SIAPS Quarterly Report

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July 2014–September 2014

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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.

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ACRONYMS AND ABBREVIATIONS

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
CNLS	AIDS Control Program (Cameroon)
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)
DRC	Democratic Republic of the Congo
DTC	Drug and Therapeutics Committee
EDT	Electronic Dispensing Tool
EHRIG	Ethiopian Hospital Reform Implementation Guideline
eTBM	eTB Manager
EUV	end-user 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
HCW	health care 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
MDG	Millennium Development Goal
MDR	multidrug resistant
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
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)
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
STGs	standard treatment guidelines
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
UNICEF	United Nations Children's Fund
USAID	US Agency for International Development
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 third year, SIAPS works with local counterparts and partners in 22 countries, and 3 regional programs in East Africa, 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 health 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 July through September 2014 period.

SELECT PROGRESS TOWARD RESULT AREAS

Intermediate Result 1. Pharmaceutical sector governance strengthened

The SIAPS approach to improving governance and accountability focuses on establishing policies and legislation supported by rule of law; organizational structures that are able to exercise appropriate decision making, authority, and oversight; transparent, ethical, and accountable systems and processes that are grounded in well-formed policies and legislation; and human resource management systems that promote effective performance and ethical practices.

Policy, Legislation, and Contracts

As part of continued efforts to achieve greater transparency and accountability in the procurement and distribution of pharmaceuticals, SIAPS is assisting selected provinces in **South Africa** to develop service-level agreements between the provincial depots and their clients and to set up systems for monitoring their implementation. The agreements outline the roles and responsibilities of all parties and establish provincial policies regarding issues such as items stocked by the depot, demand management, ordering, receipt of stock at the facility level, and communication between role players. In this reporting period, the service-level agreements between provincial pharmaceutical depots and their respective clients in Gauteng and Eastern Cape were approved and signed by the Head of Health in each province. This achievement is a culmination of extensive technical assistance provided to the provincial Departments of Health and brings the number of such service-level agreements signed with SIAPS support to three.

Also in **South Africa**, SIAPS is supporting the implementation of the Centralized Chronic Medicines Dispensing and Distribution (CCMDD) Program in eight provinces to improve access to antiretroviral (ARV) and other medicines for chronic diseases. The Legal Unit of the National Department of Health approved the model service-level agreement between provinces and the service providers responsible for preparing the prescriptions, one of several key governance documents developed with assistance from SIAPS. Furthermore, the model agreement, which details the services to be provided and the responsibilities of the providers and provinces, has now been adapted where needed and signed by all eight provinces and the respective service providers.

In **Swaziland**, SIAPS continued to support the Ministry of Health (MOH) to advocate for enactment and prepare for implementation of the Medicines and Related Substances Control Bill and the Pharmacy Bill, which will replace the existing legislation dating back to 1929. In this quarter, following two SIAPS-assisted workshops that informed 31 members of the House of Assembly and the Senate of the content and importance of the bills, the draft legislation has now progressed to the public review stage.

Standards, Guidelines, and Procedures

In **Namibia**, SIAPS continued efforts to help the Ministry of Health and Social Services (MoHSS) to adequately plan for and avail equipment needed for quality healthcare service

delivery in the management of HIV and AIDS and other public health diseases at different levels. In this reporting period, SIAPS helped MoHSS update the 2003 national medical equipment policy and develop lists of essential medical equipment for each level of healthcare service delivery. SIAPS technical assistance included supporting the Medical Equipment Subdivision of the MoHSS Division of Clinical Support Services to convene several stakeholder consultative meetings to solicit inputs to inform the update of the policy and its alignment with recent technological advances.

In **Lesotho**, technical assistance provided by SIAPS culminated in the handover of the finalized standard treatment guidelines (STGs)/essential medicines list (EML) to MOH for stakeholder validation and publication. Similarly, SIAPS collaborated with the **Dominican Republic's** MOH and the Pan American Health Organization (PAHO) to revise the national list of essential medicines which is now ready for validation. Once published, it is proposed that a ministerial decree will be issued, making use of the list compulsory for medicines procurement.

SIAPS has been providing technical support to a working group established by the **Ukrainian** MOH's State Expert Center (SEC) to develop national pharmacovigilance (PV) guidelines based on recently updated modules issued by the European Union which set out best practices for member countries. Six of the 16 planned modules have now been finalized and posted on MOH's website for public comment and a seventh is ready for expert review.

Transparency and Accountability

SIAPS is assisting the **Ethiopian** Government to develop and institutionalize systems and tools to achieve greater transparency and accountability in the management of pharmaceuticals and related finances. In this reporting period, an important milestone toward institutionalizing the Auditable Pharmaceuticals Transactions and Services (APTS) in the country was achieved when the Federal MOH and the Ministry of Finance and Economic Development approved the federal APTS regulations that SIAPS helped develop. In addition, two regional health bureaus (RHBs; Southern Nations, Nationalities and Peoples' Region [SNNPR] and Oromia) submitted draft APTS legislation and directives that enforce implementation of transparent and accountable medicine transactions at health facilities to their respective state councils for approval. SIAPS assisted a third bureau in Harari Regional State to draft their APTS regulations. APTS was rolled out to 9 additional hospitals, bringing the number of facilities implementing APTS to 31 across 6 regions.

In **Ukraine**, SIAPS responded to a request from civil society organizations to review and provide comments on draft regulations on price referencing and to participate in discussions on approaches for developing a price monitoring mechanism. The mechanism will supply reliable and up-to-date information to policymakers, managers of health systems, the public, donor partners, civil society, and others to increase transparency about medicine pricing. As a result of these discussions, the civil society organizations issued a public statement on the price referencing policy and its potential impact on access to critical essential pharmaceuticals in the country and requested further assistance from SIAPS in building their capacity and expertise in this area.

Other highlights in this reporting period included obtaining the support of **Uzbekistan's** MOH for SIAPS to conduct a comprehensive transparent assessment of the tuberculosis (TB) pharmaceutical management system in collaboration with the TB pharmaceutical management working group and the WHO country office. SIAPS helped the working group analyze data collected from 35 treatment facilities, 65 pharmacies and drug stores, and interviews in 5 oblasts. The report once finalized, will be presented to MOH staff and stakeholders for comment and validation to promote transparency, and then used to inform the development of an evidence-based strategic plan for strengthening the TB pharmaceutical management system in the country.

Coordination

In this quarter, SIAPS continued to provide ongoing assistance to help countries establish, strengthen, and support coordination mechanisms within pharmaceutical systems in collaboration with other implementing partners, donors, and health initiatives. The aims of these coordination efforts include promoting more informed decision making; fostering transparency and accountability; streamlining regulatory processes, supply chain management, and service delivery; and improving the efficiency of planning, allocation, and mobilization of government and donor resources.

Highlights of SIAPS assistance this quarter include supporting the National Directorate of Medicines and Equipment (DNME) in **Angola** to organize and facilitate the bimonthly Inter-agency Coordination Committee meetings and present the findings of the recent review of the 2010-2015 national pharmaceutical strategic plan. SIAPS also helped the newly constituted national committee for the coordination and monitoring of health commodities in **Mali** to convene meetings of its HIV and family planning technical working groups. In addition to MOH representatives, USAID implementing partners, and UN agencies, nine civil society organizations participated in these meetings and contributed to data-informed decision making on quantification of HIV and AIDS and family planning commodities.

Strategic Planning

In **Burundi**, SIAPS assisted the National Malaria Control Program (PNILP) to solicit and integrate peer-review comments into Burundi's National Malaria Strategic Plan for 2013-2017. With support of SIAPS, the PNILP convened a five-day workshop to review the strategic plan with participants representing key actors and donors, including USAID and the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund), and then revised the plan to incorporate their recommendations.

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

Sustainable access to medicines and other health technologies critically relies on the availability of skilled workers to provide and manage pharmaceutical services. To increase pharmaceutical sector efficiency, SIAPS works with stakeholders to assess their capacity to manage

pharmaceuticals at all levels and then develop and implement interventions to strengthen the system and build individual and organizational capacity.
In this quarter, across 14 countries, SIAPS trained over 4,214 professionals, including managers, pharmacists, dispensers, laboratory technologists, community health workers (HCWs), information systems staff and users, store keepers, and regional and international consultants. SIAPS also continued to assist countries strengthen the capacity of pre-service education institutions, enhance teaching curricula and methods, and nurture new generations of HCWs.

Pre-Service Training

SIAPS efforts in pre-service training helps partner countries develop a healthy, competent, and motivated workforce capable of meeting their pharmaceutical management demands across the healthcare spectrum. This quarter, SIAPS continued its support for curriculum development, accreditation of pharmaceutical training institutions, and development of a cadre of trainers that will institutionalize quality pharmaceutical management workforce development in its partner countries.

In **Namibia**, SIAPS supported the National Health Training Centre (NHTC), a training center for pharmacy assistants (PAs), to develop a quality management system (QMS) and enhance the teaching, assessment, and moderation skills of tutors so that NHTC may be accredited by the Namibia Qualifications Authority. A total of 92 participants from all 7 training networks of the NHTC (practitioners from the public and private sectors) attended the QMS workshop and accompanying facilitator, assessor, and moderator trainings. The trainings equipped participants with the skills, knowledge, and competencies to design and deliver quality healthcare education.

SIAPS also supported the University of Namibia, School of Pharmacy (UNAM-SoP) to finalize the rational medicines use (RMU) and pharmacoeconomics modules of the B. Pharm. pre-service curriculum. It facilitated an accredited pharmacoeconomics training workshop for 34 healthcare professionals including UNAM-SoP lecturers, practitioners from both the private and public sectors, and members of the EML Committee. The training equipped participants with skills in applying pharmacoeconomic principles in the selection of medicines for HIV, TB, and other public health diseases. The Health Professions Council of Namibia (HPCNa) accredited the workshop. SIAPS also built the capacity of 15 HCWs to function as core trainers on PV, in collaboration with TIPC, UNAM-SoP, and the University of Washington. SIAPS developed materials and, in collaboration with MoHSS-Division: Pharmaceutical Services (PhSs), supported 1 region to train 11 representatives from 3 districts' therapeutics committees on their role in RMU and combating antimicrobial resistance (AMR). SIAPS supported MoHSS-Division Quality Assurance (DQA) to train 31 nurses as core trainers on Central Sterile and Supply Department (CSSD) guidelines and Operation Theatre (OT) manual for infection control and waste management. With SIAPS' support, 173 (109 pharmacy and 64 PA) students attended pre-service training at UNAM-SoP and NHTC. Cumulatively from 2012, 74 PAs have graduated from pre-service training at NHTC against a target of 75.

In **Swaziland**, SIAPS designed a practice laboratory and reviewed training materials for the diploma in pharmacy program of the Faculty of Health Sciences' Department of Pharmacy at the Southern Africa Nazarene University (SANU); 15 students have successfully completed the

pharmacy certificate program and are due to graduate in October 2014. In **Lesotho**, SIAPS delivered a pre-service training on medicine supply management to 28 National Health Training College final-year students.

In-Service Training

In **Cameroon**, SIAPS worked in collaboration with Esther AID to train 51 persons, including pharmacy attendants and data clerks from the Centre and Littoral regions, on HIV and AIDS commodities, patients and stock management, and SOPs. To support capturing and aggregation of medicine stock and patients' data from peripheral and regional levels and make data available at all levels for decision making, SIAPS trained 13 persons from CNLS, CENAME, and CAPRs and implementing partners in using the HIV and AIDS Commodities Tracking Tool (OSP-SIDA).

In **Mali**, SIAPS supported the drug regulatory body (DPM) to train 31 national and regional senior staff (24 male and 7 female) on new supportive supervision guidelines and tools which led to the development of the supportive supervision implementation plan. These trainings increased the total number of trained national staff from 294 in quarter 3 to 792.

In the **Philippines**, in Region VIII and in collaboration with the Innovations and Multi-sectoral Partnerships to Achieve Control of Tuberculosis (IMPACT) Project, SIAPS trained 28 health staff with the *Practical Guide for the Management of Pharmaceuticals and Health-Related Commodities* in the Typhoon Haiyan-affected provinces.

In **Angola**, in collaboration with DNME and the provincial health directorates of Uige and Luanda, SIAPS conducted training of trainers sessions in 2 provinces for 71 participants (30 in Luanda and 41 in Uige), in improving pharmaceutical management of essential medicines specially malaria commodities and supportive supervisions. A post-training work plan was developed by each municipal team.

Supportive Supervision and Mentoring

In **Burundi**, SIAPS assisted the PNILP and the Directorate of Pharmacies, Medicines, and Laboratories in supportive supervision in 24 health district pharmacies and 512 health centers on appropriate use of distribution and consumption data for supply management, and coaching CHWs on malaria case management for under-5 children. Of the 7,681 children less than 5 years that tested positive for malaria, CHWs treated 7,154 (93.1%) of them with antimalarial medicines (ACTs) within 24 hours of the onset of fever. In July and August, of the 135 CHWs who were observed when practicing, 112 (83%) asked all the appropriate questions to assess the child's status and 101 (75%) CHWs asked all the appropriate questions to identify danger signs, while giving appropriate feedback.

In **Cameroon**, SIAPS conducted quarterly supervision in 34 facilities within USAID-supported regions to review their performance in the management of ARVs, patients, and medicine stock data from April to July 2014. The supervision report showed that between Q1 and Q3 the number of SIAPS-supported ART health facilities using country-appropriate tools to report

logistic and patient data increased from 15% to 56%, and the number that completed and submitted their logistic management information system (LMIS) reports increased from 15% to 62%. These increases can be attributed to SIAPS-supported training in HIV and AIDS pharmaceutical management, provision of reporting tools for storekeepers and pharmacy attendants, and the quarterly supportive supervision process.

In **Namibia**, SIAPS conducted support visits to 18 primary healthcare (PHC) and 2 main ART sites where SIAPS trained 23 HCWs on the use of the Electronic Dispensing Tool (EDT) mobile to capture ARV and patient data. The support contributed to enabling 98% of 50 ART main sites to continue using EDT to document and report logistic and patient data.

Tools for Capacity Building

In **Burundi**, SIAPS assisted the PNILP (national malaria program) in developing two job aids: one for dispensers on good dispensing practices and another for patients on how to take ACTs to improve adherence to treatments. In **Ethiopia**, SIAPS supported the Oromia RHB in the finalization of "Guideline for the Redistribution of Excess and Near-Expiry Antimalarial Drugs between Public Health Facilities", and oriented malaria and pharmacy experts from 18 zonal health departments (ZHDs), 7 town administrations, and 268 woreda health offices on the contents and implementation strategies of the guideline.

SIAPS TB Core updated training materials and exercises for trainings related to forecasting, supply planning, quantification, and early warning. These materials were used to train 27 national TB program (NTP) managers and partners in Ethiopia (funded through HEAL TB project), and 21 GDF consultants (7 female, 14 male) in this quarter. In **Pakistan**, the curriculum for pharmacist training was reviewed and revised. In the city of Sukkhar, 44 pharmacists were trained according to the curriculum and the directory of general practitioners to whom pharmacists can refer clients with TB-like symptoms was finalized.

In **Ukraine**, SIAPs worked in close cooperation with the PLWH Network and the National Training Centre to pilot the procurement and supply chain management (PSCM) training module for AIDS health facilities managers after its incorporation into the National Training Centre's curriculum. Piloting of module compatibility was conducted in the framework during two procurement trainings. SIAPS received very positive feedback from the participants and the National Training Centre, who emphasized not only the educational value of the module, but also underlined an urgent need for building capacity of the healthcare professionals in this area.

In **Bangladesh**, SIAPS enhanced the Supply Chain Information Portal by incorporating a service delivery point (SDP) module to track the stock status of contraceptives from the sub-district level to SDPs. The module features easy-to-interpret graphs and charts illustrating commodity availability and has been piloted in 20 upazilas in 4 districts. So far, SIAPS has successfully trained 1,698 government officials to operate the SDP module. SIAPS also helped the Directorate General of Drug Administration (DGDA) in transforming the current process for requesting and reviewing product registration documents into a process that meets international standards by adopting the common technical document (CTD). A 3-day training was conducted for 26 DGDA officials to build the capacity of DGDA staff to use CTD. The training provided a

broad understanding of the regulatory components of each module of CTD with specific reference to Bangladesh CTD guidelines developed by SIAPS.

Intermediate Result 3. Information for decision-making challenges in the pharmaceutical sector addressed

SIAPS' approach is to harmonize and/or integrate the collection and presentation of accurate quality pharmaceutical and other commodities data, processed in a timely manner, to assist staff at all levels of a country's health system make evidence-based decisions to manage health and laboratory commodities and pharmaceutical services as well as measure and monitor progress.

SIAPS teams are working to engage with counterparts and other implementing partners to strengthen management information system assessments or implementation and improve reporting practices, while capacitating local teams to ensure ownership as the demand for SIAPS tools keeps on growing. Currently, RxSolution, Pharmadex, EDT, e-TB Manager, and QuanTB are used across more than 10 countries.

Seven SIAPS-supported countries implemented regular quarterly supportive supervision visits to target project sites as part of improving data quality, tracking performance, and building capacity. SIAPS is actively involved in the quarterly review of countries' data for HIV and AIDS, TB, malaria, reproductive health, and other related commodities to inform evidence-based decisions and prevent stock out or overstock situations. This quarter, SIAPS portfolios met or exceeded their targets in 16 (53%) out of 30 indicators for this intermediate result.

Data Utilization

In **Angola**, SIAPS assisted 6 of the 18 provinces implement the approved monthly reporting and quarterly requisition forms to provide consumption data for quantifying health-facility needs and monitoring stock status for HIV- and AIDS-related products. SUGEMI, the electronic information system, has been implemented in nine administrative units in the **Dominican Republic**. The number of health facilities reporting to and receiving feedback from the SUGEMI quarterly bulletin has increased from 37.6% to 87.29% in the last quarter.

In **Namibia**, SIAPS provided technical assistance to NMPC to finalize and disseminate the January to March 2014 PMIS feedback report to all 14 regional health management teams. This report includes feedback on a set of 21 indicators for measuring the delivery of pharmaceutical services in public health facilities. SIAPS uses feedback data to develop and implement recommendations for service improvement with MoHSS-DSP. For example, based on a reduction in retention rates of both adults and pediatrics from 92.1% in October-December 2013 to 76.5% in January-March 2014, SIAPS is following up with MoHSS-DSP on implementation of ART treatment literacy materials and the SMS reminder system. As of August 2014, 13 out of 14 target districts in Namibia had access to the centralized e-TB Manager system for data entry, management, and monitoring on DR-TB. The number of captured, treated cases increased from 514 in quarter 3 to 637 in quarter 4 and the number of closed cases increased from 128 to 239. Additionally, the NMRC in Namibia provided the medicine dossiers for the hands-on evaluation

session held in July 2014; and closely worked with SIAPS to implement Pharmadex, the medicines registration tool, which has been further improved; imported data from the old system into the new web-based system; and assigned registration numbers to 507 newly registered medicines, adding to over 5,400 medicines already registered.

In **Swaziland**, 95% of facilities had completed and submitted an LMIS and patient report which was quite an improvement from the 87% reported last quarter. All 133 reporting facilities used standard reports and consumption data to inform ordering and reporting. Lab facilities reporting through CTS achieved a 100% reporting rate in August 2014. In **Lesotho,** implementation of a laboratory LMIS resulted in timely procurement and reduced RDT stock-outs from 17% to 6%. In **South Africa**, technical assistance was provided to the Mpumalanga and Limpopo Depots where Infomaker® report templates were updated to facilitate extraction and reporting of data from the provincial medical store system (PDSX).

In **Tajikistan**, SIAPS set up QuanTB as an early warning system and quantification tool. Data is collected every month throughout the country and used for analysis of TB-medicine stock levels. For example, analysis from Gorno-Badakhstan Oblast in June showed that three second-line medicines (levofloxacin, prothionamide, and pirazinamide) were almost stocked out. Based on this information, the NTP quantified the medicines and arranged timely supply to this region. During the National TB Commodity Security meeting in **Kenya,** the SIAPS TB Core team used QuanTB stock status reports to inform the decision to request that the Global Fund direct savings from year 4 activities toward procurement of first-line TB medicines to avert potential stock outs. In August 2014, the **Ukranian** CDC issued an official directive eliminating the use of manual reporting forms and mandating that all reporting forms be generated by e-TB Manager. The number of sites using e-TB Manager increased from 1,022 in quarter 3 to 1,025 in quarter 4, and the number of treated cases increased from 37,414 to 38,457. The number of cases managed and closed increased from 83,195 to 97, 242. e-TB Manager also recorded a significant increase in the number of active users: up 83% from 507 in the previous quarter to 931 this quarter.

Data Quality

SIAPS provided technical assistance, training, and supportive supervision to improve data quality in Burundi, Cameroon, Mali, Guinea, and LAC AMI. With SIAPS support, stock status reports are compiled on a monthly basis and shared with relevant stakeholders in **Lesotho** for 104 facilities. These reports include status on ARV, opportunistic infection (OI), and TB medicines; FP and nutrition commodities; and HIV RTKs and other laboratory commodities. As a result, 92% tracer medicine availability; 98% of health facilities keeping complete patient information per national standards; and no ARV stock-outs were reported. The supervision report in **Cameroon** showed that the number of SIAPS-supported ART health facilities that are using country appropriate tools to report logistic and patient data increased from 15% to 56%, and the number that completed and submitted their LMIS reports for the most recent reporting period increased from 15% to 62%. With SIAPS's ongoing intervention about the importance of feedback, Guinea has maintained a 100% feedback rate in PMI-supported zones for the past six months. Six countries in the **LAC AMI** region have implemented the revised criteria for programming the supply and distribution of antimalarial medicines in low-incidence areas. In **Mali**, SIAPS supported the regional health directorates (DRS) to organize quarterly review

meetings in July and September 2014, during which logistic data for each district was shared, analyzed, and validated.

Information System Design and Collaboration

In **Cameroon**, SIAPS works closely with CNLS's central and regional teams to establish coordinated systems for data collection, submission, collation, and analysis of logistics management information. To ensure consistent availability of strategic information at the central level, SIAPS supports the development of a dashboard that will enable the Secretariat General and DPM to consult relevant reports on stock status of malaria, family planning, and MCH commodities at all levels of the health system. The SIAPS team also implemented the HIV and AIDS Commodities Tracking Tool at the central and regional levels that will serve as an early warning system for stock status. The **SIAPS West Africa Region** shared the findings of situation analysis of HIV/AIDS commodity management that was conducted in the earlier quarter and presented the HIV/AIDS regional dashboard that has been developed as an early warning system to improve product availability and monitoring.

SIAPS **Cameroon** also participated in discussions on the implementation of the ART SMS reminder system. SIAPS met with DSP on implementing the mobile EDT in preparation for roll out of the Nurse Initiated Management of Antiretroviral Treatment (NIMART), a government initiative for decentralizing ART services. SIAPS updated the ART adherence and retention technical proposal and, with Tufts University, developed a content document for the EDT SMS messages. SIAPS, in a meeting with Tufts University, Project Hope, and PharmAccess, demonstrated use of the EDT to develop a defaulter list that can be used for tracing ART defaulters to improve retention.

In the **Philippines,** SIAPS is working with partners to set up an active cohort PV surveillance system starting with two studies (a nine-month regimen and Bedaquiline). A key part of this activity is the development and possible use of a tablet-based tool for recording and timely reporting of adverse events in programmatic management of drug-resistant TB (PMDT). In **Uzbekistan**, SIAPS and the national technical working group finalized a comprehensive indicator-based assessment of the TB pharmaceutical management system. The national TB program will use the results of the assessment to develop a strategic plan; 714 TB patients and more than 100 TB health workers were interviewed; and over 1,000 patient cards were reviewed.

In **South Africa**, SIAPS developed an interface between RxSolution and the smart phone-based application currently being piloted for monitoring and reporting medicine availability in remote clinics without the requisite infrastructure to use RxSolution. Ultimately, the system may be used to manage orders from the clinics. SIAPS, together with the local partner Health Systems Trust (HST), also increased the number of sites where RxSolution is installed from 313 to 350 countrywide. Together with MOH's Health Management Information System, SIAPS in **Swaziland** conducted an assessment of the RxSolution system, targeting 39 ART facilities and 3 central warehouses, the main purpose of which was to identify gaps and inconsistencies in the utilization of the system and use the findings to develop a robust and sustainable end-user support system.

Intermediate Result 4: Financing strategies and mechanisms to improve access to medicines strengthened

The SIAPS approach for strengthening financing strategies and mechanisms focuses primarily on addressing the key financial barriers in accessing medicines; making efficient use of existing resources; and generating additional funds.

In the past quarter, SIAPS provided technical assistance to countries in estimating financial needs through forecasting, supply planning, quantification, applying for additional funds from international bodies such as the Global Fund, conducting pharmacoeconomic analyses to ensure fiscal efficiency in product selection practices, and providing information for effective decision making. SIAPS also continued to participate actively in the countries' efforts toward achieving universal health coverage (UHC) by advocating for the prioritization of medicines benefits and management.

Addressing Financial Barriers to Access to Medicines

Through the SIAPS **West Africa Regional** portfolio, SIAPS assisted the Niger country coordinating mechanism (CCM) to set up a financial analysis working group along with two other groups to develop the HIV and AIDS concept note. This concept note includes the identification of activities to strengthen the pharmaceutical system of Niger within the next three years. In collaboration with the PSM working group, which focused on quantification and supply chain activities, SIAPS supported the development of an action plan that included financing decision points to strengthen the pharmaceutical system over the proposed time frame.

Generating Additional Sources of Finances

SIAPS **Cameroon** provided support to the National AIDS Control Program-CNLS to meet pharmaceutical-related performance requirements of the Global Fund Round 10 Phase 1. The primary goal was to ensure compliance with Phase 2 funding as well as leveraging Cameroon's eligibility for the Global Fund's New Funding Mechanism (USD 71 million). In **Angola**, SIAPS supported the NMCP in conducting a gap analysis on financial resources based on the results of a five-year forecasting exercise for malaria commodities. This key document is being used to inform the national malaria control strategic plan and to develop a concept note for submission to the Global Fund as part of the new funding mechanism before January 2015. Additionally, SIAPS Angola participated in the monthly inventory and forecasting of family planning commodities under the leadership of the National Reproductive Health Program and in collaboration with Pathfinder, SIAPS, CECOMA, and UNFPA. The results will be presented to the National Public Health Department, USAID, and UNFPA to generate the necessary funds for the next procurement period.

SIAPS supported the Government of **Swaziland** to mitigate a funding gap for key laboratory products. Because the Global Fund will no longer fund laboratory procurement in Swaziland, a transitional funding mechanism (TFM) budget was set up to procure key laboratory products for a defined time period from 2014 to December 2015. SIAPS conducted a supply planning exercise by using Pipeline software to determine delivery schedules and quantities required for

the rest of the procurement period. The results of the supply plan were used to inform the budget request to Global Fund on the TFM budget for Swaziland. SIAPS Swaziland also provided technical support on the development of the HIV/TB concept note for the Global Fund proposal. SIAPS contributed to the pharmaceutical and health systems strengthening components of the proposal. The concept note is for a total of USD 84 million for the three-year period ending in 2017.

Efficient Allocation of Existing Resources

In **Swaziland,** limited funding for ARVs has resulted in delayed payment of suppliers and sub-optimal stock levels for key pharmaceutical products. SIAPS has been supporting the government to ensure that the limited funding is used efficiently through supply planning of ARVs and family planning, laboratory, and TB commodities; forecasting and quantification of first- and second-line TB medicines; and quantification of GeneXpert machine cartridges. Data generated from these technical activities are used to inform budget planning by MOH's financial controller, the supply plan for the Swaziland Health Laboratory Services (SHLS), and procurement requests to USAID, respectively. In quarter 4, during the SHLS annual forecasting exercise for 2015/2016, SIAPS Swaziland was able to provide actual consumption data from the CTS which demonstrated consumption patterns at the facility level and increased forecasting accuracy. The forecast document has been used to inform the 2015/2016 budget request which is an estimated E114 Million (USD 10.3 million). SIAPS also worked with the Procurement Unit in MOH to develop a management plan to track the performance of suppliers and, subsequently, impact vendor selection in future procurements. Furthermore, SIAPS Swaziland continued to participate in the Southern African Development Community (SADC) pharmaceutical pooled-procurement activities that seek to ensure more cost-effective procurement of quality pharmaceuticals, encourage MOH participation in regional initiatives that leverage regional synergies, and improve resource utilization.

In the **Dominican Republic**, SIAPS worked with national counterparts to complete the technical report *Programming the Purchase of Medicines and Supplies in the Dominican Republic's Public Health System*. The report provides a comprehensive analysis of financial gaps to be addressed in the procurement of all estimated materials. The results were presented to the Ministers of Health and Finance during a joint meeting in September 2014. Furthermore, another technical report titled *Review of the List of High-Cost Medicines used by the Dominican Republic's Protected Diseases Program and Planning of Purchases for 2015* was finalized and used to support decision making and efficient use of resources. In the next quarter, SIAPS will continue supporting advocacy activities in the Dominican Republic in an effort to acquire the necessary financial resources. In **Ethiopia**, ABC analyses were conducted at different health facilities, including Jimma University Specialized Hospital and Mettu Karl Hospital. The results of the analyses were reported to the hospitals' management teams to take corrective measures.

Advocacy

During this quarter, SIAPS collaborated with WHO, MSH, and the Department of Population Medicine-Harvard Medical School to organize an interactive technical workshop for eight southern African countries in Cape Town, South Africa, on the theme "Universal Health

Coverage: Considerations in Designing Medicines Benefits Policies and Programs." Given that medicines have been largely missing in global UHC conversations, the key objectives of the meeting were to:

- Share successful and unsuccessful experiences in how countries have incorporated medicines into their UHC strategies
- Create a shared understanding on how sound medicines benefits design and management can contribute to cost control
- Build a case for use of evidence-based decision making in medicines benefits design and management
- Share the pilot experiences of Namibia and South Africa as they have already implemented a new tool on medicines benefits management

SIAPS continues its active participation as a member of the Universal Health Coverage Advisory Committee of Namibia (UHCAN). SIAPS **Namibia** attended the Namibian Association of Medical Aid Funds (NAMAF) 8th annual conference in Windhoek from September 22 to 23, 2014. The conference theme was "Drivers of Healthcare Costs: Alternative Perspectives." It was well attended by several participants from both the public and private sectors who are seeking options for financing healthcare and medicines. This is particularly relevant because of the current burden of HIV and AIDS, TB, and other public health diseases in Namibia. Additionally, SIAPS Namibia and two representatives from the Social Security Commission (SSC) and Public Service Employee Medical Aid Scheme (PSEMAS)] participated in the two-day UHC conference in Cape Town, South Africa, from September 28 to 30, 2014.

Intermediate Result 5. 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 supply planning and management, community case management (CCM), PV, RMU, EMLs, STGs, treatment adherence, AMR, drug and therapeutics committees, public-private partnerships, and infection prevention and control.

Supply Management

SIAPS has continued work to ensure the availability of essential and life-saving commodities through effective supply management. SIAPS has shown progress within the supply chain functional areas of quantification, procurement, warehouse and inventory control, and distribution management in several countries. The following country portfolios represent some of the achievements reported on this quarter.

This quarter, through SIAPS support, the **Bangladesh** National Tuberculosis Program (NTP) made progress in standardizing, finalizing, and disseminating standard operating procedures

(SOPs). Also, SIAPS successfully trained district and upazila staff on e-TB Manager, TB commodity management SOPs, and the use of a paper-based LMIS. These efforts have contributed to improved processes and information sharing, which are crucial for sustained availability of TB medicines, with the percentage of directly observed treatment sites experiencing stock outs remaining at 26% this year against a target of 20%. The NTP has been using QuanTB with SIAPS support on a monthly basis for forecasting and supply planning. Based upon data output, they were able to coordinate with the Global Drug Facility and TB medicine manufacturers to adjust upcoming planned shipments, achieving savings valued at USD 900,000. Collaborating with NTP, WHO, and the PSM working group, SIAPS also helped update QuanTB information for first- and second-line drugs (SLDs) to generate orders to the Global Fund. This exercise identified the need for first-line drugs for an additional 1,056 clients, enabling more prompt treatment to slow TB transmission. It also highlighted the need to cancel the purchase of seven expensive SLDs and reallocate a shipment of nine SLDs to another country, for a cost savings of about USD 1 million. In terms of the family planning program, SIAPS coordinated with the Directorate General of Family Planning's (DGFP) Forecasting Working Group to reach consensus that 410,000 sets of implants were not needed. This led to final procurement of only 50,000 sets, saving DGFP approximately USD 4 million. The family planning program has successfully maintained a 1% sub-district stock out rate of contraceptives and drugs and dietary kits. Across health programs, the percentage of health facilities that were stocked out of tracer medicines for more than three days remained at 29%, against a target of 25%.

In **Ethiopia**, SIAPS continued to work with the FMOH and RHBs to institutionalize Auditable Pharmaceutical Transactions and Services (APTS) through the development and enactment of directives. The APTS directives enable transparent and accountable medicine transactions, reducing wastage of HIV and AIDS, malaria, and OI medicines. SIAPS also supported antimalarial-commodity forecast and supply planning to cover 2014-2017. With the support of SIAPS, the Ethiopian Hospital Reform Implementation Guidelines (EHRIG) were used to assess hospitals against 12 operational standards including use of medicines, such as ARVs, medicines for OIs, and antimalarials. The average accomplishment rate for hospitals was 92.03%, with all hospitals except one meeting the minimum requirement of 90%, signifying high performance against standards. Furthermore, the success of the EDT at 200 ART sites has allowed the tool to also serve as a national quantification tool, enabling effective monitoring and consequent increased availability of ARVs at health facilities.

In **Angola**, SIAPS worked with the National Malaria Control Program (NMCP) to monitor monthly stock levels and distribution plans of antimalarials in 18 provinces. Using a SIAPS developed tool, forecasts for the next five years were made, which allowed the NMCP to identify a funding gap. NMCP and SIAPS will work with local development partners to leverage resources from funding agencies to procure the full forecasted quantities of medicines. Better forecasting and coordination is predicted to help the NMCP reduce the current warehouse stock-out rate of 67%. SIAPS also assisted the central medical store (CECOMA) improve upon key performance indicators (KPIs) through weekly coaching meetings. The established KPIs and regular measurement and tracking will help CECOMA attain their warehouse management and governance goals over time. CECOMA has also been capturing data on performance measures since June, offering an opportunity to document results through SIAPS interventions. The team

also facilitated trainings on warehouse and pharmaceutical management for the DNME/PNME, with three specific measures in post-training action plans to track stock, logistics information, and medicine consumption data.

SIAPS **Mali** organized two quarterly meetings with the National Technical Committee focused on forecasting and supply planning for family planning and HIV and AIDS products. As a result of the meetings, MOH sent requisition forms to all partners to procure commodities for the family planning program in line with 2014-2015 supply plans. SIAPS also organized 17 training workshops to build supply chain management capacity in 5 regions and 17 health districts. The trainings centered on warehouse management, storage, logistics reporting, and using forms and tools included in the newly distributed SOPs. This quarter, 25% of trained staff completed their post-training action plans, and 37% of health facilities continued their use of checklists to monitor and improve storage conditions. By using the procurement planning and monitoring report for malaria (PPMRm), SIAPS assisted the DPM (Direction de la Pharmacie et du Médicament) in collecting data on the stock status of malaria medicines, leading DPM to recommend to PSI to quickly transfer Global Fund malaria commodities to the Central Medical Store for distribution, preventing national ACT and RDTs stock-outs. Furthermore, NMCP, with SIAPS support, conducted a private-sector delivery program feasibility study to improve distribution and transport of malaria commodities in Mali in accordance with national policies. The team also finalized the PPM (Pharmacie Populaire du Mali) five-year strategic plan to improve supply chain coordination and governance. The strategic plan includes activities to assist PPM to meet international standards for procurement and distribution agencies.

The SIAPS **Lesotho** team has designed and completed the Supply Chain Management Leadership Development Program, a capacity-building component to improving medicine availability. The training program was delivered to 81 health workers and covered medicine management and logistics. SIAPS also conducted supportive supervision to 12 out of the 16 RxSolution-implementing hospitals and strengthened the availability of dispensing data by installing the dispensing module at two more sites. This quarter, SIAPS mentored 24 lab commodity managers, increasing the LMIS reporting rate to 95%, well above the 70% target. To address the recent stock-out of HIV RTKs, due to lack of timely reporting, SIAPS advocated and trained health workers on the recommended adherence of three-month stock levels at health facilities. In total, SIAPS conducted 113 supportive supervision visits to all 104 facilities, and further specifically mentored 179 HCWs on inventory management. However, over all, 90% of SIAPS sites with ARVs were stocked according to the two-month minimum and three-month maximum stock-level plans. The team also helped obtain a 92% availability rate of tracer medicines. In addition, there were no stock-outs of ARVs, OI medicines, TB drugs, or contraceptives for more than 28 days in the past 6 months.

In **Ukraine**, SIAPS trained 21 health workers from HIV facilities on pharmaceutical procurement, distribution, and quality control management. Expansion of capacity in utilizing e-TB Manager continued with 32 trainers and an additional 31 data-entry staff. In the **Philippines**, SIAPS supported the NTP to conduct the quantification of PMDT drugs by using the QuanTB tool. SIAPS has planned to conduct mentorship sessions with NTP's drug supply management (DSM) staff for forecasting FLDs. The approach for gathering effective data for quantification includes SIAPS's coordinating regular DSM sub-technical working group meetings; the key

output of these meetings this quarter included sharing information on consumption and forecasted data for TB medicines and laboratory supplies across agencies. The NTP has been using QuanTB as an early warning system, reducing stock-outs and expiries, with none of the 4 FLDs and 11 SLDs used for PMDT being stocked out at the national level. SIAPS is also supporting the DOH Regional Office to organize a supply management working group to strengthen cross-level supply chain management through DSM regional coordination.

In **Swaziland**, SIAPS trained 71 HCWs (27 males, 44 females) from 19 health facilities in pharmaceutical and supply chain management. In addition, 22 health workers from 15 laboratory facilities were trained on laboratory supply chain including the LMIS. SIAPS also facilitated an LMIS workshop for 20 Elizabeth Glaser Pediatrics AIDS Foundation mentors to equip them with inventory management skills in support of the PMTCT and pediatric HIV programs. SIAPS, in collaboration with the National Quality Assurance Program, also trained 19 HCWs (11 females and 8 males) from 4 health facilities with functional PTCs; they were trained on implementing quality improvement (QI) projects aimed at promoting RMU and containment of AMR. The facilities represented in this training developed QI projects for implementation. SIAPS also trained 30 participants, (21 females and 9 males) from three health facilities on forming PTCs. A total of 10 HCWs from Luyengo were provided onsite training on supply chain and pharmaceutical services management. After the training, a quality improvement plan was created and is currently being implemented and monitored. Additionally, as part of the QI project, SIAPS mentored 18 facilities on laboratory and pharmacy supply chain management and the efficient use of storage space. Furthermore, 11 health facility pharmacy/dispensing sites (24 HCWs) received mentorship on supply chain, dispensing, and RMU for HIV, TB, and family planning products. SIAPS, in collaboration with MOH, further conducted supportive supervision at 33 health facilities (20 in Hhohho and 13 in Lubombo). The supervision and mentorship contributed to improvement of the stock card update rate, up from 44% in February 2014 to 83% in July 2014.

Community Case Management

SIAPS continued assisting **Burundi's** National Malaria Control Program (PNILP) to implement CCM for malaria in two districts. SIAPS supported the PNILP in conducting on-the-job training and supportive supervision for CHWs at 25 health centers. In July and August, 387 CHWs were trained on referral criteria and 361 CHWs received refresher training on the CCM process. Of the 135 CHWs that were observed in their work environment, 83% asked all the appropriate questions to assess the child's status and 75% asked all the appropriate questions to identify danger signs.

During this quarter, 11,394 children under five with fever sought care from CHWs. Among those children, 10,284 were tested with RDTs and 7,681 were confirmed positive for malaria. Among children who tested positive for malaria, 7,154 (93%) received treatment from CHWs within 24 hours of the onset of fever. Due to a country-wide shortage of RDTs, fewer cases of malaria in children less than five years were detected and treated by CHWs, as compared to previous quarters.

SIAPS also collaborated with UNICEF to assist MOH in implementing integrated CCM (iCCM) for childhood illnesses in Burundi. During this quarter, MOH, with SIAPS and UNICEF support, conducted an advocacy workshop for scaling up iCCM and drafted a paper to guide the implementation of iCCM.

Pharmacovigilance and Rational Use

In **Ethiopia**, SIAPS continued supporting efforts to raise awareness on PV among health care providers. During this quarter, a total of 333 health care providers participated in face-to-face discussions at 16 health facilities and 1 hospital in 5 regions of the country. In addition, 276 adverse drug event reporting forms, 345 allergy cards, 210 copies of the national PV framework, 1,447 newsletters, and 330 copies of the adverse event bulletins were distributed to health facilities and RHBs. Also during this quarter, SIAPS continued supporting proper documentation of patient medication records at ART sites implementing the EDT and its paper-based version. At Suhul Hospital in the Tigray region, for example, EDT enabled hospital staff to identify and document 22 drug therapy problems related to incorrect regimens or incorrect doses (low, high, or no dose). The drug therapy problems were discussed with prescribers and changes were made to correct the regimen and the dose.

SIAPS also collaborated with Jimma and Mekele Universities to organize two rounds of training on clinical pharmacy services. A total of 200 pharmacists were trained on how to identify and resolve medicine use problems at inpatient wards and ART pharmacies. During this quarter, the country-level indicator that assesses the number of hospitals that initiate clinical pharmacy services rose from 40 in the previous quarter to 53.

SIAPS also continued to promote patient education in Ethiopia. SIAPS supported the establishment of new drug information services (DISs) at 16 health facilities and strengthened existing DIS units at 6 hospitals. To enhance the rational use of medicines at health posts, SIAPS provided technical and financial assistance to the Oromia RHB to develop, translate, print, and distribute 5,000 copies of *Drugs Management Handbook for Health Extension Workers* to health centers.

Following an assessment of the HIV/TB active surveillance system in **Swaziland** conducted in the previous quarter, SIAPS carried out a retrospective data capture of adverse events during this quarter. The data capture focused on adverse events reported during May 2013 to June 2014. Findings revealed that more patients experienced adverse events than had been previously reported. There are plans to organize a stakeholder forum to disseminate results, review successes and challenges, and share best practices. Also during this quarter, SIAPS supported MOH in developing the third *Medicines Safety Watch* bulletin to highlight results from six participating sentinel sites. SIAPS will continue working with MOH's Pharmacovigilance Unit to strengthen monitoring and reporting of adverse events.

In **Ukraine**, SIAPS entered the third phase of development of the Pharmacovigilance Automated Information System (PAIS) in collaboration with the State Expert Center (SEC) and RGData. A basic version of PAIS was successfully installed into the SEC server and tested. The goal of SIAPS is to create a fully functioning system that automates the process of reporting adverse

drug reactions (ADRs) and lack of medicine efficacy and limits the need to update information manually. SIAPS and the developers have decided to automate data exchange between PAIS and the Medicine Registry so that data from the Medicine Registry is sent to PAIS in real time. Setting up automated data exchange will begin in the next quarter.

In the previous quarter, an action plan on PV and a draft national plan for monitoring and evaluation of the National TB Program were submitted to the World Health Organization and the State Service for TB/HIV and Other Social Diseases in Ukraine, respectively. Also during this quarter, six new modules of the national guidelines have been finalized and are ready for public comment and a seventh module is ready for expert feedback. SIAPS has had to reprioritize its activities in Ukraine due to funding constraints.

In **Namibia**, SIAPS collaborated with Project Hope and the Therapeutics Information and Pharmacovigilance Center (TIPC) in the previous quarter to train 105 TB field promoters to increase spontaneous reporting of ADRs. During this quarter, TIPC received 343 ADR reports from 4 regions in the country as a result of the training, compared to nearly none in previous quarters. SIAPS also supported the data capture of active surveillance reports submitted to TIPC.

In collaboration with TIPC, UNAM-SOP, and the University of Washington, SIAPS trained 15 HCWs on PV. SIAPS also collaborated with TIPC to encourage 62 health professionals who attended the annual doctor's forum to raise awareness on PV in their health facilities and promote reporting to monitor patient safety.

SIAPS participated in two radio talk shows in Namibia to create awareness of services available to people living with HIV and AIDS. The program provided information on ARV medicines, managing side effects, adherence, and community support for HIV services. During this quarter, SIAPS also worked with UNAM-SOP to finalize pre-service training content for a theme on RMU, including AMR, within the pharmacy practice II module for undergraduate pharmacy students. A detailed instructional delivery framework was developed along with instructors' guides. The instructional delivery design was primarily based on case studies and self-directed learning. Implementation of the RMU theme began in August.

In the **Philippines**, SIAPS continued providing support to the National TB Program and the Food and Drug Administration (FDA) to set up an active cohort PV system. SIAPS and partners will begin by studying the use of Bedaquiline and the nine-month multidrug-resistant TB (MDR-TB) treatment regimen. The purpose of these two PV studies is to develop and explore the use of a tablet-based tool for recording and timely reporting of adverse events in PMDT, build technical capacity for active surveillance, and enhance technical collaboration for PV. In addition, SIAPS continued providing technical support to the Lung Center of the Philippines (LCP) to strengthen the PV reporting system. During this quarter, the LCP analyzed reasons for switching treatment regimens and recorded serious ADRs that require regimen changes to increase awareness on the importance of ADR detection and management. SIAPS is working with the FDA to review the ADR reporting form.

During this quarter, the national PV program was successfully launched in **Bangladesh** and SIAPS provided support for improving awareness of PV in hospitals and pharmaceutical

companies in Dhaka and other districts. A two-day training on PV was held for representatives from 20 private and public hospitals, including 13 pharmaceutical companies. Participants were introduced to adverse event reporting and were encouraged to initiate monitoring in their respective work settings. SIAPS also assisted the Adverse Drug Reaction Monitoring (ADRM) cell in facilitating a workshop for 30 participants from additional hospitals and pharmaceutical companies to highlight the advantages of monitoring, discussing ongoing PV activities, and identifying challenges with ADR reporting.

Essential Medicines Lists and Standard Treatment Guidelines

In the **Dominican Republic**, SIAPS supported revision of the 2014 national EML, which is currently being validated. Similarly, in **Lesotho**, SIAPS handed the final draft of the STG/EML over to MOH for validation and printing. Once complete, the STG/EML will be distributed to health facilities nationwide. SIAPS also worked with the ad hoc technical team at the National Directorate of Medicines and Equipment in **Angola** to review and finalize a draft of the national EML. Plans to organize a validation workshop are underway.

To improve prescribing and dispensing practices of antimalarial medicines at health facilities in **Ethiopia**, SIAPS supported the Oromia RHB in printing and distributing 2,000 copies of the third edition of the national malaria treatment guidelines (2012).

In **Burundi**, the percentage of prescriptions in compliance with the malaria STG, a country-level indicator, increased during this quarter. Previously, 77% of prescriptions were written in compliance with the malaria STG. During this quarter, this figure rose to 95%.

Treatment Adherence

In **Burundi**, SIAPS assisted the PNILP in developing two tools to promote good dispensing practices and improve patient adherence to treatment. The first is a job aid describing good dispensing practices. The second is a patient education tool describing how to take artemisinin-based combination therapies (ACTs), when to return to the health facility, the importance of completing a full course of treatment, and common side effects. SIAPS also helped the PNILP develop a label for medicine packages. Both the job aids and medicine label were tested in six health facilities for quality and presentation.

In **Namibia**, SIAPS participated in an HIV Adherence Technical Working Group meeting to discuss implementation of the ART SMS reminder system. A content document on the use of the SMS reminder system was developed. The EDT will be used to develop a list of ART defaulters, who can then be traced to improve retention rates.

Antimicrobial Resistance

SIAPS participated in the **Amazon Malaria Initiative (AMI)** steering committee meeting, in which participants voiced the need to agree on a strategy to prevent the emergence of ACT resistance in Suriname and Guyana. One recommended intervention is to improve access to diagnosis and treatment in gold mining camps on the Suriname, Brazil, and French Guyana

borders. In the next quarter, SIAPS will participate in a meeting in Suriname to analyze the situation and agree on a strategy.

Drug and Therapeutics Committees

In **Namibia**, therapeutics committees (TCs) have not been performing at their maximum capacity due to human resource limitations and inadequate training on terms of reference. SIAPS collaborated with the Division of Pharmaceutical Services to train 11 representatives from 3 district TCs on their role in enhancing RMU and combatting AMR. During the training, TC representatives developed action plans for improving pharmaceutical services and conducting medicine use evaluations in their respective facilities.

SIAPS also collaborated with the School of Medicine at the University of **Namibia** to facilitate an accredited continuing professional development activity for 25 representatives from 4 TCs, including doctors, pharmacists, and nurses. Topics included AMR/RMU, HIV drug resistance, and early warning indicators.

Medicine Use Review

During this quarter, SIAPS continued supporting the drug use review (DUR) pilot project at the Kyiv Oblast TB dispensary in **Ukraine**. SIAPS assisted the DUR implementation working group in developing and adjusting DUR criteria and data collection forms. There are plans to finalize these two components in the next quarter and begin collecting data. In **Ethiopia**, the total number of health facilities that have conducted drug-use-indicator-based prescription review with SIAPS support has increased from 18 to 22 since the previous quarter.

Public-Private Partnership

In **Swaziland**, SIAPS provided guidance for developing standards and guidelines to involve the private sector in TB case detection and treatment. A survey on pharmacists' knowledge, attitudes, and practices on TB diagnosis and treatment was reviewed and adapted to the Swaziland context, and a survey plan was developed.

Infection Prevention and Control

In **Namibia**, SIAPS supported the Division of Quality Assurance within MoHSS to train 31 nurses as trainers on the Central Sterile and Supply Department Guidelines and the Operation Theater Manual, both of which were finalized in the previous quarter.

Portfolios and SIAPS IRs in the Year 3 Quarter 4 Report

COUNTRY/PORTFOLIO	IR1	IR2	IR3	IR4	IR5
Africa					
Angola	•	•	•		•
Burundi	•	•	•		•
Cameroon	•	•	•	•	
Democratic Republic of Congo	•	•	•		•
East Central and Southern Africa	•				
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	23	23	26	8	19

CROSS BUREAU

Objective 1: Strengthen pharmaceutical sector governance

In this quarter, SIAPS used Cross Bureau FY13 funding to provide support to the WHO's Good Governance for Medicines Program. SIAPS has been invited by WHO to join a working group to update WHO's Assessment Instrument for Measuring Transparency in the Public Pharmaceutical Sector. On September 3, SIAPS participated in the first meeting that focused on the objectives of the revised tool (whether to maintain a focus on transparency or expand it to assess governance more broadly) and suggestions for restructuring the tool and modifying the scoring system. SIAPS will continue to provide support to the working group as requested by the WHO in the next quarter.

SIAPS continued work to develop an e-Learning course entitled "Governance in the Management of Medicines" for USAID and other users with internet. In this quarter, SIAPS worked with Knowledge for Health (K4H) project staff and their contractors to develop two animations for the course and prepare the graphics. The course content, animations, photos and glossary terms have now all been finalized and uploaded onto the GHeL website, ready for formatting by K4H project staff. In the next quarter, SIAPS will develop the test questions and further support the finalization of the graphics.

Objective 2: Capacity for pharmaceutical management and services increased and enhanced

The New Partnership for African Development (NEPAD) Agency, in collaboration with African Union Commission (AUC) and Pan-African Parliament, has spearheaded the development of the African Union (AU)Model Law for Medical Products Regulation and Harmonization. The model law, which is being developed through a consultative process with key stakeholders, is required to address legislative gaps that exist in most AU member states and that hamper effective medicines regulation and regional harmonization. USAID, through its SIAPS program, has been providing technical assistance to NEPAD to develop the model law. In July 2014, SIAPS was invited to participate in the NEPAD AU Model Law consultation meeting in Dar es Salaam—the meeting participants reviewed comments received from stakeholders, including SIAPS. Following the meeting, SIAPS submitted further comments on the revised draft to NEPAD in August 2014. In the next quarter, SIAPS will continue to participate in meetings and contribute to the development of the model law, as requested.

In the last quarter, SIAPS, the USAID AOR team and the NEPAD Planning and Coordinating Agency discussed opportunities for collaboration and how SIAPS can partner with NEPAD/AMRH to support the work of the Regional Centers of Regulatory Excellence (RCOREs). A report was drafted that set out potential activities, and timelines. The plan calls for synergy and leverage between SIAPS technical assistance plan for AMRH support (using modest Cross Bureau funding) and a SIAPS technical assistance plan that uses a different stream of core funding aimed at providing support to the Eastern African Community (EAC)/Medicines Regulatory Harmonization initiative. Approval of these plans is pending discussion with USAID

and with other donors participating in the World Bank-managed Trust supporting the EAC initiative. We expect that such discussion will be finalized during the next quarter following which SIAPS will share the work plan with the NEPAD Agency and based on agreements reached, initiate activities to support the AMRH initiative. Potential activities include supporting the development of standard curricula for pharmacovigilance and reviewing standards for accreditation for RCOREs.

SIAPS continued to work with the Accreditation Council for Pharmacy Education (ACPE) to develop an accreditation framework for pharmaceutical in-service education and training under the continuing professional development for the pharmacy workforce including pharmacists, pharmacy technicians, and assistants. The document was reviewed by SIAPS staff and ACPE has addressed the different comments. The document is currently being edited in preparation for its dissemination in November/early December 2014.

SIAPS also continued to work with its partner, the Ecumenical Pharmaceutical Network (EPN), to pilot a pooled procurement activity among some of its members in Cameroon. The activity aims at establishing a pooled procurement among interested church entities with a view to rationalize procurement, reduce medicine costs, and ultimately improve financial access to essential medicines. Implementation of activities has been ongoing during the reporting period. The first deliverable is expected in the first quarter of 2015.

Constraints to progress

SIAPS's collaboration with NEPAD to support the standard pharmacovigilance curricula and to establish selection criteria for RCOREs are pending USAID discussion with other stakeholders as well as USAID approval for submitted work plans.

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

In this quarter, an advanced draft of a guidance tool on how to develop standard treatment guidelines (STG) was sent to internal peer reviewers for feedback. The immediate next steps are to incorporate the feedback received from reviewers, finalize the draft, and submit the draft to editorial for review.

Also during the quarter, SIAPS convened a meeting of SIAPS partners, USAID, WHO (represented by the Pan American Health Organization), and experts from Boston University School of Public Health to agree on a working definition and the components of a measurement framework for pharmaceutical systems strengthening. The participants, who represented 13 different organizations working to improve access and use of pharmaceuticals in low- and middle-income countries, also proposed recommendations on the potential use of composite indicators by SIAPS for measuring pharmaceutical systems strengthening. In preparation for the meeting, SIAPS prepared a discussion paper that synthesized the findings of the literature search on (1) definitions, frameworks, and approaches that have been proposed or used to characterize a pharmaceutical system and pharmaceutical systems strengthening, (2) tools and metrics and the

domains/categories therein that have been used to assess a pharmaceutical system or to track pharmaceutical strengthening initiatives, and (3) advantages, disadvantages, applications, and conditions for appropriate use of composite indicators. The consultation objectives were achieved, namely agreement on working definitions for a pharmaceutical system and pharmaceutical systems strengthening for SIAPS and also on the components to be incorporated into a framework for monitoring and evaluating pharmaceutical systems strengthening as well as recommendations to inform the use of composite metrics. A meeting report that includes the discussion paper will be disseminated in the next quarter. SIAPS will continue to work with partners and other experts to develop the framework for measurement of pharmaceutical systems strengthening, identify associated metrics, and check the feasibility of obtaining data to routinely generate them.

Under the SIAPS activity to identify the data burden associated with collecting supply chain information at the peripheral level, the survey for a second country (Swaziland) was completed during this quarter. The survey results were shared with SIAPS's partner, Village Reach. These results, and those from the Malawi survey, will help with formulating key conclusions that will contribute to developing a policy brief to mitigate data burden. The policy brief document is expected to be completed in the coming quarter.

SIAPS also continued to work with the Harvard School of Public Health on identifying facility-level practices or behaviors that affect central supply chain performance and developing related indicators to measure these behaviors. This quarter, a draft report was presented for technical review—input was solicited from SIAPS HQ and field offices that participated in the activity. The report is under editorial review and will be shared with USAID Office of Health Affairs (OHA) beginning of October for input. OHA input will be incorporated during November. Also, a brown bag for USAID/OHA has been scheduled for the second week of December 2014. Any feedback from the brown bag will be addressed and the final report will be disseminated in January/early February 2015.

Partner contributions

Village Reach provided trainings to SIAPS on how to conduct the survey while in Swaziland.

Objective 4: Strengthened financing strategies and approaches

A SIAPS partner, Results for Development (R4D), addressed reviewer comments provided to them for their version 2.0 of A Guide to Tracking Pharmaceutical Expenditures in a Health System. Consequently, they submitted an revised version 3.0 of the report in September 2014 that included a significant update for the section on the pharmaceutical expenditure tracking approach and an analysis of existing pharmaceutical financing related tools along with their strengths and limitations.

During this quarter, we made some progress on the pharmacoeconomics training materials. We consolidated feedback from an in-house review, made some revisions to the materials, and

submitted outstanding technical questions/issues to University of Washington (UW) to address. We expect the UW's response and finalization of these changes in early October.

SIAPS also continued to develop the procurement guidance document for UNITAID. The document is intended to help UNITAID grantees carry out necessary commodity procurements in a manner that promotes good governance and efficiency and thus improves access to priority medicines. The guidance document was completed during the quarter, reviewed by UNITAID, and finalized. UNITAID has already adopted the tool. During this coming quarter, the product will be adequately branded and published.

Partner contributions

R4D was open to feedback from SIAPS and understanding of the need for revising the report to meet team expectations. To make sure that our partner understood our written comments, we took advantage of a side meeting hosted by SIAPS in our Arlington, VA, office and elaborated and clarified our expectations for the final report. This helped our partner understand the context and make the revisions accordingly.

Constraints to progress

Because of competing priorities and non-aligned schedule of individuals involved in drafting the report and in reviewing the report (SIAPS staff), the contract had to be extended to allow for more time to revise the report and produce a final version. A request was made to USAID AOTR with justification and extension was granted to SIAPS and R4D with expiry of contract on October 17.

Objective 5: Improve quality of pharmaceutical products and services

An advanced draft of the medication adherence guidance document for establishing and monitoring local medication adherence programs in resource-constrained settings was completed during the quarter. The next steps are to send the draft to internal peer reviewers and finalize the document based on their feedback.

The USAID e-Learning course on Antimicrobial Resistance (part 2) was further revised, with particular attention paid to the test questions and on insertion of new references in view of many recent developments and new articles in this area. We also began coordinating with K4H so that they are ready to work with us next quarter. The next steps are to review and finalize the course.

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

SIAPS had representation at the Annual AIDS Medicines and Diagnostics Service (AMDS) Partners and Stakeholders Meeting, which was held September 29–October 1, 2014. The AMDS Secretariat convenes this meeting to foster collaboration, sharing information, and mutual

support among AMDS stakeholders and partners. SIAPS's purpose at this meeting was to exchange information on activities for improving HIV and AIDS procurement efficiency, to discuss current and planned interventions for strengthening national supply systems, and to review ongoing activities promoting access to HIV diagnostics. During the meeting, SIAPS presented on its achievements related to the West Africa Regional Project, interacted with key stakeholders in the pharmaceutical management of HIV commodities, and participated in the Coordinated Procurement Planning (CPP) meeting aimed at planning activities for monitoring and preventing stock outs of ARVs and diagnostics.

SIAPS's support to WHO's Essential Medicines Program (EMP) portal included funding the IT contractor Human Info to update the following features—

- Document management: Restructure document data entry screens to automatically add new keywords for more efficient record creation and implement document record copying for similar documents to save reentering keywords and related data.

- User management: Update and extend user management module (add open authentication to verify users, improve security, improve interface, and add recover password upon request function)

- User interface: Reorganize the portal design to focus on digital library features.

More than 100 documents have been added to the collection this quarter for a current total of 4,529 documents.

The planning for the upcoming fiscal year and continued SIAPS support has begun. WHO is drafting a budget request for SIAPS to inform planning for a follow-on purchase order with the Human Info.

SIAPS has also concluded putting a mechanism in place to support surge requests for bulk uploads of materials and has added regular submissions of reports to the formal document archiving process.

Partner contributions

WHO continues as owner of, and active participant in, managing, the WHO EMP portal.

Constraints to progress

Time and budget constraints this year affected the pace of growth for the WHO documentation portal. Additional funding could be used to market the portal more actively, and to begin working with local counterparts to mine the knowledge base and identify knowledge gaps that would need to be addressed.

GLOBAL PROGRAMS

Malaria Core

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

Overall Quarter Progress

To improve coverage of malaria interventions, SIAPS continued to meet with PMI/Washington to discuss activity implementation in PMI-supported countries. A study report on estimating the cost of distribution of malaria commodities in Kenya and Benin was finalized and disseminated to the countries. SIAPS contributed to improving metrics and monitoring of malaria commodities by conducting end use verification (EUV) surveys in two countries and submitting stock status of malaria commodities from Angola, Burundi, DRC, Ethiopia, Guinea, Kenya, Mali, South Sudan, and Uganda.

Objective 1: Improve coverage of malaria interventions

SIAPS continued to hold monthly coordination meetings with PMI/Washington to discuss implementation of PMI activities in supported countries.

In FY 13, SIAPS, in collaboration with its core partner the William Davidson Institute, conducted a retrospective costing exercise to estimate the cost of distribution of malaria commodities including artemisinin-based combination therapies, rapid diagnostic tests, and long-lasting insecticide-treated nets in Kenya and Benin. During the quarter, the report of this was finalized and disseminated to PMI and the two countries. The study has established a costing methodology that will be replicated elsewhere by host countries and implementing partners

Objective 2: Improve metrics and monitoring and evaluation of malaria commodities

During this quarter, the EUV survey was conducted in Ethiopia and Angola. Support was provided in reviewing the findings and providing feedback on viable follow-up activities and interventions based on survey results. SIAPS provided PMI with updated information on EUV data collection methodologies and budgets for each country. The information will help PMI better plan for future surveys. 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.

MCH Core

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

This quarter, the SIAPS MNCH team continued to advocate for the importance of appropriate pharmaceutical management to increase access to essential, life-saving MNCH medicines and supplies, and thereby contribute to ending preventable child and maternal deaths.

At the global level, SIAPS remained actively engaged in technical groups such as the Supply Chain Management sub-group of the Community Case Management (CCM) Taskforce and the Maternal Health Caucus of the Reproductive Health Supplies Coalition (RHSC). As part of the Supply Chain Management sub-group, SIAPS developed and finalized the resupply tools for community health workers (CHWs) this quarter and disseminated them through the CCM Central website. SIAPS also facilitated two meetings of the Maternal Health Caucus and plans to attend the annual membership meeting of the RHSC in Mexico next quarter.

In addition, SIAPS MNCH continued to support the implementation of the UNCoLSC work plans of several technical resource teams (TRT) as well as related country specific activities. For example, as part of the Maternal Health TRT work plan, SIAPS completed the data collection for a case study in Mali examining the integration of oxytocin in the Expanded Programme on Immunization's cold chain. The preliminary report was drafted and will be shared with the Maternal Health TRT next quarter. Also next quarter, SIAPS, in collaboration with PATH, will initiate work on an options analysis for systematic integration of oxytocin in the cold chain in Mali and Ghana. Similarly, in support of the Chlorhexidine Working Group, SIAPS worked with country teams in Angola, DRC, Mali, Pakistan, and South Sudan to support introduction of chlorhexidine. In Pakistan in particular, SIAPS MNCH provided technical assistance to UNICEF and other stakeholders to finalize the strategy for the phased introduction of chlorhexidine.

Objective 1: Global awareness of the importance of pharmaceutical management for MCH medicines and supplies increased.

Through participation in global working groups and partnerships, SIAPS continued to support global partners to ensure that appropriate pharmaceutical management for medicines and supplies is included in the global MNCH agenda.

This quarter, SIAPS MNCH lead continued to support the Maternal Health Supplies Caucus in reviewing Innovation Fund proposals and preparing for the annual membership meeting in Mexico. She led the conference calls for reviewing the agenda for the annual membership meeting in Mexico of the Maternal Health Caucus at the end of July and September. In September, she reviewed the briefs prepared by Family Care International (FCI at the request of the Maternal Health Supplies Caucus on oxytocin, misoprostol, and magnesium sulfate. She also reviewed the business cases for the three medicines prepared by Jhpiego. She met with members of the MHSC to finalize the agenda for the meeting in Mexico which she will attend in October.

Senior SIAPS staff participated in discussions with USAID, Global Fund, MDG Health Alliance, and UNICEF on PSM support for countries going through the process of grant development under the new funding model. SIAPS worked to revise the scope of work for a UNICEF consultant to provide technical assistance in PSM to the global group and to countries and facilitated discussion between GMS and SIAPS on TA to Nigeria and in general to the process of assisting countries to include CCM in their global fund grants. As part of the iCCM Financing Task team, SIAPS staff participated in interviewing PSM consultant candidates. She developed a PSM checklist for iCCM to be used by consultants to identify efforts in PSM areas that need strengthening. This was received well by both the Global Fund and UNICEF and after review will be a resource for country Principal Recipient teams as well as consultants providing TA on PSM. SIAPS is having discussions with DRC, Burundi, Kenya, and Zambia as to whether the countries have the capacity to provide TA to the PSM planning as grants are developed once the concept note has been approved. Next quarter SIAPS countries will decide on where SIAPS will provide TA on the PSM as part of grant making.

SIAPS staff also participated in the monthly SCM subgroup meetings in August and September 2014. The resupply sample tools and job aids were completed and planning for next quarter's webinar in October was discussed. SIAPS staff further worked with the new Maternal and Child Survival program coordinator to upload the resupply tools to the CCM central web site and to revise the SCM subgroup part of the website.

Finally, since Ebola is now threatening implementation of iCCM and risks exacerbating child and maternal mortality in the affected areas, SIAPS translated the iCCM guidelines and family guidance package into French.

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

This quarter, a senior SIAPS staff member presented the methodology for estimation of unmet need for maternal health medicines to 22 participants from Afghanistan, India, Pakistan, Nepal, and Bangladesh through a webinar organized by the UNICEF Regional Office for South Asia (ROSA). The participants found the tool useful and will be advocating with their respective government counterparts for its use before the next scheduled quantification of maternal health medicines. SIAPS MNCH will be proving assistance as required. The tool was also translated to French and posted on SIAPS website and featured in the MSH Global Impact newsletter. The SPS-associate award in Kenya expressed interest in conducting the estimating unmet need for essential maternal health medicines workshop in Kenya. The MNCH team drafted a background document specific to Kenya so that the project team can imitate discussions with the Ministry of Health and seek approval from the USAID mission. The MNCH team also had a meeting with SIAPS partner Ecumenical Pharmaceutical Network to discuss the possibility of conducting the workshop with one of its member organizations, potentially in Zambia or Malawi. The MNCH team will continue to discuss these options next quarter.

Also this quarter, distance-based support was provided to the selected districts in Zambia using the intervention guide for the management of child illnesses. SIAPS developed a questionnaire

on how the guide was used and if district managers found it useful in their routine planning exercise. Implementation thus far has been slow as the districts were involved in their annual planning exercise in August. One of the districts (Kalomo) oriented to the guide was visited in September and had not been able to advance in the design of the intervention due to conflicting priorities. Members of the team filled in the questionnaire during discussions on the usefulness of the guide where they agreed the guide was a useful resource. Next quarter, two other districts (Nyimba and Petauke) will be visited to assess how the guide has been used and if interventions are being planned as a result. SIAPS will also meet with the UNICEF Zambia office to determine how the intervention guide can be included in the Diagnose-Intervene- Verify-Adjust- (DIVA) approach in Zambia and discuss with the inclusion of intervention guide in the generic DIVA guidance with the UNICEF New York.

Objective 3: Evidence base for effective strategies to increase access to pharmaceuticals and services increased

SIAPS continued to support CCM in Guinea as well as supporting implementation of various work plans of the technical resource teams of the UN Commission on Life-Saving Commodities (UNCoLSC), including those at the country level.

In Guinea, the LMIS at community level is being finalized and plans for introduction of the LMIS in pilot areas are being developed. Plans are also underway to review the quantification of CCM supplies. SIAPS is also finalizing a scope of work for support from VillageReach to conduct a diagnosis of the LMIS in general. The future of all of these activities obviously depends on the evolution of the Ebola epidemic. The SIAPS team in Guinea has been involved in the discussion of implementation of "no touch" iCCM due to Ebola. This has met resistance from the malaria program as it means going back to presumptive treatment of malaria. However, with support from UNICEF and WHO, the country has decided to adopt "no touch" only in the affected areas and not across the country. SIAPS supported the MoH in organizing a workshop for iCCM supervisors from one prefecture and participants were oriented in iCCM implementation and their role as supervisors and equipped with a checklist. Next quarter, SIAPS will complete the consumption data analysis and prepare for the quantification review workshop, finalize the community logistics information package for validation at central level, followed by orientation of staff at district and facility levels and plan for the diagnostic LMIS study in January 2015.

In support of the implementation of the UNCoLSC work plans, SIAPS participated regularly in the meetings of the following working groups: the Maternal Health Technical Resource Team (MHTRT), the Supply Chain and Local Markets (SCLM) TRT, the Chlorhexidine working group the Antenatal Corticosteroids working group, the Injectable Antibiotics working group, and the Diarrhea and Pneumonia working group, including the Amoxicillin and Zinc sub-groups. This quarter, SIAPS continued to provide country support for the UNCoLSC-related activities in Angola, Bangladesh, DRC, Mali, Pakistan, and South Sudan.

SIAPS continued to contribute to the Maternal Health Technical Resource Team by completing the data collection for integration of oxytocin in the Expanded Programme on Immunization cold chain case study in Mali. SIAPS hired a consultant who analyzed the data and submitted the first

draft of the Mali case study. The draft was reviewed and comments were provided to the consultant. Next quarter, the report will be finalized and SIAPS will begin drafting a methodology for options analysis for incorporating oxytocin in the cold chain in Mali. The SIAPS MNCH lead also met with Michel Pacque from PATH, the lead for the oxytocin in the cold chain sub-group, to discuss next steps for this activity.

SIAPS MNCH Lead regularly participated in the Supply Chain Technical Resource Team meetings. The quantification guidance was sent for formatting to editorial as well as translation into French. Also SIAPS staff shared authorship on an abstract on the best practices briefs that was submitted to the Global Health Supply Chain Summit (GHSC by Village Reach. SIAPS staff met with Village Reach staff to discuss dissemination workshops during the GHSC summit; SIAPS staff also worked with the UN Commission communications person to make sure finalized products were on UNCoLSC website. Next quarter, SIAPS will host the supply chain technical resource team meeting in Arlington in October 9and continue to plan for dissemination of phase 1 products during the GHSC summit.

Besides participating in the chlorhexidine working group calls and providing technical inputs on the video on the use of CHX being developed by GlaxoSmithKline, SIAPS MNCH coordinated with staff members in Angola, Afghanistan, Mali, and South Sudan regarding the interest those countries have expressed in introducing chlorhexidine. SIAPS Angola confirmed that 7.1% chlorhexidine has been proposed to be added to the essential medicines list (EML) under revision for cord care. SIAPS will continue to follow up with the in-country team on the EML revision. Materials were shared with SIAPS South Sudan as the USAID-funded MCH project has agreed to take the lead on CHX introduction. SIAPS continued to follow up on the status of the introduction plans.

The Ministry of Health in Mali also confirmed that chlorhexidine 7.1% has been included in the EML currently being revised with the support of WHO. A senior SIAPS staff member shared the link to resources on the CWG website to SIAPS Mali to provide to national stakeholders.

SIAPS MNCH assisted Pakistan in finalizing the program implementation and local production strategy for the phased introduction of chlorhexidine. SIAPS also assisted in coordinating a visit from PATH and USP for the rapid assessment of manufacturers in September and in providing information to manufacturers on product specifications. Finally, SIAPS assisted in finalizing a presentation on local production and the chlorhexidine implementation strategy given by UNICEF staff during a national workshop on chlorhexidine in Pakistan.

As part of the support provided to the Injectable Antibiotics working group, SIAPS MNCH continued to follow up in DRC on the landscape analysis. Initially, the Integrated Health Program was going to provide support for this activity, but due to delays in implementation the program no longer has funding available. Alternative funding is being sought for the survey and efforts are underway to confirm availability of IHP and SIAPS staff for the activity. Senior SIAPS staff also reviewed the PATH proposal for amoxicillin job aids for newborn sepsis. This quarter, SIAPS staff also attended the in-person meeting of the Antenatal Corticosteroids working group and was asked to lead the supply sub-group. SIAPS MNCH reviewed the materials developed under the SC TRT and the quantification guidance based on discussions

during meeting surrounding dosage. She also worked closely with the communication team at UN Commission to ensure that supply chain resources are shared with commodity technical resource teams.

Finally, a SIAPS staff member continued to follow up with PATH on the job aids for dispensing amoxicillin and exploring possibilities of any SIAPS sites or possibly Management Sciences for Health field offices to field-test the job aids. SIAPS staff also attended the Diarrhea and Pneumonia working group meeting in New York September 4–5. During this meeting, contact was made with staff from two Bill & Melinda Gates Foundation-funded projects requiring information on DRC to initiate their project activities in country. These contacts were put in touch with the SIAPS and Integrated Health Program country teams so that they can provide the required information. As part of the amoxicillin sub-group, a senior SIAPS staff member explored the role of SIAPS in pilot testing the dispensing job aids designed by PATH and had detailed discussion with the PATH team. The job aids are still being revised by the designer; however, SIAPS plans to contribute to piloting the job aids in one or two SIAPS countries.

Neglected Tropical Diseases

Goal: To ensure the availability of quality medicines, supplies, and effective pharmaceutical services to increase efficiency of neglected tropical disease (NTD) control and elimination programs.

Overall Quarter Progress

Work on the NTD portfolio is progressing according to schedule. SIAPS attended the World Health Organization (WHO) Western Pacific Regional Office NTD Program Managers Review Group meeting. Additionally, an abstract to a scientific conference was accepted for presentation at the American Society for Tropical Medicine and Hygiene, and final draft materials for the workshop on SCM for NTDs have been submitted to the US Agency for International Development (USAID) for review.

Objective 1: To strengthen global NTD coordination and oversight mechanisms

SIAPS attended the WHO Western Pacific Region Program Managers Meeting on NTDs held in Manila, Philippines, in July 2014. SIAPS provided input on issues related to supply chain management for drugs to treat NTDs in the region.

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 monitoring and evaluation. This is an important aspect of the entire NTD control and elimination program that needs to be addressed as programs begin to scale down.

Additionally, the American Society for Tropical Medicine and Hygiene accepted the SIAPS abstract on the assessment of NTD programs (previously carried out by the Strengthening Pharmaceutical Systems program, the predecessor to SIAPS) for presentation at its annual conference.

Objective 2: Support NTD Capacity Building Initiatives

During this quarter SIAPS completed the final draft of the workshop presentations, group work assignments, and accompanying manual for the National Health Managers Workshop for Supply Chain Management of National Mass Drug Administration Against NTDs. The draft materials are undergoing review by USAID. Once approved by USAID personnel, SIAPS will send the draft to the Task Force for Global Health and other stakeholders to review content and receive their input. The site and date of the pilot workshop is yet to be determined.

Partner contributions

SIAPS met with members of USAID to discuss materials to be included in the workshop and ways to improve the workshop packet.

Objective 3: Support NTD medicine safety programs

In the previous quarter, SIAPS held a meeting with USAID personnel. In this meeting USAID informed SIAPS not to move further on this project until they have assessed progress with WHO. SIAPS will follow up in the next quarter on next steps.

Constraints to progress

This objective has been put on hold until further notice. In the interim SIAPS will continue communications with USAID and WHO to ensure that progress can be made quickly once approval is received to continue this objective.

TB Core

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

Overall Quarter Progress

Much of SIAPS's work this quarter has focused on capacity building in pharmaceutical management. SIAPS updated training materials and exercises related to forecasting, supply planning, quantification, and early warning systems. These materials were then used train NTP managers and partners in Ethiopia (funded through HEAL TB project), and to train GDF consultants. Through its regional support mechanism, SIAPS contributed to the development of Tanzania's concept note for the Global Fund's New Funding Model, and provided ongoing support to select countries with regards to maintaining adequate stocks of quality TB medicines.

At the global level, SIAPS participated in two meetings with USAID, the Bill & Melinda Gates Foundation (BMGF), Global Drug Fund (GDF), US Pharmacopeia (USP) Promoting the Quality of Medicines (PQM) Program, and the Clinton Health Access Initiative (CHAI) to discuss strategies for increasing the number of suppliers, improving access to quality assured TB medicines, and the roles and responsibilities of the GDF and partners. SIAPS also contributed to discussions and decisions of the GDF Strategic Advisory Committee for developing a road map and strategy for GDF's increased role as a supplier within the United Nations Office for Project Services (UNOPS) system.

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

SIAPS continued to provide technical leadership to global initiatives and donors, with a particular focus on market shaping for second-line TB medicines and the introduction of new medicines and treatment regimens. SIAPS participated in two meetings with USAID, BMGF, GDF, USP/PQM, and CHAI where partners discussed strategies for increasing the number of suppliers, improving access to quality assured TB medicines as well as the roles and responsibilities of the GDF and partners. In September 2014, SIAPS actively contributed to discussions and decisions of the GDF Strategic Advisory Committee in developing a road map and strategy for the increased role of the GDF as a supplier within the UNOPS system for the GF programs. This strategy was later presented and discussed at the GF and UNITAID Strategic Reviews in Procurement and Market Dynamics meeting (October 1–4, 2014).

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

SIAPS has updated training materials and exercises for trainings related to forecasting, supply planning, quantification, and early warning. These materials were used in August 2014 to train NTP managers and partners in Ethiopia (funded through HEAL TB project), and to train the GDF consultants in September 2014 (total of 21 consultants: 7 female, 14 male).

QuanTB training materials and a new version of QuanTB were finalized this quarter; this allows preparations for the e-platform to resume.

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

Improve and maintain e-TB Manager

- e-TB Manager has been continuously enhanced with additional features for improved and expanded use and with new versions are released regularly.
- e-TB Manager is currently in operation at 2,519 treatment facilities in 10 countries. Globally, 3,011 active users are managing 250,783 TB cases, DR-TB cases, and presumptive TB-infected individuals.
- A generic version of e-TB Manager Desktop, a stand-alone edition of the tool for case management only, has been tested and finalized. Assessment for adaptation to fit specific country needs in Nigeria is on hold until the local office hires a replacement for the vacant lead IT position.
- An updated version of e-TB Manager's Data Analysis and Reporting Tool now allows the development of customized reports using variables from the entire database and have the results presented on an adaptable dashboard. All countries using e-TB Manager will benefit from this updated generic version.
- The e-TB Manager generic version technical documentation has been finalized.
- Support combining SIAPS, TB CARE, and country funds for adapting, monitoring and implementing e-TB Manager continues in in Azerbaijan, Brazil, Bangladesh, Cambodia, Indonesia, Namibia, Nigeria, Turkmenistan, Ukraine, and Vietnam.

Improve and maintain QuanTB

- As of September 30, 2014, there were more than 600 downloads of QuanTB version 1.0.2 from the SIAPS web site.
- An enhanced version 2.0 of QuanTB has been tested and finalized. This version now allows to quantify for TB, MDR-TB, and XDR-TB regimens of any complexity, including with new TB medicines, and make adjustments for attrition rates and changes in TB programs; it has an updated more detailed and informative dashboard, and other improvements for easier data entry and better data validation. The official launch of QuanTB 2.0.0, along with corresponding promotional materials, will take place during the 45th Union World Conference on Lung Health October 28 through November 2, 2014, in Barcelona, Spain.

Measure and evaluate impact
The 13 validated indicators to describe usage and implementation of e-TB Manager were distributed to Bangladesh, Brazil, Namibia, Ukraine, and Indonesia. These are countries where technical assistance was either provided in the past or is ongoing.

Partner Contributions

Local partners have provided important feedback for enhancing the system and developing new features and tools. In countries where SIAPS presence is not significant, SIAPS relies on local partners' and other projects' support for e-TB Manager implementation, monitoring of performance, and reporting outcomes.

Constraints to Progress

There is a lack of experienced in-country champions to conduct and monitor e-TB Manager implementation activities because of high turnover or deficiency of local MIS and TB specialists.

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

SIAPS provided technical assistance to improve access to medicines for TB control.

Tanzania
- SIAPS contributed to the development of the concept note for the Global Fund's New Funding Model in Tanzania September 1–5 and 18–19. SIAPS participated in the gap analysis, outlined quantification assumptions, reviewed quantification data, and costed out TB medicines and interventions to be covered under the New Funding Model.
- SIAPS continues to provide on-going support to selected NTPs that are implementing early warning systems to prevent stock-out or wastage of TB medicines. The support includes participation in the quarterly stock status analysis meetings in Tanzania, and advising NTPs on issues related to TB medicines procurement including the need to expedite deliveries or divert non-urgent country orders based on the QuanTB outputs.

Malawi
- With USAID coordination, SIAPS resumed communication with the Malawi NTP on quantification of TB medicines and establishment of an early warning system to prevent stock-outs or wastage. Data requirements for quantification were assembled, shared with the NTP, and dates for a SIAPS-led quantification workshop were agreed upon.

Ethiopia
- The HEAL TB project requested SIAPS support to conduct a country-specific technical workshop on quantification and to conduct a national quantification exercise using QuanTB. In August, 27 participants (21 males, 6 females) from MoH (NTP and the Pharmaceutical Logistics and Management Unit), regional health bureaus, Pharmaceuticals Fund and Supply Agency, and partners (HEAL TB, TB CARE I, and SCMS) attended the SIAPS-led workshop.

- As a part of the collaboration with GDF on global forecasting and early warning systems (which adopted QuanTB as official tool for collection and analysis of medicines data), SIAPS conducted a workshop on applied quantification of TB medicines using QuanTB tool for WHO/GDF consultants in Addis Ababa, Ethiopia, in September. SIAPS has been providing ad hoc support for GDF staff on quantification, forecasting, and early warning in GDF-supported countries.

Bangladesh

- With SIAPS support, the NTP has been using QuanTB on a monthly basis. Using the program outputs, the NTP has worked with the GDF and TB medicines manufactures to adjust upcoming planned shipments according to accurate quantification and forecasting figures. This management has resulted in a savings of approximately USD 900,000 country and donor funding from potential wastage. Details of this effort are included in the SIAPS Bangladesh report.

Georgia

- In June 2014, SIAPS participated in the GDF Monitoring Mission to Georgia, assisting with an assessment of adherence to GDF terms and conditions. The mission also supported the NTP with calculating medicine needs for the coming year and provided recommendations for addressing weaknesses to National Center for TB, MoH, WHO, and the GF Prime Recipient.

In Pakistan, the curriculum for pharmacist training was reviewed and revised to add a teaching plan and update training materials. In the past quarter, 44 pharmacists in the city of Sukkhar were trained according to the curriculum, and the directory of general practitioners to whom pharmacists can refer clients with TB-like symptoms was finalized. Discussions with the national and the provincial TB programs are ongoing to finalize memorandums of understanding with a pharmacy school and private pharmacy.

SIAPS presented a poster on the active surveillance activity implemented in Swaziland at the 20th international AIDS conference in July. In this quarter, SIAPS conducted a retrospective data capture of adverse events reported by TB and HIV and AIDS patients into the electronic data base used at the facilities (SSASSA). This was done at facilities where this data had not been entered previously into SSASSA for collection and analysis. All adverse events data for the period were aggregated and analyzed at national level. The third TB/HIV bulletin report highlighted the results from the sentinel sites. The bulletin will be disseminated to all key stakeholders in the country and a partners' meeting is planned for the next quarter to discuss results.

SIAPS is in discussion with MSH contracts team to issue an RFP to convert the current active surveillance tool into a web-based version with an off-line component and also to make it possible to import and export data from and to other existing databases used in the countries. This process is ongoing.

SIAPS will be presenting a poster on an approach to identify and minimize patient safety risk to improve pharmacovigilance in countries at the upcoming UNION conference. The approach is

based on the document developed and disseminated by SIAPS "Preventing and Minimizing Risks Associated with Anti-Tuberculosis Medicines to Improve Patient Safety."

Promote monitoring of MDR-TB medicines utilization and adoption of this practice by NTPs

- SIAPS received final comments from the last two reviewers and incorporated them into the Drug Use Reviews—A Practical Strategy to Ensure the Rational Use of Anti-Tuberculosis Medicines. The document has been edited and is now with the graphic designer. It will be launched at the October Union conference.
- In early September, SIAPS Swaziland staff submitted a request to the national ethics committee for approval to conduct the DUR. Approval is anticipated by the end of October and data collection activities will start shortly after receiving approval.
- The Namibia and Uzbekistan country programs have included TB drug use review activities in their work plan submissions.

Constraints to Progress

- Bangladesh: The DUR activity is on hold in Bangladesh until the position to lead the activity is filled. Originally posted as a consultancy, the team is considering changing it to a full-time position to attract candidates.
- Ukraine: The stakeholders in Ukraine are revising the objectives agreed on at the stakeholder's meeting last quarter. SIAPS staff in Arlington and Ukraine is providing technical assistance to guide them through the process.

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

Kenya

- SIAPS is providing ongoing support to the Kenya NTP to collect monthly stock status data and generate monthly stock status reports for first-line and second-line anti-TB medicines. SIAPS also participated in the monthly national TB commodity security committee meetings. At a recent meeting, the committee used QuanTB stock status reports as the basis of a request to the Global Fund to direct savings from year 4 activities towards the procurement of first-line TB medicines to avert possible stock-outs in the future. SIAPS provided support to the NTP to forecast and quantify first-line medicines that need to be purchased with the savings. Reports from the QuanTB early warning system continue to inform the GDF on planning and expediting deliveries.

- SIAPS took the lead in developing a position paper by the national commodity security committee that provided recommendations on managing TB medicines supply chain systems in decentralized counties. The committee advocated for pooled procurement managed by the

NTP on behalf of the counties to safeguard the availability of quality TB medicines. SIAPS also supported county governments to quantify TB medicines requirements in the decentralized system, supporting pharmacists from 47 counties to conduct quantification and supply planning of TB medicines, and stock status monitoring.

- SIAPS participated in meetings to finalize Kenya's National Tuberculosis Strategic Plans (NSP) for 2014–2017, providing technical assistance on PSM and commodity management systems strengthening including costing the PSM portion.

- SIAPS provided support to the NTP to transition from the current manual LMIS reporting system to electronic reporting through the national DHIS2 system. SIAPS redesigned tools to be uploaded into the DHIS2, drafted guidelines, and helped create a report transmission portal for TB LMIS reports.

- SIAPS also assisted the NTP in conducting a distribution and peripheral stock status audit. SIAPS designed the data collection tool used by teams collecting data in the field and a roadmap to guide the entire activity.

Zambia and Zimbabwe

- During this quarter, SIAPS supported two GDF annual monitoring missions in Zimbabwe and Zambia July 14–18 and July 21–25. As part of these missions, SIAPS supported the quantification of TB medicines for the next procurement period using QuanTB and assessed TB supply chain management and adherence to GDF terms and conditions. Based on the observed gaps, recommendations were made on how to improve procurement, quantification, and stock management.

- SIAPS provided support in reviewing TB medicines estimates for the Global Fund concept note for the new funding model in both countries, and collaborated with independent GDF consultants to assess the Zimbabwe MOH's capacity to assume the role of TB medicines procurement from UNDP, the organization currently responsible for procurement of Global Fund-supported TB medicines. SIAPS assisted the GDF in piloting the revised monitoring mission checklist, providing feedback on areas that required improvement. Following the mission to Zimbabwe, SIAPS offered feedback to the Global Fund and GDF teams on areas that needed further attention before the Global Fund grant making process.

Nigeria

SIAPS staff travelled to Abuja, Nigeria, for September 8 through14 to continue discussions on SIAPS-planned support to the NTP on TB pharmaceutical management using QuanTB. During the visit, SIAPS had meetings with the USAID Nigeria mission, NTP, and partners including JSI | DELIVER and CHAI. QuanTB was demonstrated for MDR-TB commodities at a workshop organized by the NTP and JSI | DELIVER, and to the TB/HIV team at the USAID Nigeria mission. As a result, SIAPS's proposal to second staff to the NTP was approved by the mission. SIAPS began the recruitment process, finalizing the scope of work and job description for the proposed position, and shared that information with the NTP and USAID Nigeria mission for endorsement.

Malawi
Under the coordination of USAID, SIAPS resumed communication with the Malawi NTP on quantification of TB medicines and establishment of an early warning system to prevent stock-outs or wastage of TB medicines. Data requirements for quantification were assembled, shared with NTP, and dates for a SIAPS-led quantification workshop were agreed upon.

Mozambique
SIAPS conducted a short-term technical assistance for Mozambique to assess TB pharmaceutical management. As per the agreement, SIAPS will support the Mozambique NTP to strengthen data collection and validation processes needed for accurate quantification and QuanTB will be piloted at the national level during the next quarter.

Constraints to Progress

Kenya
- Insufficient funds for procurement of first-line TB medicines. The government of Kenya maintained that it is not possible to reverse the decentralized funds. One solution may be setting up a pooled procurement system and obtaining buy-in from county governments.
- Weak logistics management information system, specifically with regard to stock status reporting.

REGIONAL PROGRAMS

East, Central, and Southern Africa

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

Overall Quarter Progress

During this quarter, SIAPS continued its support to East, Central, and Southern Africa (ECSA) to establish and institutionalize TB commodities supply management especially in the area of commodity management and data for decision making. SIAPS successfully completed and disseminated the results of the situation analysis in four countries—Tanzania, Uganda, Malawi, and Swaziland. The analysis findings were used to develop medium term strategies to address TB data and commodity management for ECSA countries. SIAPS also began establishing the ECSA TB supply chain portal, which will be a key tool for ECSA member countries to share information on stock, best practices, and technical updates; the portal will also be a platform to implement a regional web-based early warning system (EWS) to avoid expiries and stock-outs.

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

1. Situation analysis

The situation analysis for the four countries selected, i.e., Tanzania, Uganda, Malawi, and Swaziland, was done between June and August 2014. SIAPS developed the analysis protocol, collected and analyzed the data, and prepared the report for the situation analysis. The situation analysis focused on reviewing structures and systems to support TB commodities and data management, and their maturity from country to country. The main challenges that negatively affect TB programs are related to practices and processes, e.g., adherence to guidelines, technical quality, data quality, coordination, and timeliness of implementing activities and supply chain performance monitoring.

The situation analysis identified several challenges including—

- Limited coordination between agencies involved in procurement
- Weak pharmaceutical management information systems
- Quantification—lack of data, skills, tools and clear protocol for conducting good quantification
- Absence of early warning system to signal about potential problems with supply in some countries
- Procurement challenges, such as late procurement/ordering and delivery; long lead times (including the Global Fund funding); importation problems, such as customs fees; and lack of reliable medicines pipeline data
- Limited use of data for performance monitoring

- Stock-outs and treatment interruptions (but little analysis available of the underlying reasons)
- Expiry and waste of procured second-line drugs

SIAPS disseminated the situation analysis findings during the ECSA TB expert's forum in Arusha, Tanzania, held August 11–14, 2014, which included participants from eight ECSA countries—Tanzania, Kenya, Uganda, Zambia, Zimbabwe, Malawi, Lesotho, and Swaziland; and ECSA partners—KNCV TB Foundation, WHO AFRO, African Union Commission, and the Rwanda Biomedical Center, a regional center of excellence on Programmatic Management of Drug-resistant TB (PMDT).

2. Development of ECSA TB supply chain information portal

SIAPS has facilitated the initial stages of establishing the ECSA TB supply chain portal. SIAPS developed the portal concept paper, procured services through a vendor to help design and develop the portal. The portal will be a key tool for ECSA member countries to share information on stock, best practices, and technical updates. The portal will also be a platform to implement a regional web based early warning system (EWS) to avoid expiries and stock outs. The portal will have the following modules–

- EWS dashboards
- Key performance indicators (KPIs) for TB supply chain
- Learning center (resource center for TB data and commodities management)

3. Development of a medium term strategies to strengthen ECSA TB data and Commodities management

The medium-term strategy to address TB data and commodity management was developed and included—

- Establishing the ECSA TB supply chain portal which will have the following modules

- Improving TB procurement management of through regional coordination and countries collaboration by doing the following activities;
    - Map procurement practices, guides and tools among ECSA countries (landscape analysis)
    - Develop a simple harmonized TB commodities procurement guideline to support ECSA member countries, in collaboration with stakeholders
    - Develop a regional technical resource pool on procurement through consultation and trainings, with blessings from member countries
    - Coordinate with countries and suppliers to improve procurement practices and performance (360 degree feedback system)
    - Track procurements, using ECSA TB supply chain portal, and document results and interventions
    - Review capacity and strength of member states procurement agencies
    - Advocate and strengthen capacity of country procurement agents to procure all goods including donor funded

- Addressing regulatory issues to improve inter-country distribution of TB commodities by
  - Map the regulatory requirements among the member countries through a landscape analysis and validate the information through consultation with the regulatory bodies of the member states
  - Develop harmonized generic guidelines for inter-country distribution of TB commodities and solicit consensus on the use of the guideline among member states
  - Coordinate with countries and key stakeholders such as WHO, GDF and development partners to improve stock availability in inter-country distribution

- Strengthening HR capacity on TB commodity management among member states
  - Conduct comprehensive situation analysis on ECSA HR supply chain capacity strengths and gaps
  - Disseminate the situation analysis findings and report
  - Develop a comprehensive capacity building package (guides, materials and tools) on TB supply chain management for adoption by ECSA countries as needed
  - Cascade of the trainings/mentorship in country
  - Roll out the access and use of the information portal
  - Advocate for countries to procure tools to support sharing of information of supply chain information
  - Follow up on capacity building trainings

- Improving knowledge exchange among member states by sharing TB supply chain practices by:
  - Map all supply chain activities (and functions) in the ECSA member countries and any regional initiatives
  - Identify at least one best practice per country that can be reviewed and be confirmed as a best practice
  - Share through ECSA TB supply chain information portal
  - Adapt/adopt best practices in member countries
  - Identify and develop a pool of experts through capacity building that can help plan and implement the respective best practices to any country that need technical assistance
  - Period and continuous update of the challenges and best practices

- Strengthening data and management of TB laboratory commodities among ECSA member states
  - Conduct an ECSA lab supply chain situation analysis following the steps below:
  - Disseminate the results of the situation analysis
  - Develop a comprehensive lab supply chain strategy for ECSA countries
  - Prioritize the strategies to implement at country level and regional level

Partner Contributions

ECSA assisted with situation analysis work (technical and coordination with NTPs)

LAC AMI

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

Overall Quarter Progress

AMI countries have continued reporting their stock of antimalarials at central and regional warehouses. Nine countries shared data for the last quarterly bulletin (April-June). The availability of antimalarials in central warehouses has slightly increased from 83 percent to 85 percent. SIAPS has concluded the collection of information and finalized the reports in 4 AMI countries for an in-depth analysis of malaria pharmaceutical management in the Americas (Peru, Brazil, Nicaragua and Guyana). The consolidated regional report will re-orient SIAPS technical assistance.

Objective 1: Strengthening pharmaceutical sector governance

Technical reports on the situation of malaria pharmaceutical management and the impact of Amazon Malaria Initiative (AMI) interventions for Brazil, Peru, Guyana and Nicaragua, were finalized and distributed. Data collection for a similar study in Honduras was finalized. SIAPS organized a one-day workshop in Honduras to discuss the inclusion of disease control programs in an integrated pharmaceutical system, and to present the results of the assessments on the conditions and practices of medical stores. 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 August 2014.

Nine States in Brazil are working to ensure the effective implementation of malaria control strategies. A workshop to assess their progress is scheduled for the first week of December 2014. In the next quarter, SIAPS will visit Colombia, Suriname, Peru, and Guyana to discuss strategies for confronting the increased incidence of malaria and the lack of access to diagnostics and treatment in remote gold-mining areas.

Partner Contributions

PAHO coordinated the data collection, writing and distribution of the Stock Availability Monitoring bulletin.

Objective 2: Making pharmaceutical management information available for use in decision-making at different levels of the health system

PAHO coordinated the production and dissemination of the April-June AMI quarterly bulletin on the availability and consumption of antimalarials, disseminated in August 2014. SIAPS supported the collection and analysis of information in some AMI countries.

As a key component of a regional study, SIAPS analyzed the availability of medicines in Brazil,

Peru, Guyana, Nicaragua, and Honduras. Final reports were presented and discussed with national counterparts for the first four countries. For the next quarter, the Honduras report will be finalized and distributed.

Constraints to progress

Nine countries provided data for the AMI quarterly bulletin on the availability and consumption of antimalarials. Guatemala, Bolivia and Suriname did not provide data this quarter. Regionally, the availability of medicines in central stores is 85 percent, a slight increase compared with 83 percent in the previous quarter.

Partner contributions

Data collection for the regional stock monitoring report was coordinated with the PAHO malaria focal points.

Objective 3: Improving pharmaceutical services to achieve desired health outcomes

SIAPS participated in the AMI steering committee meeting, which took place in Washington DC from September 9-11. One of the most relevant topics was the need to agree on the strategy to prevent the emergence of ACT resistance in Suriname and Guyana. A key intervention should be improving access to diagnostics and treatment in the gold-mining camps located around the Suriname-Brazil-French Guyana border, as was recommended in the KAP study conducted by SIAPS and PAHO. For the next quarter, AMI will organize a meeting in Paramaribo to analyze the situation and agree on a strategy. SIAPS will participate in this meeting.

SIAPS hired a short-term consultant in Brazil to systematize the interventions to improve access to malaria diagnostics and treatment in mining camps in Para and Roraima. A draft version of the intervention proposal was prepared during this quarter. In the next quarter, the consultant will validate the proposal with local counterparts and the national malaria program.

Six countries have implemented revised criteria for programming and distributing antimalarials in low-incidence areas. Preliminary results of the regional assessment show that just two countries—Brazil and Ecuador—are fully utilizing these criteria. For the next quarter, SIAPS will disseminate a report with the results of the regional assessment as a strategy to incentivize the use of the criteria in the rest of the countries. SIAPS will also visit Colombia to facilitate a workshop leading to the agreement on the criteria for programming and distributing antimalarials in low-incidence areas.

West Africa Regional

Goal: Ensure the availability of quality pharmaceutical products especially those related to HIV and AIDS to achieve high level desirable health outcomes in target West Africa countries The SIAPS West Africa Regional Project (WARP) covers Benin, Burkina Faso, Cameroon, Guinea, Niger, and Togo.

Overall Quarter Progress

After having completed a successful user acceptance test of the HIV and AIDS regional dashboard (OSPSIDA) in Togo in June 2014, SIAPS has deployed the web-based tool in four focus countries (Niger, Cameroon, Burkina Faso and Benin). The tool has been deployed at the central level of each country to capture and aggregate product information and patient data already collected by paper-based LMIS tools. The deployment has showed the weaknesses in the paper-based reporting system as data quality was a real issue in most of the countries where the tool has been deployed.

While developing its HIV and AIDS concept note for the Global Fund new funding HIV and AIDS grant, SIAPS has been also requested by the Niger Country Coordination Mechanism (CCM) to assist the country's Procurement and Supply Management Technical Working Group (PSM-TWG) in the process. SIAPS worked closely with the PSM-TWG group of Niger to quantify ARVs, medicines for opportunistic and sexually transmitted infections, and lab commodities needed for 2015 to 2017. SIAPS also built the capacity of the team to understand the basics of quantification process to prepare them for the upcoming capacity building on quantification and supply planning (training on use of Quantimed® and Pipeline®).

In addition to quantification, SIAPS also worked closely with the team to identify some key activities that should be undertaken to strengthen pharmaceutical systems (health systems strengthening) based on situation analysis conducted by SIAPS (March 2014) and the Global Fund (April 2014). An action plan was developed by Niger after attending the joint Roll Back Malaria-Global Fund LMIS workshop organized in Ouagadougou (May 2014).

SIAPS attended the fifth Economic Community of West African States (ECOWAS) meeting on HIV and AIDS in July 2014 in Abidjan, Cote d'Ivoire. SIAPS was given the opportunity to introduce the WARP regional project and shared the findings of recent situation analysis of HIV and AIDS commodity management and related information system. SIAPS also presented the regional dashboard that has been set up as early warning system to improve product availability in West Africa Region.

SIAPS worked in close collaboration with Togo's National AIDS control program (PNLS) to deploy the Electronic Dispensing Tool (EDT) in five ART sites that have been selected after conducting sites readiness assessment in June 2014. Several meetings have been held with PNLS to mainly discuss computer issues.

Objective 1: Improve coordination and oversight among regional and national stakeholders involved in HIV commodity supply

SIAPS attended the fifth Economic Community Of West African States (ECOWAS) meeting on HIV and AIDS co-organized by West African Health Organization (WAHO) and the regional support team of the United Nations Program on HIV and AIDS (UNAIDS/RST) in July 2014 in Cote d'Ivoire. Participants from ECOWAS state members came from central medical stores (CMS), national AIDS control commission or program (NACC/NACP), pharmacy and medicines department, and pharmaceutical regulatory authority.

The meeting was held to present the ECOWAS strategic plan for 2012–2016, and discuss 2014's achievements and recommendations. One session focused on HIV and AIDS commodity security where SIAPS has made significant contribution by introducing WARP and its scope of work to strengthen HIV and AIDS supply chain. SIAPS shared the findings of situation analysis of HIV and AIDS commodity management and related information systems that has been conducted earlier in 2014 and presented the HIV and AIDS regional dashboard that has been set up as early warning system to improve product availability in West Africa Region. The dashboard will help WAHO monitor the security stock established in Central Medical Stores of Cote d'Ivoire.

Partner Contributions

WAHO is one of the key partners SIAPS is working with since we started developing the HIV and AIDS regional dashboard to set an early warning system to improve products availability in West African Region.

The ECOWAS meeting has reinforced collaboration between SIAPS and the Procurement and Supply Management Technical Working Group of the Joint UN Regional Team on AIDS (JURTA-PSM Group).

Objective 3: Increase availability and use of pharmaceutical management information for decision making at national and regional levels

Following a successful user acceptance test conducted in Togo in June 2014, SIAPS has deployed the HIV and AIDS regional dashboard or OSPSIDA in Niger, Cameroon, Burkina Faso, and Benin. The tool has been deployed at central level to capture and aggregate product and patient data already collected by paper-based LMIS tools. In Niger, the tool is hosted by the national AIDS Control Commission while in Cameroon, Burkina, and Benin, the tool is hosted by the National AIDS Control Program. In each country, participants have been trained in how to enter data and generate reports as well as how to use dashboard reports for faster evidence-based decision making to improve HIV and AIDS products availability.

OSPSIDA automatically calculates the subsequent months' opening stock and will not allow changes to be made to this opening stock. The tool will also calculate closing balances and this will prompt data entry officers to check if there are errors in the data. OSPSIDA will not only provide early warning of risk of stock-out but will also improve the data quality management to

improve the general management of the stocks. OSPSIDA will also aid in fund management by providing gap analysis budget resources available and their allocations.

To improve Togo's data quality, SIAPS worked in close collaboration with the National AIDS control program (PNLS) to deploy the Electronic Dispensing Tool (EDT) in five ART sites that have been selected after conducting sites readiness assessment in June 2014. Several meetings have been held with PNLS in preparation of SIAPS upcoming travel to Togo.

Partner Contributions

In most of countries now using the EDT, we received good feedback from key partners who are members of PSM technical working group (National AIDS Control Commission, National AIDS Control Program, Central Medical Stores, Division of Pharmacy and Medicines, and Division of Family Health). Participants from these institutions have been impressed with the EDT. Cameroon, Burkina Faso, and Benin have planned to roll out the tool at the regional level.

There is good collaboration in Benin with WHO and the Global Fund where the technical advisor for both institutions has participated in the training for the OSPSIDA dashboard and helped SIAPS to connect with some key people in country. This technical advisor is working closely with the HIV program to submit a proposal to Global Fund for next activities identified after the deployment (updating OSPSIDA, deployment at regional level, and others).

Constraints to Progress

The deployment in Niger, Cameroon, Burkina Faso, and Benin raised the same data quality issues as encountered when deploying the EDT in Togo. In most cases, opening balance of current month (in case of monthly report) or quarter (in case of quarterly report) did not respectively match with closing balance of previous month or quarter.

The system is not up to date yet. Current status per country is provided below.

- Benin: Completed data entry for January 2014 and started February 2014 y (already submitted 77.5% data).
- Burkina Faso: Completed data entry for January to March 2014. Not yet started the second quarter of 2014.
- Cameroon: Started data entry January (51% of data submitted) and February 2014 (14.5% of data submitted).
- Niger: Completed January to March 2014 data entry. Started April to June 2014 data entry (18.9 % data submitted).
- Togo: Completed January and February 2014 data entry. Started March 2014 data entry (91.8% of data submitted).
- The big challenge is in Cameroon where LMIS data from paper-based tools are only available for 34 out of 166 ART sites. The 34 ART sites are those where SIAPS Cameroon provides support.

In Niger, the reporting rate is low. As of September 30th, only 15 (44.4%) out of 36 ART sites have submitted their paper-based LMIS forms to the Logistics Analysis team based at the CMS.

For the rest of focus countries (Benin, Burkina Faso, and Togo), paper-based or electronic versions of LMIS forms submitted by ART sites are available at central levels.

In Benin, there is ongoing discussion with Global Fund to appoint data clerks to help with data entry. Burkina Faso planned to roll out the EDT at regional level so the central unit will have less work to update the system.

Regarding EDT piloting in Togo, we are facing issue of computers that do not meet minimum requirements to accept EDT software. Because to limited resources that will not allow SIAPS West Africa Regional Project to buy new computers, SIAPS already bought software and soon will be buying RAM to upgrade computers of selected ART sites.

Objective 4: Increase financial resources for pharmaceutical sector for HIV and AIDS in selected countries

To develop the HIV and AIDS concept note most efficiently, the Niger CCM has set up three main working groups—the programmatic gap analysis working group, financial gap analysis working group, and procurement and supply management working group. The PSM working group's tasks were to quantify HIV and AIDS products (ARVs, medicines for opportunistic and sexually transmitted infections, rapid tests kits, lab reagents and consumables, lab equipment) and to identify relevant activities to strengthen the pharmaceutical system within the next three years—2015 to 2017.

The PSM working group was divided in two subgroups. One subgroup was in charge of quantification of ARVs, and medicines for opportunistic and sexually transmitted infections, and the second one was in charge of health products (reagents, rapid diagnostics tests, and lab equipment) needed to support care and treatment programs.

Because of the weaknesses in quantification capabilities, the challenge was to complete the exercise in time for the concept note purpose and to strengthen the capacity of our counterpart in quantification and forecasting. The methodology for the subgroups was to start with a desk review to define the purpose of its quantification, collect and analyze data available, identify the gap in data, set the targeted population, and organize the data. Both teams were using Excel spreadsheet to do the quantification. Then each subgroup has selected the quantification method which was the morbidity method for both ARV and lab quantification.

Because of poor and incomplete data, both teams needed to make assumptions to be able to calculate the needs in terms of drugs or reagents. For STI quantification, the assumption was to use the data from 2012 and forecast for 2015, 2016, and 2017 using the population growth rate. Based on targets and assumptions set, each subgroup determined the quantity to order based on the stock on hand and stock ordered to be delivered before October 2015. This exercise required using OSPSIDA data to have an idea of the average of monthly consumption. Then the amount for each category of pharmaceuticals and health products and for each year has been determined.

After this quantification, the PSM working group started to develop an action plan for activities to be included in the concept note to strengthen the pharmaceuticals system based on findings and recommendations of SIAPS assessment in March 2014 and Global Fund PSM expert trip in April 2014, and action plan that has been developed by the Niger team who went to the joint RBM–Global Fund LMIS workshop in Ouagadougou (May 6–8, 2014).

Two meetings have been held with CCM/Niger where each of the three working groups that have been set by CMM came to present their group works. Consultants from SIAPS raised to programmatic group and the whole CCM the issue of targets that cannot be reached. The M&E Team within the Programmatic group proposed a consensual methodology to review the targets.

Partner contributions

All key in-country partners working on PSM were represented at this quantification workshop and this has made the process comprehensive and successful.

- National AIDS Control Commission
- National AIDS Control Program
- Central Medical Stores
- Division of Pharmacy, Medicines and Laboratory
- Blood Transfusion Center
- National reference Laboratory
- National Hospital of Niamey

Constraints to Progress

The main challenges for the quantification were the availability and accuracy of data, the inconsistencies of actual numbers, and the ambitious targets set in the National Strategic Plan.

COUNTRY PROGRAMS

Angola

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

SIAPS participated in the review and finalization of the National Essential Medicines List in collaboration with WHO and other key partners as well as in finalizing the first draft of the mid-term review of the national pharmaceutical strategic plan and the 2015 National Directorate for Medicines and Medical Equipment (DNME) work plan.

In collaboration with DNME and provincial health directorates of Uige and Luanda, training-of-trainers sessions were organized in the two provinces where 71 participants (30 in Luanda and 41 in Uige) were trained on supportive supervision and pharmaceutical management of essential medicines, especially malaria commodities.

The National HIV and AIDS Control Institute (INLS) continued to organize training and supervision visits in selected provinces to implement the newly revised reporting and requisition forms, in the context of the national acceleration plans against HIV and AIDS. SIAPS facilitated the regular analysis of stock levels of antiretroviral products at the national level and to inform the coordinated procurement plan (CPP).

The quarterly procurement plan and monitoring report for antimalarial medicines was completed, as well as the dissemination of the semi-annual end use verification report conducted in five provinces (Luanda, Kwanza Norte, Bie', Cunene, and Uige).

SIAPS participated in a three-day workshop organized by DNME in collaboration with the UN Funds for Population (UNFPA) and the National Reproductive Health Program on logistics and information management where one session on quantification was facilitated by a SIAPS senior technical advisor.

SIAPS continued to support one pharmacy student in their final year to improve his dissertation on the situational analysis of warehouse and distribution systems in Namibe Province.

SIAPS worked with the National Malaria Control Program (NMCP) to monitor monthly stock levels of antimalarial products in all 18 provinces and to prepare the distribution plan for the government- funded products. A forecasting worksheet tool that SIAPS prepared for the NMCP was used to estimate the need for antimalarial products for the next five years to establish the funding gap to meet these needs.

In support of the government’s efforts to end preventable maternal and child deaths, SIAPS provided direct support to the MOH’s Reproductive Health National Department and Huambo Provincial Directorate to organize a five-day training on reproductive health (RH) and family planning logistics and improving the quality of monthly RH service and logistics reports. In

collaboration with Pathfinder, SIAPS provided technical support to the national RH program to review the past year's distribution plans and to prepare the next year's forecast by using the available consumption data adjusted to current reported use rates.
SIAPS organized individual meetings with its Government counterparts and other partners to collaboratively develop the next year's work plan that will ensure the continuation, sustainability, and country ownership of the current and next level programmatic interventions, aiming at ensuring continuous availability of quality pharmaceutical services and products in Angola.

Objective 1: Pharmaceutical supply chain system governance strengthened

To enhance governance and coordination among pharmaceutical supply chain stakeholders, SIAPS facilitated DNME in organizing the bimonthly Inter-agency Coordination Committee (ICC) meeting held in September for the sub-commission on logistics, procurement, and operations. SIAPS reviewed the agenda, followed up with participants, and provided meeting logistics. At the meeting, 12 members attended out of 14 expected. SIAPS presented findings from the recent review of the 2010-2015 national pharmaceutical strategic plan.

Constraints to progress

- The ICC/logistics meeting scheduled for August was postponed to September because of other competing activities and the absence of DNME senior officials who were participating in international meetings outside the country.
- Finalizing the draft of the national supply chain strategy is hampered by two challenges: lack of availability of key data needed to complete the road map that will guide the development of the strategy and the lack of commitment at the top level of the Ministry. SIAPS, however, participated in a high-level meeting that was organized by DNME and the General Inspectorate of Health, in collaboration with consulting firms KPMG and BDO and the principal private medicines importers/wholesalers to discuss the future of medicine distribution in Angola. This allowed SIAPS to advocate for the importance of having a comprehensive national strategy that covers all the supply chain nodes and players.

Partner contributions

- DNME in coordinating the ICC/R sub-commission of logistics, procurement, and operations meeting and in coordinating the development of the national road map for a national supply chain strategy in line with the 2013-2025 national health development plan
- CECOMA in the development and implementation of the suggested processes and procedures to improve its warehouse and distribution management system
- WHO in the finalization of the national essential medicine list

Objective 2: Local capacity for pharmaceutical management enhanced

Under the coordination of DNME/Programa Nacional de Medicamentos Essenciais (PNME) and the NMCP, SIAPS organized two five-day training of trainers sessions in the provinces of Uige and Luanda whereby participants from provincial warehouses, all municipal warehouse

managers, and municipal malaria supervisors studied pharmaceutical management applied to antimalarial products and how to implement supportive supervisions. Before the training, team building sessions with facilitators from the provincial health directorates were organized to equip the trainees with adult learning methodologies and to compose a team of facilitators at the provincial level for future training. Post-training action plans were developed by each municipal team to be implemented on their return to their respective municipalities; it is expected that three selected improvements will be measured over time, including the correct use of pharmaceutical management tools, especially the stock card and delivery note, timeliness in reporting of logistics information management systems, and the use of consumption data in requisitions.

The program also implemented training in security of reproductive health/family planning commodities in Huambo province in coordination with the National Reproductive Health Program and the Health Provincial Directorate of Huambo and in collaboration with USAID's Strengthening Angolan Systems for Health (SASH) Project. All 11 municipalities and selected major health facilities that are offering family planning services participated in this training. A supervision plan was developed to follow-up with the implementation to measure post-training outcomes.

Constraints to progress

The national essential medicines program that oversees capacity building in pharmaceutical management is understaffed and does not have sufficient budget.

Partner contributions

- DNME: Coordinated pharmaceutical management training and provided facilitators
- Provincial health directorates of Luanda and Uige: Facilitated training at the provincial level

Objective 3: Information for pharmaceutical management decision-making improved

During the reported period, INLS continued to implement the approved, revised monthly reporting and quarterly requisition forms developed with support from SIAPS. Once the reports are generated from these new forms, the program will be able to use real consumption data to validate health facility requisitions and avoid shortfalls. The program will continue to assist INLS to compile these reports and follow-up the stock status for a continuous availability of HIV and AIDS products. SIAPS also provided support to update the CPP for HIV/AIDS health commodities; the CPP tool will inform decision making for procurement and supply chain management. SIAPS worked with NMCP to submit the 2014 Q3 procurement plan, updating the monitoring report for antimalarial products (PPMRm), as well as submitting the report for the sixth end user verification (EUV) exercise that was conducted in Luanda, Bie, Huila, Uige, and Kwanza norte provinces in June, totaling 47 health facilities and warehouses. The exercise also included other health commodities, such as HIV/AIDS and RH/FP. Findings showed a generalized low use of pharmaceutical management tools, especially stock cards, poor storage conditions, poor malaria case diagnosis with a high number of non-confirmed cases of malaria, and some facilities with stock-outs of ACTs and RDTs. Continuous supportive supervisions and

close monitoring of stock movements of all products are paramount to improve the current situation.

Constraints to progress

- Parallel paper reporting within INLS in which one department receives patient information and another receives logistics information makes it difficult to validate both reports. A more inclusive electronic information management system could facilitate this validation of data at the facility level, especially for the ones that have a significant number of patients.

Partner contributions

- INLS in providing information of the bi-monthly CPP and in disseminating the new revised monthly reporting and quarterly requisition forms through training
- USAID partners (Pathfinder, Forca de Saude, and Mentor) in joint activity implementation to improve data quality and report completeness in HIV and AIDS, malaria, and reproductive health commodity security

Objective 4 - Pharmaceutical services strengthened to achieve desired health outcomes

In the reported period, SIAPS continued to provide ongoing support to CECOMA to implement the identified improvements for its warehouse management and distribution systems. After on-the-job capacity building for performance improvement, SIAPS facilitated CECOMA staff to start collecting data to measure selected key performance indicators (KPIs), such as accuracy in delivery notes, pick accuracy, staff absence rate, customer satisfaction rate, dispatch timeliness, warehouse temperature, work volume, receipt timeliness, accuracy of inventory, volume of expired products, and racking utilization. With SIAPS facilitation and under CECOMA management coordination, the collected data are discussed in weekly meeting with all heads of departments to assess the previous week's activities, identifying bottlenecks and suggesting improvements that will be monitored in subsequent meetings. Currently, data from June to the present have been entered in the KPI worksheets. SIAPS will continue to follow up on the implementation of these changes that are transforming CECOMA into a well-organized national medical warehouse that will serve as a role model for replicating changes in other regional and provincial warehouses in collaboration with CECOMA.

To institutionalize a sustainable quantification process, INLS management provided input on the draft of the quantification technical working group (TWG) (approval of the draft by INLS is still pending). SIAPS participated in a one-week retreat to review the 2016-2020 national malaria control strategic plan. The program developed an Excel tool that is being used in forecasting malaria commodities. Results of this five-year forecasting are being used to conduct a gap analysis on financial resources as a key document for the national malaria control strategic plan and the current Global Fund concept note that NMCP will submit to the Global Fund before January 2015. SIAPS is participating in the technical team that is writing this concept note along with other key partners of NMCP.

SIAPS participated in the monthly inventory of family planning commodities at CECOMA to ensure their commodity security. Results of this exercise were used in the 2015 forecasting exercise of family planning commodities that was conducted under the leadership of the National Reproductive Health Program and in collaboration with Pathfinder, SIAPS, CECOMA, and UNFPA. Results of this forecasting will be presented to the National Public Health Department, USAID, and UNFPA to obtain the necessary funds for the next procurement period.

Constraints to progress

Due to the lack of availability of the NMCP logistician and other competing priorities, and despite reminders from SIAPS, NMCP has delayed the forecasting exercise for 2015 procurement; this will impact significantly on the availability of antimalarial products, especially since the Global Fund has suspended its financial support to the malaria program and PMI has significantly reduced quantities of ACTs and RDTs. Meanwhile, SIAPS has suggested a working document for this forecasting that will need to be validated by NMCP in collaboration with CECOMA and other key stakeholders in malaria commodity security.

Partner contributions

- CECOMA management and staff throughout implementation of suggested improvements
- INLS in revising the terms of reference of the quantification TWG
- NMCP in coordinating the revision of the 2016-2020 national malaria control strategic plan and in overseeing the drafting of the concept note for the Global Fund new-funding mechanism
- The National Reproductive Health Program, UNFPA, and Pathfinder in FP commodities inventory and in the quantification exercise for the 2015 procurement period

Bangladesh

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

To increase access to quality pharmaceutical products, SIAPS assists the Ministry of Health and Family Welfare (MOHFW) to strengthen its procurement and logistics systems, with a focus on family planning, Maternal, Neonatal, and Child Health (MNCH), and tuberculosis (TB). SIAPS also assists the Directorate General of Drug Administration (DGDA) to strengthen systems for drug registration and drug safety. SIAPS continues to reinforce MOHFW's newly formed Procurement and Logistics Management Cell (PLMC) as a key component of procurement reform and overall supply chain systems strengthening.

SIAPS has been laying the groundwork to transfer the day-to-day operations of the web-based Supply Chain Management Portal (SCMP) to MOHFW. The mid-term review of MOHFW's Health, Population, and Nutrition Sector Development Program (HPNSDP)) has also recommended that the MOHFW prepare for assuming responsibility for the portal as a key health systems strengthening component. The mid-term review team also recommended the permanent structure for PLMC which was a key milestone for sustainability. During this quarter, SIAPS shared a hand-over process and sustainability plan on Supply Chain Management Portal with key MOHFW officials, all ministry entities, and development partners.

SIAPS also embarked on a significant capacity building initiative to operationalize the Framework agreement, procurement operations manual, and the standard operating procedure (SOP) for anti-TB medicines and supplies. These first two initiatives are expected to standardize more efficient procurement processes at the subnational level and the new TB SOPs are expected to improve supply chain management for TB.

SIAPS is working with the MOHFW to standardize lists of essential medical equipment needed at each level of the health system and outline procurement specifications. In this quarter, SIAPS worked with the MOHFW to develop a pricing guide to enable MOHFW staff to create realistic budgets and to guide procurement. Progress was made on the final list of equipment for hospitals with 500 or more beds. The entire process has highlighted the need to improve maintenance and repair of existing equipment. SIAPS incorporated a new equipment tracking and maintenance module into the SCMP to track the status of medical equipment throughout the country.

SIAPS forecasting exercise using the QuanTB tool has proven to be a key tool for NTP to make evidence based decisions on the supply chain issues to maintain proper stocks anti-TB medicines.

SIAPS assisted the Directorate General of Family Planning (DGFP) to expand tracking of key commodities past the sub-district level to service delivery points (SDP). A SDP module has been incorporated into the DGFP's Supply Chain Information Portal (SCIP) and was tested in 20 pilot upazilas (sub-districts). SIAPS also facilitated the process of obtaining DGFP membership in the Reproductive Health Supplies Coalition based in Brussels, Belgium: the DGFP Director General signed a Declaration of Intent on August 3, 2014.

Regarding regulatory functions systems strengthening, SIAPS trained Directorate General of Drug Administration (DGDA) officials to implement common technical guidelines (CTD) to efficiently manage the registration process and raise the drug registration application and review process to meet international standards. The taskforce committee for introducing PharmaDex and other DGDA staff members were trained on PharmaDex and the pharmacovigilance system.

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

The MOHFW endorsed a Framework Agreement to streamline procurement processes through multi-year procurements that allow for multiple deliveries. SIAPS trained district and upazila staff on framework agreements and the procurement operations manual which will help standardize an effective and efficient procurement process.

DGFP's Forecasting Working Group reached consensus that only 50,000 sets of implants were needed rather than the 460,000 implant sets originally planned. The decision not to procure the 410,000 additional sets saved DGFP approximately 4.1 million US dollars (USD).

The efforts of DGFP master trainers and 13 monitoring visits contributed to increasing timely logistics reporting to 95% from 91% last quarter. SIAPS assisted MOHFW to organize six divisional workshops for DGHS officials to review the status of condemnation of unusable supplies. SIAPS trained 90 supply officers and storekeepers/pharmacists from all 21 warehouses on the upgraded WIMS version-2 and SCIP to strengthen DGFP warehouse management systems.

Further progress was made to identify medical equipment necessary at each level of the health system and determine price ranges to enable the MOHFW to develop realistic budgets. Lists of medical equipment for hospitals with 10–250 beds are complete. During a September workshop, policy makers, DGHS Directors, medical college and hospital directors, CMSD, and donors finalized the Pricing Guide. SIAPS also facilitated a session to finalize the equipment list for hospitals with 500 or more beds.

During the DGFP quarterly Logistics Coordination Forum meeting, the World Bank requested that DGFP distribute the essential medicines and supplies currently included in the Drug and Dietary Supplement (DDS) kits separately in accordance with need, rather in the form of bundled kits. SIAPS will assist a committee headed by the MCH Line Director and coordinated by the DGFP Line Director for Logistics and Supply to identify individual items to be distributed separately. As a first step, SIAPS collected information to forecast components of the DDS kits.

SIAPS facilitated an orientation for DGFP and DGHS officials on the results from a SIAPS-led forecasting exercise of 13 MNCH life-saving commodities that have been prioritized by the UN commission. The MOHFW's PLMC took the lead role in forming a national Reproductive, Maternal, Neonatal, and Child Health (RMNCH) quantification team responsible for regular review of forecasts and supply planning. SIAPS is actively working with UNFPA and DGFP to develop a six-year costed implementation plan (2015–2020) for the national family planning program and playing an instrumental role in the FP 2020 Country Engagement Working Group.

SIAPS, NTP, WHO, and PSM working group members updated QuanTB information for first-line and second-line drugs (SLD) to generate information for Global Fund orders. Results from May to June QuanTB supply planning identified the need for first-line drugs for an additional 1,056 clients that would enable more prompt treatment necessary to slow TB transmission. The exercise also highlighted the need to cancel the purchase of seven expensive SLDs and reallocate a shipment of nine SLD to another country for a cost savings of USD 1,050,183.

The SOP for TB commodities were printed and submitted to NTP for distribution. SIAPS successfully trained district and upazila staff on e-TB Manager, TB commodity SOPs, and a paper-based Logistics Management Information System (LMIS) format.

SIAPS and stakeholders launched an assessment of private pharmacies/drug shops to improve the quality of pharmaceutical services and products in Bangladesh's robust private sector. The assessment will explore the possibility of introducing an accreditation/regulation model for the shops and engaging private drug shops to improve TB case detection.

SIAPS conducted a TOT on SOPs for procurement and supply management to strengthen the capacity of two Global Fund Principal Recipients.

Constraints to Progress

- Frequent staff turnover rate among DGFP logistics personnel
- TB program staff not flexible about changing GDF quantification tool though they have accepted the usefulness of QuanTB tool.
- Various training programs and engagement of NTP personnel in other activities delayed monthly PSM Unit meetings.
- Collecting the data necessary to forecast the components of the DDS kit is challenging. Facilities do not have accurate and complete information on consumption and patient information in DGFP health facilities. SIAPS worked with partners to triangulate demographic data, available morbidity data and published data

Partner Contributions

- DGFP facilitated reporting on the status of implementing post-training action plans by central and district levels managers.
- Many TB partners (NTP, WHO, BRAC, Global Fund, Damien Foundation, and Global Drug Fund) contributed to obtaining TB medicine data necessary for proper TB drug quantification

Objective 2: Systems for evidence-based decision making established

SIAPS is facilitating the process of transitioning the management and maintenance of SIAPS-supported IT tools (e.g., MOHFW SCMP and DGFP SCIP) to the MOHFW. SIAPS and the MOHFW prepared a sustainability plan for SCMP that addresses organizational, technical and financial sustainability. On August 14, 2014, using the report to spur discussion, SIAPS facilitated a consultative session for higher officials of MOHFW, development partners, DGFP

and DGHS on the sustainability plan and sought inputs for finalization of the milestones. At the request of USAID/Bangladesh, SIAPS made a brief presentation on the SCMP sustainability plan during the Health, Population, and Nutrition Sector Development Program mid-term review meeting at the World Bank office on August 17, 2014. The presentation pulled together recommendations arising during the consultative session on the sustainability plan.

SIAPS also facilitated a shift to generating monthly logistics reports using the DGFP web-based LMIS. The SIAPS team presented a newer version of the report and demonstrated the electronic process that generates a report in five minutes as opposed to two months required to process it manually. The participants, including the Directorate General, expressed their satisfaction with the new look of the report and endorsed it accordingly, directing the MIS unit to produce and disseminate the report as demonstrated with the data from June 2014 and onwards. DGFP has transitioned from a manual approach to electronic.

SIAPS enhanced the SCIP by incorporating a service delivery point module to track the stock status of contraceptives from the sub-district level to service delivery points. The module that features easy to interpret graphs and charts illustrating commodity availability has been piloted in 20 upazilas in four districts. SIAPS successfully trained 1,698 government officials to operate the SDP module. Data from the pilot were presented to MOHFW officials and stakeholders. While it would be advantageous to be able to have data with this level of detail, data quality will need to be addressed. SIAPS will assist the DGFP to explore ways to improve data quality.

SIAPS launched the SCMP equipment tracking module pilot after a series of technical discussions with CMSD and MOHFW's National Electro-Medical Equipment Maintenance Workshop (NEMEW). This pilot will be considered as user acceptance testing of the system to further troubleshoot and fix bugs, and enhance features if needed.

The stock-out indicators advisory group of the international Reproductive Health Supplies Coalition had been developing a list of stock-out indicators to propose as the global standard. SIAPS Bangladesh was asked to validate these indicators using the SCIP to assess the feasibility of constructing each of the indicators using information from an e-LMIS. SIAPS shared results with the Reproductive Health Supplies Coalition in August.

In collaboration with the MaMoni Health Systems Strengthening Project, SIAPS is conducting a situational analysis of district level pharmaceutical management of essential RMNCH commodities in Lakshmipur. The findings from this assessment will identify strategies and activities to ensure availability of essential MNCH commodities. During this quarter, data collection tools were finalized, data collectors were trained, and initial data collection was completed. Preliminary results were reviewed and the need for additional data identified.

Based on the Joint Monitoring Mission request in April, SIAPS and partners accelerated the roll out of e-TB Manager, reaching 210 sites by the end of FY14. For the latest batch, the roll-out plan focused on a district approach that engages TB partners to support the NTP. SIAPS completed the training for 254 government officials using a cascade training approach.

Constraints to Progress

- Due to workload of TB store staff and a vacant position at Central TB Warehouse, it was not always possible to routinely collect TB medicine data. Current staff members in the central TB warehouse do not have adequate IT knowledge to update drug stock status.
- TB stock data is still not available from the peripheral level because of lack of capacity

Partner Contributions

- Many TB partners (NTP, WHO, BRAC, Global Fund, Damien Foundation, and Global Drug Fund) contributed to obtaining the TB medicine data necessary for a proper TB quantification.
- Mamoni staff reviewed data collection tools and collected data for the pharmaceutical management assessment.

Objective 3. Pharmaceutical regulatory systems strengthened

SIAPS is assisting DGDA to strengthen its medicine regulatory functions, with a focus on improving the product registration process and pharmacovigilance. SIAPS helped the DGDA to take a major step in transforming the current process for requesting and reviewing product registration documents into a process that meets international standards through the adoption of common technical documents (CTD). A three-day training was conducted for 26 DGDA officials in August to build the staff members' capacity to use CTD. The training provided a broad understanding of the regulatory components of each CTD module with specific reference to Bangladesh CTD guidelines developed by SIAPS. Through practical and interactive group sessions, the training explored how the current drug registration process will be changed following the full adoption of CTD and provided practical insights for DGDA officials on the assessment of CTD formatted applications for marketing authorization approvals.

SIAPS is working with DGDA to adapt PharmaDex, a medicine registration management system, to Bangladesh. PharmaDex is designed to capture and track whether the applications for medicine registration submitted by manufacturers meet required CTD formats. The new system will strengthen the DGDA's capacity to regulate licensing, registration, and inspection of medicines. A medicine registration application template and the flow of work within PharmaDex have been defined based on feedback from a DGDA taskforce team. A two-day user acceptance testing workshop was held in August to demonstrate and provide hands-on testing of PharmaDex to all DGDA officials. The workshop covered the application process flow and functionalities within PharmaDex, and attendees provided feedback for refining the system.

SIAPS is assisting DGDA's Adverse Drug Reaction Advisory Committee (ADRAC) to implement a pharmacovigilance (PV) system. ADRAC is responsible for analyzing adverse drug reaction (ADR) reports received from hospitals and pharmaceutical industries and making recommendations for DGDA action. To build the committee's capacity to assess whether suspected adverse reactions are due to the medicine, a training was held in July for 15 members. Recorded training videos were provided by the WHO-UMC Chief Medical Officer. The training

focused on the logic of causality, including the WHO-UMC system for standardized case assessment reports. A short 'WHO Causality Assessment Guide' was provided that focuses on strategies and criteria that take into account the clinical-pharmacological aspects of the case history and the quality of ADR reports. As a result, the committee successfully assessed 46 ADR reports and provided their recommendations accordingly. The case reports and ADRAC recommendations have been uploaded into the WHO global database.

In September, the National PV Program successfully began, followed by a two-day training on PV for 20 private and public hospitals and 13 pharmaceutical companies primarily selected as sentinel sites. One focal point person was selected from each of the hospitals and industries. The training introduced adverse event reporting and encouraged participants to initiate PV monitoring in their respective hospitals and organizations. To follow up on the PV activities at these sites and extend PV activities to other sites, ADRM cell with assistance from SIAPS, facilitated a workshop in September. The session also included extending PV awareness to 10 additional hospitals and 17 pharmaceutical industries, which resulted in 30 participants from the hospitals and pharmaceutical industries. The workshop highlighted the advantages of PV monitoring for patient safety, gave an opportunity for five hospitals and pharmaceutical companies to highlight their ongoing PV activities, identified the existing challenges with ADR reporting, and explored practical solutions to underreporting of ADRs.

Constraints to Progress

- The limited information technology experience of DGDA staff is a constraint to navigating PharmaDex. Continued support will also be needed for DGDA officials to increase their understanding of CTD formats/guidelines and the impact it is going to have on their current drug registration process.
- Submission of ADR reports to DGDA is not regular and consistent due to lack of PV awareness in all hospitals and pharmaceuticals.

Partner Contributions

The WHO-UMC Chief Medical Office provided recorded PV training videos and a WHO Causality Assessment Guide.

Burundi

Goal: Strengthen key institutions (PNILP, DPML, CAMEBU and Districts) in reducing mortality and morbidity due to malaria through strong case management and availability of malaria commodities

Overall Quarter Progress

Key institutions involved in reducing mortality and morbidity due to malaria accomplished steps in improving organization structure, governance, leadership and accountability; strengthening the supply chain mechanism for malaria commodities; and enhancing pharmaceutical services for malaria cases. SIAPS assisted the Programme National Intégré de Lutte contre le Paludisme (PNILP [National Malaria Control Program]) technically and logistically with two international workshops, four in-country seminars, and a country dialogue to enable the PNILP meet the Global Fund to Fight AIDS, Tuberculosis and Malaria's (Global Fund) criteria to become a principal recipient (PR). The PNILP submitted its concept note under the new funding mechanism (NFM). The PR Selection Committee evaluated the PNILP request which met 73% of criteria—providing Burundi national malaria control program with an opportunity to become a PR. SIAPS will continue to work with PNILP to enable it to meet remaining criteria.

PNILP gathered information on criteria and procedures for accessing performance-based financing (PBF) resources. Additionally, the PNILP followed up on a law decree elaborated to improve rational use of malaria commodities that are should be provided free of charge to end users. The law decree has been passed by the National Legislation Service, and is pending at the Office of the Government's Secretary General for submission to the Cabinet. SIAPS assisted the Directorate of Pharmacies, Medicines and Laboratories (DPML) to develop a standard operating procedures (SOPs) manual for administration, human resources, and financial management.

With SIAPS's logistic support, the Ministry of Health (MoH) through the Direction de l'Offre et de la Demande des Soins (DODS [Directorate for Demand and Provision of Health Services]) trained 86 health managers on a supportive supervision guide, with the objective of improving performance in malaria commodities management, problem-solving, and services quality. With SIAPS's technical and logistic assistance, the PNILP implemented the End Use Verification (EUV) tool to assess the performance of the health system regarding permanent availability of malaria commodities in health facilities. Also, SIAPS provided a technical and logistic assistance to the PNILP in carrying out supportive supervision in 512 health centers. PNILP and the Central d'Achat des Médicaments Essentiels du Burundi (CAMEBU [Central Medical Store]), assisted in providing information for the Procurement Planning and Monitoring Report for Malaria (PPMRm).

The PNILP is developing two job aids and designing a label for packages of prescribed medicines to promote good dispensing practices and patient education for improving adherence to treatments. SIAPS assisted the PNILP conduct supportive supervision of community health workers (CHWs) and carry out on-the-job coaching and training regarding referral criteria and the whole community case management (PECADOM) process. Of the 7,681 children less than 5 years of age that tested positive for malaria, CHWs treated 7,154 (93.1%) of them with anti-malaria medicines (ACTs) within 24 hours of the onset of fever.

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

SIAPS continued to assist key MoH institutions to strengthen their capacities related to organizational structure, governance, leadership, and accountability. PNILP is seeking to become a Global Fund principle recipient under the NFM. To further this process, SIAPS assisted the PNILP to meet required criteria including reviewing the National Malaria Strategic Plan 2013–2017, developing a concept note that complies with Global Fund's criteria, and providing necessary administrative documents. Following recommendations from a Roll Back Malaria (RBM) workshop held in Uganda in June to integrate peer review comments into malaria strategic plans, SIAPS assisted the PNILP to conduct a five-day workshop (July) with key personnel (SIAPS, Caritas) and donors (USAID, Global Fund) to integrate peer review recommendations into the Burundi's National Malaria Strategic Plan.

In August, SIAPS assisted the PNILP to conduct three in-country workshops, one funded by WHO, to elaborate the PNILP's concept note. SIAPS provided a consultant for the concept note development and update of the National Malaria Strategic Plan 2013–2017 to include all data in accordance with the Global Fund's application form. In September, SIAPS sponsored four key PNILP staff members to attend a RBM workshop held in Uganda for peer review of draft concepts notes of 11 countries based on a RBM evaluation tool. SIAPS and Global Fund jointly assisted the PNILP to conduct field visits and hold a national dialogue with 320 representatives of vulnerable groups or groups with specific needs. Visits and dialogue aimed at gathering information on needs of targeted groups related to malaria prevention and case management so that they can be taken into account in the concept note. In addition, SIAPS provided the PNILP with a consultant to conduct an in-country workshop with the participation of RBM experts, to improve the PNILP's concept note.

SIAPS assisted the PNILP to arrange an application package with all required documents, which were submitted to the Country Coordination Mechanism (CCM) on August 26, 2014. The PNILP's Global Fund's application to become a PR fulfilled 73% of the requirements—sufficient to proceed with the application process. SIAPS will continue to work with PNILP to meet remaining requirements.

SIAPS contributed to meetings with PNILP, partners, and PBF's National Technical Unit to gather information on procedures and criteria to access PBF. Such funding would enable the PNILP to optimize its performance in the fight against malaria in Burundi.

SIAPS assisted the DPML to develop an SOP manual for administrative, human resources, and financial management. The manual was submitted to DPML for further validation by the MoH. The SOPs constitute a basis for good governance and accountability for the DPML's leadership.

SIAPS assisted the PNILP to follow-up on a law decree drafted in June. The law decree passed through the National Legislation Service under the Ministry of Justice and is now in the Office of Government's Secretary General. The decree prohibits the misuse of health commodities that are supposed to be given to end users freely. These commodities include long lasting insecticide-

treated net (LLINs), anti-malaria medicines, and malaria rapid diagnostic tests (RDTs) that are donated to the MoH. When the decree is adopted and implemented, it should lead to increased good governance and accountability in health sector and increased access to malaria commodities for poor and vulnerable people.

Within the M&E framework, SIAPS contributed to evaluation meetings of the June LLINs distribution campaign. A catch up mini-campaign will be launched to provide LLINs through health centers to registered families with vouchers who were not served during the general campaign.

Partner contributions

- RBM provided technical assistance to PNILP to improve the concept note through two in-country workshops
- WHO funded one of in-country workshops to improve the PNILP's concept note
- UNICEF funded trips to Uganda/Kampala for 2 persons and RBM funded trips for 5 of 11 persons participating in peer reviews
- The Global Fund co-funded field visits and the country dialogue with vulnerable and groups with specific needs

Objective 2. National supply chain strengthened

In September, SIAPS assisted the MoH through DODS to train 86 health managers from 14 health districts. The training was on integrated supervision guidelines to equip them with knowledge and skills to conduct supportive supervision in health centers.

SIAPS assisted in analyzing districts' reports and requisitions of malaria commodities. These analyses showed that health districts needed assistance to appropriately use distribution data to update their average monthly distribution after every six months, adjust requisitions to the morbidity trends, encourage health districts to submit reports and place requisitions at regular intervals, and install a feedback form to be used by PNILP with assistance from SIAPS to provide feedback to health districts. It is expected that PNILP would eventually take on full responsibility for the forms. In August, SIAPS assisted the PNILP and DPML to conduct visits to all health districts to coach managers of health district pharmacies on appropriate use of distribution data to update their AMD every six months and on providing feedback to health centers on how to use consumption data and updated average monthly consumption to place orders for malaria commodities. SIAPS assisted the PNILP to design a feedback form for districts to improve timeliness, completeness, coherence, and precision of reports and requisitions.

SIAPS assisted PNILP to monitor stock status of malaria commodities on a monthly basis at the CAMEBU. CAMEBU stocked out of RDTs for two months in the quarter due to a delayed GFdelivery. SIAPS assisted the PNILP in following up on RDT delivery by GF, reception by CAMEBU, distribution planning, communicating with health districts, and immediately implementing the distribution upon reception by CAMEBU so as to limit the duration of RDT stock-out at health center level. SIAPS assisted the PNILP and CAMEBU to complete a

PPMRm, coordinated with USAID/PMI to accelerate the delivery of ACT and RDT expected before the end of 2014, and supported the PNILP to mobilize funds with USAID/PMI and Global Fund based on the quantification for 2014–2016.

SIAPS assisted the PNILP in following up with DPML on the importation waiver for sulfadoxine-pyrimethamine (SP) 500/25 mg to introduce intermittent preventive treatment of malaria in pregnancy (IPTp). Via SIAPS, JSI forwarded the following to DPML—the Commodity Procurement Information Request signed by PNILP and USAID Burundi, the invoice, and good manufacturing practices copy from the manufacturer. SIAPS has shared with JSI extra technical and administrative information needed by DPML to provide an importation waiver. The deadline for SP delivery passed with October 1, 2014, before the importation waiver was issued by DPML.

SIAPS assisted the PNILP and DPML in conducting the EUV and supportive supervision. The EUV covered 64 health facilities: CAMEBU, 21 health district pharmacies and 42 health centers. The supervision covered 24 health district pharmacies and 512 health centers. Overall, 64.6% of warehouses and 64.5% of health centers experienced stock outs, in particular RDT in the previous three months. Excluding RDTs, 79.3% of health facilities maintained acceptable minimum and maximum stock levels for other malaria commodities. The availability of RDTs was particularly an issue from central to peripheral levels. Corrective measures tailored to health centers with specific challenges in maintaining permanent availability of malaria commodities will be implemented. Additionally, more effective collaboration and sharing of experiences and lesson learned to improve the procurement of malaria commodities will be advocated for during MOH, donor and partner coordination meetings.

Constraints to progress

- Unavailability of SP importation waiver handicapped the procurement process. SIAPS continues to follow up with JSI and is in close communication with DPML to make sure the waiver is issued as soon as possible.
- Delayed delivery of RDTs funded by Global Fund hindered the performance of the supply chain from the central store to CHW. SIAPS is in contact with the USAID Mission in Burundi to advocate a more coordinated procurement of malaria commodities.

Partner contributions

- GF provided 5 vehicles and fuel for supportive supervision
- PNILP provided 2 to 4 cars for the supportive supervision

Objective 3. Malaria services improved

The September training on integrated supervision guidelines, conducted with SIAPS's assistance by DODS on behalf of the MoH, aimed to equip participants with knowledge and skills to conduct supportive supervision across health centers. The objective is to improve the quality of health services by increasing best practices in diagnosis, prescribing, and dispensing, hence reducing deaths and illness related to malaria.

Supportive supervision conducted by PNILP with SIAPS's support covered aspects of case management for malaria. Supervision teams visited 24 health districts and 512 health centers and carried out onsite training/coaching for health care providers according to facility needs. Furthermore, based on supervision results, SIAPS encouraged PNILP to conduct targeted actions to respond to identified priority areas of diagnosis, dispensing medication and dissemination of malaria STGs.

SIAPS assisted the PNILP to promote good dispensing practices and patient adherence to treatment. SIAPS assisted the PNILP in developing two job aids, one for dispensers on good dispensing practices and another for patients on how to take ACTs, when to return to the health facility, the importance of completing treatment even if one feels better, and common side effects of ACTs. Furthermore, SIAPS worked with PNILP to develop a label for medicine packages. These tools were tested in six health facilities and comments were given by users to improve the quality of the content and their presentation.

SIAPS worked with PNILP in supportive supervision of CHW during monthly coordination meetings in 25 health centers implementing community case management (PECADOM) for malaria. Respectively, in July and August, PNILP trained 387 CHW on referral criteria and gave 361 CHWs a refresher course on the PECADOM. Additionally, for July and August, 135 CHWs were observed when practicing—112 (83%) were able to ask all appropriate questions to assess the child's status and 101 (75%) were able to ask all appropriate questions to identify dangers signs. All were given feedback on the observations.

SIAPS assisted the PNILP to monitor the implementation of PECADOM for malaria in Gashoho and Gahombo. CHWs received visits from 11,394 children less than five years of age. Among those children, 10,824 were tested for malaria using a RDT, 7,681 were confirmed positive, and 7,666 were treated with ACTs. Among those positive for malaria, 7,154 children (93.1%) received ACT within 24 hours of the onset of fever. CHW treated fewer children in comparison with previous quarters due to several reasons, including the countrywide shortage of RDTs. Because of the RDT shortage, children were referred to health centers. Upon the delivery of Global Fund's RDT shipment, SIAPS assisted the PNILP to make RDTs available in the two health districts implementing PECADOM without delay.

SIAPS collaborated with UNICEF to assist the MoH to implement integrated community case management (iCCM) for childhood illnesses. In July, SIAPS worked with UNICEF to assist the MoH to conduct an advocacy workshop for scaling up iCCM. Benin's experience in iCCM implementation, lessons learned from the Ghana's iCCM symposium, and experiences of SIAPS, World Relief, Concern, and IADH (Initiative d'Appui au Développement Humain Durable [initiative for durable human development]) with PECADOM increased the MOH and partners' understanding of how to scale up iCCM in Burundi. The workshop elaborated key orientations on the following aspects: iCCM package, implementation conditions, list of standardized equipment for CHWs, list of standardized medicines, capacity building and motivation for CHW, supervision of CHW, launch of iCCM scale-up, monitoring and evaluation, and integrating iCCM data into the National Health Information System. In August and September, SIAPS collaborated with UNICEF to assist the MoH in developing a paper to guide the implementation

of iCCM.

Constraints to progress

- Unavailability of SP hindered the implementation of IPTp
- Shortage of RDT handicapped CHW performance in early detection and treatment of malaria among children less than five years

Partner contributions

- MoH/DODS provided expertise (8 facilitators) for training on supervision guideUNICEF funded major costs for workshops on iCCM, provided STTA for iCCM gap analysis, and supported trip of Benin's iCCM presenter
- World Relief, Concern and IADH contributed with experience in PECADOM o MoH contributed with PECADOM experience in Burundi

Cameroon

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

Overall Quarter Progress

Cameroon medicines supply chain system is still dealing with limited management capacity and poor inventory management and storage practices at regional medical stores (CAPRs) and health facilities; this likely contributes to unexpected stock-outs of ARVs and others commodities.

During this quarter, SIAPS needed to focus its current assistance on ensuring that 100 pharmacy managers who were trained in 2013 continue to use acquired knowledge and best practices to improve management of HIV and AIDS commodities.

In addition, SIAPS closely worked with the Comité National de Lutte contre le Sida, CNLS (National Aids Control Committee [NACC])and the Direction de la Pharmacie, Medicament, et Laboratoires [National Drug Regulatory Authority]) named (DPML) to improve the logistic management information system by supporting the issuance of timely and complete reports on patients under treatment and commodities stock status data. Interventions included increasing availability of data, maintaining data collection, and enhancing a reporting system from ART sites, Groupe Technique Regional (GTR [regional NACC unit]), and Centre d'Approvisionnement Pharmaceutique Regional (CAPRs).

Finally, SIAPS closely worked with CNLS to establish a coordinated mechanism for quantification, procurement and distribution of HIV and AIDS commodities to ensure uninterrupted supply plan through continuous technical assistance to the Quantification Committee.

Objective 1: Pharmaceutical sector governance strengthened

During this reporting period, SIAPS continued to work jointly with CENAME and CNLS to track ARVs stock and shipment to ensure that ARVs were distributed rationally through the country while additional shipments were awaited.

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

Under this objective, SIAPS is technically assisting the Central National d'Approvisionnement des Medicaments (CENAME) and CAPRs in improving their coordination, internal management, and storage capacity to make available high-quality commodities at distribution points. SIAPS also works with UNFPA and others partners to strengthen the CAPRs' computerized inventory control system and establish a link between them and CENAME. SIAPS is also strengthening the capacity of pharmacy attendants or managers to handle HIV and AIDS commodities management.

During this quarter, SIAPS worked with DPML, UNFPA, and others partners (GIZ, the European ESTHER Alliance, WHO, CHAI) to support the recruitment a consultant for LMIS assessment. In August 2014, the consultant conducted a tools assessment to determine the insufficiencies and propose options for improving the LMIS at different levels of the Cameroon medicines supply chain. The assessment findings were disseminated in September 2014.

In addition, SIAPS Cameroon, in collaboration with the ESTHER alliance, conducted two training workshops for 51 pharmacy attendants and data clerks from Centre and Littoral regions ART sites on the management of HIV and AIDS commodities, the management of patients and stock-related information, related standards operating procedures for health facilities.

Objective 3: Using information for decision making

Under this objective, SIAPS works with CNLS to improve HIV and AIDS commodities information system for medicines stock status and patient management by supporting the issuance of timely and complete reports on patients and stock data. Efforts are continuously made to increase availability of data, maintaining data collection and reporting systems from ART sites, GTR (regional NACC unit), and CAPRs. This includes strengthening support supervision (quarterly review and cross checks) of selected ART sites to solve data discrepancies for both patient and stock at all levels. Consumption and stock-level data are required by the CNLS, CAPRs, and CENAME for preparing orders at the regional and central levels. SIAPS is working closely with the CNLS, central, and regional teams to establish a coordinated system for data collection, submission, collation, and analysis (at all levels) of logistics management information. Recently, this series of activities included the implementation of a HIV and AIDS commodities tracking tool at central and regional levels that will serve as an early warning system for stock status in the country.

During this quarter, SIAPS conducted a five-day workshop August 25 to September 1, 2014, in Cameroon to deploy the HIV and AIDS Commodities Tracking Tool (OSPSIDA). The workshop was held to train participants from CNLS, CENAME, CAPRs, and, implementing partners on capturing and aggregating medicines stock and patients data from peripheral and regional levels so the data is available at all levels for decision making. Patients and medicines stock data from ART sites were entered for few months into the system along with stock status data from CENAME and CAPRs.

From mid-August to mid-September 2014, SIAPS conducted quarterly supervision in 34 facilities within USAID-supported regions to review how health facilities' managed ARVs and best practices on management of patients and medicines stock data from April to July 2014. The supervision report showed that from quarter one to quarter three, the number of SIAPS-supported ART health facilities' that are using country appropriate tools to report logistic and patient data increased from 15% to 56%, and the number that completed and submitted their LMIS reports for the most recent reporting period increased from 15% to 62%. The increases occurred after SIAPS reviewed the existing reporting tools of storekeepers and pharmacy attendants and developed training on HIV and AIDS pharmaceutical management.

Partner contributions

GTR has worked closely with SIAPS during this quarter to enable supportive supervision to 34 ART health facilities. The SIAPS team's involvement in the supervision boosted credibility as a partner of the MoH and CNLS, and will improve the monitoring of patient information, and consumption and distribution data. This should help ensure an uninterrupted medicines supply chain at regional and peripheral levels.

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

Under this objective, SIAPS provided support to CNLS to meet pharmaceutical-related performance requirements of the Global Fund Round 10 Phase 1 so that they can comply with Phase 2 funding. Also, as Cameroon is eligible for the Global Fund's New Funding Mechanism, SIAPS will support CNLS to meet the pharmaceutical-related requirements to access these funds (USD 71 million).

At the request of USAID and US Centers for Disease Control, SIAPS conducted an options analysis in June 2014 that aims to provide evidence for the design of interventions to strengthen the health supply system in Cameroon crucial for achievement of such targets as including PMTCT Option B+ and maternal and child health.

In August, SIAPS presented findings of the analysis during a meeting of the PMTCT/Pediatrics Technical Working Group and later to the Cameroon MoH General Secretary. "The option of strengthening the CAPRs to ensure effective distribution of ART and PMTCT commodities was shared as a recommendation from the analysis and approved by stakeholders.

During Q4, SIAPS also supported the CNLS to complete the supply chain section for the Global Fund New Funding model. The goal was to capitalize on all available resources to support the supply chain for HIV and AIDS commodities during 2015–2017. SIAPS helped identify the gap to be funded by either the Global Fund or the GoC.

Partner contributions

SIAPS worked in collaboration with partners like CHAI, ICAP, and UNFPA to conduct the option analysis.

Democratic Republic of the Congo

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

Overall Quarter Progress

In this quarter, SIAPS, together with National Malaria Control Program (Programme National de lutte contre le Paludisme, or PNLP), conducted the second End User Verification (EUV) 2014. This EUV included not only the availability of malaria commodities, but also of maternal and child health (MCH) commodities. For MCH commodities, 16 items were considered for the EUV. The values obtained those 16 commodities constitute a baseline as they were included in EUV for the first time.

The EUV found that the availability of antimalarial drugs in the facilities visited improved from 56% to 92%; the percentage of the health facilities sampled with no antimalarial decreased in the sampled facilities from 6% to 0%. Of the 1,124 under-five malaria cases reviewed, 80% were treated with an artesunate-amodiaquine combination, which is consistent with PNLP recommendations. SIAPS conducted a review of the medicines registration database in order to produce an updated list of registered medicines that are authorized on the Congolese market, and continues to support activities related to medicine registration to ensure that the number of days taken to register medicines remains at a minimum. Only three new medicines from the National Essential Medicines List have been registered, so the percentage has increased from 71.5 to 72%.

SIAPS supported the PNLP in organizing and holding its quarterly Partner Coordination meeting. Information received at this meeting resulted in the decision by PMI and the Rural Health Program (SANRU)/Global Fund (GF) to redistribute the kits to PMI-supported sites to avoid expiry and stock-outs. In addition, SIAPS was actively involved in quantifying the need for malaria commodities covering the period from July 2014 to December 2015.

Significant progress has been made during this quarter with regard to MCH activities. To enhance and expedite achievement of the Millennium Development Goals (MDGs) 4 and 5, SIAPS supported the Ministry of Health (MoH) in adopting standard guidelines for administering oxytocin, misoprostol and chlorhexidine digluconate (7.1%) in DRC. Furthermore, the use of chlorhexidine digluconate for neonatal umbilical care was also adopted. Moreover, SIAPS supported Integrated Health Projects (IHP), the main USAID-funded project in DRC, in quantifying the needs of contraceptives for next fiscal year.

SIAPS continued its support to the National Tuberculosis Control Program (Programme National de lutte contre la Tuberculose, or PNLT) in conducting active pharmacovigilance for all TB patients under second-line TB treatment in accordance with WHO recommendations. This active pharmacovigilance activity was conducted between May and September 2014 in 14 health facilities. With SIAPS support, two different cohorts (new and old cases) were closely followed and monitored for possible adverse drug reactions (ADRs) and side effects by a joint team consisting of members from the PNLT and the Clinical Pharmacology Unit of the University of Kinshasa. A total of 268 notifications were collected. Concerning new cases, 58 patients were

followed, 40 of whom were under a short-term TB treatment regimen and 18 of whom were under a long-term treatment regimen. A total of 173 ADRs were documented. Concerning old cases, 317 patients were followed, of whom 187 developed ADRs; 108 patients were under a short scheme and 79 under a long scheme TB treatment. The results of this study will be officially presented to the MoH in October 2014 before submission to the Head Quarter for possible publication.

Objective 1: Strengthening pharmaceutical sector governance

SIAPS conducted a review of the medicines registration database to produce an updated list of registered medicines that are authorized on the Congolese market.

SIAPS continues to support activities related to medicine registration through the medicine registration committee. SIAPS provides support to the committee to ensure that the number of days taken to register medicines remains to a minimum. The time taken for the registration process remains at 68 days, the same as the previous quarter. The audit conducted during this quarter shows that more 3,000 items have been registered so far, and are authorized to be used in the DRC market.

SIAPS supported the PNLP in holding its quarterly workshop on August 5-6. Through this workshop, PNLP and its partners (PMI, SANRU/GF, and the UK Department for International Development [DFID]) shared and analyzed data for malaria commodities. It became apparent that SANRU/GF and DFID had overstock of malaria testing kits and some antimalarials, such as artesunate suppositories, whereas many other stores were understocked. This information sharing allowed redistribution of those valuable commodities, thereby preventing expiry and stock-outs.

SIAPS supported a two-day workshop for the MoH to adopt standard guidelines for the use of oxytocin, misoprostol and chlorhexidine gluconate (7.1%). Furthermore, the chlorhexidine digluconate strategy for the umbilical care in DRC was also adopted. A seven-day workshop had previously been held to put in place mechanisms for the introduction of chlorhexidine digluconate (7.1%) to be used in the umbilical cord care to prevent infection after delivery.

In September 2014 SIAPS provided technical and financial assistance to finalize the guidelines of TB medicines management called “PATIMED V”, (the TB medicine management tool in DRC). To accomplish this, 16 experts from the NTP and NTP stakeholders were appointed and the PATIMED V document was successfully updated from the 2008 version. It is worth noting that PATIMED V has many innovations, including an integration of the new definitions of the TB cases recommended by WHO; the new diagnostic and therapeutic approaches; and the introduction of new concepts such as quality assurance, pharmacovigilance, a maximum-minimum system, logistics management information system (LMIS), pediatric tuberculosis, isoniazid preventive therapy (IPT), co-trimoxazole preventive therapy (CPT) and antiretroviral (ARV) treatment.

Partner contributions

PNLP and its partners, which included SIAPS, SANRU/GF, PMI-Expansion, IHP, USAID/DELIVER and DFID, worked collaboratively to achieve this objective. The redistribution of malaria commodities from SANRU/GF-supported zones to PMI-supported zones, thus precluding expiry and stock-out, respectively, in these zones, has been an excellent illustration of this collaboration between partners.

UNICEF and WHO were involved in the production of standard guidelines for oxytocin, misoprostol and chlorhexidine digluconate 7.1%

Objective 2: Increasing and enhancing capacity for pharmaceutical supply management and services

During this quarter SIAPS worked toward increasing and enhancing the capacity of health workers on pharmaceutical management and supply services by organizing, jointly with the Drug Regulation Authority (DRA) and the Belgium Cooperative Agency (CTB), training on Good Distribution Practices for Regional and District Pharmacist Inspectors. The purpose of the training was to enable and equip pharmacists with the knowledge and skills required for medicine inspection to promote quality assurance. Therefore, a total of 24 Pharmacists from various provinces were trained.

SIAPS provided financial and TA to carry out joint supportive supervision visits in five USAID-supported provinces. This intervention focused on improving management of TB care and medicines and visiting Regional Medicine Distribution Units (Centrales de Distribution Régionales) (CDRs) where TB medicines are stocked. From July 8-10, SIAPS, jointly with the DELIVER project, supported NMCP and PNAM in quantifying the need for malaria commodities in 138 PMI-supported health zones for the period from July 2014 to December 2015. This quantification exercise enabled DELIVER to estimate the needs of those commodities and thus compiled a purchase order that was submitted to the organizational headquarters.

Two training sessions on ARV management were also conducted. The first training was held from May 3-7 at Kinshasa and the second one from September 8-12 at Kisangani, in the Province Orientale. It has been noted with great concern that ARVs were not well managed in most sites supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). The sessions were therefore organized to provide health care workers in charge of managing ARVs with the knowledge and skills necessary to improve the management of the ARVs in their respective facilities. The main objectives of the training were to enable health care workers to apply good storage practices, to appropriately use medicines management tools (including data collection and reporting), and to become acquainted with quality assurance principals. Those trainings help to organize and direct PEPFAR implementing partners (IPs).

During this quarter, SIAPS, with consultants from the Accreditation Council for Pharmacy Education (ACPE) based in Chicago/USA, conducted the evaluation for the Faculty of Pharmaceutical Sciences (FOPS) of the University of Kinshasa. The evaluation started in early July 2014 and consisted of two phases: a self-assessment and the ACPE team visit, which took

place in mid-July. Recommendations were then developed, together with a roadmap for implementation.

In August 2014, as per ACPE recommendations, the Curriculum Committee was established. Its first meeting took place on September 26, kick-starting Curriculum Committee activities and adopting the roadmap proposed by ACPE. The revised curriculum should address public health issues and priorities such as management of TB, HIV, malaria, Ebola, and other tropical diseases, as well as five area of SIAPS interest: supply chain management, pharmacovigilance, antimicrobial resistance, rational use of medicine, and pharmaceutical care.

Partner contributions

For the very first time in DRC quantification for malaria commodities was carried out with involvement of all PMI stakeholders (SIAPS, DELIVER, PMI-Expansion, IHP) and PNAM.

The Ministry of High Education (MoE), MoH, ACPE, the Faculty of Pharmaceutical Sciences, and SIAPS worked collaboratively on the evaluation activity. Other stakeholders, such as WHO, expressed their interest and lent support.

Constraints to progress

A lack of reliable data on malaria commodities use makes it difficult to conduct consumption-based quantification. As a result, a morbidity-based quantification approach has been used to quantify malaria commodities.

Concerns about change (particularly among some academic bodies that fear losing some responsibilities and longstanding advantages tied to their position and current curriculum) have also presented a challenge.

Objective 3: Utilization of information for decision-making increased

From September 1-6, SIAPS, jointly with the PNLP, conducted the second EUV of the year. This time around the EUV included both malaria and MCH commodities. The availability of both commodities was evaluated, producing a number of key findings:

- The index of availability of antimalarial drugs has significantly improved. Health facilities with all four doses of malaria commodities increased from 56% to 92%.

- The percentage of health facilities with no antimalarials has decreased from 6% to 0%.

- The number of health-care providers taking care of malaria cases and who were trained on the updated malaria guidelines remains low, although it increased from 26% to 32% between March and September 2014. To address this, SIAPS is planning to develop recommendations and encourage other PMI implementing partners to intensify their support to PNLP and train health care providers on the updated malaria guidelines.

SIAPS is planning a series of training for health-care providers working in the 43 new health zones supported by PMI.

- Concerning MCH commodities, only 3 out of 135 (or 2% of) health facilities had all 16 items on the EUV checklist; 13 out of 135 (or 10% of) health facilities had 8 items. In general only 61% of health facilities had more than 50% of items.

- In July 2014, SIAPS, jointly with DELIVER, prepared and submitted the Procurement Planning and Monitoring Report (PPMRm) for malaria commodities for the period from April to June 2014. This PPMRm found that some malaria commodities were overstocked in one of the warehouses whereas those commodities were understocked in three other warehouses. SIAPS recommended redistribution activity to prevent expiry and stock-out at the respective facilities.

- In the PPMc report, batch numbers for Lo-Femenal were reported as identical to those for the fixed-dose "Combination 3" reported from CDRs. After investigation, it was concluded that the fixed-dose "Combination 3" were being mistakenly reported as Lo-Femenal.

- 80% of under-five malaria cases were treated with an artesunate-amodiaquine combination as per PNLP recommendation; this is a significant improvement since only 58% of under-fives were treated with the artesunate-amodiaquine combination in March 2014.

- The number of pharmaceutical management guidelines, list and SOPs developed, and submitted for adoption increased from four to eight (whereas the target for this indicator was set at five). Those management guidelines consist of the 2014 National Essential Medicines List, The Standard Treatment Guidelines for General Hospitals, and the MCH norms and guidelines.

- SIAPS provincial representatives conducted a stock-take exercise to assess the stock status for Lo-Femenal and Ovrette at the health facilities. Surprisingly no stock for both products was found, whereas IHP reported 247,517 cycles of Ovrette at the health zones. Therefore, it is assumed that these products are being misreported. It was further reported that for the past three years no Ovrette has been ordered as its production has been discontinued. Generally, significant overstocking has been noted for some IHP commodities. To address this, SIAPS supported IHP to appropriately quantify the need of contraceptives for next fiscal year. Based the quantification, SIAPS recommended that the quantity to be ordered be reduced. Following the LMIS evaluation that took place in November 2013, SIAPS, jointly with the DELIVER Project, supported the MoH to develop a roadmap that should guide the implementation of the recommendations from the LMIS evaluation. The timeline for roadmap spans from September 2014 to September 2015.

Partner contributions

PNLP, PNAM, IHP and PMI-Expansion participated in the EUV process.

Objective 4: Improving pharmaceutical services to achieve desired health outcomes

SIAPS has been requested to show how its interventions contribute to the overall USAID objective of an AIDS-free generation. The Next-Generation Indicators (NGI) reflect PEPFAR's strategy to increase country ownership of HIV/AIDS efforts and ensure that countries are at the center of the decision-making, leadership, and management of their HIV/AIDS programs. PEPFAR supports work towards better alignment of indicators and reporting requirements within the context of the national HIV/AIDS monitoring and evaluation (M&E) plan of each country. Each portfolio receiving PEPFAR funding is required to show either directly or indirectly how activities contribute to an AIDS-free generation. Based on the above, SIAPS-DRC is required to report on new PEPFAR indicators particularly the number of SIAPS-supported sites and the number of patients receiving treatment at SIAPS-supported sites. In August 2014 SIAPS launched data collection for those indicators. Data collected in August will be used as baseline for reference. There are 402 SIAPS-supported sites providing ART and 29,896 patients receiving ART.

SIAPS continues its support to the PNLT with an active pharmacovigilance for all the TB patients under second-line TB treatment in accordance with the WHO recommendations. This was carried out in 14 health facilities in Kinshasa between May and September 2014. With the support from SIAPS, two different cohorts (new and old cases) were closely followed and monitored for possible adverse drug reactions and side effects by a joint team consisting of members from the PNLT and the Clinical Pharmacology Unit of Kinshasa University. A total of 268 notifications were collected.

Among new cases, a total of 58 patients were followed, of whom 40 were under a short-scheme treatment regimen and 18 were under a long-scheme treatment regimen. A total of 173 ADRs were documented. Among old cases, 317 patients were followed, of whom 187 developed ADRs. 108 patients were under short-term TB treatment and 79 under long-term TB treatment. A total of 268 notification forms were filled and a total of 333 ADRs were reported, of which 46 were severe cases. Among the severe cases, 12 presented acute decrease in hearing, three presented visual disorders and four presented of deafness.

Partner contributions

The National Center of Pharmacovigilance (CNPV) provided support to the PNLT.

Dominican Republic

Goal: To increase the availability of critical medicines and diagnostic materials, including the ones used for HIV/AIDS and tuberculosis through the implementation of the different elements of the Integrated Management System for Pharmaceuticals and Medical Supplies (SUGEMI) system, and to build the capacity of national counterparts to effectively and efficiently operate the integrated system.

Overall Quarter Progress

Nearly all primary health care facilities are periodically reporting consumption and availability of medicines through the SUGEMI pharmaceutical information system. Availability of antiretrovirals (ARVs) and essential medicines has improved since last quarter due to a closer match between requisition (from health facilities) and dispatch (from PROMESE/CAL).

Objective 1: Strengthening pharmaceutical sector governance

Based on the results of the national pooled procurement analysis, SIAPS published a document summarizing the results and the financial gaps to be covered for the procurement of all needs. During this quarter SIAPS supported the revision of the National List of Essential Medicines (NEML). For the next quarter, the MoH should submit the proposal to the NEML Committee, and publish the NEML with the support of a Ministry Decree to make its use compulsory for the procurement of medicines. For the next quarter, SIAPS will also assess the tools that are used for the estimation of needs (catalogs and quantification applications) to plan for the improvements that are needed for the 2015 programming exercise.

Constraints to progress

The procedures for the validation and publication of the NEML in the Dominican Republic are lengthy and bureaucratic. This may delay the publication of the NEML, even if the content has already been validated by scientific committees.

Partner contributions

PAHO has supported the revision of the national medicines list.

Objective 2: Enhancing capacity for pharmaceutical supply management and services

In this quarter SIAPS prepared the materials for the training on the implementation of SUGEMI SOPs in 21 MoH hospitals. The training was carried out in the third week of September. For next quarter SIAPS and its national counterparts have scheduled a training for the implementation of standardized procedures for the transportation of laboratory samples and the delivery of results. The third certified course on pharmaceutical supply management is scheduled to start on November 2014. The course will be implemented by the Universidad Central del Este, and will be financially supported by USAID/SIAPS.

Objective 3: Making pharmaceutical management information available and used for decision making at different levels of the health system

During this quarter SIAPS supported the elaboration of a technical report summarizing the findings of the third supervision round to health facilities. The SUGEMI quarterly information bulletin was disseminated to a wide audience on July 2014, and is also available on the MoH website. SIAPS initiated a rapid assessment to determine the factors contributing to problems remaining in the collection, consolidation, and analysis of the data generated by the SUGEMI information system. For next quarter, SIAPS and its national counterparts will analyze the results of this assessment and agree on the on the interventions to confront the problems.

Constraints to progress

MoH hospitals still don't have a standardized tool for medicine requisition or for reporting availability and consumption. The MoH and an international consulting firm are working in the development of a software, but its full implementation is not scheduled in the near future.

Objective 4: Improving allocation of resources for procurement and pharmaceutical management operations

During this quarter SIAPS and its national counterparts finalized the technical report "Programming the Purchase of Medicines and Supplies in the Dominican Republic's Public Health System". SIAPS elaborated a comprehensive report including an analysis of the financial gaps to be covered for al full procurement of all the estimated needs. The results were presented to the Ministers of Health and Finance during a joint meeting on September 2014. For next quarter SIAPS will continue supporting the lobbying activities for the assignment of the required financial resources.

Objective 5: Improving pharmaceutical services to achieve desired health outcomes

No new disease control programs (DCPs) were incorporated into SUGEMI, but the integration of additional components of DCPs was consolidated. During this quarter SIAPS organized working meetings with national counterparts to plan for the integration of second-line TB medicines into SUGEMI. The full integration of this component is scheduled for next quarter. For the next quarter, SIAPS will also organize a training course on the implementation of SOPs to improve the transportation of TB and HIV laboratory samples, and the delivery of results within the SUGEMI framework.

Poor performing health facilities continue to be targeted on supervision visits.

Constraints to progress

Disease control program directors (maternal and child health and malaria) are reluctant to integrate the pharmaceutical supply systems. Due to competing priorities, the full integration of these programs is scheduled for next year.

Ethiopia

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

Overall Quarter Progress

USAID/SIAPS has continued providing technical support to the Federal Ministry of Health (FMOH) and regional health bureaus (RHBs) in the institutionalization of Auditable Pharmaceutical Transactions and Services (APTS) at the federal and regional levels through the development and enactment of regulations and/or directives. As a continuation to the previous quarter, the federal regulation has been approved by FMOH and the Ministry of Finance and Economic Development. The Oromia and SNNPR draft regulations have been submitted to the regional state council and are awaiting approval. Similarly, SIAPS has provided technical support to Harari Regional State to draft its regulation. APTS legislation enforces implementation of transparent and accountable medicine transactions at health facilities providing ART services to prevent wastage and diversion of essential HIV/AIDS and malaria related products (most of which are supplied through donations, especially drugs for opportunistic infections [OIs], Coartem, and food by prescription (FBP) products).

In this quarter, APTS was implemented at nine additional hospitals (six in East Amhara, one each in West Amhara, South Western Oromia, and SNNPR). As of the end of this quarter, APTS is implemented at 31 health facilities in 6 regions and its scale-up is in progress. In Amhara region, almost 90% of hospitals implemented APTS and started recording transactions on OI drugs and FBP, and routinely report on a monthly basis. APTS sites generate information on total values of medicines dispensed to patients including program drugs.

The 24 hospitals for which SIAPS provides active support in implementing the EHRIG-pharmacy chapter are all high-volume ART sites. Onsite training and mentoring was provided to DTCs, ART pharmacies, and drug information service (DIS) units as part of ensuring the rational use of medicines (adherence counseling, appropriate advice on ARV dosage, administration, handling, and storage at home).

During the quarter, SIAPS, in collaboration with Jimma and Mekele Universities, organized two rounds of clinical pharmacy training for 46 pharmacists drawn from 39 health facilities. As usual, the training was based on an intensive practical exposure which combines a one-week lecture and three-week ward attachments. In total, 200 pharmacists were trained on clinical pharmacy services and were deployed to ART sites. These trained pharmacists have played a key role in improving the identification and resolution of drug-use problems at inpatient wards and ART pharmacies.

During the quarter, SIAPS continued supporting the proper recording and reporting of information on ARV dispensing and use at ART sites that are implementing the Electronic Dispensing Tool (EDT) and its paper-based version. EDT and its manual version are the source of information for the bimonthly patient uptake and regimen profile reports. This is used to monitor adherence to prescribing guidelines (e.g., phase-out of D4T-based regimens) and

national quantification of ARVs. In addition, documentation of proper patient-medication records at ART pharmacies has enabled pharmacists to easily identify and prevent prescribing and medication errors, thereby contributing to better health outcomes for patients on ARV therapy. For example in Suhul Hospital, Tigray region, 22 drug-therapy problems were identified and documented by the ART dispenser with the help of EDT, and interventions were implemented through discussions with prescribers. Similarly, six drug-therapy problems were also identified and intervened at the ART pharmacy at St. Mary's Hospital. Most of the drug-therapy problems were related to incorrect dose and prescribing the wrong regimen.

Objective 1: Pharmaceutical sector governance strengthened

APTS tools were printed and ready for use after its approval by FMOH and the Ministry of Finance and Economic Development. FMOH has invested close to 3 million birr (~ USD 150,000) for printing these tools. A baseline assessment of pharmacy services was conducted in 17 federal and university hospitals; the report and results were disseminated to all stakeholders. Results of the baseline assessment revealed huge gaps in the provision of pharmacy services, including very poor work flow (dispensing setup), high wastage rate, lack of a transparent system for managing medicine transactions, a shortage of pharmacy and support staff, absence of an action plan to guide activities related to pharmacy services, and lack of compliance to EHRIG-pharmacy chapter requirements. Availability of key medicines varies between hospitals, but most hospitals need to make substantial improvements to ensure availability of essential medicines. The dispensing practice at these hospitals was found to be very poor. For example, the average counseling time was found to be only 43 seconds, labeling of medicines was very poor, and only 50% of patients knew how to take their medicines appropriately. The level of job satisfaction by pharmacy professionals is also very low.

In addition, the progress of site-level preparation for APTS implementation was evaluated by organizing a two-day workshop, where hospital CEOs and pharmacists participated. To oversee the progress of APTS implementation, FMOH had established a national task force called the "hospital pharmacy advisory group" which is chaired by H.E. the Minister of Health.

As part of advocacy to establish a pharmacy leadership unit at the federal and regional levels, SIAPS, in collaboration with the Ethiopian Pharmaceutical Association, drafted a document and shared it with the Amhara RHB for consideration during the restructuring of the RHB. SIAPS will support Amhara RHB, to organize a consultative meeting with relevant stakeholders to discuss on how the pharmacy service should be reflected in the organizational structure of the RHB, which is currently under review. The document outlines the current organizational gaps, the key functions of the pharmacy department at regional levels, the roles and responsibilities of the department, and its staff.

With regard to equipping the Health Regulatory Information Center (HRIC) at FMHACA, the call center has been supplied with the necessary furniture and equipment, including computers. In addition, data capturing tools were drafted during the quarter. The installation of the PBAX machine for the call center has been delayed because of procurement issues on the vendor's side, but delivery is expected soon.

As part of improving access to antimalarial drugs and other malaria health commodities, USAID/SIAPS supported a national quantification and forecasting workshop organized by FMOH and Pharmaceutical Funds and Supply Agency (PFSA). Two of the main objectives of the workshop were to produce the forecast and supply plan/procurement requirements for antimalarial commodities for 2014–2017. In this quarter, the workshop proceedings and the quantification reports were completed and will be shared with PFSA, FMOH, and other stakeholders including USAID/PMI.

Partner contributions

- FMOH has processed all the necessary steps and had discussions with the Ministry of Finance and economic development bureaus for approval of APTS regulations
- Although decisions are being delayed because of several other competing priorities, SIAPS partners have a positive attitude toward our project work

Constraints to progress

The procurement of the PBAX machine for the HRIC at FMHACA was delayed because of a shortage of foreign currency at the Ethiopian banks, which the vendor could not secure to effect the actual procurement. But, during early September, the vendor secured its letter of credit and is expecting to receive the equipment to make the installation.

Objective 2: Pharmacy services at facility level improved

In this quarter, two rounds of APTS training (one each in Addis Ababa and Oromia regions) were effectively conducted. In Addis Ababa, the training was provided to three hospitals, namely ALERT, St. Peter, and Amanuel Hospitals; 96 professionals (pharmacists, accountants, cashiers, and auditors) were trained. In Oromia region, the training was organized for professionals from Jimma University Specialized Hospital (JUSH); 65 professionals (cashiers, pharmacists, and accountants) took part in the training. As a result of this training, APTS was successfully initiated at JUSH immediately after the training.

Two training sessions on the SOP for pharmacy ART services were organized in collaboration with USG clinical partners for 57 dispensers. This activity facilitates generating bimonthly patient uptake and regimen breakdown reports which are used to guide quantification and monitor ART prescribing practices.

In this quarter, an EHRIG-pharmacy chapter implementation status assessment was conducted at 10 hospitals to create and/or identify model hospitals that can serve as centers of excellence for other health facilities by fully implementing all standards of the EHRIG-pharmacy chapter and self-sustaining their performance. According to the assessment results, the 10 selected hospitals have implemented the 12 operational standards of the EHRIG-pharmacy chapter an average of 92.03%; the percentage of implementation ranges from 76.7% (Dil Chora Hospital) to 99.75% (Debre Markos Hospital). This shows that all hospitals will graduate per the criteria developed, except Dil Chora because of its low performance. (The minimum requirement is 90%.)

Compilation of reports from the field on medicines education indicates the huge potential of this intervention to deal with problems related to irrational use of medicines, including ARVs, drugs for OIs, and antimalarials. For example, in Eastern Amhara, 65 medicine use education sessions were organized by health facilities. In these sessions, 3,970 patients (48.1% of whom were females) have benefited from the medicine use session.

To create awareness on pharmacovigilance among health providers, face-to-face discussions were carried out at seven health facilities in Addis Ababa, five in Oromia, two each in Amhara and Diredawa, and one hospital in Benishangul Gumuz; 333 health providers participated in the discussions. During the quarter, various pharmacovigilance tools and documents were distributed to health facilities and RHBs. This includes 276 adverse drug event reporting forms, 345 allergy cards, 210 copies of the national pharmacovigilance framework, 1,447 newsletters, and 330 preventable adverse event bulletins; 68 pieces of ADE data were entered into the national database.

During this quarter, SIAPS supported the establishment of new DIS units at 16 health facilities and strengthened existing DIS units at 6 hospitals.

To improve the prescribing and dispensing practices of antimalarial drugs at the health facilities in Oromia region, USAID/SIAPS supported the Oromia RHB (ORHB) through printing and distribution of 2,000 copies of the current national malaria treatment guidelines (3rd edition, 2012). The national guidelines were distributed to 268 woreda health offices for subsequent distribution to health centers in their catchment areas. In addition, to support the efforts of ORHB in improving the rational use of medicines at health posts, USAID/SIAPS provided technical and financial assistance to develop, translate, print, and distribute *Drugs Management Handbook for Health Extension Workers*; 5,000 copies of the Afan Oromo version of the handbook were distributed to 268 woreda health offices for subsequent distribution to health centers and then to health extension workers.

Partner contributions

Full participation of FMHACA north west branch during ADR face-to-face discussions including presentations and supplying newsletters, brochures, allergy cards, and other references to providers.

Partners including PFSA, FMHACA, and SCMS contributed financial, material, and technical support for the successful completion of the integrated joint supportive supervision. FMHACA contributed materials and technical support that are used for the face-to-face discussions; PFSA checklists, materials, and technical support; SCMS financial and technical support, and zonal health departments (ZHDs) managerial contributions to enforce implementation of interventions.

Most of the activities in clinical pharmacy were performed with strong collaboration of PFSA, RHB, and university staff.

Constraints to progress

- The SOP and job description produced by PFSA on clinical pharmacy were not communicated in a timely manner to RHBs and health facilities. SIAPS is trying to speed up the process by discussing the matter with the concerned persons at PFSA.
- High staff-turnover, work load, and lack of commitment to cascade activities during supportive supervision and mentoring sessions
- High demand for computers and reference books for clinical pharmacy practice and DIS units, especially from the big hospitals, such as Felege Hiwot.

Objective 3: Capacity to use information for decision making strengthened.

SIAPS supported implementation of the Electronic Dispensing Tool (EDT) at 200 ART sites and the paper-based information system at the remaining ART sites. EDT and its manual versions are used to capture patient-medication information and serve as a tool for identification and prevention of medication errors (including inadvertent changes in regimens) and monitoring patient adherence to treatment and appointment dates. This system also serves as a critical source of information on patient uptake and regimen breakdown, which is routinely used for ART program monitoring and national quantification of ARVs.

In this quarter, patient uptake and cumulative regimen breakdown reports were collected from 660 and 380 ART sites, respectively. The patient uptake and regimen breakdown reports cover 323,122 and 282,122 patients, respectively. The national aggregated data has been used to monitor the progress of switching D4T-containing ARV combinations to other regimens in adults and is currently being used for the same purpose in pediatric ART. Along with ART patient uptake reports, data on lost-to-follow up, deceased, and transferred patients are also collected on a bimonthly basis, which is key to monitor the attrition rate from the ART program. The reports are compiled and disseminated to all relevant stakeholders to support decision making related to quantification and program monitoring.

On-the-job training and mentoring on real-time dispensing were provided to 25 dispensers during the quarter. Similarly, four health facilities were supported to properly implement EDT; external backup drives were distributed to ensure continuous data backup and ensure continuous availability of quality data on patient uptake and regimen breakdown. Computer hardware and software maintenance and EDT support were provided for 8 ART and 23 electronic sites, respectively. The latest Kaspersky Antivirus was installed at 13 ART pharmacies and 2 DIS sites.

USAID/SIAPS actively participated in a national quantification exercise for ART, OI, and nutrition commodities. There was a strong presence of SIAPS at the workshop in that SIAPS-supported ART data was used as the major source of information for the quantification exercise. SIAPS was also represented in ad hoc committee for the proper utilization of d4T-based regimens to mitigate the acute shortage of pediatric ARVs. SIAPS contributed to the success of committee activities by providing relevant data and information from the field. SIAPS is also part of the national committee at FMOH to oversee the d4T phase-out in pediatric patients.

SIAPS continued its contribution by providing relevant patient-related information and status updates from the field.

To strengthen the capacity of facilities to use information for decision making, 44 PMI sites were supported by providing PMIS tools and technical support to maintain the recording, collection, and use of malaria-related information. As a result, quarterly malaria treatment and antimalarial drug management (AMDM) reports have been collected from 39 health facilities and compiled into a CRMS report. ORHB has been supported to organize 4 rounds of CRMS review meetings with participants from15 ZHDs, 39 Woreda health offices, 11 hospitals, and 28 health centers at Jimma, Adama, Diredawa, and Nekemte. The CRMS review meetings created a platform for review of AMDM activities as mechanisms to bring all stakeholders together from regional, zonal, district, and health facilities for sharing CRMS findings. It also enabled participants to celebrate achievements and review progress, analyze gaps, and set priorities for future interventions.

Constraints to progress

- High staff-turnover and staff shortages at ART pharmacies have resulted in a backlog of patient information that has not been entered or updated (transfers out and deceased patients). To solve this problem, SIAPS is providing on-the-job training for dispensers to discuss the advantages of recording and updating patient information and reviewing patient medication history to prevent medication errors.
- Frequent power interruption at some health facilities, and most computers are infected by viruses. SIAPS has recently started installing the Antivirus at all electronic sites.
- Discrepancies between electronic system data and manual records at some health facilities; inappropriate handling and use of computers.

Objective 4: Optimal use of financial resources ensured

In this quarter, APTS trainings have been given to ALERT, Amanuel, and St. Peter Specialized Hospitals in the Addis Ababa region and JUSH staff in Oromia; 161 professionals, pharmacy accountants, pharmacy personnel, auditors, CEOs, and cashiers were trained.

ABC value analyses were conducted at different health facilities, including JUSH and Mettu Karl Hospital and results reported to hospital management to take corrective measures. Technical support was also provided to Debre Tabor Hospital to carry out ABC value analysis for 2004-2005 budget years. The result of the ABC analysis was reconciled with VEN categorization of the hospital-specific drug list and is ready for final presentation to DTC and hospital management along with the results of prescription review.

To support minimizing wastage due to expiry of antimalarial drugs, SIAPS provided technical and material support to ORHB in the finalization of *Guideline for the Redistribution of Excess and Near Expiry Antimalarial Drugs between Public Health Facilities*. In addition, malaria and pharmacy experts from 18 ZHDs, 7 town administrations, and 268 woreda health offices have been familiarized with the contents and implementation strategies of the guideline during the workshop organized by ORHB, with technical support from SIAPS. The next step will be to

support ORHB to share the guideline with health facilities and program-level staff (ZHDs and woreda health offices) with directives for its proper implementation.

Partner contributions

- FMOH paid ~3,000,000 birr (~USD 150,000) for printing sample vouchers and registers for federal specialized university hospitals
- FMOH facilitated all communication with the Ministry of Finance and Economic Development
- To facilitate a training event, FMOH, Jimma University, and JUSH prepared training materials and delivered the training

Constraints to progress

- Lack of pharmacy accountants at some hospitals make recording and reporting of financial transactions difficult

Guinea

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

Overall Quarter Progress

To increase access to pharmaceutical information for better decision making, SIAPS supported the National Malaria Control Program (PNLP) with data aggregation and quantification based on the monthly malaria reports. In addition, a fourth EUV survey was conducted during this quarter, and content drafted for the upcoming quarterly malaria regional meetings. Monthly reporting rates continue to stay strong, with over 90% of facilities in PMI zones reporting on average in 2014, and timeliness rates close to 90% as well. However, issues of data reliability are surfacing which have led to joint supervisions by PNLP, SIAPS, and Stop Palu at health facilities in targeted districts.

In support of national targets for maternal and child health, SIAPS was involved in the development of a Strategic Plan on Community Health and trained health agents in five districts on topics related to the supervising community health workers.

All public health projects in Guinea have been significantly affected by the Ebola outbreak that started in early 2014 and that continues to spread throughout the country and the region. Some of the field activities initially envisioned in the SIAPS Guinea work plan have been delayed, and SIAPS Guinea has had to adjust its focus to include active participation in international and local efforts to manage the Ebola epidemic. SIAPS is now a member of the national Ebola crisis team, specifically the Logistics Committee responsible for the quantification, distribution, storage, and management of supplies. Given how challenging it has been to contain the epidemic, it is expected that health priorities will continue to shift in the months to come as the country grapples with Ebola and its consequences on managing all other diseases, including malaria.

Objective 1: Pharmaceutical sector governance strengthened

Over the past year, SIAPS has accelerated activities in the governance area and established a close working relationship with two of the national institutions that play a central role in Guinea's pharmaceutical sector: the Central Medical Store (Pharmacie Centrale de Guinee [PCG]) and the National Medicines Regulatory Authority (DNPL). Regular exchanges and planning meetings, for example, have led to PCG relying on SIAPS for additional support that was not initially envisioned in the work plan.

Thus, in August and September 2014, SIAPS supported the PCG to develop its five-year strategic plan as part of a broad collaboration with a range of government and technical partners. These efforts were chaired by the DNPL. The PCG Strategic Plan was then reviewed by a select committee who drafted the logical framework to render it more actionable.

For this first year, the Government of Guinea provided a grant of 4 billion GNF (close to 600,000 US dollars) to the PCG for the purchase of pharmaceuticals products. SIAPS provided

technical assistance to PCG's Procurement Unit in drafting the international tender document and the associated dossier for the pre-selection of suppliers. The files were submitted to the National Commission on Public Procurement—given PCG's legal status as a public institution of an industrial or commercial nature—and they were accepted with minimal administrative changes. As a result, the European Union has decided to use these templates in guiding an international tender planned through the EU-funded Projet d'Appui a la Sante en Guinee (to purchase pharmaceutical products for the PCG.

With SIAPS support, the PCG organized a finance technical committee that met regularly on the weekends to review the financial results and balance sheets of the PCG for the past three years. An Excel® model was set up and populated with financial data over the three-year period; the model will allow PCG and its partners to test the financial options laid out in the strategic plan and assess their viability for the future.

Lastly, SIAPS supported the reorganization of the quality assurance department of PCG, defining new job descriptions for personnel, new standard operating procedures, and, in particular, guidelines for self-monitoring and supervision.

Partner contributions

- The PCG Strategic Plan was developed in partnership with: PCG, DNPL, national priority disease programs, other Ministry of Health (MoH) departments, WHO, UNICEF, UNFPA, the Ministry of Finance, the National Laboratory for Quality Control, hospital pharmacists and directors, and regional and district health directors.
- The PCG finance committee was composed of WHO, UNFPA, SIAPS, the French Development Agency AFD, the PCG auditor, and PCG Finance leadership.

Constraints to progress

One of the activities envisioned by the work plan was to facilitate coordination among the committee members responsible for planning the next revision of the national essential medicines list (NEML). Early discussions took place between SIAPS and DNPL to determine the methodology for revising the NEML. However, this activity has not progressed during the year because the DNPL has been focused on Ebola activities. Given that the next revision of the NEML is due in the spring of 2015, preparations for it will pick up in the coming months.

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

To support the country in achieving goals related to maternal and child health, SIAPS participated in a semiannual review held by the MoH on community-level activities funded by UNICEF. In addition, SIAPS engaged in the development of the National Strategic Plan on Community Health and organized two workshops in Kindia and Fria for approximately 30 health agents that supervise community health workers in five different districts. As part of these workshops, SIAPS provided guidance on supervisions at the community level and introduced the monitoring tools that had been developed.

SIAPS provided technical assistance to PNLP's pharmacy team to establish a routine process of tracking malaria commodities, including stock status, consumption patterns, quantification exercises, product orders, and deliveries. PNLP and SIAPS can now calculate the average monthly consumption of various malaria medicines at the national level, based on the new monthly malaria reports that are available from both the PMI and Global Fund-supported zones.

SIAPS helped PNLP develop its semiannual work plan and was involved in a workshop where supervision guidelines for malaria activities at the health facility level were harmonized and agreed upon by all the technical partners.

Additionally, SIAPS participated in drafting the terms of reference for various working groups created under the umbrella of PNLP that will focus on monitoring and evaluation, supply management of malaria commodities, and supervisions. The working group focusing on supply management is formally recognized by the MoH and led by PNLP's main pharmacist. It involves all key malaria partners, including PCG, SIAPS, DELIVER, Stop Palu, CRS, and USAID, PMI and CDC representatives in country and it meets on a regular basis. Following a decision to manage the antimalarial products provided by donors (PMI and Global Fund) in one common basket, this working group is now in charge of all aspects of quantification, distribution and stock monitoring for the entire country.

Partner contributions:

- For the harmonized malaria supervision guidelines, PNLP collaborated with SIAPS, Stop Palu, CRS and PMI and CDC representatives in country.
- For the National Strategic Plan on Community Health, the Ministry of Health collaborated with UNICEF and SIAPS among others partners.
- For the supervision guidelines at the community level, SIAPS coordinated with the IMCI Unit of the Ministry of Health.

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

In July 2014, SIAPS and PNLP organized the fourth EUV survey in the country, which had been initially scheduled for early 2014 but delayed for several months due to the Ebola outbreak. For the first time, the survey included some districts from the area supported by the Global Fund, selected based on their proximity to the PMI-supported districts. This geographical expansion is allowing PNLP to gain a broader understanding of the malaria commodity and case management situation in the country and to propose corrective actions. CRS, the main Global Fund implementing partner, participated in field activities along with data collectors from various MoH departments.

The EUV showed good availability of artemisinin-based combination therapies, rapid diagnostic tests, and sulfadoxine-pyrimethamine, following product distributions in April in the PMI zones and in June in the Global Fund zones. It also showed that a good number of facilities need further training on inventory management, especially for filling out stock cards and maintaining

proper storage conditions. Most patients suspected of malaria had been tested and had received the appropriate treatment. In general, malaria case management is more problematic at the hospital level, while issues of stock management tend to occur at the health center level. The data collectors found that about a quarter of the patient registers were not filled out completely. And while 100% of facilities in the PMI zone had received feedback on their malaria reports in the previous six months—usually at district-level meetings, many facilities had reported data in the last month that did not necessarily match what was in the source documents (especially in the patient registers).

Since Stop Palu was also noticing problems with data reliability at the facility level, a common strategy was developed by PNLP, SIAPS, and Stop Palu to conduct quality control checks through targeted supervisions that will be initiated in early October. These supervisions will compare in detail the reports transmitted to the central level against the patient registers, stock cards, and other source documents.

During the quarter, SIAPS has supported PNLP's monitoring and evaluation team by developing new models in Excel that aggregate and graph the data from the monthly reports. The goal is to facilitate analysis, discussion, and decision making that is evidence-based and also to begin disseminating the data, once it is verified, in the form of a regular PNLP newsletter. In addition, SIAPS and PNLP have made preparations and developed content for the next series of malaria review meetings, which were delayed due to Ebola concerns but are tentatively planned for October.

Partner contributions

On reporting activities, SIAPS is coordinating with the Stop Palu project, which also has a mandate to support data collection. Stop Palu's focus is more on malaria case management data and the health facility level (while SIAPS focuses principally on pharmaceutical management data and the national/regional/district level).

Constraints to progress

Because of the Ebola outbreak, one EUV survey and two regional malaria review meetings have been postponed to early project year 4.

Objective 4: Pharmaceutical services improved to achieve desired health outcomes

Quarterly Progress

The Ebola epidemic has fundamentally altered the landscape of the national health system. Health facilities are becoming less utilized because the population does not trust the care providers and are afraid of catching Ebola. Health workers, aware of the many colleagues who got infected and died of Ebola, are now refusing to treat patients who show fever symptoms. PNLP and PMI are in the process of finalizing a new strategy for the fight against malaria in the context of the Ebola epidemic. Thus, it will be very important in the coming months to support

PNLP in revitalizing good practices for malaria case management and to continue the distribution of medicines to health facilities to rebuild the trust of the population.

SIAPS has become involved in the national Ebola Logistics Commission as an extension of its work with the PCG. This Logistics Commission is in charge of storing, managing, estimating needs for, and distributing all the supplies and equipment provided by donors for treat Ebola patients. It meets daily at the PCG to provide activity and budget updates (all technical partners can attend the meetings). As of late September, the Ebola Logistics Commission was planning the urgent distribution of gloves and protective kits/gear for health workers, with a priority given to those working in the Ebola-designated triage centers.

During the quarter, DELIVER was responsible for malaria product distributions. DELIVER is one of the partners actively involved in the new PNLP working group for supply chain management.

Partner contributions

The Ebola Logistics commission, managed through the PCG, involves not only SIAPS but pharmacists and physicians from the government and technical partners involved in the fight against Ebola.

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

During this quarter, SIAPS provided support to MoH and partners to improve the availability of pharmaceutical management information needed for evidence-based decisions. The following activities were conducted:

- Quarterly review meetings on pharmaceutical management of malaria commodities in Conakry, Boke, and Labe
- Preparation of EUVS to be conducted nationwide during next quarter
- Development of PNLP semester supervision plan

Additionally, SIAPS participated in a feedback workshop on the assessment of Guinea Health Management Information System (HMIS) that was conducted with USAID financial support.

Partner contributions

CRS actively participated in review meetings on pharmaceutical management of malaria commodities that were conducted nationwide for the first time, thus providing data on stock status and treated patients in both Global Fund and PMI-supported health districts.

Objective 4: Pharmaceutical services improved to achieve desired health outcomes

During this quarter, SIAPS worked with CRS for an integrated effort to improve availability of

health commodities through joint activities below:

- Distribution of malaria commodities to PMI-supported health districts
- Post-distribution supervision visits to Labe and Boke
- Quantification of malaria commodities for Global Fund-supported health districts
- Assessment of national medicines supply chain

Partner contributions

CRS actively participated in distribution of malaria commodities and subsequent supervision visits on pharmaceutical management that were conducted nationwide for the first time. This provided both Global Fund and PMI-supported health districts with an uninterrupted supply of malaria commodities from an integrated inventory management of the entire stock available within the country.

Lesotho

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

Overall Quarter Progress

This quarter, SIAPS provided technical assistance to write the terms of reference and engage a consultant for the establishment of the Supply Chain Coordinating Unit (SCCU) within the MoH. The supply chain unit is required in the Global Fund's new funding model and is in the newly developed MoH 2013/2014–2016/2017 supply chain management strategic plan. SIAPS has been working with MoH to introduce quantification tools for various programs such as ARVs and TB. The National TB Program (NTP) adopted QuanTB for use in quantification of TB medicines. SIAPS has been working with MoH to revise the Standard Treatment Guidelines and Essential Medicines List (STGs/EML): the final draft was completed this quarter. From the beginning of the year, SIAPS have been working with the MoH to recruit five more District Logistics Officers (DLOs) for Leribe, Mokhotlong, Qacha's Nek, Quthing, and Thaba Tseka—this recruitment was finalized this quarter.

SIAPS has installed RxSolution in all 17 government and Christian Health Association of Lesotho (CHAL) hospitals in Lesotho. Tebellong Hospital was the only hospital without RxSolution but it was finally installed this quarter. SIAPS developed mHealth that will be used at health centers to collect ARV consumption data as they do not have RxSolution installed there. In this quarter, working with the MoH and the District Health Management Teams (DHMT), SIAPS started piloting mHealth in the 4 of the 18 selected health centers in Maseru district. mHealth will later be rolled out to the rest of the country once the MoH approves it after the piloting phase.

SIAPS provided training on the newly implemented electronic laboratory information system (LIS) as well as tools that are used to compile the monthly laboratory logistics management information system (LMIS) report. From the beginning of the year, SIAPS worked with MoH and other development partners to pilot Nutrition Assessment Counselling and Support (NACS) LMIS tools in three districts (Thaba-Tseka, Botha-Bothe, and Mohale's Hoek). In the first two quarters, the reporting rates from health facilities were extremely poor. Only two out of 42 health facilities reported using NACS LMIS tools. The reporting rates have now reached 95% in this quarter.

SIAPS continued to support improving the availability of ARVs, HIV rapid test kits, and other HIV-related commodities through the production of the monthly stock status report and conducting supply planning meetings with the MoH, National Drug Services Organisation (NDSO), and other stakeholders. The technical support provided by the SIAPS DLO's at the DHMTs helped improve the availability, reporting rates, and stocking of ARVS and other ART-related commodities

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

SIAPS provided technical assistance to the MoH to write the terms of reference and engage a consultant for the establishment of the SCCU within the MoH. SIAPS provided technical assistance to the National TB Program (NTP) to conduct quantification of TB medicines using QuanTB.

SIAPS finalized the recruitment of five District Logistics Officers (DLOs) for the five districts (Leribe, Mokhotlong, Qacha's Nek, Quthing and Thaba Tseka) that are not supported by SIAPS. These DLO positions, funded by the Global Fund, are for the MoH and will be supervised by SIAPS.

Following the inception of the Supply Chain Management Leadership Development Program (SCMLDP) in the last quarter, SIAPS has been providing coaching and mentorship at facilities' cluster meetings in Mafeteng and Maseru. The SCMLDP is working to improve the availability of all health commodities in health facilities in Lesotho. There are four facility clusters (whereby three or more facilities in a district are grouped together) in Mafeteng and 13 in Maseru district. SIAPS is working with the DHMTs in these two districts to facilitate implementing the action plans that were developed in the initial SCMLDP training. These cluster meetings have encouraged sharing information for decision making for pharmaceutical management. Each cluster works jointly to achieve the set pharmaceutical supply chain and logistics activities and indicators in the action plans that were developed during the initial SCMLDP training.

SIAPS handed over the finalized draft of the STGs/EML to MoH for stakeholder validation and printing. Thereafter, the STGs/EML will be distributed to all the health facilities in the country.

Constraints to progress

The delay in holding the validation meeting of the finalized STGs/EML was due to conflicting priorities of the MoH Pharmaceutical Department. SIAPS is working with the Pharmaceutical Department to have this important meeting early in the next quarter.

Programmatic implementation of some activities was negatively affected in the last month of the quarter due to the volatile security situation in Lesotho following an apparent coup attempt on August 30, 2014.

Objective 2: Information used for decision making increased across all levels of the Lesotho health system

In this quarter, SIAPS installed RxSolution at Tebellong Hospital. This completes the installation of RxSolution in all 17 government and Christian Health Association of Lesotho (CHAL) hospitals in Lesotho.

Further, SIAPS provided supportive supervision for the implementation of RxSolution to 13 of the 17 hospitals. Currently, RxSolution is still not used at four hospitals, despite being installed

in all the hospitals. The MoH is piloting Electronic Medical Records at Motebang, St Joseph's, and Mafeteng hospitals. The Berea staff shortage has not yet been resolved. SIAPS is advocating to the Ministry of Health to have these issues resolved. Despite the pilot of EMR at Scott Hospital, the hospital continues to use RxSolution because EMR is not meeting the inventory and dispensing requirements of the pharmacy. EMR is, however, implemented in the clinical operations of the Outpatient Department at Scott Hospital.

SIAPS began the pilot of mHealth in Maseru district where 4 of the 18 selected health centers have started using the application to dispense ARVs to patients. SIAPS will continue to pilot and provide support to all the pilot sites while also documenting the developments to measure the impact of the pilot.

SIAPS delivered training to 23 laboratory technologists on the newly implemented electronic Laboratory Information System (LIS) reports for clinical data and tools for compiling the monthly laboratory commodities Logistics Management Information System (LMIS) report. SIAPS also provided supportive supervision and mentoring of 33 health personnel, covering (1) the use of LIS job aids for stock receiving, stock returning, stock taking, and stock usage; (2) producing LIS reports; (3) completing LMIS reports; (4) LIS troubleshooting; and (5) setting maximum and minimum stock levels. Of the intended 25 laboratory persons, 22 (92%) were trained in laboratory logistics management. Both training and mentoring have improved the reporting rate from 95% last quarter to 100% this quarter.

The SIAPS Laboratory Logistics Advisor also provided continuous technical assistance to the laboratory logistics officer at the MoH. This included analyzing monthly LMIS reports and providing feedback to the facilities. This technical assistance has led to improved reporting rates by the facilities and reduced stock-outs of HIV rapid test kits at health facilities from 17% in the third quarter to 6% in this quarter.

SIAPS also provided technical assistance to MoH laboratory directorate to develop specifications for clinical chemistry instruments. This activity was done to facilitate the procurement of the required equipment and reagents and avert the anticipated stock- out of reagents due to delays in acquiring new vendor contracts.

Following the piloting of the Nutrition Assessment Counselling and Support (NACS) LMIS tools in the three districts (Thaba-Tseka, Botha–Bothe, and Mohale's' Hoek), SIAPS conducted NACS LMIS implementation supportive supervision visits to the districts' health facilities. As a result the NACS reporting rates improved from 4% in the previous quarter to 95% in this quarter.

Partner contributions

SIAPS collaborated with the Elizabeth Glazier Pediatric AIDS Foundation to follow up on health facilities in Thaba-Tseka district that had challenges with NACS LMIS reporting

Constraints to progress

The MoH continues to roll out implementation of EMR, but it has not formally or otherwise indicated whether RxSolution will co-exist with EMR. Currently EMR has no comprehensive module that meets data requirements for pharmacy management. Options remain open to interface the two applications for optimum PMIS solutions. Therefore SIAPS will continue to support RxSolution so that information for supply chain decisions continues to be available.

Programmatic implementation of some activities was negatively affected in the last month of the quarter due to the volatile security situation in Lesotho following an apparent coup attempt on August 30, 2014.

Objective 3: Pharmaceutical services improved to achieve desired health outcomes

In this quarter, SIAPS continued to provide support to improve the availability of ARVs and HIV rapid test kits through having monthly stock status meetings with the MoH and NDSO. Stock status reports are compiled on a monthly basis and shared with the relevant stakeholders. These monthly stock status reports include ARVs, opportunistic infections medicines, tuberculosis medicines, family planning commodities, isoniazid preventive treatment, nutrition commodities, HIV rapid test kits, and other laboratories commodities.

SIAPS conducted supportive supervision and mentoring visits to all the 104 facilities in the SIAPS-supported districts (Berea, Botha-Bothe, Mafeteng, Maseru, and Mohale's Hoek). Additionally, SIAPS provided technical assistance to Maseru and Mafeteng health facilities to form clusters for peer to peer mentoring; 179 health care workers (127 females and 52 males) were mentored in inventory management. The overall SIAPS support to these districts in this quarter led to—

- 92% availability of tracer medicines (target is 90%)
- 98% of health facilities that keep complete patient information as per national standards (target is 90%)
- 90% of SIAPS-supported sites where ARVs are stocked according to plan, that is, within the two months minimum and three months maximum stock levels
- There were no stock-outs of ARVs, opportunistic infections medicines, TB medicines, and contraceptives of more than 28 days in the past 6 months in any of the 104 facilities in the SIAPS-supported districts. As a result, there were no patients that were turned back without ARVs at the facility level.

Constraints to progress

Programmatic implementation of some activities was negatively affected in the last month of the quarter due to the volatile security situation in Lesotho following an apparent coup attempt on August 30, 2014.

Mali

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

Overall Quarter Progress

During this quarter, SIAPS Mali continued to provide support to the Ministry of Health (MoH) and its stakeholders to strengthen pharmaceutical governance, build pharmaceutical management capacity in individuals and institutions, make logistics data available for decision making, and improve pharmaceutical services.

To improve pharmaceutical governance, SIAPS supported the DPM, which coordinates and monitors issues related to health commodities, in organizing two meetings of the National Technical Committee on August 25, 2014 and September 3, 2014. These meetings focused on the HIV commodities quantification process and updating the FP supply plan. Aside from MoH representatives, USAID implementing partners and UN agencies, nine civil society organizations actively participated in these meetings to enhance data-based decision-making on HIV/AIDS and FP commodities.

Support was also given to PNLP, PPM, and DPM to produce and disseminate SOPs and LMIS tools to be used at health facility level, elaborate on a distribution plan for malaria commodities, and develop a strategic plan for the central medical store.

Additionally, progress was made on building individual and organizational capacity for medicines supply chain management through training workshops that were held in five regions and covered seventeen health districts. These trainings, conducted in June, July and August 2014, focused on warehouse management, storage, tools such as stocks cards, and logistics reporting tools, including requisition forms and calculating commodities needs as included in the new SOPs. SIAPS also supported the August 4-6 training of central and regional supervisors on the new supportive supervision guidelines and tools developed during the second quarter. Those trainings increased the total number of trained national staff from 294 to 792. However, the percentage of trainees who successfully completed the post-training action plan to improve pharmaceutical management in their respective health facilities didn't change during this quarter, remaining at 25%.

To make data available for decision-making at central level, SIAPS assisted the DPM in conducting a stakeholder consultation in Bamako on September 2014, with a view towards developing a dashboard for malaria, family planning and maternal and child health (MCH) commodities. In the meantime, data on the stock status of malaria medicines were made available for decision-making through a PPMRm report that was submitted on time to USAID in Washington, as well as through regional quarterly review meetings organized by the SIAPS regional technical advisor. The PPMRm recommended that PSI quickly transfer all Global Fund-supported malaria commodities to the Central Medical Store for distribution to prevent health facilities from experiencing stock-outs.

With a view toward improving pharmaceutical services to achieve desired health outcomes, SIAPS supported the National Malaria Control Program (NMCP) in conducting a feasibility survey that started in September 2014. This aims to provide comprehensive information that will help successfully introduce a private-sector delivery program that improves access to effective malaria commodities in Mali according to the national policies.

Objective 1 – Strengthening pharmaceutical sector governance

During this quarter SIAPS/Mali provided assistance to the DPM to organize two meetings of the National Technical Committee for the Coordination and Monitoring of Health Commodities (malaria, MCH, HIV, TB, and FP), through HIV and FP technical working groups (TWGs). The HIV TWG discussion took place on September 30 in Bamako and focused on the HIV commodities quantification process. The MoH asked for SIAPS technical assistance to conduct the HIV quantification activity.

The purpose of the FP TWG meeting that took place on August 25 was to update the FP commodities supply plan. After the meeting, the MoH sent requisition letters to all partners (UNFPA, USAID, World Bank and PPM) involved in the supply plan so that they could procure commodities for FP program for 2014 and 2015. Nine civil society organizations actively participated to those meetings that contributed to better consensus and commitments around the national FP supply plan.

Specific technical assistance was provided to PPM to continue developing its five-year strategic plan. These activities are intended to improve supply-chain coordination and transparency, and to keep key pharmaceutical system actors more accountable. The strategic plan will guide PPM on the goals to be achieved, direction, resources required, timelines, and how to monitor the implementation of PPM activities. The plan aims to create a stronger PPM that meets minimum international standards of procurement and distribution agencies for public health supply systems.

Based on the MoH decision to make rapid diagnostic tests (RDTs) free for all, SIAPS supported the NMCP on July and September 2014 to develop distribution plans of malaria commodities at the regional and district levels. With the aim of improving medicines policies, legislation, regulations, norms, and standards, SIAPS supported production of 1756 copies of LMIS SOPs, 88,100 stock cards and 872 logistics data reporting tools (CRGS) to be disseminated in the health facilities. These documents were disseminated during LMIS training at health facility level in Bamako and five regions (Segou, Kayes, Koulikoro Mopti and Sikasso). The production and provision of pharmaceutical management tools to health facilities will enable managers to better manage and report on commodities stock status and other logistics data for evidence-based decision-making.

Constraints to progress

Collaboration between partners is a major challenge for further activities and strengthening the sector. Some partners, like UNICEF and World Vision, were not able to provide information relating to their orders to be included in the malaria commodities supply plan.

Partner contributions

DPM organized HIV and FP TWGs meetings.

PPM, DNS/PNLT, PNLP, CSLS/MSHP, SE-HCNLS participated in HIV and FP TWGs meetings. In addition, PPM and PNLP participated to the development of distribution plans for malaria commodities.

Objective 2: increasing and enhancing capacity for pharmaceutical supply management and services

With the aim of building pharmaceutical management capacity at both the individual and institutional level, SIAPS/Mali supported the Regional Directorates of Health of the Kayes, Koulikoro, Sikasso, Segou, Mopti and Bamako districts in conducting the training of health facilities staff and depot managers on the new LMIS SOPs adopted in the country. As of September 1, 648 staff members were trained in 17 health districts in these regions. Those trainings focused on warehouse management, storage, tools such as stocks cards and logistic reporting tools including requisition form and how to calculate commodities needs as per new LMIS SOPs.

During this quarter, support was given to DPM to train 31 national and regional senior staff on the new supportive supervision guidelines and tools developed in February 2014. The output of this workshop was the development of a supportive supervision implementation plan by each region.

Constraints to progress

Health center managers had only limited availability for participating in trainings leading to limited adherence to the new LMIS SOPs. Some health facilities had difficulties implementing post-training plans and the supervision plans for pharmaceutical management are not fully effective at the facility level.

Objective 3: Addressing information shortages to ease decision-making challenges in the pharmaceutical sector

To ensure regular availability of strategic information at the central level for evidence-based decision-making on the medicines supply chain, the MoH requested that SIAPS support the development of a dashboard that will enable the Secretariat General and DPM to consult relevant reports on stock status of malaria, family planning, and MCH commodities at all levels of the health system.

During this quarter, SIAPS initiated the development of a dashboard by hiring a consultant and reviewing existing reporting tools and processes for malaria, MCH, and family planning commodities within the Mali health system. For this purpose, the main warehouse for the Central Medical Store and selected sites were visited to understand the commodities distribution system

and related documentation flow. The consultant and SIAPS team subsequently consulted with the MoH, USAID and other stakeholders to identify their respective expectations, requirements, and feedback after a demonstration of a dashboard draft for Malaria, MCH, and FP commodities. Next steps will include updating the dashboard (October/November 2014), conducting a user acceptance test (UAT), developing a national-level rollout plan (January 2015), and rolling out the dashboard at the country and regional levels (February 2015).

As part of pharmaceutical information management efforts, SIAPS submitted a PPMRm to USAID-Washington, in which it recommended that PSI (GF PR) should quickly transfer malaria commodities received in the country to the central medical store to speed up nationwide distribution of ACTs and RDTs and prevent stock-out. This report also recommended that the PNLP develop distribution plans for commodities available at the central level and that DELIVER expedite a planned shipment of 1.5 million doses of CTA to replenish the pipeline.

During this quarter, SIAPS/Mali assisted the PNLP in conducting an End User Verification Survey (EUVS) for malaria and MCH commodities. Data collected during this exercise will be analyzed and results will be disseminated in Q1 2015.

At the regional level, SIAPS/Mali supported the DRS in organizing quarterly review meetings in July and September 2014. Health district managers attended these meetings, where logistics data for each district were shared, analyzed and validated. SIAPS also supported regional pharmacists in aggregating district data to be sent to the central level.

Partner contributions

PNLP, PPM, PSI, DPM, and USAID participated in the consultative meetings for pharmaceutical dashboard development.

PPM, PNLP, PSI and PMI participated in data collection for PPMRm report. DNS, DPM, PPM, DRS Kayes, Koulikoro, Sikasso, Segou, and Mopti participated in regional quarterly review meetings.

Objective 4 - Pharmaceutical services improved to achieve desired health outcomes

As part of its strategy to combat malaria, the NMCP has requested that SIAPS assist with the implementation of a pilot to introduce ACTs and malaria RDTs in private pharmacies in Bamako District. As per the revised five-year NMCP strategic plan, the final goals are for 100% of malaria cases to be confirmed using microscopy or RDTs at all levels of the health system, and to achieve correct case management in 100% of confirmed malaria cases.

Prior to conducting the pilot, SIAPS proposed conducting quantitative and qualitative studies to explore the feasibility of introducing ACTs and RDTs for malaria case management in private-sector pharmacies in Mali and to determine what factors contribute to or impede the effective and sustained introduction of these medicines. During this quarter, SIAPS finalized the protocol of the study and started data collection. Several meetings were held with

USAID, the MoH, the DPM, the NMCP, the National Pharmacy Council, and Bamako Pharmacy Council to discuss the protocol and finalize it. Focal points and data collectors were selected with the DPM and the NMCP to conduct the study in collaboration with two local consultants who were hired. With the consultants, the MoH focal points and SIAPS HQ-based technical assistance, the questionnaires were finalized, the sampling was done, and the study protocol for ethical approval was finalized and submitted.

Data collectors (pharmacy interns) and three supervisors (from DPM and PLNP) participated in a two-day training and team orientation. Training included field survey and tools testing and validation. Later the team shared experiences and feedback on the field experience with revision of the tools. Then details of data collection planning were discussed. The Pharmacy Council informed all pharmacy owners of the study, providing an official letter of introduction. Data collection started at the end of September 2014.The next steps will be data analysis and report writing, and stakeholder study results dissemination workshop and recommendations for potential solutions.

Mozambique

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

Overall Quarter Progress

SIAPS provided technical support to the Pharmacy Department (PD) with the revision of the National Essential Medicines List and the introduction and use of PharmaDex in registration of medicines. Support was also provided to the Pharmacovigilance Unit to strengthen the reporting of adverse drug reactions (ADR).

Support was also provided to the Hospital Pharmacy Department to establish and improve the functions of Hospital Drug and Therapeutic Committees (DTCs) at the central and provincial levels.

Objective 1: Governance in the pharmaceutical sector strengthened

During this quarter, SIAPS worked with the PD focal person responsible for registration of essential medical devices to finalize the registration guidelines and related standard operating procedures. SIAPS continued working with PD to review the NEML.

Meetings with 21 clinical areas and programs were held and each meeting had the following procedure:

- Present the process to review the NEML, and clarification of the work methodology
- Request experts' guidance for the selection of drugs of interest of each clinical area
- Delivery of the medicines selecting tool to the experts—the tool is a table that contains medicines from WHO EML 2013 Edition, Mozambique NEML 2010, and medicines authorized to be commercialized in Mozambique
- Delivery of the forms for declaration of exemption of interest to be filled and delivered to the secretariat on the date of the collection of the list.

The preliminary list of indicators and corresponding performance indicator reference sheets were developed for the PD with SIAPS support to strengthen monitoring and evaluation (M&E) systems.

Partner contributions

Pharmacy department members of the secretariat of the NEML have actively worked on the review of the NEML.

Constraints to progress

- Delays were caused by doctors not submitting their draft list of essential medicines to the secretariat.

- PD focal person for registration of essential medical devices was not available
- The M&E System continues with minimal progress as the position of focal person is still vacant

Objective 2: Utilization of strategic information for decision making increased

During this quarter, the process to improve Pharmadex use was accelerated with an international short term technical assistance of two consultants, from July 28 to August 1.

With this STTA, the Registration Sector Staff of the PD was trained with the necessary skills and knowledge to effectively use and sustain Pharmadex. Technical and specific work to adapt this tool to Mozambique reality and need was carried out during this technical assistance, inclduing: adapting the tool to agreed-upon data elements, procuring the required hardware and/or software, identifying in-country IT support and maintenance, installing the program(s), finalizing the software, training users, and preparing for launch of the system.

Partner contributions

The Registration Sector of the Pharmacy Department worked on a draft translation of Pharmadex and delivered it to Pharmadex IT team.

Constraints to progress

The STTA was postponed from August to September due to delays on the technical side of the work on Pharmadex. A final translation of Pharmadex to Portuguese is still not completed.

Objective 3: Financing strategies and mechanisms strengthened to improve access to medicines

Constraints to progress

No decision from Pharmacy Department to start this activity

Objective 4: Pharmaceutical services to achieve desired health outcomes improved

During this period, SIAPS Mozambique assisted the Department of Hospital Pharmacy (DFH), to conduct the second National DTC Workshop. Forty-nine health practitioners attended the workshop to review the role and functions of the DTCs. The support also included brief visits to two health facilities to address the medicine use problems and the interventions needed at the new DTCs at Maputo City and Province. SIAPS started to digitalize and edit the 24 standard treatment guidelines of internal medicine delivered in hard copy by the Department of Hospital Pharmacy and the Department of Clinical Programs of the MOH. SIAPS supported training in passive and active surveillance.

Partner contributions

The Department of Hospital Pharmacy got the necessary approvals for the realization of the 2014 second national DTC workshop. Pharmacovilance Sector of the PD has actively participated on the passive surveillance of ADRs training and on the active search of ADRs.

Constraints to progress

- Delays in obtaining approval from Department of Hospital Pharmacy for the work with the DTCs in Maputo City impacted the time STTA consultants had to spend at the DTCs
- The absence of a concept note or terms of reference for developing the STGs and the absence of a clear forecast timeline for the activities has led to misunderstandings between SIAPS and DFH on the steps of the STG development
- The lack of staff and overload of tasks in the pharmacovigilance sector of the PD hinders completing activities
- Low availability of ADRs Notification Form (yellow form)

Namibia

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

Overall Quarter Progress

SIAPS supported the Namibia Medicine Regulatory Council (NMRC), an agency of the Ministry of Health and Social Services (MoHSS), during the intensified evaluation of applications for registering HIV/AIDS and other essential medicines. Ten technical assessors, including three NMRC staff, four MoHSS pharmacists, and three personnel from the private sector, participated in the intensified session, representing 23.8% of the personnel trained with SIAPS technical support in Q3. A total of 127 dossiers were reviewed during the session, representing 17% of the three-year dossier backlog. Of the 127 medicine dossiers that NMRC reviewed, 65% of the applications lacked critical information for registration and thus were not considered for technical evaluation. Tenofovir- and efavirez-based products, which are needed for first-line treatment of HIV per the current Namibia antiretroviral therapy (ART) guidelines, were included in the technical evaluation.

SIAPS supported the National Health Training Centre (NHTC), which trains pharmacy assistants (PAs) and the University of Namibia -School of Pharmacy (UNAM-SoP), which trains pharmacists. SIAPS supported NHTC to develop a quality management system (QMS) and enhance the teaching, assessment, and moderation skills of tutors so that NHTC may be accredited by the Namibia Qualifications Authority (NQA). SIAPS supported UNAM-SoP to finalize the rational medicines use (RMU) and pharmacoeconomics modules of the B.Pharm pre-service curriculum, bringing the number of modules developed to four against the FY14 target of three.

UNAM-SoP started implementing these new modules along with the previously developed modules on pharmacovigilance and pharmaceutical supply management (PSM). As of September 2014, 173 students (109 pharmacist and 64 PA) were attending pre-service training at UNAM-SoP and NHTC. Cumulatively from 2012, 74 PAs have graduated from pre-service training at NHTC against a target of 75, with SIAPS support. UNAM will graduate its first 14 pharmacists in 2015. Also, UNAM in collaboration with SIAPS, facilitated a continuing professional development (CPD) activity for 25 healthcare workers (HCWs) on antimicrobial resistance (AMR) and HIV drug resistance (HIV DR), bringing the number of technical assistance (TA) assignments completed by local partners to four against the FY14 target of three.

SIAPS provided TA to the National Medicines Policy Coordination (NMPC) to disseminate results of the 2014 national pharmaceutical support supervisory visits (SSVs), standard treatment guidelines (STGs) post-implementation assessment, and pharmaceutical management information system (PMIS) annual report to 28 pharmacists from 13 of the 14 regions of Namibia during the annual pharmacists' forum. The pharmacists discussed interventions to improve pharmaceutical service delivery in the public sector. Key actions included strengthening of the Therapeutics Committees (TCs) to enhance their functionality in providing oversight and

accountability for pharmaceutical services, promoting RMU, and enforcing compliance to STGs to enhance patient safety.

SIAPS supported MoHSS to ensure countrywide availability of the electronic dispensing tool (EDT) for improved ART data capture. SIAPS conducted support visits to 18 primary healthcare (PHC) and 2 main ART sites serving about 15% of Namibia's 110,000 ART patients. During the visits, SIAPS trained 23 HCWs on the use of the EDT mobile to capture antiretroviral (ARV) and patient data. This initiative supports data quality as Namibia decentralizes ART services. The support contributed to enabling 98% of 50 ART main sites to continue using the EDT to document and report logistic and patient data per Q4 indicator report.

Following the SIAPS-supported pharmacovigilance training of 105 TB field promoters and supervisors in Q3, the Therapeutics Information and Pharmacovigilance Center (TIPC) received 343 adverse drug reaction reports from 4 regions in Q4 compared to almost none in previous quarters. The submission of reports shows enhanced capacity of the trainees for community pharmacovigilance aimed at promoting patient safety among the 28% of Namibia's population that lives in the 4 regions.

Objective 1: Pharmaceutical regulatory system strengthened

SIAPS supported NMRC to use and further improve the medicines registration tool Pharmadex. These efforts included developing and implementing data migration queries for importing data from the old into the new web-based system; and assigning registration numbers to 507 newly registered medicines, thereby adding to the over 5400 medicines already registered. The interventions are part of the implementation of Pharmadex to strengthen medicine registration and to support the four NMRC staff trained in June 2014 to implement post-training action plans.

SIAPS provided TA to MoHSS' Division of Clinical Support Services/Medical Equipment Subdivision to update the medical equipment policy and also develop lists of essential medical equipment for each level of health care service delivery in the country. Several consultative meetings with stakeholders at MoHSS, Windhoek Central Hospital, Intermediate Hospital Katutura, and Intermediate Hospital Oshakati were held to obtain input for updating the policy which was last published in 2003 and needed to be revised to align with the latest medical technology. A total of 32 health stakeholders from Intermediate Hospital Oshakati participated in the regional consultative meeting. The report will be ready in Q1 of FY15.

SIAPS provided TA to NMRC to review architectural plans for the new NMRC Quality Surveillance Laboratory (QSL) and developed user requirements that were submitted to the MoHSS-contracted architects for inclusion in the plans. SIAPS also organized a visit to the UNAM-SoP pharmaceutical laboratories to show the architects how a pharmaceuticals laboratory is set up and to guide the design process. This will ensure that the new QSL will meet the requirements and specifications for delivery of quality services for medicines and other medical supplies.

Partner contributions

NMRC provided the medicines dossiers for the hands-on evaluation session that was held in July 2014 and participated in rolling out Pharmadex.

Constraints to progress

- Staffing constraints hinder implementation of activities by NMRC, e.g., post-marketing surveillance (PMS) and participation of trained personnel in the practical dossier review session. SIAPS continued to provide TA to NMRC in sourcing financial support from the Global Fund to support PMS and review strategies for the cost-effective implementation of PMS activities in Namibia. However, this was not successful because of other priorities.
- Software bugs and glitches in Pharmadex as well as human resources (HR) challenges delayed implementation of the system. SIAPS is providing TA to the NMRC to navigate through the hurdles encountered in the implementation of Pharmadex.

Lesson learned: Continued TA to stakeholders and trained staff enhances implementation of post-training actions, as noted from the review of medicines registration applications following training of HCWs on medicines registration and good regulatory practices and implementation of the improved Pharmadex.

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

In collaboration with I-TECH, SIAPS supported NHTC to develop a QMS, competency framework, and scopes of practice for pharmacy technicians and PAs; they also trained NHTC tutors as facilitators, assessors, and moderators. The establishment of a QMS is based on the NQA quality assurance criteria for re-accrediting the NHTC. A total of 92 participants (practitioners from the public and private sectors and tutors) from all 7 training networks of the NHTC) attended the QMS workshop and facilitator, assessor, and moderator trainings. The trainings equipped participants with the skills, knowledge, and attitudes (competencies) to design and deliver quality healthcare education.

SIAPS, in collaboration with the University of Washington, supported UNAM-SoP and the MoHSS Division: Pharmaceutical Services (PhSs) to develop module materials and facilitate an accredited pharmacoeconomics workshop for 34 HCWs, including UNAM-SoP lecturers, practitioners from both the private and public sectors, and members of the Essential Medicine List Committee **(**EMLC). The workshop taught participants how to apply pharmacoeconomics principles in the selection of medicines for HIV, TB, and other public health diseases. The Health Professions Council of Namibia (HPCNa) accredited the workshop.

SIAPS supported the UNAM IT Department to set up an EDT training laboratory. The EDT-equipped laboratory will enable UNAM, NHTC, and MoHSS to provide pre-service and in-service training on the EDT in a sustainable manner. SIAPS is developing a standardized EDT training package based on lessons learned from previous trainings. An orientation to the EDT for 27 second-year NHTC PA students is planned for October 2014 preceding their facility assignments.

SIAPS supported UNAM-SoP to finalize and start implementing the AMR/RMU module with lecturers' and students' guides for pre-service B.Pharm. students. Five lecturers participated in the review and had their skills enhanced for developing modules in other pharmaceutical management topics. A technical report of the process was finalized and lessons shared in an online SIAPS global staff meeting for possible replication in other countries.

SIAPS provided TA to UNAM-SoP on therapeutic drug monitoring (TDM) services by participating in a procurement evaluation of bids for potential STTA providers in relation to TB medicines. The Global Fund is funding UNAM-SoP for this activity. The resource will complement pre-service pharmacy training on topical issues, such as adverse drug reactions (ADRs).

SIAPS developed an abstract entitled "Incorporating Pharmaceutical Supply Management (PSM) Module in the Pre-Service Curriculum of the B.Pharm. Program of the University of Namibia School of Pharmacy" which was accepted for poster presentation during the 2014 People that Deliver (PtD) conference to be held in October 2014. The abstract focused on human capacity development for improving PSM competency and skills through contextualized pre-service education.

As of September 2014, 109 students were attending B.Pharm. pre-service training at UNAM-SoP and 64 PA students at NHTC, totaling 173 students in training for pharmacy practice. Cumulatively from 2012, 74 PAs have graduated pre-service training at NHTC against a target of 75, with SIAPS support. UNAM will graduate its first group of pharmacists in 2015.

SIAPS wrote two case studies on (1) multipronged technical support to pharmaceutical systems to improve ART service delivery in Namibia and (2) support to Namibian institutions to address HR shortages affecting ART service delivery. The studies are for USAID's consideration for publication on their website. Documenting the case studies helped assess progress, while dissemination promotes experience sharing, which should save resources and prevent reinventing the wheel.

Partner contributions

- MoHSS' PhSs disseminated information from the 2014 SSVs, assessment of compliance to Namibia's STGs, and MoHSS PMIS reports
- UNAM-SoP on development of pharmacoeconomics and RMU, and implementation of these as well as the PSM and pharmacovigilance modules that were finalized in Q3
- Global Fund on pharmaceutical inventory management aspects which are a follow-up on recommendations of the SSV; and financial support to the development of TDM services at UNAM-SoP
- I-TECH on support to NHTC for developing a QMS, a QMS manual, and competency framework for PAs
- NQA on accreditation of the NHTC PA training program
- NHTC on development of a QMS for NQA re-accreditation and training of PAs

Constraints to progress

The 2014 annual pharmaceutical SSV report and MoHSS PMIS report for Q4 of 2013/2014 showed slackened performance in some pharmaceutical service indicators despite capacity building interventions. Inadequate HR, high staff-turnover, and limited follow-up for on-the-job support and/or awareness at health facilities made it difficult to implement programs that MoHSS staff had been trained on and impacted pharmaceutical practices such as inventory management.

Lesson learned: Dissemination of M&E information creates opportunities for sharing experiences across regions and generates action for improving services; for example, dissemination of the SSV findings at the national annual pharmacists' forum enabled 28 pharmacists from 14 regions to exchange ideas on how to budget for and implement activities to improve pharmaceutical inventory management and TC functionality.

Objective 3: Pharmaceutical metrics developed and the availability and use of data for making strategic evidence-based decisions improved

SIAPS supported PhSs to finalize reporting templates and aggregated and disseminated the January-March 2014 ART PMIS feedback report with adherence and retention information. National retention rates for both adults and pediatrics were 76.5% in January-March 2014, down from 92.1% in October-December 2013. SIAPS is following up with MoHSS Directorate of Special Programs (DSP) on implementing ART literacy materials and the SMS reminder system.

The total number of adults and children newly enrolled on ART was 14,557 (130%) of the SIAPS FY14 target of 11,140; 49 (98%) of the target 50 ART sites continued implementing electronic or mobile technology systems to document and report logistic and patient data. The ART PMIS data on trends in the uptake of patients and the distribution of regimens used for starting patients on ART indicated adherence by HCWs to the new ART guidelines. SIAPS continues to support MoHSS' measures to increase the number of new patients on ART through use of EDT at ART main and outreach sites for capturing ARV and patient data.

SIAPS supported NMPC to disseminate findings and recommendations of the 2014 annual pharmaceutical SSVs, STG post-implementation assessment, and PMIS annual report to 28 pharmacists in 13 of the 14 regions of Namibia during the national pharmacists' forum. The average score for 100 health facilities assessed was 61%, the same as the average score for 29 hospitals assessed in 2013. The 2014 SSVs included lower-level PHC facilities, some of which are in rural areas, unlike previous SSVs that only covered hospitals. The 28 pharmacists, together with NMPC and SIAPS, discussed interventions to improve pharmaceutical service delivery. Key actions included the strengthening of the TCs to enhance their functionality in providing oversight and accountability for pharmaceutical services, implementing medicine use evaluations (MUEs), ensuring compliance to STGs, and improving inventory management.

SIAPS provided TA to NMPC for finalizing and disseminating the January-March 2014 PMIS feedback report to all 14 regional health management teams. The PMIS report provides feedback on a set of 21 indicators for measuring the delivery of pharmaceutical services in public health

facilities. The data is collected at regional medical stores, referral hospitals, district hospitals, and PHC facilities.

SIAPS supported NMPC to upgrade its server for seamless hosting of the ART national database (NDB), e-TB Manager, and Pharmadex. SIAPS provided TA to pharmacy staff using 3G data connectivity to ensure EDT functionality and ART data availability at the national level for improved ART service delivery; 14 ART sites were supported to resolve challenges related to the EDT/EDT mobile, uninterrupted power supply, and the label printer. Additionally, SIAPS conducted support visits to 2 of Namibia's 14 regions with 18 PHC and 2 main ART sites serving 15,224 (about 15%) of Namibia's 110,000 active patients on ART. During the visits, 23 nurses and PAs were trained on the use of the EDT mobile to capture ARV and patient data.

The support contributed to enabling 98% of 50 ART main sites to continue using the EDT to document and report logistic and patient data.

SIAPS supported the National Tuberculosis and Leprosy Program (NTLP) in the ongoing implementation of the e-TB Manager for management of patients on medication for drug-resistant TB (DR TB). Four 4G devices were installed at 4 sites to provide Internet access to the web-based system, bringing the total number of sites with 4G installations to 11 (of the 14 DR TB sites). To ensure sustainability, the districts were informed that they should plan to provide permanent Internet access by October 2015.

As of August 2014, 13 of the target 14 districts had access to the centralized e-TB Manager system for data entry, management, and monitoring patients on DR TB.

Partner contributions

- NTLP's roll out and implementation of e-TB Manager
- MoHSS' PhSs sub-division NMPC on ART and PMIS reporting
- MoHSS-DSP on support to PHC facilities using EDT mobile for ART data capture

Constraints to progress

Loss of key personnel in senior pharmacist positions, inadequate HR, high staff-turnover, and limited follow-up for on-the-job support and/or awareness at health facilities made it difficult to implement programs on which staff had been trained and impacted pharmaceutical practices, such as PMIS reporting. Delayed report submission by regions consequently delays aggregation of data at the national level, which means that feedback to the regions will be late. SIAPS is providing TA to NMPC for follow-up with regions on timely PMIS reporting. Timeliness of report submission was discussed during the 2014 annual national pharmacists' forum held from September 29 to October 3, 2014.

Data collected through PMIS and SSV showed that HR is a key challenge affecting the quality of pharmaceutical service delivery. SIAPS, in collaboration with the Supply Chain Management System, presented the impact of HR challenges to MoHSS .

SIAPS is working closely with the MoHSS DSP Response Monitoring and Evaluation Unit (RM&E) to conduct a data quality assessment (DQA) that involves comparing EDT and the Electronic Patient Management System (ePMS) patient data as one of the measures to ensure high-quality data for ART program decision making. The results of a DQA that was conducted in Q3-4 will be discussed in October 2014. MoHSS leads this activity through the Treatment Technical Working Group (TWG).

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

SIAPS/Namibia is a member of the Universal Health Coverage Advisory Committee of Namibia (UHCAN). SIAPS participated in the Namibian Association of Medical Aid Funds 8th annual conference in Windhoek from September 22 to 23, 2014 (the theme of the conference was "Drivers of Healthcare Costs: Alternative Perspectives"). Several participants from both the public and private sectors participated in the conference that sought options for healthcare and medicines financing to ensure access, especially since Namibia is challenged by a high and dual burden of HIV/AIDS, TB, and other public health diseases.

SIAPS, together with two representatives from Namibia (Social Security Commission [SSC] and Public Service Employee Medical Aid Scheme [PSEMAS]) participated in a two-day conference on "Universal Health Coverage: Considerations in Designing Medicines Benefits Policies and Programs" in Cape Town, South Africa, from September 28 to 30, 2014.

Partner contributions

- Namibian Association of Medical Aid Funds and the Pharmaceutical Society of Namibia on medicines financing options
- SSC on universal healthcare (UHC) conference
- PSEMAS on UHC conference
- The African Development Bank is funding the Namibian Government for the initial activities of the Universal Health Coverage Committee; total funding is approximately N$6.5 million, of which SSC is funding approximately 5%

Objective 5: Pharmaceutical services delivery strengthened to improve adherence to HIV/TB treatment, enhance achievement of health outcomes, and contain AMR

Early warning indicators (EWIs) of HIV drug resistance (HIV DR): SIAPS supported RM&E and DSP to update EWI fields and queries that were developed in 2013 in the EDT. Data abstracted from the ART national database (NDB) based on these queries fed into the data validation done in Q4 whose results will be discussed by MoHSS DSP and RM&E in October 2014. EWIs analyzed include on-time pill pickup, retention in care and dispensing practices. SIAPS also updated the NDB data abstraction tool. Relatedly, a feedback meeting on HIVDR that was held with DSP discussed preliminary results of the 2014 EWI data abstraction.

Adherence improvement initiatives: SIAPS participated in an HIV Adherence TWG meeting which discussed the implementation of the ART sms reminder system. SIAPS met with DSP on

implementing the mobile EDT in preparation for roll out of Nurse Initiated Management of Antiretroviral Treatment (NIMART), a government initiative for decentralizing ART services. SIAPS updated the ART adherence and retention technical proposal and with Tufts University developed a content document for the EDT SMS messages. The documents will be discussed in the adherence TWG meeting in October 2014. SIAPS, in a meeting with Tufts University, Project Hope and PharmAccess, demonstrated the use of the EDT to develop a defaulter list which can be used for tracing ART defaulters to improve retention.

Pharmacovigilance: SIAPS, in two radio talk shows, provided information on ARV medicines, handling side effects, adherence and community support for HIV services. The activity supported MoHSS efforts to create awareness of services available to people living with HIV/AIDS.

Data capture: SIAPS, in collaboration with TIPC, UNAM-SoP, and the University of Washington, trained 15 HCWs as trainers on pharmacovigilance. SIAPS, in collaboration with TIPC, encouraged 62 doctors and dentists who attended the annual doctor's forum to increase pharmacovigilance activities within their respective health facilities. Following SIAPS and TIPC supported training for 105 TB field-promoters and supervisors in Q3, TIPC received 343 ADR reports from 4 regions in Q4, compared to almost none in previous quarters. The submission of reports shows enhanced capacity of the trainees for community pharmacovigilance aimed at promoting patient safety among the 28% of Namibia's population that lives in the four regions.

RMU: SIAPS developed materials and, in collaboration with PhSs, supported 1 region to train 11 representatives from 3 districts' TCs on their role in RMU and combating AMR. The trainees developed action plans for enhancing TC functionality to increase accountability for pharmaceutical services and to conduct medicine use assessments. SIAPS in collaboration with UNAM-School of Medicine facilitated an accredited CPD activity for 25 representatives from 4 TCs. Participants benefited from presentations and post-activity planning on AMR/RMU, HIV-DR, and EWIs. Participants included medical doctors, pharmacists, PAs, and nurses. The UNAM facilitator was one of the participants of the AMR/RMU multi-stakeholder workshop held in 2013, in which creating awareness was highlighted as needed to generate action to prevent AMR. The CPD brings the number of TA assignments completed by local partners to 4 against the FY14 target of 3. SIAPS held a meeting with two representatives from the Namibians against Antimicrobial Resistance (NAAR) Coalition and discussed activities for combating AMR.

Infection control and medical waste management: SIAPS supported MoHSS-Division Quality Assurance to train 31 nurses as trainers on Central Sterile and Supply Department (CSSD) guidelines and the operation theatre (OT) manual. SIAPS also supported the division in reviewing MoHSS infection prevention and control data collection forms/tools.

Partner contributions

- Tufts University on active surveillance of HIV DR and development of the SMS reminder system content document
- University of Washington on pharmacovigilance activities
- MoHSS (TIPC) on active surveillance and community pharmacovigilance

- UNAM–SoP on conducting the pharmacoeconomics and pharmacovigilance trainings and implementing the RMU and PSM modules for pre-service teaching
- MOHSS/Division of Quality Assurance on infection control and medical waste management activities
- MoHSS-HIV Case Management Unit and DSP on ART adherence and retention initiatives
- Project Hope on community pharmacovigilance and ART adherence and retention initiatives
- PharmAccess on ART adherence and retention initiatives
- NAAR on planning for activities to mitigate AMR in Namibia
- Nawalife Trust on radio talk shows
- MoHSS Kunene Regional Directorate on TC training
- MoHSS Ohangwena Regional Directorate on CPD activity for creating awareness on HIV-DR and AMR
- UNAM-School of Medicine on facilitating one regional CPD on AMR/RMU, EWIs, and HIV-DR

Constraints to progress

Spontaneous ADR reporting remained below target in Q4 report (15 ADRs received from facilities between April and June 2014 against a quarterly target of 75). However, community pharmacovigilance improved with 343 reports received by TIPC following the training of TB field-promoters in Q3. SIAPS supported MoHSS during the TC training, doctors and dentists' forum, and the annual pharmacists' forum to create awareness on pharmacovigilance and encourage reporting for monitoring patient safety.

TCs as structures for monitoring pharmaceutical service delivery, promoting accountability, and RMU have not been functioning maximally. This was partially attributed to HR limitations, lack of training on TC terms of reference for some regions, and management support as discussed by 28 pharmacists who participated in the 2014 annual national pharmacists' forum organized by MoHSS with TA from SIAPS. The pharmacists discussed strategies for enhancing TC functionality to be implemented in the next 12 months.

Philippines

Goal: Improved systems for increased access to quality health technologies and effective services to reduce the burden of TB in the Philippines.

Overall Quarter Progress

To ensure access to effective and sustainable services essential for TB control in the Philippines, SIAPS supports the National TB Control Program (NTP) by strengthening the laboratory network, pharmaceutical management, pharmacovigilance, and information management systems with focus on capacity-building activities in leadership, management, supervision monitoring and evaluation (M&E).

This quarter, SIAPS continued implementing key activities within the National TB Reference Laboratory (NTRL) to strengthen its human resources system, leadership, governance, management, and M&E capacity. SIAPS is providing technical assistance to NTRL on its scale-up plans for GeneXpert and TB microscopy laboratories particularly in identifying and selecting expansion sites including approaches for establishing new GeneXpert laboratories. SIAPS also assisted NTRL Technical Units in enhancing their action plans.

At the central level, SIAPS continues to play an important role in coordinating supply chain management stakeholders. In this regard, SIAPS is assisting NTP in the quantification of the Programmatic Management of Drug-Resistant Tuberculosis (PMDT) drugs, for which NTP has adopted the QuanTB tool. At the request of NTP, SIAPS expanded its quantification support to include directly observed treatment, short-course (DOTS) medicines (Category I and II adult kits, and child kits). SIAPS plans to mentor NTP Drug Supply Management (DSM) staff in forecasting first-line drugs (FLDs) and the use of QuanTB.

SIAPS continues to facilitate regular meetings with the DSM sub-technical working group. One of the group's key outputs for this quarter was ensuring that information across agencies (i.e. NTP, PBSP and NTRL) is shared and utilized for the forecasting and quantification of TB medicines and laboratory supplies.

SIAPS is supporting Region IV-A in organizing a working group intended to supervise supply chain management, particularly in requisition and distribution. This initiative is an off-shoot of the roll-out activities of the Practical Guide for the Management of Pharmaceuticals and Health Related Commodities (PGMP) in the region. In Region VIII, and in collaboration with Innovations and Multisectoral Partnerships to Achieve Control of Tuberculosis (IMPACT), SIAPS trained 28 health staff using the PGMP.

SIAPS continues to support the Quezon City Health Department (QCHD) in the expansion of the Barangay Health Management Council (BHMC). BHMC is a community-driven leadership and management model that aims to strengthen the TB program management that was introduced in Barangay Payatas in 2011. In the previous quarter, two other communities in Quezon City (Old Balara and Pansol) adopted the BHMC approach. The new BHMC action plans have also expanded to health initiatives outside the realm of TB, such as maternal health and nutrition.

During this quarter, SIAPS provided technical assistance to Payatas in refining the action plan to address problems such as lack of diagnostic services and poor private sector participation. As part of the BHMC package in District 3 of Quezon City, nine health facilities adopted the Excel-based TB tracking tool as a recording system for TB medicines. SIAPS helped the facilities to resolve overstocks and stock-outs in the monthly district-wide inventory management meetings.

With the technical support of SIAPS, the Lung Center of the Philippines (LCP) is making progress on its pharmacovigilance (PV) reporting system. This quarter, LCP was able to analyze the reasons behind treatment switches and record serious ADRs requiring regimen changes. The analysis of treatment regimen switches will enable the program to better manage the safety of medicines and forecast the quantity of medicines needed. SIAPS is collaborating with the Food and Drug Administration (FDA) of the Philippines to review the ADR reporting form.

Objective 1: Improving capacity for pharmaceutical and laboratory supply management

SIAPS continues to support the improvement of leadership and management capacity in the NTP laboratory network. A new organizational structure was implemented by NTRL in the previous quarter. After the review and enhancement of NTRL technical unit plans, SIAPS provided technical assistance to NTRL's Program Support and Quality Assurance Management (PSQAM) Unit in their expansion plans for GeneXpert and TB microscopy laboratories.

In this quarter, work on the scale-up of the Barangay Health Management Council (BHMC) grassroots health leadership and management model is underway. SIAPS is assisting the Quezon City Health Department (QCHD) to finalize BHMC plans of Payatas, Pansol and Old Balara barangays for 2014-2015. The new BHMC action plans aim to address low case finding, lack of diagnostic services for smear-positive and -negative cases, poor private-sector participation, and a high default rate.

SIAPS is working with the NTP of the Department of Health (DOH) to quantify PMDT drugs. The NTP is now utilizing QuanTB as an early warning system tool to reduce stock-outs and expiry. QuanTB outputs showed that none of the 4 FLDs and 11 SLDs used for PMDT is stocked out at the national level (central and regional warehouses and PMDT facilities).

The organized Drug Supply Management (DSM) sub-technical working group, comprised of NTP, NTRL, Philippine Business for Social Progress (PBSP) and other partners, continues to regularly meet every other month to address drug supply management issues. Key points discussed in the DSM coordination meeting are:

- Inputs from the commercial availability of anti-TB medicines meeting.
- Revision of the memorandum of agreement between PBSP and facilities on GeneXpert utilization.
- Updates on Material Management Division (MMD) plan for expanding warehouse capacity.
- A list of commodities that regional offices may include in the work and financial plan through DOH sub-allotment.

Following the roll-out training of the PGMP in Region IVA, SIAPS and IMPACT are supporting the DOH Regional Office to organize a supply management working group that aims to further enable coordination between provincial health offices (PHOs), city health offices (CHOs), and rural health units (RHUs), as well as to strengthen overall supply chain management, particularly requisition and distribution. The first regional DSM meeting is scheduled to take place between October and December 2014.

SIAPS has also started the roll-out of the PGMP in other regions of the country. To date, SIAPS has trained 28 RO, PHO and CHO health staff in the Typhoon Haiyan affected provinces. Action plans of Region VIII include rolling out PGMP training to RHUs; implementing a "pull system" that requires health facilities to request medicines; and reinforcing monitoring especially with the surge of donated medicines and supplies for the Haiyan response.

Constraints to progress

SIAPS activities with DOH partners were postponed due to the DOH's mass immunization campaign, which took place through the entire month of September.

Region IV and PHOs needed to prioritize response activities for those affected by Typhoon Rammasun in July 2014. Post-training monitoring activities and the Region IV-A DSM working group meeting have been postponed until Q1 2015.

Mobilizing resources from LGUs to improve infrastructure or storage areas has presented some difficulties. Through the organized DSM working groups (including central, Region IV A and QC District 3), SIAPS continues to advocate to LGUs on mobilizing resources for DSM activities.

Objective 2: Improving capacity for transparent and evidence-based decision-making

Since developing SOPs for information management, SIAPS has been assisting NTRL to develop M&E indicators. Additionally, through regular small-group meetings, SIAPS mentored NTRL in the use of routine laboratory information as a basis for selecting expansion sites for GeneXpert and microscopy laboratories.

SIAPS also assisted in the development of presentation materials to update NTP and partners on the laboratory network status.

Nine health facilities in Quezon City (QC) started using the Excel-based TB tracking tool to record the stock status of TB medicines for this quarter. With QC District 3 supply managers, SIAPS helped organize monthly inventory management meetings. Issues such as overstocks in the three health facilities (Escopa, Pansol and Socorro) and understocks in E. Rodriguez were resolved.

The TB tracking tool was initially designed by SIAPS to improve the recording and reporting of movement of TB medicines. With the inputs of QC District 3 partners, SIAPS expanded the TB tracking tool to also calculate requisition requirements of the health centers.

Constraints to progress

A lack of supply managers in QC District 3 because of other work priorities has presented challenges. SIAPS is presently training other district staff on the use of the TB Tracking Tool in case the supply supervisor is unavailable.

Objective 3: Improving capacity of NTP to deliver pharmaceutical and laboratory services

SIAPS continues to support NTP and the Philippines FDA to implement the pharmacovigilance (PV) system for the 9-month MDR-TB treatment regimen and Bedaquiline. SIAPS is working with partners on the model approach of setting up an active cohort PV surveillance system, starting with the aforementioned studies. These activities are: developing and exploring the possible use of a tablet-based tool for recording and timely reporting of adverse events in PMDT; building technical capacity for active surveillance; and enhancing technical collaboration for PV. In collaboration with WPRO, WHO country office and Geneva, SIAPS consultants attended a two day meeting at DOH to go through the plans to implement a PV system. SIAPS visited two treatment centers and met senior managers at the Philippines FDA to discuss the plans.

Additionally, SIAPS is collaborating with the Philippines FDA to review the ADR reporting forms.

In this quarter, SIAPS also contributed to the strengthening of the pharmacovigilance reporting system in LCP. There were 25 treatment switches noted for Q4 (down from 37 in Q3), of which 16 (64%) were caused by adverse drug reactions (ADRs), down from 18 (48%) in Q3. SIAPS assisted LCP in the analysis of trends in treatment switches. This activity increased the LCP staff's awareness on the importance of ADR detection and management as ADRs are the top reason for treatment switches. SIAPS assisted LCP in completing documents necessary for the ethical clearance of the nine-month MDR-TB study.

Data collection for the national TB supply chain assessment commissioned by USAID was completed during this quarter. For the assessment, SIAPS interviewed 1,189 patients and surveyed nine regions, 24 provincial and regional warehouses, 15 PMDT centers and 208 TB-DOTS facilities. The presentation of study results, initially planned this quarter, was re-scheduled for mid-October 2014.

The draft policy for guidelines in TB management during disasters prepared by NTP, WHO, TASC, IMPACT and SIAPS has been submitted to the DOH Health Policy Development and Planning Bureau (HPDPB) for review. The policy guidelines, targeted to frontline health workers, outline the procedures for TB management and control before, during and after disasters. These guidelines will also be appended to the revised NTP Manual of Procedures.

SIAPS participated in the mid-year NTP National Consultative and Planning Workshop, facilitating discussion of regional NTP accomplishments, issues, and problems with program implementation and laboratory support. Technical input was provided to three regions assigned to SIAPS (Regions 1, 3, and CARAGA).

In the annual Philippine Coalition against Tuberculosis (PhilCAT) convention, SIAPS advocated for the importance of correct and accessible information in overcoming TB stigma and discrimination in the country.

Constraints to progress

For the implementation of PV research, harmonization of partners with the timelines of NTP is an expressed concern. SIAPS will coordinate a meeting with NTP and partners to discuss the activities and timelines for the PV studies. Additionally, SIAPS will also include PV activities on the meeting agenda with NTP and central sub-technical working groups.

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

During this reporting period, technical assistance provided previously by SIAPS in Gauteng (GP) and the Eastern Cape (EC) showed results when the service-level agreements (SLAs) between the pharmaceutical warehouses (depots) and provincial health facilities were signed by the provincial heads of health of the two provinces. The agreements engender greater transparency and accountability in the procurement and distribution of pharmaceuticals by outlining the roles and responsibilities of all parties and establishing provincial policies regarding issues such as items stocked by the depot, demand management, ordering, receipt of stock at the facility level, and communication between role players. This achievement brings to three the number of such SLAs signed with SIAPS support.

SIAPS successfully completed development of the innovative interface between RxSolution and a smartphone-based application being piloted for monitoring and reporting medicine availability in remote clinics. This interface seeks to address one of the biggest challenges in obtaining accurate and timely information on inventory management in these clinics which may not have the requisite infrastructure to use RxSolution. SIAPS also increased the number of sites where RxSolution is installed from 313 to 350 countrywide. The additional sites implemented during the quarter include 21 Gauteng hospitals that were prioritized for implementation by the NDoH.

The project to improve pharmaceutical services in ten clinics in Mangaung district in the Free State (FS) was completed with several notable achievements. SIAPS worked with district pharmacists and provincial personnel to update standard operating procedures (SOPs) for managing medicines and supplies and ensure that these were available at all facilities; ensure availability of reference materials required by legislation; and develop and implement guidelines for supervisory support by district pharmacists.

The report on the assessment of the pharmaceutical management of TB (PMTB) in the Department of Correctional Services (DCS) was finalized and disseminated to representatives of the DCS. The assessment, which was conducted in all six regions of the DCS, has helped identify gaps in pharmaceutical services and has served as a platform for SIAPS to engage the NDoH TB-Cluster and DCS to work together to address the challenges identified.

Objective 1: Pharmaceutical sector governance strengthened

Over the last two years SIAPS has supported the NDoH Directorate: Affordable Medicines with the awarding and management of 26 pharmaceutical and medical consumable tenders. One of the critical challenges is to reduce the time taken to award a tender. The directorate has set a target of 16 and 24 weeks for pharmaceutical and medical consumable tenders, respectively, from the bid specifications meeting to the award date. During this quarter, support was provided in the processing and evaluation of five pharmaceutical tenders, namely tablets (HP09), biologicals

(HP10), large-volume parenterals (HP11), pharmaceutical liquids (HP12), and administration sets (HP15). Support was also provided for quantification and advertising two supplementary tenders. The time taken to award the tablet tender was 22 weeks, with the tender being awarded after the expected start date. The remaining tenders are yet to be published. Although the capacity of NDoH staff in managing the tender process has improved considerably, support is still required in some operational aspects. During this period, the template of the document outlining the special conditions of contract was reviewed and revised.

The tool for contract price adjustment calculations was updated. Draft SOPs for price adjustments and for preparing addenda to contracts were prepared. Feedback is still awaited on a set of SOPs related to tender management which were previously submitted to the NDoH for consideration. These SOPS relate to estimation of tender requirements; compilation of provincial estimates into national tender quantities; compilation of invitations to tender; advertisement of tender; and opening of bids. Implementation of these SOPs will facilitate transition of functions in the event of staffing changes within the NDoH and promote good governance in the tendering process.

Support was provided to the NDoH in the finalization of a strategy for reporting on supplier debt, as well as the implementation of reforms in invoicing by suppliers to facilitate payments. Standards were established for information to be included on invoices by contracted suppliers. Support was also provided in engaging with suppliers to address invoicing queries.

SIAPS continued to support the NDoH with the implementation of the Centralized Chronic Medicines Dispensing and Distribution (CCMDD) Program. As previously reported, SIAPS has supported the development of several key governance documents including a model SLA between the service providers responsible for preparing the prescriptions and the provinces together with an annexure detailing the services provided and key responsibilities of role players. The model SLA was approved by the Legal Unit of the NDoH and provided to all participating provinces. The SLA was subsequently adapted as needed and signed by the service providers and the eight provinces involved. SIAPS continued to work in collaboration with the NDoH and Health Systems Trust (HST) in finalizing indicators to monitor service delivery at various levels prior to implementation.

SIAPS continued to support the NDoH with implementation of the dashboard which provides a set of norms and standards for pharmaceutical service delivery. The NDoH completed the data capturing, analysis, and preparation of the data for the fourth quarter for presentation at the National Health Council Sub-Committee on Pharmaceutical Services. It was the first time that this was done without SIAPS support following the inception of the initiative in October 2013.

SIAPS continued to provide support on the Infrastructure Unit Support Systems (IUSS) Project, a joint initiative of the NDoH, Council for Scientific and Industrial research (CSIR), and the Development Bank of South Africa. In the case of pharmacy infrastructure, the design of pharmacies is often inappropriate and inadequate for storing medicine and providing pharmaceutical services. SIAPS worked with the NDoH and CSIR in developing the pharmacy norms and standards contained in the draft IUSS health facility guide. The document will provide guidance to design, function, and manage the flow of pharmaceutical services within

health facilities. Following a presentation to the Pharmaceutical Services Committee, a revised version of the document was finalized and posted on the CSIR website for comment. Technical assistance was provided to the NDoH in the translation of the National Core Standards into draft regulations to be published in terms of the Health Act 61 of 2003. Assistance was also provided in the review and revision of the measures and checklists, including the list of tracer medicines, to align them with the draft regulations. The revised tools are being field tested by inspectors of the Office of Health Standards Compliance.

Partner contributions

Work with HST on CCMDD program

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

Under Objective 2, SIAPS focuses on supporting the development of capacity of pharmacy personnel for both pre- and in-service training. SIAPS has also made considerable strides toward building leadership and management capacity through the Pharmaceutical Leadership Development Program (PLDP). Since the inception of the program, SIAPS has supported over 130 healthcare personnel to develop and implement quality improvement plans across 177 sites.

In an effort to promote country ownership, provinces are being supported to scale-up and sustain the PLDP and LDP quality improvement plans. This process will help ensure ownership of the program at provincial, district, and facility levels and will further capacitate pharmacists to institutionalize leading and managing practices. This process has been initiated in the Northern Tygerberg sub-structure (NTSS) in the Western Cape (WC) and in KwaZulu-Natal (KZN).

In the NTSS, the teams have identified four quality improvement projects—one sustaining the intervention that has already been implemented at each facility and the other three addressing common challenges across the sub-structure which will help strengthen provision of pharmaceutical services and improve the patient experience at the facility level. Coaching visits were conducted at all facilities in conjunction with staff from the sub-structure office to capacitate them to integrate this activity into their routine supervisory support visits.

In KZN, a meeting was held with 89 pharmacists representing the 11 districts in the province and the provincial Pharmaceutical Services office. At this meeting, the district pharmacy quarterly report (DPQR) was reviewed and areas that need to be addressed were identified. Districts that participated in the PLDP also shared the results of their quality improvement projects. Each of the teams then selected a project that they would either scale-up across all facilities in their districts or a project related to a challenge as identified in the DPQR. A project plan for this intervention was drafted with SIAPS playing a mentoring and supportive role.

In Limpopo (LP), a group of 26 pharmacists from five districts are enrolled in the PLDP. During this quarter, the second workshop and two coaching visits were conducted to support the teams. During the workshop, teams developed their challenge models and draft monitoring and evaluation (M&E) plans. Teams were also requested to summarize sections of the Public Finance

Management Act 1 of 1999 and the treasury regulations in preparation for the third workshop planned for the end of September. During the coaching visits, support was provided to each of the teams in finalizing their M&E plans as well as to determine progress toward implementing priority actions on their challenge models.

In the WC, the third of four workshops for the Klipfontein Mitchells Plain group, comprised of facility managers, pharmacy managers, and clinical managers, was held. The main objective of the workshop was to introduce tools and techniques for aligning, mobilizing, and inspiring teams to address challenges in the workplace. All eight teams provided feedback on the progress of their projects.

SIAPS also continued to support the Nelson Mandela Metropolitan University (NMMU) in developing curricula and training for BPharm, pharmacy technical assistants, and pharmacy technician students. During the quarter, SIAPS delivered lectures and practical sessions in pharmacy law and ethics to final-year pharmacy students. Students (67) also completed a semester test and achieved an average mark of 62%. Data collection for the students' research project for the MSM elective, which focuses on cold chain management, took place in September. The analysis of the results will be completed in the following quarter.

In June 2014, SIAPS worked with the University of the Western Cape (UWC) and Boston University to develop and facilitate a course on rational medicine use (RMU) during the Winter School offered by the School of Public Health. In a similar manner, a course on medicine supply management (MSM) was developed and implemented in collaboration with the Institute of Tropical Medicine. The 19 participants were mostly pharmacists working in the public sector or for non-profit organizations. The course provided participants with several key tools for managing medicines in their own setting. Both courses have been identified to be full-semester modules of the online master of public health program run by UWC. This work is ongoing.

As part of the curriculum for the MPharm/MSc (Med) offered by the Department of Pharmacy, University of Limpopo (Medunsa campus), SIAPS facilitated sessions on pharmaceutical distribution – including new models for medicine distribution – inventory management, pharmaceutical waste management and the Infection Control Assessment Tool.

SIAPS continued to share successes and best practices in capacity building with partners. A poster was presented at the Academy of Pharmaceutical Sciences Conference held in September 2014. The poster outlined support provided by SIAPS to NMMU on the fourth-year pharmacy elective program, including the RxSolution research project and medicines management and pharmacovigilance electives. In August, SIAPS presented its approach to strengthening health systems by using the PLDP at the ANOVA Health Institute Symposium on Health Systems Strengthening.

Objective 3: Use of information for decision making in pharmaceutical services improved

Strengthening structures and systems that ensure the availability of pharmaceutical information for decision making is central to SIAPS' goal. To that effect, SIAPS continues to support the

expansion of RxSolution to cover public health facilities. The system facilitates electronic management of pharmaceutical inventory while enabling users' easy access to trends on consumption and other information. SIAPS also provides technical assistance in the implementation of Infomaker®, an off-the shelf commercial report-building software, in provincial pharmaceutical depots across the country.

RxSolution system enhancements

SIAPS continued to support the implementation of information systems to support the NDoH in the implementation of two key initiatives, namely the direct delivery procurement model and the management of tenders. RxPMPU, a customized version of RxSolution, has been implemented at the NDoH for management of orders and monitoring of supplier performance in the direct delivery model. During the quarter, SIAPS provided ongoing support in updating and maintaining the software with an emphasis on implementation of the Provincial Medicine Procurement Unit (PMPU) key performance indicators for suppliers as well as order-tracking reports. Support was also provided in the addition of items on two new contracts for TB medicine and semi-solid dosage forms to the database. An interface between RxPMPU and MEDSAS, the inventory management system used by the GP depot, was finalized to facilitate supplier payments.

A pharmaceutical contracts catalogue database was developed for NDoH. The database is expected to facilitate easier distribution of contract information, such as items, pack sizes, and prices to depots, facilities, and other stakeholders. A master supplier database was also developed to keep records of all NDoH pre-qualified and approved suppliers.

SIAPS developed the interface between RxSolution and the smartphone-based application currently being piloted for monitoring and reporting medicine availability in remote clinics that do not have the requisite infrastructure to use RxSolution. This model enables data collected at the remote site to be uploaded onto RxSolution at a central location (e.g., regional hospital or district office). Ultimately, the system may be used to manage orders from the clinics. Preliminary observations from the pilot at 3 hospitals and 18 clinics in Amajuba district in KZN are positive. The pilot is expected to be completed in the following quarter.

SIAPS continued to support the biometric system pilot at four clinics in the City of Tshwane (CoT). During the quarter, prescribing and dispensing modules were implemented for use at FF Ribeirro and Lyttleton Clinic. SIAPS trained 30 doctors and nurses from CoT on the use of the module. Although good progress is being made, the unreliable network impacts on the user experience. CoT is investigating various options to address infrastructure challenges. A report template was developed and loaded onto the CoT central database to identify patients who visit more than one clinic, which may have a negative effect on health outcomes.

RxSolution rollout

This quarter, SIAPS increased the number of sites where RxSolution is installed from 313 to 350 countrywide. The initial focus for the expansion is on 21 hospitals in GP where SIAPS is providing ongoing support to ensure effective implementation and use of the system. SIAPS is also working with the LP Provincial Department of Health to install RxSolution in all 39 hospitals in the province. The Provincial Department of Health procured equipment for the

RxSolution installation. Thus far, RxSolution has been installed in 4 hospitals; 23 hospitals have been assessed as ready for installation and 10 are in the early stages of implementation.

Responding to the NDoH need for oversight on inventory management for facilities using RxSolution, SIAPS completed the development of an RxSolution dashboard that remotely pools data from health facilities with Internet connectivity. The dashboard is expected to be implemented once a decision has been made as to where the national server will be housed.

SIAPS visited provinces to develop plans to roll out RxSolution. Subsequent to the meetings, the expanded roll out of RxSolution to KZN, NW, EC, and FS commenced. It is expected that the roll out in Mpumalanga Province (MP) and Northern Cape will commence in October 2014. SIAPS has developed a training schedule for PEPFAR-supported partners. Partners already trained are providing support in FS and LP. During the reporting period, five Peace Corps volunteers and five KZN provincial IT officers who will assist in RxSolution implementation were trained.

Data management and analysis for decision making

Over the years, SIAPS has developed a set of standard reports to facilitate effective decision making using data generated through the routine use of RxSolution. Customized reports are also developed upon request from users. During the quarter, support of the RxSolution reporting module was provided to system users in Queenstown in the EC, Ermelo in MP, and part of the North West (NW) province. New sites in GP were also provided with on-site support and customizations of some of the reports.

SIAPS has been supporting a final year BPharm student from NMMU with a research project involving RxSolution. The aim of the project is to understand chronic medication prescribing patterns among patients attending a public sector health care facility in the EC. SIAPS provided support with the literature review, data extraction, analysis, and preparation of an abstract. A progress report was provided to the EC Department of Health.

Infomaker implementation

During the quarter, technical assistance was provided to MP and the LP Depot where Infomaker report templates were updated to facilitate extraction of data from PDSX. In response to a request from the Pharmacovigilance Centre at the University of Limpopo (Medunsa campus), SIAPS installed InfoMaker at the institution. Following a meeting with personnel from the Cape Medical Depot in the WC, a plan was devised to facilitate standardization of report libraries for all depots through collaboration with the State Information Technology Agency (SITA), which is responsible for supporting implementation of electronic systems in public health facilities.

As part of sharing new enhancements of the RxSolution system, two abstracts entitled "Development and Implementation of an Electronic Inventory Management System for Direct Delivery Procurement at the National Department of Health" and "Patient's Record Management in Tshwane Metro Clinics through Biometrics Registration: An Interface with RxSolution" were submitted and accepted for the 2014 ICT4 Health Conference to be held in Durban in November 2014.

Objective 4: Financing mechanisms strengthened to improve access to medicines

The Central Procurement Unit (CPU) has to submit quarterly reports to the Global Fund as well as updates on its pharmaceutical supply management plan. SIAPS provided technical support to the NDoH Global Fund Cluster to improve the quality of reporting. SIAPS further assisted with monitoring of the expenditure on ARVs procured though the Global Fund and managed by CPU.

SIAPS supported the Global Fund NDoH Unit in reviewing the Q2-2014 CPU reports and reviewing and summarizing the dashboard data inputted by the CPU. SIAPS highlighted gaps in reported data for this quarter for input into the management dashboard. SIAPS worked with the Grant Management Solutions (GMS) consultants, CPU staff, and Principal Recipient in preparation for the quarterly dashboard meeting. SIAPS worked with CPU staff and the GMS procurement consultants to validate data input.

SIAPS assisted the NDoH in performing a national analysis of expenditure per therapeutic class based on provincial procurement data for the financial year 2013-2014. The top three classes were similar to the previous financial year analysis with ARVs first, followed by vaccines and antibiotics. A comparative analysis of the expenditure per therapeutic classes between the financial years 2012-13 and 2013-14 showed a sharp decrease in expenditure on vitamins which may be attributed to measures put in place in KZN as the province was found to be the main user of vitamins in 2012-13.

SIAPS provided technical assistance to Dr. George Mukhari Academic Hospital in GP with ABC and therapeutic class analyses for the financial year 2013-14, which revealed a high expenditure on cefuroxime injection that was removed from the EML in March 2014. The results of these analyses were presented to the hospital pharmacy and therapeutics committee (PTC) and further interventions planned.

SIAPS was invited to the Annual Gauteng Pharmaceutical Services Conference in September 2014 to present on the VEN analysis and its use. SIAPS has been working with the Gauteng Provincial PTC (GPPTC) to develop a VEN analysis, which has been circulated to GPPTC members for comments. Similarly, SIAPS assisted the KZN PTC to perform a VEN analysis on the EML items included in their formulary. The draft VEN was also circulated for comment.

Objective 5: Improved medical products availability

Strengthening MSM practices at national, provincial, and institutional level is critical to building institutional capacity as part of the SIAPS Program. Under objective 5, SIAPS provides support for the quantification of tender estimates at the national level; provides mentorship on the use of RxSolution to optimize inventory management at the facility level; and supports depot functionality where necessary.

During this quarter, SIAPS worked with CHAI and the NDoH to revise the ARV quantification tool for fixed-dose combinations (FDCs) in preparation for the new tender. Since the current ARV tender was awarded in 2013, the cumulative orders placed to date versus the actual tender

forecast for the FDC ARVs (after 18 months of the 2-year contract period) is well within the target range at 98.4%. In the remainder of the contract, the estimated quantity is likely to be exceeded. A review was commenced on the accuracy of TB forecasting: orders for year 1 on HP01, and the TB tender versus forecast quantities.

In MP, SIAPS provided technical assistance to update weekly stock availability usage patterns based on reports generated using Infomaker. Technical assistance was also provided in generating expenditure reports for the Gert Sibande PHC facilities. The expenditure report enables provincial personnel to identify overspending by clinics. Further investigation highlighted the fact that, in most cases, PHC staff was not aware of their allocated annual budgets. Recommendations were made to build capacity on financial management and procurement processes.

In LP, SIAPS provided technical assistance in the review and updating of the hospital stock availability weekly reporting tool to align it with new pharmaceutical and surgical sundries contracts. SIAPS continued to provide technical assistance to the pharmaceutical depot in LP where medicine availability was 81% as of September 12, 2014. The SOPs for PHC and community health centers were finalized during this quarter and are awaiting signature of the head of department (HOD). The province will hold implementation workshops. Hospital SOPs were reviewed and are close to completion.

In-service training was conducted on contract management at Mankweng Hospital and on stock management at various hospitals in the province. District support visits were conducted to provide support to community service pharmacists (CSPs) who are engaged in the Adopt-a-Clinic project in LP. Each district reported on improvements in stock availability for the six supported clinics in different districts. Following previous support from SIAPS on MSM, staff from the LP Department of Health used SIAPS materials to conduct a workshop for 40 participants.

In line with the new focus on enhancing utilization of RxSolution for inventory management, SIAPS provided technical assistance to facilities within GP where the software was installed. NDoH requested that SIAPS provide technical support to Charlotte Maxeke Academic Hospital, following shortages of oncology and other medicines. A preliminary investigation on stock management was conducted, and a report and a draft project plan submitted to the CEO and the NDoH. Staff was trained on stock management and use of RxSolution. The system is now being used to place and receive orders both from the provincial pharmaceutical depot and via the PMPU at NDoH.

A follow-up visit was made to the Mangaung district in the FS to determine improvements achieved as part of the health facility improvement project. Interventions resulted in the following notable changes:

- SOPs for managing medicines and supplies were updated and available at all facilities
- Reference materials (manuals) were available at all facilities
- Staff handling medicines and supplies (pharmacist's assistants and nurses) were trained on MSM

- Guidelines for supervision of health facilities by district pharmacists were updated and available
- A register for district pharmacist inspection visits was implemented and available in all clinics except one
- A tool for monitoring waiting times was implemented and available at all clinics except one, with the waiting time at the majority (70%) of pharmacies/dispensing areas reported to be less than 30 minutes
- Systems for filing orders, receipts, and issues were implemented

The report from the assessment of PMTB in the DCS was finalized in July. The purpose of the assessment was to understand the management of TB and HIV medicines throughout the supply chain, from selection and procurement to distribution, storage, and ultimately, issuing to patients. The assessment was conducted in all six regions of the DCS and covered 36% of the correctional centers in the country. A total of 382 inmates' interviews were conducted to assess knowledge of their treatment and care plan. Assessments at the DCS pharmacies revealed major challenges with staffing resources and capacity, IT systems for stock management, and general compliance with Good Pharmacy Practice guidelines for stock control, storage, and management. Procurement processes were also found to be an area of concern. A dissemination workshop was held in July with representatives from pharmacy, logistics, care and treatment, and information and technology from the DCS head office and the regions to discuss the results and draft quality improvement plans. Groups worked on key challenges relating to supply chain management (medicines selection, procurement, and distribution), clinical care (medicines use), and governance and M&E (overall management system).

SIAPS subsequently held discussions with NDoH–TB cluster, the DCS, and provincial/district TB coordinators on gaps in providing HIV and TB medicines identified in the 2012 assessment conducted at DoH health facilities and in the 2013 assessment conducted in DCS health centers. Opportunities were identified to support the development of indicators related to pharmaceutical services for inclusion in the DCS health strengthening operational plan and the development of guidance documents and SOPs to improve pharmaceutical management, governance, and alignment with NDoH policies.

SIAPS attended two Southern African Development Community (SADC) workshops on pooled procurement as a follow-on to the 2012 workshop where a technical working group (TWG) on pharmaceutical procurement was formed. At the meeting, the TWG was given a mandate to finalize the business case, prepare a draft charter for SADC Pharmaceutical Procurement Services (SPPS), and inform ministries of health and stakeholders.

Partner contributions

- Worked with CHAI on quantification
- MOUs with ANOVA Health Institute and Beyond Zero were finalized; these partners provided technical assistance at the facility level on MSM using SIAPS materials and tools
- SA-SURE has appointed a pharmacist, who will work closely with SIAPS, to support 12 districts on MSM

Objective 6: Improved RMU of medicine and patient safety

A national training of trainers' workshop was facilitated as the first step in the dissemination of the 2013 Hospital-Level Pediatric Essential Medicines List (EML) and Standard Treatment Guidelines (STGs). Two representatives from each province were asked to perform a stakeholder analysis and develop an action plan for presentation at the workshop. The rationale for the revisions in the guidelines, changes in the STGs, the purpose of the EML process, and RMU principles were discussed. SIAPS is assisting the Essential Drugs Program (EDP) in assessing the comprehensive action plans requested from the provinces after the workshop. Implementation has been slow because of delays in including the rationale for changes to the pediatric EML and the slow submission of plans for review. SIAPS is currently supporting the EDP in finalizing academic detailing slides prior to dissemination to the provinces.

In September, an abstract co-authored with EDP entitled "Revision, Dissemination, and Implementation of the South African Standard Treatment Guidelines and Essential Medicines List for Hospital Level Pediatrics, 2013 – Process Flow, Challenges and Opportunities" was accepted and a poster presented at the South African Pediatric Association Conference. SIAPS also provided a summary to the EDP, outlining frequently asked questions about the EDP processes for the NDoH website.

SIAPS is working with the EDP to cost the entire essential medicines review process. The costing can be used for better budget planning. Using the SIAPS systems strengthening approach, the current review and implementation framework was mapped.

SIAPS provided assistance to NDoH in developing circulars to explain selection of medicines from certain therapeutic classes, a concept that has been incorporated in some of the tenders. SIAPS was requested to do costings for the PHC STGs and EML with a comparison between the cost of morphine syrup and tablets compared to oxycodone for pain and a comparison of the cost of treatment of tonic-clonic seizures at PHC level being conducted. Newly published evidence and international guidelines for the treatment of spasticity was done to assist the NDoH to make an informed decision about making baclofen tablets accessible to patients attending public health care facilities. Recommendations were provided to NDoH.

SIAPS continued to support the review of provincial medicines formularies in LP and GP. In LP, SIAPS has provided technical assistance to the provincial formulary task team and updated their formulary to include new contracts. In GP, one of the challenges raised in preparing motivations for submission to the PTC and NEML is the clinician's time and knowledge required for the process. It has been proposed that clinical pharmacy interns at the University of Limpopo (Medunsa campus) be trained in evidenced-based medicine and pharmaco-economics to assist clinicians in preparing motivations. It is envisaged that with this support and on-going facilitation, skills and confidence of clinicians to prepare motivations will be enhanced. A workshop was held in September.

The first version of the standardized pharmaco-economics syllabus is in the process of being uploaded on Moodle, an online teaching tool used by the University of KwaZulu-Natal. Stakeholders including the NDoH and academic staff from the pharmacy schools will be invited

to comment. An abstract entitled "Promotion of Pharmaco-economics Education in South Africa: A Standard Syllabus for In Class and Online Training" was presented as a poster at the International Society of Pharmaco-economics and Outcomes Research (ISPOR) Conference held in GP.

A total of 37 people (28 women and 9 men) were trained on PTC governance and functionality during the quarter. This training was an initial step toward revitalization of one institutional PTC (Kimberley Hospital, Northern Cape) and two district PTCs (Buffalo City District Municipality Sub-district PTC, EC and Harry Gwala District, KZN). For the first time, the role of the PTC in medicine and patient safety was included in the training, resulting in Kimberley Hospital requesting SIAPS assistance to set-up an adverse drug reaction (ADR) reporting system at their institution.

To operationalize the WC Department of Health (WCDOH) Rational Medicine Use Framework, a workshop was held to introduce participants to concepts and tools to implement RMU interventions and identify medicine use problems. Topics covered included indicator studies and ABC, VEN, and DDD analyses. Participants were requested to submit action plans detailing what interventions they will implement to improve RMU at their facilities. These action plans will be submitted to WCDOH in November and will be used to determine how SIAPS and WCDOH Pharmaceutical Services will assist participants in implementing interventions introduced at the workshop.

SIAPS continues to assist the GPPTC to strengthen compliance with STGs. The first GPPTC biennial report was launched during the Annual Gauteng Pharmaceutical Conference held in September 2014. SIAPS worked with the chairperson of the GPPTC to develop slides on RMU and antimicrobial stewardship to be presented to the management of the Dr. George Mukhari Academic Hospital. A therapeutic class analysis and ABC analysis performed highlighted high usage of non-EML antibiotics, raising concerns regarding the appropriateness of the use of antibiotics in the institution. The chairperson of the hospital PTC attended the presentation and undertook to work with the GPPTC to address the issue.

SIAPS continued to provide support to the NPC in implementing the decentralized pharmacovigilance system in MP. The results from MP are currently being utilized as the template and springboard for national roll-out which will take place over the next few years. During the quarter, SIAPS worked with one of the 24 clusters, Themba Hospital, to review ADRs as a means of encouraging regular cluster meetings. The management of cryptococcus meningitis and fluconazole prophylaxis was discussed and led to the development of two new SOPs to address management and prevention of cryptococcal infections. In NW, 13 of the 20 clusters (294 facilities) formed during phase 1 implementation training are actively reporting ADRs. A support visit was made to the Mafikeng Hospital cluster where 12 patient cases were discussed with healthcare providers.

Following a retrospective review of the ADR database, the national DR-TB program approached the NPC to collaborate on the introduction of a decentralized pharmacovigilance program in MDR-TB hospitals. Three DR-TB hospitals were identified as pilot sites for the program, namely King Dinuzulu Hospital in KZN, Sizwe Hospital in GP, and Fort Grey Hospital in EC.

Subsequently, introductory trainings were held in July at these hospitals. Following the training, ADR reports have been submitted by Fort Grey Hospital (15) and King Dinuzulu Hospital (1). Upon follow-up with the clinicians at other sites, time constraints were identified as the main limiting factor.

Findings from a retrospective analysis of the NPC pharmacovigilance database were published in the *Journal of Drug Regulatory Affairs* in an article entitled "A Snap-Shot of First-Line ART Treatment Failure Cases from Mpumalanga Province." The report presents trends from 2,851 ADR reports from MP, of which 271 (9.51%) patients were diagnosed with treatment failure. The mean age of the patients who were reported to have treatment failure was 36 years (SD=12). It was found that 150 patients (55.35%) were reported to have virological failure, 3 immunological (1.11%), and 11 with both virological and immunological failure (4.06%); 113 of the reports were generally classified only as treatment failure (41.70%) without stating the type. The average time to detection of treatment failure (time between ART initiation and detection of failure of first-line) was found to be 34.5 months. Given these preliminary findings, NPC is embarking on a more detailed study of the data in an attempt to pinpoint which specific factors—socio-demographic, baseline clinical, drug-drug interactions, drug side-effects, drug toxicity or inadequate adherence to treatment, and/or transmitted drug resistance—are contributing to the high levels of treatment failure observed.

SIAPS worked with the NDoH, South African Pharmacy Council (SAPC), and the Pharmaceutical Society of South Africa (PSSA) to finalize the poster and pamphlet for the 2014 Pharmacy Week. The message, "Use antibiotics wisely", is aligned with current efforts undertaken by the NDoH to address AMR in the country. The posters and pamphlets were translated into nine of the official languages and were distributed to public and private pharmacies across the country.

SIAPS continued to provide technical assistance to the NDoH in the finalization of the Antimicrobial Resistance National Strategy Framework 2014-2024. The consultative stakeholder meeting held in April 2014 to discuss the strengths and weaknesses of the current system with regard to AMR served as a basis for a background document that presents the current status of AMR in South Africa and interventions developed to date. AMR is a complex and multidimensional challenge that can only be addressed with interdisciplinary and intersectoral collaboration. An AMR summit is planned for October 16 to develop a comprehensive understanding of the AMR framework, obtain high-level commitment from key stakeholders to invest resources and implement sound strategies and interventions, limit further increases in resistant microbial infections, improve patient outcomes, create awareness of intersectoral collaborative activities, and identify strategies to achieve responsible use of antimicrobials and monitor trends.

Five-thousand copies of the ICAT manual were printed and distributed in all nine provinces, followed by supportive visits in GP, FS, MP, LP, and NW provinces. A one-day refresher course conducted in GP was attended by 46 participants, most of whom were quality assurance and infection prevention and control practitioners.

SIAPS has entered into partnership with the Aurum Institute (a non-profit organization) to facilitate sessions on infection prevention and control at PHC facilities. During this quarter, Aurum conducted a two-day workshop in LP using the ICAT manual, hand hygiene posters, and PowerPoint presentations were provided by SIAPS; 24 participants developed quality improvement plans for their respective facilities.

Partner contributions

- Pure Health Consulting conducted the assessment of PMTB and HIV in the DCS
- I-TECH, BroadReach Healthcare, and Right to Care continue to support the NPC in implementing the decentralized pharmacovigilance program in MP
- SAPC and the PSSA contributed to the final design of the communication material for Pharmacy Week as well as the dissemination thereof

South Sudan

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

Overall Quarter Progress

During the last quarter, SIAPS focused on improving the availability and accessibility of essential medicines by supporting distribution from the Central Medical Store (CMS) to county warehouses and health facilities. SIAPS worked with the Central Equatoria (CE) Ministry of Health (MOH) to deliver the Emergency Medical Fund's (EMF) essential medicines including maternal and child health products.

To improve pharmaceutical management, SIAPS conducted two TOT pharmaceutical management trainings at Yambio and Juba for Integrated Service Delivery Program (ISDP) and its implementing partners and state MOH and CHD staff. In total, 46 participants (37 male and 9 female) with various backgrounds attended from WE and CE. The trainers are expected to roll out training at county and health-facility levels from October through to December 2014.

Closely working with USAID | DELIVER, SIAPS supported routine information sharing on monthly kit distribution plans to counties to facilitate timely receipt and proper storage at counties and distribution to health facilities. SIAPS initiated county-level storage assessments by developing assessment tools and sharing with partners to compile their county storage gaps. This will provide data on county storage conditions, capacity, and availability of a functional cold chain. Interchurch Medical Assistance (IMA) and Health Pull Fund (HPF) compiled and shared storage gap assessment reports for their supported counties. SIAPS coordinated the compilation of this data for CES and WES.

To better prepare counties and implementing partners to receive essential supplies and ensure that partners have information on the status of Emergency Medicine Fund (EMF) supplies, SIAPS developed and shared a document that listed EMF medicines and medical supplies, which increased awareness about the existing EMF kit, the content of different lots, and quantities by facility. In collaboration with USAID | DELIVER, SIAPS supported compilation of detailed logistic data on EMF kit lots. SIAPS compiled and shared quarterly PPMRm updates, which captured ACT and RDT stock status and pipeline information. This report shows adequate stock reserve of ACT and includes recommendations for future malaria products selection and forecasting.

SIAPS, in collaboration with HPF and IMA, ensured that technical assistance and training on de-junking is rolled out to states besides USAID-supported WES and CES. Four HPF personnel were trained.

SAIPS participated in the 2014 East African Regional Network (EARN) review meeting which focused on progress updates on malaria interventions, challenges, and the way forward. South Sudan presented its progress report, chaired the meeting, and identified its technical assistance

needs. South Sudan was elected as EARN co-chair. The next step is to update the country-reporting template and identify a venue for the next meeting.

Objective 1: Pharmaceutical services improved to achieve desired health outcomes

SIAPS played a critical role in coordinating national EMF pharmaceutical management activities by facilitating periodic EMF TWG meetings. SIAPS contributed to timely distribution of EMF supplies to all 10 states with support from MOH, USAID | DELIVER, and other partnersthereby ensuring availability of essential medicines.

SIAPS facilitated a workshop on de-junking in Warrap State. 26 participants (3 female and 23 males) representing 6 counties were trained. This will help improve the storage situation and avail essential commodities.

Upon request by USAID-PEPFAR, SIAPS provided technical support for improving HIV commodity supply management in South Sudan (). SIAPS provided 200 wooden pallets to the CE medical warehouse to improve storage of PEPFAR commodities (condoms) to be allocated to PEPFAR-supported sites in WES and CES by implementing partners. These pallets will ensure that condoms and other commodities are not kept on the floor and quality is maintained.

SIAPS spearheaded the disposal of expired PEPFAR commodities and other essential medicines in five counties in WES. In all, 11 health facilities were cleared of expired ARV commodities. The process was successfully conducted in collaboration with the State Ministry of Health's (SMOH) Departments of Pharmaceutical Services and Primary Health Care, CHD, and ISDP CIP.

Working with MoH, SIAPS facilitated tax exemption process on behalf of USAID/SCMS to ensure PEPFAR procured ARVs and supplies are shipped and cleared at the ports for storage. SIAPS streamlined the engagement of various partners in the request and receipt of the tax exemption document and engendered role clarity thereby reducing the lead-time to weeks. SIAPS finalized the distribution plan for 350,000 LLINS procured by USAID | DELIVER through USAID funding. These LLINs are to be used for routine services (EPI, ANC) in WES and CES. The distribution plan provides guidance for allocating quantities to each county and provides the necessary logistics data per county. This will help USAID | DELIVER in planning for transport and storage.

Because of a gap identified in the pharmaceutical system, SIAPS, through USAID funding, procured PMIS tools to be used in WE and CE. The availability of tools will ensure that consumption data for EMF commodities is reported. This will guide MOH and partners in making evidence-based decisions for future quantification and address supply management challenges. SIAPS initiated the distribution of these tools and currently all 16 counties in WE and CE have received them.

To improve the quality of health services, SIAPS funded and conducted a joint supervisory visit to all six counties in CE. The visiting team included the CE malaria control program coordinator,

state surveillance officers, and SIAPS. The activity was part of M&E activities to track project performance and outcome/impact. Six counties, county health departments, and 46 health facilities (26 public health care centers [PHCCs] and 20 public health care units [PHCUs]) were visited. Predesigned checklists were used. Items reviewed include training, malaria management, and stock outs (e.g., ACTs) among others. Although ACTS were available in over 90% of facilities, almost all reported stock-outs of one or two ACT formulations, including antimalarials for managing severe malaria. All patients reviewed received correct treatment (ACTs) for malaria. There is marked improvement in record keeping at the outpatient level (all facilities had clean, well filled registers). Improvements in supply chain management should be prioritized to prevent antimalarial stock outs.

Partner contributions

SIAPS worked with our ISPD partners in WE and CE to ensure the distribution of the EMF is monitored and further distribution to the facilities are carried out. Similarly, SIAPS, in collaboration with MOH and USAID, used the EMF TWG forum to work with the HPF and IMA to facilitate the distribution of EMF kits from counties to health facilities to leverage resources. ISDP also provides information to us on functional facilities during updating of the distribution plan and alerts us on any challenges that occur during the distribution of EMF.

Constraints to progress

The current insecurity in some parts of the country, especially in the Unity, Upper Nile, and Jonglei has impeded the distribution of essential medicals supplies to those states. This has been a big challenge to the EMF TWG. The approval of the distribution of EMF by the Minister of Health provided some relief and has improved the situation.

The national EMF kits distribution from counties to health facilities was a challenge because USAID | DELIVER, is mandated to supply commodities up to the county level. The counties with limited logistics have a challenge in distributing commodities to the health facilities especially in counties or health facilities without implementing partners or NGOs.

The rains and bad road, has also made transport and distribution of medical supplies very difficult in some parts of the states. In WE and CE, the roads are relatively better, but still a challenge in some parts of the counties.

Storage capacity at the county and health-facility levels remains a big challenge as these facilities receive tons of medical supplies quarterly. The de-junking activity has provided some relief to most counties, but does not solve the long-term problem of storage; the limited (or sometimes no) storage capacity in most of the counties needs improvement, including proper store-handling equipment and human resources.

There is inadequate planning for resources and allocated budget to improve pharmaceutical storage and inventory management, infrastructure, and manpower is lacking. Leverage and allocation of resources by government and partners is needed to ensure achievement of desired health outcomes.

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 organized two successful TOT pharmaceutical management training events which were conducted at Yambio and Juba for ISDP and its implementing partners, state MOH and CHDS, to ensure proper drug management and rational use of drugs with a focus on EMF essential commodities. In total, 46 participants were trained for both WES and CES (37 male and 9 female). Participants had various pharmaceutical and health backgrounds (pharmacists, storekeepers, dispensing technicians, clinicians, etc.).They explored topics such as the pharmaceutical management cycle, inventory management, good storage practices, and rational use of medicines, including good prescribing and dispensing practices. These trainers are expected to roll out the training at the county and health-facility levels to improve pharmaceutical management, and ultimately, to ensure the continuous availability of essential medicines.

SIAPS supported the Global Fund and HIV directorate to conduct supply chain management training for 18 commodity managers at selected ART/PMTCT sites in all states. SIAPS facilitated sessions on the overview of the supply chain, rational use of medicines, and good prescribing and dispensing practices. Participants also had practical sessions on how to fill stock cards, interpret prescriptions, and identify prescription errors. Certificates were awarded to participants after the successful three-day training. The training will help improve the management of HIV commodities and avoid stock outs of commodities.

SIAPS facilitated a pharmaceutical training workshop organized by the Catholic Medical Mission Board in Yambio. Ten health workers (five male and five female) from three counties were trained in stock-keeping practices, storage management, and inventory management. This forms part of SIAPS' collaboration with other partners in rolling out pharmaceutical management practices throughout the counties and facilities of WE and CE.

SIAPS conducted its regular supportive supervision activities in Nyakuron, Munuki, Terekaka, and Muni PHCCs. In Nyakuron, SIAPS worked with the in-charge to label the store shelves and demonstrate how to arrange supplies on the shelves and pallets. Three pallets were delivered to the PHCC; in addition, multivitamin capsules and gentamicin eye/ear drops were distribute from the CE warehouse. Supplies that were stocked out were co-trimoxazole 480 mg tablets, ferrous and folic acid tablets, antacid tablets, and quinine 300 mg. To ensure the operationalization and improved capacity of the CE warehouse staff, SIAPS has embedded two technical staff to work in the warehouse to mentor the personnel on the day-to-day functions of the warehouse and its management. Some of the activities undertaken were inventory management, stock card updates, daily temperature recording, issuing medical supplies requested, and filing and store arrangement.

Partner contributions

The pharmaceutical management trainings and supportive supervision activities have been carried out in collaboration with our State Ministry of Health counterparts and our Integrated Service Delivery Partners (ISPD).

Constraints to progress

The availability and capacity of human resources throughout the supply chain and at the facilities is low. This results in delays in rolling out interventions. Most of the county and health facilities do not have pharmacists and trained store managers. In addition, continuous supportive supervision at county and health facilities is lacking, which results in delays in instituting interventions.

Lack of funds from partners in the roll out of pharmaceutical management has been challenge and SIAPS has raised this issue with USAID and at the EMF TWG forum for further consideration.

Objective 3: Information for decision-making challenge in the pharmaceutical sector addressed

Collaborating with USAID | DELIVER, SIAPS supported compilation of detailed logistic data on EMF kits (total volume, total weight, and number of cartoons) which is important for monitoring purposes and helpful for prior arrangement of storage space and transportation.

SIAPS, as part of its routine pharmaceutical management assessment of selected health facilities, used the CRMS tool in five counties (two health facilities in each county) in CE to generate the appropriate indicators to track program supply management and rational drug use.

Some of the areas assessed and findings were:

- Malaria diagnosis: 73% of patients tested positive: Lainya PHCC had the highest rates and Kaya PHCC had the lowest. In general, 93% of prescriptions reviewed complied with the STG.
- Handling expired drugs: Munuki PHCC at 100% was the best, followed by Mugwo, Limbe, and Ombaci PHCCs (80% each); Kansuk, Kaya, and Nyokuron PHCCs scored lowest (40% each).
- Suitability of the dispensing environment: Mugwo PHCC scored the highest at 88%, followed by Ombaci and Morobo PHCCs (84% each), and Lainya PHCC the lowest (59%); in general, the average was 75%, of which 6 facilities performed below average.
    - All health facilities were challenged by the lack of protective cloths for the dispensers, privacy and a counseling area for patients, and dispensing equipment.
- Storage suitability: Ombaci PHCC scored the highest at 86%, followed by Morobo, Kansuk, and Nyokuron PHCCs (76% each), and Kaya PHCC was the worst facility (38%); five facilities scored below average (66%), which indicates a need to improve storage conditions in the facilities.

- Dispensing practices:
  - Health facilities were using the recommended plastic envelops with a seal, although stock outs of envelops is a challenge.
  - All facilities visited wrote the diagnosis in the prescription.
  - Only 60% of facilities were entering the prescriptions in the dispensing register properly.
  - Only 70% of facilities counsel patients on how to take their medications; Only 30% of dispensers were counseling their patients on adverse drug reactions.

SIAPS supported the validation, review, and analysis of data from the county warehouses and the generation and dissemination of reports on the monthly stock status of tracer medicines, including malaria and FP commodities, to partners including SMOH and USAID. These monthly reports enabled the SMOH to take action on stock outs to ensure continued availability of medicines.

Constraints to progress

The capacity to undertake inventory management task is very minimal and is hampered by limited human resource availability. This leads to delays in receiving prompt and accurate reports for analysis. Most facilities also do not have PMIS tools for recording logistics data, makings record keeping virtually impossible. The program has only one data officer to cover both WE and CE, which makes it impossible to get information from WE.

In addition, there are inadequate resources to ensure an uninterrupted supply of stock cards, prescriptions, dispensing registers, etc.

Objective 4: Pharmaceutical sector governance strengthened

SIAPS procured and received replenishment reagents and reference drugs for quality control activities at Juba and Kaya Minilab QC office. SIAPS organized a handing-over ceremony and delivered the reagents to MOH/Drug and Food Control Authority (DFCA), who were very appreciative and praised the program for the long relationship and technical assistance in the establishment of the DFCA.

Objective 5: Scale-up of malaria interventions accelerated, better coordinated, and documented

SAIPS facilitated the country dialogue meeting with refugees as part of the Global Fund's New Funding Model grant application, for which consultation with stakeholders and key affected populations (KAPs) is a mandatory requirement. This is to ensure that the country request through the concept note represents the interests and needs of all stakeholders and KAPs in the country. A refugee camp in Juba county provided 16 participants. The recommendations were collated, harmonized with other recommendations, and included in the concept note. SIAPS organized and conducted a TOT for malaria case management in WE and CE, including parasitological diagnosis using standard national training guidelines; 16 participants (8 from each state) were trained.

SIAPS facilitated the organization and coordination of a retreat for the concept note writing team (15 members from partner organizations and NMCP). After the review, the final document was submitted to the Global Fund grant management platform.

SIAPS participated with NMCP officers to plan and organize training on reporting for malaria sentinel sites. The training (41 participants [4 females and 37 males] from 32 sites) was to improve performance of sentinel sites reporting, which is funded by WHO. As follow-on training, SIAPS held separate meetings with WHO, the Malaria Consortium, and Liverpool Associates in Tropical Medicine regarding the training of NMCP staff, malaria coordinators, and M&E officers on District Health Information System (DHIS). WHO and PSI have promised to provide desktop computers to help establish a malaria database at NMCP's central level.

SIAPS participated at the EARN review meeting in Kigali, Rwanda (September 2014). The meeting focused on key progress updates on malaria interventions, main challenges, and the way forward. South Sudan presented its progress report, chaired the meeting, and identified its technical assistance needs. Later, South Sudan was nominated as EARN co-chair. The next step is for the new EARN co-chairs to update the country-reporting template and decide on the venue for the next meeting.

SIAPS, together with the acting program director of the NMCP, attended a meeting called by USAID to brainstorm on ways to improve bednet use. It was agreed that, as part of its operational research, the program should come up with a protocol for a "KAP" survey (qualitative and quantitative) to determine the reasons that bednets are little used or misused. This will be followed by targeted interventions to improve uptake and use. However, routine activities to promote use of interventions will continue as planned.

SIAPS and the NMCP attended a training organized by the Global Fund on finance management. The next step is for the NMCP representative to attend training on the Global Fund finance management tool. The training will prepare the NMCP to become a sub-recipient with the capability of managing its Global Fund money allocations, a task that is currently performed by PSI.

Partner contributions

The Global Fund through PSI, WHO, and USAID have been supporting malaria activities through the engagement of technical consultants and advisors. USAID has also contributed to the procurement of anti-malarials and 350,000 LLINS for the case management of malaria and EPI programs accordingly.

Constraints to progress

The past political crisis has stalled major activities; the realignment of the work plan saw some activities removed.

The integration of parallel pharmaceutical supply and management by donors and the national essential drug program is a challenge which sometimes leads to expiry, overstock in some facilities, and understock in others of some antimalarials in different areas.

Swaziland

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

Overall Quarter Progress

SIAPS's work in Swaziland has focused on responding to the recent changes to national ART guidelines and the approaches introduced to fight HIV and AIDS. Swaziland is currently rolling out the PMTCT Option B+ program at all health facilities. With this rollout, there is added pressure on the country's supply chain system for health products and pharmaceutical services. Swaziland is working to ensure uninterrupted availability of tracer commodities necessary for HIV and AIDS care and treatment.

During this quarter, SIAPS has supported two key national committees that are tasked with overseeing medicines supply and rational use. These two committees are complemented by facility-based pharmacy and therapeutics committees (PTCs) whose roles are to promote rational prescribing and use of medicines.

SIAPS has supported the Chief Pharmacist in advocacy activities towards tabling the Medicines and Related Substances Control Bill and the Pharmacy Bill in the House of Assembly. Technical assistance was provided at two workshops held with the Health Portfolio committee members of the House of Assembly, and the Senators on the two bills. The workshops were aimed at introducing the law makers to the Bills and address any technical questions that may arise. At the end of quarter 4, a report of these workshops was prepared with the Chief Pharmacist for submission to the secretary for parliament.

SIAPS continued to mentor and train (pre-service and in-service) health care workers (HCWs) to ensure continuous availability of quality medicines for management of HIV, TB, family planning, and other related conditions. SIAPS trained 71 HCWs from 19 health facilities this quarter, and an average of two HCWs were mentored from 53 facilities in this quarter. Fifteen students completed their pharmacy certificate program at the Southern Africa Nazarene University (SANU) and are scheduled to graduate in October 2014. This will be the first ever group of students to obtain a local certificate in pharmacy qualification.

The facilities' reporting rate has increased—95% of facilities completed and submitted an LMIS and patient report for the most recent reporting period (August 31, 2014), up from the 87% reported last quarter. The laboratory has maintained its reporting rate between 95–100% using the web-based commodity tracking system (CTS). During this quarter, the laboratory has confidently used the data from the web-based commodity tracking in estimating the requirements for the 2015/2016 procurement period. The accuracy of data recorded on the CTS will assure a precise estimate of needs for 2015/16. The laboratory required budget for the yearly supply plan 2015–2016 is estimated at SZL114 million (10.3 million US dollars [USD]).

Availability of tracer medicines continues to be a challenge with the country struggling to maintain the required minimum–maximum levels at national and facility levels. SIAPS continues

to work with the MoH to address challenges that affect product availability such as payment of suppliers, early disbursements of funds from the Ministry of Finance, and the management of contracted suppliers.

Objective 1: Strengthen Governance in the Pharmaceutical Sector

The weak pharmaceutical regulatory system in the country has been an obstacle in the country's effort to achieve access to quality essential medicines and services for managing HIV, controlling TB, and delivering other priority public health interventions. With a population of over 100,000 patients on ART, there is need to ensure that they continuously receive quality, safe medicines to improve retention to care and treatment outcomes.

SIAPS supported the MoH's chief pharmacist in conducting an educational workshop for 31 legislators from the House of Assembly and the senate. The workshop's objectives were to introduce the legislators to the contents of the bills and why they are important to the Kingdom of Swaziland's health sector. Following the workshops, the bills have progressed to the public review stage with stakeholder input being invited through advertisements in the print media.

SIAPS continued to provide guidance for developing standards and guidelines for involving private sector in TB case detection and treatment. The concept note for the private sector involvement in TB case detection and treatment was approved. Furthermore, the pharmacists' knowledge, attitude, and practices survey regarding TB diagnosis and treatment was reviewed and adapted to the Swaziland setting. The survey plan was also developed.

In support for the chief pharmacist's office which handles certain medicines regulatory functions, SIAPS has compiled a list of medicine importers in Swaziland and designed a system for registering these importers through the office of the Principal Secretary for Health. A certificate will be issued to all listed importers of medicines, with the MoH seal as a sign of authenticity.

SIAPS provided technical assistance to the second National Essential Medicines Committee (NEMC) meeting which met to review submissions from health facilities to update the Essential Medicines List. The meeting also put together information for the MOH tracer (vital) items to be procured in the 2015/16 procurement cycle. A vital, essential, non-essential (VEN) list was reviewed and approved for inclusion in the tender list.

SIAPS coordinated and facilitated the quarterly meeting of the supply chain technical working group (SCTWG). During the meeting, attendees discussed the availability of health commodities and looked at ways to overcome challenges that are faced by the different departments or programs.

Constraints to Progress

- Delays in finalizing the procurement procedure manual and SOP
- The ministry of finance not attending the SCTWG precluded addressing issues relating to medicines finance
- Delays in the parliamentary process for the enactment of the pharmacy legislation

Objective 2: Increase Capacity for Pharmaceutical Supply Management and Services

During this quarter, SIAPS has made great strides in improving the skills of health workers in pharmaceutical supply management of HIV, TB, and family planning commodities. The interventions have been a combination of in-service training, mentorship and supportive supervision.

This quarter, SIAPS trained 71 HCWs (27 males, 44 females) from 19 health facilities. Twenty-two health workers from 15 laboratory facilities were trained on laboratory supply chain including the logistics management information system (LMIS). Post-action training plans were developed and will be used as the basis for follow-up on-site visits. SIAPS also facilitated a medicines supply management workshop for 20 Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) mentors to equip them with inventory management skills in support of the PMTCT and pediatric HIV programs. The workshop was held to improve the skills of clinic mentors on supply chain supportive supervision.

In collaboration with National Quality Assurance Program, SIAPS also trained 19 HCWs (11 females and 8 males) from four health facilities with functional PTCs on implementing quality improvement projects aimed at promoting rational medicines use and containment of antimicrobial resistance. These facilities also developed quality improvement projects for implementation. SIAPS trained 30 participants, (21 females and 9 males) from 3 health facilities on formulation of PTCs. Ten health care workers from Luyengo clinic were provided onsite training on supply chain and pharmaceutical services management. After the training, a quality improvement plan was developed and it is currently being implemented and monitored.

In this reporting period, SIAPS provides technical assistance to the Faculty of Health Sciences' Department of Pharmacy at the Southern Africa Nazarene University (SANU) on the design of a practice laboratory and review of training material for the diploma in pharmacy program. Further assistance was offered in the selection of new students for the 2014/15 academic year. 15 students have successfully completed the pharmacy certificate program and are due to graduate in October 2014. These students represent the first group to graduates from the SIAPS supported program.

SIAPS mentored 36 health care workers from 18 facilities on laboratory and medicines supply chain management. The mentorship also focused on quality improvement project, especially the efficient use of storage space. Furthermore, 24 HCWs from 11 health facility pharmacy/dispensing sites were mentored on supply chain, dispensing and rational medicines use for HIV, TB, and family planning products. Significant improvements were observed in the following area: stock card update rate improved from 44% in February 2014 to 83% in July 2014.

SIAPS, in collaboration with the MoH, provided supportive supervision to 33 health facilities (20 in Hhohho and 13 in Lubombo). The supportive supervisory visits focused on assessing

pharmaceutical supply management, pharmaceutical information systems management, and pharmaceutical service delivery.

SIAPS staff members found during the visits—

- Low stock card update (between 64% and 75%)
- Only 22% to 51% of the facilities maintained the recommended minimum-maximum stock level of tracer items. These findings will be used to design technical assistance plans for the facilities in collaboration with the MoH and collaborating partners.

Constraints to Progress

There were no vehicles available to the MoH colleagues to conduct the supportive supervisory visits.

Objective 3: Address Information for Decision-Making Challenges in the Pharmaceutical Sector

Swaziland is currently working on phasing out D4T-based pediatric regimen, and knowledge on the number of clients on D4T-based regimens relies on the data from the information systems. SIAPS therefore supports access to and use of quality information for improved pharmaceutical management decisions. SIAPS continued to provide technical support and mentorships in facilities using RxSolution. Technical support was provided in the central medical stores in developing custom reports which inform decision making and also troubleshoots errors/bugs reported in facilities.

In cooperation with the MoH Strategic Information Department (SID), SIAPS conducted an assessment of the RxSolution targeting 39 ART facilities and 3 central warehouses. The assessment covered gaps and inconsistencies in the software's use, determined the level of use, gathered the inventory specifications of hardware infrastructure and software applications, and identified outstanding system bugs/errors. SIAPS also mentored users on the system. The assessment findings will be used to develop a robust and sustainable end-user support system.

SIAPS continued to support the re-design of the RxPMIS as part of the national Client Management Information System in collaboration with the MoH. SIAPS provided guidance on compiling detailed user requirements and test case documents in readiness for testing the application. Regular meetings were conducted with the contracted vendor (Institute for Health Management) to review the documents and technical support was provided for capacity building.

SIAPS continued working on the re-design of the web-based commodity tracking system. Weekly project meeting updates were held with the development team to track project deliverables. SIAPS staff met with the Data Management Unit to review the system's functionality and incorporate their requirements in the system redesign. A change management log document was developed and used as a way to communicate what requirements were still needed and also as a way to track progress and any system changes.

SIAPS continues to support the Central Medicine Store in ensuring that the strategic information on pharmaceutical systems strengthening is available and used. During the last quarter, 95% of facilities had completed and submitted an LMIS and a patient report for the most recent reporting period (August 31, 2014), an improvement from the 87% reported last quarter. All 133 reporting facilities used standard reports and consumption data to inform ordering and reporting. Lab facilities reporting through CTS reported a 100% reporting rate month of August 2014.

SIAPS plans to continue supporting the following activities towards improving data availability and use by—

- Closely monitoring the completion of outstanding CTS project deliverables
- Engaging external consultants for finalization of outstanding RxPMIS deliverables
- Working closely with the RxSolution development team to address priority functional gaps

Constraints to Progress

Organizational challenges within the vendor engaged for the RxPMIS redesign project led to the contract not being renewed.

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

Swaziland government currently funds 100% the ART budget for the population. The allocated budget for procurement of pharmaceutical commodities is at SZL 300 million (2% of the national budget), which is less than the estimated need for all essential medicine in the country. SIAPS is supporting finance mechanisms to ensure that available funding is used efficiently. During this quarter, insufficient funding for ARVs has threatened the stock levels in the country. Delayed payment of suppliers has also led to some suppliers blacklisting the country and not honoring orders. Various consultations have been held with the MoH Procurement Unit to address these challenges.

In an effort to ensure efficient use of resources, SIAPS supported a quarterly supply planning of ARVs, family planning, laboratory, and anti-TB medicines. The supply plan results were submitted to the MoH financial controller for the quarter 3 and 4 budget. SIAPS also supported the forecasting and quantification of first- and second-line TB medicines. SIAPS, in collaboration with URC, worked on the quantification of GeneXpert machine cartridges. The quantification results were then used to develop the supply plan for the Swaziland Health Laboratory Services (SHLS). A request for procurement was submitted to USAID under a special budget that was allocated for GeneXpert roll-out. In this quarter, SIAPS, in collaboration with the MoH Procurement Unit, completed the development of the supplier performance management plan. This plan will enable the ministry to track the performance of suppliers and results will be used during the selection of suppliers in future procurements.

SIAPS also conducted the SHLS annual forecasting exercise for 2015–2016 using, for the first time, SIAPS provided information from the CTS which is actual consumption data and shows a

true reflection of consumption patterns at facility level. The forecast document has been completed and has been used to inform the 2015/2016 budget request at an estimated amount SZL114 million [$10.3 million].

Global Fund will no longer fund laboratory procurement, as a result a transitional funding Mechanism (TFM) budget was set up to procure key laboratory products for the period 2014 to December 2015. SIAPS conducted a supply planning exercise using Pipeline database to determine delivery schedules and quantities required for the rest of the procurement period. The result of the supply plan was used to inform the budget request to Global Fund on the TFM budget.

SIAPS also participated in various discussions with the HIV/TB Concept note development team to inform the pharmaceutical component of the Global Fund Proposal. The concept note is for a total of $84 million for the 3-year period ending in 2017. SIAPS contributed significantly in the Health Systems Strengthening component of the concept note with an allocation of $8 million (to be confirmed).

In an effort to ensure efficient use of available financial resources for supply of drugs SIAPS continued to participate in the Southern African Development Community (SADC) pharmaceutical pooled procurement activities. This is to facilitate more cost-effective procurement of quality pharmaceuticals and to facilitate the participation of the MOH in regional initiatives that will lead to the improved resources utilization, leveraging on the regional synergies.

Constraints to Progress

There was inadequate funding for health commodities.

Objective 5: Improve Pharmaceutical Services to Achieve Desired Health Outcomes

During this quarter, SIAPS has worked closely with the National AIDS program and the National TB Control program to support interventions for improved pharmaceutical services for HIV/TB. The interventions seeks to ensure improved access to quality medicine and improved effectiveness of pharmaceutical service to achieve better TB cure rates and treatment retention for patients on ARV.

SIAPS continuously works with the MoH to monitor the stock status for tracer ART medicines. The stock level of these tracer ARVs at the central level was in the range 2 months - 6 months, with a few items out of stock. Facilities were assisted to rationalize the quantities dispensed to patients to ensure all receive the medicines.

After an assessment in quarter 3 which showed a lot of gaps in the records captured for the active surveillance, SIAPS embarked on an intensive retrospective capturing of patient information for the period May 2013 - June 2014. The completed records revealed an increase in numbers of patients experiencing AEs than previously reported (out of 512 patients registered 58 had AEs).

The current overall results showed that out of a total of 1671 patients 905 had reported AEs. SIAPS will support a stakeholder feedback forum to disseminate these findings, review the successes and challenges encountered in implementing this activity and to share best-practices from the facilities. A time trend analysis of the adherence level reports from February 2013 to April 2014 was conducted and documented in an abstract that was accepted at the National Health and Research Conference 2014.

SIAPS was invited by the Principal Secretary for Health to participate in meeting with the Uppsala Monitoring Centre for Africa (UMC-A) mission that visited Swaziland on the 11th – 12th September. The objective of the visit was to review the current pharmacovigilance activities in Swaziland and support the country in strengthening the pharmacovigilance system to qualify for joining the WHO Programme for International Drug Monitoring (PIDM). Subsequently, on the September 18, 2014, Swaziland was accepted as an Associate Member of the WHO Programme for International Drug Monitoring, joining 34 other African countries who are full members of the PIDM. Swaziland will benefit from receiving global pharmacovogilance updates from the UMC, pending full membership where Swaziland will then be expected to also provide monthly updates. SIAPS will continue to work with the Pharmacovigilance Unit to strengthen AE monitoring and reporting, in order for Swaziland to qualify for and maintain full membership of the PIDM.

Seven PTCs demonstrated functionality by conducting at least one meeting in the past three months. Five of these facilities were working on the VEN analysis and Quantification exercise in their last meeting. SIAPS with other partners (ICAP, EGPAF, CHAI, and Baylor) is participating in the TB/HIV Pediatric TWG. New TB/HIV guidelines have been developed by this committee.

This quarter, SIAPS finalized the procurement of bins (Linbins™) for the new Lubombo Referral Hospital. These linbins were received at the facility by the Hospital Administrator and the Regional Accountant. This is part of SIAPS support to health facilities to improve storage space and ensure that products are stored according to international recommended standards.

Constraints to Progress

Slow enrollment of patients into the active surveillance system.

Tajikistan

Goal: The primary goal of the project is to strengthen the TB control system to address the threat of increased MDR-TB.

Overall Quarter Progress

In quarter 4, SIAPS continued support to Tajikistan's NTP to develop a system for early warning of supply problems with anti-TB medicines and quantification of needs. Four oblast (region) coordinators started collecting data for processing and analyzing with QuanTB. Data collection and entry is done in the user friendly macro Excel® format elaborated by SIAPS. Based on the collected data, the national pharmaceutical management (PM) coordinator started creating QuanTB files for each oblast and uses them for analysis of the stock levels. The files also are submitted to SIAPS for further analysis and support to NTP if needed.

During July–September, three monthly reports were received by SIAPS which included data from all oblasts along with the QuanTB files, and a narrative report from the National PM coordinator providing detailed information regarding the data and actions taken. Use of QuanTB as an early warning tool allowed NTP to detect upcoming problems in supply of anti-TB medicines and respond adequately in a timely manner. The findings from the PMIS assessment report identified immediate gaps that can be addressed with SIAPS assistance. The interventions to address those gaps were outlined in the SIAPS work plan for Year 4.

Objective 1: Capacity for pharmaceutical management and services increased and enhanced

Following the workshop with the National and Oblast Pharmaceutical Management coordinators in Dushanbe, SIAPS provided technical assistance to set up a system for use of QuanTB as an early warning and quantification tool. As it was agreed upon during the workshop, 4 four oblast coordinators started collecting data from respective rayon TB facilities. The data was submitted to the national TB pharmaceutical management coordinator to enter into QuanTB on the monthly basis. At the same time, national PM coordinator started using the same format to collect data from TB facilities under direct responsibility of the National TB Institute. The collected data include information on number of patients on second-line and pediatric TB treatment, medicines prescribed, and stock levels at the end of each month.

Based on the collected data the National PM Coordinator creates a QuanTB file for each oblast and uses them for analysis of the stock levels. The files also are submitted to SIAPS for further analyzes and support to NTP if needed. During July–September, three monthly reports were received by SIAPS. These included data from all oblasts along with the QuanTB files, and narrative report from the National PM coordinator providing detailed information regarding provided data and actions taken. For example, QuanTB analysis of the data from Gorno-Badakhshan Autonomous Oblast (GBAO) in June showed that three second-line medicines (levofloxacin 250 mg tablets, prothionamide 250 mg tablets, and pirazinamide 400 mg tablets) were almost out of stock while other three (capreomycin 1g vial, cycloserine 250 mg tablets, and PAS 4 g sachet) would have been out of stock in July. Based on this information, NTP quantified

medicines and arranged timely supply to this region. By working with QuanTB and analyzing data, the NTP strengthens its capacity with SIAPS providing remote support. In the next quarter, a new version of QuanTB with improved functionalities will be introduced to the NTP and the NTP drug manager will be trained on its use.

SIAPS is developing a TB pharmaceutical management training manual and training materials for inclusion in the in-service training curriculum for TB doctors and nurses. The training manual and materials will be presented to the stakeholders and finalized in the next quarter.

Objective 2: Information for decision-making challenges in the pharmaceutical sector addressed

The assessment of TB PMIS system found serious gaps which makes the development of electronic PMIS less feasible. These gaps include: unstable electricity supply, an expensive and unreliable internet connection, and lack of personal needed for managing electronic system on NTP level. However, the PMIS assessment report also identified immediate gaps that can be addressed with technical assistance from SIAPS, including a longer term objective of building consensus among key stakeholders on goals and priorities for the national strategy for e-PMIS. Additionally, these activities will include securing executive sponsorship for data governance and data-driven decision making within the NTP and optimizing the use of existing paper-based tools while developing simple automated tools (Excel, PDF forms) to monitor and manage site LMIS reporting. These tools will assist the managers at the central level to aggregate and analyze LMIS data, monitor metrics like reporting rates and average monthly consumption, and thus manage stock levels to minimize expiries and stock-outs of TB medicines. Also, SIAPS will provide assistance for revising the current LMIS system to ensure that it responds to the needs of NTP and for capacity development on use of the revised LMIS system.

Constraints to Progress

The information and telecommunication (IT) infrastructure is weak: electricity is unstable, qualified IT personal is absent and the internet connection is expensive and rarely available at TB sites.

Turkmenistan

Goal: To strengthen the TB control system of Turkmenistan to address the threat of increased multidrug-resistant TB.

Overall Quarter Progress

Although e-TB Manager has been set up for entering data for piloting purposes in two regions of Turkmenistan, the NTP has not started entering data in the system. SIAPS will continue to provide TA to the national counterpart and WHO country office to ensure timely start of data entry. It is expected that by end of 2014, the NTP will be able to generate reports from e-TB manager for the pilot regions if data is entered properly.

Objective 1: Strengthen the NTP through improving the TB management information system

In the previous quarters, SIAPS collaborated with WHO country office in Turkmenistan to handle all preparations necessary to start piloting e-TB manger case module in two regions of country—the National TB Center in Dushanbe and all 14 etrap (district) TB facilities of Mary Velayat (region). This included creating workspace on eTB Manager for Turkmenistan, customizing it, and training users. Also WHO provided and installed IT equipment at the TB sites. Although the NTP committed itself to start entering data in e-TB Manager for piloting purposes, this has not started yet. The assumption for this delay is that MOH does not want to enter the actual data on patients in the system as the server is not located in the country.

The SIAPS consultant took part in the WHO's EpiReview mission in Turkmenistan and made site visits to the pilot areas. During the visits, existing obstacles for eTB manger implementation were assessed, meetings with the National TB program and representatives of the Ministry of Health were held, and the recommended action plan was set in place and introduced to the national counterpart. The mission recommended that the MoH and NTP start entering pilot site data in e-TB Manager by October 1, 2014, and retrospectively enter data for all of 2014 in the pilot regions. Because of high sensitivity of local authorities are sensitive about the security of patient information, it was agreed that patients' names will not be entered but only registration numbers will be used. This still would allow generating the aggregated TB reports. At the same time, it was recommended that the MoH provide its support to ensure internet access for pilot TB facilities to install the e-TB Manager program customized for Turkmenistan on the server at the NTP. SIAPS will continue to provide TA to the national counterpart and the WHO country office to ensure timely start of data entry. It is expected that by end of 2014, the NTP will be able to generate reports from eTB manager for the pilot regions if data is entered properly.

Partner contributions

SIAPS collaborates with WHO on this activity in Turkmenistan. The WHO Regional Office for Europe organized an EpiReview mission to Turkmenistan in which SIAPS consultant was asked to participate. e-TB manager piloting was discussed and appropriate recommendations were given to the MoH and NTP.

Constraints to progress

The NTP has not started entering the data in e-TB Manager.

Ukraine

Goal: Improve access to, use, and accountability of life-saving medicines and health commodities of assured quality to support priority health services in Ukraine to achieve desired health outcomes

Overall Quarter Progress

In early July 2014, the SIAPS Ukraine Program was informed by USAID that it would not receive any new funding for FY15 and would need to reprioritize its current activities to ensure funding for the next FY. So, in quarter 4, the program had to reassess its activities and targets for the current year. Several trainings and site visits and activities were canceled, and USAID and SIAPS had meetings with State Expert Center (SEC) to inform them that the program would not be able to implement the Active Surveillance activity beyond technical assistance with reviewing the protocol, and that the program would only be able to support the first round of data collection and review for the Drug Use Review (DUR) activity with the Kyiv oblast TB dispensary. A similar meeting was held with Ukraine Center for Disease Control (UCDC) where it was explained that SIAPS would no longer be able to support trainings for e-TB Manager beyond those already scheduled in July and a final training of trainers (TOT) in September.

For Objective 1, no further regional visits were carried out because of funding constraints for the year. Six out of 12 planned regional visits were carried out during previous quarters and more than 80 staff of oblast/rayon facilities received on-the-job trainings. Expansion of capacity in utilizing e-TB Manager continued with 32 trainers trained including trainers from the Penitentiary Services and an additional 31 data entry users trained;16 of which were from the Penitentiary Services. UCDC issued a directive that all future reports will be directly generated from e-TB Manager doing away with the requirement of a dual paper report being developed.

Under Objective 2, the majority of targets have been achieved. However, because of a directive from UCDC and the funding constraints, no monitoring visits were carried out this quarter. SIAPS held two trainings on procurement, distribution, and quality control management for 21 HIV facilities' health workers.

For Objective 3, many indicators had to be reevaluated with the cancellation of active pharmacovigilance (PV) activities. Although the first phase of DUR pilot project has been started and three phases of Pharmacovigilance Automated Information System (PAIS) have been developed with work started on phase 4, the cancellation of the active PV activities resulted in the elimination of the indicators involved.

For Objective 4, the target of developing or updating the national pharmaceutical sector strategic plans was achieved. The PV action plan on in the TB National Program was submitted to WHO in May 2014 and Draft National Plan for Monitoring and Evaluation of National TB Program with parts on rational medicine use of PV submitted to the State Service for TB/HIV and Other Social Diseases in June 2014. Six new modules of the PV National Guidelines have been completed to the point that they can be posted for public comment before final approval by the MoH; a seventh (out of 16 total planned) is ready for expert comment.

Objective 1: Strengthen pharmaceutical management information systems (PMIS) to support the HIV/AIDS and TB Programs

Over the reported quarter, the main focus was made on continuing the e-TB Manager-related activities and interventions initiated during the previous periods with special focus on making first steps toward the transition of e-TB Manager operations and support to the Government of Ukraine (GoU) counterpart UCDC. SIAPS staff has prepared instructions and trained UCDC IT specialists on e-TB Manager software and database maintenance and software updates installations procedures.

In August 2014, UCDC staff has successfully installed e-TB Manager software updates (with minimal support from the SIAPS staff). It is agreed between SIAPS and UCDC that all the future software installations and updates will be handled by the UCDC staff. At the same time, UCDC issued an official directive to the regional TB facilities that eliminates manually prepared TB7/TB8/TB10 reporting forms. From August 2014, these forms will be generated in e-TB Manager, printed out, formally signed, and stamped and then provided to the UCDC. This is one more critical step toward to having e-TB Manager as a daily electronic tool for effective management of the national TB Program.

SIAPS is actively exploring options of the effective cost share with "Strengthening TB Control in Ukraine" (STbCU) project to support e-TB Manager trainings and related activities. Initial meeting were made between SIAPS, UCDC, and STbCU to discuss the main approach and possibilities for cost sharing. After agreeing to have initial general cost-sharing, all three parties had agreed to schedule a meeting on this topic (with USAID participation) by the end of September 2014, but this meeting has been postponed until October.

Because of the limited possibility to conduct regional trips, technical support was provided over the help desk, phone and through additionally scheduled and conducted skype sessions for the oblasts with participation of SIAPS, UCDC, and oblasts staff members (e-TB Manager regional users).

During the reported period SIAPS has conducted two training of trainers (ToT) trainings—

- July 15–18, 2014 (ToT) Kyiv
- September 2226, 2014 (ToT) Kyiv and supported two regional users trainings
- July 8–11, 2014 (penitentiary service) Kyiv
- July 1618, 2014 (Volynska oblast phthysiatrists) Lutsk

Partner Contributions

UCDC staff successfully installed e-TB Manager software updates this quarter.

Constraints to Progress

The main constraint is difficult and unpredictable political, economic, and military situation in Ukraine over the reported period and lack of UCDC capacity (staff time) to effectively support

medicines management module implementation for the anti-TB medicines procured by the state budget.

This quarter also saw a need to revise and decrease work plan activities as the project was informed that it would not receive new PEPFAR funding next year and needed to apply its current pipeline to the FY14 work plan.

Objective 2: Improve supply chain management systems for HIV/AIDS and TB commodities

On July 20–21 and August 14–15, two rounds of two-day training sessions were held by SIAPS with active participation of and substantial contributions from UCDC and the State Administration of Ukraine on Medicinal Products (SAUMP). These trainings were attended by 21 health care professionals from HIV facilities in 10 oblasts, a pharmacist from Gromashevskiy Institute of Infectious Diseases, and a new employee of UCDC. The overwhelming majority of participants are specialists responsible for quality control in their health care settings or for the quantification activities in their respective regions. The training sessions focused on the current requirements and good practices of pharmaceuticals transportation, storage, quality control, cold chain, monitoring and evaluation, SOPs, and quantification techniques. The tools produced by the Center for Pharmaceutical Management's Expiry date chart and Medicine monitoring check-list designed to facilitate supervision/self-audit were also discussed during the training. Upon organizers' request, an external expert from SAUMP covered quality control activities mandated by the Ukrainian legislation.

In close cooperation with SIAPS, the PLWH Network, and the National Training Center, SIAPS has piloted a procurement and pharmaceutical supply chain management (SCM) training module for AIDS health facilities managers as a part of the National Training Center's curriculum. The module compatibility was piloted in the framework of two procurement trainings conducted on and September 15–19 and 22–29, 2014. The training was interactive and included many practical exercises in challenging SCM areas. SIAPS got positive feedback from the participants and the National Training Center: the Director of the National Training Center emphasized not only the educational value of the module but also underlined an urgent need for building capacity of the health care professionals in this area.

Partner Contributions

SIAPS in close collaboration with UCDC and SAUMP developed and provided "Procurement, distribution and quality control management" training.

The National Training Center supported by US Centers for Disease Control, and the PLWH Network has developed the training curriculum for HIV and AIDS center staff. SIAPS contributed a procurement module to this training.

Constraints to progress

UCDC blocked joint site visits with SIAPS, citing a letter from the Security Service stating that visitors from foreign organizations must be determined not to have access to sensitive information and requiting approval by MoH for any visits to local facilities.

The unstable political situation in the country has prevented participants from several regions to attend training on procurement, distribution, and quality control management.

Objective 3: Improve pharmaceutical services for the TB and HIV/AIDS programs

In the 4th quarter, SIAPS continued working within the DUR implementation working group on DUR pilot. TB dispensary specialists worked on preparation of patients sampling according to the criteria determined at the stakeholders meeting. Based on the data provided by the TB dispensary the sampling consisted of 51 patients with resistance Isoniazid and Rifampicin. . Other working group participants with technical support provided by SIAPS developed and adjusted criteria for TB medicines utilization, forms for collection of information about treatment regimens.

On July 31, data collectors made the first pilot visit to the TB dispensary. During the visit, it was discovered that sampling consisted of patients with four resistance types, rather than with one as we had expected and 15 treatment regimens are being used.

Currently, the specialists are working on the forms. To start data collection, working group members will take the following steps: translate final version of the DUR criteria into Ukrainian, finalize and translate the forms into Ukrainian, approve final version of the DUR criteria and forms during working group meeting, and prepare protocol of the pilot and submit it for ethics committee approval. After these steps are taken the data collectors will be ready to start the data collection process. Approximate date of the beginning of data collection is October 20th, 2014.

In fourth quarter, work proceeded with the third stage of PAIS development. Agreement was reached that a common reporting form will be used to report ADR and lack of efficacy of medicines in PAIS for all users (nurses, manufacturers, physicians and etc.). This form shall be compatible with international E2B format. Using such a form will assure compliance of PAIS with international requirements and standards and will enhance possibilities of State Expert Center (SEC) with regard to PV implementation. In making this decision several challenges had to be addressed, since it required significant changes not only into PAIS specifications that were approved and signed within the first phase, but also changes into MoH Order No. 898 which approves Form 137-o designed for ADR reporting. All stakeholders had common understanding of the importance of this decision and, in the fourth quarter, the partners (SIAPS, SEC, RGData) developed, approved, and amended the work plan; and developed and signed the Supplement Agreement to the Contract that regulated changes in the course of work related to implementation of the new PAIS form for ADR reporting. However, SEC has developed and submitted for approval by MoH amendments to Order No. 898 related to the use of new form for ADR reporting.

Using the international E2B over the long term will allow using PAIS for PV purposes in emerging former USSR countries. In the 4th quarter according to the plan all stakeholders worked on the development of the basic version of PAIS. SIAPS Ukraine monitored activities of RGData and provided technical assistance to SEC. In cooperation with RGData, SIAPS staff developed a technical solution for data exchange between PAIS and e-TB Manager. On August 30th basic version of PAIS was installed into SEC server. The basic version was successfully tested by SIAPS and SEC. As an example, as of today over 81,000 reports on ADRs were transferred from SEC old database to PAIS. SES is currently working on acquisition of identification code.

In addition, SIAPS and RGData have tested data exchange between PAIS and e-TB Manager. Since e-TB Manager has not been handed out for full administration of UCDC, during the test testing server was used for e-TB Manger. After coordination of all logistical matters, testing of data exchange between IT systems using UCDC commercial server may be the next step.

After the deployment of the basic version, SIAPS proceeded with development of fully functioning version. Working on PAIS, SIAPS pursues the goal to create a system with maximum functionality that would make the process of ADR and LE of medicines as automated as possible and keep manual work to minimum. One of the systems with which PAIS is going to exchange data is the Medicines Registry. This registry contains all necessary information about medicines that will be used while reporting ADR. Earlier it was planned that data transfer from the Medicines Registry into PAIS will be performed with SEC and RGData specialists' participation.

When the SIAPS Program started working on Technical Specifications, the Medicines Registry was updated on monthly basis; currently the information in it is updated daily. To update this information manually is not feasible from financial or time perspective. Therefore, SIAPS and the developers made a decision to automate data exchange between PAIS and the Medicine Registry in order for information from the Medicine Registry to be sent to PAIS on a real time basis. This idea was supported by SEC. Currently, SIAPS in cooperation with SEC is working on establishment of a technical working group that will consist of PAIS developers (RGData), Medicine Registry developers and representatives of SEC IT Department. The task of this group is to prepare technical solution for automated data exchange between two systems. In the fourth quarter, SIAPS held several meetings with Medicine Registry developers, lawyers and SEC administration in order to coordinate all legal and logistics matters so that the technical group can start its work. Currently, SEC lawyers are preparing necessary approval documents. It is planned that in October the technical group will start working.

In the 4th quarter, the University of Washington, with the participation of SIAPS Ukraine and local experts (Svitlana Antoniak from Scientific and Research Institution of Infectious Diseases and Olena Matveeva from SEC), worked on recommendations to the active PV Protocol that was planned to be completed at the end of September. Budget cuts compelled SIAPS to opt out of active PV information system development and PV TOT development.

Partner contributions

- Within the framework of the rational medicine use implementation pilot project SIAPS is collaborating with Kyiv Oblast TB dispensary, Rational Phamacotherapy and Formulary System Support Department and Post-Marketing Surveillance of SEC, UCDC, Donetsk National Medical University.
- During the process of PAIS development SIAPS worked in close cooperation with manufacturers, SEC and developer of the system Scientific and Production Association RGData.
- SEC and National Institute of Infectious Diseases, University of Washington made significant contribution into active PV implementation.

Constraints to progress

- In August many DUR Pilot Implementation working group members were on vacation which significantly slowed the activity this quarter.
- There were challenges with TB dispensary physicians of the Pilot who while demonstrating their willingness to work on the pilot, were not willing to share data on MDR-TB patients in their dispensary. This resulted in increased time required for patient selection as originally selected patients did not meet the approved criteria after a closer look.
- Due to the military situation in Ukraine HIV medicines are not procured in time. Respectively, the number of naïve patients we planned to include into Active PV research, has decreased. This situation required adding to the Protocol patients that have been receiving treatment for over 2 to 3 years. Changes in protocol design required additional time and delayed its completion within the planned timeframe.

Objective 4: Improve pharmaceutical management governance

Upon request of the civil society organizations SIAPS provided a review of the draft regulation on price referencing, participated in its discussion and provided comments, on the basis of which CSOs made a public statement on price referencing policy and its impact on access to pharmaceuticals. CSOs requested SIAPS to make further contribution into the development of their capacity and overarching local expertise in pharmaceutical price setting and referencing.

In the 4th quarter SIAPS was not able to participate in PV working group meetings however, the working group continued working on Modules 1–6. The first final report raised many additional questions from the experts requiring modifications to be made. Taking into account the fact that the Guideline is the key document, it requires precise development. Thus, in this quarter the group worked on the comments to Modules 4–6. It is planned that in October, modules 4-6 will be posted on the MoH website and subject to public discussion for 2 months after which they will be submitted to the MoH for approval. Since the Guideline contains 16 modules, the working group made a decision to approve it step by step. As modules are adapted, they will be submitted for approval. Module 7 has been drafted and the next step is for it to undergo expert review.

Partner contributions

SEC continued work with the TWG on National PV Guidelines to continue the guideline development process along with SAUMP and manufactures

Constraints to progress

The main issue affecting Project activities implementation is the instability of economic and political processes in Ukraine, particularly, now in the period of change of government and military actions. WG meeting on SCM was further postponed. The anticipated day of its meeting has not been made public yet.

Uzbekistan

Goal: The primary goal of the project is to strengthen the TB control system to address the threat of increased MDR-TB.

Overall Quarter Progress

SIAPS conducted a comprehensive indicator-based assessment of Ukraine's TB pharmaceutical management system during this quarter. SIAPS assisted the TB pharmaceutical management working group with preparing and conducting the assessment. SIAPS worked with Ukraine staff to analyze the collected data and develop the draft assessment report. The report will be finalized and presented to the MoH and the stakeholders in the next quarter. Based on the report, a strategic plan for strengthening TB pharmaceutical management system will be developed and discussed at the stakeholders' meeting.

SIAPS collaborated closely with WHO country office in Uzbekistan on this activity. The MoH of Uzbekistan is generally not very open to sharing the information from health facilities, but was convinced of the importance of the assessment and supported it.

In quarter 4, SIAPS also provided technical assistance to the pharmaceutical management pediatric TB working group and the National Tuberculosis Program in quantification of the next order of pediatric anti-TB fixed-dose combinations (FDC) from the Global Drug Facility (GDF).

Also, SIAPS discussed and agreed with the TB pharmaceutical working group possible areas for technical assistance from SIAPS. Those areas were reflected in the SIAPS work plan for year 4.

Objective 1: Pharmaceutical Sector Governance Strengthened

After the preparatory work performed in the previous quarters in close collaboration with the TB Pharmaceutical Management Working Group (WG) and WHO country office in Uzbekistan, SIAPS provided technical assistance to MoH in assessment of TB pharmaceutical management system in quarter 4. This included finalization of the data collection forms and a training of trainers for the data collection team leaders who subsequently trained 20 health professionals on the assessment methodology and data collection. Then five groups collected data in 35 TB treatment facilities throughout 5 oblasts. They interviewed 714 TB patients and more than 100 TB health care workers, reviewed more than 1000 patient treatment cards, and assessed 65 pharmacies and drug stores in medical facilities. The collected data was entered into the Excel tool created by the SIAPS team for data analysis. SIAPS assisted the working group in analyzing the collected data and developing first draft of the assessment report. Also, SIAPS provided technical assistance in validation of data. The draft assessment report has been developed. The report will be finalized and presented to the MoH and stakeholders in the next quarter. Also, based on the assessment a strategy for strengthening TB pharmaceutical management system will be developed.

Partner Contributions

WHO supports SIAPS in all activities in Uzbekistan. WHO's support is particularly important in organizing SIAPS visits to the country because of the current strict regulations and reaching officials for meetings. During the assessment, the WHO TB Medical Officer accompanied one of the groups to the data collection sites as one of the team leaders was delayed due to her obligations at the MoH.

Constraints to Progress

Although heavily bureaucratic procedures for organizing meetings with the national counterparts are still a constraint in Uzbekistan, all parties, including MoH were more collaborative and supportive.

Objective 2: Utilization of strategic information for decision making increased

In quarter 2, the Uzbekistan MoH decided not to implement eTB Manager. SIAPS did not work on this activity in quarter 4.

Constraints to Progress

The Uzbekistan MoH decided not to implement e-TB Manager as they were planning to develop integrated health information system of which TB would be part of. The Minister of Health of Uzbekistan verbally informed USAID/Central Asia Health and Education Regional Director and other USAID and WHO officials of its decision at the meeting on January 7, 2014.