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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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CONTENTS

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, including 2 regional programs in Latin America. 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 October through December 2013 period.

SELECT PROGRESS TOWARD RESULT AREAS

Intermediate Result 1. Pharmaceutical sector governance strengthened

The SIAPS approach to improving governance and accountability focuses on establishing transparent management systems grounded in policies based on best practices, legislation supported by the rule of law, and regulation supported by appropriate technology and capacity.

Pharmaceutical Registration and Licensing

In Bangladesh, SIAPS assisted the Directorate General of Drug Administration (DGDA) to make significant progress in strengthening its medicine regulatory functions. SIAPS worked with DGDA officials to orientate them on Common Technical Document (CTD) guidelines which will guide the DGDA and pharmaceutical manufacturers on submitting product dossiers consistent with International Conference on Harmonization (ICH) recommendations. The CTD guidelines will be used to steer further adaptation of Pharmadex, the SIAPS web-based, integrated regulatory information management system that was pretested this quarter.

Technical assistance provided by SIAPS to South Africa's National Department of Health (NDoH) to improve governance in the licensing process culminated in the publication of revised criteria for awarding licenses for pharmacies. The criteria were published in the *Government Gazette* in February, 2014. The new criteria are based on population per sub-district and will support the intention of the National Drug Policy to improve community access to pharmaceutical services.

The existing legislation in South Africa does not provide for electronic prescribing and transmission of prescriptions. At the request of the NDoH, SIAPS researched how other countries regulate this practice and submitted the findings to the NDoH. The next step is to determine and draft amendments to the legislation to allow for electronic dispensing.

Medicine Quality

SIAPS worked with the Ministry of Health (MOH) to initiate the procurement of reagents and reference standards to maintain minilab operations in Juba and Kaya. This enables screening of imported medicines to identify fake/counterfeit drugs, especially the private sector.

To improve efficiency and transparency in post-marketing surveillance (PMS), SIAPS helped the Bangladesh DGDA update their website to a web portal that enables DGDA field officers to provide real-time data on the quality of pharmaceuticals during site inspections.

Policies and Procedures

In Burundi, SIAPS continued work to strengthen the organizational structure of the National Malaria Control Program (PNILP). SIAPS assisted the PNILP to develop a standard operating procedure (SOP) manual for financial, administrative, and human resource management and to

work with staff to draft job descriptions for all positions. SIAPS will help the PNILP to assess staff skills and competencies according to the duties set out in the job descriptions and develop a training plan and a proposal for a revised functional structure for the PNILP.

As a first step in developing a list of essential medical devices and support equipment (MDSE) for Namibia, SIAPS presented a report to the Ministry of Health and Social Services (MoHSS) that set out preliminary findings of a situational analysis in the public health sector and recommendations for next steps. The list of essential MDSE will help MoHSS adequately plan for and avail devices and equipment needed for management of HIV and other priority diseases in Namibia.

Strategic Planning

In Lesotho, SIAPS has been collaborating with MOH, the National Drug Service Organization (NDSO), and other implementing partners to develop the 2013/14–2016/17 Supply Chain Management (SCM) Strategic Plan and establish a supply chain coordinating unit within MOH. SIAPS facilitated a three-day consultation workshop and helped to finalize the SCM Strategic Plan which is required as part of the new Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) new funding model.

SIAPS has been participating in the update and review of the Philippines Strategic Plan for TB Control (PhilPACT) as well as supporting the National TB Reference Laboratory to develop the National TB Program (NTP) laboratory strategic plan, which is a sub plan of the PhilPACT. Both strategic plans were approved this quarter.

Standards and Accreditation

To improve access to antiretroviral (ARV) and other medicines for chronic diseases, SIAPS is assisting in the implementation of the Central Chronic Medicine Distribution and Dispensing model in eight provinces in South Africa. In addition to beginning work on developing a document that will set out the policy principles for implementation of this model, SIAPS helped the NDoH identify a set of draft indicators for monitoring service delivery at provincial, district, and facility levels, as well as by service providers. The indicators were presented at the National Health Council Sub-committee on Pharmaceutical Services.

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. Considerable progress was made in institutionalizing the Auditable Pharmaceuticals Transactions and Services (APTS) at the federal and regional levels through the enactment of legislation and directives. SIAPS helped two regional health bureaus (Southern Nations, Nationalities and Peoples' Region (SNNPR) and Oromia) draft APTS legislation and directives. These are awaiting approval of the respective regional governments, together with Addis Ababa, Tigray, and Harari regions. At the federal level, the Federal Ministry of Health (FMOH) reviewed the APTS regulation, which is now ready for final consultation among

stakeholders prior to approval by H.E. the Minister of Health. In response to a request from FMOH to include federal and university-owned hospitals in the roll out of APTS, SIAPS collaborated with the Medical Services Directorate (MSD) to modify, submit, and secure approval for the APTS tools from the Ethiopian Ministry Finance and Economic Development (MOFED). SIAPS held consultation and training-of-trainers workshops and collected baseline data for the 17 hospitals that have been selected for APTS implementation in the next quarter. Next steps to meet this ambitious target and deadline include helping the hospitals improve infrastructure and facilities to meet the minimum requirements for implementation of APTS.

To improve the functioning of Mali's pharmaceutical supply system and services and coordination among key stakeholders, SIAPS has been assisting the Direction de la Pharmacie et du Médicament (DPM) establish a national committee for the coordination and the monitoring of health commodities for malaria, MCH, HIV, TB, and family planning (FP) programs. SIAPS helped the DPM update the terms of reference for the committee, identify members, and develop a calendar of activities. In January 2014, the Minister of Health signed the decision to officially establish this national committee. SIAPS helped the DPM organize a meeting of the new committee at which a quantification subcommittee with technical working groups for each category of commodities was established. With assistance from SIAPS, the newly established technical working group for FP completed a quantification exercise for contraceptives. The next step is to present the results of this quantification exercise to the national committee for validation.

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

SIAPS works with stakeholders to assess their capacity to manage pharmaceuticals at all levels and then implement interventions to strengthen the capacity of individuals and institutions to ensure delivery of pharmaceuticals. This quarter, Angola and Swaziland had significant achievements in strengthening local organizations to provide pre-service training. In addition, a number of portfolios accomplished in-service training and developed SOPs and guidelines.

Pre-Service Training

SIAPS/Angola continues to enhance pharmaceutical capacity of local institutions and individuals by working with a local school of pharmacy to implement pre-service pharmaceutical management training for Bachelor of Pharmacy (BPharm) final-year students. SIAPS/Swaziland is working with stakeholders to reform pre-service health professional training curricula to address pharmaceutical management topics and ensure that it is accredited by a relevant governing body. The Diploma in Pharmacy curriculum at the Southern Africa Nazarene University (SANU) was approved for training students. There are 44 students enrolled for the Certificate in Pharmacy program, and the diploma training program will commence in August 2014.

During this quarter, SIAPS continued to build capacity in the pre-service training of pharmacy technical assistants, pharmacy technicians, and pharmacists at Nelson Mandela Metropolitan

University (NMMU). With SIAPS support, two new electives in pharmacovigilance (PV) and medicine supply management are being offered to final-year BPharm students. For the first time, training on RxSolution has been included in the curriculum of pharmacy technician students at NMMU. The software was installed on the computers in the training laboratory at the university. The first training session for 56 students was conducted by SIAPS and emphasized the application of medicine supply management principles. It is envisaged that exposing undergraduate students to RxSolution will reduce the need for on-the-job training in public sector facilities, as it is anticipated that many of these students will join the public sector, once qualified. Capacitating the university staff to conduct the training contributes to the sustainability of this initiative.

In-Service Training and Supervision

In Cameroon, SIAPS focused on strengthening monitoring and supervision at the health-facility level to the improve management and availability of HIV and AIDS commodities, especially ARVs. The supervision guide was revised and adapted to focus on two levels of service delivery, namely, the Regional Medical Stores (CAPRs) and health facilities. Strengthening the internal management and storage capacity of the CAPRs will enhance availability of quality commodities at distribution points and improve coordination between the CAPRs and the central medical store.

In Ethiopia, SIAPS staff conducted supportive supervision and mentoring of pharmacy professionals at 14 health facilities to build their capacity in implementing good prescribing and dispensing practices. Health facilities were also provided with copies of standard prescription paper, good prescribing and dispensing manuals, and tablet-counting trays. The support also included reviewing the status of implementation of pharmacy standards, utilization of facility-specific drug lists, and adherence to standard treatment guidelines (STGs).

SIAPS/Namibia in collaboration with SCMS/Namibia, provided technical assistance to MoHSS Division of Pharmaceutical Services to update three standardized support supervision visit (SSV) checklists for hospital, regional medical stores (RMSs), and primary health care (PHC) facilities; oriented regional pharmacists to the revised checklists; and participated in the national annual SSVs for 2014. Two RMSs and 100 facilities across all 14 regions of Namibia were visited. Regional pharmacists were mentored to accomplish the assessment of facility performance on the basis of selected pharmaceutical indicators by collecting and verifying pharmaceutical data.

SIAPS/South Africa continued to build leadership and management knowledge and skills through the Pharmaceutical Leadership Development Program (PLDP). The roll out of the PLDP, which uses a participatory and continuous performance improvement approach, currently covers 177 facilities, up from 122 last quarter; various improvements in service delivery have been reported (refer to the South Africa section of this report).

Tools for Capacity Building

SIAPS/Lesotho provided technical assistance to the MOH laboratory directorate to review the hospital-level laboratory commodity manual. In addition, SIAPS worked with MOH to develop a

health-center-level laboratory commodity management procedure manual and mentored 16 laboratory personnel (one from each laboratory). SIAPS Lesotho also supported the MOH family health division to develop LMIS tools for the Nutrition Assessment and Counseling Support (NACS) Program; 42 health facilities in 3 pilot districts (Botha Bothe, Thaba Tseka, and Mohale's Hoek) were empowered to take the lead in this process.

SIAPS/Mali developed new SOPs for stock management and a logistics management information system, and they were also adopted for use in health facilities. With a pool of regional trainers trained at the end of year 2, SIAPS provided support to the DPM and each of six regional health directorates (Direction Régionale de la Santé) to conduct six training workshops for warehouse and health information managers. These trainings focused on warehouse management, storage, tools (such as stocks cards and logistic reporting tools), and how to calculate commodities needs per the new LMIS SOP requirements; 138 users, including pharmacists, district warehouse managers, and health information managers, were trained during these workshops.

Selected additional activities include the following—

- In the Dominican Republic, the last module of the certified course on pharmaceutical management was completed and 33 students are in the final stage for graduation. SIAPS completed SOPs for the integration of hospitals into SUGEMI. The training of all hospital personnel is scheduled for next quarter.

- Through a joint team composed of experts from Tigray RHB, Mekele PFSA hub, and SIAPS, health facility staff in the Tigray region were mentored on how to improve pharmaceutical service delivery. As a result, one of the referral hospitals (Ayder Referral Hospital) provided "clinical pharmacy services" for the first time and generated daily and monthly intervention reports. Currently, 40 hospitals are providing clinical pharmacy services throughout Ethiopia. Patient education sessions were organized at 11 health facilities in 4 regions. These sessions create awareness for patients on the appropriate use of medicines, thereby contributing to the safe use of medicines and containment of antimicrobial resistance. The facility staff accomplished prescription reviews and drug use evaluations (DUE) on selected medicines; 15 hospitals were supported in the quarter to strengthen the Drug Information Service.

- In Lesotho, SIAPS delivered in-service training to 82 healthcare workers in pharmaceutical logistics management. RxSolution is currently installed in 16 out of the 17 hospitals and technical assistance was provided to implement RxSolution in 13 additional facilities.

- SIAPS used MCH Core funds to develop tools for determining the unmet need for maternal health commodities as well as the case studies of DRC and Bangladesh that were finalized and submitted for editing. In addition, the results of the sub-national procurement assessment in Bangladesh were disseminated to identify possible next steps with key stakeholders from the government, USAID, and implementing partners.

- With support from SIAPS/Namibia, the National Health Training Center (NHTC) obtained final approval of the Pharmacist's Assistant (PA) training curriculum from the Health Professionals Council of Namibia (HPCNa). SIAPS installed new computers and a local area network (LAN) at NHTC to support the training of PAs and implementation of the new curriculum. This LAN will provide a platform for "learner–tutor" exchange of training materials and relevant literature in the course and contribute to quality assurance of the PA training program.

- In Namibia, SIAPS also trained 25 MoHSS healthcare workers as trainers of trainers for EDT. This will enable the MoHSS staff to train new staff members recruited in the Ministry on the use of the EDT and development and use of monthly reports.

- In Philippines, SIAPS worked with NTRL and other partners to develop the 2014 NTP laboratory network operational and technical assistance plans. To help strengthen NTRL's M&E capacity, SIAPS drafted the SOPs for laboratory M&E, reporting, and data management. SIAPS is also providing guidance to the technical units in developing their 2014 work plans, including their respective M&E plans and budgets.

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

SIAPS' approach is to integrate pharmaceutical data collection, processing, and presentation of information to help staff at all levels of a country's health system make evidence-based decisions to manage health and laboratory commodities and pharmaceutical services.

During this quarter, the key activities related to this IR focused on the submission of quarterly and other reports; development of SOPs; training, mentoring and supportive supervisions; expanding use of electronic and manual tools, such as EDT, e-TB Manager (e-TBM), and RxSolution; and conducting assessments and participating in important consultative processes related to HIV and AIDS, TB, malaria, reproductive health, and related medicines.

As part of strengthening the pharmaceutical/logistics management information system, three countries demonstrated data quality improvement; nine submitted PMI-required procurement planning and monitoring quarterly reports (PPMRm) and four countries submitted end use verification (EUV) quarterly reports; five countries continued to use and enhance electronic tools; and four countries conducted assessments for scaling-up/introducing electronic tools. Several countries have introduced monthly stock status reporting as a two-page narrative or dashboard presentations. These reports serve as active early-warning information on stock availability, pipeline, and funding situations and are shared with MOHs, USAID, and other donors.

Data Utilization

In Guinea, SIAPS took the lead role in developing and launching an improved monthly malaria reporting template that now includes more detailed information on patients, cases tested/

confirmed/treated/referred, and a brand new section on drug management, including stock status and monthly consumption at the health-facility level. Ethiopia produced its CRMS quarterly report which tracks several service and system indicators and charts trends in indicator performance. To ensure institutionalization and ownership, a stake-holders' review process is in place for follow-on actions from the report. South Sudan and Cameroon have followed also implemented CRMS reporting.

During this quarter, EUV surveys were conducted in DRC, Ethiopia, and Mali, while Angola finalized its EUV report and disseminated the results. Support was provided in reviewing the findings and providing feedback on viable follow-up activities and interventions based on EUV survey results. To facilitate procurement decisions at PMI, SIAPS aggregated data and reported on stock status of malaria commodities (PPMRm) from Angola, Burundi, DRC, Ethiopia, Guinea, Kenya, Mali, South Sudan, and Uganda. In preparation for the upcoming Malaria Operational Plan (MOP) visits, gap analysis templates from Angola, Burundi, DRC, Guinea, Kenya, and Mali were completed and will be submitted to PMI. Bangladesh has continued the submission of monthly stock status reports by using dashboards, which are accessible on the web for use by interested parties.

The newly launched West Africa Regional Project developed a concept note for a regional dashboard to set up a web-based early warning system (EWS) to capture ART commodity and RTK data from various sources at the country level and to load it into a central data depository for storage and aggregation. The EWS Dashboard will assist focus countries, sub-regional organizations (including USAID/WA, UNAIDS regional, WAHO, Global Fund, and other relevant regional and country-level stakeholders, including Ministry of Health HIV and AIDS program managers [National HIV/AIDS Control Program, Central Medical Stores, Pharmacy Regulatory Authority]), and NGOs in improving forecasting, supply planning, and procurement to support the continuous availability of ARVs, RTKs, and other HIV-related commodities.

- In Ethiopia and Namibia, 416,490 persons have active files for ARV management at the pharmacy level, strengthening adherence counseling and tracking defaulters.
- Ethiopia, Namibia, and South Africa have 1,010 health facilities using SIAPS-provided manuals and electronic tools for patient and product data/ information management.

Data Quality

In Cameroon, Ethiopia, Lesotho, and South Sudan, 65 health facilities benefitted from mentoring and supportive supervision to ensure that data is submitted on time, approved tools are used, and data capturing and reporting are accurate so that data quality is improved.

In Cameroon, SIAPS and CNLS conducted support supervision visits in 24 additional ART health facilities within the Adamawa, North West, South West Regions. The supervision aim was to monitor ARV consumption and distribution and to help health facilities solve data discrepancies between patient and stock reports to increase availability of quality data.

In Ukraine, progressive improvement in data completeness was registered, reaching a 98% consistency rate when comparing e-TBM and paper-based reports.

Information System Design and Collaboration

In South Africa, the development of bar coding functionality for the stock management module in RxSolution was completed. A demonstration was successfully conducted for NDoH. Pilot use of the functionality will commence in the upcoming quarter. In addition, the biometric (finger printing) function is in the final stages of development. Infomaker® was installed at the North West (NW) pharmaceutical depot. The use of Infomaker facilitates quicker generation of reports from depot inventory management systems as required by NDoH. Weekly medicine availability and outstanding order reports are generated from 6 of the 10 depots using Infomaker. A set of 62 standard reports has been developed with SIAPS support.

The e-TBM generic version has been continuously enhanced with additional features for improved and expanded use, and a desktop module that can be synchronized with the online version was recently released. e-TBM is currently operating at 1,974 sites in 11 countries. Globally, 2,820 active users are managing 141,856 TB and MDR-TB cases.

In Namibia, SIAPS supported MoHSS with development of two EDT installation checklists that will be used to standardize IT support and minimize downtime for reloading EDT computers across the network currently operational in 50 ART sites countrywide. One checklist will be used for all existing EDT computers while the other will be used for new computers with improved hardware specifications. These two improved checklists add to the number of pharmaceutical management guidelines, lists, and SOPs developed (or updated), cumulatively totaling 60 as of March 31, 2014.

SIAPS continued supporting the National Tuberculosis and Leprosy Program (NTLP) to operationalize e-TBM in 13 designated regional drug-resistant TB (DR-TB) centers in Namibia. SIAPS supported NTLP to design specifications for the new server that will be hosting e-TBM and that will serve as a backup for the EDT national database (NDB) server. e-TBM provides data for the programmatic management of DR-TB patients including those co-infected with HIV.

In Ethiopia, to facilitate data capturing and recording activities at dispensing units at ART sites, USAID/SIAPS distributes data capturing tools (registers and treatment cards) for facilities using a paper-based system. In this quarter, 76 ART sites received PMIS formats (ARV adult dispensing registration books, ARV pediatrics dispensing registration books, patient information sheets, and OI drug dispensing registration books) to support data capturing efforts. Fifteen ART sites received software and hardware maintenance support and mentoring on data capturing, aggregation, and reporting. Onsite training on the recording of the patient information sheet and its documentation (maintaining confidentiality), transcribing from the patient information sheet to the ARV dispensing registration book, preparing a consumption summary, and generating ART monthly regimen reports were provided to newly recruited data clerks and pharmacy personnel.

The QuanTB tool (a downloadable forecasting, quantification, and early warning system for TB medicines) was enhanced and version 1.0.2 was released. The tool is now available in English, Russian, French, Spanish, Portuguese, and Chinese. In addition, this new version includes an easier process for identifying quantities needed for emergency orders, the ability to import the number of cases from Excel, and the ability to export quantification data to Excel. An updated user guide accompanies this version and includes improved overall guidance and three new annexes on forecasting for multiple years, quantifying patient kits, and quantifying ancillary medicines. The updated user guide has been translated into the new languages and is expected to be available by next quarter.

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

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 financial resources; and generating additional financial resources.

During this quarter, SIAPS provided technical assistance and training in five countries (Dominican Republic, South Africa, Ethiopia, Swaziland, and Namibia) to improve national financing mechanisms. Efforts were aimed at strengthening local systems in these countries to collect necessary data to identify commodity financial gaps and/or to identify opportunities for improving efficiencies, while also participating in national dialogue on universal health coverage. In addition, SIAPS continued its effort to develop a technical leadership tool for pharmaceutical finance tracking.

Analyzing and Tracking Costs

The first draft of the pharmaceuticals financial flow assessment tool was developed in collaboration with SIAPS' partner, R4D. The tool is intended to track the flow of funds in the pharmaceutical sector whether originating from donors or from public funds, thus allowing trend analysis over time and across programs, facilitating identification of gaps and informing resource allocation. The tool is being reviewed and is expected to be finalized and available in the course of the next two quarters.

In the Dominican Republic, SIAPS continued to provide support for implementation of the integrated Pharmaceutical Management Information System (PMIS) and for (what is locally known as) SUGEMI documenting the increasing incidence of stock outs (partly due to inadequate financing). As a result, SIAPS began the process of collecting data to determine the extent of the financial gap so as to inform essential medicines procurement.

In South Africa, SIAPS' technical assistance continued to strengthen the Provincial and selected Institutional Therapeutic Committees (PTCs) in Gauteng Province, primarily to analyze pharmaceutical expenditures by using ABC analysis. Support was also provided to the Northern Cape PTC to identify the top cost drivers through ABC analysis. The results of these exercises

are being reviewed by the respective PTCs to inform the design of interventions aimed at changing prescribing patterns and reducing pharmaceutical expenditures.

Maximizing Resources

SIAPS continued its assistance in response to the requests of the Ethiopian MoH to scale-up APTS initiatives in 17 selected hospitals. SIAPS supported the modification of the needed financial tools for the APTS and supported Drug and Therapeutic Committees (DTCs) in conducting ABC/VEN analyses in 9 hospitals. By the end of the second quarter, ABC/VEN analyses were conducted in 11 health facilities constituting 91.7% of the annual target. Reports of these analyses have been shared with facilities' senior management for decision making. In addition, staff members in 2 regional hospitals in Amhara have been trained to apply the system, generate reports, and communicate findings for decision making.

On the other hand, SIAPS provided support to the finalization of the Swaziland HIV and AIDS quantification report for the period April 2014–March 2016. The report takes into consideration the increased demand for products after recent changes in treatment guidelines. The report identifies funding gaps and recommended strategies for the mobilization of necessary resources. It will also inform commodity procurement activities, assuring the availability of an adequate quantity of products to deliver the additional services per the new guidelines.

Addressing Financial Barriers in Access to Medicines

The inaugural meeting of the Universal Health Coverage Advisory Committee of Namibia (UHCAN) took place March 19. The meeting aims at improving the status of and expanding UHC and the HIV and AIDS and MNCH responses. SIAPS actively participated in the inaugural meeting highlighting the pharmaceutical management considerations for such UHC expansion.

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. This includes support to countries in supply planning and management; rational medicines use; pharamcovigilance; facility and community-based case management; medicine and therapeutics information; and infection control

Community Case Management

During the quarter, SIAPS continued to work with the national malaria control program (PNILP) in Burundi to support community case management (CCM) in two districts. By the end of the quarter, all 402 community health workers (CHWs) were trained and equipped to treat children less than 5 years within their catchment areas. A total of 9,462 children less than 5 years with fever had access to CHWs. Among them, 9,420 were tested for malaria with a rapid diagnostic

test (RDT) and 7,452 tested positive. A total of 5,236 children received malaria treatment within 24 hours.

SIAPS also disseminated the results of the pilot evaluation of CCM conducted in collaboration with PNILP and Concern Worldwide in three districts in Burundi. The results were shared at the central level and in the two districts supported by SIAPS. The data pointed out the advantages of shifting to an integrated model (iCCM), outlined the costs of CCM and iCCM, and recommended steps for improving the quality of care.

Pharmacovigilance and Rational Use

SIAPS published the new document entitled *Preventing and Minimizing Risks Associated with Anti-tuberculosis Medicines to Improve Patient Safety*. The document was disseminated through various channels including e-drug, WHO portal, MSH newsletter, and SIAPS website: siapsprogram.org. SIAPS also developed and submitted an abstract on the safety risk management approach to the UNION meeting.

In Ethiopia, SIAPS organized discussions on how to identify, prevent, manage, and report adverse drug reactions (ADRs), medication errors, and product quality defects in six health facilities. During the quarter, 71 ADRs from 39 health facilities were reported into the national PV database. Following reports of product quality defects by health providers, regulatory decisions were made on three products—distribution of amoxicillin 250 mg tablets and 5 ml suspension was put on hold until the laboratory investigation is complete, and the importer of RHZE was informed to recall the product and report to the Food, Medicine and Health Care Administration and Control Authority (FMHACA).

Support to active surveillance activities continued in two of Namibia's main hospitals. The Therapeutics Information and Pharmacovigilance Center (TIPC) and SIAPS collaborated to provide training to field promoters on PV and on the ADR reporting tool. TIPC received 51 ADR reports between October 2013 and March 2014. SIAPS supported TIPC in analyzing data from 842 suspected ADRs generated from spontaneous reports submitted between 2011 and 2013. The analysis showed that ARVs were associated with ADRs. A report entitled *Assessing the Safety of ARV Medicines using Spontaneously Reported Adverse Event Data in Namibia's Vigibase® Database* was produced.

SIAPS continues to support South Africa's National Pharmacovigilance Center to implement the decentralized PV system in Mpumalanga (MP) and NW provinces. To date, the total number of ADRs received in MP is 2,697 since the program's inception in 2010. During the quarter, phase two implementation began in NW involving on-site mentorship and support to stimulate reporting and to improve the quality of reports received. At this stage, only 4 of 20 clusters have submitted a total of 170 ADR reports related to ARV ADRs.

In Swaziland, SIAPS works closely with MOH to collect adverse event data from the four sentinel sites that are piloting the HIV/TB active surveillance project. Bimonthly monitoring and supportive supervision visits are conducted at these sites. SIAPS provided support to MOH's

Pharmacovigilance Unit in the analysis of data collected during the quarter and will release the results with the next quarter's edition of the *Medicines Safety Watch* newsletter.

In Ukraine, SIAPS has supported progress in (1) automating information systems to increase ADR reporting, (2) expanding active surveillance, and (3) conducting PV audits. The final draft of the active PV protocol was submitted for an expert review during this quarter. The WHO training course on PV and cohort event monitoring for patients on treatment for drug-resistant TB held in Copenhagen in March was an opportunity to provide support to the State Expert Center (SEC) and the Ukrainian Center for Disease Control to develop and present a concept note on the PV strategy for the national TB program. Subsequently, SIAPS provided assistance to the SEC to develop a PV national action plan for the national TB program and to also develop a plan for the implementation of a PV system audit.

Rational use activities have advanced in several countries. SIAPS is adapting the Drug Use Review Guidelines for the TB program in Ukraine to facilitate improvements in rational use of ant-TB and other medicines. During the quarter, SIAPS finalized and presented for discussion a study report on knowledge, attitudes, and practices influencing access to antimalarials in gold mining areas in Suriname.

In Ethiopia, SIAPS supervised and mentored pharmacy professionals at 14 health facilities to improve prescribing and dispensing practices. During supportive supervision visits, SIAPS staff provided health facilities with materials including an electronic version of standard prescription paper, manuals on good prescribing and dispensing, and tablet counting trays. SIAPS also reviewed progress on the implementation of pharmacy standards as laid out in the Ethiopian Hospital Reform Implementation Guidelines, use of facility-based drug lists, and compliance with STGs. In addition, 15 hospitals were supplied with a new edition of a drug supply management reference and with various tools to strengthen the drug information service. Also, the revised version of *Medicines Use Education to Clients: Healthcare Providers' Guide* was distributed to health facilities. Also, three information, education, and communication materials on RMU and AMR were distributed for use by patients.

In Burundi, SIAPS collected data on best practices in case management of malaria. Findings show that 52.5% of facilities have a copy of the new malaria STGs, 76.5% of prescriptions comply with the new malaria STGs, 63.6% of labels on dispensed medicines were clear and legible, 96.6% of patients received instructions on the use of their medication, and 50.9% of patients can correctly repeat information received about their medication. This data will allow SIAPS to provide support to improve practices and to ensure the rational use of malaria medicines.

In Namibia, SIAPS continued to provide support to the Pharmaceutical Services Division of the Ministry of Health and Social Services (MoHSS) to finalize the STG post-implementation assessment report for 13 health facilities in 6 regions of Namibia covering 11 disease conditions. Of the 1,090 prescriptions reviewed, 26% complied with the STGs. Data showed that compliance to the STG has declined by 33% between 2011 and 2013. Among the 37 prescribers interviewed for the assessment, 94.4% reported that STGs were available in their facilities and 83.3% of them had personal copies. Although STGs appear accessible, compliance is low. The STG post-

implementation assessment report provides recommendations to MoHSS for improving compliance to Namibia's STGs.

Treatment Adherence

In Namibia, SIAPS finalized the printing of ARV treatment literacy materials to increase retention and adherence to ARV treatment; 250 desk flip charts were produced in 9 languages, along with 200 DVDs. With Cross Bureau funding, SIAPS made further progress on the medication adherence guidance document. This document is an evidence-based practical tool designed for health care professionals and other stakeholders in resource-limited settings to set up a systems-based approach to improving medication adherence. In South Africa, the smartphone application for the Adult Hospital Level Standard Treatment Guidelines and Essential Medicines List (EML) was launched on January 29, 2014, and can now be downloaded from the NDoH website (www.health.gov.za). The application is expected to contribute to improving compliance with the Adult Hospital Essential Medicines List by increasing access to the guidelines.

Antimicrobial Resistance

SIAPS organized patient education sessions at 11 health facilities in 4 regions of Ethiopia. These sessions create awareness on the safe and appropriate use of medicines, thus contributing to the containment of AMR. SIAPS also continued to build the capacity of FMHACA for organizing AMR/RMU training for media personnel and for organizing AMR advisory committee meetings.

In Namibia, SIAPS helped abstract and analyze data on early warning indicators (EWIs) of HIV drug resistance from the national database. Using data from July to September 2013, SIAPS compiled a quarterly ART adherence and retention report. The report shows that 37 facilities are implementing activities to monitor and/or promote adherence to recommended treatment. Still, the number of EDT sites monitoring adherence to ART remains at 46 (below the target of 50).

In South Africa, SIAPS provided assistance to the NDoH to develop a clinical monitoring tool for drug-susceptible TB. The draft tool was submitted to the TB Directorate. Also in South Africa, the Director General of Health established the national antimicrobial stewardship working group in October 2013. SIAPS participates in this working group, providing technical assistance in preparing for a national stakeholder's consultative meeting in the next quarter in which the draft national AMR strategy framework will be discussed.

With Cross Bureau funding, SIAPS made progress on the USAID e-learning course on AMR (part 2). The draft of the course is being reviewed internally. Pre- and post-knowledge test questions were also developed.

Drug and Therapeutics Committees

In Swaziland, SIAPS facilitated the formulation of PTCs at six hospitals. Two of the six facility DTCs conducted meetings in which they documented resolutions aimed at improving medicine use.

In Ethiopia, SIAPS provided technical assistance to 11 health facilities to conduct a prescription analysis and DUR on selected medicines. The results of the review were disseminated to members of the DTC and hospital management and informed the development of intervention plans at each hospital. SIAPS also provided technical assistance to DTCs in nine hospitals in the Amhara and Tigray regional states to conduct an ABC/VEN analysis.

In South Africa, there is no clear policy on PTCs. This has resulted in differences in the objectives and functioning of PTCs across and within the same level of care in the country. During the quarter, SIAPS began working with the NDoH on the development of a National Policy for the Establishment and Functioning of Pharmacy and Therapeutics Committees in South Africa. PTCs will focus on three core components—a formulary system, RMU including safety and quality, and procurement and financial management. During the quarter, SIAPS also supported a training of trainers (ToT) workshop on PTC functionality and basic pharmaco-economic principles for 23 KwaZulu-Natal DOH clinicians and pharmacists of South Africa.

Still in South Africa, the Rational Medicines Utilization Sub-committee of the Gauteng Provincial PTC (GPPTC) identified the need to assess the use of misoprostol to protect maternal and child health. SIAPS supported the GPPTC in reviewing the quantities of misoprostol used in each facility from January to June 2012 and from January to June 2013. SIAPS will continue to provide assistance in conducting this comprehensive analysis. The results will be used to promote the safe use of misoprostol and to reduce mother and child morbidity and mortality. In Mozambique, the Jose Macamo Hospital has requested assistance from SIAPS in implementing a unit dose system in some clinical departments where medicines will be pre-packaged prior to dispensing. In the Pemba Provincial Hospital, a small study on compliance with prescription norms was also carried out and the results were presented to the DTC and other clinicians.

Supply Management

SIAPS supports holistic supply chain management to assure uninterrupted availability of medicines and other health commodities. Emphasis is on continuous improvements in supply chain processes including quantification, procurement, warehousing and inventory control, and transportation management. In this quarter, ten countries were supported by SIAPS to implement measures to prevent stock out of medicines and other health commodities. These countries are Angola, Burundi, Dominican Republic, Ethiopia, Guinea, Lesotho, Mali, Philippines, South Africa, and Swaziland.

In Swaziland, SIAPS worked with MOH to finalize quantification of HIV and AIDS medicines and commodities for the period April 2014 to March 2016. The exercise took into consideration the increased product demand due to the revision of treatment eligibility criterion and the introduction of the option B+ in PMTCT. MOH has already made commitments to fund the needs for fiscal years 2014 and 2015. SIAPS, in collaboration with UNFPA, also conducted an FP quantification exercise that produced a forecast and supply plan for reproductive health and FP supplies for 2014–2018. Finally, a supply plan for laboratory and TB medicines was developed for the 2014 financial year.

As a quick solution to address stock-outs of antimalarials in Guinea, and based on a PMI/USAID request, SIAPS conducted an emergency distribution of PMI-funded antimalarial commodities to 19 districts and approximately 175 health facilities in Guinea. SIAPS initially developed distribution plans to determine the quantity to be shipped to Pharmacie Centrale de Guinée (PCG) regional warehouses and other regional depots so that all health facilities could have a continuous supply of these health products. Meanwhile, SIAPS continued to provide technical assistance for strengthening the quantification, reporting, and replenishment system for essential medicines including the 13 MCH commodities.

SIAPS provided technical assistance to Angola's central medical store (CECOMA) to improve the warehouse and distribution management system. CECOMA's top management adopted a detailed warehouse and distribution management strengthening plan produced by this support. Through on-the-job training, SIAPS worked with CECOMA staff in developing SOPs for receiving, storage, and distribution. SIAPS also supported the development of additional management tools for CECOMA, including key performance indicators; introduction of a unique product numbering system; and suggested a new warehouse location numbering system in CECOMA. SIAPS drafted an organogram for the transition from a product-based management structure to a function-based management structure and with detailed information on roles and responsibilities for the recommended positions. The coordinated procurement plan for HIV and AIDS health commodities for Angola, which informs procurement and supply chain management for HIV and AIDS commodities, was also updated.

To help improve availability and accessibility to GeneXpert testing, SIAPS worked with the National Tuberculosis Reference Laboratory (NTRL) to develop an allocation list for the distribution of GeneXpert units in the Philippines based on an analysis of local TB epidemiology, population, transportation, power supply, and security conditions. A total of 70 units are expected to be deployed throughout the country by the end of 2014.

SIAPS continues to provide support to the Central Procurement Unit (CPU) of the South Africa's NDoH. The support is mainly to allow the CPU to adequately manage the procurement of ARVs purchased with Global Fund funding and distributed by 19 stocking units. Terms of reference have been finalized for the support that SIAPS provides to the CPU, which includes input on the development of performance measures and review of quarterly reports to the Global Fund.

The pharmaceutical depot in Limpopo reported 79% medicine availability at the end of the South African Government financial year in March 2014. This level of availability shows a marked increase from the 50% average reported at the end of the previous financial year. This improvement is the culmination of several interventions implemented with support from SIAPS, which included improving access to inventory management information at depot and facility levels and better management of supplier performance.

SIAPS Portfolios and SIAPS IRs in the Year 3 Quarter 2 Report

COUNTRY/PORTFOLIO	IR1	IR2	IR3	IR4	IR5
Africa					
Angola	•	•	•		•
Burundi	•	•	•		•
Cameroon	•	•	•	•	
Democratic Republic of Congo	•	•	•		•
Ethiopia	•	•	•	•	•
Guinea	•	•	•		•
Lesotho	•	•	•		
Mali	•	•	•		
Mozambique	•		•	•	•
Namibia	•	•	•	•	•
South Africa	•	•	•	•	•
South Sudan	•	•	•		•
Swaziland	•	•	•	•	•
West Africa Regional	•	•	•		
Asia and Middle East					
Bangladesh	•	•	•		•
Philippines		•	•		•
Europe and Eurasia					
Tajikistan		•	•		
Turkmenistan			•		
Ukraine	•	•	•		•
Uzbekistan	•		•		
Latin America and the Caribbean					
Dominican Republic	•	•	•	•	•
Haiti					•
Amazon Malaria Initiative	•		•		•
Core Portfolios					
Cross-Bureau	•	•	•	•	•
Malaria Core		•	•		
MCH Core		•	•		•
TB Core	•	•	•		•
Total Portfolios	21	22	26	8	19

CROSS BUREAU

(formerly Common Agenda)

Objective 1: Strengthen pharmaceutical sector governance

SIAPS is using Cross Bureau funding to develop an e-learning course entitled "Governance in the Management of Medicines" for USAID and for other public health practitioners with Internet access. In this quarter, SIAPS reviewed comments received from the USAID/Washington Office of Health Systems (OHS) following an in-depth technical review of the draft course materials. Following OHS's review, SIAPS and Knowledge for Health (K4H) discussed and agreed upon the changes to be made to the instructional design and sequencing of the course, and to plan for the development of the graphics and animation. The K4H project staff recommended that the course be made available online at a test site before sharing it with the USAID Bureau of Democracy, Rights, and Governance and members of the WHO Good Governance for Medicines (GGM) program to allow reviewers to provide comments on the content as well as the look and feel of the online version. In the next quarter, SIAPS will develop a draft to be uploaded to the global health e-learning platform and will further support the review process as needed.

Also in this quarter, Cross Bureau funding supported SIAPS participation in the WHO Good Governance for Medicines Technical Working Group meeting in Tunis, Tunisia, March 17–20, 2014. A member of the SIAPS technical team gave a presentation on "Good Governance in Medicines Registration in Low- and Middle-Income Countries: SIAPS Activities" and participated in various working group sessions aimed at reviewing the WHO transparency assessment instrument; discussing the development of codes of conduct and conflict of interest policies; and defining indicators and methodologies for good governance monitoring and evaluation. In the next quarter, SIAPS will explore opportunities to further support the WHO GGM program in these areas.

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

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 broader context of continuing professional development for multiple levels of the pharmacy workforce including pharmacists, technicians, and assistants. ACPE drafted a framework document outlining how an accreditation program for pharmaceutical continuing education and training should be established for resource-constrained countries. SIAPS reviewed and provided feedback to ACPE to help finalize the framework document.

SIAPS also continued to work with its partner, the Ecumenical Pharmaceutical Network (EPN) to further explore the new opportunity to strengthen pooled procurement by EPN members in Cameroon. The ongoing proposal looks at establishing a pooled procurement amongst interested church entities with a view to rationalize procurement, reduce medicine costs and ultimately improve financial access to essential medicines.

Constraints to Progress

- Delayed deliverable from ACPE. The final framework is now expected in Q3.

- A change in the position of the EPN Executive Director has delayed the activity related to the conceptualization of pooled procurement.

Objective 3: Information for decision-making challenges addressed in the pharmaceutical sector

In this quarter, SIAPS met with USAID/Washington to discuss the role of Technical Advisory Group (TAG) in the activity to develop a framework and metrics to measure the effects of pharmaceutical systems strengthening interventions. It was agreed that in place of a TAG, a consultative meeting of SIAPS partners would be convened to validate proposed definitions, frameworks, and metrics. SIAPS will draft the terms of reference for the partner consultation, propose participants, and determine scheduling of the stakeholder meeting.

The targeted literature search to identify frameworks, approaches, and metrics that have been proposed or used to characterize a pharmaceutical system was completed with the assistance of a consultant contracted by SIAPS. The literature search confirmed the lack of agreement on standardized approaches, metrics, or tools for measuring the impact of pharmaceutical systems strengthening interventions. In this quarter, SIAPS will continue to compile indicators for system strengthening interventions, define the preliminary framework, and identify an initial set of metrics for the pharmaceutical sector components which will be presented for review at a consultative meeting of SIAPS partners, including WHO, Harvard University, and other selected experts. The consultative meeting is tentatively scheduled for the start of the fourth quarter. Following the consultation, SIAPS will refine the framework and metrics and field test the tools.

In other work under this objective, SIAPS developed an initial draft of the STG how-to manual based on a peer-reviewed and revised outline. The draft is currently being further reviewed internally before being finalized.

SIAPS also continued to work with the Harvard School of Public Health (HSPH) on the activity aimed at identifying facility-level practices or practice-related behaviors impacting central supply chain performance and developing related indicators. Last quarter, a literature review was completed on practices and behaviors at the health-facility level that influence the performance of supply chains. This quarter, data collection was completed in three focus countries: Cameroon, Swaziland, and Namibia. These data will inform the identification of key practices and related behaviors that impact upstream supply chain performance at hospitals, health centers, and dispensaries.

Working in collaboration with VillageReach on the data burden activity, SIAPS finalized the survey tool based on the result of the pilot study in Malawi. SIAPS has also now identified Cameroon and Mali where the survey will be implemented. The survey will include information

in a sample of facilities to identify the actual data points related to logistics information systems that are routinely collected and reported. The survey will also show the extent to which this data is being used. Results from the survey are expected to inform the burden of data collection and to guide the recommendations on the minimum package of data points that need to be collected for informed decision making.

Partner Contributions

Harvard School of Public Health is contributing their experience in supply chain studies to support the behavioral research study on pharmacy practices.

VillageReach revised the survey questionnaire based on SIAPS recommendations. The final version is now ready to be applied in selected countries.

Constraints to Progress

Regarding the activity with HSPH, upstream indicators, previously thought to have been available from SCMS, had to be developed from a literature review. Fortunately, most of the indicators have been defined through the work that the SCMS project has accomplished.

Objective 4: Strengthened financing strategies and approaches

This quarter, SIAPS reviewed and provided comments on the deliverable developed by Results for Development (R4D) Institute on the financial flow assessment tool for pharmaceuticals. SIAPS has planned to provide R4D with updated materials by April 18. Additionally, R4D has agreed to present their deliverable internally during the next quarter.

Partner Contributions

R4D was subcontracted for this activity because of their expertise in the area of financing.

Constraints to Progress

There were a few delays on the part of R4D, caused by travel and other commitments.

Objective 5: Quality of pharmaceutical products and services improved

Following the review and approval of the document outline, and using the SIAPS framework for strengthening systems to improve medication adherence, an initial draft of the medication adherence guidance document was developed. The next step is to review and finalize the draft of the medication adherence guidance document.

Additionally, the USAID e-learning course on antimicrobial resistance (part 2) underwent extensive additional revisions. The draft of the course was circulated and reviewed internally. In addition, a set of pre- and post-reading knowledge test questions were drafted.

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

SIAPS continued the support to the WHO Essential Medicines and Health Products portal with funding for the IT contractor (Human Info) to make improvements to the platform and to add medicines-related documents to the platform. This quarter, Human Info's work focused on internal systems improvements to capture meta-data more efficiently and improvements to the web interface for displaying search results. Through the combined efforts of Human Info and the WHO documentarian, the platform now hosts more than 4,200 documents on medicines.

SIAPS coordinated an online review with the IT contractor to allow for the demonstration of the improvements made to the platform to date. SIAPS and Human Info staff reviewed line by line improvements to the system to assure that work performed met the needs of the WHO client. WHO was unable to attend the online demonstration and Human Info agreed to set up a follow-on meeting.

Discussions continued this quarter on plans for broader dissemination of the EMP Portal and how to use the portal to ascertain areas for future research is needed to round out the body of knowledge on medicines management.

SIAPS has continued internal marketing of the portal to encourage technical staff to publish finished works on the site. SIAPS is also investigating how best to link the two sites – either list the portal on siapsprogram.org as a resource or include a live newsfeed on the website to share real-time updates from the WHO EMP portal.

SIAPS staff attended the Supply Chain Costing User's Group Meeting hosted by the USAID | DELIVER Project in March. The objectives of the meeting included: highlighting the group's accomplishments from the March 2013 meeting and identifying areas of unfinished business; sharing updates, advances, or changes to new tools, manuals, or reports; discussing economic evaluation of supply chains; and identifying follow-up actions. Various approaches to supply chain costing were discussed as well as the use of economic evaluations for supply chains. SIAPS shared insights from the distribution costing work on malaria products conducted in Kenya and Benin. SIAPS also shared lessons learned on obtaining information on volumes of products and using the extrapolative model for estimating costs, developed by SIAPS. Lastly, two working groups, both of which SIAPS will participate in, were created to develop a composite indicator for monitoring supply chains and to develop mechanisms to link supply chains to health outcomes.

Partner Contributions

WHO continues as owner and active participant in managing the WHO Essential Medicines and Health Products portal.

GLOBAL PROGRAMS

Malaria Core

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

Overall Quarter Progress

During the quarter, SIAPS continued its effort to improve coverage of malaria interventions. A SIAPS staff met with PMI/Washington to discuss of activity implementation in PMI-supported countries.

In addition, SIAPS facilitated PMI procurement decisions by conducting EUV surveys in two countries, completing the gap analyses templates, and submitting stock status of malaria commodities from Angola, Burundi, DRC, Ethiopia, Guinea, Kenya, Mali, South Sudan, and Uganda. Together these activities work toward improving availability of malaria commodities and thereby contribute to ending of preventable maternal and neonatal deaths due to malaria and its complications.

Objective 1: Improve coverage of malaria interventions

Quarterly Progress

SIAPS continued to hold monthly coordination meetings with PMI/Washington to discuss implementation of PMI activities in supported countries. Also during the quarter, SIAPS finalized the "Guide for Malaria Commodities Logistic Management System: Applying the Monitoring-Training-Planning Approach for Improving Performance." The guide is intended to assist countries with improving logistic management skills for their malaria programs.

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

Quarterly Progress

During this quarter, the end use verification (EUV) survey was conducted in Ethiopia and Mali, while Angola finalized the EUV report and disseminated the results. Support was provided in reviewing the findings and providing feedback on viable follow-up activities and interventions based on EUV survey results. 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. In preparation of the upcoming Malaria Operational Plan (MOP) visits, gap analysis templates from six countries (Angola, Burundi, DRC, Guinea, Kenya, and Mali) were completed and will be submitted to PMI soon.

MCH Core

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

Overall Quarter Progress

The SIAPS/ Maternal and Child Health (MCH) project staff continued to push forward the global agenda for pharmaceutical management to increase access to essential, life-saving maternal, newborn, and child health (MNCH) medicines and supplies and thereby contribute to ending preventable maternal and child deaths. SIAPS continued to be actively engaged at the global level through its participation in United Nations Commission on Life-Saving Commodities (UNCoLSC) working groups, and other global task forces such as the Community Case Management (CCM) Taskforce and the Reproductive Health Supplies Coalition (RHSC). For example, SIAPS co-presented in a webinar on quantification of CCM commodities, organized by the CCM Taskforce. Also this quarter, SIAPS Principal Technical Advisor Beth Yeager, was named chair of the RHSC Maternal Health Caucus. Finally, SIAPS presented at the Congressional Caucus on Maternal Health issues on March 26, 2014, on strengthening the role of the health work force for saving the lives of women and children.

SIAPS also made progress in developing and validating tools for improving pharmaceutical management. This quarter, SIAPS/MCH successfully conducted a workshop on the results of the sub-national procurement assessment in Bangladesh. SIAPS worked with key stakeholders from the government to identify the next steps for improving local procurement practices to increase availability of essential maternal health medicines at the district level. Additionally, the program received approval from USAID/Zambia to validate the intervention guide for child illness beginning next quarter.

At the country level, in the Democratic Republic of the Congo (DRC), SIAPS/MCH worked closely with SIAPS/DRC and DRC's Ministry of Health (MoH) and Department of Pharmacy and Medicine (DPM) in the EML review and implementation plan for the use of chlorhexidine (CHX) 7.1 percent for umbilical cord care, as well as the use of 250 mg amoxicillin dispersible tablets for pneumonia treatment among children under five. The updated version of the EML now includes all 13 UN Commission priority commodities.

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

SIAPS/MCH participated and presented at a number of meetings, working with global partners to ensure that appropriate pharmaceutical management for medicines and supplies is included in the global MCH agenda.

This quarter, Beth Yeager was named chair of the Maternal Health Supplies (MHS) Caucus of the RHSC which serves as a forum for addressing the challenges of access to reproductive health commodities, particularly magnesium sulfate, misoprostol, and oxytocin. As chair of the MHS Caucus, Ms. Yeager will be responsible for facilitating the group's quarterly meetings, tracking

progress on Caucus initiatives, and serving as a liaison between the Caucus and other maternal health initiatives and working groups.

Also, SIAPS MCH staff attended a pre-eclampsia/eclampsia Technical Working Group Meeting hosted by MCHIP. The purpose of the meeting was to exchange information regarding current work to improve management of pre-eclampsia/eclampsia.

SIAPS presented at the Congressional Caucus for Women's Issues (CCWI) on maternal health on March 26, 2014. The caucus is a Congressional Member Organization registered with the House Administration Committee; its membership includes the women members of the House of Representatives. International Medical Corps and Management Sciences for Health along with the co-chair and vice-chair of the Caucus organized a briefing and SIAPS presented on strengthening the role of the health work force for saving the lives of women and children.

SIAPS also continued to facilitate the monthly collection of the data for the Jadelle Access Project from SIAPS countries. The data includes a summary on the availability of Jadelle progesterone implants in SIAPS countries based on reviews of the orders information received from various data sources and includes data (e.g., stock on hand and average monthly consumption) on the anticipated months of stock on hand.

SIAPS continued to push forward the global agenda for pharmaceutical management for medicines for child health. On March 3–5, 2014, SIAPS staff participated at the iCCM Evidence Review Symposium in Accra, Ghana. Prior to the symposium, SIAPS actively contributed to the development of a lessons-learned document in supply chain management. This document was part of the resource package that participants in the symposium were provided. Lessons-learned documents were developed for each thematic area. During the symposium, SIAPS also attended the supply chain sessions which included a side session on quantification of products for CCM.

SIAPS continued to actively participate in the CCM Taskforce, including attending the quarterly meeting on January 16, 2014, as well as the Supply Chain Management (SCM) taskforce subgroup. SIAPS chaired one of the three subgroup meetings and contributed to the development of generic supply chain management tools for CCM. The tools are basically a resupply order form with reporting on stock status and are still in process of development. On February 26, 2014, SIAPS staff co-presented a webinar on quantification for CCM. Next quarter, SIAPS will continue to participate in the SCM subgroup and CCM Taskforce activities. On May 5–9, 2014, SIAPS will attend the CORE Group's Global Health Practitioner Conference in Silver Spring, MD. During the conference, SIAPS will co-facilitate a supply chain session organized by the SCM subgroup.

Finally, because of the release of the New Funding Model from Global Fund, there have been two meetings between USAID and implementing partners on how to support countries in preparing for concept notes that incorporate elements of the iCCM platform for submission to the Global Fund. It was agreed that SIAPS participation at the West Africa Global Fund/iCCM meeting in Ghana was not necessary and USAID will coordinate the needed technical assistance (TA) once there was clarity on which countries are eligible to submit concept notes and whether the allocated funding envelopes would be sufficient to include CCM.

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

Significant progress was made this quarter in developing guidance and tools for pharmaceutical management for MNCH through the development of the unmet need methodology for maternal health commodities, subnational procurement assessment for maternal health medicines in Bangladesh, and the intervention guide for the management of child illness.

The tools for determining the unmet need for maternal health commodities as well as the two country case studies of DRC and Bangladesh were finalized this quarter and submitted to the editorial team. Next quarter SIAPS will present the tool at a brown bag organized by USAID on April 1, 2014, and will disseminate the final version.

Also this quarter, the analysis was completed for the subnational procurement assessment and a draft report was developed. SIAPS staff members traveled to Bangladesh from February 21 to March 7, 2014, to disseminate the results of the assessment and identify possible next steps with key stakeholders from the government, USAID, and implementing partners. Overall, the outcomes of the workshop were: (1) recognition that local procurement of maternal health medicines needs to be improved, especially with regards to forecasting and supply planning; (2) agreement that district level authorities need more support and resources to conduct local procurement of medicines; and (3) SIAPS's commitment to include a focus on strengthening local procurement practices in its program activities.

The validation of the intervention guide for the management of child illness was also approved by USAID Zambia and a letter was drafted for USAID to send to the Ministry of Community Development and Maternal and Child Health (MoCDMCH) as well as a presentation that USAID will make to the MoCDMCH. The SIAPS staff member in Zambia also met with partners and discussed the purpose of the guide and its validation so that coordination with them will be easier once USAID and MoCDNCH have selected the districts. Alongside the coordination in country, the guide has been formatted and "bundled" into a more user friendly format that can be easily navigated on a compact disc (CD) or memory stick. The CD/memory stick will also contain all the references that can be disseminated. Next quarter SIAPS and Harvard will initiate validating the guide in Zambia from April to May 2014.

Partner Contributions

Harvard Pilgrim Health Care will participate in the validation exercise and are just awaiting the confirmation of dates.

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

SIAPS/MCH works to increase the evidence base for effective strategies to increase access to pharmaceuticals and services by providing technical support at the country level, specifically in Guinea, Burundi, and DRC, and at the global level through the UNCoLSC. In Guinea, SIAPS is developing an information system to track consumption and availability of medicines at the

community level. This will be piloted as a parallel system because there is no functioning system in which to integrate it. During this quarter, the guide for use a community LMIS was completed and the Integrated Management of Childhood Illness (IMCI) Coordination Unit will ensure that the guide is approved. SIAPS continues to monitor the stock levels of CCM commodities at central and regional stores with the aim to set up a system for the IMCI Coordination Unit to continue this process. The Coordination Unit also completed a data collection exercise to complete the missing data on consumption from Guinea's community health workers. This data will be compiled next quarter and used for a review of the forecast and supply plan of CCM products. The SIAPS Core MCH team continues to work with the country team to plan the activities of the MCH funds. Next quarter, SIAPS MCH will review quantification for CCM and validation of the community LMIS and pilot monitoring systems to track consumption and availability at CHWs and health center levels in Guinea as well as to track the availability at the central and regional stores.

During this quarter, the results of the community case management of malaria evaluation in Burundi were disseminated on February 4, 2014. Based on the results presented, USAID, the MoH, and the other key stakeholder who attended the meeting were able to orient a course of action to implement integrated CCM. The MoH agreed that it needs to focus on coordination and planning, improving quality of care through strengthening supervision, and creating quality improvement teams, as well as improving medicine supply. SIAPS/ Burundi will continue to support these follow-up activities.

In DRC, SIAPS/MCH continued to provide technical assistance to SIAPS/DRC to finalize the revision of the EML. This new version of the EML includes all 13 life-saving commodities for women and children recommended by the UNColSC. The draft EML is being edited for printing. SIAPS has also supported the MOH to develop an addendum to the standard treatment guidelines for management of pneumonia in children under five with amoxicillin 250 mg dispersible tablets.

SIAPS further assisted DRC's Department of Pharmacy and Medicine (Direction de la Pharmacie et du Médicament [DPM/D3] and the UNCoLSC's Chlorhexidine Working Group to prepare for an assessment of manufacturers in DRC for potential local production of chlorhexidine digluconate 7.1 percent. The assessment was conducted by US Pharmacopeia (USP) and PATH with funding from the Chlorhexidine Working Group. SIAPS supported the assessment by coordinating with the DPM, USP, PATH and the selected manufacturers; planning for meetings with key MOH institutions and manufacturers; and facilitating logistics organization for the assessment.

SIAPS assisted the MoH (Direction Chargée de la Santé des Familles et Groupes Spécifiques-D10 and DPM/D3) to conduct a partner's coordination meeting for organizing the implementation of the country's UN Commission work plan. The meeting was held to provide updates on the country UN Commission work plan and mobilize and engage the MoH partners in implementing the work plan. Next quarter, SIAPS will continue to support SIAPS/DRC to finalize the national strategy for the introduction of CHX, develop treatment guidelines for key MNCH products that have been recently added to the EML for service providers, and prepare for the quantification of the 13 lifesaving commodities for women and children.

At the global level, SIAPS remained active in the UNCoLSC working groups and subgroups. SIAPS participated regularly in the meetings of the following working groups: Recommendation 6, Maternal Health Technical Reference Team (MHTRT), and the Chlorhexidine, Antenatal Corticosteroids, Neonatal Resuscitation, Injectable Antibiotics and Diarrhea and Pneumonia commodity working groups, including the Amoxicillin and Zinc subgroups.

SIAPS staff members attended the Supply Chain and Local Markets working group meeting (formerly known as Recommendation 6 working group, which merged with the Recommendation 2 working group). The quantification guidance for Reproductive Maternal Newborn and Child Health commodities was completed and circulated for comment. After receiving comments, SIAPS produced a final draft version which will be shared with the Supply Chain and Local Markets working group as the document is sent for editing and formatting. SIAPS also worked to finalize the compendium of promising practices in supply chain management. VillageReach circulated the latest drafts of the briefs, with the exception of the brief on warehousing, and received comments. The final set of briefs will be finalized next quarter.

SIAPS attended the in-person meeting of the MHTRT and suggestions for the phase 2 work plan were discussed. SIAPS met separately with PATH on two occasions to discuss activities around operationalizing integration of oxytocin in the cold chain. Next quarter, SIAPS will work with PATH to finalize the proposed activities which will likely be a case study on integration of oxytocin in the Expanded Program on Immunization cold chain in Mali, and an options analysis in two countries to define feasible integration scenarios.

Through participation in the CHX working group, SIAPS was requested to provide TA to Pakistan for introducing CHX 7.1 percent for umbilical cord care. SIAPS is expected to travel to Pakistan next quarter in April 2014. Also, on January 8, 2014, SIAPS staff attended a combined meeting of the Chlorhexidine and Country Working Group (CWG) specifically on chlorhexidine for umbilical cord care: country implementation planning. The meeting was held to discuss and agree on the goal and strategy for CWG and how to accelerate efforts to implement at the country level. SIAPS staff presented updates of CHX activities in DRC and participated in a panel discussion on lessons learned during 2013 in organizing and conducting stakeholder meetings. SIAPS staff presented on the potential role of the working group in optimizing technical assistance to countries for CHX implementation.

SIAPS participated in three meetings of the Injectable Antibiotics Technical Reference Team (IATRT) and an additional meeting with the group convener to discuss the landscape analysis of injectable antibiotics in DRC. Since MSH is a lead partner in the landscape analysis in DRC, SIAPS will continue to contribute and provide support to the analysis as well as the design of a study on the quality of injectable antibiotics in a few countries (led by USP PQM and PATH). SIAPS also participated in a meeting of a small group of the IATRT to set goals for the IATRT workplan. Finally, in Bangladesh, SIAPS met with Saving Newborn Lives Program to discuss potential collaboration on the landscape analysis in Bangladesh.

SIAPS staff participated in a two-day face to face meeting of Diarrhea and Pneumonia working group in New York January 22–23, 2014. She also participated in the amoxicillin subgroup and the zinc ORS subgroup meetings.

Next quarter, SIAPS will continue to regularly participate in the UNCoLSC working group and subgroup meetings. SIAPS will also attend the next Diarrhea and Pneumonia working group meeting in Washington, DC, in May 2014. SIAPS will also be coordinating with PATH to participate in the field test of the amoxicillin job aids as well as contributing to the landscape analysis on injectable antibiotics in DRC and Bangladesh.

Partner Contributions

SIAPS continued to work with VillageReach on finalizing the compendium of promising practices in supply chain management. VillageReach circulated the latest drafts of the briefs, with the exception of the brief on warehousing and received comments.

Constraints to Progress

Because of the conflicting schedules of the DRC MoH, the finalization of the action plan for the introduction of CHX 7.1 percent for umbilical cord care planned for this quarter has been delayed.

TB Core

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

Overall Quarter Progress

In year 3, quarter 2, SIAPS continued its efforts with global TB initiatives. In addition to continuing to provide technical leadership to the GDF through secondment of the Global Drug Facility (GDF) Chief of Operations, SIAPS also contributed a chapter titled "Systems approach for ensuring uninterrupted supply of new and existing quality-assured medicines" to the Stop TB Partnership and WHO Task Force for the Development of New Policies for the Treatment of TB. In terms of capacity building activities, SIAPS supported the rollout of QuanTB training in Tanzania and West Africa, maintained communication with countries trained on QuanTB to ensure its regular use as early warning system to prevent stock-outs and overstocking, provided direct technical support to NTLPs upon request for forecasting and quantification, and participated in GDF missions and TB program reviews.

With regards to tool development, SIAPS released version 1.0.2 of QuanTB, the downloadable application for forecasting, quantification and early warning system of TB medicines. QuanTB version 1.0.2 is available in 6 languages: English, Russian, French, Spanish, Portuguese, and Chinese, and includes an easier process for identifying quantities needed for emergency orders, among other updates. Additionally, SIAPS published and disseminated the "Preventing and Minimizing Risks Associated with Anti-tuberculosis Medicines to Improve Patient Safety" document through various channels like e-Drug, WHO portal, MSH newsletter, and the SIAPS website.

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

Quarterly Progress

Global TB Initiatives (Activity 1.1)— Many countries are taking steps to obtain these long awaited medicines for their programs and introducing new regimens. Past experience with the use of new TB medicines, however, calls for a cautious approach to the adoption, introduction, and implementation of new medicines to avoid their misuse and rapid development of drug resistance. To address this, the Stop TB Partnership and WHO have established a Task Force for the Development of New Policies for the Treatment of TB. Comprised of representatives from leading technical organizations, this taskforce is developing a policy implementation package (PIP) for national TB programs to guide them through the process of rational introduction of new TB medicines and regimens into their TB programs. SIAPS developed and wrote a section to the PIP on "Systems approach for ensuring uninterrupted supply of new and existing quality-assured medicines." This section will help policy makers and decision makers to understand how new medicines are adopted, introduced, and implemented to ensure better access to new medicines in their countries. WHO/Geneva will finalize the document in the next quarter.

SIAPS continued to provide technical leadership to the GDF in promoting and disseminating good medicines management practices and managing its operations through the secondment of the GDF Chief of Operations (Manager).

Regional Conference (Activity 1.2)—Following the EURO TB conference in Antalya, Turkey, in December 2013, conference proceedings were drafted based on content from panel presentations, discussions, and recommendations. This document is expected to further knowledge exchange and support WHO EURO region countries in addressing critical pharmaceutical management related shortcomings and challenges. A Priority for Action document, an expected deliverable for this conference, is in development for five sections.

Partner contributions

Global TB Initiatives (Activity 1.1)—The Global Drug Facility manager supported the concept and framework during the development of the tool-kit.

Constraints to progress

Global TB Initiatives (Activity 1.1)—SIAPS, through its predecessor program RPM Plus, played a leading technical role in the 2007 Task Force, and led the development of its key guiding documents, *New Technologies for Tuberculosis Control: A Framework for their Adoption, Introduction and Implementation* and *Engaging Stakeholders for Retooling TB Control*, both published under StopTB auspices in 2008. SIAPS was invited to contribute to the current Task Force in the third and fourth meetings (out of four) but did not play any role in the design and development of the PIP outline and key notions. Because there is no overlap in the participants of both task forces, except for SIAPS consultants, the late inclusion of SIAPS in the process resulted in a loss of institutional memory and valuable and tested approaches and guidelines.
Regional Conference (Activity 1.2)—Competing priorities and deadlines limited rapid progress on the Priorities for Action document. Further, the notes from the group discussion were either in "shorthand" or Russian. Substantial time is needed for content analysis of global knowledge base in relation to the suggestions provided by the five groups of participants for the five sections.

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

Quarterly Progress

Building capacity in pharmaceutical management for TB (Activity 2.2)—Following the resignation of key staff for this activity from the SIAPS Capacity Building team, TB Core staff have met several times to discuss the best way forward and have agreed to examine various consultancy options for assistance in completing the activity. Given the visibility and sustainability of the USAID Global Health eLearning platform, TB Core staff decided to target this platform to house the SIAPS module. Because a supply chain course is already available on this site, the focus of the SIAPS e-learning course will shift to QuanTB which is already available as in-classroom training. After additional trainings in the upcoming quarter, the material will be finalized, and then tailored to the e-learning module.

Constraints to progress

Building capacity in pharmaceutical management for TB (Activity 2.2)—As a key staff member resigned from the SIAPS Capacity Building team, it was necessary to revise plans for future work.

Develop an operational pharmaceutical research strategy for the effective implementation of national tuberculosis programs in three to five high-burden countries (Activity 2.3)—Because of competing demands and priority technical assistance in supply chain management to be delivered at country level, we were unable to identify the key operational research questions that can be meaningful for client countries. After the GDF regional officers and SIAPS regional officers are in place and actively working, we expect to identify priority areas to address activity 2.3 objectives.

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

Quarterly Progress

e-TB Manager (Activity 3.1)

- The e-TB Manager generic platform has been continuously enhanced with additional features for improved and expanded use and a new version was released. e-TB Manager is currently operating on a total of 1,974 sites in 11 countries. Globally, 2,820 active users are managing 141,856 TB and multidrug-resistant (MDR)-TB cases.

- QuanTB tool (downloadable application for forecasting, quantification, and early warning system of TB medicines) was enhanced and version 1.0.2 was released. Now the tool is available in 6 languages: English, Russian, French, Spanish, Portuguese, and Chinese. In addition, this new version includes an easier process for identifying quantities needed for emergency orders and the ability to import the number of cases from Excel,® and export quantification data to Excel. An updated user guide accompanies this version and includes improved overall guidance and three new annexes on forecasting for multiple years, quantifying patient kits, and quantifying ancillary medicines. The updated user guide has been translated into the new languages and is expected to be available by next quarter. As of March 31, 2014, there were 220 downloads of the tool.

- SIAPS worked with the WHO and GDF and integrated QuanTB with the early stock-out warning system as a part of the global forecasting for anti-TB medicines.

- Training package on quantification of TB medicines using QuanTB tool was adapted and updated, and planned to be finalized after testing during workshop for WHO and GDF and the Global Fund staff in Geneva by next quarter.

- e-TB Manager Desktop (stand-alone version for case management) testing continued to finalize the first version and also initiate adaptation for pilot testing in Bangladesh and Nigeria by next quarter.

- e-TB Manager generic technical IT documentation is being continuously updated.

- QuanTB and electronic and mobile health forums were developed and released for information exchange regarding quantification, forecasting, electronic system interoperability, and unique identifiers.

- The proposed joint symposium with KNCV Tuberculosis Foundation and WHO titled "Next Generation of e-Health for TB: Systems That Communicate" was accepted for the 45th Union World Conference on Lung Health.

- Support combining SIAPS, TBCARE, and country funds for adapting, monitoring, and implementing the e-TB Manager in Armenia, Azerbaijan, Brazil, Bangladesh, Cambodia, Indonesia, Namibia, Nigeria, Turkmenistan, Ukraine, and Vietnam was continued.

After multiple iterations, 13 common indicators that measure/characterize the use of e-TB Manager were developed with their rationale. A data collection form with relevant templates was designed to facilitate self-assessment by country programs. A pilot test was initiated in the Namibia country program to check for clear, comprehensible wording; accuracy of indicators; and feasibility of implementation. Initial feedback was received and the draft was modified. Based on the pilot findings, the common indicators will be finalized and the next step will be for dissemination to all countries using e-TB manager.

Pilot test guidelines for data analysis and information for decision making (Activity 3.2)—In Bangladesh, an inventory of documents used by their national tuberculosis program (NTP) was generated, listing their purpose, scope, variables measured, and frequency of publishing. The next step is to map the flow of information from users downstream to upstream, identify who is the ultimate custodian of the report(s), how information get used for decision making, and how the feedback loop is generated. Based on this situational analysis, the next step will be to generate relevant questions for key informant interviews.

Partner contributions

e-TB Manager (Activity 3.1)—Local partners have provided important feedback for system enhancement and development of new features and tools. In countries where SIAPS/MSH presence is significant, local partners' support for system implementation, monitoring, and reporting of key activities has been crucial for gathering successful outcomes.

Constraints to progress

e-TB Manager (Activity 3.1)—In countries without MSH country presence and deficiency of local MIS and TB specialists, there have been difficulty garnering strong champions to monitor and conduct e-TB Manager implementation activities.

Pilot test guidelines for data analysis and information for decision making (Activity 3.2)—Numerous competing demands in the Bangladesh program slowed progress, as did the departure

of a key TB staff from SIAPS program. We will attempt to make progress on this activity by leveraging SIAPS TB core staff presence in Bangladesh in future TDYs. Further, this is a completely new initiative for which there is no standard operational protocol or methodology. Based on information gathered incrementally, the protocol and data points that are relevant for the objectives of this activity are being designed.

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

Quarterly Progress

Provide technical leadership to global and regional Green Light Committee groups and Stop TB MDR TB activities and provide short-term TA to support GDF recipient countries (Activity 5.1)

- SIAPS organized the second TB Quantification Technical Meeting using QuanTB in Dar es Salaam, Tanzania, February 3–7, 2014, which included consultative meetings with the NTP and John Snow International/Supply Chain Management Systems to plan for the meeting. The training involved 18 participants from 3 countries—Tanzania, Ethiopia, and Zimbabwe—targeting NTP pharmacists, central medical stores staff, and WHO staff. The main areas of focus included data collection and planning for quantification, key issues to consider when planning for quantification, making assumptions and decisions, basic principles of supply planning, and introduction to QuanTB and early warning systems to prevent stock-outs. Participants were also guided to use country data to quantify first-line and second-line medicines and begin to implement an early warning system using QuanTB. Based on the country QuanTB outputs, SIAPS helped identify immediate red flags that needed to be addressed to avoid a stock-out or wastage. These ranged from zero to one month of stock at the central level to more than 30 months of stock for some medicines. SIAPS continued to support to the national TB programs in Uganda, Zambia, Tanzania, Kenya, and Zimbabwe on implementing the QuanTB tool. Several reminders were sent to these countries that have undergone training to share their updated QuanTB files for review and identification of areas needing further support. SIAPS received files from Uganda, Zimbabwe, Ethiopia, Tanzania, and Kenya, and challenges that SIAPS needs to address include stock imbalances, delayed submission of patient enrollment data by districts/regions, and inconsistency of reported stocks-related data. A stock-out of at least one item was observed in all five countries and appropriate recommendations were given.

- SIAPS provided technical leadership in the area of TB pharmaceutical management in two mid-term reviews of TB programs conducted in Tanzania and Kenya in February and March 2014, respectively. The reviews assessed progress of the NTPs; identified implementation challenges, emerging needs, and opportunities; and prioritized high impact interventions to plan for future TB control. During these reviews SIAPS focused on procurement and supplies management (PSM), including identification of key achievements, challenges and proposing possible ways to improve TB pharmaceutical management.

- While in Kenya for the TB program review, SIAPS was requested to participate in the GDF monitoring mission which coincided with the mid-term review of the 2011–2015

Tuberculosis Strategic Plan. The mission took place March 3–7, 2014, and SIAPS technically assisted assessment of TB drug supply system and supported the national TB program's quantification of first- and second-line medicines using QuanTB.

- As part of the recruitment of SIAPS staff to NTPs in the region, SIAPS defined the roles and responsibilities of the positions in supporting activities related to the prevention of stock outs and overstocks. SIAPS initiated discussions with the national TB programs in Kenya and Nigeria on the proposal to recruit staff to the respective NTPs; SIAPS then developed scopes of work and job descriptions for the roles. Discussions for similar recruitment of staff have commenced with the TB programs in Afghanistan, Mozambique, DRC, Philippines, and Burma.

Public-private mix (Activity 5.2)—Tanzania: In February 2014, SIAPS, in collaboration with the Tanzania National TB and Leprosy Program (NTLP) and the Tanzania Pharmacy Council, presented the results of the public-private mix pilot project at a meeting in Dar es Salaam.

Prior to the meeting, SIAPS staff finalized data analysis from 5 supervision visits conducted across the 15 months of the pilot intervention. Over the course of the pilot, SIAPS trained 737 dispensers and conducted sensitization workshops with 468 health care workers from diagnostic and treatment centers in Morogoro and Dar es Salaam. As a result, 587 clients with TB symptoms seen at ADDOs and pharmacies were referred to TB diagnostic and treatment centers for evaluation; 81 of these patients were confirmed as having TB. The workshop was attended by 39 people and including representatives from the NTLP, USAID/Tanzania, and dispensers from ADDOs and pharmacies. The NTLP reported plans to incorporate the approach into the upcoming program strategic plan, given the encouraging findings from the pilot intervention. Following the meeting, SIAPS conducted a focus group discussion with 11 participants from the pilot to discuss major challenges to participation and strategies to overcome them.

Pakistan: SIAPS staff conducted a TDY to Pakistan and identified two organizations that have the interest and capacity to carry on the PPM pharmacy initiative after the conclusion of the SIAPS pilot project: Greenstar and Mercy Corps. The Pakistan National TB Program, including the NTP Manager, reiterated their interest in the work and requested that SIAPS continue to TA in future scale up of the work. SIAPS is currently drafting a scale up plan and will share it with key stakeholders for their review. SIAPS briefed the USAID mission on the activity and they expressed an interest in participating in the scale up strategy review workshop. Lastly, SIAPS completed the trainings of pharmacy staff and interviewed trainees about their experience.

Risk management algorithms for TB/HIV co-medication (Activity 5.3.1)—SIAPS published and disseminated the "Preventing and Minimizing Risks Associated with Anti-tuberculosis Medicines to Improve Patient Safety" document through various channels such as e-drug, WHO portal, MSH newsletter, and SIAPS website. SIAPS also developed and submitted an abstract on the risk management approach for the UNION meeting.

Pilot active surveillance for monitoring the safety of TB/HIV co-medication (Activity 5.3.2)—SIAPS worked closely with Ministry of Health counterparts in Swaziland to collect adverse

event data from the sentinel sites. SIAPS also conducted a supervisory visit to the sites to assess their performance and progress during this quarter.

Drug Use Review (Activity 5.4)

- A stakeholder meeting to discuss implementation in Swaziland is tentatively scheduled for early April with a target to start data collection in May and complete analysis by the end of August.

- A stakeholder meeting to discuss implementation in Bangladesh is tentatively scheduled for the end of May or beginning of June and targeting data analysis to be conducted by the end of September.

- SIAPS/Ukraine staff are in the process of adapting the DUR Guidelines for Ukraine. The team will propose objectives that a DUR can address for the TB program in Ukraine to the State Services on HIV/AIDS and Other Socially Dangerous Diseases. Once the objectives have been agreed upon, data collection forms will be developed and implementation activities can proceed.

- The UNION Scientific Committee approved the SIAPS proposal of a symposium for the 45th UNION world conference on lung health. The symposium entitled, "Community Driven Psychosocial Support: Don't forget Medication Counseling!" is expected to not only provide knowledge exchange but also stimulate decision makers and MDR-TB program implementers recognize the importance of using and enhancing existing platforms for patient safety, including data from Drug Utilization Reviews for tailored patient counseling.

Constraints to progress

- Most countries overestimate scale-up estimates by using country targets not based on historic enrollment and trends.
  - Some countries did not have accurate information on their stock-on-order and the correct date their orders were to be received in-country.
  - Most countries do not collect data on the number of MDR-TB cases on treatment by regimens or by percentage of medicines as required in QuanTB tool.

- Delays or reluctance in sharing EWS data by some NTPs

Next quarter

- SIAPS will continue to provide technical assistance to priority countries to build capacity for quantification and implementation of early warning system to prevent stock outs

- Conduct TB quantification meeting in three countries—Democratic Republic of the Congo, Mozambique, Malawi, and Nigeria

- Participate in GDF monitoring mission upon request

- Pilot active surveillance for monitoring the safety of TB/HIV co-medication (Activity 5.3.2)

- The central analysis tool (DCAT) downloaded at central level was lost when the computer was reformatted. The team has not been able to analyze data collected from sites. SIAPS is working with tool developers to reinstall DCAT at the CMS and on some computers in the SIAPS office to prevent this from happening again. During this visit, staff will also be retrained on data analysis.

Drug Use Review (Activity 5.4)—In South Africa, the National Department of Health DR-TB directorate has suspended working on implementing the DUR program to focus on their efforts on decentralizing MDR-TB care. It is anticipated that activity will continue next year and the results will assist the directorate to assess prescribing habits of the newly trained DR-TB health care providers.

REGIONAL PROGRAMS

LAC AMI

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

Overall Quarter Progress

During this quarter, SIAPS finalized the "Knowledge, attitudes and practices influencing access to antimalarials in Suriname gold mining areas" study. It was presented and discussed in Paramaribo, Suriname. Participants agreed on national and regional interventions to improve access to antimalarials. Amazon Malaria Initiative (AMI) countries have continued reporting their stock of antimalarials at central and regional warehouses. The number or countries reporting has, however, decreased from 73 percent last quarter to 54 percent this quarter. For the countries reporting, the availability of antimalarials remains the same: around 76 percent.

Objective 1: Pharmaceutical sector governance strengthened

Quarterly Progress

An evaluation to assess the impact of AMI-supported interventions was conducted and finalized in Choco, Colombia. The results were presented and discussed with malaria program authorities and technicians. The data collection for a similar study was initiated in Loreto, Peru.

Partner contributions

The quarterly bulletin for the availability of antimalarials is coordinated and produced by the Pan American Health Organization (PAHO) with assistance from SIAPS.

Constraints to progress

A technical assistance visit to Honduras had to be postponed for next quarter, due to competing agendas in the country. During this visit, tentatively planned for April 2014, SIAPS will conclude the study on storage conditions in regional warehouses, and assess the progress in the implementation of a requisition and dispatch tool.

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

Quarterly Progress

PAHO coordinated the compilation of information on the availability and consumption of antimalarials for the AMI quarterly bulletin. SIAPS supported the collection of information in some AMI countries.

During this quarter, SIAPS finalized the technical report and success story documenting the impact of the introduction of a guideline for malaria pharmaceutical management in Choco, Colombia. The story is available in SIAPS/AMI website http://siapsprogram.org/ami/. SIAPS also concluded the technical report on "Knowledge, attitudes and practices influencing access to antimalarials in Surinam gold mining areas." The results were presented and discussed during a meeting held in Paramaribo on February 2014.

During this quarter SIAPS concluded a research protocol to assess the availability of antimalarials in AMI countries and the impact of interventions supported by AMI. Information from primary sources has already been collected in Colombia, Ecuador, and Peru. For next quarter, information will be collected in Brazil. The rest of the AMI countries have not authorized the collection of information yet.

Partner Contributions

The Knowledge, Attitudes, and Practice study conducted in Surinam gold mining areas was supported by PAHO.

Constraints to Progress

Only six countries provided data for the AMI quarterly bulletin on the availability and consumption of antimalarials, four less than in the previous quarter. AMI partners consulted with malaria programs regarding their interest in this bulletin during the AMI meeting (Managua, Nicaragua, March 10–14, 2014).

Objective 3: Pharmaceutical services improved to achieve desired health outcomes

Quarterly Progress

SIAPS concluded the technical report on "Knowledge, attitudes and practices influencing access to antimalarials in Suriname gold mining areas." The results were presented and discussed during a meeting held in Paramaribo on February 2014. Participants at this meeting agreed on national interventions to improve access to good quality pharmaceuticals in mining areas. They also drafted recommendations for regional interventions involving neighboring countries (Brazil and French Guyana), and the support of regional initiatives, including AMI. Six countries have implemented revised criteria for programing and distributing antimalarials in low incidence

areas. The results and impact of this intervention have not been assessed yet. SIAPS is currently conducting a rapid assessment that will determine (among other variables) the availability of medicines in low incidence areas. The results will be presented and discussed during a regional meeting scheduled for the second semester of 2014.

Constraints to Progress

Few AMI countries have authorized the study that will determine the availability of medicines in low incidence areas.

West Africa Regional

Goal: Ensure the availability of quality pharmaceutical products especially those related to HIV/AIDS to achieve high level, desirable health outcomes in target West African countries.

The SIAPS West Africa Regional Project (WARP) covers Benin, Burkina Faso, Cameroon, Guinea, Niger, and Togo.

Overall Quarter Progress

SIAPS WARP conducted a situational analysis of HIV and AIDS commodities management in the six target countries. Of the six, data was collected from Burkina Faso, Cameroon, Guinea, Niger, and Togo. The results indicated that there are more than 250,000 active patients in these five countries; that better coordination is needed among the stakeholders; that countries have different levels of coordination within their health care systems; and that there are gaps in funding information.

A concept note was developed for a web-based, regional dashboard to set up an early warning system (EWS) for HIV and AIDS commodities management.

SIAPS attended two WAHO experts meeting. The goal of the first one in Accra, Ghana, was to develop the ECOWAS Regional Pharmaceutical Plan (ERPP). The expected outcome of the ERPP is for the region to achieve self-sufficiency in local pharmaceutical production; reduce over- dependence on imports and over-reliance on donations by donors and partners; and strengthen the regional pharmaceutical sector by the year 2025. The goal of the second meeting in Bobodioulassso, Burkina Faso, was to develop TORs for the development of a web portal for the Essential Medicines and Vaccines Program.

SIAPS WARP attended the USAID/WA Regional Health Office (RHO) partners' meeting to update partners on the RHO's vision and strategic direction, to review partner performance, and to foster a spirit of collaboration among partners. During this meeting, SIAPS got an opportunity to discuss possible collaboration and experience sharing with the USAID | DELIVER PROJECT about an EWS and technical assistance in the West and Central Africa regions.

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

Quarterly Progress

As part of project startup, SIAPS WARP conducted a situational analysis to gain an understanding of the current capacity for HIV and AIDS commodities management and supply in each focus country, except Benin (where health workers were on strike). The regional project director travelled to Burkina, Togo, and Niger to collect data; data was collected by the local SIAPS offices in Guinea and Cameroon.

Specifically, in each target country, the situational analysis has—

- Identified key stakeholders involved in the management of ART commodities and their respective roles

- Identified the adopted STGs and the registered ARV products as well as rapid test kits (RTKs)

- Determined sources and levels of funding for ARVs and RTKs in each of the target countries

- Assessed quantification, procurement, and distribution mechanisms used for ARVs and RTKs (including coordination)

- Assessed the data elements related to ARV and RTK commodity management collected at each level of the health system

- Assessed the information flow and reporting for ARV and RTK commodity management across the different levels of the health system

In each assessed country, data was collected by reviewing key documents (including pharmaceutical policies, guidelines, and protocols for ARV and RTK management, assessments, and reports) and informant interviews of 45 staff (between February 10 and March 13, 2014) from the national (e.g., national AIDS control programs [NACPs], pharmaceutical services, central medical stores [CMSs], and regulatory sectors), regional, and provincial levels and health facilities (clinicians, pharmacists, and dispensers). The key findings are:

- There are a little over 250,000 active patients in all five countries. Overall, there are lots of gaps in data which affect planning and accurate forecasting.

- Stakeholders vary in terms of numbers and roles with a varying emphasis on different supply chain functions. Improved coordination and focus on technical assistance is needed.

- Together, stakeholders serve a number of sites and patients. There is gap in funding information. Some degree of transparency in commodity management is needed for better planning and coordination.

- Each country is at a different level of coordination. Countries have also set up working groups/committees on HIV and AIDS commodity management.

- It takes 3 to 12 months to register products in these countries, and the registration status is often unclear. A better understanding of the registration systems and procedures is needed.

- Overall, the average number of first- and second-line ART regimens per country is nine and ten, respectively. For effective supply planning management, it is best for countries to have six or seven regimens.

- Offices responsible for quantification vary across countries. There are notable quantification deficiencies due to lack of data.

- There are a lot of gaps in procurement processes across countries contributing to many challenges.

- Storage and distribution weaknesses in SOPs and distribution planning have been noted. There are gaps in inventory management SOPs.

- Only Togo developed an SOP manual for LMIS of ARV and RTKs with forms to capture data related to stock status, consumption, losses and adjustments, and patient data. Many people involved in management of ARVs and RTKs are not trained on LMIS.

- In general, reporting rates are very low.

The findings from the situational analysis will inform the development of appropriate interventions that will bridge the gaps and serve as a basis for establishing a regional coordination mechanism for HIV/AIDS commodities management.

Objective 2: Enhance capacity for pharmaceutical supply management for HIV/AIDS commodities in target countries

Quarterly Progress

During this quarter, we prepared for the upcoming SIAPS WARP stakeholders' meeting to launch the project and conduct training on HIV and AIDS information management and quantification of ARVs. To prepare for the meeting, we:

- Developed TORs and the meeting agenda and shared them with all HIV program managers in the six focus countries, regional bodies, and other key partners

- Prepared and reviewed training materials with the quantification consultant, dashboard consultant, and MSH communication team

- Held a conference call with members of JURTA-PSM Group (UNAIDS, ESTHER, Global Fund, WHO, and USAID/WA)

SIAPS WARP also attended the USAID/WA RHO partners' meeting "From Piloting to Scaling-Up Best Practices across West Africa" at the Fiesta Royale Hotel, March 19-20, 2014. As requested by USAID/WA RHO, SIAPS WARP gave presentations that highlighted activities undertaken, results achieved, challenges met, lessons learned, and activities planned for the coming months. Participants agreed on organizing this event frequently. SIAPS also met with DELIVER staff to discuss collaboration between both projects in EWSs for FP commodities and technical assistance for improving commodities' security at the country and regional levels.

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

Quarterly Progress

A concept note to set up an HIV and AIDS commodities tracking tool or EWS dashboard to monitor products availability has been developed as well as scopes of work for a consultant.

The goal of the HIV Commodity EWS Dashboard is to capture, track, aggregate, and gain information about ARVs, RTKs, and other HIV and AIDS commodities for better and faster decision making in the West Africa subregion. The dashboard will assist in forecasting, supply planning, and procurement. The dashboard will be available to all stakeholders, country governments, partners, and NGOs and will offer a platform to easily share information on funding flows and stock out risks. The data will be used to inform decision making and mitigate risks in the short, medium, and long terms. The system will have three key components—capture of data (system input), data storage and aggregation, and data analysis and reporting (system output).

The consultant has started developing the system and it will be ready for participants' orientation during upcoming SIAPS WARP stakeholders' meetings. Comments and suggestions from participants will help to develop final version for roll out at the country and regional levels.

SIAPS attended the West African Health Organization's (WAHO) experts meeting in Bobodioulasso, Burkina Faso, March 3–5, 2014, to plan the creation of the web portal for the Essential Medicines and Vaccines Program.

The Essential Medicines and Vaccines Program aims at developing access to quality, safe, and efficacious medicines and vaccines in the West African region. To manage an effective, modern program, the modern tools of information technology must be used to enhance the work of the program for its stakeholders.

The purpose of the three-day meeting was to start the project by reviewing existing web portals (WAHO website, the Coordinated Informed Buying [CIB] website), drafting TORs for the experts who will develop the portal, drafting the scope of work, drawing a roadmap for the experts and others involved in the project, and reviewing the action plan

The portal is expected to:

- Facilitate medicines registration
- Improve pharmacovigilance activities and issue alerts on counterfeit medical products
- Make available copious information on sources of essential medicines and their manufacturers or importers to make procurement more efficient
- Provide information that will promote research analysis

COUNTRY PROGRAMS

Angola

Goal: Improved Availability of Quality Products for Effective Pharmaceutical Service Delivery and Better Health Outcomes

Overall Quarterly Progress

During the reporting period, the monthly meeting of the subcommission of logistics, procurement, and operations of the inter-agency coordination committee (ICC) in the revitalization program was held in January to coordinate all the key players in medicine public supply chain. In total, 10 stakeholders were represented. SIAPS presented findings of the last Angola public supply chain analysis. In addition, a draft of the national essential medicines list was distributed to all members to request their final inputs before the list is approved by the national medicine technical committee to be appointed by the Ministry of Health.

SIAPS collaborated with one of its partners, Imperial Health Services (IHS), to support CECOMA, Angola's central medicine stores, in improving its warehouse and distribution management system. A detailed strengthening plan for CECOMA warehouse and distribution management proposed by SIAPS was adopted by CECOMA top management. Through on-the-job workshops, SIAPS worked with CECOMA staff to develop standard operating procedures (SOPs) for receiving, storage, and distribution medicine supplies. The team developed additional management tools for CECOMA including 10 key performance indicators (KPIs) for CECOMA such as picking or order accuracy, dispatch timeliness, storage temperature variances, inventory accuracy, and warehouse utilization, introduced a unique product numbering system, and suggested of a new warehouse location numbering system in CECOMA. SIAPS also reviewed CECOMA warehouse and distribution management organogram and suggested more efficient staff utilization by changing from a product-based management structure to a function-based management structure with detailed information on roles and responsibilities for the recommended positions.

In line with the 2013–2025 national health development plan, SIAPS aided the Directorate of Medicines and Equipment (DNME) to develop an outline to set up for a comprehensive national supply chain strategy. SIAPS organized consultation meetings with key stakeholders in medicines supply chain to get their input and agreement on toward the finalization of the road map that will guide developing the national supply chain strategy.

SIAPS met with officials from Universidade Jean Piaget and the DNME to identify dates, topics, and facilitators of the planned pharmaceutical supply chain management pre-service training for final-year pharmacy students. All the training material was adapted to the local context.

The DNME, in collaboration with Provincial Health Directorates of Luanda, Bié, Cunene, and Huila, held coordination meetings at provincial level with all provincial health teams, provincial partners, all municipal health directors, and municipal malaria supervisors to share findings of

SIAPS baseline assessment, identify key problems in pharmaceutical management, suggest solutions and key players, and integrate SIAPS interventions in provincial annual action plans. Preparations are now underway to organize provincial training of trainers in pharmaceutical management in the four provinces.

Findings of the last end user verification (EUV) were disseminated to the national malaria control program, the 2013 Quarter 4 Procurement Plan and Monitoring Report of malaria products (PPMRm), and the bimonthly Coordinated Procurement Plan for HIV and AIDS products were also disseminated.

During the reported period, INLS organized a training on the new revised monthly reporting form and quarterly requisition form for HIV and AIDS program that was developed with SIAPS technical assistance and started their implementation in selected hospitals. SIAPS participated in implementing partners meeting to integrate the national reproductive health plan and to a PEPFAR semi-annual coordination meeting.

Objective 1: Pharmaceutical supply chain system governance strengthened

In the reported period, SIAPS collaborated with DNME to review the terms of reference for and started the recruitment process for the consultant who will review the national pharmaceutical strategic plan. SIAPS also followed up the recruitment of the consultant that will work on the revision and finalization of the National Essential Medicines List and the National Formulary manual and attended consultation meetings with USAID, WHO, and DNME. However, there is an anticipated delay in WHO administrative procedures to finalize the recruitment of the consultant. In line with the national health development plan and the national supply chain strategy development, SIAPS performed a documents review and organized meetings with key informants including the Secretary of State for Health, the national director of medicines and equipment, CECOMA, USAID and other key stakeholders, to draft the road map that will guide the development of this national supply chain strategy. Technical people to run the strategy have been identified and the necessary buy-in from DNME was achieved. Once the road map is finalized and agreed upon, the team will then draft the national strategy to be validated and approved by the Ministry of Health.

SIAPS will assist in the review of the national pharmaceutical strategy plan; follow up with the WHO consultant and DNME to finalize the national essential medicines list and the development of the national formulary manual. SIAPS will also help finalize the road map and start developing the national supply chain strategy.

To improve CECOMA governance in warehouse management, SIAPS assisted CECOMA through on-the-job workshops with CECOMA technical staff and under the coordination of CECOMA deputy director in developing 10 Standard Operation Procedures of warehouse management and distribution and 10 KPIs that CECOMA will use to monitor its performance. Because the director of CECOMA was not available during this exercise, one CECOMA staff member was identified to lead all the process from development to implementation of these documents. SIAPS will continue to follow up with their finalization and approval. During the quarter, SIAPS Angola along with MOH implemented activities focused on strengthening the national supply chain of medicine

including those essential for improving maternal and child health by improving warehouse practices, the logistics management information system (LMIS), procurement, and distribution.

Partner Contributions

- DNME in coordinating the ICC/R sub-commission of logistics, procurement and operations meetings and in coordinating the development of the national road map towards 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.

Constraints to Progress

A continuous absence of some members of the ICC/R subcommission of logistics, procurement, and operations remains a big challenge. The frequency of the meeting was reduced to be held every other month and to continue organizing these meetings in the place where most of the public health programs are localized.

Difficulties in getting the needed data on stock movements at CECOMA level handicapped the revision of the CECOMA warehouse layout and the finalization of unique product numbering. The team will continue to educate CECOMA top management about the importance of providing all the necessary data for successful support.

There has been a long delay in approving the national technical committee that will validate the national essential medicines list. There is a need to work with strategic stakeholders including WHO for more advocacy at the minister's office level to approve this committee.

Objective 2: Local capacity for pharmaceutical management enhanced

SIAPS continues to enhance pharmaceutical capacity of local institutions and individuals by working with DNME to identify a local pharmacy school to collaborate with in organizing pre-service pharmaceutical management training to its finalist students in pharmacy. The Universidade Jean Piaget of Luanda was identified for this first phase and students at other remaining pharmacy school will be trained at a later date. These students will have training materials adapted from existing Center for Pharmaceutical Management training material that has been used in similar settings and local facilitators, and the venue and the dates for the training have been agreed upon. Thirty-five students are targeted to benefit from this training.

After conducting the baseline assessment to inform SIAPS interventions and indicators, SIAPS in coordination with DNME and NMCP participated in meetings in Luanda, Huila, Bié, and Cunene to disseminate SIAPS baseline findings and integrate SIAPS interventions in the provincial annual plans. In total, 162 participants composed of provincial health team and partners, municipal health directors, malaria municipal supervisors, and municipal public health

officials attended these meeting; 91 percent of municipalities invited attended. As a next step, SIAPS will organize a training of trainers in the provinces for all municipal warehouse managers and municipal malaria supervisors to be followed by municipal trainings and supportive supervisions. SIAPS will also adapt a post-training supervision tool that will allow the measurement of identified key performance indicators as a direct follow up of the training.

Partner contributions

- DNME adapted the pharmaceutical management training material and coordinated with training facilitators

- University Jean Piaget helped prepare the pharmaceutical training for the finalist students in pharmacy provincial health directorates. Also facilitated coordination meetings at provincial level to integrate SIAPS activities in the provincial action plans.

- DNME and NMCP provided the national facilitators in the provincial coordination meetings

Objective 3: Information for pharmaceutical management decision making improved

SIAPS continued to support the National Institute for HIV and AIDS Control (Institute Nacional da Luta contra a SIDA (INLS) to improve LMIS data quality and reporting rates for HIV and AIDS commodities by submitting the revised monthly reporting form and quarterly requisition form to INLS management for approval and implementation. As a direct result of ownership, INLS provided its inputs to the final version of the forms and organized internal training to the staff that is currently disseminating the new LMIS forms in selected hospitals and at provincial level. SIAPS will assist with a compilation tool that will capture all logistics information from health facilities using the new reporting form in following up the availability of HIV and AIDS health commodities. Besides, the information contained on the revised manual reporting and requisition forms is being incorporated in the INLS patient management electronic system that is used in selected hospitals to facilitate reporting and data use for decision making.

SIAPS provide support to the national malaria control program to update the 2013 Q4 Procurement Plan and Monitoring Report for antimalarial products (PPMRm) and to finalize and disseminate the end user verification report that was implemented in the last quarter. Findings showed a generalized low use of pharmaceutical management tools especially stock cards at municipal and facilities level, poor storage conditions, poor malaria case diagnosis with a high number of non-confirmed cases of malaria, large number of cases of malaria for children under five, and frequent stock-outs of artemisinin-based combination therapy (ACTs) and rapid diagnostic tests. Contributing factors included inadequate or lack of laboratory diagnosis in some facilities; national stock outs of RDTs, unbalanced distribution of ACTs at provincial level, lack of regular supervisions at facility level; and low priority from municipalities to reproduce the pharmaceutical management tools especially stock cards.

With SIAPS support, the NMCP organized a national meeting with all provincial essential medicine and malaria supervisors to discuss these issues of logistics and information

management systems and recommend corrective actions to improve the availability and use of antimalarial medicines. Emphasis was put on the treatment of children under five and pregnant women that are either benefiting with the intermittent preventive treatment in pregnancy (IPTp) or are under malaria treatment to adhere strictly on the preventive measures and on the treatment protocols to reduce the malaria morbidity and mortality rates. SIAPS advised including the low dosage of folic acid (0.4 mg) in the national essential medicine list for the pregnant women that are taking both sulfadoxine-pyrimethamine (SP) for IPTp and iron plus folic acid to prevent anemia to avoid drug-drug interactions. SIAPS staff also recommended reinforcing the information provided to prescribers not to provide SP for HIV positive pregnant women who are eligible to IPTp and who are already taking co-trimoxazole as HIV opportunistic infections preventive therapy as this association is contraindicated. This will contribute to a better treatment and care of maternal, neonatal and child health especially in HIV positive pregnant women and reduce the risk of medicines toxicities to both the mother and the fetus.

SIAPS also provided support to update the coordinated procurement plan for Health Commodities Tool to inform procurement and supply chain management for HIV and AIDS commodities. One of the challenges included the difficult access to stock levels data. SIAPS will collaborate more with the Global Fund principal recipient for HIV and AIDS, United Nations Development Program, in updating this important tool to prevent stock-outs of antiretrovirals and other HIV and AIDS health commodities. In relation to reproductive health (RH) and family planning interventions, SIAPS organized a coordination meeting with RH implementing partners to discuss and agree on each partner's collaboration in improving the reproductive health logistics information system. SIAPS also participated in a meeting organized by USAID to integrate SIAPS interventions in the national RH annual plan and started preparations of a technical assistance to the reproductive health program.

Partner Contributions

- NMCP helped coordinate and implement EUV and PPMRm
- INLS provided information on the bi-monthly coordinated procurement Plan and in disseminating the new revised monthly reporting and quarterly requisition forms through training and multiplication
- DNME worked to coordinate EUV data collection
- Provincial and municipal teams collected data on EUV and PPMRm
- USAID implementing partners (Pathfinder and Forca de Saude) worked jointly to improve data quality and report completeness in reproductive health

Constraints to Progress

- Low use of pharmaceutical management forms at health facility level that handicapped EUV data collection: this problem has repeatedly been reported to the Ministry of health and to provincial health directorates to ensure that these forms are available and consistently used.

- Incomplete monthly logistics reports from facilities to provinces that delay the national compilation of data

Objective 4: Pharmaceutical services strengthened to achieve desired health outcomes

SIAPS continued to provide ongoing support to improve CECOMA warehouses by introducing a new pallets numbering system for the CECOMA warehouse, developing new product unique number, designed a new warehouse management spreadsheet, and provided to CECOMA with transport options guidelines and other related tools to increase products security and staff safety. SIAPS also suggested changes in the CECOMA warehouse management organization that, once approved, will be based on functions rather than product lines for increasing the use of the warehouse and flexibility of personnel to enhance the customer service. Availability and access to the key data including stock movements over time were the biggest challenge to implement these changes in CECOMA. Discussions are under way with CECOMA top management to avail the needed data and information so that CECOMA can gain the maximum benefit of this support.

To institutionalize a sustainable quantification process, SIAPS finalized the revision of the terms of reference that will guide the quantification technical working groups for both malaria and HIV and AIDS commodities and submitted them to the top management of the national HIV and AIDS and malaria control programs for approval and official nomination of these groups. SIAPS is collaborating with other key stakeholders including Global Fund Principal Recipients to push for establishing of these groups that will be directly involved in the forthcoming forecasting and supply planning for both malaria and HIV and AIDS health commodities. SIAPS will continue to follow up with the approval of the technical working groups to be involved in the next quantification exercise. SIAPS will continue to follow up on the implementation of the new changes in CECOMA that will be replicated in other regional and provincial warehouses, directly linked with CECOMA.

Partner Contributions

CECOMA staff helped implement the new pallet numbering system in their warehouse; INLS director participated in the revision of the national quantification technical working group terms of reference

Constraints to Progress

Long bureaucratic procedures to officially nominate the quantification technical working groups to be involved in the review of the national forecasting of malaria and HIV and AIDS health commodities. Advocacy meetings are being held with top management of NMCP and INLS to speed up the establishment of these groups that will ensure the sustainability and country ownership of the quantification process.

Bangladesh

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

Overall Quarter Progress

SIAPS BD continued its technical assistance for system strengthening and capacity building to the Ministry of Health and Family Welfare (MOHFW) and its key directorates. During FY13 and the first quarter of FY14, heavy political unrest countrywide delayed several important activities. In the second quarter, SIAPS Bangladesh successfully accelerated the pace of delayed activities.

SIAPS worked with the MOHFW to develop a table of organization and equipment to allow the ministry to procure standardized equipment for each level of the health care system. SIAPS also received clearance to use the Framework Agreement Standard Bidding Document (FWA) for procuring goods under pooled funding.

Using the Upazila Inventory Management System (UIMS), 100 percent of the UIMS functional areas at periphery level were able to upload their logistics reports. This is a tremendous accomplishment for the MOHFW. Focusing on good warehousing and logistics management practice at the periphery level, SIAPS initiated massive capacity cascading training program for key logistics personnel from each upazila. Each upazila created action plans for improving their logistics system. A total of 835 key logistics staff members from 428 upazilas were trained and many have begun implementing action plans in their work places.

SIAPS new venture to strengthen the logistics management system for Central Medical Store Depot (CMSD)/Directorate General of Health Services (DGHS), especially in the Logistics Reporting and Tracking system for priority medicines, gained momentum in this quarter. Key partners working in this area were brought together with SIAPS assistance under DGHS leadership to develop a list of priority medicines and a reporting format for the medicines. A technical working group (TWG) was formed to serve as the oversight group for a pilot of the system.

SIAPS facilitated development of the Common Technical Document (CTD) guidelines for DGDA to strengthen its drug regulatory functions and introduced an online drug registration management system called PharmaDex. The guidelines will also be used as source materials that will allow PharmaDex to be adapted to the specific requirements in Bangladesh. The drug registration application template was developed by SIAPS with inputs from DGDA to effectively regulate licensing, registration, and inspection.

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

Quarterly Progress

SIAPS assisted the MOHFW's Procurement and Logistics Management Cell to unify procurement and logistics management operations and strengthen systems.

During this quarter, the FWA obtained a second clearance from World Bank for use in procuring goods under pooled funding. SIAPS continues to pursue Central Procurement Technical Unit (CPTU) clearance to use the documents for procurement of goods financed by the Government of Bangladesh (GOB).

A milestone achievement for SIAPS was to assist the MOHFW to draft a Procurement Operations Manual for the procurement of goods, works, and services under both GOB and pooled funding. The manual will help the MOHFW to standardize efficient procurement processes. The MOHFW reviewed the manual during this quarter and forwarded it to the CPTU for clearance.

The Procurement and Logistics Management Cell's monthly coordination and oversight meeting was chaired by the Additional Secretary (Development and Medical Education) in January. The meeting monitored the progress of procurement packages and tracking of procurement in the supply chain management portal, progress of the waste disposal process in hospitals and health centers, and the National Electro-medical and Engineering Workshop and Training Center's progress in medical equipment repair/installation.

SIAPS facilitated medium term (five-year) forecasts in collaboration with the DGFP, DGHS, and stakeholders, including UN agencies that will provide evidenced-based procurement decisions for Maternal, Neonatal, and Child Health life-saving commodities.

To standardize equipment to be procured for various levels of the health care system, SIAPS has been working with MOHFW counterparts to develop a table of organization and equipment. A finalization workshop for the table that applies to 50 and 250 bed hospitals was held in February. A group of experts updated the table of organization and equipment for common departments at primary and secondary health facilities. For hospitals with 500 or more beds, a core committee will address policy decisions on equipment for areas such as modern kitchens, laundry equipment, waste disposal systems, as these big hospitals are associated with huge infrastructure development and human resources deployment. The organization and equipment tables for 10 Maternal and Child Welfare Centres, 50 bed hospitals, and 250 bed hospitals were submitted to MOHFW for their review.

Along with producing tables on organization and equipment efforts, SIAPS facilitated a workshop to review maintenance management with concerned authorities involving National ElectroMedical Equipment Maintenance Workshop and CMSD/DGHS. Maintenance requests and monthly reporting forms and maintenance management protocols were discussed. SIAPS will assist the MOHFW to develop a pricing guide after finalizing the table of organization and equipment and add specifications for medical equipment.

Regular monthly supply chain and quarterly Supply Chain Coordination Forum meetings were held to strengthen DGHS systems. The third forum meeting was organized by DGHS with assistance from SIAPS. Considerable progress was made in transferring stewardship of this regular meeting to DGHS. All DGHS Line Directors and development partners (DFID, World Bank, USAID, JICA, and UNICEF) in attendance discussed the allocation/distribution plans of

goods that falls under each Line Director that should be drawn up at the same time as the procurement plan. Where emergency procurement and buffer stock apply, this may be waived. The CMSD Director requested Line Directors develop a redistribution plan for undelivered equipment, medicine, and RH commodities, suggesting that CMSD use the transport of Extended Program for Immunization (EPI)/ WHO's Department of Maternal Neonatal Child Adolescent Health (MNCAH) program which have the same routes.

As a follow-up to the forum meeting, SIAPS facilitated a specification workshop in March to develop the standard template of specifications for medical equipment and review specifications for core equipment developed by the CMSD specification committee.

Partner Contributions

The DGFP high officials including directors, divisional directors, and deputy directors have worked hard to make the regional logistics training successful and they committed to implementing post-training action plans. Key stakeholders at DGHS, DGFP, and CMSD have provided inputs on the sub-national procurement assessment.

Constraints to Progress

- The FWA is a completely new development for the MOHFW and has many legal implications. CPTU is taking time to review the documents but the process has taken longer than expected.

- A challenge to update the table of organization and equipment is the lack of availability of participants, especially clinicians/experts, to participate in workshops. In addition, implementing the table will require strong policy guidelines in infrastructure development and HR deployment at the health facilities.

- Frequent turnover of the GOB staff erodes the experience and technical knowledge that staff needs to execute operational activities.

Objective 2: Systems for evidence-based decision making established

Quarterly Progress

SIAPS participated in the Second Conference of the Union South-East Asia Region (SEAR 2014) held in March in Dhaka and added on a one-day symposium to showcase TB achievements such as e-TB Manager and QuanTB.

SIAPS facilitated a one-day orientation (in two batches for 20 pilot upazilas) on an updated UIMS v2.5 that includes a service delivery point dashboard module for use in sites participating in a pilot in collaboration with other USAID partners including the MaMoni Project.

SIAPS recently enhanced the MOHFW supply chain management portal by adding an additional module—the module is an equipment tracking system, which tracks expensive medical

equipment procured (using online procurement system) by CMSD through Reimbursable Project Aid funds. The module has been installed in government health facilities. Equipment tracking is a critical component of a hospital's or medical institution's financial accountability and will help track the status and performance of the equipment by taking into the consideration "value for money" concept. The team made a brief presentation and demonstration on the equipment tracking module to the higher officials of MOHFW and sought inputs.

SIAPS is assessing the demand for drug and dietary supplement (DDS) kits at the facility level throughout the country for the period 2014–2015, as the recent DGFP Forecasting Working Group identified that complete information on the number of DDS kits and the kit's contents to be able to assess what kit components are being used and what components are lacking. This assessment provides the GoB policy makers and donors with a framework for computing what quantities of kits and their contents may be required in the future.

SIAPS also worked with sites on the quality of reports and contributed to designing supervision plans at low-performing sites for UIMS and e-TBM. Initial observations indicate that data quality in e-TBM (such as timeliness, completeness, and accuracy), has progressively improved to 81 percent in February 2014, representing an increase of 23 percentage points compared to September 2013 (58 percent). Direct upload of logistics data through UIMS to web-based DGFP/LMIS has also improved significantly to from 49 percent in February 2013 to 88 percent in February 2014. Timely reporting has facilitated prompt decision making by the managers at all levels.

SIAPS has undertaken a stock-out analysis for contraceptives and anti-TB drugs over the past three years. The team also completed a questionnaire for a Contraceptive Security Indicator Survey and shared it with USAID team. SIAPS also worked with VillageReach team to prepare a policy brief on the United Nations Commission on Life-Saving Commodities Working Group recommendations that explores integrating health management and logistics management information systems and identifies best practices for data management.

As part of efficient pharmaceutical logistics management information system, SIAPS has extended its technical support to DGHS to introduce and implement such logistics tools at district reserve stores, upazila health complexes, and the national level.

SIAPS facilitated with DGHS leadership a workshop on a logistics reporting and tracking system for priority medicine in January. Around 30 MOHFW participants and key development partners attended the workshop. Among others, representatives from DGHS, DGFP, DGDA, CMSD, USAID, Obstetrical and Gynecological Society of Bangladesh, UNFPA, WHO, UNICEF, International Centre for Diarrhoeal Disease Research, Bangladesh, EngenderHealth, Save the Children, and Ipas. Main outcomes of the workshop were: proposal of a list of 25 priority medicines to be tracked, a draft reporting format, and identification of four proposed pilot districts. After the workshop, Government issued a notification on the formation of a TWG specifying members to establish a "Logistics Reporting and Tracking System" for priority medicines. The first meeting of this TWG was held in March. The group finalized a tentative implementation plan, pilot areas, tracer drugs and feedback on the proposed warehouse management inventory software and logistics management information systems.

Partner Contributions

- Key stakeholders from DGHS, DGFP, DGDA, CMSD, representatives from development partners (Save the Children, Engender Health, I-Pass, International Centre for Diarrhoeal Disease Research, Bangladesh), UN agencies (WHO, UNFPA), and donors (USAID) worked extensively to identify the tracer drugs to finalize the reporting form and select the piloting sites, and also to prepare the terms of reference for the TWG.

Objective 3: Pharmaceutical regulatory systems strengthened

Quarterly Progress

SIAPS assisted the DGDA to update their web portal. Updates entailed appraising drug registration data lists and creating a data entry field to be used by DGDA field officers to provide real-time data about the quality of pharmaceuticals as a part of post marketing surveillance (PMS) during site inspection. A two-day orientation was conducted in January on the web portal and the PMS reporting form developed by DGDA. During the orientation, there was a demonstration of the web portal and the principles of PMS as a component of pharmacovigilance monitoring were presented. A user guide was developed to enable DGDA to navigate the system effectively. SIAPS handed over the web portal to DGDA and the portal is now hosted on the DGDA server. To ensure effective maintenance of the web portal, a content management team was established at DGDA.

To support the DGDA to strengthen drug regulatory functions, SIAPS worked with the DGDA to develop Modules 1–3 of the CTD guidelines. SIAPS conducted an orientation in March for 26 DGDA officials. Officials were informed on how the CTD guidelines are organized, including the type and content of documents that pharmaceutical industries will submit in product dossiers. Participants discussed how the present drug registration process in DGDA will be transformed through use of CTD and an online drug registration system. The DGDA CTD guidelines will serve as guidance documents for both DGDA and pharmaceutical industries on how to properly organize and submit product dossiers consistent with International Conference on Harmonization recommendations.

To allow DGDA to effectively regulate licensing, registration, and inspection, SIAPS developed an online drug registration management system called PharmaDex. A drug registration application template was developed and incorporated into PharmaDex. The data list of registered drugs and their manufacturers for both local and importers was evaluated to be incorporated into PharmaDex to allow for effective drug registration process flow within the online system. SIAPS conducted a one-day orientation to demonstrate PharmaDex to 26 DGDA officials, receive feedback for improving the system, explain the application process flow/processing applications, and to summarize PharmaDex implementation plans and future prospects. PharmaDex is designed to capture and track whether the drug registration dossier submitted by the manufacturers meets the requirements for CTD guidelines.

During the previous quarter, the Adverse Drug Reaction Monitoring (ADRM) Cell within DGDA was declared by the MOHFW in Bangladesh as the National Drug Monitoring Centre. The ADRM cell was also awarded associate membership by the WHO Uppsala International Drug Monitoring Centre. As of January, DGDA gained access to VigiBase, the WHO global individual case safety reports (ICSR) database. The next critical requirement to attaining full Uppsala center membership will be the regular submission of ICSRs to VigiBase. During a January ADRM cell meeting, approximately nine adverse drug reaction (ADR) reports were found to be acceptable and were forwarded to the Adverse Drug Reaction Advisory Committee.

To strengthen the ADRM cell to effectively manage ADR reports received from hospitals and pharmaceutical companies, SIAPS developed an adverse drug event (ADE) database. The database will be used in parallel with VigiFlow database for ADR reporting and processing of data received from PV reporting centers. Members of the ADRMC provided feedback for improving the ADE database through a user acceptance testing exercise. Four ADRM cell members were coached on VigiFlow e-learning courses as a precursor to the training on the use and management of VigiFlow that will be provided by a WHO-UMC representative in April. Following the training of ADRM members on VigiFlow, DGDA will be ready to start submitting ICSRs using VigiFlow.

Partner Contributions

- All participants are ready to start collecting the necessary data list to populate the web portal.
- DGDA officials wish to learn more about CTD and are willing to work towards its adoption to align the drug registration process in Bangladesh with international standards.
- WHO and DGDA are working together with SIAPS to implement a pharmacovigilance system in Bangladesh.

Constraints to Progress

- A user guide was developed to enable DGDA navigate the system effectively. Delays in updating data delayed updating the website.
- Majority of DGDA officials have limited computer knowledge that could limit the adoption and efficient navigation of PharmaDex
- A considerable number of hospitals and pharmaceutical companies are not submitting ADR reports to DGDA. The pharmacovigilance guideline and manual are in the process of being finalized. Standard operating procedures and protocols are not yet developed for the ADRM cell and ADRAC.

Burundi

Goal: Strengthen key institutions in reducing mortality and morbidity due to malaria through strong case management and availability of malaria commodities

Overall Quarter Progress

Malaria is the leading cause of mortality in children under five in Burundi. Through improving the availability of anti-malarial medication in Burundi, SIAPS is contributing to the President's Malaria Initiative (PMI) goal of reducing malaria-related deaths, USAID's focus on Ending Preventable Maternal and Child Deaths (EPMCD), and the Government of Burundi's focus on meeting millennium development goals.

SIAPS continues to strengthen the organizational structure of the National Malaria Control Program (PNILP). SIAPS assisted PNILP and Roll-Back Malaria (RBM) stakeholders to conduct a coordination meeting in January during which the 2014 joint Annual Work Plan was validated. Additionally, RBM partners met to review first quarter progress against the workplan. SIAPS guided the development of a Standard Operating Procedures Manual for Financial, Administrative, and Human Resource Management. Job descriptions for all staff were drafted.

In preparation for the first grant submission to the Global Fund under the New Funding Model, SIAPS is working with PNILP and stakeholders to coordinate the development of a sound technical note, the first stage in the grant application process. The concept note will be based on the PNILP strategic and M&E plans for 2013–2017, which was validated in December 2013.

SIAPS fostered the Directorate of Pharmacies, Medicines, and Laboratories (DPML) leadership through a stakeholder's coordination forum. The group agreed on a work plan for establishing a pharmacovigilance system, the need to review current procurement law, and the Logistics Management Information System (LMIS) new stock parameters for at each level of the system. The MoH central warehouse (CAMEBU) will be the logistics management office with key representatives from MoH vertical programs, e.g., malaria, HIV/AIDS and reproductive health. The monthly requisition process was harmonized for all pharmaceuticals, a major benchmark in increasing efficiency.

Key stakeholder staff members were trained in quantification methods and a three-year quantification exercise was completed for malaria commodities. The quantification team identified gaps for 2014 and shared with key stakeholders to inform procurement and identify and mobilize necessary resources to meet the projected needs. In January, a quarterly procurement plan and monitoring report for malaria (PPMRm) was conducted with PNILP and stakeholders to monitor pipelines and analyze stock. A key follow up action from the exercise is accelerating the delivery of rapid diagnostic tests (RDTs) from June to April to avoid a stock-out.

To increase the use of metrics used to monitor progress in case management, SIAPS collaborated with partners to collect data from the facility level. The data revealed that 76.5 percent of prescriptions complied with the new malaria STGs. In addition, while 96.6 percent of patient received instructions on the use of their medication, only 50.9 percent of patients could repeat

the correct information. SIAPS is working with health facilities to improve case management practices through on-the-job supervision at the facility level, emphasizing best dispensing practices to ensure rational use of malaria treatment.

SIAPS disseminated results from the pilot evaluation of community case management (CCM) conducted in collaboration with PNILP and Concern Worldwide. Evaluation data pointed to advantages of shifting to an integrated model (iCCM), outlined costs of CCM and iCCM, and recommended steps for improving the quality of care.

SIAPS trained and equipped community health workers (CHWs) in two districts. By March, all 402 CHWs were treating children less than 5 years of age within their catchment areas. Monthly CHW meetings now provide continuous education on best practices. The March session focused on recognizing danger signs.

To support the implementation of the Ministry of Health's (MoH) new intermittent preventive treatment in pregnancy (IPTp) policy, SIAPS worked with PNILP and stakeholders to complete a sulfadoxine-pyrimethamine (SP) quantification, and developed and validated IPTp guidelines and training modules. The official launch of the IPTp policy was set for June 2014, pending availability of SP.

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

Quarterly Progress

During the reporting period, SIAPS continued to strengthen the organizational structure, governance, and accountability of PNILP.

SIAPS assisted PNILP and in-country Roll-Back Malaria (RBM) stakeholders to organize a quarterly coordination meeting in January 2014. As a result of the meeting, the 2014 joint Annual Work Plan was validated. The PNILP has disseminated the work plan to all implementers, stakeholders, and district teams for easy implementation.

In preparation for the next grant submission to the Global Fund, SIAPS started to coordinate the development of a sound technical note, the first stage in the grant application process for the Global Fund New Funding Mechanism. The new Global Fund mechanism will be based on the PNILP strategic and ME plans for 2013-2017 that were validated in December 2013. In April of the upcoming quarter, three representatives will attend the orientation workshop convened by the Roll Back Malaria Harmonization Working Group in Senegal, April 10–11, 2014, with the main objective of assessing country readiness to develop a concept note and help country teams to outline support needed to apply for the Global Fund New Funding Model. This workshop will build participants' skills to develop a technically sound concept note in compliance with the Global Fund New Funding Model. After the workshop, the team will organize a meeting with a large in-country group to engage in country dialog and identify country support needs to facilitate the development of a new grant in October 2014.

In line with strengthening the organizational structure of PNILP, SIAPS helped develop a standard operating procedures (SOPs) manual for financial, administrative, and human resources management. Job descriptions for all staff were drafted based on substantial involvement of all staff. As an immediate step to implement the SOPs, the PNILP management team (director, deputy director, and four heads of department) will appoint staff as per the new structure and match skills with newly developed job descriptions. An assessment of available skills and competence of staff will lead to a training plan and a proposition for a new revised PNILP functional structure.

In relation to building capacity the of PNILP staff, two staff members are being trained in malariology from February 1 to April 6, (new staff in-charge of case management, one medical doctor in Gashoho). The course will allow the participants to be aware on new dynamics and concepts in management of a national malaria program.

SIAPS also provided equipment for the PNILP office to ensure a good working environment and efficiency, and also helped organize internal monthly meetings with the management team (director, deputy director, and head of department) to plan activities.

In addition, SIAPS contributed in various "comite de pilotage": a long-lasting insecticide-treated nets nationwide campaign and a committee to prepare for the World Malaria Day celebration on April 30, 2014.

Next Quarter Plan

- Launch the PNILP handbook manual and disseminate new job descriptions to all PNILP staff
- Assist the PNILP to prepare for an upcoming evaluation necessary to determine if PNILP can become a direct recipient of Global Fund monies.
- Support the World Malaria Day celebration on April 30th
- Continue to support PNILP and its stakeholders to develop a concept note to submit to Global Fund in October 2014
- Support the PNILP in planning, monitoring, and evaluating as per the 2014 Annual Work Plan

Objective 2: National supply chain strengthened

Quarterly Progress

SIAPS continued to strengthen the leadership and good governance of DPML through stakeholder's coordination (Thematic Group on Medicines). Monthly meetings were organized under the leadership of DPML. Key meeting topics included national procurement procedures at all levels, the redesign of the Logistics Management Information System (LMIS), the Pharmacy Act and other regulations in place, and the establishment of a pharmacovigilance system in

Burundi. During the meeting, the Thematic Medicines Group members agreed upon a two-year work plan to establish a pharmacoviligance system, the need to review the current procurement law as per needs in pharmaceuticals, and the new LMIS with new stock parameters defined months of stock desired at the CAMEBU, district pharmacy, and facility levels. As a logistics management office, the CAMEBU will play a strong coordination and leadership role with key representatives from vertical programs (mainly HIV and AIDS, malaria, reproductive health, TB, nutrition). The monthly requisition process was harmonized for all pharmaceuticals.

During the same quarter, 11 staff members at central level (PNILP, CAMEBU, SEP/CNLS, and Médicins Sans Frontiers Belgique) were trained in quantification methods and use of specific tools, such as Quantimed and PipeLine. A three-year quantification exercise was completed for 2014–2016 for malaria commodities (ACTs, RDTs, medicines for severe malaria, SP for IPTp). The quantification team analyzed current stocks at all levels with all planned orders and defined a gap in 2014 as per the new stock parameters defined in the LMIS. The gap analysis was shared with key stakeholders such as USAID, UNICEF, RBM, and Global Fund for resource mobilization and procurement.

In line with quarterly pipeline monitoring and analysis of stock, a PPMRm was conducted in January 2014 and discussed with the Principal Recipient of Global Fund (SEP/CNLS), UNICEF, USAID, CAMEBU, and PNILP at national level to take appropriate actions. The delivery of RDTs was moved from the initial plan of June to April 2014 to avoid stock-out. The PPMRm is for ACTs and RDTs at the central level (CAMEBU).

These activities were carried out to promote continuous availability of quality commodities and proper use of malaria commodities with minimal stock outs.

Activities Planned for the Next Quarter

- Continue to support the PNILP to organize the Thematic Medicines Group monthly meetings ensuring that all activities identified and recommendations provided are implemented.
- Continue to plan and monitor the distribution plan of ACTs and RDTs for 45 districts.
- Continuously monitor the "stock according to plan" at the district level
- Prepare for the EUV survey

Objective 3: Malaria services improved

Quarterly Progress

During the reporting period, data collected on best practices in case management of malaria revealed that 52.5 percent of visited facilities have a copy of the new malaria Standard Technical Guidelines (STG), 76.5 percent of prescriptions complied with the new malaria STGs, 63.6 percent of dispensed medicines labels were clear and legible, 96.6 percent of patients received instructions on the use of their medication, and 50.9 percent of patients can repeat the correct information received about their medication. From these data, SIAPS will continue to improve practices through on-the-job supervision at the facility level, emphasizing best dispensing practices to ensure rational use of malaria treatment.

During reporting period, SIAPS continued to support the CCM in two districts. New CHWs were trained where replacements were needed. The newly recruited CHWs were equipped with all basic equipment (bicycles, bags, mobile phone, umbrella, cup, spoons, torch, etc.) to become fully functional. By the end of March, all 402 CHWs in the two districts were on-board and treating children less than 5 years of age within their catchment areas.

In February 2014, SIAPS disseminated results of the pilot evaluation of CCM in the three districts in collaboration with PNILP and CONCERN Worldwide: the results were first disseminated at the central level and then shared in the two districts supported by SIAPS. A plan to implement corrective measures was shared and agreed upon with all stakeholders. The main recommendation was to put in place a continuous education mechanism for CHWs.

Starting in March, SIAPS with PNILP, the two districts and health centers, held and will continue to organize monthly meetings with CHWs. SIAPS provided continuous education on best practices in management of fever among children less than 5 years old, best practices in diagnosis of malaria with RDT, filling of stock cards, management of stock and re-supply system of ACTs and RDTs, proper counseling on how to take medication to improve compliance/adherence to treatment, and management of the referral system.

In March, all 25 health centers in the two supported districts held monthly meetings: all 402 CHWs were oriented on "recognizing danger signs" as critical for a well-functioning referral mechanism to avoid mortality among children and received enough quantities of RDTs and ACTs.

The 402 CHWs received a total of 9,462 children less than five years with onset of fever. Among those children, 9,420 were diagnosed of malaria with a RDT; 7,452 were confirmed positive to malaria, and 7,318 were treated with ACTs (98 percent). Among them, 71 percent, which represented 5,236 children, received malaria treatment within 24 hours of the onset of fever. The CCM is key to increasing access to services and reducing mortality among children less than 5 years, and thus contributing to the achievement of Millennium Development Goals and EPMCD goals.

To stay on track toward MDGs and EPMCD goals, SIAPS continued to facilitate the adoption and subsequent implementation of the new IPTp policy by the MoH. During the quarter, quantification of SP was completed with technical support from SIAPS and shared with USAID and UNICEF for procurement. In collaboration with WHO, UNICEF, PNILP, PNSR, the guidelines for IPTp as well as training modules were developed and validated. The official launch of the IPTp policy was set for June 2014 but could be delayed due to procurement of SP.

Activities Planned for Next Quarter:

- Facilitate supervision and continuous education of CHWs to reinforce the quality of case management

- Facilitate supportive supervision at the facility level to strengthen best practices in case management

- Support the development of a concept note on integrated CCM of malaria with diarrhea and pneumonia.

- Support the PNILP and the Health Community desk to implement recommendations made during the pilot evaluation of CCM

Cameroon

Overall Quarter Progress

Cameroon's supply chain system is characterized by limited management capacity and poor inventory management and storage practices at regional medical stores (CAPRs) and health facilities. This is the likely cause of unexpected stock-outs of ARVs and others commodities. Because of this, SIAPS has focused its current technical assistance (TA) efforts on strengthening monitoring and supervision at the health facility level to ensure that the 100 pharmacy managers trained in 2013 will put their acquired knowledge to improving management of HIV and AIDS commodities.

SIAPS continued to work closely with the National AIDS Control Committee (CNLS) and Direction de la Pharmacie, Médicaments et Laboratoires (DPML) to improve the information system for stock and patient management by ensuring that reports on patients and stock data are completed and submitted on time. These reports will increase availability of data, maintaining data collection, and reporting systems from ART sites, GTR (regional NACC unit), and CAPRs.

During Q1, SIAPS conducted support supervision in 10 of the 34 selected ART health facilities in USAID-supported regions. In Q2, SIAPS completed the support supervision in the remaining 24 ART health facilities. Fourteen were Centre de Traitement Agree (CTA), health facility treatment centers that represent the general, central, and regional hospitals; Centre Hospitalier Universitaire, and assimilated private hospitals while ten were "Unité de Prise en Charge" (health facilities treatment centers) that represent the district hospitals. Through this supervision, SIAPS Cameroon supported improving data management of HIV and AIDS commodities by:

- Assessing storage practices and inventory management, subsequent corrective actions were conducted through mentorship and needed guidance to enhance the system

- Collecting data and information for the monitoring of patients under treatment and HIV/Aids commodities stock status

- Mentoring and building the capacity of pharmacy attendants, storekeepers, and data clerks on storage, dispensing practices, inventory management, filling in registers, and HIV and AIDS data reporting

Objective 1: Pharmaceutical sector governance strengthened

Under this objective, SIAPS is supporting the finalization of standards operating procedures for HIV and AIDS commodities management at health facilities. Additionally, SIAPS provides technical assistance to CNLS and the Central Medical Stores (CENAME) to conduct HIV and AIDS commodities quantification and to establish a coordinated mechanism for quantification, procurement, and distribution system.

During this reporting period, SIAPS continued to work jointly with CENAME and CNLS to track ARVs stock status and shipment to ensure that ARVs were distributed rationally through

the country while the country awaited additional shipments. During March 2014, SIAPS has closely worked with CNLS to develop effective ARV distribution plans by monitoring and reconciling stock levels at central and peripheral levels with the number of patients under treatment and targets.

SIAPS also started the process of formalizing the existing HIV and AIDS commodities Quantification Subcommittee and extending this effort to other key supply chain stakeholders within the country. To do so, SIAPS—

- Held two workshops in March 2014 where several important documents related to the quantification subcommittee were developed and agreed on—
    - Terms of reference of the subcommittee that defines roles and responsibilities of the subcommittee and its members
    - SOPs that define the process and steps of quantification exercise
    - Roadmap that highlighted key activities of the subcommittee and their timelines
- Started preparation for a workshop on quantification that will provide skills and knowledge to the subcommittee members. SIAPS subsequently worked closely with CNLS to collect and compile data needed for quantification of ARVs (Prevention of Mother to Child Transmission and antiretroviral therapy), opportunistic infections medicines, and labs commodities.

Constraints to progress

The main challenge faced by the formal quantification committee is the complexity and lack of clarity of the Government of Cameroon on funding mechanism and process for procuring HIV and AIDS commodities. This makes it difficult to project stock availability in the course of the year.

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

Under this objective, SIAPS is technically assisting to improve the internal management and storage capacity of CAPRs to make available high-quality commodities at distribution points and improve their coordination with CENAME. SIAPS will leverage efforts with the Gesellschaft fur Internationale Zusammenarbeit (German Agency for International Cooperation) (GIZ), the United Nations Family Planning Agency (UNFPA), and others to strengthen the CAPR's computerized inventory control system and establish a link with CENAME.

During this quarter, SIAPS continued to collaborate with others partners like GIZ, UNFPA, ESTHER, the World Health Organization, CHAI, and DPML to develop TORs and recruit international and national consultants to carry out an evaluation and analysis of the existing logistics management information system (LMIS). The consultants will determine the LMIS insufficiencies and propose options to improve the Cameroon supply chain especially

strengthening the supply, management, and distribution of pharmaceutical commodities and laboratory supplies at the central, regional and health facility levels.

Objective 3: Use of information for decision making

Under this objective, SIAPS works with CNLS to improve HIV/AIDS commodities information system for stock and patient management by supporting the issuance of timely and complete reports on patients and stock status data to increase availability of data, maintaining data collection and reporting systems from ART sites, GTR (regional National AIDS Control Committee unit), and CAPRs. This includes strengthening joint supportive supervision visits (quarterly review and cross check) of selected ART sites to solve patient and stock data discrepancies at all levels.

In the last quarter, 3 percent of ART health facilities were using national tools to report on commodities logistics and patients data. Since consumption and stock-level data are required by the CNLS, CAPRs, and CENAME for preparing orders at the regional and central levels, SIAPS continued working closely with the CNLS, central, and regional teams to establish a coordinated systems for data collection, submission, collation, and analysis (at all levels) of logistics management information. SIAPS efforts focuses on 34 targeted health facilities so that reports are timely and completely issued on patients and stock data (solving data discrepancies).

During Q1, SIAPS and CNLS conducted joint supervision visits on pharmaceutical management of HIV/AIDS commodities in 10 ART health facilities within the Center Region. In Q2, SIAPS and CNLS expanded the supportive supervision visits to 24 additional ART health facilities within the Adamawa, North west, South West Regions. The aim of the supervision visits was to monitor ARV consumption and distribution and to help health facilities solving data discrepancies between patients and stock reports to increase quality data availability. SIAPS provided feedback on the supervision findings in a workshop held by CNLS for the 10 regional GTRs.

During Q1, SIAPS helped with printing some strategic drug management tools and reporting tools and monthly ART synthesis reports to increase the ability of ART health facilities to properly manage their stock and therefore improve the quality of consumption and patient report. In Q2, as part of the effort to enhance the reporting system, SIAPS continued to distribute drug management (stock cards, ART registers) and reporting tools (Monthly Program Synthesis form) to the health facilities to health facilities and ART sites.

Partner contributions

The CNLS regional team, GTR, closely worked with SIAPS during this quarter to complete the support supervision plan to remaining ART health facilities. The team's involvement in the supervision gave credibility to SIAPS as a partner of the MOH and CNLS that contribute to improve the monitoring of patient information, and consumption and distribution data. As result, this partnership progressively contributed to enhance supply chain efficiency for an uninterrupted availability of commodities at regional and peripheral levels.

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

Under this objective, SIAPS supports CNLS to meet pharmaceutical-related performance requirements of the Global Fund Round 10 Phase 1 so that the country can comply with Phase 2 funding. Since Cameroon is eligible to access to the Global Fund's New Funding Mechanism, SIAPS continued to support CNLS to meet the pharmaceutical-related requirements needed to obtain a 71 million US dollar grant from the Global Fund.

Democratic Republic of Congo

Overall Quarter Progress

The SIAPS Democratic Republic of Congo (DRC) technical assistance program made important progress towards improving the governance of pharmaceutical regulatory systems in DRC this reporting period

Significant progress was made toward reducing the number of days required to register a pharmaceutical product in the DRC. Last quarter, it took 84 days—this quarter, 72 days (the target was 71 days). SIAPS contributed financial and technical support to the quarterly medicines registration session. Although revised standard operating procedures (SOPs) have not yet been implemented, SIAPS efforts still contributed to reducing the review time of a technical dossier before its submission to the evaluation committee.

In addition, the percentage of items on the essential medicines list that are registered rose from a baseline value of 44 percent in 2011 to reach 60.5 percent, thereby meeting the quarterly target.

The capacity building efforts of SIAPS are also on track. To date, the cumulative number of people trained by SIAPS in pharmaceuticals management is 284, compared with the 290 targeted for this quarter (98 percent of target).

SIAPS' technical assistance supported improvements to the collection, analysis, transmission, and use of pharmaceutical management information. The percentage of stock records that correspond with physical counts for a set of tracer medicines rose to 67 percent this quarter, surpassing the target of 60 percent. In addition, the percentage of health facilities that completed and submitted an LMIS report rose to 63 percent, significantly higher than the target of 30 percent.

This suggests that, although the completeness and timeliness of reports is not perfect, it is significantly improved over the baseline value set three years ago. This suggests that SIAPS interventions may be having the desired effect of improving the availability of data for management decision making.

Finally, SIAPS technical assistance that seeks to improve pharmaceutical services in DRC also appears to be bearing fruit. Continued strong collaboration with the sister IHP project reduced the percentage of health facilities with stock outs of a preselected group of medicines for three days or more in the past three months from 69 percent in December 2013 to 55 percent. It is expected that availability will be further improved with the anticipated medicines delivery in June 2014.

Objective 1: Pharmaceutical sector governance strengthened

Quarterly Progress

The SIAPS DRC technical assistance program seeks to strengthen the governance of pharmaceutical regulatory systems in three areas. One is to improve drug registration procedures

and practices; the second is to review and disseminate the national essential medicines list and to support its incorporation into life-saving maternal and child health commodities; and the third is to support improvements to the quality assurance programs of the Ministry of Health (MoH).

The M&E plan for SIAPS/DRC has semiannual and annual targets and two indicators. Progress was made this quarter in finalizing baselines for these indicators and for obtaining up-to-date measures.

One measure is the average number of days required to register a pharmaceutical product. The baseline measure at the beginning of SIAPS was 82 days.

At the end of this reporting period, the indicator improved significantly from 84 days last quarter to 72 days this quarter (the target for this quarter was 71 days). This improvement is attributed to SIAPS' financial and technical support to the quarterly medicines registration session which began on December 27, 2013. The assistance included coaching and sensitizing the regulatory authority staff on how to measure this indicator and reduce the time taken to process dossiers submitted for registration. Although the revised SOPs have not yet been implemented, SIAPS efforts contributed to reducing the review time of a technical dossier before its submission to the evaluation committee.

The percentage of items on the essential medicines list that are registered is another indicator of the effectiveness of the registration process. The baseline value for this indicator was 44 percent in 2011. At the end of this reporting period, this reached 60.5 percent, slightly above the target of 60 percent.

Due in part to SIAPS support, during this quarter, MoH processed 223 registration dossiers and approved 164. The cumulated total products registered in the MoH database is now 1999. The Drug Regulatory Authority (DRA) continues to demonstrate transparency in the process by publicly posting the lists of newly registered medicines after each quarter, and the percentage that is on the EML has increased to the set target.

Other activities carried out during the quarter in support of improved governance included the setting up of quantification subcommittees specific by program, with a core group to be trained from which the national quantification committee will be derived. This national quantification committee will conduct quantification exercises for commodities of the major diseases including malaria, tuberculosis, HIV and AIDS, and MNCH/FP.

During this quarter, SIAPS supported a two-day workshop for the National Malaria Control Program focused on sharing information on malaria commodities supplies and different mechanisms for monitoring the management of these products at health facilities. This was a follow-up to the antimalarial quantification training run by SIAPS with CARITAS.

In January 2014, SIAPS supported a TB partner's consultation meeting by providing a venue for the meeting. Several partners took attended including NTCP, USAID, WHO, PATH, DAMIEN ACTION, CARITAS, IHP, and SIAPS. During the meeting, activities carried out in 2013 and activities planned for 2014 were presented.

This quarter, SIAPS assisted the Directorate of Pharmacy and Medicine (DPM/D3) and the chlorhexidine working group of the UN Commission for Life-Saving Commodities for Women and Children to prepare for an assessment of manufacturers in DRC for potential local production of chlorhexidine digluconate 7.1 percent for umbilical cord care. This assessment was conducted March 24-28 by USP and PATH. SIAPS facilitated all the preparation tasks and, from the results of the preliminary questionnaire, three manufacturers have been selected for the assessment: Ave Pharma, Mohak Labo Pharma, and Laboratoire B.I.S

In March 2014, SIAPS, in collaboration with WHO, UNICEF, and UNFPA, assisted MoH (Direction chargée de la santé des familles et groupes spécifiques-D10 and Direction de la Pharmacie et du Médicament-D3) to conduct a five-day partners' coordination meeting for organizing the implementation of the country UN Commission work plan. The goal of the work plan was to eliminate bottlenecks to access of 13 life-saving commodities for women and children. In addition to providing updates on the work plan, the attendees drafted procedures and TORs for harmonized implementation of the work plan; 23 attendees were involved in this activity. The next step is to organize a workshop to validate the drafted procedures and TORs and mobilize and engage all the MoH partners to implement the work plan. This workshop is planned for April 2014.

Constraints to Progress

The development of DRC Global Fund concept notes for malaria, TB, and HIV and AIDS has required SIAPS/DRC to reorient our support to these programs as related to the quantification of commodities.

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

Quarterly Progress

The SIAPS/DRC technical assistance program seeks to improve the capacity for pharmaceutical supply management in three areas—supporting TB quantification training, organizing cascade trainings in pharmaceutical supply management, and supporting improvements to supervision of supply management functions at the health-facility level. The M&E plan for SIAPS/DRC has semi-annual and quarterly targets set for this objective. To date, the cumulative number of people trained by SIAPS in pharmaceuticals management is 284, compared with the 290 targeted for this quarter (98 percent of target).

From February 4 to 12, 2014, with technical and financial support from SIAPS, a TB quantification training session was conducted; 22 participants were trained (7 women, 15 men).

The training was co-facilitated with WHO and the International Union against Tuberculosis and Respiratory Diseases. Four different quantification tools were used during this training, and National Tuberculosis Control Program staff benefited from capacity building on these tools.

In addition, the national aids control program requested SIAPS assistance for the development of the procurement and supply management component of a concept note for the HIV and AIDS program. This took place in February 2014.

With respect to SIAPS technical and financial support to improving the capacity of partners and health districts in the monitoring and supervision of health facilities, a total of 16 supervisions were held in 4 USAID-supported provinces. Health workers were coached on understanding and calculating average monthly consumption, available stock, delivery time, and months of stock available for the 17 USAID tracer medicines.

These supervisions also identified an overstock of FP commodities (female condoms, IUDs, Jadelle, Lo-Femenal, Microlut, Ovrette) at the health-facility level. SIAPS advised IHP to reallocate these commodities to non-USAID-supported facilities to prevent expiry.

Constraints to Progress

To complete the training on QuanTB, SIAPS has planned additional technical support from HQ in the next quarter to build a pool of trainers, who will then build the capacity of staff of CPLT and DPS in all provinces.

Partner Contributions

- WHO and the International Union for Respiratory Diseases facilitated the training session.
- IHP provided additional logistics support that facilitated the supervisory trips. IHP also helped track monthly reports of medicine management in the health zones (HZs).

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

Quarterly Progress

The SIAPS/DRC technical assistance program seeks to ensure that quality data is collected, analyzed, and transmitted to the appropriate persons and used to improve patients' access to pharmaceuticals by ensuring that stock-outs are reduced. This component of the program operates in two areas.

One is to design and then implement revised Logistics Management Information Systems (LMIS) and procedures that will ensure greater availability of essential health program commodities in USAID-supported provinces. The second is to extend the use of the Electronic Dispensing Tool (EDT) to Katanga Province and transfer responsibility for data management and use to the National AIDS Control Program (PNLS).

The M&E plan for SIAPS/DRC has eight semiannual or annual targets set for this objective, and there are two indicators that are expected to be reported upon at the end of this reporting period.

The percentage of stock records that correspond with physical counts for a set of tracer medicines is a key indicator of the functionality of a logistics management system. Ideally there would be 100 percent correspondence between physical counts and stock records. If not, then all other information generated from written stock records is likely to be erroneous and of very limited value for management decision making.

The baseline value for stock records that match the physical count is 0 percent set in December 2011 The baseline was 0 percent because of the unavailability of pharmaceutical management tools at the facility level. The target for year 3 of the project is 60 percent. This quarter, SIAPS visited 64 health facilities. Out of 505 stock cards reviewed, 338 (67 percent) were concordant with the physical count. This surpasses the target.

The percentage of health facilities that completed and submitted an LMIS report is a basic measure of the degree of functionality of an LMIS.

The baseline value for health facilities submitting completed LMIS reports is also 0 percent, set in December 2011. The target for this year is 30 percent. Under Objective 2, SIAPS reported that the completeness and timeliness of the monthly reports of medicine management collected during supervisory trips was at 63 percent. This compares most favorably with the target of 30 percent, although it is not at the 80 percent that is eventually expected by MoH.

Although the completeness and timeliness of reports is not perfect, it is significantly improved over the baseline value set three years go. This suggests that SIAPS interventions may be having the desired effect of improving the availability of data for management decision making.

During this quarter, SIAPS prepared and submitted two procurement planning and monitoring reports for malaria commodities in January 2014 and for contraceptive commodities in March 2014.

For the malaria report, data had been collected in late 2013 from 8 regional distribution centers (CDRs) and depots that service the 138 PMI intervention HZs; the data revealed that ACTs had been distributed to only 59 (43 percent) of the HZs. SIAPS noted two major difficulties that adversely affected the distribution to HZs.

First, SIAPS recommends a combination of push and pull distribution systems; however in South Kivu (28 HZs) and Kasai Oriental (32 HZs), only the pull system was used, and not in accordance with SOPs. Second, medicines are transported to HZs on scheduled delivery days; the delay in ordering ACTs resulted in them missing the scheduled delivery.

SIAPS recommended that PMI commodity distribution should be carried out quarterly and independently of the transportation of other essential medicines and that the push system be used for HZs that do not transmit their orders on time, even though it is more costly.

To ensure delivery of commodities from HZs to health facilities, SIAPS recommended that implementing partners make a USD 15 allocation to cover transport costs for each health center

that comes to pick up commodities at the HZ. This policy has already been implemented, supported by the IHP project.

SIAPS submitted the PPMRc report in March 2014 for the period October to December 2013. Data came from the following partners: PSI, UNFPA, and IHP.

SIAPS noted that the UNFPA contraceptives order for 2014 has been overestimated for the HZs; there exists old stock of Ovrette, which is no longer recommended and has been replaced by Microlut. These observations were addressed to the UNFPA for potential reallocation of overstock to other HZs. In addition, maximum and minimum stock levels are not well estimated in UNFPA-supported HZs. These problems suggest that capacity building in quantification of contraceptives commodities is needed.

Constraints to Progress:

There are two bottlenecks in the commodity supply chain in DRC. The first one is between CDRs and HZs and the second one is between HZs and health facilities. When the pull system is not used properly by HZs and orders are not placed in time to ensure commodities are included on the fixed delivery calendar, commodities do not get delivered to health facilities. The addition of a push system for PMI commodities is expected to resolve this problem.

Objective 5: Pharmaceutical services improved to achieve desired health outcomes

Quarterly Progress

The SIAPS/DRC technical assistance program seeks to improve pharmaceutical services in four areas. One is to support improvements in drug supply management at the CDRs; the second is to improve the reporting of ADRs; the third is to support the quantification of life-saving commodities for MNCH; and the fourth is to make STGs available in all provinces.

The percentage of warehouses and health facilities with stock outs of a preselected group of medicines for three days or more in the past three months is a key marker of the availability of medicines. The baseline set in December 2011 was 100 percent. The target for year 3 is 40 percent.

This quarter, SIAPS did not measure stock-out rates at the CDRs. However, the percentage of health facilities with stock-outs decreased from 69 percent in December 2013 to 55 percent. It is expected that availability will be further improved with the June 2014 medicines delivery.

SIAPS tracked the delivery of IHP orders placed with the suppliers MEG and Asrames, as well as the delivery of medicines from CDRs to HZs.

During January and February 2014, SIAPS continued the collection, analysis, and documentation of medicine management reporting sheets received from HZs. Since the introduction of these sheets in HZs by SIAPS in May 2013, to date, among the 11 HZs from Kasai Occidental, only

the Luambo HZ did not report data. The rate of reporting was therefore 91 percent, which is a major and significant improvement over target for this year of 30 percent.

However, the quality of data is also a challenge. Nonetheless, this information still allows the tracking of the availability of tracer drugs and the development of remedial actions to improve medicines availability. This has permitted relocation of commodities from sites with overstock to those where commodities were needed.

In February 2014, SIAPS supported the development of distribution plans and conducted an analysis of orders expected to cover IHP-supported facilities for the period March to May 2014. Likewise, SIAPS supported the Provincial Coordination for Blood Transfusion (CPTS) Project to estimate their commodities requirements for the next three months and also supported PMI in developing distribution plans for ACTs and RDTs for the next quarter.

To facilitate the rapid dispatch of commodities to final beneficiaries, SIAPS requested that IHP arrange for transport. This was approved by IHP and medicines were distributed.

For an effective approach to medicine distribution, a SIAPS-IHP delegation met the provincial medical officer and the provincial pharmacist in February 2014 to discuss medicine supply to the HZ in the Kasai Occidental province; steps have been taken to address identified challenges including the quality of HZ requisitions and adjusting credit lines.

Partner Contributions

To contribute to the improvement of storage conditions and facilitate proper management of TB commodities, SIAPS supported the transfer of anti-TB medicines from CPLT to CADMEKO in close collaboration with the provincial health authority, the CPLT, and CDR. A working session with all stakeholders led to an effective transfer of responsibility for the management of TB drugs from the MoH TB Program to the CDR CADMEKO in February 2014.

Dominican Republic

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

Overall Quarter Progress

The study on the warehouse conditions of major hospitals and the standard operating procedures (SOPs) for the integration of Ministry of Health (MoH) hospitals to SUGEMI were finalized. SIAS supported the design and publication of SOPs for the integration of MoH hospitals to SUGEMI. The number of health facilities reporting availability and consumption is greater than 75 percent. The facilities are not only reporting periodically, but since the information systems is linked to the periodic requisition of medicines, they are using this information for making accurate estimation of needs.

Objective 1: Pharmaceutical sector governance strengthened

Quarterly Progress

During this quarter SIAPS supported the drafting of six additional SOPs for the integration of public hospitals to the Unified Pharmaceutical System (SUGEMI). Training personnel is scheduled for next quarter as is SIAPS's support for pooling medicines procurement. SIAPS finalized the study on Availability and Consumption of Laboratory Reagents in MoH Labs. During this quarter, the results were presented and discussed with Centers of Disease Control and Prevention (CDC) partners and MoH counterparts.

Partner Contributions

PAHO has supported international consultancies and workshops for the revision of the national medicines list.

Constraints to Progress

The essential medicines list was not finalized during this quarter as scheduled. A workshop for the revision of the current medicines list was rescheduled for next quarter.

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

Quarterly Progress

The last module of the certified course on pharmaceutical management was completed on February 2014. Thirty-three students must now present their final reports as the last requirement for graduation. The final evaluation of the course is scheduled for next quarter.

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

Quarterly Progress

During this quarter SIAPS supported the design and publication of a technical report summarizing the findings of the first supervision round to health facilities. Although there are still problems with the SUGEMI pharmaceutical management electronic tool and the internet connectivity, the percentage of facilities regularly reporting through the pharmaceutical management information system (PMIS) is increasing, and the quality of the information is improving. The SUGEMI quarterly information bulletin was disseminated to a wide audience on February 2014, and it is also available in the MoH website.

Constraints to Progress

The internet connection in some regional health services is deficient. SIAPS consultants had to adjust the electronic tool to allow off-line entering of data. MoH hospitals don't have a standardized tool for medicine requisition and to report availability and consumption. The coordination with the MoH information unit to solve this problem has been slow.

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

Quarterly Progress

The SUGEMI PMIS has documented increasing stock-outs, largely due to insufficient financing to cover the programmed requirements. SIAPS started collecting information for a study on the financial gaps for the procurement of medicines and medical supplies. The technical report should be completed by the end of next quarter.

Constraints to Progress

Financial information is fragmented in different sources, and sometimes difficult to access. SIAPS has already requested support of MoH authorities to facilitate access to the data.

Objective 5: Pharmaceutical services improved to achieve desired health outcomes

Quarterly Progress

No new Disease Control Programs were incorporated to SUGEMI, but additional components of currently integrated programs were included:

- TB personnel were trained on SOPs for the integration of laboratory supplies to SUGEMI

- SOPs for the integration of MoH to SUGEMI were finalized and validated. SIAPS finalized a research protocol for a baseline study that will lead to integrating the transportation of laboratory clinical samples and delivery of results to SUGEMI.

Constraints to Progress

Disease control program directors (maternal and child health, malaria) are reluctant to integrate their particular medicines and supplies component the integrated pharmaceutical system.

Ethiopia

Goal: To ensure access to quality pharmacy services, that will lead to improved health outcomes, by strengthening pharmaceutical systems

Overall Quarter Progress

USAID/SIAPS/Ethiopia has made good progress in achieving targets included under the FY14 plan. The scale up of Auditable Pharmaceuticals Transactions and Services (APTS) at different regions was extensive. During this quarter, two regional health bureaus (Southern Nations, Nationalities, and Peoples Regions (SNNPR); and Oromia) have drafted APTS legislation or directives with support from USAID/SIAPS. Most importantly, the federal level legislation/directive on APTS is reviewed under the leadership of the Federal Ministry of Health (FMoH) and is now ready for final consultation among stakeholders prior to approval by H.E the Minister of Health. APTS regulations for Addis Ababa, Tigray, and Harari regions that were drafted during the first quarter are still waiting for approval of the respective regional governments.

USAID/SIAPS-Ethiopia received a special request from the FMOH to scale-up APTS at federal and university-hospitals. Following the request, SIAPS, together with staff at the Medical Services Directorate (MSD), modified the APTS tools to meet specific requirement for these hospitals. The financial tools were then sent to the Ethiopian Ministry Finance and Economic Development (MOFED). All the modified financial tools were accepted and approved by MOFED. Seventeen hospitals owned by FMoH, universities, and Addis Ababa City Administration have been selected by MOH for APTS scale-up.

As part of improving pharmacy services and rational medicines use at health facilities, prescription reviews were conducted at 11 health facilities in the quarter and the results of the review was disseminated to members of DTC and management of the hospital. Based on the findings of the prescription review, intervention plans were developed at each of the hospitals. ABC/VEN analysis was conducted at nine hospitals from Amhara (five hospitals) and Tigray (four hospitals) regional states. SIAPS provided technical assistance to the hospitals' Drug and Therapeutics Committees (DTCs) to conduct ABC and VEN analyses, ABC/VEN reconciliation activities, and identify candidate medicines for further analysis. During FY14 (quarter 1 and 2), 11 health facilities conducted ABC/VEN analysis, 91.7 percent of the annual target.

Records indicate that, over the past few years, SIAPS has supported the establishment of DTCs at 527 health facilities. Out of these, DTCs at 88 health facilities have developed and revised their own facility specific medicines list. Moreover, 53 health facilities initiated Drug Information Service (DIS); 40 health facilities started providing clinical pharmacy services, and 20 health facilities implemented APTS.

In this quarter, SIAPS conducted a follow-up assessment on major indicators that SIAPS-Ethiopia identified to measure its interventions. This assessment was conducted at 24 Ethiopian Hospital Reform Implementation Guidelines and 37 President's Malaria Initiative sentinel sites to measure the outcomes of program intervention and the changes observed after the baseline

assessment that was carried out a year ago. Preliminary results show improvements in most of the SIAPS global indicators. They include To the percentage of trainees successfully completing the post training action plan increased from 14.2 to 76.2 percent, the percentage of health facilities that received feedback on previously submitted reports increased from 41.7 to 50 percent, percentage of health facilities implementing good dispensing standards for medicine dispensing increased from 54.2 to 70.8 percent, the percentage of SIAPS-assisted DTCs that have implemented AMR advocacy or containment related activities increased from 29.2 to 37.5 percent, and the percentage of antibiotics prescribed in proportion to all medicines decreased from 62.2 to 58.8 percent. Results of some of the indicators were also found to be higher than the targets set for the current plan period.

Objective 1: Pharmaceutical sector governance strengthened

Quarterly Progress

SIAPS is providing technical support to the Ethiopian government (federal and regional) in developing systems and tools that ensure good governance in the pharmaceutical sector and achieve greater transparency and accountability. During this quarter, SIAPS has continued its effort to institutionalize APTS at federal and regional level by developing and enacting regulations and directives. The FMoH has completed revision of the draft regulation and is preparing for a wider stakeholder consultation before submitting it for approval. The APTS regulation in Oromia region had been thoroughly reviewed by experts and discussed in the presence of relevant stakeholders at a two-day consultative workshop. The feedback from stakeholders have been incorporated and it is now ready for submission to the regional government. APTS regulation for SNNPR has progressed well and is now submitted to the regional government for approval.

Following the FMoH's request to support scale-up of APTS implementation at federal and university hospitals, SIAPS has assisted the ministry to adapt APTS financial and transactional tools so as to meet each facility's unique requirements. After making the required adjustments, the financial tools were submitted to and approval secured from the MOFED. The quantities required for each hospital was determined and FMoH is currently printing of all APTS tools.

A consultative workshop, a training of trainers, and an experience-sharing event were organized for the 17 hospitals selected by the FMoH for initiation of APTS. The consultative workshop was officially opened by H.E the Minister of Health. In his remarks, the Minister said that APTS is a priority for FMoH and needs to be implemented in all the 17 hospitals within a period of three months. The progress of implementation is being followed up by a national task force chaired by the Minister.

Following the training and consultative workshop, baseline data has been collected from the 17 hospitals using a standard data collection tool. The gaps identified in human resource were submitted to the FMoH for subsequent action. With technical support from SIAPS, the hospitals are actively working toward improving their infrastructure and facilities as part of meeting the minimum requirements for implementation of APTS.

To support establishing a system for transparent and accountable pharmaceutical management, SIAPS provided technical assistance to FMoH and Pharmaceutical Fund and Supply Agency (PFSA) to develop and implement a national quantification guideline for antimalarial drugs and related commodities. SIAPS held discussions with both stakeholders in the formulation of a national guideline based on the MSH *Manual for Quantification of Malaria Commodities: Rapid Diagnostic Tests and Artemisinin-Based Combination Therapy for First- line Treatment of Plasmodium Falciparum Malaria* established for the purpose. A technical committee composed of the FMoH, PFSA, and SIAPS was established to coordinate the organization of a national antimalarial drugs quantification workshop that brings participants from regional and federal stakeholders and international and partner organizations. At the end of the workshop, forecasting for products requirements for the years 2015–2017 will be made and a national guideline for future quantification process is expected to be endorsed.

Partner Contributions

The FMoH was supportive in facilitating meetings, creating awareness on the importance of APTS to hospital CEOs, and issuing invitation letters for trainings and consultative meetings

Constraints to Progress

The ambitious plan by FMOH and expectations to scale up APTS in all federal, university, and Addis Ababa regional hospitals within three months timeline was a huge challenge in time and effort, thereby reducing SIAPS availability to manage and work on other current projects.

Objective 2: Pharmacy services at facility level improved

Quarterly Progress

During this quarter, SIAPS staff conducted supportive supervision and mentoring to pharmacy professionals at 14 health facilities to build their capacity in implementing good prescribing and dispensing practices. Health facilities were also provided with an electronic copy of standard prescription paper, good prescribing and dispensing manuals, and tablet counting trays. The support also included reviewing the status of implementation of EHRIG pharmacy standards, utilization of facility specific drug lists, and adherence to standard treatment guidelines (STGs).

In particular, two hospitals in Tigray region received support and mentoring from a joint team composed of experts from Tigray Regional Health Bureau (RHB), Mekele PFSA hub, and SIAPS. As a result of intervention through experts from RHB and PFSA during the supportive supervision, one of the referral hospitals (Ayder) was able to provide clinical pharmacy service and generate daily and monthly intervention reports. Currently, 40 hospitals are providing clinical pharmacy services throughout the country.

Patient education sessions were organized at 11 health facilities in 4 regions. These sessions are used to create awareness to patients on the appropriate medicines use, thereby contributing to the safe use of medicines and containment of antimicrobial resistance. In the quarter, 11 health facilities from Addis Ababa, Oromia, Tigray, Harari, and SNNP regions were technically

supported to conduct prescription review and drug use evaluation on selected medicines. The technical support includes arrangement of assessment schedule, data collection tools, sampling technique, review procedures, and organization of familiarization workshops after the assessment is finalized.

Fifteen hospitals were supported in the quarter to strengthen Drug Information Services. They were given new edition of drug supply management reference book and different tools (forms) for documenting daily drug information requests and responses, summarizing information, and reporting monthly activities. As an example, two hospitals (Adigrat and Wukro hospitals) in Tigray have received and documented 19 and 14 documented enquiries respectively and provided responses accordingly.

Information, education, and communication materials on antimicrobial resistance/rational medicine use were distributed for use by end users (patients). In addition the revised guide on "Medicines Use Education to Clients: Healthcare Providers' Guide" was distributed to health facilities for use by practitioners, Similarly, soft copies of medicine use education providers guide and hard copies of references on rational medicines use (dispensing and counseling guides, brochures, pediatrics dosing chart) have been supplied to 12 hospitals in Amhara region.

Five health facilities in Addis Ababa and one facility at SNNPR held discussions on adverse drug reactions (ADRs)/pharmacovigilance to enable health providers identify, prevent, manage, and report ADRs, medication errors, and product quality defects. In the quarter, the pharmacovigilance center at Food, Medicine and Health Care Administration and Control Authority (FMHACA) received a total of 71 ADR reports from 39 health facilities and entered their information into the database. Based on reports, regulatory decisions were made on two drugs (amoxicillin 250 mg/5ml suspension and RHZE) as a result of reported product quality defect that was observed by health providers. The market authorization holders have been informed not to distribute the product until laboratory investigation is complete for amoxicillin. For RHZE, the importer has been informed to recall the product and report to FMHACA.

Partner Contributions

- The Oromia RHB and FMOH technical staff worked actively with SIAPS staff during all steps of reviewing APTS regulations and preparation for implementation of APTS.

- PFSA and SCMS were involved in the revision of the SOP training manual by providing the necessary information on current recommendations related to antiretroviral therapy (ART) regimens

- FMHACA has significantly contributed both financially and technically in organizing media personnel training on antimicrobial resistance/rational medicine use and antimicrobial resistance advisory committee meetings. This is the result of the continued capacity building to this organization, and is a good sign of ownership and sustainability

Constraints to Progress

- The fact that some of the activities were not part of SIAPS annual work plan for this year might have negative impact on the performance of the project in accomplishing other planned activities. But since the activities were of national importance, some adjustment on the timeline of the work plan has been made.

- High turnover of trained staff and frequent rotations with in health facilities affected ownership and sustainability. There was also an inability to properly keep and use reference materials supplied to health facilities (formularies, STGs, prescribing and dispensing manuals, dispensing and counseling guides, ADR reporting forms).

- There was a high demand for computers and reference books for clinical pharmacy practice and drug information services, especially from big hospitals.

Objective 3: Capacity to use information for decision making strengthened

Quarterly Progress

SIAPS has continued supporting ART sites in their efforts to capture data on patient-medication profiles and use it for making decisions at the time of dispensing. The report from each ART sites is aggregated by SIAPS at national level and is shared to all stakeholders and partners on bi-monthly basis. This information has contributed greatly to monitoring antiretroviral (ARV) prescribing practices (adherence to treatment guidelines) and guiding national quantification exercises.

During the quarter, one bimonthly patient uptake and regimen breakdown report was compiled and shared to all relevant stakeholders and partners. The patient uptake report was collected from 657 ART sites (113 government hospitals, 518 government health centers, and 26 private and nongovernmental facilities). The total number of patients on ART was 306,490, (4,186 or 1.4 percent) more patients than the immediate past reporting period. On the other hand, regimen breakdown report were collected from about 370 ART sites (20 additional sites compared to previous quarter). A total of 252,830 patients on ART are covered in the regimen breakdown report (82.5 percent of those covered under the patient uptake report). Review of the regimen breakdown report indicates that 0.2 percent, 48.3 percent, and 49.4 percent of patients are on D4T-based, ZDV-based and TDF-based regimens respectively. The proportion of patients on second-line regimen is less than 2 percent.

To facilitate data capturing and recording activities at dispensing units of ART sites, SIAPS distributes data capturing tools (registers and treatment cards) for facilities using the paper based system. In this quarter, 76 ART sites received pharmaceutical management information system formats (ARV adult dispensing registration book, ARV pediatrics dispensing registration book, patient information sheet, and OI drugs dispensing registration books) to support the data capturing efforts. As regards to technical assistance, 15 ART sites received software and hardware maintenance support; and mentoring on data capturing, aggregation and reporting. Onsite training on filling out patient information sheets (PIS) and its documentation (maintaining

confidentiality), transcribing from PIS to ARV dispensing registration book, preparing consumption summaries, and generating ART monthly regimen report was provided to newly recruited data clerks and pharmacy personnel.

In collaboration with US Government and government partners (Tigray RHB, University of California Santiago and Ethiopia Network for HIV/AIDS Treatment, Care and Support four rounds of SOP trainings were organized during the quarter for 83 dispensers (pharmacy staff) and data clerks. The training mainly focused on ART patient-medication related data capturing/recording, processing, compiling, reporting and documentation (filing) and the using such information for recognizing and preventing medication errors, ADRs, drug interactions, and other medication-related adverse events.

The Electronic Dispensing Tool (EDT) implementation readiness assessment was carried out at three health centers in Addis Ababa. Onsite training was provided to pharmacy professionals and data clerks on the database and real time dispensing. The database will be installed for use at these sites during the next few weeks. Likewise, 4 ART sites in Tigray region implemented EDT (three sites upgraded ADT to EDT and one manual site converted to computerized system) and onsite training was provided to 13 experts and 4 data clerks.

As part of PMI activities, quarterly CRMS data was collected from 40 health facilities Antimalarial Drug Management sites in Oromia region using the CRMS monitoring checklists, compiled and disseminated to relevant stakeholders and partners.

Partner Contributions

ICAP supported SIAPS to distribute PMIS tools to ART sites unreachable by our project

Constraints to Progress

- Shortage of trained pharmacy personnel at ART dispensing units result in poor quality of recording and documentation
- Some new ART sites are found to dispense ARV drugs directly without recording into the PIS and dispensing registers
- There are report discrepancies in some ART sites between figures received through telephone and actual review of records.
- Pharmacy staff has a high turnover

Objective 4: Optimal use of financial resources ensured

Quarterly Progress

In this quarter, SIAPS in collaboration with Amhara RHB provided technical support to two hospitals in the region to initiate implementation of APTS. Pharmacists from two hospitals that

already implemented APTS in the past were intentionally involved in the provision of technical assistance during initiation of APT at the new hospitals. The annual target set by SIAPS for this plan period was to implement APTS at 12 hospitals. During the first and second quarters of the plan year, APTS has been implemented at a total of 8 health facilities, making an achievement of 66.7 percent.

Five hospitals from Amhara and four hospitals from Tigray regional states were supported to conduct ABC analysis, VEN categorization, and ABC/VEN reconciliation analysis. Based on the findings of ABC value and stock status analysis, one hospital in Amhara region (Debre Markos referral hospital) identified a candidate drug (i.e., ceftriaxone) for conducting further in-depth analysis. Drug use evaluation on ceftriaxone is currently underway. During FY14 (quarters 1 and 2), 11 health facilities conducted ABC/VEN analysis, making up 91.7 percent of the annual target.

Accountants (4), auditors (2) and pharmacy staff members (10) at two hospitals in Amhara region (Debre Tabor and Felege Hiwot referral hospitals) have been mentored on record-keeping, transaction and performance/service auditing, report generation, and data communication generated to decision makers (DTCs and Hospital Management). Similarly, the pharmacy accountant and the head pharmacist at Jugel hospital in Harari region were supported on generating APTS reports and sharing it with decision makers.

In connection to antimalarial drugs management support, a draft guideline on stock transfer of antimalarial drugs has been developed and shared to Oromia RHB for comments and further enrichment. The next step will be to review the guideline with relevant stakeholders and come up with the final document for printing and distribution to health facilities for implementation. This guideline is expected to facilitate transfer of antimalarial drugs from on facility to another during situations of overstock in one facility and stock-out in the other. This practice helps to avoid wastage due to expiry of AMDs and reduce patient deaths due to prolonged stock-out of antimalarial drugs.

Partner Contributions

- Pharmacists from APTS implementing hospitals in Amhara actively participated in providing technical support during initiation of APTS implementation at two hospitals in the same region. They shared their practical experience during initiation of APTS at the new hospitals.

Constraints to Progress

- Delay from the Oromia RHB to provide comments on the draft stock transfer guideline

- Unavailability of pharmacy accountants at some hospitals in Amhara region makes it difficult to record financial transactions and timely reporting

Guinea

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

Overall Quarter Progress

During this quarter, as part of the strengthening of the pharmaceutical sector governance, SIAPS worked with the National Regulatory Authority (DNPL) to effectively increase its capacity to regulate and manage pharmaceutical systems. SIAPS and DNLP made progress towards revision and validation of key regulatory and policies documents such as the National Pharmacy Policy including its implementation plan, and the National Essential Medicines List.

Additionally, SIAPS supported the Central Medical Store of Guinea (PCG) to increase transparency and accountability through appropriate policies, guidelines, and SOPs revision. SIAPS trained 22 PCG technical staff on pharmaceutical Good Distribution Practices (GDP), and developed a GDP check-list for self-assessment to identify gaps and implement corrective actions.

Finally, SIAPS participated in the development of the concept note for the Global Fund New Funding Mechanism, a governance and transparency document required for the upcoming Guinea proposal submission to request funds from Global Fund.

To increase capacity of local institutions and individuals for pharmaceutical management and services, SIAPS worked with DNPL, Programme National de Lutte contre le Paludisme (PNLP), and PCG to conduct a quantification exercise for malaria commodities for PMI-supported districts. Additionally, SIAPS staff visited the new PCG Regional Warehouse in Boke to make recommendations on how to improve the management of warehouse and storage conditions.

SIAPS continued support for the on-going development of a pharmaceutical management information system and use of related tools that report on both products and patients for evidence-based decision making on commodities procurement, logistics and services.

As part of the effort to build a national health information system, SIAPS, in collaboration with PNLP and the National Health Information System (BSD/SNIS) continued to implement the LMIS for malaria commodities in PMI-supported districts. At the request of PNLP, SIAPS hosted several discussions with DELIVER, Stop-Palu Project, BSD/SNIS, WHO, and Catholic Relief Service (CRS) to expand the pharmaceutical management information system (PMIS) in Global Fund-supported districts. Towards this goal, SIAPS organized a five-day training workshop in three Global Fund-supported regions (Mamou, Kindja, and Faranah) and trained 121 health workers on use of the LMIS.

SIAPS worked with PNLP to organize the next quarterly review meetings on the pharmaceutical management of malaria commodities in PMI-funded districts and to plan for the next end user verification survey (May 2014) on the availability and use of malaria commodities.

On February 5-6, 2014, SIAPS attended the workshop organized by DNPL and DELIVER on the Logistic Management Unit to discuss the LMIS implementation and the role of PCG and DNPL in the PMIS. To improve availability of 13 key maternal and child health (MCH) commodities to improve the lives of mothers and children, SIAPS worked with PNLP and PCG to develop distribution plans of PMI-funded commodities to be distributed 19 health districts and approximately 175 health facilities in April 2014. Additionally, SIAPS supported the quantification, reporting, and resupply system for MCH commodities. Various consumption reports of 13 key MCH medicines were compiled and the availability of these products in different PCG regional depots was assessed in January. Lastly, on February 13, 2014, SIAPS met with MoH's Integrated Child and Maternal Illnesses Unit coordinator to discuss implementation of the LMIS at the community level.

Objective 1: Pharmaceutical sector governance strengthened

During this quarter, in two touch base meetings with the DNPL (February 19 and 24), SIAPS established a timeframe for the planned support to DNPL. In addition, progress on the implementation of various activities was discussed.

SIAPS and DNPL agreed that efforts should be focused on the following activities:

- Validation workshop for the National Pharmaceutical Policy (NPP)
- Validation workshop for the National Pharmaceutical Implementation Plan (NPIP)
- Revision of all pharmaceutical regulatory documents and Good Pharmaceutical Practices, including inventory and drug management tools and medicines registration files
- Revision of the National Essential Medicine List
- Preparation of a cost recovery round table

PCG requested technical assistance from SIAPS to implement activities that improve its transparency and accountability, and therefore meets donors' expectations. Toward this end, SIAPS organized a training workshop for PCG staff on pharmaceutical Good Pharmaceutical Distribution Practices (GDP) on February 22, 2014; 22 staff from PCG were trained (8 women and 14 men) and a self-assessment check-list for GDPs was developed and established for regular use in PCG warehouses. The storage conditions in the main PCG warehouse in Conakry (where PMI-funded commodities are stored) were assessed and an improvement plan developed and validated by PCG. PCG agreed to conduct warehouse enhancements based on this improvement plan.

Next steps include the revision of the PCG Pharmaceutical Tender Document (based on the self-assessment tool with a particular focus on the training of pharmacists on the WHO prequalification system), the revision of PCG Standard Operating Procedures (SOPs), and the development of the road map on the improvement of PCG governance and transparency during this year.

SIAPS met with the president of the Comité de Suivi (the monitoring committee which leads PCG legal reforms and the implementation of EU audit recommendations) and agreed to provide support to the committee's upcoming meeting in order to review the Government-PCG Convention and make it more operational.

As part of the effort to improve governance, transparency, and effective communication within MoH, SIAPS helped develop a malaria concept note for the Global Fund's new funding mechanism.

Finally, as part of integration effort between USAID implementing partners, SIAPS discussed with US Pharmacopoeia Promoting Quality of Medicines Project (USAID-funded Project) in Guinea during the last week of January on pharmaceuticals quality assurance issues within the country.

Partner Contributions

SIAPS met with key partners (UNICEF, WHO, Global Fund, European Union/Agence Française de Développement [EU/AFD]) during this quarter with the aim of leveraging funds and efforts to strengthen the DNPL and PCG. SIAPS continued to work closely with WHO for synergistic support to DNPL especially to address medicines supply chain weaknesses.

Constraints to Progress

Ebola hemorrhagic fever outbreak was the high priority for MOH staff and, as a result, it was quite difficult to plan activities.

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

In continued efforts to strengthen the pharmaceutical management capacity of individuals and institutions in Guinea, SIAPS supported PNLP and its partners to conduct a quantification exercise for antimalarial commodities (ACTs and RDTs) to be distributed in health facilities in the PMI-supported districts of Labe, Boke, Faranah, and Kindia. As result, it was determined that a three-month supply of artemisinin-based combined treatments (ACTs) and rapid diagnostic tests (RDTs) were required to ensure the availability of these medicines and ultimately, help contribute to ending preventable maternal and child deaths in the country. This exercise also provided information for decision regarding the quantity of commodities that needed to be transferred to PCG regional warehouses and other regional depots to ensure continuous supply of health facilities.

SIAPS outlined a distribution plan from the central level to the health facilities which is immediately functional, with an uninterrupted control and permanent follow up system that involves MoH staff from each level of the health system (central, regional, district, and peripheral).

To address storage management issues in a new PCG warehouse in Boke, SIAPS visited the warehouse and provided key recommendations to improve the setup of the warehouse storage and distribution systems. An efficient organization flow was proposed and additional issues were addressed relating to the reception, quarantine, temperature and humidity record system, storage of specific products, and cold chain requirements.

Constraints to Progress

Insufficient coordination between donors and stakeholders involved in the pharmaceutical sector still remains a big challenge, and it is critical to have a more effective follow up committee with key partners such as CRS/GF, PNLP, UNICEF, WHO, and USAID.

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

A major achievement toward this objective over the past year has been the development and launch of an improved monthly malaria reporting template which now includes more detailed information on patients, suspected and confirmed cases, and a brand-new section on drug management, including stock status and monthly consumption at the health-facility level.

In January, SIAPS hosted several discussions at its offices with PNLP directors and staff, the Stop Palu Project, DELIVER, CRS, BSD/SNIS, WHO, and other in-country partners about next steps with the pharmaceutical information management system (PMIS) that was introduced last year. PNLP and SNIS, with SIAPS' technical support, have now been receiving monthly malaria reports from the districts and facilities in PMI zones for over six months, and the quality of the data has steadily improved, thanks to ongoing training provided by SIAPS and PNLP during the quarterly review meetings. At this stage, PNLP would like to create a regular newsletter as a means of sharing the epidemiological and pharmaceutical data more broadly. SIAPS has begun working with PNLP's M&E team to aggregate, analyze, and review the quality of data.

Stop Palu will support further by working directly with health facilities and districts on data validation at the source and eliminating common errors. CRS and PNLP have used the SIAPS training module developed last year and introduced the new malaria reports and product order forms to the remaining 19 districts outside of PMI zones; SIAPS participated in these trainings during the quarter to ensure coordination and technical support.

PNLP requested SIAPS to expand the implementation of the LMIS of malaria commodities by training health workers on LMIS tools and methodologies in the regions of Mamou, Kindia and Faranah. Training workshops took place in seven health districts in these regions from March 19-24, 2014. A total of 121 (12 females and 109 males) health workers, district statisticians, and pharmacists were trained.

Preparations for the next quarterly review meetings (with national, regional, and district health authorities) and the fourth EUV survey also began during this quarter (the activities themselves are planned for April and May, respectively).

In early February 2014, SIAPS, along with key members from national health programs and other health partners (UNFPA, WHO, SOLTHIS, CRS, CNLS, and MSF) attended the workshop organized by DNPL and DELIVER to discuss implementation of a comprehensive Logistic Management Information System (LMIS) where PCG, BSD/SNIS, and DNPL should play key roles. The purpose of the meeting was to coordinate and leverage resources for a successful implementation.

Objective 4: Pharmaceutical services improved to achieve desired health outcomes

During this quarter, PMI/USAID requested SIAPS to conduct an emergency distribution of PMI-funded antimalarial commodities to 19 districts and approximately 175 health facilities. As a quick solution to address stock outs of these live-saving commodities, SIAPS developed distribution plans to determine the quantity to be shipped to PCG regional warehouses and other regional depots so that all health facilities could have a continuous supply and use of these health products.

Additionally, several meetings took place between SIAPS, DELIVER, PNLP, PCG, and USAID/PMI (both in Guinea and in Washington) to identify the best way to synergize and manage the availability and use of commodities. SIAPS and DELIVER will develop a collaborative and joint work plan to address logistics bottlenecks and strengthen the supply chain of PMI-funded commodities in Guinea.

SIAPS also provided technical assistance to support the quantification, reporting, and replenishment system for MCH commodities. Various consumption reports of 13 key medicines were compiled at the community level and their availability in different PCG regional depots assessed as of January 2014. Finally, on February 13, 2014, SIAPS met with MoH's Integrated Child and Maternal Illnesses Unit coordinator to discuss the implementation of the LMIS at the community level and agree on what SIAPS will be doing in support of MCH activities.

Lesotho

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

Objective 1: Pharmaceutical sector governance system strengthened

Quarterly Progress

As an integral part of the supply chain technical working group, SIAPS Lesotho continued to work with the Ministry of Health (MoH), the National Drug Service Organization (NDSO), and other implementing partners to increase the capacity for pharmaceutical supply management and services in Lesotho. Two supply chain technical working group meetings were held during this reporting period. These meetings discussed the 2013/14– 2016/17 supply chain management (SCM) strategic plan and the establishment of supply chain coordinating unit within the MoH. SIAPS Lesotho facilitated the finalization of the SCM strategic plan which is needed as part of the new Global Fund to fight AIDS, Tuberculosis and Malaria (Global Fund) funding model. Additionally, the National Health Training College (NHTC) competency-based preservice training curriculum is near finalization. SIAPS plans to hand over the curriculum to NHTC in the next quarter so that it is ready and endorsed for use in the next NHTC academic year starting in August 2014.

SIAPS has continued to work with the MoH to finalize the Standard Treatment Guidelines (STGs) and Essential Medicines List (EML) and it appears that they both will be ready in the next quarter. The MoH pharmaceutical department has recommitted itself to support the development and finalization of the STGs and EML—both the STGs and EMLs have been vetted by the specialists in the different fields and were also peer reviewed. Regarding the contribution towards the prevention of maternal and child death, the revisions in the STGs and EML included the addition of medicines in the areas of HIV and AIDS, pediatrics, nutrition, obstetrics and gynecology, which did not appear in the previous version. These medicines are—

- HIV and AIDS: Inclusion of option B plus for the treatment of all HIV-positive pregnant women to bring into line with the new HIV treatment guidelines
- Zinc sulfate for childhood diarrhea and chlorhexide for the treatment of umbilical sepsis
- Nutritional: F75 and F100 formula, and Plumpy'nut paste® were added for the treatment of malnutrition
- Obstetrics and gynecology: Addition of misoprostol for postpartum hemorrhage

SIAPS delivered in-service training to 82 health care workers in pharmaceutical management logistics management. The target for the quarter was 100 health care workers.

Partner contributions

SIAPS collaborated with Global Fund Coordinating Unit (GFCU) to cover the cost of the SCM strategic plan activities.

Constraints to progress

TheMoH faced challenges on agreeing to the development of the supply chain directorate as was articulated in the Global Fund Interim application. This delayed the completion of the supply chain strategy. SIAPS worked with MoH to clarify the understanding that the development of such directorate was supposed to be a decision of the MoH and not of outside partners or donors. This eventually led the relevant departments at MoH to decide to create a Supply Chain Coordinating Unit (SCCU) rather than a Supply Chain Directorate. With this decision, work on the strategic plan continued.

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

Quarterly Progress

RxSolution has been installed at 16 out of the 17 government and Christian Health Association of Lesotho hospitals. During this quarter, SIAPS continued to provide technical assistance to implement RxSolution at 13 facilities. Currently, RxSolution is not at Motebang Government Hospital and St Joseph's Hospital because the MoH is piloting an Electronic Medical Register (EMR). RxSolution implementation was also suspended at Mafeteng Hospital due to frequent power outages. The MoH has plans to eventually roll out EMR to all the facilities country wide. The MoH has not yet made clear if EMR will co-exist with RxSolution.

SIAPS provided technical assistance to the MoH laboratory directorate to review a hospital level laboratory commodity manual. In addition, SIAPS worked with the MoH to develop the first of its kind health center level laboratory commodity management procedure manual. It is envisaged that this new manual will strengthen laboratory Logistics Management Information Systems (LMIS) at all health centers. Sixteen laboratory personnel (one from each laboratory) were mentored. Two laboratories (Tebellong and Mokhotlong) were not represented.

To strengthen Nutrition Assessment and Counseling Support (NACS) LMIS, SIAPS supported the MoH family health division to develop LMIS tools (daily dispensing tally sheet and requisition forms). The tools were distributed to all the 42 health facilities in the three pilot districts (Botha Bothe, Thaba Tseka, and Mohale's Hoek). The DHMTs were empowered to take the lead in this process.

Constraints to progress

Because of difficulties with transportation, SIAPS experienced challenges to conduct adequate on-site support to hospital laboratories. Therefore SIAPS is building capacity in senior laboratory

personnel to conduct the required supervision. It is envisaged this will be resolved when three new vehicles procured by arrive Lesotho at the beginning of the next quarter.

Reports on consumption of nutrition commodities by the health centers was poor as there were no Nutrition Assessment and Counseling Support LMIS tools. It is envisaged that with the new tools that were developed and distributed to health centers the reporting will improve. Reports of data that will be collected using these new tools will be expected at the being of the next quarter.

Objective 3: Use of information for decision making increased across all levels of the Lesotho health system

Quarterly Progress

SIAPS provided support to the MoH and NDSO to improve the availability of health commodities especially antiretrovirals (ARVs) and HIV Rapid Test Kits (RTKs). This was done through having monthly supply planning meetings. Stock status reports were compiled on a monthly basis and SIAPS has supported the MoH and facilities to make requisition of the health commodities in time.

During the quarter, 149 health care workers (186 is the quarterly target) were mentored in pharmaceutical management as part of the Supportive Supervision and Mentoring program. The mentorship mainly focused on the proper quantification of ARVs, opportunistic infections medicines, nutrition, TB, and family planning commodities. This also covered the proper use of the LMIS tools and correct filling of bin cards.

There is, however, a stock-out of Plumpy'nut which is due to a procurement logistical challenge that the MoH faced. SIAPS is working with MoH and other implementing partners to resolve this issue.

Partner Contributions

SIAPS collaborated with International Center for AIDS Care and Treatment Programs to improve the ordering of TB commodities by the health centers from the hospitals and shared the mandate through the district-based programming model that SIAPS has adopted.

SIAPS partnered with Elizabeth Glaser Pediatric AIDS Foundation and assisted with on-site trainings on the roll out of isoniazid preventive therapy (IPT) and reporting requirements for the number of patients in the ART monthly summary report and ARVs requisition. The activity was conducted to sensitize the health care workers on the guidelines in rolling out IPT. This will ensure the availability of health commodities at the health facilities.

SIAPS joined with Partners In Health TB clinic pharmacy and NDSO to re-distribute health commodities such as injectable streptomycin for TB treatment that was overstocked at partners MDR-TB clinic. The medicine was redistributed to Qoaling filter clinic and Lesotho Defense Force clinic in Maseru district.

Constraints to Progress

Transport to conduct supportive supervision visits was a challenge. As indicated above, SIAPS has procured three vehicles that will help alleviate this challenge.

There was a challenge due to late requisitions made by two hospital laboratories (Motebang and Quthing hospitals) that almost led to a stock out of RTKs. SIAPS quickly worked with the MoH to ensure that the requisition was made and NDSO delivered the necessary stock and eventually averted the stock out.

There is, however, a stock-out of Plumpy'Nut due to a procurement logistical challenge that the MoH faced. SIAPS is working with MoH and other implementing partners to have this resolved as soon as possible.

The meetings were held with International Center for AIDS Care and Treatment Programs and Elizabeth Glaser Pediatric AIDS Foundation to discuss district-based programming model to support the health centers.

Mali

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

Overall Quarter Progress

SIAPS continued its effort to strengthen governance in the pharmaceutical sector, to build capacity in pharmaceutical management, and also to support the implementation of a functional LMIS to render pharmaceutical management information available and useful for decision making at different levels of the Malian health system.

To improve the functioning of Mali's pharmaceutical supply and services and the coordination mechanism among key stakeholders in the pharmaceutical sector, SIAPS assisted the Direction de Pharmacie et Medicament (DPM) to establish a national committee for the coordination and the monitoring of health commodities. The TORs for this committee were updated as well as the list of the members and a calendar of activities. In January 2014, the Minister of Health signed the decision that officially put in place this national committee.

The subcommittee for the quantification process and the technical working groups for each disease were also put in place. A meeting of this official national committee was called for January 22, 2014. Six civil society organizations as well as national and international partners attended the meeting, where major supply chain issues and the quantification process were discussed for malaria, MCH, FP, HIV, and TB.

To strengthen the governance of the pharmaceutical sector during this quarter, SIAPS/Mali focused on supporting the DPM to organize a meeting of the national technical committee for the coordination and monitoring of the supply chain of key health commodities (malaria, MCH, HIV, TB, and FP), to conduct the quantification exercise of FP commodities, and to develop a guideline for supportive supervision for the logistic management system.

As part of the effort to improve transparency and accountability of the pharmaceutical management system, SIAPS/Mali provided technical assistance to the PPM (central medical store) to strategically improve its services and meet partners' and donors' expectations related to procurement, storage, and distribution of pharmaceuticals to the regional and the district levels. SIAPS assisted the PPM in reviewing its business plan and developing a five-year strategy. As a result, the PPM is more committed to and responsible for handling pharmaceuticals and other health commodities that are procured by donors and other development partners, such as the Global Fund, USAID, and other UN agencies. Additionally, with the goal of improving pharmaceutical services, SIAPS assisted the PPM in the revision and development of SOPs (business process) to respond to current demands and technology advancement.

During this quarter, progress was also made in strengthening the capacity of individuals and institutions in pharmaceutical supply management; 138 health workers were trained in 6 regions of Mali on the new LMIS; 14 members of the national committee for FP commodities quantification were trained on Reality Check and Pipeline software for the forecasting and the

supply plan of FP commodities. Support was also provided to train three key senior managers of pharmaceutical sector institutions and disease programs (two at DPM and one at NMCP) in management of logistics management information systems in March 2014.

SIAPS also made progress towards IR3 which aims to make available pharmaceutical management information for decision making. Indeed, one PPMRm and one PPMRc report were submitted to USAID/Washington. The analysis of data along with SIAPS recommendations allowed MOH and partners to place emergency orders and transfer products to health facilities in need in an evidence-based way.

SIAPS also supported the NMCP to conduct one EUV exercise which showed that 83 percent of health facilities currently have malaria standard treatment guidelines and 32 percent of health facilities have completed and submitted an LMIS report for the most recent reporting period.

Objective 1: Pharmaceutical sector governance strengthened

Quarterly Progress

During this quarter, SIAPS/Mali provided assistance to the DPM to organize the meeting of the national technical committee for the coordination and the monitoring of health commodities (malaria, MCH, HIV, TB, and FP) to conduct the quantification of FP commodities and to develop a guideline for supportive supervision for the logistic management system. These activities improved both the coordination and the quantification process with the involvement of key stakeholders for better decision making.

In March 2014, to improve transparent and accountable pharmaceutical management systems, SIAPS assisted the PPM in reviewing their SOPs to meet donors and partners' expectations.

In January 2014, during the technical coordination meeting chaired by MoH's technical advisor in charge of medicines, stocks status and commodity levels for key diseases (malaria, TB, HIV, MCH, and FP) were presented as well as the pipeline of these commodities. Supply chain issues were discussed and recommendations made. The subcommittee in charge of the quantification process was also put in place in February 2014, and this subcommittee includes a TWG for each disease.

With SIAPS support, in March 2014, the TWG for FP conducted a quantification process for contraceptives. Reality Check software was used for forecasting and Pipeline software for supply planning. Demographic and consumption-based methods were used for commodities forecasting in both public and private sectors (social marketing), and supply plans were developed to cover the needs between 2014 and 2018. The results of this quantification exercise will be presented early in April 2014 to the national committee for validation.

With the aim of improving norms and standards, SIAPS committed to assisting the DPM to review supervision tools for the implementation of the redesigned LMIS during post-training activities. These supervision tools will help standardize supportive supervision activities at all levels of the health system. They were developed with the participation of public structures

(central and regional levels) in collaboration with SIAPS and other MoH partners, especially PSI and UNDP that are Global Fund Principal Recipients. SIAPS organized a workshop with stakeholders at the central and regional levels in January 27–31, 2014. Presentations on the minimum requirements of a supportive supervision tool and key components of supportive supervision guidelines allowed participants in work groups to adapt existing tools and produce a draft of a Malian supportive supervision tool for the health commodities supply chain.

In March 2014, SIAPS/Mali assisted the PPM in reviewing its operations manual and SOPs, including beginning development of five-year strategic and business plans. Approaches used included documentation review, in-country rapid analysis, consultations, stakeholder consultations, and site visits (PPM premises in Bamako, PPM regional depot in Kayes). Collected data will be analyzed for modeling purposes. The first phase of this technical assistance focused on addressing appropriate immediate needs and "quick fixes" and gathering information that will be used for business/strategic plan development during the second phase planned for May 2014.

Partner Contributions

- The national committee for supply chain coordination meeting held in January 2014 was chaired by MoH's technical adviser and conducted by the DPM. Attendees included PPM, DNS/PNLT, NMCP, CSLS/MSHP, PSI, FNUAP, DNS/DSR, LNS, USAID, UNDP, and HCNLS.

- Participants from DPM, LNS, ANEH, CRS, PSI, MSI, FENASCOM, CNOP, AMPPF, CPS, UNFPA, UNDP, and USAID contributed to the FP commodities quantification exercise. UNFPA financed the active logistic data collection for the quantification.

- Participants from Kayes, Gao, and Mopti regional directorates of health, PPM, DPM, PNLP, CNOP, GPSP, DNS, Inspection de la santé, PSI, and UNDP contributed to the elaboration of supportive supervision guidelines.

Constraints to Progress

- Consolidating collaboration between partners is a major challenge for further activities and strengthening the sector.

- Poor quality data available for quantification

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

Quarterly Progress

After the LMIS assessment and redesign, new SOPs focused on stock management and the logistic information system were developed and adopted. SIAPS provided assistance to MoH to develop training materials for different levels of the health system, including the central and

CCM levels. A pool of regional trainers was trained at the end of Y2 activities. During this quarter, SIAPS provided support to the DPM and six Direction Régionale de la Santé to conduct six training workshops for warehouse and health information managers. These trainings focused on warehouse management, storage, tools such as stocks cards and logistic reporting tools, and how to calculate commodities needs per the new LMIS SOP requirements; 138 users including pharmacists, district warehouse managers, and health information managers were trained during these workshops organized in Kayes, Koulikoro, Sikasso, Segou, Mopti, and Bamako regions. Separate trainings will be held for staff from district, health center, and community health workers during the coming month.

As part of follow-up actions, SIAPS will provide technical and financial assistance to each Direction Régionale de la Santé to conduct supportive supervision and coaching visits using the new guideline developed. This will contribute to improving the quality of implementation of the new LMIS and SDADME (Schema Directeur pour l'Approvisionnement et la Distribution des Medicaments Esentiels) and will strengthen the capacity of users in the field to report logistic data to the higher levels.

In line with strengthening the capacity of institutions involved in pharmaceutical management, SIAPS supported the training of four central managers involved in the management of medicines in general and particularly in the information and logistics management system at the central level. These trainings improved their understanding and their overall vision of LMIS and its implementation. To maintain momentum and ensure ownership, SIAPS financially supported the training of three other managers (two DPM and one NMCP) in March 2014.

Objective 3: Information for decision making challenge in the pharmaceutical sector addressed

Quarterly Progress

SIAPS worked closely with the DPM, the PPM, and the NMCP to produce the quarterly PPMRm and PPMRc. The PPMR is a mechanism that was established to provide specific information concerning the availability of malaria and FP commodities on a quarterly basis. The information sought focuses on the availability of stocks at the PPM. These reports include recommendations relating to the supply plan and distributions for malaria and FP commodities. SIAPS assisted the DPM, the NMCP, and the PPM to implement the recommendations.

SIAPS coordinated with the NMCP to conduct one EUV survey in February 2014, following the sampling protocol and revised periodicity that was introduced by PMI in 2011. The survey was conducted in six regions in Mali at 86 facilities visited. The key findings and recommendations are as follows:

- Malaria standard guidelines are available in 83 percent (65/78) of the health facilities. This is a good percentage of availability, but in some cases, the guidelines are not followed. Future efforts should focus on supportive supervision to ensure guidelines are understood and used for malaria case management.

- In uncomplicated malaria cases under age 5, 21 percent (199/929) were not treated with ACT. Supervisions are not regular; 59 percent of health facilities received supervision on malaria case management during the last six months. Since March 2014, SIAPS regional advisors have been relocated to assist the regional directorates of health with supervision and other activities, such as training, coaching, and coordination meetings.

- Only 36 percent of health facilities stocked the four presentations of artemether-lumefantrine (AL). Efforts should be made to make all four presentations of AL available at all facilities. To improve the availability of malaria commodities, by March 2014, SIAPS will assist the NMCP to develop distribution plans for AL. SIAPS will also follow-up with the PPM and the district warehouses on the implementation of the distribution plans to make sure commodities reach the facility level.

- Only 32 percent of facilities submitted stock reports on time.

The findings of the EUV surveys will be disseminated next month so that corrective actions can be taken. SIAPS will assist the NMCP and regional directorates of health to organize dissemination meetings to improve the implementation of recommendations and reduce stock-outs at the lowest level.

Mozambique

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

Objective 1: Governance in the pharmaceutical sector strengthened

Quarterly Progress

The SIAPS Mozambique technical assistance program seeks to strengthen the governance of pharmaceutical regulatory systems in Mozambique in three areas. One is to promote and support the development, adoption, dissemination and use of a national essential medicines list, the second is to develop a system for the regulation of essential medical devices, and the third is to support the Pharmacy Department (PD) of the Ministry of Health (MISAU) to strengthen its monitoring and evaluation systems.

The monitoring and evaluation (M&E) plan for SIAPS, while still provisional, has only annual targets set for this area of work, so there are no indicator results to report this quarter. However, it is important to note that there was progress was made this quarter in measuring baselines for these indicators. This will permit the project to report later in the year on its achievements on the basis of objectively verifiable measures.

The expected outputs for this quarter included continuing the process of supporting the Pharmacy Department (PD) to revise and update the National Essential Medicines List (NEML), finalizing the essential medical devices guidelines and standard operating procedures, and to assist to revise and institutionalize an M&E plan with agreed upon indicators linked to a results framework.

Limited but significant progress was made in revising the NEML during the past quarter. SIAPS prepared the supporting reference documents and information (such as available STGs and an updated list of registered drugs in Mozambique) for the NEML committee to use of during the process of reviewing and updating the NEML. This will help the NEML committee in reviewing and updating the NEML. In addition, a preparatory meeting was held with the head of the NEML committee, the PD, and Medical Supplies Procurement Service where it was agreed that the NEML committee secretariat will prepare the meeting agenda, presentations, and handouts for the review meetings. In accordance with the approved work plan, the NEML committee will begin the review process next quarter. The results of the committee meetings and review of the NEML will be a list of all medicines approved for procurement and use in Mozambique's public health sector, providing the basis for the development of regional, hospital, and clinic formularies lists.

However, the nomination of the NEML members was not finalized by the MISAU in this quarter as expected but the final nomination may be made before the middle of April, 2014.

During the past quarter, SIAPS continued working with the Ministry of Health focal person for registration of essential medical devices to finalize the registration guidelines and related

standard operating procedures. These documents were not finalized as the MISAU registration team is overwhelmed with the number of applications for registration, which delays the process of systems improvements.

A preliminary list of indicators and corresponding performance indicator reference sheets (PIRS) were developed for the PD with SIAPS support in September 2013 toward strengthening M&E systems. SIAPS intends to support the department to develop and finalize the M&E plan and build its capacity to implement the plan effectively, with a focus on key indicators that will provide useful information to improve the department's accountability and transparency as well as critical assessment and planning.

However, the PD staff member previously appointed and trained in the last two quarters was transferred outside the department. The appointment of a replacement person has been pending since January 2014, and this is likely to result in substantial delay in data collection and reporting. Therefore, the work is on hold until a new focal person is appointed.

Constraints to progress

The issues of the delay of the nomination of the NEML committee members by the MISAU and the loss of the M&E focal point in the PD were both raised officially with USAID Mozambique and the head of the PD in March 2014. The assistance of the USAID mission has been formally requested to move these issues forwards with the PD.

Objective 2: Utilization of strategic information for decision-making increased

Quarterly Progress

The SIAPS Mozambique technical assistance program seeks to increase using strategic information for decision making by installing a computerized system for the registration of pharmaceuticals.

The M&E plan for SIAPS has only annual targets set for this area of work, so this quarter there are no indicator results to report this quarter although baselines were established for these indicators. This will permit the project to report later in the year upon its achievements on the basis of objectively verifiable measures. The baseline measure for the average number of days taken to approve regulatory applications stands at 261 days, from October 2011. By the end of September, SIAPS has set a provisional target to reduce this to 90 days.

To achieve this, in 2013, SIAPS worked closely with stakeholders to systematically analyze strategic information system options to select systems and tools that meet the specific needs of Mozambique, and recommended that the software tool Pharmadex be used to improve the registration pharmaceuticals.

During this reporting period, the SIAPS Country Director worked with the pharmacy department to acquire the remaining PharmaDex customization requirements required by SIAPS to start the process of software customization. This included a breakdown of roles and responsibilities for

the executive director of product registration, the head of the registration section of the PD, registration officers, and the review board. SIAPS will begin to customize PharmaDex for Mozambique in the next reporting period, beginning in April 2014. Later a pilot version will be made available and the PD staff will be trained in utilizing this program.

Constraints to progress

The required information needed to start customizing PharmaDex was not finalized as the process for defining and approving it is much slower than anticipated. This constraint was also raised with USAID Mozambique and the head of the Pharmacy Department.

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

Quarterly Progress

SIAPS Mozambique seeks to strengthen pharmaceutical financing strategies and mechanisms in Mozambique by enforcing the pharmaceutical price control system and to build staff capacity to properly control and enforce the system within the current pricing laws. This was proposed to the Ministry of Health by SIAPS in July 2013, when an assessment was conducted and a roadmap was translated and presented to the head of PD and the management team.

The M&E plan for SIAPS again has only one annual target set for this area of work which is for the price control system to be endorsed by the PD by September 2014.

During this quarter, several discussion meetings were held with the PD director, the head of the inspection section of the PD, and head of finance and administration. However, no progress was made towards adoption of the proposed new pricing systems and no decision was made by the PD to initiate this activity.

Constraints to Progress

Despite continued discussions with the PD and several attempts by the country director to elaborate upon the details of the proposed medicine pricing system and the recommended action plan, no progress was made this quarter.

- There is only one newly appointed pharmacist in charge of the pricing system, whereas at a minimum, there is need for two staff members to handle pricing regulations and two more staff members for price-related inspection.

- There are no laws in Mozambique to empower the price control system and support its enforcement.

- This activity delay was also raised with USAID Mozambique and the PD director.

Objective 4: Pharmaceutical services to achieve desired health outcomes improved

Quarterly Progress

The SIAPS Mozambique technical assistance program seeks to improve pharmaceutical services in Mozambique in three areas. The first is to support Drugs and Therapeutic Committees (DTCs) at hospitals to improve medicine use, and the collection and analysis of medicine use information for making decisions. The second is to provide technical support for implementing the pharmacovigilance system to improve medicine safety, and implementation of integrated supportive supervision and other supportive materials (e.g., guidelines, SOPs, training materials, job aids) to improve the quality of pharmaceutical management and services according to established standards. The third is to provide technical support for reviewing standard treatment guidelines, with two diseases targeted for completion this year.

The provisional M&E plan for SIAPS has defined a mixture of both annual and quarterly indicators for this area of work. However, baseline measures have not been finalized, and so realistic targets have not been set. It is expected that this section of the M&E plan will be finalized in the next reporting period and the majority of baseline measures recorded.

In this quarter, SIAPS provided support for six DTC meetings (6 meetings) in the Jose Macamo Hospital in Maputo. This is the appointed pilot hospital, and has requested assistance to also implement a unit dose system in some clinical departments where medicines will be pre-packaged prior to dispensing. Pending USAID approval, SIAPS will technically support to help the hospital's DTC to achieve this goal.

The replication and expansion of the systems strengthening work on DTCs to other provincial hospitals was also initiated this reporting period. The Department of Hospital Pharmacy (DFH) at the Ministry of Health made six provinces a priority because of their immediate needs. The first visit was for four days to the Provincial Hospital of Pemba in Cabo Delgado province. As it was the first visit, the head of the DFH joined the team to assure the success of the activity. SIAPS has also added supervising the provincial level hospitals' pharmaceutical services and the training of the DTCs on pharmacovigilance management to this activity. To improve the supervision activity in future, SIAPS will support the DFH to review the pharmaceutical services supervision form of the hospitals. The supervision of the Pemba Provincial Hospital allowed the team to better identify the problems of the hospital in relation to the medicines management within overall hospital services. A small study on compliance with the prescription norms was also carried out and the results presented to the DTC and other clinicians.

With respect to the work on the revision of standard treatment guidelines, the National Directorate of Medical Care of the Ministry of Health has expressed the need for the support from SIAPS for the development and review of standard treatment guidelines (STG) for the treatment of priority diseases and conditions in Mozambique.

The full inventory list and hard copies of all the four available STGs were compiled and prepared in February to eventually be shared with the Ministry of Health committee that is expected to be

responsible for the review. These STGs are for HIV and AIDS, tuberculosis and multidrug-resistant TB, malaria, and hypertension and other cardiovascular risk factors. SIAPS handed these over to the appointed president of the committee, but despite the appointment of other committee members, there was no progress.

Constraints to Progress

- The DTC members are part of the hospital staff and are overwhelmed with tasks.
- The lack of basic conditions such as a computer and internet access for the pilot DTCs contribute to the delays on the pilots' work and reporting.
- The feedback from the original DTC for the updated information from the groups is taking more time than expected
- Reporting and collecting of ADR reports between the district and provincial level was not done efficiently because of transport and communication problems
- The SIAPS team was overloaded with the logistical and administrative arrangements required for the provincial visits as there is no administrative or financial staff at the Mozambique SIAPS office

Namibia

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

Objective 1: Pharmaceutical system governance strengthened

Quarterly Progress

To support the Namibian Medicines Regulatory Council (NMRC) to expedite registration of ARVs and other pharmaceuticals in Namibia, SIAPS demonstrated the improved version of Pharmadex, an integrated, web-based tool that helps streamline and track medicines registration for the national drug regulatory authority. In addition, in-depth discussions with six NMRC staff were held on gaps to be filled. During these sessions with the NMRC, the Pharmadex user requirements for the registration and inspection modules were also revised and will be used to customize the system.

SIAPS provided regulatory capacity building technical assistance to NMRC. A consultant conducted a desk review and facilitated in-depth discussions with members from each functional section of NMRC to identify strengths and challenges and recommended how to improve the efficiency of NMRC in regulating the efficacy, safety, and quality of ARVs and other essential medicines in Namibia. The support is aimed at expediting registration of generic ARVs and other essential medicines, including those for maternal, newborn, and child health (MNCH).

Data analyzed for 2013 showed that NMRC reviewed and approved 159 out of 286 applications for registration. On average, it took 34 days to register fast-tracked applications, which included ARVs, anti-TB medicines, and those for MNCH. Although the result indicates a shorter average (34 days) than targeted (50 days) period for review and registration of dossiers, the data excludes the period between the date of application and the date of screening; in other words, the amount of holding time in the system before review begins is not included in the data. Analysis revealed an average of 199 days before dossier applications were reviewed (as of December 31, 2013). Implementation of Pharmadex is expected to address this anomaly by capturing the date of application, screening, and the time taken to evaluate and approve dossiers for registration.

SIAPS supported NMRC through two meetings to review the post-marketing surveillance (PMS) protocol that was developed with SIAPS support in 2012. The meeting highlighted human and financial resource challenges that hinder the active implementation of the PMS initiative. In Q2, no decisions were made by MoHSS on the basis of PMS activities. SIAPS will continue providing technical assistance to the NMRC for implementation of PMS initiatives and use results to support regulatory decision making.

SIAPS provided technical assistance to MoHSS to assess the medical devices and support equipment (MDSE) situation in the public health sector. A consultant interviewed national-level staffs and private sector importers and distributors of MDSE. The preliminary findings, recommendations, and technical report were presented to MoHSS. The list of essential MDSE

will help MoHSS adequately plan for and avail equipment needed for management of HIV and other disease conditions in Namibia.

SIAPS provided technical and financial support for the Essential Medicine List Committee (EMLC) meeting that reviewed 25 motivations for changes to the Nemlist to reflect the latest cost-effective treatment options and to enable availability of the medicines recommended in the STGs. (Nemlist is Namibia's reference document for procurement of medicines including ARVs.) These 25, as well as 50 other motivations reviewed in June 2013, resulted in recommendations for modification of the Nemlist.

- This support impacts on the percentage of Nemlist items that have registered products. This is still low at 60.9 percent against the annual target of 70 percent. Some items on the Nemlist are not registered by NMRC at the moment (e.g. nutritional supplements).

- This support contributes to the percentage of medicines procured in the public sector that are listed on the Nemlist whose result is 93 percent (for 2012 analysis). The target is to maintain the baseline value of 93 percent.

The EMLC will also be responsible for guiding review of the STGs per the TORs revised during the meeting.

Partner Contributions

NMRC on requirements for improving Pharmadex

Constraints to Progress

- Resource constraints (HR and finance) hinder implementation of PMS activities by NMRC. SIAPS will continue providing technical assistance to NMRC, including review of strategies for the cost-effective implementation of PMS activities.

- Data quality limitations on the number of days taken to evaluate and approve dossiers for registration, because the date of application has been replaced by the date that screening the application begins. SIAPS is working to address this data quality issue in the improved Pharmadex.

- The existing updated human medicine register is not uploaded on the NMRC website, although the register is accessible to the public on request by email. NMRC is working with the website service provider to enable uploading the updated register on a regular basis.

- The human medicine register lacks some essential information (e.g. packaging and identifying mark, country of manufacture, site of the manufacturer, validity of registration). SIAPS is providing technical assistance to NMRC to upgrade the register through the improved Pharmadex.

- Full implementation of the improved Pharmadex has yet to be realized; this delay impacts the average number of days to evaluate and approve regulatory applications. SIAPS is working toward full operationalization and use by September 2014.

Objective 2: The capacity of pharmaceutical human resources and local institutions in managing the pharmaceutical system and supply chain in delivery of sustainable ART and other pharmaceutical services strengthened

Quarterly Progress

SIAPS, in collaboration with SCMS, provided technical assistance to MoHSS Division of Pharmaceutical Services (PhSs) to update three standardized supportive supervisory visit (SSV) checklists for hospital, regional medical stores (RMSs), and primary health care (PHC) facilities and to orient regional pharmacists to the revised checklists. SSVs support pharmacy staff at health facilities to strengthen delivery of ART and other pharmaceutical services. The checklists were revised to improve the scoring mechanism and pharmaceutical system maturity/capability aspects from the capability maturity model (CMM) diagnostic tool. Two RMSs and 100 facilities across all 14 regions of Namibia were visited. Regional pharmacists from across the country participated in these visits to assess facility performance in selected pharmaceutical indicators by collecting annual data/verifying PMIS data and to provide on-the-job technical assistance (e.g. on inventory management and sharing experiences among regions). The 2014 SSVs included baseline data collection for PHC facilities targeted for inventory management interventions. MoHSS (NMPC) is compiling the aggregated report.

SIAPS, in collaboration with Harvard School of Public Health, assessed the impact of facility-level pharmaceutical inventory management practices on (Central Medical Stores (CMS) performance in the supply of ARVs in Namibia. Data was collected from 8 health facilities located in 2 of Namibia's 14 regions. Two trip reports and a draft technical report were compiled.

SIAPS provided technical assistance to the Pharmacy Council and the Health Professions Council of Namibia (HPCNa; the profession's regulatory body) in strengthening registration of pharmacy professionals by developing a framework for assessing the suitability of applicants for licensure. Qualified, competent, and licensed pharmacy professionals are critical in provision of quality pharmaceutical care for ART and general patients, including MNCH patients. The consultant submitted one trip report and will finalize a technical report in early April. The technical assistance included conducting in-country stakeholder consultations on the registration and regulation of pharmacy professionals and developing a framework; the Pharmacy Council evaluators were then oriented on the framework, methodology, and tools for evaluating competencies of pharmacists and pharmacist assistants (PAs). The quarter target was to finalize a framework and train users on it, which was achieved.

SIAPS held two meetings with the National Health Training Center (NHTC) to review supported activities. With SIAPS' support, NHTC obtained final approval of the PA training curriculum from HPCNa. A consultant was engaged to support NHTC with accreditation of the PA training curriculum by the Namibia Qualifications Authority. SIAPS installed a local area network

(LAN), comprising a computer server and several dummy terminals, at the NHTC's PA training unit. The LAN is fitted with EDT for training PAs on patient and stock management for patients on ART. This LAN will provide a platform for "learner–tutor" exchange of training materials and relevant literature in the course and contribute to quality assurance of the PA training program.

A trip report on the support to the UNAM SOP strategic plan was submitted. The team awaits the technical report. The supply chain and pharmacovigilance (PV) modules for the B.Pharm at UNAM are under review.

SIAPS provided technical assistance to MoHSS to enhance knowledge and skill of 25 healthcare workers as trainers of trainers for EDT. They will be able to manage ART pharmacy data and to train other pharmacy and nursing staff in their regions to efficiently collect data using the EDT and EDT mobile dispensing tools. Namibia has 52 ART sites with over 100,000 patients, 8 percent of which are pediatric. EDT is the main tool used for reporting ART logistic and patient data. The number of persons trained in pharmaceutical management cumulatively increased from 291 to 316 in Q2.

Partner Contributions

- HPCNa – input into the framework for regulating licensure of pharmacy personnel
- Harvard School of Public Health – support on assessing the impact of facility-level inventory management practices on CMS performance in the supply of ARVs in Namibia
- Global Fund – Orienting regional pharmacists on the SSVs checklists
- MoHSS (PhSs) in organizing and coordinating the SSVs
- UNAM-SOP – review of supply chain and PV modules
- SCM –SSV implementation and supply chain issues
- MoHSS (NMPC and NHTC) – training of PAs

Constraints to Progress

SSVs were completed in March, and the report will be completed about July 2014; this will delay the availability of data whose data source/means of verification is the SSV report. SIAPS and SCMS will support MoHSS with compilation as part of the initiatives for transitioning this activity to MoHSS.

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

Quarterly Progress

To improve EDT interoperability, SIAPS supported MoHSS with development of two installation checklists to standardize IT support and minimize downtime for reloading EDT computers currently operational in 50 ART sites countrywide. One checklist will be used for all existing EDT computers and the other will be used for new computers with improved hardware specifications. These two improved checklists add to the number of pharmaceutical management guidelines, lists, and SOPs developed (or updated), cumulatively totaling 60 as of March 31, 2014.

SIAPS continued supporting the National Tuberculosis and Leprosy Program (NTLP) to operationalize the TB Management Information System (e-TB Manager) in 13 designated regional DR-TB centers in Namibia. In Q2, SIAPS supported NTLP to design specifications for the new server that will be hosting the e-TB Manager, and will serve as a backup server for the EDT national database server. Two consultative meetings were held with two network infrastructure vendors to provide guidance on the planned installation of 4G devices with wireless antennas at the drug-resistant TB (DR-TB) centers to provide Internet network access to the e-TB Manager server at national headquarters. e-TB Manager provides data for the programmatic management of DR-TB patients, including those co-infected with HIV. In 2012, HIV prevalence among TB patients was reported at 47 percent. TB remains one of the main opportunistic infections affecting HIV-infected persons. Namibia had 251 DR TB patients in 2012 and over 110,000 people on ART as of September 2013. The continued support enabled use of the knowledge and skills gained by the 40 healthcare workers trained on e-TB Manager in October 2013.

SIAPS participated in a stakeholders' consultative meeting for the development of an M&E manual for the NTLP. The support contributes to improving MoHSS's systems for quality data collection, management, and usage of ART and other public health programs. SIAPS also contributed to the NTLP 2013 annual report through provision of information on SIAPS supported activities.

SIAPS participated in a five-day stakeholders' workshop to develop an approach for the adoption and implementation of a uniform disease classification coding (DCC) system in Namibia. The DCC will be used by the public and private sectors along all levels of the health system to ensure uniform coding of diagnostic information system-wide. SIAPS participation is part of support to MoHSS to establish mechanisms to ensure integration and interoperability of the EDT with other systems at facility and national levels to provide continued availability of data for decision making for ART and other public health programs.

To improve data quality assessment (DQA) of ART and other pharmaceutical data, SIAPS, in collaboration with SCMS, provided technical assistance to MoHSS (PhSs) to include items in the SSV checklists to verify some of the data that health facilities convey in their routine

Pharmaceutical Management Information System (PMIS) and ART reports. The findings will be available when MoHSS completes the 2014 SSV report.

Partner Contributions

- NTLP in the roll out and implementation of e-TB Manager
- SCMS on updating SSV checklists for DQA
- MoHSS (Directorate of Special Programs Research M&E Unit) on DQA planning

Constraints to Progress

SIAPS is working closely with the MoHSS Directorate of Special Programs Research Monitoring and Evaluation Unit to conduct a DQA that involves comparison of 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. No DQA was conducted in Q2 as planned; MoHSS leads this activity through the Treatment Technical Working Group.

Objective 4: Financing strategies and mechanisms to increase access to medicines strengthened.

Quarterly Progress

A draft technical report of the assessment conducted in December 2013 to improve coverage of HIV medicines, general health benefits, and insurance management is still under review, awaiting input from the client, the Namibian Association of Medical Aid Funds (NAMAF). Important recommendations include the need for medical aid providers to realign protocols for HIV and standardize reimbursements to increase coverage of chronic diseases and find a substitute for the recently defunct Risk Equalization Fund for HIV and AIDS treatment created by private sector health plans.

MSH/Namibia is a member of the Universal Health Coverage Advisory Committee of Namibia (UHCAN). SIAPS participated in the committee's inaugural meeting on March 19, 2014, chaired by the deputy permanent secretary of MoHSS. The UHCAN will develop and implement strategies to improve the status of universal health coverage in Namibia to sustain the response to HIV and AIDS and MNCH. As of September 2013, Namibia had over 110,000 active patients on ART with about 8.4 percent of these being pediatric. The ART coverage was estimated at 84 percent of eligible HIV-infected patients in 2013. Those 110,000 patients are more than 5 percent of Namibia's approximately 2 million people. The estimated HIV prevalence in adults in 2012 was 18.2 percent.

Partner Contributions

- The African Development Bank is funding the Namibian Government for UHCAN's initial activities

- Namibian Association of Medical Aid Funds (NAMAF)

Constraints to Progress

There have been delays in obtaining medicines claims data from NAMAF. The SIAPS acting country director is still in discussions with NAMAF to have the data made available in April 2014.

Objective 5: To strengthen pharmaceutical services delivery to improve adherence to HIV/TB treatment, enhance achievement of health outcomes, and contain antimicrobial resistance (AMR)

Quarterly Progress

Printing ARV treatment literacy materials (250 desk flip charts in 9 languages and 200 DVDs) was finalized. The materials will help increase retention and adherence to ARV treatment. The ART retention rate was 86.8 percent and 11.2 percent were lost to follow-up for July to September 2013. The number of active patients on ART was 110,658 as of September 2013, based on 48 out of 50 EDT sites that reported.

SIAPS supported MoHSS to finalize two manuscripts for publishing in peer-reviewed journals. The publications are aimed at sharing Namibia's lessons and interventions on ART adherence.

To follow early warning indicators (EWIs) of HIV drug resistance, SIAPS abstracted and analyzed data from the national database and compiled a quarterly ART adherence and retention report for July–September 2013. The report shows that 37 facilities are implementing activities to monitor and or promote adherence to recommended treatments (one facility more than the 36 facilities for April–June 2013. However, this is still below the target of 46 of the 50 EDT sites monitoring adherence to ART.

SIAPS supported MoHSS (PhSs) to finalize the STG post-implementation assessment report; 13 health facilities from 6 of Namibia's 14 regions participated in the assessment on 11 disease conditions including HIV. Overall, 286 (26.2 percent) out of 1090 prescriptions reviewed complied with the STG using "strict" criteria and 55.1 percent complied using "loose" criteria. The findings show a decline in compliance to STGs from 59.2 percent in 2011 to 26.2 percent in 2013 (strict criteria). Compliance to HIV protocols was relatively higher than other disease conditions at 63.5 percent. Of the 37 prescribers interviewed, 94.4 percent reported availability of STGs in their facilities; 83.3 percent of whom had personal copies. The STG finding is similar to the SSV result of 2013 which showed that 93 percent of health facilities had a copy of the STGs. Although STGs seem accessible, compliance is low, implying that there are gaps in the usage of STGs. The report provides recommendations for MoHSS to help improve compliance to Namibia's STGs.

SIAPS reviewed interim findings of the on-going active surveillance activity at two of Namibia's main national hospitals. SIAPS, in collaboration with UNAM-SOP, reviewed the draft PV training module.

At the request of MoHSS through NHTC and the National Medicines Policy Coordination (NMPC) Sub-Division, 1,500 copies of the Nemlist were reprinted.

A meeting held with Project Hope and the Therapeutics Information and Pharmacovigilance Center (TIPC) advisor discussed collaboration on community PV and linkages with MoHSS' PV system. TIPC and SIAPS were requested to support retraining field promoters on PV and also review the adverse drug reaction (ADR) reporting tool.

SIAPS provided technical assistance to TIPC for analysis of data and compilation of a report on ART spontaneous adverse events; 842 suspected ADRs generated from spontaneous reports submitted from 2011 to 2013 were analyzed. Analysis of ADRs is a pivotal requirement to guide regulatory and clinical guideline decisions on improving the safety of patients taking ARVs and other essential medicines. Analysis showed that ARVs were associated with ADRs. An abstract titled "Assessing the Safety of ARV Medicines using Spontaneously Reported Adverse Event Data in Namibia's Vigibase® Database" was developed. TIPC received 51 ADR reports between October 2013 and March 2014.

SIAPS supported MoHSS (Division of Quality Assurance) to update phlebotomy guidelines. SIAPS, in liaison with USAID, MoHSS, and Daab (consultants) started preparations for a study tour on medical waste management. The activity will help strengthen Infection Control Committees and improve infection prevention and control and medical waste management in health facilities. This will contribute to the safety of patients with HIV and other public health diseases.

Partner Contributions

- Project Hope on community PV
- UNAM in reviewing the PV training module
- University of Washington on PV activities
- MoHSS (NMPC, TIPC, and NHTC)

Constraints to Progress

Spontaneous ADR reporting remained below target as health facilities are not actively sending reports to TIPC. SIAPS will continue supporting TIPC to create awareness on PV among healthcare workers and encourage reporting for monitoring patient safety.

Philippines

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

Overall Quarter Progress

In quarter one and in collaboration with National Tuberculosis (TB) Reference Laboratory (NTRL) SIAPS submitted a draft of the National TB Program (NTP) laboratory network strategic plan, which is part of the Philippine Plan of Action to Control TB (PhilPACT). In this quarter, SIAPS participated in updating and reviewing PhilPACT. Both documents were approved during this quarter.

SIAPS trained NTP staff on pharmaceutical management of medicines, specifically on quantification of needs. Following a demonstration of QuanTB, NTP agreed to test the tool.

SIAPS participated in the meeting on logistics and management of medicine supply. During this meeting, the NTP and stakeholders accepted SIAPS's proposal to establish a Drug and Supply Management working group. This group, together with the laboratory and programmatic management of drug-resistant TB (PMDT) working groups, support the national Technical Working Group for TB, including the National TB Reference Laboratory (NTRL).

SIAPS developed pharmacy training modules and conducted a training of trainers workshop. Trainings will continue in quarter 3 as part of a rollout of the practical guidelines. This activity is implemented in collaboration with IMPACT. SIAPS presented a medicines tracking tool which will be tested in several sites in Quezon City and implemented in Region 4A. During a training for NTRL staff, SIAPS staff discovered the imminent stock-out of GeneExpert® machine cartridges and alerted NTP and the Philippines Business for Social Progress (PBSP), the Global Fund Principal Recipient.

At NTP's request, SIAPS senior staff participated in discussing and drafting emergency plan and policies for typhoon Yolly.

Following recommendations from Joint Program Review, USAID requested that SIAPS increase its level of assistance to NTRL. In response to USAID request, SIAPS in consultation with NTRL and NTP, defined several focus areas for support. These activities will be added to an amended work plan including the assessment of the supply chain and pharmaceutical management of TB medicines and laboratory supplies.

Objective 1: Capacity for pharmaceutical and laboratory supply management improved

Quarterly Progress

SIAPS and NTRL agreed to focus on building a system for selection, procurement, distribution, rational use, and management support of laboratory supplies. SIAPS met with NTRL and PBSP

to link the procurement, distribution, and use processes. The first item selected to test the system was Xpert cartridges; other laboratory supplies will be added as the system is built. This led to the analysis of cartridge stock supply that triggered an alert to expedite the delivery.

SIAPS proposed a revised work plan to align our activities more closely with NTRL's needs and evolving priorities. Our focus will be to help NTRL strengthen its organizational capacity to lead and manage the NTP laboratory network, particularly in improving the laboratory policy environment, and in tracking the performance of the laboratory network based on the NTP laboratory strategic plan.

SIAPS continues to work with NTRL to enhance the functions of its technical units and develop their work plans. The new organizational chart and staffing pattern was presented to NTP and stakeholders during the NTP Laboratory Thematic Meeting. The proposed staffing requirements were accepted by NTP and PBSP/Global Fund and will be the basis for recruiting project-based staff supported by Global Fund as well as the future recruitment of NTRL/Research Institute for Tropical Medicine (RITM) staff over the next three years.

SIAPS worked with NTRL and the NTP laboratory working group to develop the draft policy for the use and scale up of GeneXpert. The draft document was presented to the national TB Technical Working Group. The policy is now under revision based on Department of Health's (DOH) comments.

SIAPS supported NTP to revise the PhilPACT, reviewed the draft document, and facilitated a stakeholder's consultation workshop. The updated PhilPACT is expected to be launched in April 2014. SIAPS is also continuing its support to NTP in finalizing the revised NTP Manual of Procedures. SIAPS is also continuing support to the NTP's second drug resistance survey.

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

Quarterly Progress

SIAPS is currently finalizing the preliminary assessment report on the NTP information system. The findings from the study were initially presented to a small group representing the USAID-supported health projects. As part of the NTRL capacity building on information management, SIAPS is working with NTRL to establish systems and processes for laboratory data collection and management. Related to this, SIAPS has developed draft standard operating procedures for NTP laboratory network reporting and data management. SIAPS also helped NTRL's M&E unit develop a capacity building plan.

SIAPS will field test a tool for tracking the distribution of anti-TB medicines and laboratory supplies. We were given approval by the Quezon City Health Department to implement the tests in several health centers and one district level health office in the city.

SIAPS participated in the Project Implementation Review for the Department of Health's TB case management information system, called the Integrated Tuberculosis Information System.

The activity aims to assess and evaluate the overall status of the project in all implementing sites. The results of the review will be vital in determining strategies for possible implementation in 2014–2015.

SIAPS worked with NTRL and other partners to develop the 2014 NTP laboratory network operational plan and technical assistance plan. To help strengthen NTRL's M&E capacity, SIAPS drafted the standard operating procedures for laboratory monitoring and evaluation, reporting, and data management. We are also providing guidance to the technical units in developing their 2014 work plans including their respective M&E plans and budgets.

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

Quarterly Progress

To help improve availability and accessibility to GeneXpert testing, SIAPS worked with NTRL to develop an allocation list for the distribution of GeneXpert units in the Philippines based on an analysis of local TB epidemiology, population, and other local characteristics such as available transportation and power supply infrastructure and security conditions. A total of 70 units are expected to be deployed throughout the country by end of 2014. We also helped NTRL develop activities to support the scale up process.

Our grassroots health program leadership and management model in Payatas, Quezon City, is being replicated in the city by Quezon City Health Department (QCHD) with the help of other NGOs and the support of local politicians. The model is called Barangay Health Management Council (BHMC) and was expanded beyond TB control to cover all public health programs. To support the replication process, we started to develop a technical guide on establishing BHMCs. A summary of the Payatas experience is posted on www.siapsprogram.org. A preliminary discussion was made with the district officer of Quezon City for the implementation of a tracking tool to improve the management and inventory of pharmaceuticals. The activities will include: (1) the field testing of the tracking tool, (2) technical assistance in the use of data from the tracking tool, and (2) use of the Practical Guide for Pharmaceutical Management.

SIAPS met the Filipino Food and Drug Administration (FDA) and NTP staff to discuss the way forward for PV activities. Given the introduction of new drugs, PV activities will be accelerated. At the end of quarter, SIAPS was invited by WHO/Western Pacific Regional Office (WPRO) to a regional meeting on quality assurance of TB medicines and presented SIAPS experiences in pharmacovigilance.

SIAPS participated in the WHO WPRO meeting on Quality Assurance of TB drugs and presented the Asia-Pacific Pharmacovigilance assessment report.

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

The publication of revised criteria for awarding licenses for pharmacies in the *Government Gazette* in February was the culmination of technical assistance provided by SIAPS to the National Department of Health (NDoH) to improve governance in the licensing process and increase access of communities to pharmaceutical services.

Using a training of trainers approach, pharmacy technician (PT) students at Nelson Mandela Metropolitan University (NMMU) in the Eastern Cape (EC) were the first students to be introduced to RxSolution in their pre-service training. The PT students are the first intake of this new cadre of mid-level healthcare worker. It is envisaged that exposing undergraduate students to RxSolution will reduce the need for on-the-job training on the system, thus building capacity and assist institutionalization of the use of RxSolution.

SIAPS committed to providing support in improving the quality of service delivery in 170 facilities by the end of FY13. To date, SIAPS has supported 570 public sector facilities to improve performance through the Pharmaceutical Leadership Development Program (PLDP) and the Adopt-a-Clinic Project in Limpopo (LP). Since the inception of the PLDP in South Africa, 58% of the 40 measurable results addressed using the Challenge Model were achieved. During this quarter, 24 pharmacists working in eight teams completed the PLDP in KwaZulu-Natal (KZN). One of the notable achievements included a reduction in the average time to process an order at the Provincial Pharmaceutical Supplies Depot (PPSD) in KZN from 27 days in July to 13 days in November 2013.

SIAPS has received an unprecedented increase in demand for RxSolution, the computerized inventory management software developed by MSH. Working in collaboration with NDoH and USAID, an implementation plan has been developed for roll-out of RxSolution beyond the 313 sites currently using the system. The plan includes a general pharmaceutical information management strategy for NDoH. During this quarter, a budget of USD 2.2 million was prepared and submitted to USAID for approval. Pre-installation assessments were conducted at 19 facilities which include 9 ideal (prototype) clinics that will be used to pilot the NHI. Contingent on funding approval, once implementation in these facilities is completed, work on phase 2 of the rollout plan (which includes implementation in 52 clinics in NHI districts) will commence. The expansion of RxSolution coverage is expected to contribute to improved inventory management of all pharmaceuticals including ARVs, TB medicines, and commodities used in the management of maternal and child health.

The pharmaceutical depot in LP reported 79% medicine availability at the end of the South African Government financial year in March 2014. This level of availability shows a marked increase from the 50% average reported at the end of the previous financial year. This improvement is the culmination of several interventions implemented with support from SIAPS

which included improving access to inventory management information at the depot and facility levels and better management of supplier performance.

The smartphone application for the Adult Hospital-Level Standard Treatment Guidelines and Essential Medicines List (EML) was launched on January 29, 2014, and can now be downloaded from the NDoH website (www.health.gov.za). The application is expected to contribute to improving compliance with the adult hospital EML by increasing access to the guidelines.

Such was the success of the SIAPS-supported decentralized pharmacovigilance system being implemented by the NDoH National Pharmacovigilance Centre in Mpumalanga (MP) that a scale-up of the model has been initiated in North West Province (NW). A total of 294 health facilities are actively reporting ADRs in MP. The cumulative total number of ADRs received in the province since the inception of the program is 2,697. To date, a total of 170 ADR reports have been received from sites in the NW.

Objective 1: Pharmaceutical sector governance strengthened

Quarterly Progress

SIAPS is currently experiencing an increased demand for support to strengthen governance in the pharmaceutical sector. SIAPS had planned to support the development, review, and revision of a cumulative total of seven policies, procedures, guidelines, norms, service level agreements, or contractual documents for pharmaceutical services by the end of FY13. During this quarter, the publication of a new set of criteria for awarding pharmacy licenses brought the total number of such documents finalized to six.

As reported in October 2013, SIAPS supported NDoH to strengthen governance in the issuing of licenses for pharmacies by developing a new set of criteria for awarding these licenses. The new criteria are based on population per sub-district and will support the intention of the National Drug Policy to improve access to pharmaceutical services. After scrutiny by the Legal Unit of the NDoH, the revised criteria were published in the *Government Gazette* on February 28 for three months to allow public comment.

One of the consequences of the absence of a clear policy framework is marked differences in the objectives and functioning of PTCs across and within the same level of care in the country. During this quarter, SIAPS commenced working with NDoH on the development of a National Policy for the Establishment and Functioning of Pharmaceutical and Therapeutics Committees in South Africa. In terms of the policy, PTCs will focus on three core components, namely, a formulary system, rational medicine use including safety and quality, and procurement and financial management.

Current legislation does not provide for electronic prescribing and transmission of prescriptions. This shortcoming needs to be addressed as soon as possible. At the request of the NDoH, research was done on the situation in other countries. A summary of the findings was submitted to NDoH. The next step will be to draft amendments to the legislation.

As reported under Objective 5, SIAPS is providing technical assistance at various levels in the implementation of the Central Chronic Medicine Distribution and Dispensing (CCMDD) model in eight provinces. Work commenced on the development of a policy document to outline the policy principles supporting implementation of this approach. SIAPS provided support to this project at the NDoH level with the development of a set of draft indicators for monitoring service delivery at provincial, district, and facility levels, as well as monitoring service providers. The indicators were presented at the National Health Council (NHC) Subcommittee on Pharmaceutical Services (PS). Comment from the provinces is awaited.

It was previously reported that SIAPS would continue to support the Directorate: Affordable Medicines in the development and management of the oncology (HP04) and contrast media tenders (HP05). Both tenders were finalized for publication on March 20, 10 days before the start date of April 1, 2014. The time taken to award these tenders was 26 weeks, which is 10 weeks longer than the SIAPS target of 16 weeks. The length of time taken was due in part to delays in obtaining the necessary approvals.

Draft SOPs for tender management were submitted to the NDoH for review. The proposed SOPs will enable NDoH to evaluate the workload and appropriate staffing requirements for effective tender management. Support was also provided in implementing a tender estimate and costing tool to submit estimates for three tenders (small volume parenterals and insulin devices [HP06]; aerosols, inhalers, and inhalants [HP07]; and semi-solids [HP08]). NDoH staff was mentored in the review of the estimates for these tenders. SIAPS also supported the grouping of items according to therapeutic class, so that items within the same category compete with each other for award.

All medical consumable items that were not awarded on the 2013 tenders are being identified and reviewed with the aim of publishing supplementary tenders for these items. Support is also being provided to NDoH on routine medicine availability and supplier monitoring systems, thus contributing to improved pharmaceutical sector governance.

In October 2013, SIAPS supported the drafting of a set of norms, standards and related data elements aimed at benchmarking pharmaceutical services at the provincial level. The results are presented in a dashboard which allows for comparison across provinces. During this quarter, SIAPS provided technical assistance in the review of the norms and standards and the reporting tool based on comments received. A draft manual on the application of the standards was developed and discussed at the NHC PS Subcommittee meeting held in February. An abstract on this work was submitted to the Third Global Symposium on Health System Research to be held in Cape Town in October. SIAPS also provided input to the Department of Performance, Monitoring, and Evaluation on norms and standard for concurrent functions to improve service delivery for health. This project aims to enable national departments to have more control over the quality and performance of services at provincial and local government levels so that there is a closer link between accountability and responsibility.

In March, technical assistance was provided to the Western Cape in a planning and review workshop for the provincial head office, district pharmacists and pharmacy managers of major

hospitals in the province. The aim of the workshop was to develop a plan to align activities of pharmaceutical services with the provincial vision.

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

Quarterly Progress

During this quarter, SIAPS continued to build capacity in the pre-service training of pharmacy technical assistants, PTs, and pharmacists at NMMU. With SIAPS support, two new electives in pharmacovigilance and medicine supply management (MSM) are being offered to final-year BPharm students. Technical assistance was provided in the development of training materials for these two electives. This year, sessions on PTCs will be included as part of the curriculum for final-year pharmacy students. SIAPS provided technical assistance in the revision of the training materials on PTCs, including content on pharmaco-economic principles.

For the first time, training on RxSolution has been included in the curriculum of PT students at NMMU. The first training session for 56 students was conducted by SIAPS. Training emphasized the application of MSM principles using RxSolution. Three lecturers from the university were subsequently trained on RxSolution to enable them to continue training students. Support will be provided by SIAPS as needed. It is believed that exposing undergraduate students to RxSolution will reduce the need for on-the-job training in public sector facilities, as it is envisaged that many of these students will join the public sector once qualified. Capacitating the university staff to conduct the training contributes to the sustainability of this initiative.

The postgraduate student who, with technical assistance from SIAPS, conducted research comparing the cost of re-packaging bulk, oral solid medicines and manufacturers' prepared patient-ready packs in the public sector completed this work. The student will receive a master's degree in April.

The University of Limpopo-Medunsa campus is in the process of developing a strategy for integration with the neighboring Dr. George Mukhari Academic Hospital. This integration would enhance training by enabling greater participation of academic staff and students in the daily operations of the hospital pharmacy. SIAPS was part of the initial stakeholder engagement workshop attended by staff from the Department of Health, the hospital, and the university.

The completion of the PLDP for the second group of pharmacists in KZN saw SIAPS surpass its FY13 cumulative target of 170 health facilities applying an approach for participatory and continuous performance improvement with a total of 177 being reached. Since the inception of the PLDP in South Africa, 58 percent of the 40 measurable results addressed using the Challenge Model were achieved. Although teams do not always achieve the desired measurable result in the short time available, most teams do show good progress. The overall number of health facilities supported by SIAPS to implement quality improvement initiatives now stands at 570.

A total of 24 pharmacists from 6 districts, the provincial office, and the provincial pharmaceutical depot in KZN presented their results to senior management and other

stakeholders in February 2013. The following are the results achieved at the end of the program by the eight teams who implemented quality improvement initiatives in 55 facilities:

- Reporting on stock-out and expired medicine data elements by 15 primary health care (PHC) clinics in eThekwini South subdistrict was improved from 67 percent and 33 percent, respectively, in August 2013, to 100 percent for both for September to December 2013.

- Sundumbili Community Health Centre and Stanger Hospitals achieved greater than the targeted 20 percent improvement in compliance with STGs for the use of non-steroidal anti-inflammatory agents from August to December 2013. An 8 percent improvement was observed at Montebello Hospital. These observations were based on 400 prescriptions assessed in August and December 2013.

- The completeness and accuracy of the pharmaceutical data elements reported by two hospitals and six PHC facilities in Zululand was improved by 17 percent to an average of 98 percent.

- In Ugu district, the defaulter rate of patients collecting pre-dispensed chronic medicines from four PHC clinics dropped from 28 percent in August 2013 to 23 percent by the end of January 2014.

- A team in eThekwini district aimed to reduce the percentage of patients collecting chronic medication (including ARVs) from the pharmacy outpatient department by 20 percent at two regional hospitals (Addington and Mahatma Gandhi) and two CHCs (Phoenix and KwaDabeka) by the end of January 2014. As a result of external factors and delays in implementation of interventions, limited improvements were noted.

- The availability of tracer medicines in 11 PHC facilities in uThungulu district increased from a range of 77–96 percent to 96–100 percent by the end of January 2014. Tracer medicines included ARVs and medicines for TB.

- Interventions at nine PHC facilities in UMkhanyakude district contributed to four facilities achieving 80% compliance with six SOPs for MSM. There was a notable improvement in compliance with MSM SOPs when compared to baseline for all nine facilities, although none of the facilities achieved the expected measurable result of 80% compliance with all seven SOPs. Average compliance for each SOP improved from a range of 17–75 percent to a range of 54–84 percent in the six months ending in January 2014.

- The average time to process a main order at the Provincial Pharmaceutical Supplies Depot (PPSD) was reduced from 27 days in July to 13 days in November 2013. This remarkable reduction in processing time is expected to contribute significantly to medicine availability within the facilities serviced by the PPSD. Work is expected to continue toward achieving the target of 10 days set by the depot.

The Zenzele team of pharmacists from GJ Crookes Hospital in the Ugu district, which participated in the first round of PLDP workshops held in KZN, was awarded a Provincial Gold Award at the Member of the Executive Council Annual Service Excellence Awards. The award was for outstanding achievement for service delivery innovation and best practice. The team achieved a 16 percent reduction in uncollected, pre-dispensed chronic medicine parcels from a PHC facility in Ugu district. The team sustained and expanded these initiatives and, in doing so, facilitated the opening of two additional outreach centers, Ghandi Nagar and the Amahlongwa. This initiative has gone a long way toward bringing chronic services closer to communities within the district.

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

Quarterly Progress

The availability of information on pharmaceutical inventory management is critical to the effectiveness of the health system as a whole. SIAPS continued to provide support in this area through implementation of RxSolution (inventory management software) and Infomaker® (off-the-shelf commercial report-building software). SIAPS surpassed the initial target of implementing RxSolution in 300 public health facilities by the end of FY13. Responding to requests from NDoH, SIAPS will, with support from USAID, be expanding use of the system.

Infomaker was installed at the NW pharmaceutical depot. Further assistance will be provided by engaging with stakeholders to structure reports so that they are aligned with the existing computerized system used at the Depot. Infomaker facilitates quicker generation of the reports required by NDoH from depot inventory management systems. Weekly medicine availability and outstanding order reports are generated from 6 of the 10 depots using Infomaker. A set of 62 standard reports has been developed with SIAPS support.

The number of health facilities using RxSolution increased from 280 to 313 during the quarter. NDoH requested that RxSolution be installed in additional public health facilities in support of the NHI implementation. Following a stakeholder engagement meeting attended by representatives from USAID, NDoH, and selected provincial pharmacy and IT personnel, a proposed RxSolution roll-out plan was developed. The plan includes a general pharmaceutical information management strategy for the government. A budget of USD 2.2 million has been prepared and submitted to USAID.

During this quarter, pre-installation assessments were carried out at 19 of the sites in Gauteng (GP) (11), KZN (3), MP (2), LP (2), and Free State (FS) (1). Of the 19 clinics, 9 are facilities that have been identified as ideal (prototype) clinics that will be used to pilot the NHI as well as one regional pharmacy (Tshwane Regional Pharmacy). Of these, nine were deemed to have the necessary infrastructure and staffing requirements for RxSolution implementation, which has commenced.

The pre-installation assessments at Polokwane and Mankweng Hospitals in LP identified several infrastructure and equipment requirements, which were communicated to the province.

Subsequently, the province established an RxSolution task team which includes SIAPS. The province procured the necessary equipment to allow RxSolution to be installed early in the following quarter.

In GP, implementation of RxSolution relies on the requisite equipment being made available. Priority will be placed on installing RxSolution in the three ideal clinics in this province. Once implementation in all of the above has been completed, phase 2 of the priority rollout plan will commence. This includes implementation in 52 clinics in NHI districts. This will be finalized in consultation with NDoH.

One of the key components of the plan is the support that is required by each of the provinces for installation and maintenance. Several PEPFAR-funded partners have been identified who can provide personnel to facilitate implementation of the software. Implementation in GP includes Alexandra Clinic which is managed by ANOVA (a PEPFAR partner). BroadReach Healthcare will fund a post for an MIS practitioner at the regional pharmacy in Germiston. Ekurhuleni Metro will facilitate implementation of RxSolution. Health Systems Trust (HST) will make available 12 of their staff members to be trained to assist with the RxSolution rollout in four provinces.

SIAPS continued to provide support to the Provincial Medicine Procurement Unit (PMPU) currently managing direct delivery procurement (DDV) of ARVs and medicine for oncology for facilities in LP (40) and GP (26). Operational volume (quantities ordered, received, and paid for), supplier performance, and overall unit performance report-generating templates were developed to facilitate extraction of information from the customized version of RxSolution used to manage inventory at PMPU. Work is also underway on the development of an interface with the system used for financial management by NDoH. This innovation will facilitate quicker electronic payments to suppliers for DDV items and reduce data capture errors.

SIAPS continues to develop RxSolution to maintain a competitive edge in meeting the needs of users. During the quarter, development of bar coding functionality for the stock management module was completed and was successfully demonstrated for NDoH. Pilot use of the functionality will commence in the next quarter. In addition, the biometric (fingerprinting) function is in the final stages of development.

SIAPS continued to provide maintenance support to existing sites including NMMU. Also at NMMU, SIAPS is supporting a final-year pharmacy student in a research proposal to analyze the prevalence of and evaluate prescribing trends for chronic medication use among patients attending a public sector health care facility in EC. This analysis is expected to be conducted using data extracted from RxSolution.

Partner Contributions

- SCMS— supporting the PMPU with contracts and supplier management in LP and GP
- BroadReach—funding an MIS post at the regional pharmacy in GP
- HST—providing additional personnel to support the RxSolution rollout
- ANOVA Healthcare—supporting management of the Alexandra Clinic

Constraints to Progress

- Increased work-load on the electronic tools team due to increased demand for RxSolution

- Contingent to additional funding being approved, five key new positions were advertised including deputy director MIS, cluster manager software development, cluster manager implementation and support, PMIS project manager, and senior MIS advisor for software development (for the control tower at NDoH)

- Additional posts have also been advertised for four developers and five provincial implementation and support staff

Objective 4: Financing mechanisms strengthened to improve access to medicines

Quarterly Progress

Work under Objective 4 focused mainly on improving reporting by the Central Procurement Unit (CPU) of NDoH. SIAPS is also working to build capacity at the provincial, district, and facility levels to identify inefficiencies and waste in current pharmaceutical management operations and analyze options for improvement. To that effect, SIAPS has made considerable progress in GP in identifying high-cost drivers and designing appropriate interventions.

SIAPS provided technical assistance to the Gauteng Provincial PTC and institutional PTCs at Rahima Moosa Mother and Child and Sebokeng Hospitals in analyzing pharmaceutical expenditure using ABC analysis. Support was also provided to the Northern Cape PTC with the review of the top cost drivers in their ABC analysis. The results of these ABC analyses were submitted to the respective PTCs for review. The information is being used to design interventions aimed at changing prescribing patterns and reducing expenditure. As such changes take time, meaningful results can only be expected 12 months after implementation of the intervention.

The CPU manages the procurement and distribution of 19 line items of ARVs using Global Fund resources. SIAPS continued to provide support to the CPU in the review of their quarterly report to meet Global Fund requirements. During the quarter, ToRs for the support SIAPS will provide to the CPU were finalized and adopted. The ToRs include a cost-sharing arrangement where all travel expenses and funds required for activities by the SIAPS staff member involved, will be covered by the Global Fund. SIAPS provided input on indicators to be used by the country coordinating mechanism (CCM) for CPU activities. SIAPS assisted with the review of the Global Fund reporting tools. Technical assistance was also provided to the CPU during the first visit of the Grants Management Solutions (GMS) group to the NDoH for the Principal Recipient (PR) Management Dashboard Pilot Project. GMS is providing support to the CPU on the development of performance measures and reporting.

Technical support was provided during the review of a report on the stock take carried out in January at the Domestic Distribution Center (DDC). The DDC is a warehouse managed by Imperial Health Services where ARVs procured with Global Fund resources are stored. Following this, SIAPS was asked to provide onsite technical support to NDoH at the quarterly stock take at DDC in March. Input was also provided in the review of the CPU procurement management plan to ensure good governance in procuring ARVs through the Global Fund.

To strengthen provincial compliance with the standards established in the National Dashboard for Pharmaceutical Services, SIAPS continued to support PS in GP and LP with allocation of medicines in the provincial formulary into vital, essential, or non-essential categories (VEN analysis). The process involves pharmacists from all levels of care. Once finalized, the draft VEN analysis will be submitted to the provincial PTC for approval.

The director general of health asked the SIAPS county program director to take the lead in writing a chapter on medicines, health products, and technology for a book being compiled by NDoH on its achievements and challenges in 2010-2014. Several other academics, consultants, and NDoH staff are involved in writing chapters on other aspects of the healthcare delivery system. It is intended that the book will be launched at the Third Global Symposium on Health Systems Research in Cape Town in October 2014.

Objective 5: Improved medical products availability

Quarterly Progress

Work under Objective 5 focused on quantification, interventions to improve medicine availability at various sites, and supporting new models of service delivery.

It was previously reported that SIAPS worked in collaboration with the NDoH and CHAI to develop the quantification model used to determine estimates for the ARV tender, effective January 1, 2013. As of the end of the quarter, the actual quantities of fixed-dose combination ARVs purchased were 60 percent of the forecasted total. The variance from the target (80) is largely due to the use of single-agent ARVs which are still stocked in large quantities across the country. SIAPS is part of the team that is currently revising this model to allow for regimen changes in preparation for a new ARV tender to be advertised by NDoH in August 2014. The revised model is expected to be completed during the next quarter.

A model was developed for the provincial DOHs to cost and compare estimates for tenders. This model was successfully implemented for three tenders advertised during this quarter and will be used by NDoH for future tenders. SIAPS also provided support to the NW province in consumption-based quantification using Infomaker reports from the provincial depot.

The LP stock availability monitoring tool was reviewed in accordance with current pharmaceutical contracts. The depot reported 79 percent medicine availability at the end of the South African Government's financial year in March. This level of availability is a marked improvement from the 50 percent average reported at the end of the previous financial year. Several interventions supported by SIAPS that have been identified as having contributed to the

improvement include improved access to inventory management information with the use of Infomaker; weekly stock availability and stock-outs from facilities which helped inform planning for orders as well as following-up with suppliers; awarding of surgical tenders by NDoH; and effective supplier rotation by the depot when doing buy-outs.

The consultant appointed by SIAPS continued to implement activities to strengthen MSM at 10 PHC and 2 community health centers in the Mangaung Health District in the FS. Analysis of consumption data at nine clinics enabled the identification of R7,800 worth of stock at risk of expiring. This stock was redistributed to other facilities. Stock was also rearranged to ensure optimal use of the limited space available in facilities. Working in collaboration with district personnel, new SOPs, ordering schedules, and registers for supervisory visits by pharmacists were developed and submitted to all facilities. SIAPS printed and donated revised stock cards, which allows the 10 PHC facilities to record monthly consumption for each medicine. Onsite training on the use of stock cards was conducted. Plans are underway to provide support in ensuring that all facilities order stock on a monthly basis from the provincial depot, once the space issue is resolved. Currently, four facilities are still ordering weekly from the sub-depot because of space limitations. Other facilities are supplied by the depot and are allowed to keep a buffer stock of three months. A post-intervention assessment will be conducted in the next quarter.

Following MSM training in November 2013, feedback and recommendations on how to improve stock management were provided to Qaukeni subdistrict in EC. Recommendations were aimed at reducing excess stock identified following an analysis of monthly consumption data for tracer medicines at six PHC clinics in the district.

NDoH is in the process of implementing the Ideal (Prototypes) Clinic Project as part of NHI. SIAPS is in the initial phases of implementing RxSolution to support MSM at the nine PHC facilities identified for this project. Following a request from NDoH, two SIAPS teams, comprising one member each from the medicine information systems and the medicine access and availability teams carried out site readiness assessments in GP (3), FS (1), KZN (3), and MP (1). This approach aimed at determining the readiness of sites to implement RxSolution, as well as identify how MSM practices can be optimized once the system is in place. The challenges identified during the assessments related mostly to human resources (shortages, lack of knowledge and willingness to use the system) and IT (shortage of hardware and absence of network). NDoH and SIAPS will be working together to address these challenges. Work is underway on the development of SOPs for MSM using RxSolution.

In LP, assistance was provided in updating the PHC stock-take template. Editing of the PHC SOPs was also completed. The SOPs were sent to the Center for Pharmaceutical Management editorial department for review.

In South Africa, newly qualified pharmacists must perform one year of community service in a public sector institution. During the quarter, SIAPS supported the orientation workshops of community service pharmacists (CSPs) in four provinces. In the EC, sessions were presented on the use of stock cards for managing medicine supplies at health institutions, the use of formulae to calculate quantities to order, and the development of SOPs. In the NW, presentations were

made on the pharmaceutical management framework, pharmaceutical waste management, and infection prevention and control. The report on the Bojanala District medicine availability assessment was shared with district pharmacists and pharmacy managers. In LP, CSPs were introduced to the Adopt-a-Clinic Project. Sessions were facilitated jointly by SIAPS and provincial DOH officials who were trained and capacitated by SIAPS in the previous year. An implementation plan was developed for the period ending November 2014 when CSPs will present their achievements. In MP, SIAPS provided 30 *Managing Drug Supply* (MDS-3) memory sticks for training purposes.

SIAPS provided support for two pharmacists from the LP DOH PS to present at the South African Association of Hospital and Institutional Pharmacists conference. The presentations were entitled "Assessment of Vhembe District Primary Health Care Facilities for National Health Insurance" (poster) and "Improving Medicines Access and Availability in Vhembe District Primary Health Care Facilities, Limpopo Province" (presentation).

Formal training on MSM was conducted for a total of 89 health care professionals (16 males and 73 females) in FS (27) and Alfred Nzo district in the EC (62). In the EC, plans are in place to provide technical assistance in addressing some of the challenges identified during the training.

The consultant engaged to conduct the assessment of pharmaceutical management for TB in correctional facilities adapted the data collection tools developed in a similar assessment of public health care facilities. The tools were piloted during an assessment at Baviaanspoort and Cullinan Correctional Centers. Assessments were conducted in the juvenile center at Emthonjeni and the Medium Security Unit of the correctional center. Findings were shared on-site with healthcare personnel. Based on the findings and observations made during the pilot assessment, the process flow, route schedule, and data collection tools were amended and subsequently approved by the Department of Correctional Services. Further site assessments will be carried out in the next quarter.

The NDoH has introduced a new model for the provision of chronic medication to public sector patients—Central Chronic Medicine Dispensing and Distribution (CCMDD). NDoH awarded a tender to three service providers toward the end of 2013 to provide CCMDD services in 10 NHI districts across 8 provinces. Implementation began February 1, 2014. Support was also provided in the development of financial and logistics pathways, as well as with the development of project plans at district level.

SIAPS provided technical assistance to establish a framework for data and document flow to allow supplier payments and facility expenditure allocation between the PMPU at NDoH and GP depot. SIAPS will continue to support NDoH in its effort to implement the CCMDD model by providing technical assistance on MSM and quantification at the national, provincial, district, and facility levels.

Objective 6: Improved rational use of medicine and patient safety

Quarterly Progress

SIAPS provided a training of trainer (ToT) workshop on PTC functionality and basic pharmaco-economic principles to 23 KZN DOH clinicians and pharmacists. This training is expected to be provided in turn to members of PTCs within the province. The overall average participants' scores improved from 48 percent in the pre-test to 75 percent in the post-test. An analysis of the tests identified areas where further capacity building may be needed. Subsequent to the ToT, SIAPS was asked to support the rollout of PTC training in uMkhanyakude district in March. SIAPS attended the launch of the KZN PPTC where SIAPS assistance provided during the revitalization process was acknowledged.

Technical support was provided to LP PS to strengthen their compliance with the PTC-related standards in the National Dashboard. Governance tools (e.g., ToRs, confidentiality, and declaration of interest documents) were shared as well as templates for developing an operational plan. Guidance on rational medicine use interventions was also provided.

SIAPS provided technical support to the GPPTC to review the quantities of misoprostol used per facility SIAPS will provide assistance in conducting a comprehensive analysis of misoprostol usage in health care facilities based on statistics from the Mother and Child Program. The results will be used to design interventions to promote the safe use of misoprostol in the interest of reducing mother and child morbidity and mortality.

One of the findings from the pharmaceutical management of tuberculosis assessment conducted in public health care facilities in 2012 was poor compliance with STGs. Subsequently, the TB Directorate at NDoH requested SIAPS assistance with the development of a clinical monitoring tool for drug-susceptible TB. The draft tool was submitted to the TB Directorate and comment is awaited.

SIAPS provided support to the NDoH with facility readiness assessment of the Decentralized Satellite MDR TB Unit in the rural NW. SIAPS was invited to attend the opening of this unit as part of World TB Day celebrations in NW. In preparation for its support to NDoH in building capacity in management of MDR-TB, SIAPS attended the WHO MDR-TB Symposium where concerns regarding the management of drug-resistant TB were discussed.

An abstract titled "An Assessment of Compliance with National TB Protocols across Six Provinces in South Africa" was submitted and accepted for presentation at the 4th South Africa TB conference to be held in June 2014.

SIAPS continued to provide support to the NDoH Pharmacovigilance Centre (NPC) in implementing the decentralized pharmacovigilance system to improve the safety of patients on ARVs in MP and NW. In MP, out of the 28 clusters (266 feeder clinics), 4 of them (Standerton and Bongani TB and Matikwane and Elsie Ballot Hospitals) were absorbed by nearer clusters for logistic reasons. The cumulative total number of ADR reports received in the province is 2,697 since the program started in 2010. It was previously reported that phase 1 implementation

training was completed in NW where 20 clusters were formed. Implementation of phase 2 has begun and involves on-site mentorship and support to stimulate reporting and improve the quality of reports received. As this is the early stage of phase 2, only four clusters have submitted a total of 170 ADR reports, all of which concerned ARVs. It is expected that the support will improve the quantity and quality of reports submitted.

SIAPS is part of a national AMR stewardship working group established by the director general of health in October 2013. The group identified the development and implementation of a national AMR strategy, encompassing health, veterinary, and agriculture, as a major step. The draft national strategy framework was disseminated for review and will be discussed during a national stakeholder's consultative meeting in the next quarter.

Partner Contributions

- I-Tech: Maintained TrainSmart database for healthcare workers trained for the pharmacovigilance program in Mpumalanga

- BroadReach Healthcare: Assisted with printing small quantities of materials for the pharmacovigilance program

- Right to Care: Funded provincial pharmacovigilance coordinator position

South Sudan

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

Overall Quarter Progress

Following the political instability in December 2013 in South Sudan, the SIAPS office was closed and then reopened in late January 2014. At this time, USAID requested the SIAPS program to highlight work plan activities which could be continued by the local team with remote support from the evacuated Third Country Nationals (TCN). During the last quarter, SIAPS South Sudan shifted from a health system strengthening mode to an emergency relief, critical functions, and support services mode with a focus on improving availability and accessibility of much needed essential medicines by supporting the distribution of essential medicines to county warehouses and health facilities. SIAPS worked with various states including the Central Equatoria State (CES) Ministry of Health (MoH) to deliver the Emergencies Medicines Fund (EMF) essential medicines including maternal and child health products which included oral rehydration salts (ORS) for diarrhea, antibiotics for pneumonia in children, antimalarials such as ACTs and sulfadoxine-pyrimethamine, and oxytocin for postpartum hemorrhage, all of which are required to support the Ministry of Health and Social Welfare's (MoHSW) efforts to reduce preventable maternal and child deaths.

During this period, the SIAPS Country Project Director (CPD), the Portfolio Manager, SIAPS senior staff based in Arlington, VA; USAID Washington: and USAID South Sudan had a number of strategic discussions to revise and agree on the broad directions for the SIAPS program through September 2014. A modified work plan is currently being developed for submission and approval. In line with the case by case approval approach adopted by the USAID, the SIAPS CPD was requested to return to South Sudan to support providing emergency services, distributing pharmaceuticals and assisting the Pharmaceutical Technical Working Group and MoHSW pharmaceutical and pharmaceutical sector partner activities. While he is there, the CPD will confirm activities for the planned modifications of the SIAPS FY 13 work plan.

Despite the political insecurity and the emergency relief mode of the SIAPS project, the SIAPS Pharmaceutical System and Malaria Advisors joined the USAID SIAPS Activity Manager, and the South Sudan TB and Malaria Program Managers for three weeks in Kenya to review and update the Pharmaceutical Supply Chain Management Plan for the Global Fund application for South Sudan. This activity was critical to ensure a continuous flow of much needed commodities for the people and Government of South Sudan.

Objective 1: Pharmaceutical services improved to achieve desired health outcomes

Quarterly Progress

To improve pharmaceutical services to achieve desired health outcomes, SIAPS, worked with the Central Equatoria State (CES) MoH to deliver much needed artemisinin-based combination

therapy (ACTs) received under the EMF Lot-7 to all the CES counties. SIAPS stepped in for the DELIVER Project to support the distribution based on request from State Ministry of Health (SMoH) and USAID. Currently, all six CES counties have received some antimalarials with SIAPS technical support.

SIAPS also supported Yambio County to ensure the proper inventory management of all the antimalarials received. The program staff worked with the storekeepers to verify the receipts of the ACTs, and 55 cartons been distributed to the hospitals, primary health care centers (PHCC), and primary health care units (PHCUs). The distribution to health facilities was done through leveraging resources and collaboration with the World Vision, an integrated services delivery partner (ISDP) in Yambio County.

To ensure an uninterrupted supply of medicines for prevention of postpartum hemorrhage, SIAPS supported the distribution of 1,200 doses of misoprostol to Mundri East in collaboration with UNFPA and Jhpiego. SIAPS worked with SMoH to allocate emergency kits (essential medicines for MCH and dressings and other medical supplies) supplied by UNICEF to CES and coordinated with Jhpiego to send the kits to different counties. These activities contributed to increasing availability of these life-saving medicines during this critical period in South Sudan.

SIAPS, in collaboration with the directorate of pharmaceutical for WES, carried out de-junking of the medical stores in Ibba and Nzara counties. This is part of the de-junking campaign initiated to ensure that all 16 county stores in the two states have improved stores and capacity. SIAPS also collaborated with Action Africa Help and International Medical Corps that are ISDPs during this exercise.

As part of improving storage capacity and inventory management, SIAPS oversaw the ongoing disposal of expired/damaged commodities in Kajokeji after the de-junking exercise in collaboration with the county health departments.

SIAPS continues to provide technical assistance in the daily management of the newly renovated CES medical store to ensure its smooth operation with the necessary inventory management practices including store arrangements of medicines, stock card update, receipts, and issues of medicines. Receipts of accurate data from the CES will improve the quality of logistics information for decision making.

Partner Contributions

SIAPS collaborated with ISDP, UNICEF, Health Pool Fund (HPF), and USAID | DELIVER to ensure that essential medicines and supplies are distributed throughout the country.

Constraints to Progress

Although actual procurements and shipment of essential medicines are handled by other partners, SIAPS provides technical assistance for the overall national quantification of essential medicine needs. Due to security and operational constraints on the side of partners, the shipments of the

EMF supplies have been delayed. Several facilities are out of stock of essential medicines and this situation has been worsened by the country's humanitarian crisis.

SIAPS has, through the Pharmaceutical technical working group and the health cluster meeting, worked to improve communication with the MOH and partners to ensure re-distribution of medicines and to provide appropriate channels for addressing drug management challenges. One suggestion has been re-convening the pharmaceutical technical working group (PTWG), a forum which brings government and partners together to discuss challenges, gaps, opportunities, and solutions. SIAPS serves as the secretariat to the PTWG.

The de-junking activity has also experienced problems with disposal as some counties have carried out disposal but have not yet disposed of the de-junked commodities as disposal requires additional resources. SIAPS has managed to work with partners to support these exercises and also provide transport to the disposal sites.

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

Quarterly Progress

To increase and enhance the capacity for pharmaceutical supply management and services, SIAPS continues to assist with the day-to day management of the CES medical store to ensure its smooth operations and to ensure that medicines are stored appropriately and the necessary inventory management practices are ensured: these include store arrangements of medicines, stock card update, receipts and issues of medicines.

To strengthen capacity in pharmaceutical management, SIAPS carried out a rapid assessment in CES to determine the stock levels of pharmaceutical supplies, and availability of PMIS tools. During the visits to El Sabbah Children's hospital, Gumbo PHCU, Kator PHCC, Kuda PHCC and Kuda Lodimi PHCU, commodity managers were trained in using stock cards and filing the request and issues vouchers for supply of medicines. Generally, there were good storage arrangements but poor record keeping by most of the facilities; this could be attributed to the unavailability of pharmaceutical management information system (PMIS) tools in some facilities.

SIAPS also supervised and supported the updating of the monthly essential medicines consumption reports for Yambio hospital and discussed with the storekeeper how to improve the reporting systems. The hospital administration has provided a computer to the stores for inventory management to facilitate the calculation of the adjusted average monthly consumption for essential medicines. In Yambio PHCC, the program reviewed the filling of the dispensing register and checked the availability of pharmaceutical management information system (PMIS) tools and found that a number of the tools such as the Report and Requisition Voucher and the dispensing registers had run out.

Partner Contributions

The State MoH in CES and staff in the various facilities supported these exercises.

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, delays reporting, and sometimes inaccurate reports. Most facilities also do not have PMIS tools for recording logistics data and this makes record keeping virtually impossible. There will also be a need to increase in the number of SIAPS staff supporting the data collection exercises in WES and CES.

Objective 3: Information for decision-making challenge in the pharmaceutical sector addressed

Quarterly Progress

To ensure information for decision making is enhanced, SIAPS, in collaboration with national partners, reconvened the PTWG, of which SIAPS serves as the secretariat. SIAPS coordinated the supply of PMIS tools to Tambura County to ensure the continuous supply of commodities, facilitating the timely request and issues of medicines between county stores and health facilities. In collaboration with the International Medical Corps (IMC), an ISDP implementation partner, SIAPS analyzed health facilities stock status for Juba, Yei, Lainya, Terekeka and Morobo counties; analyzed the data collected; and provided feedback to the counties as well as the directorate of pharmaceuticals and equipment and the State MoH.

As part of inventory management and strengthening of data collection, SIAPS visited selected facilities including: Nyokuron PHCC, Gurei PHCU, Malakia, Sacred Heart PHCU, Mahad, Kator PHCU, Gumbo, Hai Jebel, Gudele PHCU, St. Kizito, Gudele Block 4 PHCU, and Munuki PHCC. After collecting stock status data for these facilities, SIAPS staff analyzed the data and shared with CES MOH.

Partner Contributions

The State MoH in CES and staff in the various facilities supported these exercises.

Constraints to Progress

The human resource challenges at the facilities and the capacity to undertake inventory management task is very minimal. This leads to delays in receiving prompt and accurate reports for analysis. Most facilities also don’t have PMIS tools for recording logistics data and this makes record keeping virtually impossible. The program has only one data officer to cover both states of WES and CES: this has made it impossible to get information from the WES.

Objective 4: Pharmaceutical sector governance strengthened

Quarterly Progress

To strengthen the pharmaceutical sector governance, SIAPS worked with the Directorate for Policy Practice Unit Dr. Buchay to provide comments on the concept note for the standard treatment guidelines (STGs)/essential medicines lists (EMLs) review. SIAPS also supported the review of the program and presentations for the two-day STG/EML task force orientation workshop, in collaboration with WHO and other partners. Through remote support, SIAPS reviewed the plan for officially establishing the review task force to review the 2007 South Sudan Essential Medicine List. The reviews are based on changes in disease specific guidelines for South Sudan and on recent WHO Model Essential Medicine list as well as on the 2012 South Sudan essential drug procurement list.

In the last quarter, the procurement of Minilab reagents and reference drugs was initiated to ensure that Minilab operations in Juba and Kaya are not interrupted The Minilab activities are being undertaken to support the Government of South Sudan in its efforts to reduce the entry of poor quality medicines into the country from the border points of the country. This activity has been slowed considerably due to the political situation in country.

SIAPS actively participated in the South Sudan MoH tuberculosis program strategic planning for 2015 to 2019 conducted in Nairobi from February 24 to March 16, 2014. The meeting was organized by South Sudan MoH National TB program in collaboration with MSH TB care. SIAPS provided technical support in overall strategic planning process with special emphasis in areas of pharmaceutical and supply management, rational drug use, monitoring and preventing adverse reactions, and program management.

Constraints to Progress

The newly established Drug and Food Control Authority (DFCA) lacks the requisite number of human resource staff members to engage in fruitful discussions on the EML/STG. Secondly, the political situation has stalled the process of setting up the team to carry out this activity.

Objective 5: Scale up of malaria interventions accelerated, better coordinated and documented

Quarterly Progress

SIAPS supported the development of terms of reference and standard operating procedures for the Malaria Indicator Survey (MIS) blood slide readers and supervisors. The MIS co-investigator, in collaboration with the South Sudan Reference Lab and the National Malaria Control Program, selected candidates from the existing database of laboratory technicians. SIAPS also helped complete the second data entry processes for the ongoing Malaria Indicator Survey.

The data analysis and report writing will be carried out in the coming months after the data entry process. Most of the data was collected prior to the changes in the political climate, and work on MIS during this quarter has been focused on data entry and analysis. SIAPS will continue supporting the MIS work remotely from the evacuated Malaria Advisor in collaboration with WHO, MIS co-investigators, and the NMCP.

SIAPS reviewed the generic WHO guidelines for developing national malaria strategic plans and adapting them to the South Sudan context as part of the review and update of the malaria strategic plan.

Despite delays due to political environment, SIAPS continued to provide support on finalizing the training plan for malaria case management in CES and WES. Discussions were held with the state coordinators or their representatives for selecting health cadres of traditional birth attendants and community health workers and the higher cadres, separately. These trainings will ultimately lead to improved malaria case management at the facilities' levels and enhance treatment and care for malaria patients.

Following the final review of Malaria Program Review (MPR) report, SIAPS formatted and readied document for printing. The printed document will be disseminated widely to stakeholders.

SIAPS reviewed the draft national malaria treatment guidelines. When finalized, the guidelines will be used in the malaria case management trainings countrywide and to enhance adherence to malaria treatment protocols, thus assuring effective treatment of malaria in the country.

Partner Contributions

The Global Fund through Population Services International (PSI), WHO, and USAID have been supporting the malaria activities through the engagement of technical assistance/consultants and advisors. USAID has also contributed in the procurement of anti-malarial for the case management of malaria.

Constraints to Progress

Because of the current political crisis, the embedded advisor is not in-country and most of the state and county level support has stalled. Other partners who fund the malaria program such as the Global Fund/PSI and others also suspended funding for the program activities. The limited number of malaria staff has also impacted negatively on implementation of key activities as several activities including supervision do not take place as frequently as they should.

Swaziland

Goal: The goal of the SIAPS program in Swaziland is to assure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes.

Overall Quarter Progress

SIAPS continues to strengthen the pharmaceutical sector with the vision of assuring availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes. Support is provided to the Ministry of Health (MOH) in the scale-up of HIV treatment services and the roll-out of the option B+ for the PMTCT program, according to the WHO revised HIV treatment guidelines (2013).

SIAPS supports MOH with efficient financing strategies and mechanisms to scale up this program. During the forecasting of HIV medicines, SIAPS paid special attention to the increased demand brought by the revision of the treatment eligibility criterion from a CD4 of 350 to 500 and the introduction of the Option B+ in PMTCT. MOH is committed to fund this budget in FY 2014/15. SIAPS, in collaboration with UNFPA also conducted a FP quantification exercise which produced a forecast and supply plan for reproductive health and FP supplies for 2014–2018. A supply plan for laboratory and TB medicines was also developed for the 2014/15 financial year.

Strengthening governance and promoting transparency and accountability in the pharmaceutical sector remains a priority. SIAPS resumed the work on the Medicines & Related Substances Control Bill and the Pharmacy Bill. Approval was granted by the Office of the Attorney General to present the bills to the Cabinet.

SIAPS worked to support the functioning of two committees, namely, the Supply Chain Technical Working Group (SCTWG) and the National Essential Medicines Committee (NEMC). SIAPS facilitated the eighth SCTWG meeting, wherein various supply chain issues were discussed, the national stock situation presented, and health program plans for 2014/15 shared. The meeting highlighted some serious challenges and risks to product availability that may negatively affect HIV/PMTCT program scale-up. It was resolved that various advocacy actions should continue to mobilize resources from the Ministry of Finance for health commodities in the 2014/15 budget. The TORs and members of the NEMC were approved by the principal secretary. The formal appointment of members and the first meeting of the committee are scheduled for the next quarter. SIAPS also participated in the national HIV/TB Coordinating Committee, Pediatric ART TWG meetings wherein issues related to access to products for TB/HIV were discussed.

SIAPS has targeted the establishment of a functional contract management system for procurement and supported the recruitment of a senior procurement officer (funded by the Global Fund); SIAPS also drafted a business process flow for contract management and suppliers' performance evaluation. SIAPS continues to support implementation of procurement and supply management activities supported by the Global Fund in Swaziland.

During this reporting period, 18 health care workers (HCWs) from 12 facilities were mentored on laboratory supply chain system management, and 13 HCWs from 6 facilities were mentored on pharmaceutical supply management. Supportive supervisor visits (SSVs) to evaluate and strengthen supply chain and pharmaceutical services were conducted in 30 ART facilities in the Manzini region. SIAPS also facilitated the approval of a three-year diploma in pharmacy curriculum at the Southern African Nazarene University (SANU) with the first enrollment in quarter 4.

SIAPS is committed to strengthening pharmaceutical services by assuring patient safety and therapeutic effectiveness of medicines. SIAPS supports six facilities piloting the HIV/TB active surveillance project. Currently, four (67 percent) of the six pilot sites are implementing the active surveillance project. During this quarter, SIAPS has actively supported the supply chain component of the Elimination of MTCT framework and MNCH by monitoring stock availability at facilities.

Objective 1: Strengthen governance in the pharmaceutical sector

Quarterly Progress

SIAPS continues its commitment to strengthening governance in the pharmaceutical sector. During the quarter, SIAPS devoted efforts toward improving medicines policies, legislation, regulations, norms, and standards. SIAPS updated the Medicines and Related Substances Control Bill and the Pharmacy Bill. The bills were further aligned to the NEPAD Model Law which seeks to harmonize medicines regulation in Africa. The finalized bills were approved by the Office of the Attorney General to be presented to the Cabinet. SIAPS and the Office of the Chief Pharmacist apprised the recently appointed Minister of Health on the status of the current legislation.

SIAPS facilitated the SCTWG meeting on March 19, 2014, with representatives from the United Nations Population Fund, PEPFAR, Global Fund, Ministry of Finance, Médecins Sans Frontières, Clinton Health Access Initiative (CHAI), and the Ministry of Health. The objective of the meeting was to discuss stock status and issues regarding product availability. SIAPS also facilitated the drafting of the TORs and the principal secretary has approved the proposed members for NEMC. The formal appointment of members is scheduled for quarter 3.

In Swaziland, all health commodities are procured through competitive, open tender. As part of promoting transparent and accountable pharmaceutical procurement systems, SIAPS set a quarterly target of ensuring that all suppliers are prequalified for 100 percent of national procurement packages. WHO prequalified suppliers/manufactures are used for ARVs and TB medicines. Currently, only 50 percent of national procurement packages were bid on by suppliers that were prequalified. Essential medicines are a separate procurement package, and hence, prequalification of suppliers was not done. SIAPS targeted to ensure that 100 percent of procurements are implemented through competitive bidding. During the quarter, SIAPS supported the procurement unit in tender evaluation worth USD 18.8 million in a three-day tender-adjudication meeting for HIV and AIDS commodities. Potential suppliers have been

identified, and a tender evaluation report has been prepared and submitted to the National Tender Board for approval.

SIAPS continues to support the implementation of strategic and evidence-based pharmaceutical sector development plans. SIAPS participated in the development of the National TB Control Program's strategic plan. SIAPS has also been appointed by the Principal Secretary to co-chair the Allied Health Services component of the National Health Strategic Plan 2014–2018 development committee. SIAPS facilitated a meeting to develop the Pharmacy Strategic Plan (2012–2016) M&E framework. The core team responsible for the development of the M&E framework includes the acting chief pharmacist, CMS strategic information analyst, and MOH's head of the M&E department. Currently, a draft document is pending review by the wider group of stakeholders.

Constraints to Progress

- It has been a long process to finalize the procurement guideline and SOPs (the subject was also raised in the SCTWG meeting). The procurement unit promised to review the documents with various stakeholders and finalize them by June 2014. SIAPS will collaborate with the EU/World Bank project within MOH to assist in fast-tracking this process.

- The presentation of the bills to the Cabinet for approval was postponed on three different occasions, leaving this activity pending at the conclusion of the quarter.

Objective 2: Increase capacity for pharmaceutical supply management and services

Quarterly Progress

SIAPS continues with its commitment to strengthening the pharmaceutical and supply chain management capacity of individuals and institutions. During this reporting period, SIAPS conducted supportive supervisory visits (SSVs) to 44 health facilities. This number includes 30 ART facilities that were visited in the Manzini region. During these visits, 18 HCWs from 12 laboratory facilities were mentored on laboratory supply chain, and 13 HCWs from 6 ART facilities were mentored on the pharmaceutical supply chain of HIV, TB, and FP. The mentorship focused on stock card availability, stock card updates, stock report and order completeness and accuracy, consumption rate calculations, and good storage practices of health commodities.

SIAPS intends to reform pre-service health professional training curricula to address pharmaceutical management topics and ensure that the training is accredited by a relevant governing body. During the quarter, SIAPS successfully obtained approval of the diploma in pharmacy curriculum at SANU. Currently, there are 44 students enrolled in the pharmacy certificate program. The diploma program will commence in August 2014.

SIAPS is also building the capacity of the SANU Pharmacy Department staff in various pharmaceutical management interventions. Discussions are underway for the department to conduct certain surveys and assessments on behalf of SIAPS in this fiscal year.

Constraints to Progress

With the approval of the diploma in pharmacy program by the SANU Senate in February 2014, the operationalization of the program has been documented and delivered to the dean of the Faculty of Health Sciences for review. However, the document notes the need for additional teaching and support staff (along with computers, and laboratory space) to effectively deliver the program. A proposal has been submitted to the dean to create four posts at SANU (three full-time lecturers and one department head).

Objective 3: Address information for decision-making challenges in the pharmaceutical sector

Quarterly Progress

SIAPS continues to address information for decision-making challenges in the pharmaceutical sector by supporting patient and inventory management information systems for HIV, TB, FP and MNCH, laboratory, and essential medicines. In this regard, SIAPS had a quarterly target of ensuring the utilization of two systems for requesting and reporting pharmaceutical sector information, namely, RxSolution and APMR/RxPMIS. SIAPS supported a data- recovery incident that transpired at the CMS due to a computer server malfunction. SIAPS engaged a vendor to successfully perform a full data restoration to the last known functional state of the server. SIAPS is now working to install a back-up system with automated procedures, enforce access rights to the server, and develop a disaster recovery plan.

In FY13, SIAPS engaged a vendor to redesign the RxPMIS software into a web-based platform with additional modules for HIV testing and counseling, TB, and PMTCT. The completed modules were delivered in quarter 1. SIAPS continues to work with MOH and the subcontracted vendor (IHM) to ensure deliverables are fast-tracked and the minimum software development lifecycle standards are adhered to. Currently, four pilot sites have been identified and assessments are underway to ensure that connectivity to the central server is in place for the pilot. SIAPS continued to support the development of a paper-based logistics information management system (LMIS) to capture, at the facility level, data related to medicines and laboratory supplies. SIAPS mentored 12 health facilities on laboratory LMIS. SIAPS printed 150 copies of TB LMIS forms and distributed them to facilities.

SIAPS targeted that at least 40 sites, including CMS and the Health Laboratory Service (SHLS), should implement electronic or mobile technology systems to document and report on specific component(s) of the pharmaceutical system by end of FY 2014. SIAPS set a quarterly target of ensuring that the Commodity Tracking System (CTS) was implemented at CMS and the SHLS warehouse, and provided training to the relevant personnel on CTS. During this reporting period, the web-based CTS was implemented at the SHLS warehouse. Training and mentorship has been

conducted for a data clerk and four SHLS warehouse staff. Currently, laboratory supply chain reports are available on the CTS for the year ending February 2014 (www.lmis.org.sz).

SIAPS set a quarterly target of ensuring that 100 percent (39) of ART facilities use consumption data to inform ordering. During the quarter, 92 percent (36/39) of ART facilities completed and submitted an LMIS report; 59 percent of ART facilities completed and submitted an ART LMIS report on time (within seven working days). All of the reporting facilities used the standard reporting tools that require consumption data to inform ordering. SIAPS further made efforts to ensure that strategic information on pharmaceutical systems strengthening is available and used. SIAPS set a target that the 39 main ART facilities (with LMIS) and 14 main laboratories (with CTS) receive feedback on previously submitted reports. In this quarter, 3 out of 14 (21.4 percent) main laboratory facilities have received data quality feedback on their LMIS reports. Feedbacks to ART facilities had previously been conducted annually. Currently, in partnership with MOH and CHAI, SIAPS has developed a plan to conduct quarterly data quality assessments for the 39 reporting facilities with the objective of providing data feedback. Further data feedback will be given at the regional dissemination meetings facilitated by the National AIDS Program.

Partner Contributions

SIAPS worked with the Harvard School of Public Health to conduct an assessment of facility level factors that have a significant impact on the performance of the national supply chain of ARVs.

Constraints to Progress

- RxSolution data-loss incident which interrupted service delivery at the CMS
- Slow progress on the web-based RxPMIS redesign
- Getting reports on time from facilities has been a challenge. SIAPS has proposed a follow-up of all facilities by the sixth day of each month to ensure that all facilities submit on time
- Poor reporting rate from ART sites during January and February
- Shortage of IT officers in MOH to support RxSolution/RxPMIS at facilities

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

Quarterly Progress

SIAPS supports MOH toward ensuring that financing strategies and mechanisms are strengthened to improve access to medicines for HIV, TB, MNCH and FP. SIAPS successfully finalized the "HIV and AIDS Quantification Report for April 2014–March 2016." In forecasting the requirements for the two-year period, SIAPS paid special attention to the increased demand brought about by the revision of the treatment eligibility criterion from a CD4 of 350 to 500 and

the introduction of the option B+ in PMTCT. The financial requirement for the first year is estimated at USD 16.5 million for medicines and USD 6 million for laboratory commodities. MOH and the Ministry of Finance have committed to fund this budget in FY 2014/15 with an initial allocation of USD 11 million.

During this quarter, targets were set and achieved to produce four forecasting documents that enhance efficient use of financial resources for HIV, FP, laboratory, and TB commodities. The results of this exercise have been used to inform tenders and procurement plans for HIV, TB, laboratory, and FP commodities.

The "Family Planning Commodity Quantification for January 2014–December 2018" developed in quarter 1 was also completed and shared with counterparts in MOH and UNFPA.

Furthermore, SIAPS set a target to ensure existence of quarterly supply plans for HIV, FP, laboratory, and TB commodities. In this regard, SIAPS facilitated four quarterly supply plan exercises for HIV, TB, FP, and laboratory commodities. The result of the supply plan exercises were used to plan shipments from different funding sources (UNFPA, Population Services International [PSI], Global Fund). Although there are challenges in releasing adequate funds for procurement, the supply planning exercise helped UNFPA to cancel unnecessary procurement of 12,000 sets of Jadelle® (an implant contraceptive containing 75 mg levonorgestrel) worth USD 102,000. This exercise has also helped to analyze funding gaps and served as early warning system to indicate imminent stock outs of critical products.

Constraints to Progress

Insufficient budget for priority health commodities, hence the country struggles to maintain the prerequisite stock levels.

Objective 5: Improve pharmaceutical services to achieve desired health outcomes

Quarterly Progress

SIAPS continued to strengthen pharmaceutical management systems and ensure product availability to support TB/HIV integration and MNCH. SIAPS set a quarterly target of receiving stock status reports from 144 facilities, which includes ART facilities, facilities receiving FP commodities, the Central Medical Stores, main laboratories, and the SHLS warehouse. During the quarter, stock status reports were received from the CMS, 92 percent of ART (36/39) facilities, 90 percent (130/144) of facilities receiving FP commodities (i.e., condoms), 14 main laboratories, and the national laboratory warehouse. SIAPS also monitors stock levels of MNCH commodities such as folic acid, ferrous sulfate, and oxytocin; this quarter CMS maintained adequate stock levels of these three essential maternal health medicines.

The SIAPS quarterly target included ensuring that there are no warehouses or facilities with stock-outs of tracer medicines for three or more days in the last three months. During this reporting period 15 percent (6/39) of ART facilities indicated stock-outs of lopinavir/ritonavir 125 mg tablets. CMS and the SHLS warehouse reported stock-outs of the following products;

didanosine 250 mg, didanosine 400 mg, LPV/r 125 mg, abacavir/lamivudine 30/60 mg, CD4 reagents, and TDF/3TC/EFV 300/300/600 mg.

SIAPS set a quarterly target of ensuring existence of a job aid (poster) on good storage practices of health commodities. This job aid has been distributed to at least 90 percent (130/144) of facilities. During the Manzini supportive visits, it was observed that 20 percent of the 30 facilities visited had this poster. The laboratory warehouse has successfully distributed about 150 posters to various laboratory facilities.

SIAPS is committed to assuring patient safety and therapeutic effectiveness for HIV and TB patients. During the quarter, a target was set to ensure that the six pilot sites implementing the active surveillance project were reporting. Bimonthly monitoring and SSVs were conducted at four sites that are currently reporting on the active surveillance. There were also two meetings led by the MOH pharmacovigilance focal person at one of the two sites that have not yet started reporting on active surveillance; the goal was to explore solutions to the facility's inability to report.

SIAPS also set a quarterly target of ensuring that ADR data is documented and reported and that the *Medicines Safety Watch Newsletter* is disseminated. During the quarter, SIAPS supported MOH's Pharmacovigilance Unit in collecting monthly data from four of the six pilot facilities. The process of analyzing this data is underway, with the plan of releasing the results in the next quarter's edition of the *Medicines Safety Watch Newsletter*.

SIAPS supports Pharmacy and Therapeutic Committees (PTCs) at six hospitals. During this quarter, two of the six PTCs conducted meetings with documented resolutions aimed at improving medicines use.

SIAPS seeks to ensure that 100 percent (144) of supported facilities implement good dispensing standards for medicine. The Mbabane Government Hospital was supported to improve their management and dispensing of ARVs.

Constraints to Progress

- The data analysis database for the active surveillance was lost and no back-up was available. The firm responsible for supporting the system could not be available during this quarter because of other commitments. Thus, although active surveillance data was collected, the data could not be analyzed.

- Erratic supply of priority commodities due to funding constraints at MOH

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

SIAPS continues to provide technical assistance to National Tuberculosis Program (NTP) of Tajikistan in all aspects of TB pharmaceutical management. In Quarter 2, SIAPS helped develop the pharmaceutical management section of the draft TB Control Strategic Plan (2015-2017) as per request of the Tajikistan NTP. SIAPS developed an Excel tool which would allow the NTP to collect information on number of MDR-TB patients on treatment and what anti-TB medicines (or regimens) are prescribed to them. Having this information would allow NTP to use QuanTB as an effective early warning system. SIAPS participated and supported NTP in leading a drug management working group. SIAPS worked with the national counterparts to plan the pharmaceutical management curriculum reform for the post-diploma education of TB specialists and nurses. It was agreed that out of 156 hours in-service training of TB doctors and nurses (which is required for all TB doctors and nurses every 5 years), 6 hours will be dedicated to TB pharmaceutical management; SIAPS has already started working on training materials.

Also, SIAPS assisted with mapping out the current TB and pharmaceutical management information systems, conducting a gap analysis and needs assessment for developing a TB pharmaceutical management information system. The assessment will be used for development of the strategy for an electronic TB PMIS.

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

Quarterly Progress

SIAPS supports Tajikistan's NTP and contributed to development of the new National TB Control Strategic Plan for 2015–2017. Particularly, SIAPS supported NTP to develop the pharmaceutical management component of the new TB Control Strategic Part. WHO provides TA to the country to develop the National TB Control Strategic Plan for 2015–2017 and SIAPS collaborated and coordinated its work with them. The strategic plan is being finalized. The plan will be used to develop the concept note for applying for Global Fund grants funding according to the New Funding Model.

A lack of up-to-date information on MDR-TB patients on treatment and their prescribed anti-TB medicines (or regimens) does not allow NTP to use QuanTB effectively as an early warning system. SIAPS has developed an Excel tool which would allow the NTP to collect that information. The tool will be piloted in Quarter 3.

SIAPS participated and supported NTP to lead a drug management working group.

SIAPS worked with the national counterparts to plan the pharmaceutical management curriculum reform for post-diploma education of TB specialists and nurses. Senior SIAPS staff met with the Head of Department of Medical and Pharmaceutical Education, Personnel Policy and Science at the MoH of Tajikistan to discuss this activity. Kurbangul Zakirova, the Chief TB specialist of the MOH of Tajikistan was identified, as a national counterpart for this activity. In discussion, it was agreed that out of 156 hours in service training of TB doctors and nurses (which is required for all TB doctors and nurses every 5 years), 6 hours will be dedicated to TB pharmaceutical management. Next steps, in Q3, would be the development of TB drug management curriculum outline, draft training manual and training presentations. These materials will be provided to the Chief TB specialist for review. After review, the document would be finalized at the workshop with the interested parties and then approval by the MOH.

Partner contributions

SIAPS contributed to development of the new TB Strategic Plan in coordination with the WHO"s consultant who provided technical assistance for developing the plan.

Objective 2: Information for decision-making challenges in the pharmaceutical sector addressed

Quarterly Progress

SIAPS is working on developing the strategy for electronic TB pharmaceutical management information system (PMIS) for Tajikistan. SIAPS made an assessment visit to Tajikistan to map current TB related information flows (both electronic and paper-based), develop a summary of existing tools and data capture by level of the health system, develop a gap analysis for data capture, define the scope, and identify high level requirements for the TB PMIS. SIAPS worked with the NTP, TB facilities, and international partners to collect the information for this assessment and a report is being developed. Based on the assessment, a strategy for electronic TB pharmaceutical management information system will be developed.

Partner contributions

SIAPS worked very closely with KNCV implementing USAID TB CARE I project in Tajikistan on gathering the information needed for the assessment.

Turkmenistan

Goal: The primary goal of the project is to strengthen the TB control system of Turkmenistan to address the threat of increased MDR-TB.

Overall Quarter Progress

The SIAPS Turkmenistan project has greatly progressed with the e-TB Manager pilot implementation activity performed February 4–8, 2014, as described in the work plan. E-TB Manager training was conducted for key stakeholders, the target for 12 trainees was exceeded as 22 e-TB Manager users were trained. SIAPS provided technical assistance to set up an e-TB Manager administrative module on Turkmenistan workspace and populate it. The system was customized to meet the needs of the country. Also, in collaboration with the national counterparts and WHO country office in Turkmenistan, an action plan for piloting of e-TB Manager was developed. The SIAPS portfolio team meets weekly with the WHO IT consultant in Turkmenistan who is responsible for further implementation of the pilot.

Objective 1: Strengthen the NTP through improving the TB management information system

Quarterly Progress

SIAPS provided technical assistance to set up an administrative module in the Turkmenistan workspace of e-TB Manager and populate it. The system was customized to meet the needs of the country. Also, SIAPS, in collaboration with WHO Country Office in Turkmenistan, provided training on use of TB case management module of e-TB Manager. There were 22 participants from two regions of Turkmenistan: Ashgabad City and Mary Oblast. Also, SIAPS identified 4 principal users of the system who will be main counterparts for piloting the e-TB Manager. In collaboration with the national counterparts and WHO country office in Turkmenistan, an action plan for piloting of e-TB Manager has been developed and SIAPS meets weekly with the WHO IT consultant in Turkmenistan implementing the pilot. At the moment, WHO is gearing up to install the local server and all the necessary computer equipment in the Mary region. The server had been procured and is waiting to be installed after the heads of clinics give official permission. The permission from the deputy minister of health has already been granted and it is expected that in mid-April the server is going to be installed and ready for data entry.

Partner Contributions

The WHO Country Office in Turkmenistan organized training and provided all the other necessary administrative and logistical support. The WHO IT consultant was present during the whole training and is currently providing the updates during the regular meetings.

Constraints to Progress

The major constraint for this objective is unwillingness of the Turkmenistan government to provide real patient data for training purposes. The SIAPS team assumed that it would be more

sensible and efficient for the users to use their own data, so that they could accurately input it during the training. However, because of the lack of communication from the NTP, SIAPS had to prepare mock data for the training. Another constraint was the stringent regulation for acquiring approval for traveling to the country, e.g., a SAIPS staff plan to travel to Turkmenistan to provide the training was not immediately approved.

Ukraine

Goal: Through a health systems strengthening approach, build local capacity and develop strategic partnerships to 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

During the reporting period, Ukraine has experienced a high level of political and civil unrest coinciding with a change in government and subsequent staffing changes in the MOH. Despite the challenges presented by this evolving situation, SIAPS still made progress toward its goals and objectives.

Under Objective 1, SIAPS made strides in its activities to strengthen pharmaceutical information systems. Due to security concerns, travel during the quarter was limited and SIAPS relied on alternate means of communication; for example, conference sessions were organized through Skype to continue working with regional users and partners at the Ukrainian Center for Disease Control (UCDC) to implement the medicines management module of e-TB Manager (e-TBM) in 14 oblasts. Also during this quarter, the e-TBM activities plan and the e-TBM trainings schedule for 2014 were developed and approved in cooperation with UCDC, allowing for the first e-TBM training of trainers (ToT) to begin on March 31, 2014. The consistency of data submitted in e-TBM compared to data submitted in paper copy also improved this quarter, with 98% of data indicating consistency across both methods.

Work also continued under Objective 2 to improve supply chain management systems for HIV and AIDS and TB commodities. SIAPS cooperated with the International HIV/AIDS Alliance in Ukraine in organizing the training "Introduction to Procurement and Supply Chain Management of Health Products: Public Procurement Principles and Best Practices" and provided specific training sessions on quantification and supply planning and distribution and storage. SIAPS, in collaboration with UCDC, also finalized the site visit monitoring plan for 2014; however, no site monitoring visits were conducted because of national security concerns. SIAPS continued developing a self-monitoring checklist for use at the site level, which will be introduced at a planned training of HIV and AIDS facility staff in quarter 3 of this year.

Progress was also made this quarter to improve pharmaceutical services for the TB and HIV/AIDS programs under Objective 3 through the ongoing development of the Pharmacovigilance Automated Information System (PAIS). SIAPS worked with the State Expert Center (SEC) and the selected vendor to analyze the requirements and specifications according to the approved development plan. SIAPS continued cooperation with the Hromashevskiy National Institute for Infectious Diseases and SEC to finalize the active pharmacovigilance (PV) protocol which has been submitted for expert review.

SIAPS provided assistance to the SEC to develop a PV action plan for the National TB Program. The concept for the plan was developed during the workshop entitled "Pharmacovigilance and Cohort Event Monitoring for Patients on Treatment for Drug-Resistant TB" (organized by WHO

in Copenhagen on March 3-7, 2014) and is based on SIAPS' PV Strategic Development Plan. The action plan itself was developed after the workshop, with SIAPS providing technical assistance in the writing and development of the plan.

Objective 1: Strengthen pharmaceutical management information systems (PMIS) to support the HIV/AIDS and TB programs

SIAPS focused its efforts this quarter on piloting the medicines management module of e-TBM in 14 oblasts using the TB medicines supplied under the Global Fund Round 9 program and e-TBM ToT. Due to political instability which limited regional travel, SIAPS and UCDC provided technical support to regional e-TBM users through calls to the helpdesk, conference calls, and Skype sessions.

Additional attention was paid to the development of the e-TBM Activities Plan for 2014 and the e-TBM Trainings Schedule for 2014. Both documents were developed and formally approved by SIAPS and UCDC in February 2014. The training schedule was also published on the electronic TB Registry section of UCDC's website. On March 31, 2014, SIAPS began its trainings with an e-TBM ToT session per the approved training schedule. There were 13 participants representing Kharkivska, Symska, Kirovohradska, and Poltavska oblasts, as well as an M&E staff member from the Strengthening Tuberculosis Control in Ukraine (STBCU/USAID) Project.

SIAPS also made strides to ensure the completeness of data entered into e-TBM to support its use in effective decision-making. The UCDC is already using e-TBM to monitor the epidemiological trends at the regional and national levels, identify gaps in the implementation of regional TB programs, and to prepare for regional monitoring visits. The first quarter case reports required by MoH were automatically generated in e-TBM for all participating oblasts and were submitted to the UCDC along with the corresponding paper-based reports. For the past three quarters, the TB case numbers from e-TBM have been cross-checked with the paper-based reports; the check showed that 77% of data in e-TBM was consistent with the paper-based reports in Q4 2013, 85% were consistent in Q1 2014, and 98% were consistent in Q2 2014, indicating a 13 percentage point increase in data completeness.

Due to the unstable political and military situation and unclear formal status of Crimea, the UCDC (administrator of the national TB registry) decided to block access to the TB registry for Crimea and Sevastopol.

Constraints to Progress

The main constraint to progress is the difficult and unpredictable political, economic, and military situation in Ukraine occurring during the reported period, though SIAPS and UCDC were able to react proactively and agree on crisis management approaches to continue e-TBM implementation and utilization in country. However, continued issues in Crimea mean that data from that region is inaccessible.

Objective 2: Improve supply chain management systems for HIV/AIDS and TB commodities

SIAPS continues to support the UCDC to strengthen pharmaceutical management monitoring and supervision. In January, UCDC approved the monitoring plan for 2014. The 25 monitoring visits (planned for the rest of the year, as the security situation permits) allow for a visit to each oblast to both TB and HIV and AIDS health facilities. As a member of the supervision team for pharmaceutical management, SIAPS will review medicines storage facilities, drug dispensing practices, and recordkeeping at both TB and HIV and AIDS facilities.

Using data from e-TBM and the e-TBM quantification tool, SIAPS supported the UCDC in planning for the Global Fund quarterly distribution of second-line TB medicines to 15 oblasts. SIAPS developed and conducted trainings on quantification and supply planning and distribution and storage during the "Introduction to Procurement and Supply Chain Management of Health Products: Public Procurement Principles and Best Practices" training organized by the HIV/AIDS Alliance held January 20-24, 2014.

Partner Contributions

- The UCDC is taking an active role in conducting monitoring and supervision visits to the TB facilities, using a team of key specialists. Medicines management supportive supervision was also provided as part of these visits in close cooperation with the UCDC.

- SIAPS, in close collaboration with the UCDC, developed and provided a supply chain management monitoring checklist, which is now being reviewed.

Constraints to Progress

- The recent change in government has resulted in ongoing staff changes at the upper and mid-levels of MoH and a reevaluation of ministry structures. The result has been a delay in joint activities such as site visits as the staff at UCDC is focused on internal issues.

- Regular work with the UCDC was interrupted by a Global Fund audit and resulted in many delayed or canceled meetings.

- SIAPS has agreed to support UCDC in the development of supply chain SOPs, previously requested by the Global Fund. However, to date UCDC has yet to prioritize this activity.

Objective 3: Improve pharmaceutical services for the TB and HIV/AIDS programs

SIAPS made progress in three major pharmacovigilance (PV) activities: (1) automating information systems to increase reporting of adverse drug reactions and lack of medicines efficacy (passive surveillance), (2) expanding active surveillance, and (3) conducting PV audits.

SIAPS cooperated with the SEC department head for rational pharmacotherapy and state formulary system to provide support in improving rational use of anti-TB and other medicines

through implementation of the Drug Use Review (DUR) Program. The SEC indicated interest in piloting the program in Kyivska oblast. SIAPS continues to work on the DUR implementation plan and is actively seeking involvement from the UCDC and the TB Institute.

SIAPS also worked with the SEC and vendor to analyze the standards, requirements, pre-project investigations, and design specifications in compliance with the approved plan for development of the Pharmacovigilance Automated Information System (PAIS).

SIAPS proceeded with active PV implementation while continuing to wait for MOH approval of the active PV working group. SIAPS continued coordinating the adaption of the active PV protocol with the Hromashevskiy National Institute for Infectious Diseases and the SEC. The final version of the active PV protocol was prepared. The protocol will be submitted to the active PV working group for discussion and approval.

SIAPS began preparing for the ToT on TB pharmacovigilance.

On March 3-7, 2014, SIAPS Ukraine took part in a WHO workshop on "Pharmacovigilance and Cohort Event Monitoring for Patients on Treatment for Drug-Resistant TB" in Copenhagen, Denmark. The training materials from this course will help inform the upcoming ToT.

Partner Contributions

- SIAPS cooperated closely with manufactures, SEC, and the vendor (Scientific and Production Association RGData) to develop the PAIS.

- SEC and the National Institute for Infectious Diseases contributed significantly to the implementation of active PV activities.

- SIAPS began working with the SEC department for rational pharmacotherapy and state formulary system in the development of a framework for implementation of a pilot project on rational medicines use.

Constraints to Progress

Changes in the political and economic situation in Ukraine had significantly impacted planned project activities. Due to changes in state leadership, the approval of the PV working group has been suspended which, in turn, will negatively impact active PV implementation timelines. At the same time, some positive changes were observed. At the end of March 2014, SIAPS received information from SEC that the new Health Minister is open to discussing the approval of the working group. As a result, SIAPS sent their written proposals to the SEC.

Objective 4: Improve pharmaceutical management governance

SIAPS continued to support the development of national pharmacovigilance guidelines with the finalization of module 4, "Pharmacovigilance System Audit" and began work on module 5, "Risk Management System."

SIAPS is also contributing to the development of indicators for monitoring supply chain management through a working group of Round 10 Global Fund grant recipients (the HIV/AIDS Alliance, All-Ukrainian Network of People Living with HIV/AIDS, and UCDC). In January 2014, the working group on procurement and supply management (PSM) indicators met and selected draft indicators.

Following recommendations stemming from the National HIV Conference held in February 2014, the UCDC approved the internal order to create the supply planning working group to ensure regular access to quality assured ARV medicines and other commodities. SIAPS was invited to participate in the working group meetings which will begin next quarter.

During the WHO workshop "Pharmacovigilance and Cohort Event Monitoring for Patients on Treatment for Drug-Resistant TB" in March, the SEC and UCDC, supported by SIAPS/Ukraine developed the concept of the PV strategy for the National TB Program. The concept is based on SIAPS' PV Strategic Development Plan (proposed to Ukraine in 2012) and is currently implemented in the country. After the workshop, SIAPS assisted the SEC to fully develop the plan. At the request of WHO, the SEC has sent the draft action plan to the State Service and UCDC for approval.

Partner Contributions

- SIAPS took part in the supply planning working group alongside other partners –including the SEC, state administration on medicinal products, manufacturers, and physicians, among others.

- The Principal Recipients of Global Fund Round 10 Phase 2 are working collaboratively with partners, and the Global Fund, to develop PSM indicators.

- UCDC cooperated with SIAPS on the development of PV programs for the National TB and HIV/AIDS Programs. Despite the obstacles faced by the UCDC, UCDC management enabled cooperation to continue. Currently, the UCDC is involved in the development of a national PV action plan for the National TB Program.

Constraints to Progress

As a result of the political situation in Ukraine, some working group meetings on the development of PV guidelines were postponed. UCDC has delayed the introduction and use of the PSM indicators developed with the support SIAPS due to delay with the start of Phase 2 of the Global Fund Round 9 and 10 grants and inability to collect the corresponding data.

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

Coordinated work of SIAPS and WHO Country Office (CO) resulted in the Uzbekistan Ministry of Health (MoH) TB pharmaceutical management working group. However, strict bureaucratic procedures have created obstacles to effectively implementing the project in the country. The Ministry held its first working group meeting, which was hosted by WHO and guided by SIAPS. Particularly, the working group agreed on conducting an indicator-based assessment. A plan of action for conducting the assessment was agreed upon.

After long consideration, the Ministry of Health (MoH) of Uzbekistan decided not to implement e-TB Manager and instead develop their own TB information system.

After discussion with USAID mission in Central Asia, SIAPS identified several other areas of pharmaceutical management where it can support Uzbekistan using the funds initially allocated for implementing e-TB Manager. These suggestions are based on the priority areas for action identified by the First Conference on Pharmaceutical Management for TB, MDR-TB, and XDR-TB for WHO European Region and initial discussions with participants from Uzbekistan at this conference. SIAPS, in collaboration with WHO Country Office is working with the MOH and NTP to agree on the activities for a technical assistance in above mentioned areas.

Objective 1: Pharmaceutical Sector Governance Strengthened

Quarterly Progress

The Uzbekistan MoH created the TB pharmaceutical management working group. SIAPS joined with the working group to plan for an indicator- based assessment of TB pharmaceutical system. The working group held its first meeting with support and coordination of SIAPS and WHO. The working group was briefed about the assessment methodology of TB pharmaceutical system and a plan of action was agreed upon. According to the plan, the group's next meeting will be held in mid-May, where the protocol of the assessment, data collection forms, list of the documents to be reviewed, and list of sites to be visited will be finalized. Drafts of all these documents will be prepared by SIAPS prior to the meeting.

Partner Contributions

WHO supports SIAPS in all activities in Uzbekistan, and this support is quite important in organizing SIAPS visits to the country according to the current strict regulations and reaching officials for meetings. The TB Pharmaceutical Management working group meeting was organized in the WHO office in Uzbekistan.

Constraints to Progress

The main constrain in Uzbekistan is fact that country's bureaucratic procedures have become more strict. Now even meetings with the national counterparts require clearance and permission from the MoH and sometimes the Ministry of Foreign Affairs.

Objective 2: Utilization of strategic information for decision making increased

Quarterly Progress

After long consideration, the Uzbekistan MoH decided not to implement e-TB Manager and instead develop their own TB information system. The Minister of Health of Uzbekistan informed the USAID Central Asia Republics Health and Education Regional Director Ms. Khadijat Mojidi and other USAID and WHO officials about this decision at a meeting on January 7, 2014.Thereafter, SIAPS identified several other areas of pharmaceutical management where it can support Uzbekistan including—

- Technical assistance (TA) to strengthen anti-TB medicines supply system of Uzbekistan through improving supply planning and implementing early warning mechanism (QuanTB)

- TA to NTP of Uzbekistan to develop and implement Drug Use Review (DUR) program to improve rational use of anti-TB medicines

- TA to improve TB pharmacovigilance system through strengthening the capacity of the pharmacovigilance unit at the Directorate of Quality Control of Medicines and Medical Equipment of Uzbekistan and improving TB doctors' capacity on individual case safety reporting.

SIAPS, in collaboration with WHO Country Office, is working with the MoH and NTP to agree on the activities for a technical assistance in above mentioned areas.

Partner contributions

WHO supports SIAPS in all activities in Uzbekistan, which is critical for organizing SIAPS visits to the country according to the current strict regulations and reaching officials for meetings.

Constraints to progress

The MoH decided not to implement eTB Manager. They did not give any explanation for this.