National Medicine Advisory Committee and the ad hoc commission was organized to discuss and agree on the structure and content of the document. The development of this document is coordinated by an international consultant hired by the Global Fund through UNDP and its use will complement the NEML to promote good prescribing and dispensing practices while enhancing RMU. Following a request from DNME, SIAPS continued to collect the needed information to draft the guiding document on pharmaceutical pricing policy that will be used by the MOH to establish this policy which will increase access to affordable pharmaceutical products once fully implemented and enforced.

Constraints to progress

The main challenge is the change in priorities at MOH due to falling oil prices that slowed down the development of the national supply chain strategy and approval of the NEML. Another big challenge is access to essential data that will allow SIAPS to finalize the guiding document for development of the national pharmaceutical pricing policy.

Partner contributions

- MOH/DNME's overall coordination in the organization of the SCLAO meeting and the development of the guiding documents
- CECOMA's collaboration in providing some price data on past procurement to be used in the development of the pricing policy guiding document
- UNDP/Global Fund for technical and logistics support in hiring the consultant to develop the national formulary manual

Objective 2. Local capacity for pharmaceutical management enhanced

SIAPS Angola continued the adaptation and translation of the training materials for pharmaceutical management of HIV and AIDS commodities and the development of the national guidance for managing these commodities. These training materials will be used once SIAPS is able to work directly with selected health facilities in Luanda to improve HIV and AIDS pharmaceutical management starting next fiscal year. SIAPS sponsored the participation of one government staff in an Africa regional meeting on digital health for overcoming barriers to ending preventable child and maternal deaths and achieving universal health coverage; SIAPS sent also one participant in a delegation of seven officials from Angola. The meeting was organized in Lilongwe, Malawi, May 12–15, 2015. SIAPS assisted CECOMA to develop and submit an abstract on "Strengthening the Logistics Management System to Improve Access to Reproductive Health/Family Planning Commodities in Angola," for the 4th International Conference on Family Planning in Indonesia in November 2015. This abstract has been accepted as a poster among 2,200 abstracts submitted, and the event is due to attract more than 3,500 participants.

SIAPS continued to provide technical assistance to CECOMA to collect daily data to monitor key performance indicators (KPIs) and to organize weekly KPI review meetings at CECOMA to address bottlenecks. Using KPIs, the technical meetings are able to recommended improvements to CECOMA's operations and monitor their implementation. The planned training for CECOMA regional warehouses was delayed because no new staff was recruited because the regional warehouses are still not yet finalized and handed over to CECOMA to initiate their operations.

To follow up on the implementation of the pharmaceutical management post-training action plan, SIAPS worked with provincial teams from Luanda, Huila, and Cunene to gather information from municipal levels. Four municipalities reported that they have been able to organize cascade training sessions in their respective catchment areas, namely Cazenga and Rangel in Luanda, Kwanhama in Cunene, and Matala in Huila. Other municipalities reported the lack of budget to implement the planned training.

During the reporting period, the program facilitated a capacity-building activity in medicine registration to 8 staff (3 female, 5 male) of the DNME in the Department of Registration and Homologation.

Constraints to progress

The delay in finalizing CECOMA regional warehouses and organizing capacity-building sessions for CECOMA's newly recruited staff is due to the current financial crisis that the country is passing through. Municipal teams are also reporting the lack of funding to implement post-training action plans. SIAPS is also no longer able to keep supporting the selected provincial teams that were capacitated with Exxon Mobil funds through PMI because it was a one-time support to properly follow up outcomes of the pharmaceutical management training.

Partner contributions

- CECOMA coordination in monitoring and improving KPIs
- MOH/Office of Planning and Statistics to provide the staff to participate in the Africa digital health meeting in Malawi
- Provincial health directorate teams to follow up the post-training action plan

Objective 3. Information for pharmaceutical management decision making promoted

SIAPS held meetings with the NMCP M&E team to review the quality and completeness of the monthly reports sent by the provinces. The NMCP M&E unit (only one staff) experiences difficulties in revising the more than 2,000 reports and is unable to send regular feedback to provinces. In the provinces where SIAPS provided direct support last year with funds from Exxon Mobil through PMI, the majority of the health facilities reported on time this quarter.

In coordination with the NMCP, the program collected monthly stock levels for antimalarial commodities and prepared the quarterly PPMRm that was submitted to PMI Washington through USAID | DELIVER. An important observation since last year has been that the current stock level of ACTs at the provincial warehouse level is very critical as all the provinces were below their minimum stock level of six months. SIAPS reported an imminent risk of stock-out if no immediate action is taken.

Although MOH was aware of this situation since last year after the withdrawal of Global Fund's assistance to purchase antimalarial products, there has been no indication that the procurement process at CECOMA has been initiated, as they were waiting an approval from the minister of health to initiate an emergency order since January 2015.

Under the coordination of DNME and NMCP, the program provided logistics and technical support to conduct the EUV three-week data collection exercise in Luanda, Cabinda, Huila, Moxico, and Namibe provinces. Preliminary findings show improvements in the use of stock cards, although facilities were reporting stock-outs of some antimalarial products and inadequate storage space. Data recording for malaria case management was still an issue as the team observed the lack of some key information such as the laboratory diagnostics results and prescribed treatment in the patient registers, especially in big hospitals.

SIAPS continued to provide technical support to INLS to analyze their current stock and pipelines to compare with their distribution rates to anticipate any shortages or to raise a red flag for products that are not moving/at risk of expiration. During EUV visits, SIAPS visited four health facilities (among the selected nine facilities that will receive PEPFAR support in the coming fiscal year) to learn about their human resource capacity and identify their issues in pharmaceutical management and in the availability of logistics and patient data for decision making. This exercise was done to inform next year's SIAPS Angola work plan starting in October 2015.

Constraints to progress

- Review of the government budget that will affect the overall supply chain from the central to

the health-facility level, especially the risk of stock-outs
- Difficulty in collecting data from NMCP and provinces due to withdrawal of Global Fund support to pay some staff at the provincial level (malaria provincial officials)
- Nonuse of pharmaceutical management tools at the health-facility level that jeopardizes stock movement records
- A generalized weak LMIS across all health commodities that results in a weak supply chain and risk of stock-outs on one hand and wastage due to expired products on the other hand

Partner contributions

- DNME and NMCP coordination role in EUV
- NMCP and provincial warehouse managers and malaria supervisors in development of the PPMRm

Objective 4. Pharmaceutical service to achieve desired health outcomes improved

SIAPS continued to provide technical assistance to regularly conduct national stock-level analysis of HIV and AIDS commodities including antiretroviral products, rapid tests kits, opportunistic infection drugs, and condoms. Findings were discussed with the INLS logistics team to define recommendations for commodity security improvements. As a result of this analysis, recommendations were made with regard to a donation from the World Bank to supplement available stock. The team also met the clinical department of INLS to advocate for the use of available fixed-dose combination of antiretrovirals in tablets instead of individual oral solutions for pediatrics as per WHO recommendations; they also advocated for an already available (in large quantities), once daily fixed-dose combination of tenofovir/emtricitabine/ efavirenz as a treatment of choice for all new adult patients on treatment to avoid the medicine expiring if not used. INLS management has finally approved the establishment of the national quantification TWG for HIV and AIDS commodities. SIAPS will continue to provide technical support to this group.

The program collaborated with UNFPA and Pathfinder to conduct inventory of all FP products at CECOMA in coordination with the National Reproductive Health Program. SIAPS participated in a meeting to finalize and approve next year's forecasted needs of FP commodities, chaired by the national director of the Public Health Directorate. The meeting was attended by all key stakeholders in FP logistics.

SIAPS continued to monitor the availability of antimalarial medicines in all 18 provincial warehouses and at CECOMA. Following this monitoring, SIAPS advised on the imminent stock-out and distribution of some quantities of ACTs available in CECOMA. There is a huge quantity of RDTs that will expire in November 2015 in the provinces and at health facilities. SIAPS advised NMCP to closely follow the priority distribution as health facilities still have other batches that have good dates of expiration.

During the reporting period, the PEPFAR Angola team revised the list of health facilities to retain only nine in which to implement the integrated model of direct support to HIV and AIDS

continuum of care services with more chance of getting tangible results within the first year of intervention. SIAPS was advised to remove all the targets entered into DATIM as the selected indicators will only be reported by another implementing partner. SIAPS is only being required to report on level 3 indicators that are not entered in DATIM.

Constraints to progress

- Delay in the official nomination of the quantification TWG
- Lack of patient data to provide sound decisions to INLS during stock analysis meetings
- Delays in the introduction of PEPFAR partners to INLS and the health directorate of Luanda to define roles and responsibilities, reach consensus, and jointly plan interventions

Partner contributions

- INLS coordination in stock monitoring of HIV and AIDS commodities
- National Reproductive Health Program coordination role in FP inventory
- CECOMA, UNFPA, and Pathfinder collaboration roles in FP commodities inventory
- NMCP and provincial warehouse managers and supervisors in monitoring antimalarial products at provincial level

Bangladesh

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

Overall Quarter Progress

SIAPS' advocacy to the Ministry of Health and Family Welfare (MOHFW) have succeeded in this quarter as the ministry assigned two IT specialists to manage the Supply Chain Management Portal (SCMP). The head of Procurement and Logistics Management Cell (PLMC) requested the Joint Secretary (Development) to expedite the process of permanent positions for PLMC. The PLMC facilitated timely online procurement plans development process using SMCP as a tool for FY2015–16.

In this reporting period, SIAPS expanded its Directorate General of Family Planning (DGFP) Service Delivery Point (SDP) dashboard module of SCMP from pilot to countrywide covering all 488 subdistricts.

SIAPS facilitated a training of trainers (TOT) for 20 DGFP staff members on SDP module for countrywide rollout. DGFP master trainers, with assistance from SIAPS technical advisors, conducted field-based training to 971 DGFP users which enabled them to upload electronic logistics report more appropriately. As a result, 99% of all upazilas (subdistricts) accurately uploaded their logistics data on time.

As part of strengthening procurement management system, SIAPS facilitated dialogue among relevant parties to minimize the errors in bidding documents and streamline the procurement process. SIAPS also engaged relevant stakeholders to draft the Table of Equipment for tertiary level hospitals. With SIAPS assistance, the recent DGFP Logistics Coordination Forum (LCF) developed the Framework Agreement bidding document and used it to procure one item using and introduce the e-Government Procurement (e-GP) system.

The National Tuberculosis Program (NTP), together with other key stakeholder's and donors, conducted an assessment on functionality of e-TB Manager. Further countrywide rollout of the tool will be defined based on the assessment outcomes as indicated in the Y4 work plan.

SIAPS provided training to 86 Directorate General of Drug Administration (DGDA) and Pharmaceuticals industry officials on advanced Good Manufacturing Practice (GMP) and adverse drug event data analysis under pharmacovigilance (PV). An inspection exercise was also carried out as part of GMP training. SIAPS gave technical assistance to DGDA for publishing the updated Bangladesh National Drug Formulary (BDNF) for strengthening the regulatory systems.

Progress has been made to commission oxygen systems in Khulna Shishu Hospital (KSH) to provide regulated and uninterrupted medical oxygen for critical management of in-patient children on a cost sharing basis.

During the last quarter SIAPS conducted health information system (HIS) mapping exercise to assess all existing HIS tools and their performance, and to provide strategic guidance to MOHFW on using a unique electronic platform for the health information system. The assessment recommended the Government of Bangladesh (GOB)-owned DHIS2 platform be used for national indicator reporting. The assessment also covered the functional linkage between DHIS2 and SCMP.

As part of regular capacity building intervention, 149 personnel from DGHS, DGFP, and MOHFW have been trained on procurement and supply management by Engineering Staff College, Bangladesh.

Objective 1: Supply Chain Management Systems of the MOHFW and Component Procuring Entities Strengthened

The PLMC/MOHFW endorsed the sustainability plan of SCMP and its related tools, technologies, and methodologies. The MOHFW designated two IT personnel to manage SCMP. PLMC also took the lead role to develop 32 annual procurement plans for FY 16 using SCMP.

At the PLMC quarterly coordination meeting held on May17, 2015, the progress on permanent positions for PLMC was reviewed and the Joint Secretary (Development) was assigned the responsibility to expedite the process.

SIAPS facilitated consultative workshop held May 30, 2015, with key GOB officials to revisit the current year technical assistance and explore potential areas of technical assistance to be included in the next year work plan. Senior officials from the MOHFW and USAID were present in the workshop. GOB officials indicated their strong desire for continuous SIAPS assistance on system strengthening beyond 2016; this was supported by the USAID representative.

SIAPS facilitated a workshop on May 10–-11, 2015, on annual forecasting of RMNCH commodities for DGFP procurement planning of FY 2015–16. The workshop focused on the need to form a Forecasting Working Group subgroup of two DGFP key officers to prepare a draft forecasting report by June for family planning commodities. DGFP Logistics and Supply (L&S) unit will take the lead for the forecasting working group preparatory work.

An important activity in the current SIAPS work plan is expansion of SDP dashboard in the SCMP/SCIP system to track individual SDP level information of consumption, stock balance, stock-out rates, etc. Based on the successful piloting of SDP dashboard module in 20 upazilas for reproductive health commodities, there are new demands from DGFP and donor partners to track all DGFP items through the SDP dashboard. Accordingly, UIMSv3 is an upgraded and enhanced dashboard with new feature and improvements and auto connect topographies in SCIP.

The SDP dashboard module will allow the program managers to track the stock-out situation, which will help taking realistic steps for averting stocks-out and also will help improving the stock availability of Family Planning and other MCH commodities at SDP levels. This module provides the following advantages—

- Easy to track real-time stock status of DGFP commodities at SDP level with root-cause/pattern of stock-outs to ensure regular supply
- Easy to intervene and taking measures for improving the routine data quality aspects
- NGOs profiles are easy to track and more thorough, e.g., registration/affiliation status, service eligibility status
- Mapping out potential vacant positions and human resource planning

As part of countrywide scale up of the DGFP SDP module, SIAPS facilitated a training of trainers for 20 (18 males and 2 females) staff members from DGFP. DGFP master trainers with assistance from SIAPS technical advisors provided training to 971 DGFP field level officials to improve the stock situation in the country at SDP level. Six Family Planning (FP) divisional directors, an additional director from Distribution and Supply, and 64 district FP deputy directors were present as resource persons.

Central Medical Store Depot (CMSD)/DGHS's bidders' dialogue took place on May 17, 2015, with 70 participants. The dialogue enabled the bidders to learn about effective management of the bidding documents to complete the procurement cycle efficiently. The World Bank made special notes to bidders and CMSD to make better bidding submission and bidding decisions.

Constraints to Progress

- Poor coordination among different ministries like Public Administration, Finance, Law, Justice and Parliamentary Affairs.
- Lack of adequate attention from L&S unit directors on supply management.
- Poor motivation to bring changes in the existing DGFP committees.
- Insufficient human resources in the NTP and the TB warehouse

Partner Contributions

- PLMC and Engineering Staff College, Bangladesh showed commitment to conduct the training within the allotted time to strengthen the procurement efficiency in the system.
- DGFP has given full cooperation in organizing training on upgraded version of UIMS i.e., SDP dashboard module.
- DGFP high officials from national, divisional, and district levels attended in the training to inspire the sub-district level staff to use the upgraded module.
- Most of the trainings were conducted in GOB venues.
- The Director of CMSD has played a vital role to obtain the approval of proposed inventory management tools.

Objective 2. Systems for Evidence Based Decision Making Established

SIAPS facilitated a comprehensive Health Information System (HIS) mapping exercise and provided specific recommendations to strengthen the national HIS. The report recommended using of DHIS2 as main tool to avoid the overload of individual patient and logistics transactional data. It’s also recommended to form a high level technical working group at

MOHFW to oversee the overall HIS functions and to formulate policy and set standards.

SIAPS HIS team also worked with DGHS, German Technical Cooperation, and MNCH team to design the eLMIS in DHiS2 platform and did the content analysis (identifying possible reports, charts, maps, etc.) to incorporate in the dashboard. The system is will be implemented in a selected districts under Dhaka division.

SIAPS provided technical assistance including capacity building to the Bangladesh country coordination team to design and develop the Bangladesh Country Coordination Mechanism (BCCM) website—the Health Minister launched the website.

SIAPS continued assessing the quality of implementing sites' reports and contributes to designing supervision plans at low-performing sites for SDP dashboard module. The analysis shows that around 96% of sites are maintaining accepted level of data quality standard as of May 2015. It has also been observed that on-time direct data uploading of logistics data through UIMS to web-based DGFP/eLMIS has increased (98% in Feb 2015 to 99% in May 2015). SIAPS provided technical assistance to roll out the SDP dashboard module in 488 upazilas which will capture more than 28,000 SDP's stock information. An analysis was performed to see the availability of contraceptives at SDPs; 1.07% SDPs are experiencing a stock-out in the month of May 2015 (N = 478 upazilas).

As part of strengthening the logistics reporting system for priority maternal, newborn, and child health medicines, SIAPS provided training to 123 storekeepers and statisticians, Sub-Assistant Community Medical Officer, and Community Health Care Provider.

Upon request, SIAPS undertook a landscape synthesis of reproductive, maternal, newborn and child health (RMNCH) life-saving interventions and commodities in Bangladesh in prescribed tools to profile the current status. The consultant employed by SIAPS met relevant stakeholders in DGHS, DGFP, DGDA, and CMSD to collect relevant information and documents.

USAID, SMC, and SIAPS jointly visited the Khulna Shishu Hospital (KSH) to see what progress has been made in installing the oxygen cylinder.

SIAPS facilitated an assessment to review the implementation status of the e-TB Manager functionality engaging all relevant stakeholders (NTP, USAID, DFID, WHO, WB, CTB, SIAPS). The field visit was took place June 29–July 3, 2015.

In this quarter, two PSM meetings were held. For the first time, the quantification (using QuanTB) exercise was conducted using accurate stock data from Shaymoli central TB warehouse as the physical inventory was taken after many years with SIAPS assistance.

TB team also visited 20 upazila health complexes in 7 districts and 2 Chest Disease Hospitals of two different drug-resistant TB sites to monitor the performance of the electronic recording and reporting system. The team met with peripheral level key health authorities and addressed users' needs and problems in infrastructural setup.

Constraints to Progress

The development, incorporation, and training on reporting forms into the DHIS2 platform was delayed because of working group members were out of the country

Partner Contributions

MIS-DGHS and conference room used for the training of DHIS2.

Objective 3. Pharmaceutical Regulatory Systems Strengthened

To continue to build the capacity of DGDA officers on how to review Common Technical Document (CTD)-based dossiers, 7 DGDA officers have been selected to become master trainers. A one-day orientation was organized on April 29, 2015 to provide the participants training on what to expect and how to be a good trainer. The training also addressed areas on how to establish a training program within DGDA and periodically document its effectiveness.

The launching of PharmaDex was planned for this quarter but delayed because of readiness of the DGDA asked for more time to build capacity.

As a part of strengthening capacity of the ADRM cell members, SIAPS facilitated a workshop for the ADRM cell members on April 9, 2015, on WHO VigiLyze tool, a search and analysis tool, that provides the PV center access to the world's largest database of adverse drug reaction (ADR) reports submitted from over 100 countries. During the workshop, the participants were able to have a national view of the ADRs uploaded to the database and able to conduct statistical analysis. The advisory drug committee sub-expert group evaluated 80 ADE reports and made their scientific recommendations to categorize the reports as ADRs.

A Content Management Team (CMT) comprising of 5 DGDA officials was established at DGDA to ensure effective maintenance and management of the web portal as a part of effective post-marketing surveillance activities. A two-day intensive workshop was held April 15–16, 2015, to enable CMT members to engage in routine data analysis for informed decision making to their superiors, document data, and upload recent news onto the site.

Bangladesh current national drug formulary was published in 2006. However, for the past nine years, a significant number of pharmaceutical companies and products totaling 275 medicine manufacturing companies producing and marketing around 13,026 generic products and 24,404 kinds of trade names have been registered with DGDA. At the request of DGDA, SIAPS provided technical assistance to prepare and publish an up-to-date version of the formulary; 10,000 copies were printed for physicians, pharmacists, and other health care providers. The formulary provides the key information necessary for prescribing, dispensing, and administration of drugs that are registered and approved by the DGDA.

SIAPS facilitated a four-day interactive workshop, June 6-9, 2015, on advanced topics on GMP for 56 field inspectors of DGDA from all Bangladesh districts to improve their GMP inspection procedures that will enhance regulatory oversight and compel more pharmaceutical companies to

manufacture medicines according to the standards. Furthermore, three day site visits to three different pharmaceutical manufacturing facilities were organized for 15 selected DGDA inspectors in June. To sustain this capacity building activity on GMP, a training of trainers and debriefing workshop was conducted on June 10 and 14, 2015, for the 15 field inspectors, with objectives to train these officers to become future trainers within DGDA and to regularly conduct in-house training.

Constraints to Progress

- Getting the DGDA directors to allot more time for GMP training and mock inspections for the junior officers.
- Continue to work with ADRM cell to have ownership of the PV monitoring in Bangladesh.DGDA reluctant to launch Pharmadex as pilot.

Burundi

Goal: Contribute to a reduction in malaria-related morbidity and mortality in Burundi

Despite civil unrest in Burundi in May and June, significant progress has been made during this quarter. A major accomplishment was the approval of the NMCP (National Malaria Control Program/*Programme National Intégré de lutte contre le Paludisme*, PNILP) Concept Note submitted to the Global Fund (GF) in January 2015 with SIAPS technical assistance. The grant will allow the implementation of malaria activities. Thus far, SIAPS has assisted in developing and submitting three grants for malaria activities, totaling USD 58,574,074.

SIAPS assisted the NMCP in implementing the 6th end user verification (EUV) survey, conducting monthly stock status monitoring at the central medical store (*Central d'Achat des Medicaments Essentiels du Burundi*, CAMEBU) for malaria commodities, and produce the 13th PPMRm to generate information for decision making. For the EUV, data analysis is in progress, and the report is planned for July 2015. The PPMRm report underlined the necessity for donors (GF and PMI) to improve compliance with supply plans to prevent stock-outs of commodities. The monthly stock status monitoring has been shared with key stakeholders with a recommendation to expedite PMI and Global Fund deliveries respectively of 261,552 and 203,925 treatments of artesunate-amodiaquine 100mg-270mg (3 tablets) to prevent stock-outs. The central store CAMEBU had less than two months of stock rather than the recommended four-month minimum.

SIAPS continued to assist the NMCP to improve supply chain management through facilitating the delivery of commodities. SIAPS assisted in delivering 1,186,000 sulfadoxine-pyrimenthamine (SP) tablets for the pilot implementation of intermittent preventive treatment for pregnant women (IPTp), as well as 2,129,777 ACT treatments, and 2,200,000 rapid diagnostic tests (RDT) purchased by PMI. The last PMI deliveries to achieve yearly targets were planned for the end of June 2015.

SIAPS assisted the NMCP in conducting three trainings for lab technicians on malaria diagnosis and healthcare providers on malaria standard treatment guidelines (STGs). Trainings targeted three health provinces, Ruyigi, Rutana and Cankuzo, which have seven health districts belonging to a cluster of 28 districts that experience 87% of malaria cases. Thus far 2,810 persons have been successfully trained in pharmaceutical management of the targeted 3,200 for the end of FY15.

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

SIAPS continued to support the NMCP in the area of governance and leadership. As result of previous SIAPS assistance to NMCP in fund mobilization, the Global Fund approved the NMCP Concept Note submitted in January 2015, for a total amount of USD 24,921,561 to support NMCP malaria activities for the coming three years. SIAPS assisted the NMCP in updating the supply plans for malaria commodities for the next two years (2016-17), according to the approved concept note in line with the new funding model. Updated supply plans will help the

NMCP develop a procurement and stock management plan, which is among pending requirements. SIAPS continue to collaborate with the MSH Leadership, Management, and Governance Project to assist the NMCP in fulfilling remaining requirements for the Global Fund to sign the concept note. Other requirements are an implementation mapping, a performance framework, a procurement and stock management plan, a detailed budget, an M&E plan, responses and follow-up actions to the Technical Panel Review observations on the concept note, and additional key information about the NMCP.

In relation to the above, SIAPS sponsored trips to Zimbabwe for the NMCP M&E officer and an MOH advisor for the EARN (East Africa Roll Back Malaria Network) and SARN (Southern Africa Roll Back Malaria Network) Joint National Malaria Control Program Managers Meeting. The main objective of this meeting was to build on the 2014 meeting and share information and experiences on the countries' annual work plans, TA plans, status and update on the Concept Note and grant making processes, and transition from control to pre-elimination and resource mobilization through the development of business plans. Acquired skills and experience by participants will be used to update current work plans and will guide the upcoming year's operational work plans.

SIAPS assisted the NMCP with follow-up of the legal decree titled "*Renforcement des actions de lutte contre le Paludisme*", which promotes the rational use of donated malaria commodities. The Ministry of Justice revised the decree again and issued a final version to be presented to the Cabinet for endorsement. This is a major step towards increased governance and accountability within the NMCP and in pharmaceutical management, hence improved malaria services.

SIAPS contributed to World Malaria Day celebration activities on April 24th. For the occasion, SIAPS assisted the NMCP with sponsorship to conduct an informational debate on malaria in Burundi and around the World, broadcasted on national TV on April 23, 2015. The panel was comprised of a representative of the MOH, the Director of the NMCP and a WHO representative. SIAPS contributed to logistics preparations for the public celebration on April 24, 2015, which was attended by the Assistant Minister of Health. Events articulated around the three-year theme, "Investing in the future: Combat malaria", to draw attention again to the coordinated big push required to combat malaria.

SIAPS assisted the NMCP by providing inputs to the Roll Back Malaria (RBM) roadmap. NMCP contributions to the roadmap have been approved, and the roadmap has been published on the official WHO website.

Constraints to progress:

Several activities have been rescheduled due to security unrest that prevailed in Burundi in May-June 2015.

Partner contributions:

- For the World Malaria Day celebration, other stakeholders contributed in the following areas: Radio broadcasts and media synergy (Caritas, ACECI and ALUMA)

- Celebration venue logistics (World Vision)
- Informational debate (WHO)
- Promotional materials (Global Fund, PSI and Standard Diagnostics)

Objective 2. National supply chain strengthened

SIAPS continued to assist DPML and NMCP in strengthening the supply chain to ensure availability of malaria commodities. In April and June 2015, SIAPS assisted the DPML in conducting meetings of the Medicines Thematic Group, a pharmaceutical management technical working group. The meetings focused on two key elements: the envisioned national quantification committee, and the analysis of challenges facing the supply chain, based on various studies, including the National Supply Chain Assessment, which was co-funded by SIAPS and SCMS in 2014. As output, key activities to consistently make health commodities available for the next semester will focus on the roll-out of the redesigned LMIS system to collect data for appropriate decision making and a formalized quantification committee to reinforce the capacity to respond to needs of health products at all levels of the supply chain. SIAPS assisted in writing terms of reference for the national quantification committee and malaria sub-committee. The terms of reference were submitted for validation and approval by the MOH.

SIAPS assisted the NMCP to arrange for importation waivers for malanil and artesunate (injectable 60 mg) as requested by USAID/DELIVER. Malanil will be used in entomological studies on malaria vectors. SIAPS assisted with the delivery of 1,186,000 SP tablets for IPTp pilot implementation, 2,129,777 ACT treatments, and 2,200,000 RDT purchased by PMI.

SIAPS assisted the NMCP in the distribution of malaria commodities from CAMEBU to health districts by assisting with the analysis of health district monthly distribution reports and requisitions, and providing feedback to districts to improve the estimation of district needs and requisition process to prevent stock-outs at district level. Despite the political unrest, SIAPS assisted the NMCP in ensuring that districts placed their orders and received products on time.

Additionally, SIAPS collaborated with the NMCP to implement PPMRm and EUV to generate information for decision making. SIAPS submitted the PPMRm for January-March 2015 and assisted the NMCP in conducting EUV data collection. The EUV reports will be available in July 2015. SIAPS assisted the NMCP to monitor stock levels of malaria commodities at the CAMEBU/Central medical store. Major recommendations consisted of expediting PMI and Global Fund deliveries respectively of 261,552 and 203,925 treatments of artesunate-amodiaquine 100-270mg used to treat malaria for children aged 6-13 years to prevent stock-out.

Constraints to progress:

Cancellation of a monthly meeting of the Medicines Thematic Group and rescheduling of the EUV implementation due to political unrest in May-June 2015.

Partner contributions:

DPML arranged for meeting venue for monthly meetings of the Medicines Thematic Group.

Objective 3. Malaria services improved

SIAPS continued to assist the NMCP in improving malaria services to reduce mortality and morbidity related to malaria. SIAPS assisted the NMCP logistically and technically to conduct a training of lab technicians on malaria diagnosis and two refresher trainings of health care providers on malaria STGs. The intervention targeted the three eastern health provinces of Ruyigi, Rutana, and Cankuzo.

These provinces have health districts falling completely or partially under hyperendemic areas: Rutana and Gihofi in Rutana; Kinyinya in Ruyigi; and Cankuzo and Murore in Cankuzo. These are provinces with a high prevalence of malaria in general, particularly among children under five years. The seven health districts located in these three provinces are among the 28 health districts providing 87% of malaria cases nationally, and are where the NMCP will focus interventions through 2017. According to the malaria national strategic plan 2013-2017, the average incidence of malaria among children is 139% nationally. Among children under 5, the malaria incidence for five of the seven health districts ranges between 180.4% and 391.4%. Among children 5 and older, the national average malaria incidence is 27.7%. In the three provinces, malaria incidence among children aged 5 years and beyond range between 33.4% and 71.1% in five of seven health districts. In four of seven targeted health districts, the rate of co-infection is high. In hospitals, the average national death rate due to malaria was 2.2 in 2013. Among 10 health districts with a rate over 3.4 in the country, three are among those targeted by the intervention. SIAPS and the NMCP are striving to improve malaria services in the three provinces, which would have a remarkable impact on the decline of malaria related deaths. NMCP works with other stakeholders in the remainder of the 28 health districts with a high prevalence of malaria.

NMCP, in collaboration with SIAPS, trained 55 lab technicians on malaria diagnosis: 5 women and 50 men. The training increased trainees' theoretical knowledge by 34 percentage points and practice by 29 percentage points. The refresher training on malaria diagnosis targeted lab technicians trained by NMPC in 2012. A total of 90 persons have been refreshed on malaria diagnosis techniques, 14% of them being women. Participants in the refresher training increased their theoretical knowledge by 24 percentage points and practice by 19 percentage points. NMCP and SIAPS envision conducting on-the-job supervision visits to further assist trained staff on practical aspects of malaria diagnosis. Thus, almost every health center in the three health provinces has one or two lab technicians who have been successfully trained in malaria diagnosis and are able to accurately diagnose suspected malaria cases. Accurate malaria diagnosis is a key to correct treatment and the reduction of malaria related mortality.

As for the refresher training of health care providers on the malaria STGs, 97 providers have been trained, 23% of whom are women. The average progress of trainees was 26 percentage points, from a pretest score of 46% to a post test score of 72%. Learning focused on malaria epidemiology; clinical signs of uncomplicated malaria; recognition of severe malaria and its specific signs; diagnosis of malaria; appropriate treatment of uncomplicated and severe malaria; good dispensing practices with more emphasize on the use of combination of quinine and

clindamycin for the second-line treatment of uncomplicated malaria cases; and administration of injectable artesunate prior to the transfer of severe malaria cases to hospital, as the NMCP is going to introduce clindamycin and injectable artesunate in the seven districts. Acquired knowledge will strengthen the quality of malaria case management, including good practices in consultation, accurate diagnosis, correct prescriptions, and good dispensing practices. This will contribute to the reduction of mortality related to malaria.

Constraints to progress:

Conducting trainings in the field with unpredictable security conditions was a challenge. Due to unstable security conditions that prevailed in May and June, SIAPS technical team was obliged to monitor and supervise two of the three trainings remotely. SIAPS collaborated closely with the NMCP to make sure planned trainings were accomplished with the collaboration of NMCP and field-based trainers.

Partner contributions:

NMCP and the health districts and provinces provided facilitation expertise, while the Hôpital Prince Régent Charles provided an expert who assisted in updating training materials and planning for malaria diagnosis and refresher trainings.

Cameroon

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

Overall Quarter Progress

First, the third quarter of PY4 for SIAPS Cameroon made progress toward improvement of pharmaceutical governance and transparency of the management system for HIV and AIDS commodities. SIAPS has led the recently established Medicines Cluster, a coordination mechanism that regroups technical and financial partners (TFPs) working on areas related to the pharmaceutical sector in Cameroon. On behalf of the cluster, WHO and the Centers for Disease Control (CDC) have jointly requested that the Government of Cameroon (GoC) involve TFP representatives in the development of the terms of reference for an incoming audit of the national Central Medical Stores (CENAME).

SIAPS also collaborated with Positive Generation, a civil society organization that implements an observatory on patients' barriers to access to HIV diagnostics and care; indicators and information were shared and there may be a possible expansion of observatory coverage to PMTCT as well.

Second, this quarter was marked by an overall improvement in timeliness and completeness of reports (from 13.5% to 49%) and a positive move toward best practices in pharmaceutical management at the health-facility level. This progress was partly attributed to the recent deployment of the SIAPS regional technical advisors who ensure a closer coordination between the regional NACC, the regional warehouse, and the health facility. Another important factor contributing to this improvement has been the capacitation of ART site coordinators to conduct internal supervision of ARV management activities; this capacitation has been facilitated by regional feedback meetings in which coordinators have learned to interpret the results from the supervisions and agree on management actions.

During this quarter, data from supervised sites showed following improvement:

- Percentage of facilities that had ARV stock-outs dropped from 41.3% to 36.7%, thus confirming the positive trend observed in the previous quarter
- Percentage of health facilities that had good quality storage conditions and met good storage practices stands at 67%
- Number of ART sites that have started to report stock-outs has increased from 0 to 34.7%
- Percentage of stock records matching physical counts increased from 48% to 69%
- Percentage of facilities that reported logistics information increased from 33.7% to 53.8%
- Timely reporting rate has improved from 13.5% to 49%

However, the progress observed during the last quarter on the implementation of the OSP-SIDA dashboard was not maintained during this quarter, and related indicators dropped significantly. This was partly due to the significant level of effort required to update the database and the limited availability of skilled human resources to ensure data entry. Other problems related to the

system itself have been recently solved.

To reduce financial barriers to access to pharmaceuticals, at NACC's request, SIAPS participated in revising the narrative sections of the concept note to the Global Fund and in reviewing the quantification that needed to be adjusted to new targets and programmatic strategy. Furthermore, SIAPS facilitated some discussions between the Global Fund and the Regional Warehouse of the Central Region to address the suboptimal storage infrastructure of the warehouse.

To improve pharmaceutical services, SIAPS took the lead in discussing with USAID and SCMS a possible strategy for distributing PMTCT commodities that aligns with the new PEPFAR 3.0 guidelines during COP15 implementation. SIAPS was actively coordinating with USAID and SCMS to define the roles, responsibilities, and processes to ensure that a differentiated approach will be implemented for the distribution of ARVs and effective implementation of the PMTCT Option B+ in PEPFAR-supported regions.

Objective 1. Pharmaceutical sector governance strengthened

For PY 4, this objective includes activities to improve pharmaceutical governance and transparency of management systems for HIV and AIDS commodities through a coordinated mechanism of commodities quantification, procurement, and distribution from the national level to health facilities. It also includes work with some civil society organizations involved in advocacy for access to ART to improve the HIV and AIDS health commodities supply chain and identify and report issues related to availability.

One of the main achievements of the Medicines Cluster this quarter was the submission to the Ministry of Health of a letter signed by CDC and WHO on behalf of the TFPs and the Medicines Cluster requesting involvement of the TFPs in the development of terms of reference of the audit that will be conducted at CENAME. It is expected that the recommendations from the audit will trigger reform of CENAME, especially to address governance concerns. It is expected that the audit will be conducted and findings released before the end of the year.

During this quarter, SIAPS collaborated with Positive Generation to jointly launch the 2014 Positive Generation report entitled "Break the Price" of the HIV observatory. Key indicators on stock-outs of ARVs and HIV rapid test kits (RTKs) were presented by both organizations from different angles. Positive Generation presented the observations from the patients' experience, and SIAPS presented stock-out indicators from the logistics reporting system. Both sources of information converged in results that showed that access to ARVs is improving overall, although access to RTKs is hampered by an inefficient implementation of the national policy that regulates patients' testing fees.

Constraints to progress

As in last quarter, little progress has been achieved in ensuring that the HIV Quantification and Stock Monitoring Committee takes full ownership of its responsibilities. Given that this concern relates to governance and accountability, the SIAPS country project director has already brought this problem to the attention of the NACC permanent secretary during a joint meeting with

USAID. More in-depth discussions are planned during the next quarter.

In the delicate political context of Cameroon, a balance must be maintained between the advocacy role that SIAPS plays to improve governance and good relations with the permanent secretary of NACC. Proactive communication and information sharing need to be strengthened, especially as discussions of the activities for PY5 begin.

Partner contributions

The French Agency for Cooperation is significantly advocating for CENAME reforms, and actively involving SIAPS technical expertise in the process.

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

Although during PY 4, most of the activities related to supply management focused on regions and health facilities, this objective includes activities to maintain some support to CENAME and the regional medical stores (CAPRs), especially in terms of human resources capacity building. Strengthening supportive supervision visits has been chosen as one of the best approaches to improve inventory management practices in health facilities. In addition, SIAPS reports under this objective on activities that were jointly initiated last year and implemented with UNFPA related to the upgrade of the LMIS in CENAME and CAPRs.

During this quarter, SIAPS provided training to 18 stock keepers and 2 supervisors at CENAME on stock management and supervision. These trainings were requested by CENAME in an effort to improve the operational capacity of its staff. Training materials were adapted to cover specific procedures and roles of the central stores. The trainings were co-facilitated by SIAPS and two technical managers of CENAME through a participatory approach that revealed gaps in procedures and technical skills. In relation to the supervisors, the training was focused on the role of a supervisor and management skills development.

SIAPS has participated in the review of the terms of reference for recruiting a consultant financed by the Clinton Foundation, who will be sitting at the Directorate of Pharmacy to support the multiple-partner project for the upgrade of the Enterprise Resource Planning (ERP) system in CENAME and the 10 regional warehouses. The recruitment was conducted this quarter, and it is expected that the consultant will take their position soon. In addition, following SIAPS recommendations, AEDES was recruited by UNFPA to develop the tender documents for the procurement of IT goods and services necessary to upgrade the ERP system and to develop an electronic LMIS platform to be used by the LMIS Unit that will be established at the Directorate of Pharmacy.

Constraints to progress

There is still significant uncertainty about continuation of the LMIS project. This project is the result of the commitment and good will of different partners who have decided to leverage resources and efforts to address an important gap in LMIS. However, the project has not been

totally hosted by any institution, which sometimes is reflected in the lack of adequate technical and managerial oversight. Although the LMIS project is moving in a good direction and there seems to be additional engagement from the Directorate of Pharmacy in this process, the person leading the activity from UNFPA is leaving the country, and it is uncertain whether the Clinton Foundation will continue working in this area when the Family Planning Project ends in July 2015. This issue needs to be discussed by the Medicines Cluster in the next quarter.

Partner contributions

UNFPA and the Clinton Foundation are funding the consultant and software for improvement of the LMIS.

Objective 3. Use of information for decision making increased

With the deployment of the technical advisors to the regions, SIAPS has been able to implement a better approach to supervision and capacity building during this quarter, which contributes to strengthening the reporting system itself, building the capacity of the ART site coordinators to use data for decision making, and improving the quality of pharmacy services overall. Compliance with reporting timeliness and quality of data reported has significantly improved across the four regions, especially in the North West and South West regions, where the technical advisors have been present during the full quarter.

Part of this improvement is attributed to the implementation of a regional feedback meeting that follows the quarterly supervision activities. The ART site coordinators are the target audience of the feedback meetings because they are in charge of supervising the staff and services overall. However, during the supervision activities, SIAPS noted that ART coordinators often do not supervise the staff in charge of dispensing and managing ARVs, nor the related recording and reporting activities. During the feedback meetings, each of the coordinators received a one-page factsheet that captured the most important performance indicators related to ARVs management in their own health facility, as well as observations and suggestions for improvement. SIAPS guided the ART site coordinators in interpreting the indicators that could then be compared with the overall results of the region and discussed management actions to improve ARV data reporting and management. The lack of adequate competencies and tools to conduct internal supervision were highlighted by the ART coordinators as a major concern across all four regions. The ART site coordinators also suggested some actions that SIAPS could implement to assist the sites, including development of job aids for internal supervision and integration of coordinators in SIAPS supervision activities, which have already been implemented.

USAID informed SIAPS that the regions of Adamawa and Est will be not part of next year's work plan, as per PEPFAR guidance. Therefore, supervision activities in Adamawa and Est have been conducted separately and adapted to ensure an adequate transition out of these regions. Results for the supervision will help SIAPS focus on specific actions to be conducted during the last quarter of PY4, while exploring the possibility of handing over some activities to other partners or the regional government. Both regions have expressed their concerns, given that no other partner is currently providing support in pharmaceutical management.

In relation to OSP-SIDA, a regional workshop was organized in Ghana to discuss challenges, lessons learned, and recommendations among all countries implementing OSP-SIDA. One of the specific challenges of OSP-SIDA in Cameroon is that the tool has been decentralized to the regions, and the tool was not conceived initially to be used at the regional level. Some recommendations formulated during the workshop have already been addressed by SIAPS. One important change is that now the system allows entry of information in parallel instead of sequentially, which created unnecessary delays. For example, the stock on hand at the regional warehouses could not be conducted until the data from the health facilities had been entered, which now is possible. In addition, an Excel solution has been created to allow entry of data off-line and update data once an Internet connection is available.

Constraints to progress

In relation to OSP-SIDA, one of the bottlenecks in Cameroon (also experienced by other countries) is the need to plan for human resources to deal with the increased workload caused by entry of health facility data. The regional NACC offices are not sufficiently staffed to ensure supervision of sites and routine M&E activities. SIAPS Cameroon is currently considering the possibility of partnering with institutions such as HIV associations, academic institutions, and others that may have an institutional interest in collaborating with the HIV program and having access to data.

Objective 4. Financial barriers reduced

Under this objective, SIAPS Cameroon PY4 reports on contributions to monitoring procurement and supply management (PSM) performance for HIV and AIDS commodities and to ensure compliance with Global Fund requirements for forecasting and management of these health commodities. In this sense, SIAPS plays a double role. On the one hand, SIAPS is directly providing technical assistance to CNLS, which is the main Global Fund principal recipient for HIV, and to CENAME, selected CAPRs, and health facilities. In addition, SIAPS is one of the members of the country coordinating mechanism, representing the TFP.

In May 2015, the CCM resubmitted the HIV/TB concept note to the Global Fund. In the absence of a specialized consultant to coordinate the supply management sections of the document, SIAPS was requested by NACC to participate in the process of revising the narrative sections, as well as in the review of the quantification that needed to be adjusted to new targets and programmatic strategy. Although not all SIAPS contributions were incorporated into the document that was finally submitted to the Global Fund, the national counterparts are now better equipped to answer on possible clarifications coming from the TRP during the approval process.

In addition, SIAPS facilitated some discussions between the Global Fund and the regional warehouse of the central region to address the suboptimal storage infrastructure of the warehouse. Although a long-term solution should be found, SIAPS conducted a cost analysis for renting additional storage space, which will be further discussed with the principal recipients and the Global Fund.

Constraints to progress

SIAPS expects that grant negotiations will involve a significant level of effort from the NACC (principal recipient of the grant), given the changes in the tools that are now requested, but also given the significant challenges that the country is experiencing ensuring an adequate supply chain. This may create a significant increase in workload for SIAPS staff, especially if this is not handled in a timely manner by NACC. SIAPS will take the lead in discussing with NACC to adequately plan next steps.

Objective 5. Availability of pharmaceuticals improved

For PY 4, this objective includes implementing an active distribution system for ARVs and test kits from the four regional CAPRs to targeted health facilities for PMTCT Option B+ in PEPFAR-supported regions. Initially, the health facilities that should be targeted are those corresponding to the first stages of the implementation of PMTCT Option B+, as described by the ministerial instruction of November 2014. In the PEPFAR regions concerned, the same sites are those that will receive technical assistance by SIAPS during this year.

During last quarter, two regional technical advisors and two pick-up vehicles were deployed to the North West and South West regions. During this quarter, recruitment of the remaining two regional technical advisers was finalized and the advisers deployed to the Central and Littoral regions during June after proper induction in Yaoundé. SIAPS has obtained the non-objection from the USAID to proceed with the procurement of two vehicles to deploy to the Central and Littoral regions to improve pharmaceutical availability for PMTCT implementation. Meanwhile, two vehicles have been rented to ensure that the implementation of the activities is not disrupted, and also to contribute to the overall support of distribution activities.

In addition, SIAPS Cameroon took the lead in discussing with USAID and SCMS a possible strategy for distributing PMTCT commodities aligned with the new PEPFAR 3.0 guidelines, which will be implemented in the four PEPFAR regions during COP15. This strategy would imply the staggered direct delivery of PEPFAR commodities from the SCMS warehouse in Ghana to each of the regional warehouses, avoiding the stop of the products at CENAME. Through this strategy, the regional warehouses will play a significant and more active role in determining their own PMTCT needs and will increase their involvement in making decisions on ARV management. Furthermore, given the significantly high number of health facilities that will be dispensing ARVs under the PMTCT Option B+ strategy, a differentiated approach will also be implemented for the distribution of ARVs in high- and low-yield PMTCT sites in the PEPFAR regions, where commodities will be pushed to low-volume sites, possibly bi-annually, while maintaining the pull system for medium- and high-yield sites.

USAID, SCMS, and SIAPS were actively coordinating to define the roles, responsibilities, and processes to ensure that the process is put in place. As such, a meeting was held in Arlington SCMS headquarters between the SCMS team, USAID, and SIAPS, and a visit of SCMS to Cameroon is likely to happen during the last week of July 2015 to refine the approach for distribution of PMTCT commodities directly to the regions.

Finally, SIAPS played an active role in the PMTCT Task Force, a committee that regroups national and international partners working in PMTCT. During this quarter, supply chain barriers due to a lack of institutional coordination were addressed in several meetings. As a result, the Task Force decided to bring this issue to the permanent secretary of the Ministry of Health. SIAPS assisted the Directorate of Family Health to develop a presentation capturing the main obstacles related to the supply of ARVs for PMTCT, and concrete actions to be taken by the Ministry of Health to solve the problem. Unfortunately, the meeting was cancelled at the last minute due to an unforeseen event, and no new date has yet been communicated.

Constraints to progress

The implementation of new supply systems as alternatives to CENAME are still politically sensitive.

Democratic Republic of the Congo

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

Overall Quarterly Progress

During this quarter, SIAPS supported the Faculty of Pharmaceutical Sciences (FOPS) in finalizing the five-year strategic plan (2016 -2020), which was one of the recommendations by the US-based Accreditation Council for Pharmacy Education (ACPE) to improve the governance to better monitor faculty operations.
SIAPS also supported the MOH (DMP) to disseminate the registered medicines directory second edition throughout the country for use by pharmacist inspectors and custom services at the border posts in four provinces of the DRC that are main entry points for pharmaceuticals.

During this reporting quarter, SIAPS provided financial and technical support to the National Malaria Control Program (NMCP) to train 533 health workers on malaria case management at the facility level. The training included malaria commodities management as well.

Objective 1. Pharmaceutical Sector Governance Strengthened

During this quarter, SIAPS supported the FOPS to finalize the development of the strategic plan. The development of the strategic plan for the FOPS was one of the recommendations by the Accreditation Council for Pharmacy Education (ACPE), a USA agency, to improve the governance in order to better monitor the Faculty operations. The strategic plan has been finalized and presented to the Minister of High Education (ESU) who commended this achievement and acknowledged USAID/SIAPS for the continuous assistance to FOPS to ensure that the graduated pharmacists are well trained and able to respond to public health needs of the country. The Minister further stated that the developed strategic plan constitutes a favorable response to the challenges related to pharmaceutical governance that undermine the pharmacy sector in DRC. To conclude, the Minister commented that the FOPS is the very first faculty in DRC to develop a strategic plan to better govern its operations; and therefore, he urged all other training institutions to follow this commendable example and use the FOPS strategic plan as a model. He also asserted that his Ministry is from now on entering into contracts with faculties, based on their respective strategic plans.

This quarter, SIAPS continued to provide support to the drug registration committee. Out of 411 dossier applications submitted, 402 were treated and 274 dossiers (68%) were approved and authorized, putting the total number of registered medicines to at 4,009. Also, 6 dossiers were rejected, 122 dossiers were deferred due to incomplete data, and 9 dossiers were put on hold until the next session and to be treated as a backlog.

In addition, SIAPS provided technical support to the MOH to hold two National Medicine Committee's meetings on May 28 and 19 June 19, 2015. The first meeting was held to discuss mechanisms to strengthen the committee and ensure that the 2015 planned activities are being implemented, and also mitigate obstacles and bottle necks that hinder the effectiveness of the

committee. The second meeting focused on planning activities for next quarter. In accordance to the current USAID scope of work and instructions, SIAPS continues to support the development of the strategic plan for the National Medicine Supply Chain System, with the process to be led and coordinated by the National Program for Medicines Supply (PNAM). On June 12, 2015, SIAPS actively participated in the situation analysis for SNAME. This was a crucial step in the process of the development of the strategic plan meant to be finalized by August 2015.

During this quarter, SIAPS supported the MOH (DMP) to disseminate the second edition of the registered medicines directory throughout the country for use by pharmacist inspectors and custom services within the country and at the border posts in four provinces that are main points of entries for pharmaceuticals in the DRC. Pharmacist inspectors and custom officers received training on how the directory has to be used as a medicine control tool. At the same time, SIAPS supported the MOH to disseminate the updated version of the National Essential Medicine List (NEML) to health zones and facilities. The NEML is a strategic tool with regard to the medicine selection and rational prescribing and dispensing.

From April 13 to 23 2015, SIAPS provided financial and technical assistance to the MOH to organize and hold a workshop on strategies and mechanisms for the dissemination of the MNCH norms and directives, capacity building for health workers regarding MNCH, introduction of chlorhexidine gluconate 7.1% for umbilical care, guidelines of dispersible amoxicillin 250 mg tablets, magnesium sulfate, female condoms, and dexamethasone

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

This quarter, SIAPS provided support to Evidence to Actions (E2A) a new USAID project, by providing a briefing on contraceptives stock management to 14 E2A staff members from across the country. In addition, SIAPS assisted E2A to estimate the needs for contraceptive commodities and place an emergency order that covers three months of activities in the Kasai Occidental province.

Regarding malaria disease program activities, during this quarter, SIAPS supported the NMCP to train 533 health care workers (129 females and 404 males from 447 health zones) on malaria case management, giving a cumulative total of 820 health care workers from 777 health facilities out of 1,086 (or 72%) under PMI support. The training topics included prevention, diagnosis, and treatment of malaria. There was also a module on quantification of malaria commodities and pharmacovigilance.

Jointly with the other stakeholders Projet de Sante Integree (PROSANI), PSI/ASF, ProVIC, UNICEF, CRAD) SIAPS supported the MOH to hold a seven-day workshop to train 20 health workers from the national level on the strategies for dissemination and use of MNCH guidelines.

Constraints to Progress

The 44 new PMI-supported HZ are spread over 6 health provinces area and this increased logistics issues and then the cost of activities like training work shops

Objective 3. Utilization of Information for Decision Making Increased

The alert system setup component of the stock monitoring tool at the MSH depot in Kinshasa helped SIAPS identify19,244,157 units of male condoms and kits of oral rehydration salts combined with zinc at risk of expiry. Those stocks represent 769,766 US dollars (USD) in value. The information was shared with all stakeholders including USAID mission, and a redistribution plan was developed to prevent the wastage of those medicines and commodities.

From April 20–25, 2015, SIAPS supported the NMCP to conduct the end user verification (EUV) survey which revealed the following findings:

- Stock-out remains a real challenge although the situation has improved. Fifty-five percent (61/112) of health facilities surveyed were found to be stocked out on ACT for infants for 3 days or more within the 3 month preceding the visit. This is due to an erratic supply of ACT to health zones. As a lesson learned, SIAPS reiterated recommendations for regular supply of malaria commodities and continued to encourage the use of a combination of both pull and push supply systems in the country.

- The NMCP guidelines recommend that all malaria cases should be confirmed by either rapid diagnostic testing (RDT) or microscopy. Unfortunately, only around 27% of malaria cases are not confirmed by RDTs or microscopy. SIAPS recommends that all clinical malaria cases to be confirmed with RDT or Dry Spot testing before administering malaria treatment, thus enhancing the rational use of antimalarial commodities. Only 30.5% (371/1,216) of health workers are trained on the updated NMCP guidelines.

Partner Contributions

NMCP DRA, PNAM IHP, PMI-Exp (Postpartum Support International and Caritas)

Objective 4. Financing Strategies and Mechanisms Strengthened to Improve Access to Medicines

Health financing remains weak in DRC because of insufficient budget allocation by the government, so health services depend heavily on global partners support. The big challenge is that after the close-out of these donor-funded projects, health facilities experience stock-outs of pharmaceuticals due to unavailability of funds to purchase medicines and related supplies. To address this critical issue, the MOH recommended that medicines donated by partners should be dispensed at a user fee representing only 30% of medicines Ex-work value. The 30% should be recovered at health facility level and constitute medicines' capital for respective health facilities in case of delay in supply and partners' projects close-out. During the previous quarter, SIAPS provided support to provinces to assess the level of funds generated so far, and it was revealed that health facilities under USAID-IHP managed to recover a total of USD 333,560 representing 20% of the expected amount. During this reporting quarter, SIAPS assisted the health department in Sankuru province to assess the level fund recovery rate. The analysis revealed that health zones presented various recovery rate varying between 67% (best fund recovery rate) and 21% (worst fund recovery rate) averaging a fund recovery rate of 37%.

For the coming quarters, SIAPS plans to assist health zones to share their experience so that the health zones that are doing well with higher fund recovery rate can be the role model for others.

Objective 5. Pharmaceutical Services to Achieve Desired Health Outcomes Improved

During this reporting quarter, contracts for warehouses in Kamina and Kolwezi have been terminated due to poor management and storage conditions of medicines. USAID-funded medicines have been moved to other medicines depots to ensure good management and storage conditions. Furthermore, SIAPS is providing technical support to the warehouse CAMEKIS, in Kisangani in Province Orientale, to develop a one-year improvement plan for the period from July 2015 to July 2016. CAMEKIS has been facing many challenges with regard to its financing, operations, and storage spaces, and staff shortages and lack of managerial expertise add to the warehouse's poor operations. During the next quarter, an improvement plan will be presented to all key stakeholders (MOH and development partners) for financial and technical assistance which SIAPS will continue to support.

Constraints to Progress

A mismatch between data collection tools used at health facility level and those used at health zone level has led to data captured from health facility level not being captured at health zone level.

Dominican Republic

Goal: Increase the availability of critical medicines and diagnostic materials, including the ones used for HIV/AIDS through the implementation of the different elements of the SUGEMI system; increase 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 (1392 of 1400, or 99%) reporting their data and receiving feedback on their data. This was a slight increase over the previous quarter, when 95% of facilities reported their medicines availability. SIAPS supported a decentralized estimation of needs exercise for the procurement of medicines and supplies in 2016.

Objective 1. Pharmaceutical sector governance strengthened

During this quarter, the MOH—with SIAPS technical assistance—finalized and validated the final version of the Essential Medicines List (NEML) based on comments and suggestions made by the technical team reviewing therapeutic guidelines for primary health care facilities. The NEML will be published by a Ministry Decree in July 2015.

SIAPS supported the revision and validation of the therapeutic guidelines and medicines formulary for primary health facilities. Draft versions of both documents were presented to the MOH counterparts, who will work on the final edition and publication during the next quarter.

During this quarter SIAPS supported the decentralized estimation of needs exercises for the procurement of medicines and supplies in 2016, and a national meeting for the consolidation of results at regional and national levels. For the next quarter, the final results will be presented and discussed with national authorities, and a technical report will be distributed to all interested parties.

Constraints to progress

The publication of the essential medicines list was scheduled for this quarter. The NEML, however, has to be approved by a multisectoral committee, including the private sector, which has not supported the publication of the NEML in its current version.

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

During this quarter SIAPS the Universidad Central del Este (UCE), with SIAPS support, finalized the administrative proposal for a certification course on rational use of medicines, scheduled to be implemented in the last quarter of 2015. A short-term consultant was hired to draft the educational modules. For the next quarter, SIAPS will conduct a meeting for the revision and validation of these modules.

During this quarter, SIAPS supported the training of personnel in two major hospitals in the

implementation of SUGEMI procedures, and a monitoring tool was developed to assess the implementation progress and results. For the next quarter, SIAPS will monitor the implementation progress and report the results to national counterparts.

Partner contributions

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

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

The January-March SUGEMI quarterly bulletin was disseminated to a wide audience on May 2015 by email, 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 supported the upload of a revised interface for primary data entry and consultation of pharmaceutical management indicators. For the next quarter, SIAPS will support the training of MOH personnel in the decision-making process based on these indicators. SIAPS will also develop a proposal for a logistics information system that will provide PROMESE clients with information on procurement requisition, dispatch, and inventories. SIAPS will also develop a proposal for the integration of medical materials and laboratory reagents and supplies to the SUGEMI information system.

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

SIAPS consultants collected information for the analysis of the financial gap in the procurement of medicines and supplies. For the next quarter, the results will be presented and discussed with national authorities and technicians, and a technical report summarizing the findings will be developed and distributed to national counterparts and interested parties. This report may include updated information on PROMESE's requisitions and dispatches, provided that the proposal (objective 3) is accepted and implemented in the next quarter.

Objective 5. Pharmaceutical products and services improved to achieve desired health outcomes

The training for the implementation of SUGEMI in two additional major hospitals (Hospital Maternidad La Altagracia and Hospital Moscoso Puello) was completed. For next quarter, SIAPS will monitor the implementation progress using a standardized tool, and report on the results.

SIAPS has collected information for the integration of laboratory reagents and materials into the SUGEMI information systems. The elaboration of a proposal, and validation with counterparts had to be postponed to the next quarter due to conflicting agendas of SIAPS consultants and counterparts.

SIAPS provided technical assistance for the transfer of high-cost medicines being dispensed from the MOH central offices to hospital pharmacies. From these pharmacies, medicines will be managed following SUGEMI procedures.

SIAPS supported the implementation of a baseline assessment previous to the integration of the Maternal and Child Health Program (M&CP) to SUGEMI. For the next quarter the results and a proposal for the integration will be presented to the M&CHP director. By the end of the next quarter, SIAPS will support the transference of all M&CHP products to the SUGEMI administration.

Ethiopia

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

Overall Quarter Progress

In this reporting quarter, the Tigray Regional Health Bureau (RHB) enacted Auditable Pharmaceutical Transactions and Services (APTS) regulation, which makes it the fifth region to enact an APTS regulation/directive with extensive technical and financial support from SIAPS. This achievement accounts for 62.5% of the life-of-project target. The regulations are creating a new age of pharmacy service improvement in the country.

A total of nine different trainings on APTS (4), ART (2), antimalarial drug management (AMDM) (1), and drugs and therapeutics committees (DTCs) (2) were organized during the quarter. All these trainings were attended by 285 professionals, of which 37% were females. Specifically, one TOT on APTS was facilitated for pharmacists (drawn from the RHBs, health science colleges, and nine hospitals of the Southern Nations, Nationalities, and People's Region [SNNPR]), hospital CEOs, and finance officers.

Medicine use health education is being advocated by many stakeholders for its role in empowering the public in effective and safe use of medicines. To realize this, SIAPS supported health facilities by providing a health education manual and support on using IEC materials, by preparing a comprehensive medicine use education schedule, and by demonstrating how to conduct, document, and report these sessions. In this quarter, medicine use-related education was provided at different wards to 4,907 patients in the Amhara and Tigray regions, where 24 different topics were covered, including, AMR, ART, and MNCH. MNCH medicine use education covered breastfeeding, vaccines, pregnancy, family planning (safe use of contraceptives), and safe use of iron/folic acid supplementation. Of the total number of patients that attended the education session, 57.3% were female.

In the reporting quarter, prescription indicator studies were conducted by DTCs at five hospitals in Tigray region and the result indicated reduction in the number of prescriptions that contain one or more antibiotics. Substantial results were observed at Mekelle Hospital, with a reduction in the number of those types of prescriptions from 52.35% to 27.25%, and over 95% of the prescribed medicines were from the facility-specific drug list. On average, 94.3% of prescribed medicines were actually dispensed in the hospitals. This is a good indicator of excellent drug availability in the hospitals.

One of the basic functions of a DTC is the development of policies that can promote rational medicine use (RMU). With this mandate, the DTC at Hidar 11 Hospital in East Amahra became a pioneer by developing an essential document entitled "Rational Medicine Use Policy of Hidar 11 Hospital." The policy consists of nine chapters pertaining to RMU.

In this quarter, the ART pharmacy unit in Mekelle Hospital in the Tigray region prevented 45 medication errors and is playing a key role in improving the treatment outcome of ART patients.

Of those, 9 were ART pediatric patients and 25 were female patients of reproductive age. This is good evidence that SIAPS support to ART services is contributing to a reduction in morbidity and mortality of mothers and children from HIV and AIDS.

In this quarter, Bonga, Durame, Hawassa University, and Jinka Genera Hospitals, all from SNNPR, started implementing APTS tools. This makes a total of 41 health facilities implementing APTS tools since the introduction/creation of this system (82% of life-of-project target).

The first nationwide EUV survey of antimalaria products and case management using the PMI-Washington (PMI-W) tool was conducted in this quarter. Data were collected and compiled from 44 facilities (22 hospitals/health centers, 10 health posts, and 12 storage facilities) from all regions. Based on the findings from the survey data, the summary EUV report was prepared and forwarded to SIAPS HQ for submission to PMI-W. In quarter 3, 1000 copies of the National Malaria Diagnosis and Treatment Guidelines (NMDTG) were reprinted for distribution to health facility drug information services.

In addition, the director of systems analysis and software products and the SIAPS senior MIS advisor visited Ethiopia in late January/early February 2015 to train selected staff from the Food, Medicines, and Health Care Administration and Control Authority (FMHACA) on the registration module, define processes for user feedback, and report system errors and change requests. Additionally, the team also trained industry applicants on product registration, captured key system requirements, and refined process flows in preparation for the inspection and licensing module.

Objective 1. Strengthen pharmaceutical system to ensure access to quality pharmacy services that will lead to improved health outcomes

In quarter 3, one APTS regulation was enacted by the Tigray Regional State Cabinet after thoroughly examining the content and concept of the regulation. The Cabinet approved the regulation because it is a new venture and unique for the region. The Tigray RHB printed all APTS tools and vouchers with its own budget. This is an exemplary practice for ownership and sustainability.

Similarly, the SNNPR Justice Bureau supported translation of the regional APTS regulation that was enacted in the first quarter of this fiscal year and submitted for printing. Adoption of the Addis Ababa City Administration APTS regulation is in its final stage of approval.

Partner contributions

Printing expense of the APTS regulation fully covered by the Tigray RHB.

Objective 2. Pharmacy services at facility level improved

A coordination role was played by SIAPS for the first national assessment and supportive supervision for the implementation of clinical pharmacy service at 43 public hospitals in 5

regions and 2 city administrations.

The clinical pharmacy service SOPs, which are meant to facilitate standardization of practices at various hospitals, were printed and made ready for distribution. The ART SOPs were also printed and are being distributed through the system, including health centers.

SIAPS provided technical support to various hospitals to document, aggregate, and communicate results of clinical pharmacy activities. Reports received during the quarter indicate that six hospitals in Amhara regional states were able to serve 1,307 patients of which 842 (64.4%) had a documented patient medication profile. Of 375 identified drug therapy problems, interventions were made on 371 (99%) by pharmacists; 307 (83%) interventions were fully accepted by clinicians. To strengthen the patient-centered pharmacy service, 127 ward rounds and 57 morning rounds with multidisciplinary team, 9 pharmacy-only morning rounds, and 1 pharmacy-only round were conducted.

SIAPS produced and submitted a technical report entitled "Outcomes of Journalists' Capacity-Building Intervention on the Prevention and Containment of Antimicrobial Resistance in Ethiopia, 2012-2014" and posted an AMR blog entitled "Containing AMR in Ethiopia: What Role Does Media Play?"

Antimicrobial Resistance Day was commemorated on June 16, 2015, under the theme of "AMR: A Global Health and Economic Threat!" SIAPS collaboratively presented a paper entitled "Current Status of Microbial Resistance in Ethiopia: Updates on National AMR Containment Strategy: Implementation and Challenges."

To create awareness on PV among health providers, face-to-face discussions were carried out at seven health facilities (four in Addis Ababa and three in Oromia). A total of 140 health providers participated in the discussions. During the quarter, various PV tools and documents were distributed to health facilities and RHBs, including 172 adverse drug event (ADEs) reporting forms, 100 allergy cards, 80 national PV frameworks, 140 newsletters, and 70 preventable adverse event bulletins; 81 pieces of ADE data were entered into the national database and acknowledgment provided to 75 ADE reporters.

A consultative workshop was carried out with representatives of 35 teaching private and public institutions with the objective of following up on inclusion of PV in their curriculum.

To strengthen DIS units to provide evidence-based medicines information to providers and patients, SIAPS provided computer printers and electronic accessories for two hospitals in the Amhara region and one in Oromia. Four hospitals in the Oromia region have been provided with guest chair, notice boards, and sign boards for their DIS units. All the facilities in the above mentioned regions, along with three more hospitals, had received different reference materials for their respective DISs.

In quarter 3, SIAPS supported two health facilities (Woldia and Mettu Karl Hospitals) to conduct drug use evaluations on Coartem (antimalarial drug).

National treatment guides, such as the Ethiopian Formulary 2013, are key documents that must be available to dispensers and prescribers working at health centers. In contrast to hospitals, distributing guides to each health center by SAIPS is difficult, as the number of health centers is high. The most feasible strategy is distributing these guides via the Pharmaceutical Fund and Supply Agency (PFSA), RHBs, and zonal health offices. Using this method, about 1,300 formularies and 52 STGs were distributed to various hospitals and health centers in Amhara, Afar, and Dire-Dawa regions, the majority of which went to the health centers.

Constraints to progress

- Health facilities are working to improve their service, but 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.
- Some hospitals are facing poor commitment from pharmacy professionals and weak management support for clinical pharmacy service implementation.

Partner contributions

- Staff from government partners (PFSA, RHBs) and WHO are being actively involved in each undertaking
- RHB and PFSA hubs are taking the initiative to organize and coordinate joint supportive supervision and are fully involved in finding solutions to challenges identified at the facility level.
- Health facilities, FMHACA, EPHI, and mass media agencies and outlets

Objective 3. Capacity to use information for decision making strengthened

During the reporting quarter, 200,000 patient information sheets and 20,000 patient tracking charts have been printed and distributed to ART sites through PFSA, SCMS, and PHSP.

SIAPS generates patient uptake and regimen breakdown reports on a regular basis, and this information is shared with all stakeholders and partners to guide decisions on ART program monitoring and adherence to treatment guidelines. Continued support is provided to health facilities to maintain patient medication records and submit reports on a bimonthly basis. Two rounds of patient uptake and regimen breakdown reports were produced and shared during this quarter from 680 and 380 health facilities, respectively. According to the recent patient uptake report, 339,471 patients were on ART, of which 296,433 patients were covered in the regimen breakdown report (87.3% of those covered under the patient uptake report). The progress of phasing out the D4T regimen has been continually monitored, and use of the regimen has declined dramatically during the past few months. Currently, less than 3% of pediatric patients take D4T-based regimens.

As a way of ensuring continuous patient information recording at the health facilities and generating reports for decision making, additional computers were provided to Bishoftu Hospital and external backup drives were provided to Amanuel Hospital and AHF/WWO Clinic. Computer hardware and software maintenance support were provided to 103 ART electronic

sites and on-site training was provided to 18 pharmacy professionals.

In quarter 3, EDT was initiated in private hospitals using their own computers; three hospitals in the Addis Ababa region were equipped with the necessary software and their pharmacists were provided on-the-job training.

Progress in supporting FMHACA to develop an automated regulatory information system to facilitate medicine registration continued. Based on the user acceptance testing feedback that was collected from FMHACA experts, TWG members, and management, the pre-import permit (PIP) part of the software was tested and feedback was submitted to modify the various functionalities. The PIP part of the software was tested on two different occasions, and it is almost complete in terms of functionality requirements. Development of other parts of the software is ongoing. To effectively implement the software, an organizational change management plan is required. Accordingly, the plan has been prepared and approved by the TWG, and individuals to work as a change management team have also been identified.

In this quarter, 360 copies of the PMI/AMDM malaria drugs dispensing register and monthly report summary form were printed for distribution to all PMI sites in all regions; 210 copies of the form were distributed to health facilities in Amhara, Oromia, Harari, Dire Dawa, and the SNNPR regions.

Following the orientation for all SIAPS technical staff on the PMI-W EUV survey processes, 44 facilities were selected (22 hospitals/health centers, 10 health posts, and 12 storage facilities) in all regions and the first nationwide EUV survey was conducted using the PMI-W tool. Based on the findings from the survey data, a short summary EUV report was prepared and forwarded to SIAPS HQ for submission to PMI-W.

Stock status data was collected from Continuous Results Monitoring System sites, aggregated, and reported to Oromia RHB and 17 zonal health departments to take appropriate management actions for resupply and exchange of excess stocks and near-expiring products between health facilities. As a result of this effort, the agencies facilitated the redistribution of 542 ampoules of artesunate injection and 3,870 doses of ACTs worth an estimated 75,000 birr.

Constraints to progress

- Frequent failure of old computers
- Some external backup drives are damaged and have not been fixed
- Discrepancy between data reported by phone and actual data at some health facilities
- Frequent power interruption
- Inappropriate handling and use of computers
- Shortage of trained ART pharmacists due to high staff-turnover at some health facilities
- At some health facilities, EDT is not being used in real-time dispensing; it is handled by a data clerk which defeats the intended purpose
- Medication error reports are not recorded and documented properly at some health facilities
- Medicine Registration and Licensing Directorate is a busy department and serves several clients each day

- TWG members have difficulty providing deliverables on a timely basis
- Management approval takes an unnecessarily long time

To solve the above problems, discussions were held with CEOs and heads to replace (by installing additional RAM) or upgrade old computers. On-the-job training was provided for the newly assigned dispensers, and discussions were held on the advantages of recording and updating patient information in real-time dispensing.

Partner contributions

- Health facility CEOs and dispensary staff are interested in implementing EDT for real-time dispensing
- USP/Promoting the Quality of Medicines (PQM) regulatory affairs officer serves as a member of the TWG for the registration module; participated in the TWG meetings and user acceptance training; took assignments; and produced deliverables
- Health facilities provided stock data that was used in the preparation of the April 2015 antimalarial drugs stock status report
- Oromia RHB malaria unit notified zonal health departments to use the report to facilitate redistribution of excess and near-expiry AMDs between public health facilities

Objective 4. Optimal use of financial resources ensured

During the reporting quarter, APTS implementation was started in three hospitals in SNNPR (Durame, Jinka, and Bonga Hospitals). On-site mentoring was provided to the hospital staff on implementation of the APTS package.

The Bonga Hospital APTS was inaugurated with a colorful ceremony. The hospital was able to identify drugs for ten top diseases, conduct stock status analysis, identify medicines at risk of expiry, perform ABC/VEN analysis, and conduct an audit for the first time for selected medicines.

APTS helps to achieve efficient utilization of medicines budget. Currently, it is being implemented in 41 health facilities. Since APTS is a new system, all finance and pharmacy staff in health facilities need to be trained. A TOT was provided to 41 pharmacists (from SNNPR RHB, health science colleges of SNNPR, and 9 hospitals of the region), hospital CEOs, and finance officers at Arbaminch General Hospital.

To assist the sites implementing APTS, three rounds of on-site training was provided to 95 finance and pharmacy professionals drawn from three hospitals (Durame, Bonga, and Jinka). One of the encouraging observations during the quarter was that, for two of the three hospitals that received on-site training, the hospitals covered refreshment costs, per diem for trainees, and the training halls. This is an encouraging sign of ownership and sustainability of APTS trainings.

During the quarter, technical assistance was provided to health facilities in Amhara region to monitor the medicines expiry and wastage rate. The medicines expiry rate of APTS-implementing hospitals ranged between 1.34% and 0.09%, which is far below the national target.

ABC/VEN analysis was conducted by five hospitals in Amhara and SNNPR regions (Lalibela, Bonga, Arbaminch, Durame, and Butajira Hospitals), results of the analysis were presented to DTCs, and an intervention plan was developed. One good example of a facility that conducted ABC/VEN analysis in the previous quarter and implemented the intervention plan was Mehal Meda Hospital in Eastern Amhara region. The hospital implemented APTS and saved resources that covered health centers in its networks. The hospital does this through hospital-health center cluster support. In April 2015 alone, the hospital received medicines worth 14995.6 Birr from three health centers and one Woreda health office. The number of items transferred to Mehal Meda hospital was 15. The list contains vital lifesaving maternity medicines such as magnesium sulfate. The other vital medicines on the list are iron with folic acid, TAT 1500 IU, ORS, glucose 40%, sodium chloride 0.9%, and diazepam 5 mg/mL.

Constraints to progress

Reporting time is not maintained because of Internet connection problems and weak commitment from some pharmacy professionals as well as pharmacy accountants. Some hospitals did not include the store report.

Partner contributions

- SNNP RHB facilitated and covered the APTS TOT at Arbaminch
- Arbaminch General Hospital provided training hall (for APTS TOT training) free of charge
- Durame and Jinka Hospitals shared onsite APTS training costs (provided training hall, covered refreshment costs and per diem for trainees)

Guinea

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

During this quarter, SIAPS Guinea worked with the Ministry of Health (MoH) and its partners to improve access to quality pharmaceuticals and services. Key achievements have improved pharmaceutical sector governance, availability of information for decision making on pharmaceutical management, and the availability of antimalarial products countrywide.

To improve the pharmaceutical sector governance, SIAPS provided technical assistance to the Direction Nationale de la Pharmacie et des Laboratoires (DNPL) to develop a draft of the Pharmacy Act and a job description for the position of regional pharmacist inspector. SIAPS also supported the Central Medical Stores (Pharmacie Centrale de Guinee, PCG) in the development of their annual operational plan.

In collaboration with other partners, SIAPS assisted the Monitoring and Evaluation Unit of the Programme Nationale de Lutte contre le Paludisme (PNLP) in the development and validation of its standard operational procedures (SOPs). It also provided support in the development and dissemination of findings from the supervision visits that PNLP and partners have recently conducted in the country's regions.

In an effort to improve capacity of institutions and individuals in pharmaceutical management, SIAPS supported PNLP in developing a scope of work along with a collection tool for a prospective collection of artemisinin-based combination therapies (ACTs) and rapid diagnostic tests (RDTs). Trainings sessions on use of the developed collection tool were subsequently organized in regions with SIAPS support. At the request of PMI, the purpose of this intervention was to define actual commodities stock status countrywide and to subsequently reallocate products where stock-outs have been identified as a result of the Ebola outbreak, which discontinued the use of RDTs and conducted to an erratic use of ACTs.

To improve availability of pharmaceutical management information for decision-making, SIAPS worked with PNLP to prepare and organize quarterly review meetings on management of malaria commodities in Labe and Kindia regions. Given that the Ebola outbreak has affected the reporting system—and, therefore, data quality—these meetings constituted an opportunity for the national health authorities to hear from health facilities and health districts about concerns and issues that have compromised the reporting system in the context of the Ebola outbreak.

In addition, SIAPS and other partners participated to a meeting that the MoH has convened to revive the national Health Management Information System (HMIS) and develop its related strategic plan.

Lastly, SIAPS provided support to PCG to receive and store a consignment of 607,830 doses of artemether-lumefantrine tablets (AL) and 11,520 artemether injections that have been procured with PMI funds. This will improve availability of malaria commodities, particularly with a planned withdrawal of artesunate-amodiaquine tablets (ASAQ) and their incoming replacement

by AL tablets in all health districts where the Seasonal Malaria Chemoprevention Project (SMC-Access) will be distributing sulfadoxine-pyrimethamine (SP). Given the high risks associated with concomitant use of ASAQ and SP that is prescribed for the intermittent preventive treatment of malaria during pregnancy, this intervention will help improve service for patients.

Objective 1. Pharmaceutical sector strengthened

During this quarter, SIAPS supported the DNPL in organizing a three-day workshop in Kindia to develop a draft of Law on Pharmaceutical legislation and regulation in Guinea. After this workshop, DNPL established an ad hoc committee and identify its members for the finalization of the Pharmacy Law draft.

Efforts and resources were leveraged with the WHO and Catholic Relief Service (CRS) to support DNPL in developing a job description for the position of regional pharmacist inspector (RPI). It is expected that RPI will play a key role in improving the implementation of pharmaceutical regulatory activities in regions and health districts. SIAPS also provided technical assistance in the development and presentation of the PCG annual operational plan.

On April 14-16, 2015, SIAPS attended the restitution meeting that PNLP has organized on findings from the recent integrated supervision. PNLP subsequently requested SIAPS assistance in refining a regional reporting template. The template is designed to capture key supervision facts and findings, enabling a final report to be issued based on individual regional reports.

Finally, in collaboration with other partners, SIAPS participated to a validation of SOPs that a consultant has developed for the M&E Unit of the PNLP. The validation workshop was organized by PNLP at Donka Hospital on May 13-14, 2015.

Constraints to progress:

During this quarter, the Ebola outbreak was still a major constraint that kept attention and efforts of the MoH staff, making it difficult for MoH partners to plan and conduct other activities.

Partner contributions:

SIAPS has leveraged efforts with some key partners (WHO, CRS, and SOLTHIS) to support pharmaceutical governance-related activities, and with CRS and Stop Palu for assistance with PNLP. WHO and CRS contributed to PCG activities.

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

The Ebola outbreak has negatively impacted consumption of ACTs and discontinued the use of RDTs in Guinea; as a result, both overstocks and stock-outs of malaria commodities have been reported. To address this problem, PMI requested that SIAPS work with PNLP to learn the stock status of ACTs and RDTs in health facilities countrywide, with the aim of reallocating overstock to places in need of commodities. SIAPS helped develop a scope of work for this activity, along

with a collection tool needed to record commodities stock status, and participated in training sessions for data collectors in Labe on June 9, 2015. This intervention is expected to be continued in next quarter for Conakry and Kindia region.

Partner contributions:

CRS, the MSH/LMG Project and Stop Palu contributed toward this objective during this quarter.

Constraints to progress:

The lack of coordination among health system players in Guinea was a big challenge. There were multi-country mass immunization campaigns that Guinea participated to, therefore delaying all other activities that have been planned during the same period.

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

SIAPS and the PNLP continued organizing regional quarterly review meetings on pharmaceutical management of malaria commodities. Because of Ebola-related trouble in Boke, review meetings were organized only in Labe and Kindia regions. These meetings constituted an opportunity for PNLP authorities to learn how Ebola outbreak had negatively affected the reporting system on commodities availability and treated patients. At this hand, a feedback form template was developed and sent to health districts prior the review meetings to facilitate their presentations during the review meeting.

On June 15, 2015, SIAPS also attended a meeting that the MoH and partners have organized to find ways to rebuild the national Health Management Information System (HMIS) and develop its related strategic plan.

Constraints to progress:

Activities related to the availability of information on pharmaceutical management for decision-making were limited by a continuing Ebola outbreak in Guinea.

Objective 4. Strengthened financing strategies and mechanisms to improve access to medicines

The Seasonal Malaria Chemoprevention Project (SMC-Acces) will be distributing SP in Guinea. Given the high risks associated with concomitant use of artesunate-amodiaquine (ASAQ) tablets and SP prescribed for the intermittent preventive treatment of malaria during pregnancy, the country has decided to withdraw ASAQ from some health districts while replacing equivalent treatments of artemether-lumefantrine (AL) tablets.

During this quarter, SIAPS provided support to PCG to receive and store a consignment of 607,830 treatments of AL tablets and 11,520 artemether injections that have been procured with PMI funds. This will improve availability of malaria commodities, particularly with a planned

withdrawal of (ASAQ).

Constraints to progress:

The Ebola outbreak had a significant impact on health service delivery in Guinea.

Haiti

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

Objective 1: Haiti Pharmaceutical Sector Governance Strengthened

In Q3, SIAPS continued providing technical assistance to Haiti's Ministry of Public Health and Population (MSPP) by finalizing cost and operational analyses of a proposed public sector integrated pharmaceutical products supply chain. These analyses will be used to help the ministry make decisions about the integrated supply chain's design and operationalization. The draft report was submitted to MSPP and its partners for comment in May 2015. A stakeholder workshop is being planned for Q4. This workshop is expected to allow MSPP, along with its partners, to endorse the designed integrated supply system and develop a strategic plan for its implementation.

Additionally, the new national pharmaceutical policy developed with, among others, the technical assistance of SIAPS was printed in Q3 and will be officially launched in Q4 by the Minister of Health. This is the first of its kind in Haiti. A series of provincial sensitization workshops to promote the implementation of this policy are being planned for Q4.

Lesotho

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

In this quarter, SIAPS continued to work with the Ministry of Health (MoH) to deliver in supply chain management of both laboratory and pharmaceutical commodities using Supply Chain Management Leadership Development Program (SCMLDP) approach, bringing the number of health districts to 10. SIAPS has developed a plan to deliver the SCMLDP workshops by the next quarter. The SCMLDP seamlessly combines the application of leadership and management practices in the supply chain management activities at all levels of the health system in the country. This program aims to ensure increased availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes. Furthermore, SIAPS worked with the National University of Lesotho (NUL) to commence the development of a simulation laboratory for RxSolution and other MSH tools. It is anticipated that the MoH Supply Chain Coordinating Unit (SCCU) will work with the NUL to provide both pre-service and in-service training at this facility.

In this quarter, SIAPS continued to provide technical assistance to strengthen laboratory services. All laboratories supported by SIAPS submitted the laboratory Logistics Management Information System (LMIS) reports on time. Only 11%—two facilities of 18—experienced stock-outs of HIV rapid test kits (RTKs).

The District Logistics Officers (DLOs) provided support to all the ten districts and managed to conduct supportive supervision and mentoring (SSM). In Maseru, Botha Bothe, Mokhotlong, and Mafeteng, this SSM was incorporated into the SCMLDP. Therefore in this quarter 150 health care workers were mentored in supply chain management activities.

These SSM visits contributed remarkably in program results. The health facilities that experienced stock-out of commodities accounts for 11% while there are 38% of the health facilities have antiretrovirals (ARVs) stocked according to the plan (that is within the designed minimum and maximum quantities/months of stock). Data also shows that more than 95% of health facilities use the appropriate tools to report patient and logistics data.

Objective 1. Capacity for pharmaceutical supply management and services increased and enhanced

In this reporting period, SIAPS conducted in-service training workshops in the Maseru and Mokhotlong districts. SIAPS trained a total of 26 health care workers (8 males and 18 females) in supply chain management of both laboratory and pharmaceutical commodities using the SCMLDP approach to improve their capacity in inventory and logistics management systems to ensure the availability of health commodities. The quarterly target for the number of staff to be trained was 25. In this quarter, SIAPS provided technical assistance to Supply Chain Coordinating Unit (SCCU) to develop the rollout plan of SCMLDP to the rest of the districts.

To address bottlenecks in the supply chain system in Lesotho, the SCMLDP seamlessly

combines the leadership and supply chain management of pharmaceutical and laboratory commodities alike in order to improve the healthcare workers' competencies in conducting logistics functions, such as how to quantify and procure needed medicines and supplies, receive and store commodities, and track inventory. The participants form clusters made of two to four facilities that work together to complete the action plans that they developed during the workshops. The data indicate that for 61% of the 80 trainees who have successfully completed their post-training action plans did so during this reporting period.

SIAPS will continue to work with District Health Management Teams (DHMTs) in areas where the program has already been implemented to support the peer-peer mentoring and progress review meetings among the trainees and their health facilities in the implementation of the agreed facility Supply Chain Management (SCM) performance indicators. This support is a vital part of the improvement process to assure the trainees successfully implement the action plans during the training workshops. Additionally, SIAPS provided RxSolution training to two National University of Lesotho (NUL) pharmaceutical department staff (one male and one female). This training is a part of pharmaceutical management training for increasing institutional capacity by introducing an electronic pharmacy management system that will be used to simulate and introduce students to the latest technologies that will be used at the facilities once they join the workforce.

Furthermore, SIAPS participated in SCM Technical Working Group (TWG) meeting to review the SCM TWG Terms of Reference for and National Drug Service Organization (NDSO) stock status report.

Constraints to progress:

The Drug Supply Management (DSM) needs to be an integral part of the SCMLDP, but the challenge is that it has not yet been adopted by the MoH. Therefore, SIAPS is working with SCCU to have DSM adopted by the next quarter.

Partner contributions:

The Global Fund Coordinating Unit (GFCU) provided financial assistance to the MoH while SIAPS provided technical assistance to facilitate the SCMLDP workshops.

Objective 2. Utilization of information for pharmaceutical and laboratory decision making increased across all levels of the Lesotho health system

In this quarter, SIAPS oriented the SCCU laboratory supply coordinator on how to conduct SSM using the LMIS supervisory checklist. SIAPS implemented this activity to capacitate the new SCCU staff members on conducting SSM so as to ensure sustainability of SCM activities beyond SIAPS support. This activity was also done to support strengthening of laboratory LMIS thereby ensuring continuous availability of RTKs and other ART-related laboratory commodities. All laboratories (18 out of 18) supported by SIAPS submitted the laboratory LMIS reports on time. However, 11% (2 of 18) laboratories that experienced stock-out of RTKs.

SIAPS also worked with the SCCU laboratory Supply Coordinator to develop a laboratory reporting tracking tool. This tool will be used to track the requisitions from when they are sent by facilities. Essentially, it will track lead time, the time requisitions spend at central level, the time requisitions spend at the National Drug Service Organization (NDSO) before they can be served, and, ultimately, the time it takes commodities to reach the facilities. The information generated by this tool will be used to determine the overall lead time, which can be used to inform quantification and procurement processes.

Constraints to progress:

Laboratory staff are frequently reassigned to other health facilities, which leads to non-reporting, and subsequent stock-outs of RTKs in Quthing and Qacha's Nek. SIAPS engaged both SCCU and laboratory directorate to urgently address the issue, and the director of laboratory services is now sending permanents staff to these places.

During the SSM visits to Quthing, SIAPS and SCCU established that the district was out of stock for Determine HIV RTKs, while the laboratory head was also absent when the orders for the HIV RTKs was supposed to be made. SIAPS and SCCU requested that the NDSO provide the facility with HIV RTKs while the issue was taken to laboratory management. The District Logistics Officer (DLO) for Quthing was advised to provide support to the laboratory head to ensure that the district never experiences undue stock outs of HIV RTKs.

Partner contributions:

SIAPS collaborated with the MoH to develop the laboratory requisition tracking form.

Objective 3. Pharmaceutical services improved to achieve desired health outcomes

SIAPS continued to provide technical assistance to the MoH to improve the national availability of ARVs, HIV RTKs, and other HIV-related commodities through conducting the monthly stock status meetings facilitated by the MoH. In these meetings, the monthly stock status reports are analyzed and informed logistic decision making is executed so as to ensure continuous availability of the tracer commodities (ARVs, HIV Rapid Test Kits and other ART related commodities).

In this quarter, SIAPS conducted 77 supportive supervision and mentoring visits to health facilities in all 10 districts of Lesotho. Additionally, 150 health care workers (123 females and 27 males) were mentored in inventory management and pharmaceutical management information systems using both the cluster system and health facility visit approaches. The participants formed clusters made of two to four facilities that work together to complete the action plans developed during the workshops.

The overall SIAPS support to these districts has shown the following results:

• 93% of health facilities keep complete patient information as per national standards (target is

90%)

• 98% of health facilities are using country-appropriate tools for reporting logistic and patient data by districts (target is 90%).
• ARVs are stocked according to plan—that is, within the two months minimum and three months maximum stock levels— has reached 38% of SIAPS-supported sites (target is 39%).
•11% of health facilities (19 out of 71) experienced stock-out of ARVs for more than three days (target is less than 10%).

Partner contributions:

SIAPS collaborated with the NDSO to compile the monthly stock status reports. SIAPS also collaborated with Clinton Health Access Initiative (CHAI) and GFCU to conduct stock status meetings.

Mali

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

Overall Quarter Progress

To improve pharmaceutical governance, SIAPS supported the Direction de la Pharmacie et du Medicament (DPM) to organize two meetings to update malaria and FP commodities supply plans (June 22-26, 2015). The MOH, USAID and its implementing partners, UN agencies and civil society organizations (CSOs), attended these two meetings. The number of CSOs that participated in pharmaceutical management decision making increased from 17 to 19 during this quarter. Additionally, SIAPS supported the National Malaria Control Program in Mali (NMCP) to develop two distributions plans of malaria key commodities. Since then, the number of distribution plan developed with SIAPS support increased from 12 in quarter 2 to 14 in quarter 3.

To help make the Pharmacie Populaire du Mali (PPM) a transparent and accountable organization, SIAPS and IHS supported development of four SOPs for pharmaceutical management in reception, storage, picking, and packing and shipping. The next step will be a training of staff on how to implement and measure SOP adherence for each department.

To build capacity in pharmaceutical management, SIAPS supported 18 local institutions to provide training. Specifically, SIAPS supported the DPM to design and organize four comprehensive three-day workshops to train MOH staff and others stakeholders on the use of OSP-SANTE (Outil de Suivi des Produits de la Santé), a web system for management and tracking of antimalarial and FP commodities. During these workshops, 139 participants (37 female and 102 male) were trained on data entry and other related transactions. As result, the total number of professionals trained in pharmaceutical management countrywide increased from 836 to 975 (235 female and 740 male). The next step is to expand this training to 11 additional health districts in 6 regions. To improve adherence to the LMIS SOPs, SIAPS and MOH conducted coaching and mentoring activities in health facilities in Bandiagara and Tominian health districts, and were still underway in the six districts of Bamako. The percentage of staff that successfully completed their post-training action plan increased from 36% to 46%.

SIAPS and the William Davidson Institute (WDI) conducted a qualitative assessment and strategic review of the technical assistance that SIAPS is providing to Mali. The purpose of this analysis was to establish key results and impact from significant interventions in supply chain management.

SIAPS also supported the MOH to develop and submit to USAID/Washington one PPRMm and one PPMRc. In addition, support was provided to MOH to organize workshops to validate LMIS data and to disseminate findings and recommendations from the last EUV survey in six regions. LMIS data showed that the overall reporting rate of health facilities increased from 53% to 67%.

Another significant intervention was the implementation of the web based system/dashboard that captures, tracks, aggregates, and makes information on malaria and FP commodities accessible

for MOH and its stakeholders for better and faster decision making.

Objective 1. Pharmaceutical sector governance strengthened

To improve pharmaceutical governance, SIAPS supported the DPM to organize two meetings of the Malaria and Family Planning TWGs. These meetings, chaired by DPM, took place June 22-26, 2015, to update malaria and family planning supply plans based on medicines consumption and inventory replenishment data. They addressed challenges of integrating data from management of FP commodities from the Social Marketing Project, a new USAID implementing partner. Key recommendations from the meetings were the following:

- Inform NGOs so they can make information and data available a week before the workshop
- Make an emergency order for the public sector for 400,000 vials of Depo-Provera injection for October 2015, and 35,459 cycles of oral contraceptive Microlut for December 2015
- Organize a meeting to present the procurement plan to the Technical Coordination Committee
- Share the shipments summary with stakeholders and request a confirmation for procured quantities from Population Service International (PSI)/Global Fund
- Send the procurement plan to the Central Medical Stores (PPM)

Constraints to progress

- Insufficient involvement of stakeholders during the update of supply plans
- Lack of partners' commitment to adhere to the national supply plan for malaria and FP commodities

Partner contributions

- Malaria TWG, FP TWG, DPM, PPM, NMCP, National Health Directorate (Direction Nationale de la Santé/Division Santé de la Reproduction), National AIDS Control Program (Cellule Sectorielle de Lutte contre le SIDA/Ministère de la Santé et de l'Hygiène Publique).
- Donors: USAID, Global Fund/PSI, UNFPA
- CSOs: Projet Village du millénaire, Fédération Régionale des Associations de Santé Communautaire, PSI, Association de Soutien au Développement des Activités de Population, Projet de développement décentralisé, Marie Stop International, ESTHER AID, Futurs Group, USAID ASSIT.

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

During this quarter, SIAPS supported 18 local organizations to build their capacity to provide training and conduct technical assistance in pharmaceutical management. Hence, 23 technical assistance and trainings were conducted with DPM, PPM, NMCP, DRS, and health districts.

Additionally, SIAPS supported the DPM to design and organize four comprehensive three-day workshops to train MOH staff and stakeholders on OSPSANTE. Participants to these workshops came from the central, regional, and health-district levels including medicine warehouse managers, national and regional hospital pharmacies managers, and health information management system (HIMS) managers.

SIAPS worked with MOH to conduct coaching and mentoring sessions in health districts of Tominian (Segou Region) and Bandiagara (Mopti Region) for professionals who have been previously trained in pharmaceutical management. As a result, the percentage of trainees who successfully completed their post-training action plan increased from 36% to 46%. Similar activities were initiated and are still ongoing in additional health districts including Bafoulabe (Kayes Region), Bougouni (Sikasso Region), Baraouli (Segou Region), and Djenne (Mopti Region).

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)
- Hôpital du Point G, Hôpital Gabriel Toure, Hôpital du Mali, Hôpital de Kati, Hôpitaux de Kayes, Sikasso, Segou et Mopti
- PPM, DPM, PNLP, USAID, Measure Evaluation, Catholic Relief Service
- USAID, PSI, Unité de Gestion du Projet/Programmes des Nations Unies pour le Développement (UGP/PNUD), UNFPA, Global Fund

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

During this quarter SIAPS supported the MOH to develop and submit one PPMRm and one PPMRc to USAID/Washington and to organize dissemination meetings for the last EUV survey results in five regions and Bamako. Furthermore, six quarterly coordination meetings were organized in Kayes, Koulikoro, Sikasso, Segou, Mopti, and Bamako to discuss and validate LMIS data that showed an increase of reporting rate from 53% to 67%.

To facilitate timely data aggregation for decision making, SIAPS provided support to MOH for the implementation of the OSP-SANTE, a web-based dashboard that captures, aggregates, tracks and makes information available and accessible for malaria and FP commodities. SIAPS conducted a user acceptance test and oriented warehouse managers and HMIS managers on data entry and other transactions. Trained professionals came from 50 health districts including six regional, national, and regional hospital pharmacies. Afterward, they could start entering monthly data for the period January 2014 to March 2015.

Constraints to progress

- Lack of partner's commitment to adhere to the national supply plan for malaria and FP commodities
- Proper management of the new system at all levels to make a relevant decision

Partner contributions

- PPM, PSI, DPM, DSR, USAID, and UNFPA attended meetings on analysis and validation of collected pharmaceutical management data
- DRS, PPM regional warehouses, and health districts of Kayes, Koulikoro, Sikasso, Segou, Mopti regions and Bamako participated in quarterly review meetings

Mozambique

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

SIAPS has continued to work towards achieving results to ensure access to pharmaceuticals and services through strengthening the capacity of the Pharmaceutical Department (PD) and the Drug and Therapeutics Committees (DTCs). During this quarter, SIAPS provided technical support for the implementation of the electronic medicines registration system (PharmaDex), by assessing the IT needs of the PD.

The process of procuring IT equipment and selecting a company to perform the assessment of IT infrastructure in the PD was initiated, and the SIAPS country team reviewed and finalized the draft of policies and procedures for use of the National Essential Medicines List (NEML). The draft NEML, as well as the draft policy and procedures for use of the NEML, were presented to the chair of the NEML Committee president.

SIAPS also supported the hospital pharmacy department (HPD) in building the pharmaceutical management capacity of staff at hospital pharmacies to ensure the achievement of the recommendations laid out in the Second National Drug Therapeutic Committee Seminar. SIAPS provided support to the HPD staff to prepare training for the Hospital Drug and Therapeutic Committees (CHTF/DTC) to improve the identification and monitoring of medication errors, develop interventions to monitor the compliance with best practices for the acquisition, storage, distribution and dispensing of medicines.

The standard operating procedures (SOPs) to evaluate medicines use was developed in consultations with the HPD. HPD staff was trained to train the hospital staff on the use of the SOPs.

While SIAPS registered significant progress in this period, SIAPS was requested by the head of the PD to stop all SIAPS activities and later reactivated, which delayed the implementation of Pharmadex and pharmacovigilance (PV) activities. However on May 29, SIAPS had a meeting with the Head of PV and they requested additional SIAPS support.

There was a change in the leadership of the PD and HPD in the MOH. Tania Sitoie was appointed as head of the PD, while Dr. Felicidade was appointed as the head HPD.

Objective 1. Governance in the pharmaceutical sector strengthened

Coordination with the home office IT team to prepare the implementation of Pharmadex in the PD registration division is underway. The process of procuring IT equipment and choosing a company to do the assessment of the IT system in PD was underway. This will help assess the readiness to install Pharmadex and address any gaps in terms of equipment or infrastructure that will need to be addressed before Pharmadex can be made operational.

PD will ask for support with Pharmadex implementation, as Dr. Felicidade states that an

agreement is needed to continue collaboration with SIAPS. As recommended by the local mission SIAPS will prepare a matrix including all Pharmadex activities and STTAs that can be signed by Dr. Felicidade.

SIAPS continued working towards the access of basic medicines, collaborating with PD and the NEML consultants to finalize the NEML for Mozambique. During this period, SIAPS entered the recommendations from health specialists working groups from the EML Workshop, and updated the fields in the NEML matrix with work group comments and observations. The final list, as well as the draft of policies and procedures for use of the NEML, was presented to the chair of the NEML committee for final review and approval by the Minister of Health.

Constraints to progress:

• Entering the workshop recommendations in the NEML Excel Matrix took more time than expected due to the fact that the different work groups entered the information in the soft format tool differently. There was no specific training on working in and editing the Excel document. The CMAM staff was unable to introduce prices and consumption in the NEML Matrix, as had been requested by the chair of the NEML Committee.
• The head of the PD put Pharmadex and M&E activities on hold pending a memorandum of agreement between SIAPS and PD, which had never been required before.

Partner contributions:

• PD supported the entry of the workshop recommendations in the NEML Excel Matrix
• Central Medical Stores (CMAM) provided a list of prices and consumption for medicines that are in the NEML Excel Matrix.

Objective 2. Capacity in pharmaceutical management increased and enhanced

SIAPS worked with HPD staff to prepare a training for the Hospital Drug and Therapeutic Committees (CHTF/DTC) to improve the identification and monitoring of medication errors—a need identified at the Second National DTC Seminar. Standard operating procedures for evaluating medicine use were developed in consultation with the HPD, and three HPD staff were trained to train the hospital staff on the SOPs.

Subsequently a four-day training workshop for four DTC members and 1 member of the HPD staff was conducted at Maputo Provincial Hospital (MPH) in Matola City from April 27th to 30th. The participants also tested the SOPs during the training.

After the training SIAPS supported the HPD to revise the SOPs for evaluation of medicines use in health facilities (HFs). These SOPs were developed and tested in April, then revised in May to include the inputs from the test in the Maputo Provincial Hospital.

Partner contributions:

HPD participated on the design of materials.

Objective 3. Pharmaceutical services to achieve desired health outcomes improved

The method to monitor availability of essential medicines at HPD was not included in the first draft of SOPs, therefore SIAPs, supported HPD to introduce the SOPs and introduce on the Drug use evaluation SOPs package.

Support to the PV was delayed due to a sudden request by the PD for an agreement between SIAPS and the PD. However, on May 29, SIAPS had a meeting with the Head of PV, who requested SIAPS support on:

1. Technical and logistic support to organize a national PV workshop in Beira Province in August 2015;
2. Technical support for the revision of the PV system;
3. Technical support in collaboration with the TB program to introduce a pilot strategy to improve ADR reporting. The strategy is based on the use of a pharmacotherapy sheet to monitor medicine-related problems, including ADRs.

Constraints to progress:

SIAPS still waiting for a formal request from PD to start arrangements for the PV workshop.

Partner contributions:

HPD provided information for the development of the SOPs.

Namibia

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

Overall Quarter Progress

SIAPS provided technical assistance (TA) to the Namibia Medicines Regulatory Council (NMRC) to identify medicines in the Namibia Essential Medicines List (Nemlist) that were not registered. This information will be used to prioritize and expedite the registration of ARVs and other essential medicines in Namibia.

SIAPS provided TA to NMRC to compile laboratory test results of post-market surveillance medicines samples collected from the public sector in 2014. Out of the 144 samples tested, 21 (14.6%) did not conform to the pharmaceutical quality compendia standards, and one of the failed samples was not registered in the country. NMRC is investigating further and will implement preventive actions.

As of June 2015, the first group of 14 pharmacists graduated from Namibia's first School of Pharmacy (SOP) at the University of Namibia (UNAM), while 26 pharmacists assistants (PAs) graduated from the Ministry of Health and Social Services' (MOHSS) National Health Training Center (NHTC). Supported by SIAPS, with the US President's Emergency Plan for AIDS Relief (PEPFAR) funding, these new graduates nearly double the number of highly trained health care workers for Namibia, and reduce the current staff vacancy rate.

SIAPS provided IT support to MOHSS's Division: Pharmaceutical Services (Div:PhSs) for the electronic dispensing tool (EDT), EDT mobile, e-TB Manager, and Rx Solution. The support enabled the 50 main ART sites and the 13 DR-TB treatment sites in Namibia to continue using electronic systems for drug stock and patient data capture.

To integrate the EDT and EDT mobile with the electronic patient management system (ePMS), SIAPS supported the MOHSS to monitor the percentage of patients with ePMS unique numbers on the EDT/national database (NDB). The completeness of ePMS unique number on the NDB for new patients started on ART improved from 79% in Dec 2014 to 82% in Mar 2015.

SIAPS supported the MOHSS to compile and disseminate ART-PMIS reports for October to December 2014 and January to March 2015 and also handed over the data analysis tools to the ARTS logistics pharmacist whom SIAPS mentored. The ART-PMIS report provides information for ARV stock and ART patient management and early warning indicators (EWIs) of HIV drug resistance. The ARV pill pick-up increased from 59% in October–December 2014 to 83% at the end of March 2015. The percentage of patients achieving 75% adherence rate stayed strong—increasing from 79% to 80% and the percentage of patients on treatment 12 months after initiating ART remained at 95%.

SIAPS completed a pilot test of the short message service (SMS) system for ART adherence. SIAPS, together with the University of Washington, provided technical guidance to the

Therapeutics Information and Pharmacovigilance Centre (TIPC) to conduct a pharmacoeconomics analysis of potential costs, and cost-effectiveness of a national active surveillance program compared to the existing spontaneous adverse drug event (ADR) reporting system. MOHSS is reviewing the report which will inform Namibia's pharmacovigilance strategies.

Objective 1. Pharmaceutical Regulatory System Strengthened for Better ART Services

SIAPS provided TA to the NMRC to analyze the NMRC medicines register and Nemlist to identify the Nemlist items that are not registered and listed on the NMRC register. The information will be relevant in prioritizing the registration of Nemlist items at NMRC.

The annual analysis of NMRC medicines register showed that 65.7% of the 668 items listed on the Nemlist have registered products, an improvement from the 60.9% in 2014. Namibia maintains an up-to-date regulatory medicines register (for human medicines) which is publicly available.

With SIAPS TA, the NMRC redesigned website was uploaded and made available to the NMRC staff for testing. The tool will ensure timely dissemination of medicine regulation information to NMRC clients and achieve greater efficiency of medicines registration, including new antiretroviral formulations.

SIAPS provided TA to NMRC to compile the laboratory test results for the medicine samples collected for post-market surveillance (PMS) in October–November 2014. Out of the 144 samples tested, 21 (14.6%) samples did not conform to the quality compendia standards, and measures are being taken by NMRC to seek explanations and preventive actions from the manufacturers. Based on the findings from the 2014 PMS activity, a protocol for 2015 post-market surveillance –medicine quality monitoring was drafted; the 2015 PMS will consider medicines at public health facilities in four of Namibia's 14 northern regions, and sample categories will include new fixed-dose combination ARVs, co-trimoxazole oral suspensions, diazepam tablets, multi-vitamin tablets, and phenobarbitone tablets.

Partner Contributions

NMRC provided updated data for comparison of medicines register and Nemlist list items without registered products

Constraints to Progress

Some of the medicine names on the Nemlist and NMRC register do not correspond because of the varying naming conventions. SIAPS will continue to work with the NMRC to conduct a detailed analysis of the available data and improve data capture for future analysis and decision making. SIAPS will also advocate for the use of a common medicines nomenclature.

Objective 2: Capacity of Pharmaceutical HR and Local Institutions in Managing the Pharmaceutical System and Supply Chain in Delivery of Sustainable ART and Other Pharmaceutical Services Strengthened

SIAPS held a meeting with the MOHSS's NHTC to discuss possible collaboration with the National Training Authority (NTA) of Namibia, enabling the NHTC to have access to technical support for assuring the quality of training. SIAPS continues to play a role in identifying strategic partnerships for the NHTC to ensure that the training program and the graduates are of good quality and that the center continues to receive support from Namibian institutions after SIAPS ends. The meeting also discussed developing a documentary of stakeholders views about SIAPS support to the NHTC—a USAID-required documentation.

SIAPS supported the NHTC to process data from the PA graduate tracer study. The findings and recommendations will be reviewed and disseminated among stakeholders in July 2015. The study shall inform the revision of the PA curriculum and interventions for enhancing their quality of training at NHTC.

SIAPS assisted the UNAM-SOP by initiating the development of teaching materials for pharmaceutical regulatory affairs pre-service and in-service training to be offered by the institution.

The inaugural group of 14 locally trained pharmacists graduated from Namibia's first School of Pharmacy at UNAM in April 2015, and 26 PAs graduated from the NHTC in May 2015. The 40 new graduates increased the number of new health care workers who graduated from a pre-service training institution from 74 in FY 2014 to 114 in FY 2015, meeting the 114 targeted for FY 2015. To assure the high quality of pre-service training for both programs, SIAPS, provided TA in strengthening the quality management capacity of the two local institutions and tutors. As of June 2015, 35 (97%) of the 36 public health facilities visited during annual pharmaceutical supportive supervision visits (SSV) had a qualified PA providing ART and other pharmaceutical services. The 97% is an improvement from the 80% level of 2014. More competent pharmacy personnel are needed to provide ART services in Namibia and contribute to the control of the HIV/AIDS epidemic.

SIAPS oriented 40 pharmacy students at the UNAM-SOP on how to apply the rational use of medicines indicator-based methodology to assess the quality of dispensing practices of health care providers, the level of patients' knowledge of their medicines, and level of patient satisfaction with dispensing services at public sector pharmacies. The students applied this methodology during their attachment to rural public health pharmacies in June–July 2015 and compiled a manuscript titled "Compliance to good dispensing practices: an evaluation of public health facilities in rural Namibia." Clearance is being sought from the MOHSS to disseminate the findings and recommendations in relevant journals.

Partner Contributions

- The NHTC, on training of pharmacist's assistants and graduation, data processing of the PA tracer study.

- The UNAM-SOP, on graduation of pharmacists, orienting students for medicine use-related assessments during rural facility assessments, and development of the pharmaceutical regulatory affairs module and teaching materials.

Constraints to Progress

The NHTC and NTA meeting is yet to take place as both parties were unavailable in Q3. SIAPS will work with the MoHSS Directorate Policy and Planning and Human Resources Development to assist.

Objective 3: Pharmaceutical Metrics Developed, the Availability and Use of Data for Making Strategic Decisions on ART Program Improved

SIAPS supported the IT Administrator for the Intermediate Hospital Oshakati to install the RxSolution pharmacy management software on a new computer and updated the guide for RxSolution installation and setup for reference as part of transitioning of SIAPS' IT support to MOHSS. SIAPS also supported the Div:PhSs to assess the use of the RxSolution, to inform the MoHSS plans for rolling out the tool to other hospitals in Namibia.

SIAPS supported MOHSS to compile and disseminate the report of the health facility supportive supervision visits conducted by Div: PhSs in February 2015. The report was disseminated at a 2-day national summit of ministry policy makers, national-level pharmaceutical service managers, regional pharmacists and chief medical officers from all 14 regions of Namibia. The summit emphasized the role of health managers and policy makers in improving the delivery of pharmaceutical services. At the summit, participants developed resolutions to improve pharmaceutical services delivery for the control of HIV and other conditions. SIAPS and SCMS provided refresher training to participants on principles of pharmaceutical inventory management. A manual for standardizing the conduct of national SSVs that SIAPS helped to develop, is under review by the Div:PhSs.

SIAPS supported the MOHSS to update the EDT national database (NDB) with data from the 50 main ART sites, compile SQL database queries (scripts) for extracting information from the NDB, and aggregating the data to enable national level reporting of ART services. SIAPS developed SQL scripts that automate most of the data collation, validation, aggregation, and output from the NDB. This included abstraction of data for the 2015 HIV-DR early warning indicators (EWIs).

As part of improving the integration of the EDT with the ePMS, SIAPS supported the MOHSS to monitor the percent of patients with ePMS unique numbers on the EDT/NDB. The ePMS unique number completeness on the NDB for new patients started on ART improved from 79% in Dec 2014 to 82% in Mar 2015. In Mar 2015, the extent of completeness unique number fields for all patients on ART was 60%, which is similar to the 59% in Dec 2014. This indicates that historic records are not regularly updated to ensure completeness of essential data fields. During EDT trainings, SSVs and ongoing IT support, SIAPS advocated for pharmacy staff to always enter the ePMS unique number into the EDT. SIAPS participated in the ministry's Health

Information System Technical Working Group (HIS TWG) meeting in May 2015 in which PEPFAR partners took up various roles for implementing the HIS strategy for Namibia. SIAPS will, in collaboration with partners, continue to design and implement standards for data exchange between patient level systems to realize the concept of a shared health record.

Div:PhSs, with SIAPS assistance, supported to compiled and disseminated a consolidated Pharmacy Management Information System (PMIS) report for October to December 2014. Using key indicators, the PMIS monitors the quality of ART and other pharmaceutical services delivered to patients at health facilities, and enables managers' and national level staff to design interventions to improve service delivery.

SIAPS supported Div:PhSs to compile and disseminate the quarterly ART-PMIS reports for October to December 2014 and January to March 2015; and also handed over the updated ART-PMIS data analysis tools to the ART logistics pharmacist. The ART-PMIS report provides vital information for managing ARV supply and ART services. As at March 2015, there were 136,324 active patients on ART. The patients' ARV pill pick-up improved from 59% in October to December 2014 to 83% in January to March 2015; the proportion of patients achieving adherence of more than 75% increased from 79% to 80%, while the percentage of adults and children known to be alive and on treatment 12 months after initiation of ART remained high (95.5%). SIAPS completed pilot-testing of the SMS-based adherence reminder service. Based on feedback from previous EDT trainings, SIAPS updated the EDT to support the automatic generation of ART unique identifiers (IDs) for patients transferred-in or in-transit. The revised EDT version is being tested before it can be implemented all ART sites to improve quality of data capture.

In collaboration with the HIV/AIDS program, SIAPS provided site level technical support to 10 ART sites with focus on supply chain reliability for ARV medicines, co-trimoxazole, and compliance to national treatment guidelines.

SIAPS finalized the scope of work for engaging a consultant to customize the ART dashboard used in West Africa for the EWI and essential ARV logistics information for Namibia.

Partner Contributions

MOHSS (Directorate: Special Programs (DSP), HIV case management sub-division, Div:PhSs [sub-division NMPC]) on ART program implementation and supportive supervision visits

Objective 4. Financing Strategies and Mechanisms to Improve Access to Medicines for HIV and AIDS

Objective 4 (health financing) reported on in Q1 was dropped from the work plan in March 2015 following USAID mission guidance.

Objective 5: Pharmaceutical Services Delivery Strengthened to Improve Adherence to HIV/TB treatment, Enhance Achievement of Health Outcomes, and Contain AMR

SIAPS supported the DSP to pilot-test the SMS-based adherence reminder system at two ART sites in Windhoek. The SMS service allows automated short messages to be sent to ART patients, reminding them about their pharmacy appointments and promoting their adherence to ART. After the pilot-test, the system will be rolled out to 10 more ART sites. Relatedly, SIAPS participated in the ART adherence technical working group meeting and shared the ART adherence strategy document that SIAPS developed.

SIAPS continued supporting the Kunene Region therapeutics committee to conduct a medicine use evaluation (MUE) in Opuwo district. Through the TA from SIAPS, the Opuwo district therapeutics committee will collect, aggregate and analyze MUE data of high quality and compile an informative report for improving the rational use of HIV and AIDS medicines.

SIAPS is supporting the Div:PhSs to revise the 5th edition of the Nemlist. Twenty-six requests for changes to the Nemlist were reviewed; recommendations will be presented to the Essential Medicines List Committee in Q4 of FY15.

SIAPS contributed to the MOHSS efforts on decentralizing ART services to primary health care (PHC) facilities through task shifting to the nurse-initiated management of ART services (NIMART). SIAPS trained 44 pharmacists, PAs, and nurses from 14 regions on the use of the EDT and the EDT mobile. The EDT is the tool used in ART clinics to manage dispensing services and data on ART patients and ARVs. The EDT mobile is a device used to collect dispensing data from the more peripheral primary healthcare ART sites such as clinics and health centers where it is not possible to use a desk-top computer.

With regards to the HIV-DR early warning indicators (EWIs), SIAPS drafted standard operating procedures (SOPs) for data abstraction from the NDB to enable MOHSS to do the abstraction independently in future. SIAPS supported the Div:PhSs in compiling the report on EWIs in the ART-PMIS feedback reports for October to December 2014 and January to March 2015 which were disseminated in Q3.

SIAPS supported a local USAID-funded organization, Namibia Planned Parenthood Association, to review their Memorandum of Understanding with the MOHSS with a view of providing ART services at their clinics. This is part of SIAPS efforts in ensuring that the lower level clinics that are easily accessible to clients provide the much needed ART services. The support also included TA and specifications for IT services needed for the installation of the EDT at the target sites.

SIAPS participated in preparations for sharing experiences and best practices on the control of hospital acquired infections between UNAM-School of medicine and the University of Bonn, Germany. SIAPS is part of the steering committee that is coordinating the partnership on infection prevention and control and activities to combat hospital acquired infections between the two universities. SIAPS Namibia staff member also participated in the Uppsala Health Summit

(UHS) 2015 on "A World Without Antibiotics," convened to deliberate ways of implementing the global action plan for preventing antimicrobial resistance.

In collaboration with the University of Washington (UW), SIAPS provided technical guidance to Div: PhS to conduct a pharmacoeconomics analysis of the health benefits, potential costs, and cost-effectiveness of a national active surveillance program, compared to the existing spontaneous adverse drug event (ADR) reporting system. The draft report is under review by the MOHSS. The MOHSS Therapetics Information and Pharmacovigilance Center (TIPC), which SIAPS has supported in previous years, was able to review all 55 ADR reports received in January to March 2015 without help from SIAPS.

Partner Contributions

- DSP and Div:PhSs on pharmacy staff training on the EDT and EDT mobile to support decentralization of ART services and roll out nurse- initiated management of ART services
- Tufts University of documenting SIAPS support to the MOHSS on HIV-DR EWIs
- UNAM-School of Medicine, University of Bonn, academic exchange program on infection prevention and control and combating hospital acquired infections, for patient safety
- MOHSS Div:PhSs on pharmacovigilance activities and the pharmacoeconomics analysis of benefits and outcomes of active surveillance
- MOHSS-DSP on ART adherence and retention initiatives, SMS reminder piloting
- UW on pharmacoeconomics analysis of health outcomes, potential costs, and cost-effectiveness of a national active surveillance program compared to the existing spontaneous ADR reporting system

Constraints to Progress

Pharmacy personnel need more on-the-job training and mentoring to ensure their efficient use of the tool for quality data capture. It's not always easy to schedule such follow-up sessions with them due to other competing needs.

Niger

Goal: To strengthen pharmaceutical management of health products to treat malaria.

Objective 1. To strengthen pharmaceutical management of health products to treat malaria

Development of the Global Fund Concept Note

With the new funding mechanism established by the Global Fund, NMCP, and CCM are required to submit a concept note covering a three-year period (2016–2018) for an estimated funding level of 39 million euros. The concept note was submitted on April 20, 2015, in accordance with the deadline.

The SIAPS Supply Chain Technical Advisor supported the technical working group during this quarter to respond to Global Fund's queries and to provide clarifications. We expect to receive Global Fund feedback on the concept note by August 2015.

The SIAPS technical advisor worked also closely with Global Fund portfolio by facilitating communication between NMCP and Global Fund by ensuring that the technical working group responds to Global Fund request for clarification on time.

Quarterly Inventory of Malaria Commodities at the Central Medical Store

On April 8, 2015, the SIAPS technical advisor was invited to participate in the Central Medical Store's (Office National des Produits Pharmaceutiques et Chimiques) quarterly physical inventory of malaria product in Niamey. Discrepancies found were related to missing information on stock cards records. The physical inventory also identified the low stock level of malaria commodities at the Central Medical Store, particularly for artemether-lumefantrine. The inventory report was shared with the NMCP for making decisions on malaria commodities procurement. Currently, product distribution to district level is done twice a year. The next distribution is planned for January but, with this level of stock, it may be compromised unless the government order arrives as planned in July 2015.

Launch of a Supply Chain Technical Committee for Malaria Products

To strengthen the management of malaria products and coordination among the various stakeholders, the technical advisor assisted the NMCP and Medicines Regulatory Authority (Direction de la Pharmacie et d Médicine Traditionnelle) in finalizing the arrêté (decree) and scope of work for a new technical committee which will focus on supply chain issues related to malaria commodities management. The work of this new technical committee was endorsed by all stakeholders including NMCP, the Medicines Regulatory Authority, and the Central Medical Store.

The arrêté establishing this technical committee has been approved and signed by the Ministry of Health on May 19, 2015.

The first meeting of all partners involved on malaria supply chain management was held on April 30, 2015, prior to signing the arrêté. This was the first meeting ever held in Niger on malaria commodities management, and consisted of 10 staff members from NCMP, Central Medical Store, Médecins Sans Frontières (MSF) Espagne, MSF Suisse, Catholic Relief Services (principal recipient of the Global Fund), and UNICEF. During this meeting, stock status of malaria commodities at the central level was shared with all partners.

A summary of malaria commodities supply plan has been developed following this meeting based on information provided by the partners. This table helps the NMCP to have information regarding malaria commodities available in country and quantity distributed by partners at the health districts level.

Next step—Next meeting of the official committee will be held on July 2015.

Planning and Coordination of Seasonal Malaria Chemoprevention Activities

During this quarter, the SIAPS advisor coordinated an important meeting with partners including UNICEF, MSF Spain, and NMCP to define roles and responsibilities of all partners involved in seasonal malaria chemoprevention (SMC) in Niger and to plan for the next SMC campaign in Niger. The shortfall of SMC commodities, amodiaquine–sulfadoxine/pyrimethamine was discussed and secured.

The 2015 campaign will run from August to November.

Launch of Mass Bednet Distribution Campaign

On May 16, 2015, SIAPS Niger participated in the official launch of the mass distribution campaign of long lasting insecticidal nets (LLIN). This ceremony was held in the region of Maradi (600 km from Niamey) and the First Lady of Niger and the Ministry of Health both attended.

This 2015 campaign will be conducted in six regions (Tahoua, Maradi, Zinder, Diffa, Niamey, and a part of Dosso) and around 8.6 million LLIN should be distributed.

However, this current launch focused on three regions (Maradi, Tahoua, and Zinder) and around 6.4 million LLINs will be distributed. All LLINs were procured with Global Fund funding through its principal recipient Catholic Relief Services. The remaining 2 million nets for the last three regions (Diffa, Niamey, and Dosso) will be procured by the government. This procurement is currently taking place and the nets are not yet available to deliver so the distribution campaign in these three regions will start in a few months.

Coordination Meeting with Partner Working on Malaria

To facilitate relationship with partners involved with malaria supply chain, the SIAPS technical advisor conducted several meetings with key partners. In May, we met and discussed with MSF

Spain, MSF Suisse, MSF France, Save the Children, CONCERN, and UNICEF. During these meeting, the meeting partners discussed how to work together to strengthen the malaria commodities supply chain and improve the medicines management at the facility level. Everyone agreed with this approach and appreciated the initiative. At the end of each meeting, the partners provided information regarding their stock on hand and upcoming procurement. They also provided information regarding their geographic coverage. All these information should help to improve the distribution plan in the future. It is a practice in Niger that some districts received deliveries from both the central medical store and from other partners without any coordination which leads to stock-outs or overstock at facilities level.

Additional Activities Related to Malaria Supply Chain Management

During this quarter, the SIAPS technical advisor worked closely with NMCP on additional activities to improve malaria supply chain management in the country—

- Completed the revision of current pharmaceutical management tools used by NMCP team for the distribution system on May 2015. Revised tools are now used to manage the distribution of malaria commodities. The distribution plan designed for the next quarter will serve as baseline and will support to monitor stock and consumption from the central level in accordance with number of case of malaria tested, confirmed and treated as reported by districts.

- Work plan for malaria supply activities developed and approved by the NMCP coordinator.

- Participated in a three-day workshop organized by the CCM–Global Fund, to develop a strategic plan to strengthen the management of commodities supply chain in Niger.

Philippines

Goal: Strengthen key institutions in reducing the TB burden through increased access to quality and effective pharmaceutical and laboratory services

Overall Quarter Progress

During this quarter, SIAPS continued to help the National TB Control Program (NTP) to strengthen the laboratory diagnostic network, supply chain management, pharmaceutical regulatory systems, and information management to increase access to quality TB pharmaceutical and diagnostic services.

Continuing strategic activities aimed at strengthening the leadership, management, governance, and organizational capacity of National TB Reference Laboratory (NTRL), SIAPS provided technical assistance to improve the laboratory network's monitoring and evaluation (M&E) system through a Laboratory Network Monitoring Training for NTRL and regional staff. Several coaching sessions were held on data collection, collation, analysis, interpretation, recording, and reporting.

SIAPS continues to work closely with the Quezon City Health Department (QCHD) to expand the Barangay Health Management Council (BHMC) model. SIAPS provided technical assistance to amend the city ordinance on BHMC scale-up and to develop community action plans of the three currently assisted BHMCs and four new expansion BHMCs. The initial three BHMCs manage a single barangay each while the four new BHMCs adopted the "cluster model" wherein one BHMC manages multiple barangays.

To build the capacity of NTP in overall pharmaceutical management, SIAPS strengthens the Drugs and Supplies Management (DSM) sub-technical working group to address supply chain issues and revise guidelines and processes. SIAPS assisted the NTP's programmatic management of drug-resistant TB (PMDT) to expedite the delivery of second-line drugs (SLDs) with critical stock status levels and to quantify SLD needs for two operational research studies, and integrated DOTS (directly observed treatment, short-course) sites, called iDOTS sites.

To strengthen capacity in quantification, SIAPS provided a basic QuanTB orientation for NTP and partners. The orientation was attended by 16 national staff (5 males and 11 females), mostly managers from NTP, National Center for Pulmonary Research of the Lung Center of the Philippines (NCPR-LCP), NTRL, Innovations for Multi-sectorial Partnerships to Achieve Control of Tuberculosis (IMPACT) Project, Technical Assistance Support to Countries (TASC), and Philippine Business for Social Progress (PBSP)—the Global Fund Principal Recipient. Participants expressed their appreciation of the processes and features found in QuanTB, and suggested that the tool be expanded to also quantify first-line drugs and ancillary medicines. SIAPS plans to conduct a more detailed QuanTB training for the NTP Drug Supply Management unit staff.

To improve pharmaceutical regulatory systems, SIAPS continues to work with NTP, the Food and Drug Administration (FDA) of the Philippines, NCPR-LCP, and PBSP, particularly in the

preparation of the nine-month MDR-TB treatment regimen and bedaquiline operational research studies, update of national essential medicines list, and registration of medicines with FDA. SIAPS main outputs this quarter included: (1) medicine dossiers of kanamycin and ethambutol received by NTP from manufacturers, and (2) participation in writing sections of the nine-month MDR-TB and bedaquiline implementation guidelines.

Objective 1. Capacity for Pharmaceutical and Laboratory Leadership, Governance and Management Improved

SIAPS facilitated a planning workshop to assist BHMCs to develop community action plans for 2015–2016. The plans focus on addressing low TB case finding among adults and children, increasing access to microscopy and radiologic diagnostic services, increasing the number of treatment partners, and improving case holding. The plans also include maintaining zero stock-outs of TB category II adult kits and improving M&E for TB, including data analysis.

SIAPS conducted sessions on monitoring and documenting BHMC governance practices. BHMCs are working to improve accountability, transparency, human resources, health financing, financial monitoring, multi-sector participation and consensus building. Documented good practices of the Old Balara BHMC included mobilization of resources of 400,000 Philippines pesos (8,835 USD) for equipment and medicines, increased facility- based deliveries, and increased case detection through intensified community-based services and information education campaigns. During a community TB assembly, out of 447 participants, 52 (11.6%) walk-in TB cases were identified, 80 children were screened, and treatment was initiated in 12 children who tested positive.

Additionally, SIAPS held follow-up meetings with QCHD to refine their scale-up plans for BHMC with emphasis on selection of priority barangays and composition of the Council.

The DSM sub-technical working group, with SIAPS' assistance, discussed mitigating actions for the shortages of SLDs, expired MTB/ Rif cartridges, and the recall of pediatric TB suspensions. A change in the International Dispensary Association (IDA) electronic system delayed delivery of SLD medicines and contributed to the shortage. SIAPS is helping NTP to closely coordinate with PBSP procurement team, Logistics Management Division, and contractors to address this shortage by accelerating shipments and clearance for release from customs.

To avert quality issues with first-line TB medicines for children, SIAPS is assisting the NTP prepare to procure fixed-dose dispersible pediatric tablets through the Global Drug Facility (GDF). The fixed-dose dispersible pediatric tablets are a new product that will be available in late 2015. SIAPS, in collaboration with NTP, reviewed NTP's annual reports and financial budgets to quantify requirements. This entailed revising the DOH NTP Procurement Plan and Purchase Request prepared by DOH. SIAPS also supported NTP in coordination with GDF and DOH Central Office Bids and Awards Committee, to allow international procurement, prepayment/advance payment of order, and clearances.

SIAPS is also working with DOH's Pharmaceutical Division (formerly known as National Center for Pharmaceutical Access and Management or NCPAM) to update the pediatric TB

medicines formulation and include pediatric medicines and SLDs in the national essential medicines list, the Philippine National Drug Formulary. This is critical since Philippine law only allows government procurement of medicines that are included in the national drug formulary.

The magnitude of drug-resistant tuberculosis in the Philippines is still a major concern. A strategy in the PMDT plan in the 2010–2016 Philippine Plan of Action to Control Tuberculosis (PhilPACT) is the integration of PMDT care into DOTS services offered at health facilities, bringing services closer to patients' homes. SIAPS, as requested by NTP, provided assistance to further integrated DOTS (iDOTS) efforts by reviewing implementation guidelines, particularly on pharmaceutical supply chain management. SIAPS joined NTP to advocate with regional, provincial, and city health offices in Region 10 of iDOTS. In the national capital region, SIAPS assisted the NTP and the regional office to avoid drug shortages for iDOTS treatment region-wide by reviewing stock status per treatment facility, redistributing medicines, and prioritizing drug supply.

Constraints to Progress

Challenges in good quantification of annual medicine requirements particularly for pediatric TB cases since the current NTP reports are unable to capture relevant data. As a solution, NTP has recently revised its current reporting form to capture relevant pediatric TB information.

Objective 2. Capacity for Transparent and Evidence-Based Decision Making Improved

SIAPS continued its work in strengthening the capacity of NTRL and NTP to manage and utilize information for decision making and conduct M&E.

During this quarter, SIAPS provided technical assistance through a Laboratory Network Monitoring Training which was attended by six staff from NTRL (three staff from Program Support and Quality Assurance Monitoring Unit and three staff from Monitoring and Evaluation Unit), and the Region IV-A Medical Technologist Coordinator.

This training aimed to develop the laboratory network monitoring skills, including how to collate and organize data, and write and disseminate reports to laboratory managers and staff. The training included field visits to TB microscopy and GeneXpert laboratories where the trainees gained experience in monitoring activities including developing a monitoring checklist, reviewing laboratory records, interviewing staff on laboratory practices, and using laboratory network indicators to evaluate laboratory performance. USAID observed the monitoring activities during the field visits.

After the training, the participating staff developed their laboratory network monitoring plan which will be monitored in conjunction with SIAPS in the upcoming quarters. NTP, with SIAPS' technical assistance, conducted joint DSM monitoring visits to four PMDT facilities and one warehouse in NCR. During the visits, SIAPS mentored the NTP DSM staff on data collection, interpretation, and providing recommendations on improvement of pharmaceutical management.

NTP and SIAPS also facilitated the pull-out of SLDs that are nearing expiration for redistribution to other PMDT centers for immediate use.

Eight rural health units in Region IV-A were visited by Laguna and Quezon Provincial Health Offices for the routine quarterly NTP monitoring, with the support of SIAPS and IMPACT. General improvements in the storage and medicine requisition practices were observed. Of note was one facility which was found to have stocks placed directly on the floor during the March 2014 baseline assessment. This facility has since generated its own funds to purchase pallets to properly store stocks.

Upon consultation, it was deemed necessary by SIAPS and Quezon City Health District 3 supervisors that the TB supply tracking tool be implemented at the district level. SIAPS is currently re-strategizing and in the process of adapting the tool to the information needs of the district supervisors.

SIAPS continues to participate in the discussion with the DOH's Knowledge Management and Information Technology Service, NTRL, and PBSP on the enhancement of the Integrated TB Information System (ITIS) laboratory module.

Partner Contributions

IMPACT provided logistics support for monitoring visits to rural health units in Laguna and Quezon.

Constraints to Progress

- Because of intervening schedule of NTRL assisting with the scale-up of GeneXpert and light-emitting diode fluorescence microscopy (LED-FM) laboratories, the continuation of the technical assistance at the field level was delayed. SIAPS continues to coach NTRL staff individually and by small groups.
- Competing DOH priorities on "High Impact Five Programs" rendered the Region IV-A staff unavailable for SIAPS activities.

Objective 3: Capacity of NTP to Deliver Pharmaceutical and Laboratory Services Improved

SIAPS continues to facilitate the linkage between NTP, the Philippines FDA,, and other stakeholders to bolster the country's pharmacovigilance system. In this quarter, SIAPS continued to work closely with NTP, PBSP, and NCPR-LCP to prepare for the nine-month MDR-TB treatment regimen and bedaquiline operational research studies.

NTP, NCPR-LCP, and the Philippines FDA of, with support from SIAPS, PBSP, and other partners, met with the DOH undersecretary to discuss the approval of the nine-month MDR-TB treatment regimen study. The study received a conditional approval, and has started in July. SIAPS continues to collaborate with NTP, GDF, and IDA to secure the medicine dossiers of all medicines for the study. Two medicine dossiers (kanamycin and ethambutol) were received by

NTP from the manufacturers this quarter and will be submitted to FDA and other dossiers are also scheduled to be sent soon. SIAPS also provided technical assistance in writing the implementing guidelines for MDR-TB study.

For the bedaquiline study, SIAPS participated in discussions with NTP, the Philippines FDA, and Janssen Pharmaceuticals (the marketing authorization holder of bedaquiline) to determine Janssen's role and processes for monitoring of medicine safety. Additionally, NTP and partners including SIAPS, participated in a writing workshop, called a "writeshop," to develop the national implementing guidelines for the bedaquiline study. SIAPS contributed by writing safety monitoring and ethical considerations guidelines.

During the joint monitoring visits to PMDT and DOTS facilities conducted this quarter, SIAPS encouraged the spontaneous reporting of serious adverse events to the FDA.

SIAPS joined the workshop arranged by DOH-PD on supply chain management and standards of good pharmacy practice. The workshop and meetings were held to harmonize efforts and technical products on pharmaceutical management. SIAPS shared technical products with DOH-PD and WHO, they included the Practical Guide for Management of Pharmaceuticals and other Health-Related Commodities, DSM job-aids, and TB DSM monitoring tool.

At USAID's request, SIAPS delivered presentations on technical assistance to NTRL and BHMC expansion to other USAID cooperating agencies.

Constraints to Progress

SIAPS is assisting the FDA to organize the FDA National Advisory Committee for PV which is responsible for the review of adverse events reports and conduct causality analysis. SIAPS efforts on this project are on hold as the FDA delayed invited experts as committee members and waiting for their confirmation.

South Africa

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

Overall Quarter Progress

Since its inception, SIAPS has contributed to the implementation of several priority initiatives of the National Department of Health (NDOH), including the direct delivery procurement model and the centralized chronic medicine dispensing and distribution program. SIAPS identified the need to develop an overarching strategic framework that provides clear direction on all initiatives required to improve access to and availability of health products in the country. During this quarter, work commenced in consultation with key stakeholders to draft a strategy document that describes the key outcomes and components of pharmaceutical service delivery.

One of the components of the strategy document is the contracting mechanisms used to procure health products for public health facilities. During the quarter, SIAPS contributed to the implementation of a new electronic method for submission of tender bids for the Directorate: Affordable Medicines, which is responsible for awarding and managing tenders for the public sector. The new mechanism, which was used for five tenders during this quarter, aims to reduce the errors and delays that occurred in the manual data capture process used previously.

SIAPS continued to roll-out RxSolution in response to NDOH priorities. By the end of the quarter, the system was in use in 393 public health facilities across South Africa. In Gauteng, Helen Joseph Hospital, which has the largest number of people on antiretroviral therapy in the province, became the first of the 21 facilities using RxSolution to implement the dispensing module.

Working in collaboration with the University of the Western Cape (UWC), Schools of Public Health and Pharmacy, and Boston University, the online elective module on rational medicine use (RMU) was finalized for the masters in public health program. This activity was the culmination of assistance SIAPS has provided since 2014 to develop course materials for modules which are offered to local and international health care professionals.

Objective 1: Pharmaceutical sector governance strengthened (IR 1)

Since 2012, SIAPS has contributed to the development and review of several key strategic documents to promote good governance for pharmaceutical services at the national, provincial, and facility levels.

During this quarter, SIAPS formed part of a team currently engaged in developing a national strategy for improved access to and availability of health products. SIAPS worked with NDOH to develop frameworks that describe the key outcomes required to support medicine access and availability as well as the main components that contribute to these outcomes, namely, selection, contracting, contract management, distribution, replenishment management, and rational use of health products. Governance, workforce management, financial management, and information

systems and management form the foundation for these components. SIAPS facilitated two workshops for stakeholders including the NDOH, provincial heads of pharmaceutical services and Supply Chain Management Systems (SCMS). The frameworks were accepted and will form the basis for the strategic document. Shared visions were developed, the current situation described for each of the components, and short- and long-term interventions developed. A small team with representation from NDOH, SIAPS, and SCMS is working on concept notes relating to the various components that will form the basis of the strategy document. A draft document is expected to be completed for review in the upcoming quarter.

Since the inception of the program, SIAPS has supported NDOH in the coordination of tenders for pharmaceuticals and medical consumables. A new method of electronic bid submission has been implemented by NDOH with SIAPS assistance. The new format aims to reduce manual data capture and improve management of the bid information database. The SIAPS team has been an integral part of the process, assisting in developing bid documents, data mapping, and data processing for the conclusion of the bidding process. A tender database has been built and templates for the pack of bid submission documents as well as the Special Conditions of Contract for medical-related items have been revised. Electronic bid submission was used for one tender for medical consumables (condoms) and for three pharmaceutical tenders (TB medicines, antibiotics, and contraceptives) awarded during the quarter. The first two contracts come into effect on July 1, and the latter three will be effective October 1, 2015. The tender for administration sets for intravenous injections is awaiting final approval. With the exception of that particular tender, all other tenders were awarded prior to the start dates. In addition to assisting with the electronic bid submission process, SIAPS provided technical assistance with bid closure and offers compilation, as well as bid evaluation and award.

Further technical assistance was provided to NDOH on specification and estimation as well as bid preparation in the new format for seven more medical-related contracts, which were advertised during the quarter.

SIAPS provided technical assistance to NDOH in the development of an operational plan for the Tender Unit which is aligned to the tender project plan and annual performance plan of the NDOH. Assistance was also provided with the review of job descriptions for the Affordable Medicines Unit to align these with the operational plan. Work commenced on standardizing job descriptions for provincial heads of pharmaceutical services, district pharmacists, and sub-district pharmacists. SIAPS had previously helped with drafting six SOPs for the tender management process. During the quarter, a further two SOPs for tender estimate preparation and preparation and management of sample evaluation for medical-related products were revised and submitted to the NDOH for review. NDOH staff was mentored on each of these processes.

An ABC analysis per therapeutic class was done in collaboration with the NDOH for the 2013/14 financial year. The data were further analyzed to reflect which of the items procured during this period were on national tenders. The aim of the exercise was to identify high-cost drivers that were previously not on tender. Work commenced on the development of polices on tendering per therapeutic class and stakeholder engagement by the National Essential Medicine List Committee.

In the previous quarter, SIAPS assisted the NDOH in facilitating a stakeholder engagement meeting to obtain collective input on proposed amendments to the Good Pharmacy Practice rules relating to mobile pharmaceutical services, pharmacies operating Internet sites, collection and delivery of medicines to patients, and operation of remote automated dispensing units. As a follow up, SIAPS provided technical assistance in consolidating all the inputs on behalf of NDOH for submission to South the African Pharmacy Council.

SIAPS continued to help the Global Fund Cluster improve quality of reporting. The Central Procurement Unit (CPU) has to submit quarterly reports to the Global Fund as well as updates on its pharmaceutical supply management (PSM) plan. During this quarter, SIAPS supported the Global Fund-NDOH unit and CPU in revising the March 2016 PSM plan for submission to the Global Fund. SIAPS provided input into the quarterly reports from the CPU to the local funding agent, including development of a narrative for the progress update and disbursement request.

In FY13, SIAPS assisted the NDOH to establish a set of norms and standards for the delivery of pharmaceutical service. A presentation on trends in provincial compliance with the standards during the last four quarters was prepared for a meeting of the National Health Council Sub-Committee for Pharmaceutical Services.

SIAPS provided technical assistance in coordinating and facilitating a stakeholder engagement meeting for the placement of community service pharmacists (CSPs). The meeting was called following a challenge experienced by the NDOH in placing all candidates that applied for community service in 2015. During the workshop, participants developed short-, medium-, and long-term recommendations for addressing the shortcomings identified in CSP placement.

SIAPS committed to facilitating the development of a standardized set of SOPs for medicine supply management at facility level. To date, 34 of the expected of 56 SOPs have been drafted. It is envisaged that upon completion of this work, the SOPs will be published on the NDOH website and serve as a reference for pharmacists country-wide. In Limpopo, an SOP was developed for cleaning data from PDSX, an inventory management tool used at the facility level, as a means of facilitating the evaluation of stock control data.

Following the strategic planning workshop conducted in February for Northern Cape provincial pharmaceutical services, SIAPS provided technical assistance in facilitating a one-day workshop to develop an operational plan emanating from the strategic plan. SIAPS is assisting the province to put together a strategic plan document.

Partner contributions

SCMS participation in workshops and work on the medicine access and availability strategy including concept notes

Constraints to progress

Lack of clarity on task assignments to NDOH staff, leading to an unsustainable overreliance on SIAPS staff to perform operational functions; discussions have been held with NDOH staff to address this challenge

Objective 2: Capacity of personnel for the provision of pharmaceutical services enhanced (IR 2)

SIAPS continued to provide technical assistance in developing a pharmaceutical management curriculum for pre-service and post-graduate levels. Working with university staff, SIAPS provided pharmacovigilance training for 22 NMMU final-year BPharm elective students at Nelson Mandela Metropolitan University (NMMU) in the form of formal contact training and assisted with the design of five research projects. Ethics clearance was obtained in June 2015. To showcase the collaboration between SIAPS and NMMU, an abstract entitled "Building Capacity in Data Mining and Large Database Analysis to Support Informed Decision Making" was submitted and accepted for a podium presentation at the South African Association of Health Educationalists conference to be held in Gauteng in September 2015. The abstract outlines the RxSolution project conducted with NMMU in 2014. Another abstract entitled "Reporting of Adverse Drug Reactions in Private Sector Pharmacies in the Nelson Mandela Metropole, South Africa" was accepted for a poster presentation at the First Training Workshop and Symposium MURIA Group to be held in July at the University of Botswana in Gaborone.

A request was made by NMMU for a SIAPS representative to serve as an external moderator and external examiner of pharmacoeconomics papers for pharmacy students. Initial review of the June and July 2015 examination and supplementary examination have been completed.

A lecture on pharmaceutical waste management was facilitated for fourth-year pharmacy students at Sefako Makgatho Health Sciences University (SMU). Also at SMU, the NDOH and SIAPS facilitated a one-day interactive workshop on medicine supply management for 55 final-year students.

As previously reported, SIAPS has collaborated with the University of the Western Cape (UWC), Schools of Public Health and Pharmacy, and Boston University to develop online elective modules on RMU and medicine supply management (MSM) for the masters in public health program. During this quarter, SIAPS was involved in the final stages of development of content, design of assessments, and plans for the roll-out of the RMU module. In addition, SIAPS updated the material for the RMU and MSM courses for the Winter School which is planned for the end of June/early July. Attendees are local and international medical practitioners and pharmacists. SIAPS will facilitate sessions for the last time, where after the facilitation role and updating of training materials will be handed over to the university.

Following lengthy negotiations with the Department of Pharmacy at SMU, agreement was reached on integration of aspects of the Leadership Development Program (LDP) into the management of pharmaceutical services module of the MPharm (public health pharmacy and management). According to the agreement, LDP tools will be used in the development of a student project to improve the delivery of pharmaceutical services in their workplace. SMU staff will be capacitated to enable them to run the course in 2016/2017. Two workshops were held

during this quarter, namely, "Introduction to Leadership and Management Practices" and "Using the Challenge Model to Address Workplace Challenges". Fourteen students are enrolled on the program. Using the challenge model, ten desired measurable results have been crafted. Students have been given the assignment of finalizing their challenge model, conducting a stakeholder analysis, getting a better understanding of their current situation, collecting baseline data, and starting the process of documenting the process.

SIAPS continued to build the capacity of district and provincial teams to sustain quality improvement initiatives implemented as part of the Pharmaceutical Leadership Development Program in KwaZulu-Natal. A coaching visit for all the teams was held during the quarter to monitor progress and assist teams to refine their challenge models and action plans.

SIAPS also continued to provide the LDP for a group of 27 pharmacy, clinical, and operational managers in the Khayelitsha Eastern Sub-structure (KESS) in the WC. Each of the 10 facility teams has developed a measurable result and is in the process of implementing priority actions to achieve it. During the quarter, a coaching visit and workshop were held. Participants are expected to complete the LDP and present their achievements to management next quarter.

An article entitled "Pharmacy Leaders for the Future–Are We Doing Enough?" regarding the workshop facilitated by SIAPS at the conference of the South African Association of Hospital and Institutional Pharmacists in March was published in the South African Pharmaceutical Journal.

Objective 3: Use of information for decision making for pharmaceutical services improved (IR 3)

Over the past two years, the implementation of an effective Pharmaceutical Management Information System (PMIS) has become a priority for the NDOH. In response, SIAPS has invested considerable effort in the development and implementation of electronic tools such as RxSolution.

Software development

During the previous quarter, SIAPS drafted a PMIS strategy and circulated it to NDOH and SCMS for comment. Once finalized, the strategy will be incorporated into the broader strategy for improved access to and availability of health products mentioned under objective 1.

The master procurement catalogue (MPC) with up-to-date prices of all pharmaceuticals currently on NDOH contracts was made available on the NDOH website during the previous quarter. At present, updating of the MPC with contract information is a manual process for which SIAPS provides support. SIAPS has been requested to create an automated functionality to make updated versions of the MPC available downstream. The draft policy relating to the MPC which will form part of the PMIS strategy is currently under review.

NDOH requested that SIAPS update the tender module that had been developed previously to accommodate electronic bidding and more stringent NDOH requirements for tender evaluation. Re-designing of the module is awaiting documented user requirements.

As reported previously, SIAPS developed and implemented RxPMPU, a customized ordering system for the direct delivery procurement model currently being implemented by NDOH. Ongoing assistance is provided to NDOH in the use of the software. During the quarter, SIAPS added barcode functionality to RxPMPU for purchase orders. The added barcode functionality allows variables such as supplier code, demander number, purchase order number, and province to be captured automatically. SIAPS also updated the items on RxPMPU that can be ordered through the provincial medicine procurement units (PMPUs) by health facilities in Gauteng. NDOH aims to procure 70% of the essential medicines list (EML) products in Gauteng through PMPU. During the quarter, SIAPS helped the PMPU reroute orders for products to the Gauteng depot to rationalize stock holding at the depot.

The SCMS and SIAPS teams responsible for demand planning and forecasting met and developed a concept note. A project plan aimed at improving medicine availability at Charlotte Maxeke Academic Hospital was developed and submitted to Gauteng Provincial Pharmaceutical Services and the USAID mission.

SIAPS had previously developed an RxSolution module for management of formularies. The formulary tool was installed and is being evaluated by the Essential Drug Programme (EDP) at NDOH. It is envisaged that use of the formulary tool will facilitate quicker dissemination and subsequent implementation of revised STGs and EMLs.

Ongoing capacity building is provided to users in customizing reports for drawing data from RxSolution. A new purchase order report that reflects stock on hand was developed for Gauteng. The report template is currently under review. A report for managing patient bookings was customized for facilities in the Free State.

Technical assistance was provided to NDOH in the analysis of data extracted from the Stock Visibility System (SVS), a smart phone-based application for recording stock on hand at clinics, which is currently being implemented. The application enables visibility of stock levels at clinics and is being interfaced with RxSolution with a view to implementing a push system for supply to clinics.

Implementation of RxSolution

SIAPS is part of the NDOH-Partners Consortium with representation from NDOH, SCMS, and USAID, which meets regularly to monitor the rollout of RxSolution, implementation of the Control Tower at the national level, and the PMPU. SIAPS was requested to review the training requirements and ongoing assistance for RxSolution and develop a proposal for future assistance. A session was organized internally and a draft document produced which is ready for circulation and input. SIAPS attended steering committee meetings in Limpopo, North West, and Northern Cape provinces. These meetings serve as the key platform for engaging with stakeholders on the

progress of RxSolution implementation. An RxPMPU technical meeting was held in KwaZulu-Natal to ascertain stakeholder requirements and outline key steps in installation of RxPMPU.

An assessment tool was developed and approved by NDOH to conduct assessments at the ten central hospitals as part of implementing an electronic system for early detection of stock-outs of medicines at hospitals. The assessment aims to determine the feasibility of interfacing with a dashboard that pools data from facilities to a central location as a means of increasing stock visibility. The assessments are planned for the following quarter.

The number of sites using RxSolution has increased to 393. New sites include 2 reinstallations in Gauteng, 3 sites in Limpopo, 1 in the Northern Cape, 2 in the Eastern Cape, 19 in KwaZulu-Natal, and 10 newly confirmed sites in the Eastern Cape.

The number of sites proposed for the installation of RxSolution is 40 in Eastern Cape, 34 in KwaZulu-Natal, 10 in Northern Cape, 9 in Gauteng, and 30 in Limpopo. During this quarter, three sites in the Eastern Cape and seven in the Northern Cape were assessed. SIAPS and the Foundation for Professional Development (FPD) started assessing 51 more clinics in Tshwane District for implementation of RxSolution; 26 clinics are already using the system in the district. During the assessment process, gaps were identified in the capacity available to install RxSolution in all 51 clinics. Discussions are underway with the district to prioritize sites for implementation.

During the quarter, SIAPS was requested to install RxSolution in 700 National Health Insurance (NHI) clinics across the provinces. SIAPS held a meeting with NDOH to discuss the training of provincial technical support officers (PTSOs) who will be responsible for the roll-out of RxSolution in NHI districts. SIAPS will conduct training for the PTSOs during the last week of July.

In Gauteng Province, SIAPS worked with SCMS to provide technical assistance at the hospitals implementing the direct delivery model (PMPU). During the quarter, SIAPS trained 10 newly appointed procurement/admin clerks at Charlotte Maxeke Academic Hospital (2), Chris Hani Baragwanath (2), Dr. Dadoo (1), Pholosong (2), and Rahima Moosa (3). Further technical assistance was provided to Dr. George Mukhari (DGMAH), Charlotte Maxeke Academic, Kalafong, Jubilee, and Steve Biko Academic Hospitals. This included updating institutional medicine lists and item information; allocating items to respective bins; stocktaking; placing automated purchase orders; and receiving, issuing, and generating reports to inform decision making. Training on the RxSolution dispensing module was provided to four pharmacists and five pharmacists' assistants at Helen Joseph Hospital. Electronic dispensing of orthopedic prescriptions has commenced. This is the first of the 21 hospitals in Gauteng to use both the stock management and dispensing modules of RxSolution. Progress reports on the implementation process and RxSolution usage were compiled for Rahima Moosa, Steve Biko Academic Hospital, Kalafong and DGMAH.

Hospital pharmacy personnel and FPD staff were trained during RxSolution rollout in the three Limpopo regional hospitals. Stock take was conducted and the hospitals successfully switched from PDSX to RxSolution. Fifteen facility users were trained on RxSolution in KwaZulu-Natal.

One-on-one refresher trainings at facilities were also provided as part of ongoing support. Two checklists were developed detailing steps to be followed during the rollout of RxSolution and RxPMPU at the facility level.

As part of ensuring quality in the roll-out and implementation of RxSolution, facilities where RxSolution has recently been installed are contacted to determine the usage of the system and the support provided by SIAPS and partner implementation teams. A questionnaire is sent to pharmacy managers to obtain their perspective on usage of the system and the support required to ensure effective use. Comments are analyzed and shared with the implementation team for further action. During this quarter, an improvement in the response rate from 34% (56/164) in the previous quarter to 40% (66/165) was observed.

Partner contributions

- HST: ongoing technical support to facilities
- FPD: ongoing technical support in Tshwane District clinics and rollout of RxSolution in Limpopo
- BroadReach: support implementation of RxSolution in CHCs and clinics at Ekurhuleni Metro and Central Dispensing Unit in Ekurhuleni District
- Limpopo Department of Health: purchased hardware for RxSolution implementation although monitors have yet to be delivered
- SCMS: work on PMPU, demand planning, and analysis of data from SVS

Constraints to progress

- Delay in finalizing PMIS strategy, which will be incorporated into the medicine access and availability strategy
- Lack of properly documented user requirements for tender module; ongoing work on additional requirements by NDOH and PMPU is being addressed
- Delays in finalization of MOUs and project charters with the provinces; continuous follow-up is done with provinces and NDOH
- Poor response to facility perspective assessments; to remedy this, facilities are contacted by telephone
- Lack of buy-in (ownership) from management and IT at some facilities is being addressed on a case-by-case basis
- Challenges in skills transfer at facility level

Objective 4: Financial mechanisms strengthened to increase access to medicines (IR 4)

In the work plan for the period September 2014 to October 2015, SIAPS planned to provide assistance in the implementation of efficient medicines benefits management under National Health Insurance as well as help with the development of a health technology assessment model for South Africa. No progress has been made toward these interventions because each of them is dependent on the release of the white paper on implementation of the NHI in South Africa. Recently, the NDOH National Strategic Plan 2015/16-2019/2020 and its related annual

performance plan (APP) establish the department's priorities for the next five years. In light of the new APP strategic objectives, SIAPS identified the need to reprioritize the above mentioned activities to strengthen technical assistance for review of the EML and STGs and provide assistance in the implementation of the national strategy to address antimicrobial resistance (AMR). A request has been made to the local mission to revise the work plan accordingly.

Constraints to progress

White paper for the NHI yet to be published

Objective 5: Pharmaceutical services improved to achieve desired health outcomes

Availability of essential medicines and other health commodities at health facilities remains a top priority for the South African Government. This objective is driven by the NDOH. SIAPS' assistance to NDOH is closely aligned to the NDOH strategy to reduce the incidence of HIV, reduce new infections, pay specific attention to TB-HIV co-infection, and increase the number of patients enrolling in the ART program, thereby contributing to an AIDS-free generation.

As reported in the previous quarter, SIAPS is collaborating with the Gauteng Provincial Department of Health, the DGMAH, and the Sefako Makgatho Health Sciences University to build a model hospital pharmacy at DGMAH. The two key measures of success for this center of excellence are improved availability of essential medicines needed to treat HIV, TB, and other communicable and non-communicable diseases and improved patient outcomes. During this quarter, a progress report was presented to DGMAH management, meetings were held with different technical teams and pharmacy management, more resources were allocated to RxSolution implementation, and in-service training on medicine management provided to pharmacy personnel. SMU has allocated students to different wards to strengthen stock management. At the last meeting of the technical working group on June 12, the usage of RxSolution was said to be 75–80%, based on the usage report. SIAPS conducted an ABC analysis which was presented to the hospital Pharmaceutical and Therapeutics Committee (PTC).

SIAPS is conducting infection prevention and control (IPC) activities to support the national strategy on AMR. SIAPS conducted a one-day ICAT refresher course in the Nkangala health district in Mpumalanga Province; 38 quality control managers, IPC coordinators, and occupational and environmental health managers attended the training. SIAPS promoted AMR globally by designating May as AMR month. SIAPS South Africa prepared a blog on AMR and IPC activities achieved in the country. Two articles on AMR were published in the quarterly newsletter.

Technical assistance was provided to the NDOH by conducting an ABC analysis for the tertiary committee on non-EML items that should be reviewed. Gauteng, KwaZula-Natal and Limpopo also required assistance with ABC analyses for their Provincial Pharmacy and Therapeutics Committee (PPTC) meetings. SIAPS conducted an ABC analysis to identify antibiotic usage patterns in the Ekurhuleni district in Gauteng. The analysis will form the basis for operational research that will be conducted in the district. In addition, the growing need from facility PTCs

for ABC interpretation was identified during this period, and a presentation on interpretation of ABC analyses prepared.

In the Western Cape (WC), SIAPS assisted the WC PPTC with the development of terms of reference for the Medicine Use Evaluation (MUE) Sub-Committee which was approved by WC PPTC. The first official sub-committee meeting was held in June 2015. SIAPS assisted the WC PPTC with the development of their first province-wide MUE. An ABC analysis had identified aspirin as a possible medicine use problem in the province. The newly formed MUE Sub-committee developed a data collection tool for a province-wide MUE for aspirin. During an RMU training conducted previously, participants developed criteria for aspirin use in the province. The criteria and data collection tools were finalized by SIAPS and UWC. Data collection will be performed in July /August after obtaining ethics clearance.

SIAPS also provided training for new and existing PTC members in Eastern Cape and Limpopo to introduce PTC members to issues of governance, the roles and functions of PTCs, and tools to be used by PTCs to improve RMU.

Throughout the quarter SIAPS, has assisted the EDP with the process of the PHC STGs and EML completion, publication, and implementation. The input from SIAPS helps improve transparency and governance in the selection of essential medicines, builds skills among the human resource component, and ultimately will help improve service delivery to patients. The EDP Unit announced the publication of the pdf version of the revised PHC STGs and EML (21 chapters). SIAPS continues to provide assistance to the EDP with the publication of the revised guidelines, including writing speaker notes for an official ministerial launch, and preparing submissions to the Minister of Health and Director General's Offices. In June 2015, SIAPS helped the NDOH host a meeting with Gauteng, Eastern Cape, Free State, KwaZulu-Natal, WC, and Correctional Services regarding implementation of the guidelines. Meetings with the North West, Northern Cape, Mpumulanga and Limpopo will take place in the upcoming quarter.

SIAPS is working with the EDP and Right to Care to develop plans for implementing the PHC guidelines once published. Potential implementation plans include announcements at conferences. SIAPS also developed an SMS tag line for NDOH, which sent it to societies, asking them to send it out to members advertising the PHC STGs and EML. In parallel, SIAPS was asked to test a smart phone application of the PHC STGs and EML. SIAPS provided input for improvement of the application to the NDOH and Open Medicine Project, supported by the Medical Research Council who was charged with the responsibility of developing the application. In May 2015, an article entitled "Essential Medicines–A Work in Progress" was published in the South African Pharmaceutical Journal. The article was co-authored by NDOH, SIAPS, and a University of KwaZulu-Natal lecturer. This was the first of a series of intended articles.

In this quarter, SIAPS assisted EDP with medicine reviews. As part of a review on labetalol use in pregnancy, prices of labetalol tablets and injection were extracted from internal and local price indicator websites and documents. Additionally, SIAPS completed a medicine review on the use of the levonorgestrel intrauterine device in chronic pelvic pain in patients with endometriosis. A basic costing review was done as well as a motivational review on the use of labetolol in

eclampsia; however, there was no evidence of superiority to the standard medicines available on the EDL.

During this quarter, SIAPS capacitated an EML representative in KwaZulu-Natal to conduct and interpret an ABC analysis for the province. After the training, the representative was able to conduct an ABC analysis for the province, excluding an Anatomical Therapeutic Class analysis.

A member of the SIAPS team was nominated to the KwaZulu-Natal PTC in June 2015.

SIAPS provided ongoing technical assistance to the NDOH Pharmacovigilance Centre (NPC) implementing the decentralized pharmacovigilance system in the Northern Cape (phase 3) and Eastern Cape (phase 1). Mpumalanga and North West Province are being monitored for level of uptake as they are in phase 4 of the roll-out plan. SIAPS provides ongoing technical assistance through consultant expertise in interpretation of data collected from the sites where NPC has rolled out. A challenge has been identified in North West as there has been a remarkable fall-off in reporting. One response to this is that NPC set up intervention meetings with the district clusters. SIAPS has been invited to attend and assist with the intervention which will occur in July 2015 at four sites in North West.

The three-country investigation into the use of early warning indicators as a potential predictor of HIV drug resistance risk was initiated. The South African protocol was developed with reference to the South African scenario in terms of the challenges of retaining patients on therapy and access to ARTs and the use of RxSolution as an information source for the various indicators. Once there is agreement on the proposal between the three countries (including ethics and access approval), the data collection tools will be validated and data collection started.

SIAPS provided input on the South African Pharmacy Council's pamphlet and poster messaging for Pharmacy Week.

Partner contributions

Right to Care: implementation of PHC guidelines
UWC: aspirin MUE in WC

Constraints to progress

Staff shortage and workload for the establishment of the hospital pharmacy model; SIAPS is following up with hospital management to address implementation challenges

South Sudan

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

Overall Quarter Progress

During quarter 3, SIAPS supported the distribution of essential medicines/EMF commodities to facilities in Western Equatoria (WES) and Central Equatoria (CES) States. SIAPS ensured that the necessary storage space and local logistics such as transport in the 16 counties within these 2 states are arranged through coordination with our Integrated Service Delivery Partners (ISPD). These commodities include oral rehydration salts, antibiotics, antimalarials (ACTs), and sulfphadoxine pyrimethamine (SP) for intermittent preventive treatment in pregnancy and oxytocin for reduction of preventable maternal and child deaths.

Using funding from PEPFAR, SIAPS supported the National HIV Department and the MOH to distribute 300 cartons of male condoms to counties and health facilities within CES and WES. Some facilities that received the much needed condoms were Kator, Nyakuron, and Munuki Primary Health Care Centers (PHCCs) and some selected counties were Lainya, Yei River, and Kajokeji. This helped greatly to avert a stock-out of condoms which helps prevent sexually transmitted infections such as HIV and contributes to the AIDS-Free Generation agenda.

SIAPS also supported the transport and distribution of 60 cartons of AZT-based regimens to selected ART centers; Juba ART center in CES; and Kapoeta, Nimule, and Magwi in Eastern Equatoria State (EES). This was a strategy to avoid stock-out of ARVs including AZT regimens.

SIAPS was requested by the MOH and director general of Primary Health Care to support the assessment and accreditation of a new health facility in WES. SIAPs designed a checklist and led the team visit for the assessment. The facility was proposed to be opened as a hospital by the Evangelical Lutheran Church of the Sudan. However, based on the assessment results, the facility could at best be opened as a PHCC, with lots of other improvements needing before health services could be started. A detailed report was submitted to the director general of Primary Health Care and the minister of health.

SIAPS South Sudan continues to make progress on a number of indicators including but not limited to:

- Number of pharmaceutical management trainings conducted in WES and CES (status: 6/16 trainings rolled out)
- Number of counties submitting monthly stock status report (status: stock status reports for 5 counties collected in CES; activities in WES limited by absence of technical staff; with recruitment of a new technical advisor, it is expected that indicators will improve in WES)
- Number of constituted pharmaceutical technical working groups (PTWGs) (status: the program has conducted four PTWG meetings this quarter, exceeds the expected four meetings for the year)

Objective 1. Pharmaceutical services improved to achieve desired health outcomes

SIAPS coordinated with USAID | DELIVER to ensure that all 16 counties in CES and WES received their EMF supplies, including antimalarials and other essential commodities. SIAPS communicated through its partners, such as ISPD and CHDs to ensure that available space was created to receive the consignment, and proper documentation was also done to ensure accountability for the supplies received. Currently, all counties have received their Quarter 4 last quarter of EMF supplies, and SIAPS is supporting partners to ensure the distribution of these much needed supplies to the facilities where they are needed.

SIAPS provided technical and logistical support to Morobo County in CES in the distribution of the last quarter EMF commodities to health facilities that had been requested earlier but could not be delivered because of logistic challenges. These health facilities included Aboroto, Payume, Lujulo, and Aloto PHCCs and Yaribe and Kendila Primary Health Care Units (PHCUs). SIAPS engaged the county's implementing partners such as the ISDP in the process.

To ensure correct and uninterrupted supply of medicines, SIAPS has been working with its partners, including the MOH, to discuss plans and options for the next procurement of essential medicines as the EMF comes to a close. By September 2015, the country faces an imminent stock-out of essential medicines. SIAPS has met with the different stakeholders to look at options and also quantify the vital commodities needed, given the limitations in funding from donors and partners. Hopefully, with financial commitment from donors, the availability of essential medicines will be assured to help save lives of many South Sudanese.

SIAPS continues to provide technical assistance in the management of the CES medical store (which also holds supplied for Juba County) to ensure smooth operation, appropriate medicine storage, and proper inventory management practices (e.g., store arrangement of medicines, stock card update, receipt and issue of medicines).

Currently, supplies are issued based on requests from facilities as part of the implementation of the pull system. Condoms and ARVs from PEPFAR are also stored at the CES medical store.

SIAPS, as part of support to the National HIV Department through PEPFAR, supported the in-country customs clearance and transport of PEPFAR-supported ARVs and condoms to the warehouse for storage and distribution. The clearance of these vital commodities at the ports of entry remains a challenge; however, SIAPS has leveraged on its working relationship with government institutions to ensure smooth clearance and delivery of these supplies to be stored appropriately. This has dramatically reduced the lead time in clearing ARV commodities from an initial 3-4 months to about 2-4 weeks, thereby reducing the risk of poor storage and ensuring that the much needed ARVs reach the people who need them most.

SIAPS has been engaging with the USAID | DELIVER team to ensure that the procurement of 400,000 LLINs, 630,000 doses of ACTs, and about 7,500 doses of SPs are received on time,

transported, and appropriately stored. These supplies are to be distributed to all 16 counties in WES and CES.

SIAPS facilitated a de-junking and disposal of supplies of the Multi-Donor Trust Fund commodities that were stored by selected counties in CES and WES. Some of the counties include Ezo, Nagero, Tambura , and Maridi; nearby PHCCs and PHCUs were also supported. Part of the exercise was to also rearrange the stores to create more space for the in-coming last quarter EMF. SIAPS worked closely with implementing partners on the ground, such as Juanitor International and World Vision International.

Partner contributions

The project has collaborated with partners such as the ISDP, HPF, WHO, UNICEF, and USAID | DELIVER to address issues related to drug supply and management.

Constraints to progress

The general insecurities continue to greatly affect drug supply and management in the country, with certain areas being difficult to reach due to the conflict. Limited funding for health programs, such as drug procurement, has potential implications for some of the key interventions on drug availability.

In CES and WES, some counties do not have store keepers and pharmacists who are accountable for the management of drugs. This also affects capacity-building efforts. Selected counties and health facilities have challenges with shelves and pallets, resulting in poor storage and management of EMF supplies. The program, in collaboration with the NMCP and the National AIDS Control Program, has initiated procurements of pallets to reduce the problem.

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 continues to provide technical assistance in the day-to-day management of the CES medical store, ensuring smooth operation and appropriate medicines storage and inventory practices, including arrangement of medicines in the store, stock card update, and receipts and issues of medicines. SIAPS has provided computers and basic training on how to use them to help staff carry out the day-to-day task of warehouse management.

SIAPS provided technical assistance to World Vision through facilitation of pharmaceutical management training June 15 to 19, 2015, for their health care providers. The participants included clinical officers, midwives, and nurses from the refugees' camps and health facilities which include Mapudu PHCC and Napere PHCU. In all, 10 health workers were trained (8 male and 2 female). This forms parts of SIAPS support in rolling out the pharmaceutical management interventions to the health-facility level to improve medicines availability and use.

SIAPS facilitated training on basic computer skills for staff at the Juba ART site as part of the establishment of the Electronic Dispensing Tool (EDT) to be used for managing ARV and patient care and treatment. In all, seven health workers were trained (five male and two female). The training focused on how to use the key board and its functional keys, Word, and Excel. It is expected that this will help make the use of EDT user-friendly and also build health workers confidence in using the computer.

SIAPS facilitated five days of pharmaceutical management training for Inter Church Medical Aid. This is part of SIAPS collaboration with other partners to strengthen and support pharmaceutical systems. Some of the areas covered in the training included Good Storage Practices, correct use of PMIS tools and reporting forms; rational use of drugs, and conducting effective supportive supervision.

The training was a TOT for participants from the two states of Upper Nile and Jongeli to roll-out the pharmaceutical management efforts at the service delivery level and during monitoring and supervision at the health facilities. In all, 30 participants were trained comprising 6 females and 24 males. The health workers targeted were community health workers, nurses, medical storekeepers, clinical officers, and pharmacy technicians.

SIAPS conducted three days pharmaceutical management training in Yei in early April 2015. The training focused on pharmaceutical management, including PMIS and challenges such as stock management, store improvements, and rational use of medicines.

Participants were drawn from all the Payams of Yei County/Town and CHD staffs. The participants were composed of clinical /officers, nurses, lab technicians, medical storekeepers, midwives/ANC and community health workers; 29 males and 1 female were trained.

Partner contributions

The project has collaborated with ISDP, Inter Medical Aid, and HPF to ensure that pharmaceutical management trainings are rolled out throughout the country. These partners provided logistics and materials for the training.

Constraints to progress

Human resources availability remains a challenge at the facility level, and the capacity to undertake pharmaceutical management tasks is minimal. This leads to difficulty in rolling out program activities.

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

To ensure that information for decision making is enhanced, SIAPS continued to provide monthly stocks status reports through the Logistic Management Unit (LMU). The data received this quarter was mainly from CES. During the monthly report data collection and feedback to the counties, the team noted that there has been a continuous improvement in stock availability. The

rate of stock-outs of tracer medicines has been reduced in all counties. This can be attributed to the effective distribution of EMF throughout the country. The LMU received data from Yei, Terekeka, Kajo-Keji, Morobo, and Lainya Counties and the reporting rates have increased from 10% to 60%. This is significant given that the information received from these counties helps address any stock-out situation and will inform future quantification for drug procurements.

SIAPS compiled the April-June 2015 PPMRm which included the national antimalarial stock status report for the country. The data is used globally for an early warning system to monitor countries' antimalarial stock status, including information on national antimalarial drug selection, procurement, and distribution. The report showed that the availability of antimalarials is approximately 3-4 months of stock, which is consistent with current pipeline and procurement data.

Partner contributions

SIAPS worked with ISDP partners within CES and WES in data collection and field visits. PSI also contributed significantly in providing data for anti-malarial stock status from their supplies.

Constraints to progress

Human resources availability remains a challenge at the health-facility level, and the capacity to undertake inventory management tasks is minimal. This leads to delays in receiving prompt and accurate reports for analysis. The program has just recruited a new data officer for WES, which should make it possible to get information from that state.

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

SIAPS participated in a one-day New Funding Model (NFM) Grant orientation meeting that focused on the Global Fund and principal recipient structure and how it relates to the NMCP, activities to be funded by the Global Fund, available funding, how funding can be assessed, and understanding the associated accountability requirements. The outcome was a better orientation of the NMCP staff on the Global Fund NFM and increased preparedness for grant proposal writing.

Constraints to progress

The newly established Drug and Food Control Authority lacks sufficient human resources and several activities currently requiring their input are therefore delayed, a case in point being the EML/STD development being led by WHO.

Objective 5. Scale-up of malaria interventions accelerated, better coordinated, and documented

As part of the monthly malaria M&E technical meetings, SIAPS updated the previously developed malaria M&E work plan for January-December 2015. This was shared with the

NMCP officers and partner M&E officers from the Malaria Consortium and PSI. The updated work plan also highlighted and synchronized timelines for the different M&E activities.

SIAPS worked with the CES malaria coordinator to conduct malaria case management refresher trainings for 80 health staff (40 from each the public sector and the private sector). SIAPS is currently supporting preparatory work for case management training to take place in August.

SIAPS worked together with the NMCP program manager and other NMCP partners, to discuss the plan for the malaria mid-year review meeting. SIAPS provided technical input into the review meeting which took place June 22 to 25, 2015. by preparing and presenting on the 2015-2016 Malaria Annual Work plan Overview, Malaria Surveillance and M&E Updates and led the discussions on the Jan-Jun 2015 State progress reporting sessions. The state reporting sessions also served to validate plans for the next six months (July-December 2016) prior to the next review meeting. SIAPS also supported the NMCP M&E officer to prepare a presentation on overview of malaria morbidity and mortality trends. The next step is to finalize the state progress reports and submit them for incorporation into the final workshop report. In total, there were 43 participants (9 female and 34 male) who took part in the meeting, including NMCP staff, state M&E officers, malaria coordinators, and malaria partners, both implementers and donors (e.g., USAID, UNICEF, and Global Fund LFA & PSI).

SIAPS had a meeting with the USAID M&E specialist to discuss key elements of the SIAPS performance monitoring plan (including malaria activities, such as trainings, supervision, and sentinel surveillance) as well as discuss the USAID prospect of developing a performance management plan and need to come up with an indicator that can be monitored in all USAID projects. The performance monitoring plan is a USAID requirement that should be designed by each project with a set of elements that should be taken into account. It was agreed that the common indicator to be tracked will be "number of pharmaceutical management training and supportive supervision activities conducted in WES and CES."

SIAPS participated in a one-day NFM grant orientation that focused on the Global Fund and principal recipient structure and how it relates to the NMCP, activities to be funded by the Global Fund, available funds, how these can be accessed, and accountability systems. The outcome was that staff has become better oriented, although meeting presentations have yet to be shared.

Partner contributions

The Global Fund, through PSI, WHO, and USAID, has been supporting malaria activities through the engagement of technical assistance/consultants and advisors. USAID has also contributed to the procurement of antimalarials for case management.

Constraints to progress

The malaria advisor position has not been filled yet. It is hoped that this position will be filled in the next quarter to support the program.

The human resource capacity at the national, state, and county levels to fully implement malaria interventions is limited, which has affected 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.

Swaziland

Goal: Assure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes for HIV, TB, and family planning

Overall Quarter Progress

MOH continues to face challenges in maintaining required levels of HIV and TB tracer health commodities at facilities and central levels. This compromises the country's efforts in achieving targets for HIV (i.e., 90:90:90), TB, and universal health coverage. SIAPS works through the pharmaceutical systems strengthening approach to support MoH achieve national targets for HIV and TB. This quarter, 52% (69) of ART-supported sites maintained required min-max stock levels for ART tracer drugs, an improvement from the 18% reported in the previous quarter; 12% (n = 133) of ART sites reported stock-outs of tracer products for at least three days or more in the quarter. The Central Medical Stores (CMS) and facilities experienced stock-outs of RHZE, lopinavir/ritonavir 200/50 mg, lopinavir/ritonavir 100/25 mg, and TDF/3TC/NVP co-packs. Consequently, SIAPS facilitated redistribution of medicines among facilities to prevent patient treatment interruptions. SIAPS worked with the National AIDS Program and CMS to guide facilities in switching patients from TDF/3TC/NVP to TDF/3TC/efavirenz.

SIAPS participated in HIV, TB, lab, and national Supply Chain Technical Working Group (SCTWG) meetings to get input from all stakeholders on supply management interventions and cooperation in improving stock availability. SIAPS has been requested by the HIV Treatment and Care TWG to provide technical assistance to the ARV forecasting task team as part of the new ARV guidelines roll-out.

SIAPS trained 151 (90 female, 61 male) frontline health workers in pharmaceutical management of HIV and AIDS. They included (18) pharmacists, (48) pharmacy technicians, (29) pharmacy assistants, and (32) nurses. Supportive supervision and mentorships were conducted at 66 facilities and 2 central warehouses.

A total of 92% of ART sites completed and submitted an ART LMIS report, demonstrating an improvement from 87% in previous quarter. Laboratory LMIS recorded a 100% reporting rate consistent with the previous quarter. Timeliness of reports continues to be a challenge with this quarter recording 49% for ART sites, compared to 56% reported in the previous quarter. SIAPS continued supporting activities to ensure interoperability of Rxsolution with other health information systems. SIAPS also supported and monitored closely the roll-out of the web-based Commodity Tracking System (CTS) at CMS.

SIAPS also supported the National TB Control program (NTCP) to review TB medicines quantification. Following USAID's pledge to support condom procurement, SIAPS worked with CMS preparing and submitting a plan for procurement valued at $407,013 for 2015/16 with a confirmation of consignment delivery in August and October 2015. SIAPS has also supported the Swaziland Health Laboratory Services (SHLS) to prepare the quantification of laboratory commodities. SIAPS was part of the team that met with assistant director of CMS to brief him on

progress regarding the procurement of ARVs and the identification of space at CMS to accommodate the scale-up in HIV management. SIAPS worked with CMS to explore optimal utilization of the central warehouse and facility storage space. SIAPS assisted the Procurement Unit with preparing the motivation for the limited tender procurement of a few ARVs that did not attract bidders in two rounds of the open tender. The Swaziland Public Procurement Regulatory Authority (SPPRA) has since approved the request for quotation for procurement of items such as lopinavir/ritonavir suspension, saquinavir, and nevirapine 100 mg dispersible tablets. SIAPS assisted MOH in preparing input for the draft of public procurement regulations 2015 published by SPPRA to guide implementation of the Public Procurement Act 2012. A request for special consideration of procurement needs for health products was included in these regulations.

SIAPS continued supporting five active surveillance sentinel sites through mentorships. To position Swaziland for impending adoption of bedaquiline, SIAPS facilitated pharmacovigilance training at the National TB Hospital for health care workers managing MDR/XDR TB patients.

Objective 1. Strengthen governance in the pharmaceutical sector

Building on the milestones achieved thus far on regulatory matters, SIAPS continued to support the Office of the Chief Pharmacist to advocate for enactment of the Medicines and Related Substances Control Bill and the Pharmacy Bill. Three meetings were held with the Health Portfolio Committee to prepare for the debate on the bills in the House of Assembly. Consequently, the bills were successfully debated and approved, with amendments by the House of Assembly. The bills have yet to be debated by the House of Senate; once approved there, they will be enacted into law. Advocacy with senators continue.

In the absence of laws, SIAPS provides technical assistance in controlling medicines imported into Swaziland by supporting the chief pharmacist in issuing VAT exemption letters to the Swaziland Revenue Authority for imported prescription medicines. In addition, SIAPS provided guidance on importation guidelines for medicines and manufacturing of nutritional supplements.

During the quarter, SIAPS facilitated the dissemination of the pharmacy strategic plan to all ART sites and community pharmacies. In the next quarter, a stakeholder consultation meeting will be held to finalize the plan's M&E operational framework

SIAPS continues to coordinate and facilitate high-level discussions to improve supply chain processes; prevent stock-outs for HIV, TB, laboratory, and health commodities and ensure RMU at all levels of health care. During the quarter, SIAPS participated in the HIV Treatment and Care TWG, TBTWG, TB/HIV National Coordinating Committee, SCTWG, and weekly laboratory SC meetings. Following a presentation of findings from a data quality audit at the SCTWG, a resolution was taken to address the quality of logistics data in the country.

Constraints to progress

Nonattendance of officials responsible for the supply chain management of ARVs and TB medicines at TWG meetings and other technical/stakeholder platforms is a grave concern for

implementation of interventions to improve commodity security. SIAPS will continue to engage the head of CMS and the chief pharmacist to encourage participation of the ARV procurement and the TB program pharmacists in the TWGs.

Objective 2: Increase capacity for pharmaceutical supply management and services

SIAPS conducted trainings for 151 (90 women, 61 men) health care workers on pharmaceutical management of HIV commodities and implementation of the 2014 integrated HIV management guidelines. Participants developed post-training action plans, 21 of which were developed into quality improvement projects in the respective facilities.

In an endeavor to contain antimicrobial resistance and improve TB case finding, SIAPS supported the TB program in developing training materials and designing a patient referral system between private pharmacies and public health facilities. These documents were used to inform training of 24 private pharmacy personnel on TB symptom screening and referral processes. The training was co-funded by the national medicines wholesaler, SwaziPharm.

Furthermore, an abstract on the involvement of private sector pharmacists in TB control was submitted to the 46th Union Conference on Lung Health 2015. SIAPS will distribute monitoring tools and other job aids during the supportive visits in the next quarter.

SIAPS also conducted onsite training on completion of active surveillance tools and use of the electronic sentinel site database (SSASSA) for health workers at three facilities earmarked for active surveillance, which commenced for two of the facilities. The next step is to deploy SSASSA at the National TB Hospital Data Unit. This brings the number of facilities implementing the HIV/TB active surveillance to seven.

Because of the impending adoption of bedaquiline, SIAPS provided onsite training on pharmacovigilance at the National TB Hospital for all health professionals managing MDR-TB patients; the goal is to revive the active surveillance system and establish a patient safety monitoring system.

SIAPS continues to provide supportive supervision and mentorships in all four regions. During the quarter, SIAPS conducted supportive supervisions at 66 health facilities and 2 central warehouses. SIAPS supported the MOH-CMS to conduct “deep dive” supportive supervision visits to 37 health facilities in the Manzini and Shiselweni regions. In Manzini, facilities showed an improvement in stock card update from 56% in 2014 to 74% in 2015.

SIAPS has been working to improve the relationships between ART initiation and feeder sites in regards to patient management and stock availability. In the Lubombo region, staff from the Good Shepard Hospital and the regional clinic supervisor conducted supportive visits to feeder clinics.

Two health facilities were supported to improve supply chain management for laboratory commodities. Four health care workers from these facilities were mentored on inventory

management including how to properly store commodities; calculate AMC and re-order levels; monitor the SHLS supply chain pipeline; and place monthly orders on time. In addition, onsite mentoring on the use of RxSolution was conducted at 5 health facilities and 2 warehouses, reaching 14 users; 6 staff members of the Data Management Unit (DMU) were mentored on the use of the CTS.

SIAPS provided technical assistance to Southern Africa Nazarene University (SANU) to ensure minimal disruptions during the on-boarding of the newly appointed acting head of the Faculty of Health Sciences and selection of the new external examiner. SIAPS participated in a workshop for students and preceptors on clinical attachments. SIAPS also facilitated SANU pharmacy students in receiving training by the Swaziland National HIV/AIDS Program to capacitate them on providing health care services to key populations.

SIAPS support to SANU is coming to an end with the academic year 2014/15.

Partner contributions

EGPAF financially supported PMTCT and sexual reproductive health training

Constraints to progress

Communication between health facilities (customers) and CMS (supplier) has been lacking. SIAPS facilitated a meeting between regional health managers (clinic supervisors, regionally based pharmacists, and the regional matron) in the Lubombo region with senior management at CMS. The objective of the meeting was to help stakeholders share challenges and agree on solutions to improve medicines availability in the region's health facilities. This fostered open communication between the assistant director, regional matron, and regional health managers receiving weekly CMS updates.

Objective 3: Address information utilization for pharmaceutical management decision making

Great strides have been made to improve availability of logistics data for decision making at SHLS; a reporting rate of 100% has been maintained this quarter, and SIAPS has strengthened efforts through revising and printing the main laboratory commodities LMIS forms. These forms are a data source for the SIAPS-supported data entry clerk to capture the data on the redesigned web-based CTS and engage laboratory management on gaps identified. With SIAPS support, SHLS addresses the gaps through mentorship and supportive supervision to improve timeliness, accuracy, and completeness of reports.

RxSolution has been in use in the country for inventory management, with patient information management capabilities. To adapt to the changes within the health system and meet client needs, SIAPS acquired a new version of RxSolution from the developers in SIAPS South Africa. The MIS advisor and an MOH counterpart were oriented on the new version during a visit to Pretoria in May. Going forward, the pair will be primary supporters of RxSolution implementation and interfacing with other systems to strengthen patient management

information. SIAPS is currently providing technical assistance to the Strategic Information Department on the integration of RxSolution with the Client Management Information System currently under development with technical assistance from the Institute for Health Measurement.

Leveraging on the successes with the consistent use of RxSolution at SHLS and using Pipeline software for supply planning, SIAPS identified the need for the tools to be synchronized to overcome the burden of manual data entry, reduce errors in data transcribing, and improve time efficiency. SIAPS went on to engage a local developer to design an interface application that will synchronize Pipeline and RxSolution. To date, a sync application and draft system documentation (user guide, installation guide) have been developed for the SIAPS team to test.

SIAPS provided technical assistance and participated in the semi-annual CMS DMU data quality assessment at 49 health facilities. The report of findings from this assessment is currently being drafted and will be finalized and disseminated at a workshop next quarter. SIAPS also continued to support the CMS in improving reporting rates of logistics data from facilities. During the quarter, 92% of ART sites managed to complete and submit an ART LMIS report, demonstrating an improvement from 87% in the previous quarter. Timeliness of reports continues to be a challenge with this quarter, recording 49% for ART sites, representing a 7% decrease in performance for the quarter.

Constraints to progress

The use of CTS at the DMU has not progressed as anticipated albeit training has been provided. Mentorship and support will be provided to the unit to ensure that data capture, analysis, and publishing of reports is up to date.

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

This quarter, SIAPS supported the NTCP in quantifying first-line anti-TB medicines. The main objectives were to review methodologies and tools; validate all assumptions and discuss data sources and gaps; and determine how to address gaps. SIAPS also conducted two supply planning meetings for TB medicines (NTCP) and submitted the supply plan report to the TB program to be sent to CMS for creation of purchase orders.

SIAPS is part of the team that ensures that laboratory commodities are properly forecasted, and that all streams of funding (MOH and Global Fund) are adequately coordinated to avoid stock-outs and over-stocking. SIAPS supports this exercise by providing critical data analysis from various sources such as RxSolution and the CTS. The annual quantification process for 2016/2017 forecasts for laboratory commodities is due to be completed on August 31, 2015.

USAID has pledged to procure male and female condoms for the MOH. CMS has received the first consignment of 6 million male condoms in April. This was an emergency stock that was procured when MOH stock levels fell below the recommended minimum. A supply plan for the 2015/16 was done to inform planning of condom procurement. The plan was forwarded to

USAID, and an order for the next consignment has been placed with expected delivery dates of August 2015 and October 2015.

For the Procurement Unit, SIAPS supported the tender evaluation for standardizing chemistry platforms within SHLS and the re-tender for pharmaceuticals and medical supplies that had not received bids earlier. MOH received a supplementary budget of SZL 110 million which was requested in November 2014. These funds were used to place an order of tenofovir/lamivudine/ efavirenz tablets. A consignment equivalent to two months of tenofovir/lamivudine/efavirenz was received through the USAID procurement mechanism, boosting the stocks of this product this quarter. Assistance has been provided to the Procurement Unit in preparing a request for quotations for procurement of a few low-volume ARVs that did not attract bidders in the two rounds of open tenders.

As part of the grant making process, the Global Fund team visited the country to discuss with proposed activities for the HIV/TB grant with MOH. SIAPS supported the assistant director of CMS to the Global Fund delegation to illustrate progress regarding the procurement of ARVs and the availability of space at CMS to accommodate the scale-up in the management of HIV.

Constraints to progress

During the budget allocation, MOH had provided adequate funds for the procurement of ARVs. Global Fund had also been requested to provide support to ensure availability of ARVs so that implementation of the 2015 HIV management guidelines is not hindered by unavailability of medicines. MOH is still struggling to find funds for the purchase of an additional warehouse which would greatly increase storage capacity. The change in financial years (2014/15 and 2015/16) has affected the procurement cycle, hence a few stock-outs of tracer medicines, including TB first-line medicines, were recorded this quarter.

Objective 5: Improve pharmaceutical services to achieve desired health outcomes

Swaziland continues to face challenges in maintaining required stock levels of health commodities at facilities and central levels. During the quarter, 52 % (n=133) of ART-supported sites were able to maintain the required minimum-maximum stock levels for ARV tracer medicines. This was an improvement from the 18% reported in the previous quarter ending March 2015. Furthermore, 12% (n = 133) of these ART sites reported a stock-out of tracer medicines for at least three days or more in the last three months. The CMS and facilities experienced stock outs of RHZE, lopinavir/ritonavir 200/50 mg, lopinavir/ritonavir 100/25 mg and TDF/3TC/NVP co-packs. In light of this, SIAPS facilitated the redistribution of these medicines among facilities to prevent treatment interruptions and supported the guidance to switch patients from the NVP regimen to the EFV fixed-dose combination.

SIAPS supported the CMS in implementation of the performance improvement plan developed following the warehouse operations training held in December 2014. In this quarter, inventory accuracy has been chosen as an area of intervention by introducing cycle stock counting at CMS. A stepwise approach will be followed, beginning with monthly physical stock counts of TB

medicine. The inventory accuracy for TB commodities for the month of June was at 38% and the target for December 2015 is 90%.

Working with MOH pharmacovigilance focal person, SIAPS continued supporting the five active surveillance sentinel sites through supportive supervision visits and data collection visits. During the mentorship visits, SIAPS conducted audits of selected files to address gaps found during causality analysis; provided facilities with job aids for grading adverse events and to complete tools; and verified data quality in specific patient files. Two new facilities were added to the five active surveillance sentinel sites. SIAPS also facilitated the formation of a pharmacovigilance core team to develop the national medicines safety monitoring committee.

SIAPS continued to provide technical assistance in drafting the causality assessment of adverse events, analyzing over 150 adverse events. The pharmacovigilance data analysis showed that 2,080 patients have been enrolled on the active surveillance system and 939 adverse events reported; 58% of ADRs were reported by females and 42% by males. The most common ADRs among patients on ARV were rash (21%), peripheral neuropathy (16%), and vomiting (11%). Meanwhile, patients on TB treatment mostly complained of peripheral neuropathy (14%), ototoxicity (12%), and rash (8%).

A total of 50 ADR reporting forms were printed and disseminated to facilities. The reporting rate for passive surveillance has increased from 20 ADR reports in the previous quarter to 46 in the current quarter. Analysis of the reports received in the last two quarters revealed that efavirenz was a suspected medicine in 38% of the reports, nevirapine constituting 14% of complaints, and isoniazid was the suspected causative medicine in 11% of the reports. The findings were documented in the Medicines Safety Watch Newsletter and also shared at the semi-annual National ART Semi-Annual Review meeting. The improvement in reporting of ADRs has propelled Swaziland from being a provisional member to full-membership of the WHO Uppsala Monitoring Center. The next steps are to disseminate the newsletter and print 50 copies of it for dissemination to MOH senior staff and other stakeholders.

Following the PTC training conducted in the previous quarter, eight facilities have had at least one meeting this quarter. Issues discussed included the use of STGs, triplicate prescriptions for the pharmacy, refilling of chronic medication, development of an antibiotic policy, and implementation of the new integrated HIV guidelines.

Constraints to progress

In the initial request for support for the procurement of condoms, the Sexual Reproductive Health Unit (SRHU) requested that USAID not buy silver or unbranded condoms. However, the first consignment of condoms was white, and the unit was not pleased. SIAPS engaged the SRHU, and it was agreed that going forward, USAID will procure Protector Plus, a branded condom.

Tajikistan

Goal: To strengthen the TB control system of Tajikistan to address the threat of increased MDR-TB

With SIAPS support, the technical capacity of NTP in pharmaceutical management increased further. The NTP now is able to coordinate work of the stakeholders related to TB pharmaceutical management.

The TB pharmaceutical management manual, along with the respective training materials (Power Point presentations) for post-diploma curriculum is ready for translation into Tajik language and approval from the MOH.

The Java based electronic tool to aggregate and manage LMIS data has been developed and in close collaboration with NTP, the tool is being tested.

SIAPS developed training materials for refreshing LMIS training, which is scheduled to be conducted in September.

Early warning and quantification system is functioning. SIAPS agreed with the partner organizations (KNCV, Project Hope) they will support its rollout and maintenance after SIAPS phase out.

Objective 1. Increase and Enhance Capacity for Pharmaceutical Management of NTP of Tajikistan

During the reporting period, SIAPS provided a TA to the National Pharmaceutical Management Coordinator of Tajikistan NTP to manage and coordinate unified forecasting and quantification of the SLD to be ordered by the different partners—principle recipients of the Global Fund TB projects (UNDP, Project Hope).

The draft TB pharmaceutical management manual along with the respective training materials (Power Point presentations) for post-diploma curriculum, which was developed by SIAPS to the NTP and Chief TB Specialist of the MOH for their comments during the previous quarter. Comments were received and now SIAPS team is in the process of finalization and translation of training materials from Russian to Tajik. After the materials are translated, they will have to be sent to the Ministry of Health for a final approval and handover.

Partner Contributions

The NTP and Chief TB Specialist of the Ministry of Health reviewed and provided their inputs for the TB pharmaceutical management training curriculum materials.

Objective 2. Increase Use of Information for Decision Making in TB Pharmaceutical Management

SIAPS assists the NTP in optimizing the use of existing paper-based LMIS reporting, and is developing an automated Java based tool to aggregate and manage LMIS data electronically. The tool allows aggregation of information on stocks and medicine's movement sent by the oblasts to the national level through email. The National PM coordinator has a primary access to the tool which will save considerable time in acquiring and summarizing the information. Also, it is expected that the system would improve quality and completeness of reports. The system is currently being tested and then will be piloted in the Sogd oblast and some other selected district TB facilities.

Also, SIAPS provided TA to develop a training curricula and materials for a refresher training in LMIS for staff involved in TB pharmaceutical management for all levels. Trainers at the central level who will be responsible for teaching TB pharmaceutical management at oblast and rayon level TB facilities, were trained. The trainings are planned to be conducted in July–August with SIAPS support.

Partner Contributions

National partners (NTP and National TB Prevention Center) participated in testing of the electronic reporting system. USAID-funded Challenge TB program implemented by KNCV will take over supporting the NTP to roll out the electronic tool for LMIS data aggregation after SIAPS project finishes.

Objective 3. Strengthen Supply System of Anti-TB Medicines

SIAPS continues supporting NTP in utilization of the early warning and quantification system through QuanTB. The patient- and stock-related data for QuanTB is collected from all TB facilities on quarterly bases and submitted to the upper level. The data is entered in QuanTB and analyzed by the national PM coordinator for entire country. The NTP pharmaceutical management coordinator makes medicines distribution plans for the regions and districts based on the QuanTB analysis. Also, it helps to coordinate the quantification of medicines with the international partners ordering medicines from GDF. Also, currently, SIAPS supports NTP in shifting some responsibilities to the oblast level in the Sogd and Kurgantube regions—in the future, the collected data will be entered in QuanTB on the oblast level and the ready QuanTB files will be sent to the national level.

Partner Contributions

The new early warning system was discussed with the partner organizations Project Hope and KNCV implementing USAID-funded TB programs, which have a pharmaceutical management component for the next five years. KNCV and Project Hope are willing to contribute to the rollout and maintenance of the early warning and quantification system. Project Hope is planning to designate staff at all levels responsible for the early warning system to support the NTP and KNCV will be supporting the NTP in monitoring and supervision visits. During the country visit,

a SIAPS consultant provided a one-day training to the Project HOPE pharmaceutical supply management person. SIAPS also supported KNCV Tajikistan branch office to develop a work plan for the pharmaceutical management component in the framework of Challenge TB program, where rollout of early warning system and quantification with the use of QuanTB is scheduled for the next five years.

Turkmenistan

Goal: To strengthen the Tuberculosis control system of Turkmenistan to address the threat of increased MDR-TB.

Objective 1. Strengthen the Turkmenistan NTP by improving the TB management information system

There has not been any progress in implementing of e-TB manager in Turkmenistan. As there is no progress in implementation of eTB Manager and the National counterparts show no commitment for starting piloting of eTB Manager in the country, the other areas for SIAPS support also were explored. During the SIAPS consultant's visit to Turkmenistan, who conducted GDF country monitoring mission on GDF's behalf, this issue was discussed. The NTP expressed interest in training of the staff on use of QuanTB for early warning and medicines quantification purposes. SIAPS is currently discussing with the WHO office in Turkmenistan the possibility of organizing a joint training of the NTP staff on the use of QuanTB.

Constraints to Progress

Neither the Ministry of Health nor National TB Program shows any commitment in implementation of eTB Manager. Although the staff was trained and WHO office in Turkmenistan provided TB facilities in Ashgabat and Mari region with IT equipment, no actions were taken by NTP to start piloting of the system.

Partner Contributions

SIAPS collaborates with WHO Country Office in Turkmenistan on all its activities.

Ukraine

Goal: Assure availability of quality pharmaceutical products and effective pharmaceutical services to achieve the desired outcomes for HIV and AIDS and TB patients in country.

Overall Quarter Progress

The third quarter of SIAPS PY4 in Ukraine was marked by advancements in all activities, some of them outstanding.

For objective 1, a final milestone was reached when the transition memorandum with the Ukrainian Center for Disease Control (UCDC) was signed, thus closing the process of transferring ownership of e-TB Manager to the Government of Ukraine.

Another important advancement is related to implementation of the Medicines Management Module (MMM), the piloting of which began in Kyiv oblast, for drugs procured by both the Global Fund and public funds. The State Penitentiary System (SPS) is expected to pilot use of the module in July 2015.

For objective 2, the data analysis on drug utilization review (DUR) in a TB facility was successfully completed, taking the review to the next step; the first draft of the report is expected in July. The protocol for DUR in HIV facilities is in the final stage of development, and the piloting is planned to start in early August 2015.

The pilot of Pharmacovigilance Automated Information System (PAIS) continues, with 52 cases of ADR/lack of efficacy entered. Development of the data protection system for PAIS has started and is going according to plan.

For the objective 3, development of the national PV guidelines is proceeding. Two more modules are in development since the PV Guidelines Working Group resumed its work. Four modules out of those six previously developed were approved by the MOH.

Despite the political circumstances surrounding the national essential medicines list (NEML), agreement has been reached with key stakeholders on the course of action and drafting the legislation. One of the drafted documents, the provisions on NEML, has successfully passed public discussion, and is under review at the Ministry of Justice. Approval is expected in early July.

For objective 4, the continuing success story of framework agreements is now supplemented with a successful tender performed in Poltava oblast for antibiotics valued at over USD 21,000 to be delivered to the children's hospital.

Objective 1. Strengthen pharmaceutical management information systems to support the HIV and AIDS and TB programs

The focus during this quarter was on the transitioning ownership of e-TB Manager to the Government of Ukraine and advancing the MMM.

The transition memorandum with UCDC was signed on June 4, 2015. This is the final milestone which closes the process of transferring ownership of e-TB Manager to the Government of Ukraine. Ownership and responsibility for system maintenance has been handed from SIAPS Ukraine to UCDC.

The consultant was contracted on April 1, 2015, to coordinate further implementation of the MMM. The module is finalized and is being piloted in Kyiv oblast, for drugs procured by both the Global Fund and public funds. It is expected that by the end of June/mid-July, the data on stock level will be entered to the system. When it is done, training will begin.

Additional progress was made in implementation of e-TB Manager in the State Penitentiary System (SPS) in relation to MMM. As a result of extensive collaboration between SIAPS Ukraine and SPS, the algorithm of drug flow within SPS was explicitly formalized in a separate document entitled MMM Guide. This document contains detailed descriptions of all possible algorithms and MMM user guidelines. Based on these algorithms, the MMM was adapted to the needs of SPS. It is expected that SPS will pilot the module in quarter 4, PY4.

In addition, progress has been made on a treatment module and an analytic report sub-module. The treatment module has been enhanced to make management of treatment data more flexible. The results of these efforts are contained in a treatment module enhancement proposal, the document agreed upon with UCDC. The analytic report sub-module now has additional country-specific analytic dimensions, such as districts and health care supporters.

Partner contributions

The major contributing partner for this objective remains UCDC, which continued to support MMM implementation and provide SIAPS Ukraine with specifications of technical requirements for updates, bug fixes, and other improvements for e-TB Manager.

Constraints to progress

UCDC requested that regions express their needs for technical assistance in implementation of e-TB Manager; Donetsk, Kharkiv, and Ternopil oblasts replied. Later, Donetsk oblast withdrew its request. After that, UCDC asked SIAPS Ukraine to provide such assistance in the context of field visits, which will be held jointly or separately. By the end of June, UCDC had not provided SIAPS Ukraine with a visits schedule. Visits are expected to be performed in the next quarter.

UCDC and SPS need to enter stock-level data into MMM to enable use of the module for forecasting demand. Apparently, the current process of MMM implementation is perceived as a difficult task by personal at health facilities. This is caused by the inconsistency between data in

system and actual stock levels. Actualization involves data collection down to the facility level, where current "manual" medicines management processes are weak (from management's perspective), while the process of data entry is complex and time-consuming. Based on piloting results, data entry will be simplified.

The current official TB reporting and TB treatment guidelines are poorly formalized and require much extra effort to adopt e-TB Manager to them.

SPS ran into an internal budget issue, as they did not include the monthly fee for Internet provider services for a large number of workplaces in their budget. The issue is being resolved internally by SPS.

Objective 2. Improve pharmaceutical services for the TB and HIV and AIDS programs

The completed TB facility DUR data collection forms were received by SIAPS Ukraine in late March 2015, and it was planned that data analysis would take about a month. A closer look at the data revealed that it is much more diverse than was expected. As a result, the analysis took longer and was successfully completed by mid-June. The final draft of the report is expected to be presented at a stakeholders meeting in late July/early August.

The vendor for DUR protocol development for HIV facilities was selected and the contract was signed in late May. The protocol is in development and is expected to be delivered in mid-July to be discussed at a stakeholders meeting.

According to the plan, the next step will be piloting the protocol in two health care facilities (Chernihiv Oblast and Kyiv City AIDS Centers), which will have signed the relevant MOUs with SIAPS Ukraine. As of the end of June, the MOUs are finalized and have been signed by SIAPS Ukraine. Both mutually signed MOUs are expected in July.

The piloting and further improvement of the DUR/HIV protocol will take approximately three to four weeks, thus early in September, data collection is expected to start.

SIAPS Ukraine continued piloting the PAIS in AIDS centers. By the end of June, 52 cases of adverse reaction/lack of efficacy (cumulatively over two quarters) were entered into the system.

The format of the data protection system for the PAIS was agreed upon with the State Expert Center (SEC), and the contract was signed with the developer. The system began development in May 2015. Until the data protection system is in place, piloting the PAIS will continue, preliminarily until the end of quarter 1 PY5.

Meanwhile, the pilot of PAIS has expanded and now includes five more regional (oblast) AIDS centers and SEC representatives in these oblasts. The training was held on June 3, 2015, for AIDS center doctors. On June 17, the roundtable was held on intermediary results of PAIS piloting. All regional representatives of SEC and AIDS centers were present. The plan for pilot advancement was agreed upon.

Partner contributions

Major contributor for implementing DUR in TB and AIDS facilities is SEC, which helped in reviewing and finalization of the data analysis, based on which the report will be prepared. AIDS centers greatly contributed to improving the PAIS by using it and providing the feedback.

Objective 3. Improve pharmaceutical management governance

The work on pharmacovigilance (PV) guidelines was suspended in two previous quarters because of political and staffing issues around SEC management. (In addition, a server was lost in a fire.) By May 2015, the situation became stable after the new heads of SEC and the relevant MOH department were appointed. This positive change allowed the work of the PV Guideline Working Group to resume. Since then, two modules of the national PV guidelines are being developed. Of the six modules already developed, four were approved by MOH in late May.

Due to the changed political environment, reforming the NEML process was adapted accordingly. As of the end of June, the plan is that the first set of documents will be approved by separate orders of MOH including (with respective timelines):

- Regulations on NEML (early July)
- Regulations on EML Expert Committee (end of July)
- Methodology of drug selection for EML (end of August)

Afterward, the EML Expert Committee will develop the EML, which will be approved by decree of the Cabinet of Ministers of Ukraine (CMU), which is envisioned for November 2015.

In this quarter, the draft regulations on NEML were published on the MOH web site for public discussion, which officially ended May 25. Comments and suggestions received were reviewed and taken into account. The final version is ready to be submitted to the Ministry of Justice for final approval. If no major issues arise, approval of regulations on NEML by MOH order is expected in early July.

Additionally, the draft regulations from the EML Expert Committee were developed and are expected to be submitted to MOH in July 2015. The decree of CMU has also been drafted.

In the reporting quarter, the vendor for developing the web-based price monitoring tool was selected, and as of the end of June, the details of the contract are being discussed.

Partner contributions

- After the PV Guidelines Working Group resumed work, the SEC worked on approval of the four modules by the MOH.
- The National Medical University and SEC continue to provide assistance in developing the legislation for NEML.

Constraints to progress

Due to delays with selection of the vendor for medicine's price monitoring tool, there are risks that the development will not be finalized as scheduled.

Objective 4. Improve management of supply chain services

Early this quarter (April 8, 2015) the senior technical advisor for supply chain resigned from SIAPS Ukraine. Recruitment has been initiated, and a new team member is joining SIAPS Ukraine in early July.

Meanwhile, the trainings on framework agreements given in the previous two quarters continue to yield results. Thus, three more tenders for framework agreements were announced during this quarter in Poltava oblast. Two of them were not successful with only one bidder in both tenders.

Another one was successfully completed with three winners. This tender was for antibiotics (three INNs) which are to be delivered during 2015–2016. The total cost of the accepted proposals is USD 21,161.41 (UAH 444,500.10). The framework agreement is expected to be signed no later than July 12.

Lately, advancement of the framework agreements agenda was falling behind in Dnipropetrovsk, partly because of local health administration staffing changes caused by the change of the oblast's governor. To follow up on these issues, the consultant for SIAPS Ukraine visited Dnipropetrovsk on June 10–12, 2015. The main purpose of the visit was to reach an agreement with the administration of Dnepropetrovsk oblast on supporting framework agreements as a tool for public procurement of medicines and initiating practical steps forward. As a result, the workplan of the pilot project on the framework contract was signed. Key areas for the successful development of the project have been identified and a letter from the oblast Governor's Office was addressed to SIAPS Ukraine, reassuring the oblast's interest in continuing implementation of framework agreements.

SIAPS Ukraine worked in a few areas other than framework contracting, one of which was preparatory work for the National Supply Chain Assessment (NSCA), which is envisioned in early PY5. On June 16–17, 2015, the workshop on NSCA was held in Kyiv by the MOH with technical assistance from SIAPS Ukraine. This workshop opened a planning phase of the assessment and has informed an understanding of scope, time, and resources needed, as well provided necessary input to further planning, methodology adaptation, and implementation processes. The event was opened by the Deputy Minister of Health, Ihor Perehinets, and USAID Ukraine Health Office Director, Charles Lerman.

Participants were the top experts representing national and international stakeholders from government and civil sectors. A SIAPS senior technical advisor and an SCMS technical assistance program officer were the main speakers of the workshop. They presented the methodology and tools of the assessment and facilitated the discussion toward a common understanding of preliminary technical details of the assessment and expectations regarding stakeholders' involvement in its implementation later this year. The workshop was covered in an

article in the local pharmaceutical newspaper Apteka. During two follow-up meetings, the necessary input for assessment planning was retrieved. Afterwards, the preliminary budget for the assessment was drafted, outlining the requirements and a high-level plan of a proposed NSCA roll-out in Ukraine.

To improve the management of supply chain services, SIAPS helped UCDC get additional supplies of ARVs through PEPFAR's Emergency Commodity Fund (ECF). SIAPS participated in several meetings with UNAIDS, Global Fund principal recipients, and the US Government to discuss the issues around next year's supply of ART and lab commodities. SIAPS was then requested by the US Government team to support the UCDC in completing the ECF toolkit as part of the application for ECF funding and to liaise with the PFSCM to provide the required information so that they could provide a price estimate for the commodities requested.

Partner contributions

Two health facilities have announced framework agreements tenders in Poltava: Poltava Oblast Mental Clinic and Poltava Oblast Children's Hospital.

Constraints to progress

The main constraint was the absence of a senior technical advisor on supply chain to advance the framework agreements agenda.

Uzbekistan

Goal: The primary goal of the project is to strengthen the TB control system to address the threat of increased MDR-TB.

During the reporting period, an abstract on the comprehensive indicator based TB pharmaceutical management assessment was developed and submitted to the 46th World Conference on Lung Health. A draft report on piloting of Drug Use Review (DUR) program in three TB facilities of Tashkent city has been prepared. DUR findings were presented at the VIII Congress of Phthisiatricians and Pulmonologists of Uzbekistan, which was held in May 2015 in Tashkent city. Also, an abstract "Drug Use Review Program in Uzbekistan: Pathway to Improved Rational Use of Anti-Tuberculosis Medicines" was submitted to the 46th World Conference on Lung Health to be held in December 2015.

System for data collection for quantification and early warning system has been established on all levels of three regions and Tashkent city and this system is functioning. Early warning and quantification system is functional and run by the regional staff for two pilot regions (Khorezm Oblast and Tashkent City).

Nationwide training for drug management specialists to improve TB Logistics Management Information System in Uzbekistan was conducted in May–June 2015.

Objective 1. Strengthen Pharmaceutical Sector Governance

During the reporting period, an abstract "Indicator-Based Assessment of TB Pharmaceutical Management System in Uzbekistan: Information for Strategic Planning" was developed and submitted to the 46th World Conference on Lung Health, to be held in December 2015. The abstract discusses methodology and some findings of the comprehensive indicator- based TB pharmaceutical management assessment which was conducted by SIAPS and the National TB Pharmaceutical Management Working Group in summer 2014The assessment produced findings that served as a basis for the development of the TB Pharmaceutical Management Chapter of the new National TB Control Strategy of Uzbekistan.

Partner Contributions

National TB Pharmaceutical Management Group members contributed to the development of the abstract.

Objective 2. Strengthen Pharmaceutical Services for the NTP of Uzbekistan

During the reporting period, SIAPS supported the national counterpart, TB Pharmaceutical Management Working Group (MOH PM working group) , which was established by the Uzbekistan MOH, to analyze data collected during the drug use review (DUR) that was conducted with SIAPS assistance in February–March 2015 in three TB facilities of Tashkent City. The finalized report is expected to be disseminated next quarter to the respective TB facilities and also the detailed improvement plan will be elaborated. The DUR findings were developed and presented at the VIII Congress of Phthisiatricians and Pulmonologists, held in

May 2015 in Tashkent City. Also, the SIAPS abstract on the Drug Use Review Program in Uzbekistan" submitted to the 46th World Conference on Lung Health, was approved for a poster presentation.

Partner Contributions

SIAPS worked with the Uzbekistan TB Pharmaceutical Management Working Group that was established by the MOH to conduct the DUR and analyze the findings. Also, the TB Working Group collaborated with SIAPS to develop the report and abstract.

Objective 3. Strengthen Supply System of Anti-TB Medicines

Since January 2015, an system for early warning and quantification with the use of QuanTB was being piloted in three regions (Samarkand, Khorezm, and Fergana oblasts) and Tashkent City, which is managed and coordinated by the central level (National TB institute and Republican DOTS center). The system enabled the National Tuberculosis Program to take remedial actions at the district levels to avoid stock-outs or surplus of second-line medicines that would lead to losses due to expiry. In May 2015, SIAPS facilitated a meeting with participation of the representatives of the pilot regions and TB pharmaceutical management working group to discuss the results of the pilot. During the piloting period, the early warning and quantification system helped to detect and solve several problems in supply of anti-TB medicines on the district level. It was decided that the system will be rolled out throughout the country and plans are that training of remaining oblast representatives will be conducted in July, including those oblasts that are supported by USAID-funded TB project implemented by Project HOPE. The model of the system will be based on the results of the pilot. As of today, all pilot regions continue data collection and analyses by using QuanTB.

During May–June 2015, SIAPS supported the NTP in conducting a nation-wide refresher trainings in LMIS for all designated drug management staff in TB facilities. Training materials were developed and trainers from the central and oblast levels were trained as trainers. There were a total of 236 TB drug management specialists from 186 districts and 14 regional level TB facilities that were trained.

Constraints to Progress

The main challenge for the implementation of the early warning and quantification system is a lack of HR capacity and turnover of trained staff in Fergana oblast. In Fergana, the system pilot results did not meet expectations, particularly in terms of reporting the problems detected by the system and the remedial actions taken.

Partner Contributions

The USAID-funded TB project carried out by Project HOPE will support implementation of early warning and quantification system in four regions of Uzbekistan. Respectively, SIAPS was requested to support and provide training in use of QuanTB for Project HOPE and oblast TB facility staff.

The training on LMIS was conducted in close cooperation with the Republican scientific Institute of Pulmonology and TB, National DOTS Center and World Health Organization (WHO) office in Uzbekistan.