

## **SIAPS Quarterly Report**

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Project Year 7, Quarter 1  
October-December 2017



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**SIAPS** 

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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.

## Recommended Citation

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## TABLE OF CONTENTS

Acronyms and Abbreviations .....	iv
Cross Bureau .....	2
Global Programs .....	6
Maternal, Newborn, and Child Health.....	6
Regional Programs.....	8
Latin American and Caribbean .....	8
West Africa Regional Project .....	9
Country Programs .....	11
Bangladesh.....	11
Benin .....	17
Mali .....	19
Mozambique .....	25
Namibia.....	28
Philippines .....	34
Sierra Leone .....	38
Swaziland.....	41

## ACRONYMS AND ABBREVIATIONS

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

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



## INTRODUCTION

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

The program's five result areas are as follows:

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

Now in its final year of implementation, this report presents highlights of SIAPS's activities organized by Cross Bureau, and our global (Maternal Newborn Child Health), regional, and country portfolios for the October through December 2017 period.

## CROSS BUREAU

### ***Objective 1: Strengthen pharmaceutical sector governance***

As part of SIAPS technical leadership activities in the area of governance, the program has been assisting the WHO Good Governance for Medicines (GGM) Program to update and expand the scope of their assessment instrument for measuring transparency in the public pharmaceutical sector. In previous years, SIAPS participated in GGM technical working group meetings to deliberate on the proposed objectives, methodology, and scope of the revised tool; submitted comments on the various drafts; and facilitated sessions on two modules at a GGM consultative meeting called to consolidate feedback from all reviewers. In this quarter, WHO invited SIAPS to attend a meeting at WHO headquarters in Geneva to review the results of the field tests of the revised Pharmaceutical System Transparency and Accountability Assessment Tool. Four of the five countries (Fiji, Malawi, Malaysia, and Mongolia) who field-tested the tool reported their experiences and provisional findings at the meeting held on December 18-20, 2017. At the request of WHO, SIAPS helped facilitate breakout sessions to review each module of the tool based on the field tests and participated in discussions to agree on the scoring. WHO hopes to finalize the tool in the first quarter of 2018 and the companion guide shortly thereafter. Additionally, SIAPS participated in discussions at this meeting to review and submit comments on a draft policy brief developed by WHO to provide guidance to countries on engaging with civil society in the pharmaceutical sector. At the request of WHO, SIAPS will also provide comments on a second WHO brief on managing conflicts of interest in the pharmaceutical sector in the next quarter.

Also in the area of governance, SIAPS collaborated with USAID's Leadership, Management, and Governance (LMG) Project to examine and document the evidence regarding the role of governance, leadership, and management in strengthening health system performance—specifically pharmaceutical systems—in LMICs. The chapter on pharmaceutical systems is one of five that documents the influence and impact that leadership, management, and governance have on health service delivery and performance. SIAPS worked with LMG Project staff to scan peer-reviewed and gray literature by using a rapid assessment methodology to develop the compendium, which is intended to stimulate discussion and inform further research and study. The compendium will be finalized in January 2018.

As part of documenting and sharing lessons learned, SIAPS is developing a technical brief that describes strategies for improving governance in pharmaceutical systems and provides case study examples of SIAPS support to countries to enhance accountability, reduce wastage, and improve efficiencies. In this reporting period, SIAPS prepared the draft for internal technical review. The brief will be finalized early in the next quarter.

As of December 31, 2017, 438 learners have successfully completed the USAID Global Health eLearning course “Good Governance in the Management of Medicines,” which was developed by SIAPS with assistance from the Knowledge for Health Project. Included among the learners that have earned a certificate since the course was launched two years ago are 84 people from Nigeria, 60 from Sudan, 30 from Rwanda, and 27 from Kenya.



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

SIAPS continues to make significant progress in establishing a framework for measuring pharmaceutical system performance, including resilience and desired system outcomes. This quarter, the SIAPS team met with our partners at Boston University School of Public Health (BUSPH) to review the findings of the in-country pilot in Bangladesh and identify strategies to streamline the tool for future assessments and determine how to improve the methodology to take the tool to scale from the completed and ongoing pilots. During the meeting, the team requested feedback from BUSPH on indicator and assessment question wording, as well as data analysis/scoring. The SIAPS team is currently working to incorporate these responses into the ongoing revision of indicators and assessment questions, which will appear in the web-based version of the tool.

Concurrently, the SIAPS Namibia team initiated the in-country pilot of related indicators and has conducted several interviews and site visits. Data collection for the pilot is expected to finish early in the next quarter.

In December 2017, SIAPS staff at headquarters met with a representative from SoftWorks, the contractor assigned to develop the web-based version of the data collection and analysis tool, called PSS Insight, that will be utilized in the future at the country level. During this series of meetings, the SIAPS team finalized scopes of work, approved tool layouts and views, conceptualized desired functionality of the tool, developed site selection methodologies, and considered issues involved with taking PSS Insight to scale beyond the country pilot stage.

Also in December 2017, SIAPS presented a webinar entitled “What Gets Defined, Gets Measured: Definitions and a Framework for Measuring Pharmaceutical Systems Strengthening.” Fifty participants called into the webinar where SIAPS presented the program’s work on coining definitions and developing a measurement framework to guide the identification of metrics for tracking pharmaceutical systems strengthening (PSS). As of January 9, 2018, there have been 201 unique viewings of the webinar recording<sup>1</sup> and 86 unique views of the blog,<sup>2</sup> which was developed to publicize the event. In addition, the health policy and planning publication “Defining Pharmaceutical Systems Strengthening: Concepts to Enable Measurement” on which the presentation was based was viewed over 250 times in December 2017, further illustrating interest in the topic.

### ***Objective 4: Strengthened financing strategies and approaches***

During this quarter, SIAPS senior staff reviewed the draft descriptions of the selected pharmaceutical expenditure indicators. These include the definition of the indicators, its policy relevance its relation to the system of health accounts, potential data sources, and the calculation methodology. Also, an outline for the proposed pharmaceutical expenditure tracking guide was

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<sup>1</sup> <http://siapsprogram.org/2017/12/06/now-available-what-gets-defined-gets-measured-webinar-recording/>

<sup>2</sup> <http://siapsprogram.org/2017/11/30/special-preview-a-new-tool-to-measure-pharmaceutical-systems-strengthening/>

developed. The drafting of the guide is now underway and is expected to be completed in the next quarter.

During this quarter, the paper on pharmaceutical management considerations for expanded health coverage was published on <http://siapsprogram.org/publication/pharmaceutical-management-considerations-for-expanded-coverage-of-essential-health-services-and-financial-protection-programs/>.

As a next step, to help disseminate the paper and elucidate the intended discourse, a draft of a webinar highlighting the key considerations and importance of including medicines and strengthening pharmaceuticals systems in expanded health coverage programs has been developed. The aim is to launch the webinar next quarter during the first week of February 2018.

### ***Objective 5: Quality of pharmaceutical products and services improved***

Antimicrobial resistance (AMR) is one of the 11 action packages of the Global Health Security Agenda (GHS), a partnership of nearly 50 nations, international organizations, and nongovernmental stakeholders. GHS aims to build countries' capacities to create a world safe from infectious disease threats, including AMR.

To monitor the success of GHS's AMR efforts, USAID tasked SIAPS with developing a core set of indicators that will allow it and its partners to monitor and make appropriate decisions to enhance the performance of AMR containment strategies.

During this quarter, SIAPS developed a draft document that serves as a logic framework for monitoring the GHS/AMR efforts of USAID, along with a small set of proposed indicators. SIAPS focused on infection prevention and control and antimicrobial stewardship. The draft document is currently being reviewed by USAID. The framework will be revised and finalized during the next quarter based on USAID's feedback.

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

Following the external review by SIAPS' partners, the Harvard School of Public Health and Harvard Pilgrim Institute, 12 case studies on PSS were selected for inclusion in this evidence collection. The combined, weighted scores determined the final 12 case studies. Two case studies that were published in peer-reviewed journals were included because they clearly added to the credibility of this evidence collection.

For accepted case studies, an extensive outreach effort was completed with authors, editors, and communications staff to prepare the case studies for dissemination through the [pharmasystems.org](http://pharmasystems.org) website. Preparation included ensuring consistent language and format across all case studies, formatting, graphic design, and data visualization. SIAPS initiated work with a web design and development team to conceptualize the new website, reviewing mockups for costs, time, and level of effort. Once a design was selected, SIAPS compiled the necessary backend information needed for the website, including abstracts, keywords, other search

parameters, photographs, and other visual elements. SIAPS also developed several complementary sections to the evidence collection, including an introduction to the PSS global call, methodology, and a preamble.

Cross Bureau funds permitted SIAPS' continued participation in global technical leadership and networking events during this quarter. The SIAPS program director delivered the keynote address during the opening ceremony of the 10th Global Health Supply Chain Summit, which took place November 15-17, 2017, in Accra, Ghana. The theme of the 2017 summit was "Linking to the Future of Global Health Supply Chain Management through Enhancing the Role of the Private Sector, Technology Enablement, and Workforce Development and Empowerment." The annual event brought together decision and policy makers, academics, and health care providers and practitioners to discuss issues in global health delivery.

SIAPS staff also attended and presented three posters highlighting SIAPS work and some of its results at the 3rd Biennial Scientific Conference on Medical Products Regulation in Africa (SCOMRA), which took place November 27–28, 2017, in Accra, Ghana. The theme of the conference was "Sustaining the Momentum for Regulatory Harmonization in Africa." The three posters aimed to spark discussions around SIAPS experiences and lessons learned in strengthening medicine regulatory systems in Africa.

A technical brief detailing deliberations and key recommendations from SCOMRA may be found here at <http://siapsprogram.org/publication/siaps-showcases-key-approaches-at-africas-medicine-regulation-conference-accra-ghana/>

Further, SIAPS staff actively participated in the Union World Conference on Lung Health organized annually by the International Union Against Tuberculosis and Lung Disease. The theme of the 48th conference was "Accelerating Toward Elimination." The Union conference is a leading platform for global researchers, implementers, private industry, and civil society to discuss new scientific research on tuberculosis.

Working in collaboration with the Stop TB Partnership's Global Drug Facility and KNCV TB Foundation, SIAPS led the delivery of a workshop entitled "Quantification Challenges in Times of New TB Medicines and Regimen: Country Experiences and Speed-Course using a Digital Tool." The forum was a good opportunity for SIAPS to share with delegates about the sustained access to its digital tools through source codes on GitHub, thus freely allowing partner to use and further develop these tools as needed.

## GLOBAL PROGRAMS

### Maternal, Newborn, and Child Health

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

#### ***Overall Quarter Progress***

This quarter marked the start of SIAPS' support to the Global Financing Facility (GFF) to provide technical support and overarching guidance on reproductive, maternal, neonatal, and child and adolescent health (RMNCAH) commodity management for countries participating in GFF. Initial work started to orient the new GFF countries as well as discussions on other commodity-related issues for the other countries.

#### ***Objective 2: Guidance and Tools for Improving Pharmaceutical Management for MNCH Developed and Disseminated***

During this quarter, SIAPS conducted a webinar for the Reproductive Health Supplies Coalition on the financial flows of RMNCH commodities. There was good turnout and the presentation stimulated many interesting questions. The reports for the work conducted were all finalized and disseminated to country stakeholders, including USAID. This activity is now closed.

The article on the review of current pharmaceutical management policies and systems that affect access to essential MNCH medicines and supplies, conducted under Countdown to 2015, is still under peer review for publication in the *BMC Health Services Research Journal*.

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

The SIAPS Bangladesh team continues to follow up on a pharmacovigilance (PV) activity; formalizing the role of the focal persons for PV and adverse drug event reporting in each department. The staff who were not initially trained in PV at the end of 2017 will be trained in this last quarter, and reporting of ADEs is expected to start. SIAPS has requested the Directorate General of Drug Administration in Bangladesh to provide baseline ADEs for MCH medicines in order to monitor any changes. The activity is being documented as an example of how to integrate MCH ADE reporting into existing PV systems.

#### ***Objective 4: Support and Overarching Guidance on RMNCAH Commodity Financing and Management Approaches for the GFF Secretariat and Participating Countries Provided***

In mid-October 2017, the SIAPS MCH focal person spent one week at the World Bank (WB) offices in Washington, DC to get oriented with the GFF and meet with key staff in both the GFF secretariat and USAID. As a result of these initial discussions, a draft workplan was developed,

shared with stakeholders from USAID and GFF secretariat, and then finalized at the end of the quarter. It will be circulated for final approvals at the start of the new quarter. There are four main areas of work.

*1. Develop guidance on commodity management for new GFF countries*

Available data from FP2020, Countdown, and other surveys on commodities was studied for the 10 new GFF countries. This data is being condensed into country datasheets for use at the upcoming orientation workshop in January 2018. At the workshop, SIAPS will make a presentation on commodity management, highlighting the different components and their importance for RMNCAH outcomes. As part of this exercise, discussions were also held on the use of data from the RMNCH landscape synthesis tool, which was used under the United Nations Committee on Life-Saving Commodities, and its applicability to GFF countries. The revision of the RMNCH commodities quantification supplement has started and was divided into different segments for reviewers to work on. Once updated, this will be distributed to GFF countries as an important resource.

*2. Support select countries in implementing activities to improve access to quality commodities*

During the course of this quarter, SIAPS provided input to a number of discussions including private sector collaboration to improve supply chains, which will be further developed in DRC, Senegal, and Mozambique in the coming quarters. Also, SIAPS has been connected to technical discussions in Sierra Leone and Guatemala as well as the development of a position paper on investment in community health workers by the GFF secretariat.

*3. Contribute to the GFF secretariat's knowledge and learning agenda*

SIAPS has been in discussion with other technical staff at the WB and the Interagency Supply Chain Group on ensuring the quality of commodities. Some guidance would be useful for WB field staff to navigate commodity procurements. In the next quarter, the team will explore how best to provide that guidance, including considering a pending publication by the USAID Global Health Supply Chain-Procurement Supply Management project. Additionally, a webinar on commodity management is planned for early next quarter for the existing 16 GFF countries.

*4. Contribute to the global agenda on commodities for RMNCAH*

SIAPS attended the technical meeting of the LMIS working group under the Health Data Collaborative, which included a work planning session, presentations on DHIS 2 and GS1, sustainability, and data quality. Of the many technical next steps, the GFF could have a role in coordination of LMIS efforts in-country.

Throughout the quarter SIAPS has participated in team, country program, and programmatic meetings, raising commodity issues when appropriate.

## REGIONAL PROGRAMS

### Latin American and Caribbean

**Goal: SIAPS supports Amazon Malaria Initiative (AMI) countries to build institutionalized and sustainable national and regional mechanisms that ensure a continuous supply of antimalarials as the key malaria control strategy, particularly in low-incidence and remote areas where underserved populations live and work.**

#### ***Overall Quarter Progress***

Through the AMI, SIAPS had been supporting countries in the Amazon Basin and Central America to strengthen the management of malaria commodities. During this quarter, at the request of the Ministry of Health in Peru, SIAPS used the remaining AMI funds to provide technical assistance to support the dissemination of standard procedures for pharmaceutical management in the country.

#### ***Objective 3: Pharmaceutical services improved to achieve desired health outcomes***

The National Directorate of Medicines in Peru (DIGEMID) requested technical assistance for the nationwide implementation of the standard operational procedures for pharmaceutical management that DIGEMID developed last year with SIAPS technical assistance through the AMI. These procedures will improve the supply of antimalarials and other medicines and supplies used by disease control programs and unify their management into an integrated system. Building on the work of the previous quarter, when SIAPS supported the final revision of the guideline and procedures, during this quarter SIAPS supported the Ministry of Health to prepare the workshop material and conduct four macroregional workshops. These workshops were held in the north, south, central, and capital areas of the country for 245 technical and administrative staff who support the management of commodities in the regional health teams. Participants appreciated the initiative to update and disseminate the standard procedures for pharmaceutical management, and the workshops strengthened coordination between the national and regional levels. The national team committed to mobilizing resources to print the technical documents for dissemination and also to monitoring and providing support to implement the procedures. The regional teams committed to including implementation of the procedures in 2018 annual plans and to disseminating them to facility-level staff. The workshops ended on a high note, with all participants celebrating renewed energy around an integrated pharmaceutical management system and committing to making it a success in 2018.

## **West Africa Regional Project**

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

### ***Overall Quarter Progress***

With the imminent close-out of SIAPS technical activities by December 31, 2017, activities this quarter focused on transitioning EDT and OSPSIDA to country ownership. In Togo, both EDT and OSPSIDA were fully transitioned to country ownership during the quarter. National scale-up of the use of EDT gained momentum, with 81 of the planned 88 facilities using EDT by January 2018. In Benin, 90% of the activities for transitioning OSPSIDA to country ownership were completed. SIAPS continues to provide technical assistance to Benin to finalize the transition of OSPSIDA in January 2018 and support the country team to continue use of the tool.

### ***Objective 1: Improve coordination among regional and national stakeholders involved in ensuring ARV and HIV/AIDS commodity availability***

No JURTA-PSM meetings were held during the quarter under review.

### ***Objective 2: Enhance capacity for pharmaceutical supply management***

In October 2017, agreement was reached between SIAPS and the National AIDS Control Programs of Togo and Benin on the transitioning of OSPSIDA to country ownership. Specific requirements were identified by each country team to support the transfer of the tool to their country. These requirements were addressed by SIAPS during the quarter.

Remote support was provided to Togo and Benin for capturing data into OSPSIDA and for the use of reports generated by the tool for HIV/AIDS pharmaceutical management. Both countries experienced challenges in meeting the target of entering 100% of warehouse data and at least 75% of health facility data into OSPSIDA during the quarter. The challenges were identified and SIAPS provided support to help each country address them and catch up with backlog for the quarter.

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

Significant progress was made with the large-scale implementation of EDT in Togo. The technical report on the evaluation of the five EDT pilot sites was completed in October. The report confirmed the readiness of the Togo National AIDS Control Program for the national scale-up of EDT and also proposed the roles and responsibilities for different stakeholders involved in the scale-up. SIAPS provided support to the National AIDS Control Program team to develop a strategy for the national scale-up of EDT funded by a grant from The Global Fund.

In October 2017, an EDT training activity was conducted in Lomé Togo to build the capacity of users and IT managers for national scale-up of the tool; 11 participants were trained, including dispensers from identified facilities, EDT mentors/superusers, and IT staff. The activity was completed successfully, in spite of concerns about political unrest in the country at the time. The transfer of EDT to Togo was completed during the quarter. Togo is now independently managing the use of EDT.

During the quarter, the National AIDS Control Program committed significant time and effort to the national scale-up of EDT, which has been rolled out on schedule and in line with the agreed strategy. In November and December, the scale-up team from the National AIDS Control Program and UGP (Global Fund Principal Recipient) conducted training activities and installed EDT in several sites across the country. In total 139 EDT users were trained at 81 facilities and were using EDT for dispensing ARVs to patients in Togo by January 2018.



## COUNTRY PROGRAMS

### Bangladesh

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

#### ***Overall Quarter Progress***

USAID has been supporting SIAPS to address pharmaceutical system strengthening issues, including supply chain management for reproductive health, maternal, newborn, and child health (MNCH), and tuberculosis (TB) commodities; strengthening drug regulatory systems; ensuring data availability for decision making by establishing information systems; and building local capacity to strengthen overall health systems in Bangladesh.

For SIAPS' final year of implementation, the work plan includes a number of close-out activities, including an end-of-project event. On December 10, 2017, SIAPS held a one-day workshop on capturing lessons learned and sharing best practices. Representatives from the Ministry of Health, DGHS, DGFP, DGDA, NTP, INGOs, stakeholders, donors, and UN agencies attended. The objective was to showcase SIAPS' key successes and lessons learned for future implementation efforts and for building ownership among senior Government officials as part of systems strengthening.

SIAPS continued to support the Procurement and Logistic Management Cell (PLMC) of the Ministry of Health and Family Welfare (MOHFW), and a final draft of the "Documentation of PLMC" (PLMC profile) was developed.

The updated price guide was presented at the stakeholders' workshop for finalization. SIAPS supported a technical update session on the introduction and scale up of an electronic logistics management information system (eLMIS) for priority MNCH commodities, which was organized by the DGHS with participation from the Technical Working Group. A joint advocacy workshop with UNFPA, "Strengthening commodities security and forecasting for essential RMNCAH medicines", was held at the Moulvibazar Civil Surgeons Office. SIAPS conducted a refresher training for the DGFP's UMIS troubleshooters and WMIS operators.

SIAPS provided technical assistance to the National Tuberculosis Program (NTP) on TB drug quantification, forecasting, and budgets. TB medicines continued to be issued through electronically generated vouchers from data entered into the WIMS; this has helped to upgrade the NTP's overall inventory management system at Shyamoli CWH. The SIAPS TB team facilitated a one-day workshop on sharing best practices and lessons learned for health managers and users of the electronic recording and reporting system (e-TB Manager) in the Rajshahi Division. The TB team also participated in stakeholder meetings, including the biannual partners' coordination meeting.

During this quarter at the request of the MOHFW, SIAPS expanded the Asset Management System (AMS) to three additional district hospitals and provided training to district hospital officials in Serajganj, Manikganj, Jhenaidah, and Moulvibazar under the DGHS. Technical

assistance was provided to draft operational guideline on the AMS and develop a uniform asset registry.

On October 22, 2017, a national pharmacovigilance workshop was conducted to finalize the draft guideline with stakeholders. More than 100 representatives from the DGHS, MOHFW, hospitals, BSMMU, ICDDR-B, USAID, USP-PQM, and pharmaceutical industries participated.

SIAPS has provided technical assistance to develop a training plan for 2017–2018 as requested in the DGDA's strategic plan.

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

The draft PLMC profile was developed and 27 expert members of the committee provided feedback. It will be finalized by Additional Secretary (Dev). More than 20 MOHFW officials attended a two-day procurement management training conducted by the ESCB.

The updated version of the price guide for medical equipment was discussed at a finalization workshop in November, with Additional Secretary (Dev) of the MOHFW presiding. Representatives from the PLMC; hospital wing of the MOHFW's health division; NEMEMW; and line directors, including those from the CMSD, attended the workshop.

A total of 77 troubleshooters, 15 master trainers, and 62 UMIS system users from the DGFP were trained through facilitated skill development and hands-on sessions. The terms of reference for troubleshooting were approved by the DGFP. The list of troubleshooters was provided to the DGFP as part of the SIAPS phase-out plan.

To transition the maintenance and operations of the UIMS/WIMS, a one-day refresher training for WIMS users and UIMS troubleshooters was organized.

The DG-DGFP formed a supply chain monitoring committee to ensure rational distribution of contraceptives and medicines. Since April 2017, 10 meetings have been held. SIAPS provided support to analyze the available stock and consumption trend data under different warehouses and subdistrict-level stores. The following decisions were made by the DGFP:

All managers in the supply chain should monitor the stock status of injectables and IUDs to minimize potential stock-outs.

Notifications will be issued to district- and subdistrict-level managers who submit late reports, and explanations for stock-outs will be requested.

Buffer stock of oral contraceptives will be withdrawn from selected stores and redistributed to other areas as needed.

The UNFPA organized two workshops on strengthening commodities security and forecasting of the essential reproductive, maternal, neonatal, and child health (RMNCAH) medicines at the

Civil Surgeon's Offices in Moulvibazar and Jamalpur. These workshops were chaired by Civil Surgeons. SIAPS technical advisors presented current data of the respective districts and discussed how to do quantification.

The UNFPA also organized a one-day training of trainers, during which SIAPS facilitated a session on forecasting of oxytocin, misoprostol, and magnesium sulfate.

SIAPS conducted a two-day refresher training on forecasting and quantification of TB medicines using QuanTB for 10 participants from the NTP and partners. SIAPS arranged to refill expired fire extinguishers to ensure the safety of the NTP's TB central warehouse at Shyamoli. A SIAPS senior technical advisor participated in the TB annual planning meeting of NTP partners, organized by BRAC, in November 2017. The SIAPS TB team attended the PSM working group meeting at the NTP; the urban TB workshop with a focus on universal health coverage, held at the BRAC Center; a workshop on the sixth edition of the national TB guidelines; and the biannual partners coordination meeting.

SIAPS staff embedded in the CMSD have continued to provide on-the-job technical assistance to roll out the AMS, which includes life-saving surgical equipment, in Sirajganj, Manikganj, and Jhenaidah District Hospitals under the DGHS.

#### *Partner contributions*

- UNFPA jointly organized the workshop on commodities security with SIAPS.
- UNICEF collaborated with SIAPS and organized the training of trainers (TOT) for district statisticians and UNICEF MIS officials on rolling out the DGHS eLMIS to the new UNICEF-supported districts.

#### *Constraints to progress*

- Regular deskwork has been delayed due to the transfer of key officials within the PLMC who had been actively involved.
- There were delays in data recording due to physical stock counting practices at the NTP.
- Limited human resource capacity at the NTP hindered good warehouse practices.
- District hospitals had poor internet connectivity.

#### ***Objective 2: Systems for evidence-based decision making established***

SIAPS provided technical assistance to the NTP on using e-TB Manager and on PSM activities. e-TB Manager has been implemented at 259 sites in 37 districts under the NTP. The DGHS uses DHIS2 to manage warehouse data. In April 2017, SIAPS made DHIS2 and e-TB Manager interoperable and has since updated e-TB Manager to meet the NTP's demand for effective quarterly TB data reporting. The SIAPS TB team provided a one-day workshop on the new features of e-TB Manager for civil surgeons and UHFPOs in the Rajshahi Division.

### *Availability of quality data improved*

SIAPS provided technical assistance for the effective implementation of the AMS at selected sites.

A two-day training on the AMS was organized for users at three hospitals to build their capacity on asset recording. Softworks has made changes to the AMS requested by government officials from the CMSD, NEMEMW, and health facilities.

SIAPS also provided technical assistance to the MOHFW to ensure an effective transition of the supply chain management portal (SCMP).

Some changes, like the removal of World Bank approval, have been incorporated into the SCMP. UIMS and WIMS user manuals were also updated.

### *Utilization of data increased*

SIAPS continued to engage a local IT firm to provide backend support for sustaining the existing SIAPS-supported Health Information System (HIS) tools developed for the MOHFW and its directorates.

Current software contractors are monitored and verified for monthly activity reports, which are submitted to senior management and used for the annual report. Some RHIS system tasks were performed by Softworks in the current scope of work.

The SOP for updating Pharmadex to include source codes is currently under review by the DGDA and the SIAPS advisor.

SIAPS worked with stakeholders to promote the effective use of its HIS tools in different policy platforms.

The SIAPS IT team joined the A2i program briefing session at the American Club and discussed engagement with the DGDA and DGFP beyond focusing on family planning inventory software and infrastructure issues.

The SIAPS HIS team presented SIAPS interventions during a workshop on capturing lessons learned and sharing best practices on December 10, 2017.

SIAPS facilitated the in-country transition of e-TB Manager and Pharmadex.

The source code of Pharmadex has been handed over to Softworks, SIAPS' software vendor. Pharmadex has been deployed in the DGDA data center, and the Pharmadex database is regularly backed up by the SIAPS IT team. One ACI product was registered using Pharmadex. A one-day workshop on the Pharmadex product registration application for companies was held.

New network firewall hardware has been installed in the DGDA data center to enhance the security of the DGDA network and secure the server. The transition of e-TB Manager is under way.

### *Partner contributions*

- Partners from ICDDR, B and Measure Evaluation worked with SIAPS and Softworks to finish some pending work on the RHIS system.
- Government officials from the DGDA, DGHS, DGFP, and NTP and representatives from UNICEF and UNDP were very much engaging in sharing lessons learned and best practices and worked together to formulate the sustainability areas.
- District hospital management staff provided logistics support during on-the-job training of Government staff.
- The NTP, Global Fund, BRAC, and Damien Foundation provided additional support.

### *Constraints to progress*

Due to limited human resources at the DGDA, there was a delay in finalizing the SOP for Pharmadex source code modification.

### ***Objective 3: Pharmaceutical regulatory systems strengthened***

SIAPS partnered with the DGDA to improve the efficiency and transparency of the country's medicine registration process. With technical assistance from SIAPS, the DGDA adapted Pharmadex to meet the needs of Bangladesh. SIAPS facilitated trainings for DGDA officials and selected pharmaceutical industry representatives to build their capacity to successfully use the tool. SIAPS also supported the DGDA in adopting Common Technical Document (CTD) guidelines so that dossiers submitted to the DGDA meet international standards.

After the launch of Pharmadex in May 2017, an action plan for implementation was developed in discussion with the DG and DGDA officials. A CTD and Pharmadex task force was created, and trainings for DGDA staff and pharmaceutical companies have been scheduled; as of November 2017, 20 officials from 10 companies had been trained. For now, the DGDA will use paper-based submissions for DCC-approved products for registration, and 10 companies will submit the new generic cardiovascular system product for online registration through Pharmadex.

Also in November, WHO organized a workshop on antimicrobial resistance (AMR) with support from the DGDA. This workshop was attended by representatives from the MOL, MOHFW, DGHS, CDC, BSMMU, ICDDR-B, SIAPS, USAID, USP-PQM, GARB, and FAO.

As part of the DGDA's strategic plan, SIAPS provided technical assistance to develop the 2017–2018 training plan for human resources for the DGDA, which has been handed over to the DGDA and other DPs. CTD guidelines and Pharmadex user modules for applicants and DGDA officials were uploaded to the DGDA web portal. NAS has been installed on the DGDA data server provided by SIAPS.

A national pharmacovigilance workshop was conducted, but the report has not yet been finalized. The guideline has been sent to the MOHFW for final approval.

Of the nearly 200 adverse drug event (ADE) reports sent from hospitals and pharmaceutical companies, more than 150 were evaluated. A technical subcommittee meeting was held at the DGDA during this quarter. A draft MOU for the NTP and ADRM cell has been reviewed by the NTP and DGDA, and final approval is pending. The ADRM cell also decided to form an agreement with national health programs (i.e., NTP, national malaria program, EPI/AEFI, HIV/AIDS) so that ADE reports are included in the pharmacovigilance program.

#### *Partner contributions*

The DGDA organized the events.

## **Benin**

**Goal: Ensure the availability of quality products and effective pharmaceutical service delivery for better health outcomes**

### ***Overall Quarter Progress***

During this quarter, SIAPS supported the Ministry of Health (MOH) through the Department of Pharmacy, Medicines, and Laboratory (DPMED) to strengthen the medicine registration process and related information management system.

SIAPS supported the National Malaria Control Program (NMCP) to finalize a report on the first end user verification (EUV) survey and to conduct a second EUV survey during this quarter. In addition, SIAPS worked to ensure the availability of all deliverables and other reports.

### ***Objective 1: Pharmaceutical sector governance strengthened***

Following the assessment of DPMED medicines registration in November 2016, one recommendation was to work with the DPMED to optimize the existing electronic registration tool (SIGIP\_ARP) to make it functional and to provide additional resources (computers and personnel) to enter the accumulated backlog of data. It is anticipated that five data clerks will work on data entry in January 2018. SIAPS recommendations for the server hosting the application were also implemented, which will speed up access to the system significantly.

The SIAPS team identified four SOPs related to medicines registration that need to be updated:

- Receipt of dossier applications for marketing authorization for medicines
- Screening of dossier applications (administrative)
- Evaluation and registration of medicines (technical)
- Archiving and storage of dossier applications and samples

SIAPS also provided a comparison of SIGIP\_ARP and Pharmadex to enable decision making about the potential implementation of Pharmadex in Benin. The SOPs are under development and are expected to be finalized during the next quarter. SIAPS also suggested several indicators for monitoring the performance of the DPMED electronic registration tool. These included the number of expiring and expired medicine licenses at the DPMED beginning in January 2018, which will serve as a baseline to measure future progress in terms of license renewal, and progress on the backlog of dossiers for entry and action.

### ***Constraints to progress***

Given that DPMED has insufficiently skilled staff to manage the medicines registration system, SIAPS agreed to provide data clerks to help address the backlog of registration documents. Although this will help, it is likely that additional support will be required at least in the near term after SIAPS closes.

**Objective 2: Increase and enhance capacity for pharmaceutical management and services**

SIAPS completed training workshops with the DNSP on the new logistics SOPs in September 2017, and the training manual on the use of the LOMIS tools was developed and is available.

*Partner Contributions*

The USAID-funded ANCRE program committed to edit the validated version of the SOP manual for Ebola management.

*Constraints to progress*

A significant number of health professionals and store managers still need further capacity development support and follow up after the training in 2017.

**Objective 3: Address information for decision making challenges in the pharmaceutical sector**

In July 2017, SIAPS supported the NMCP to conduct an EUV survey in the Borgou and Alibori regions. The summary report was submitted to USAID in September 2017, and the findings were discussed among stakeholders and regional MoH officers during a one-day dissemination meeting in December 2017.

SIAPS worked with the NMCP to develop the terms of reference for a second EUV survey, which was conducted in December 2017 in the Zou and Collines regions. Data analysis is scheduled for January, and the summary report will be submitted no later than January 31, 2018.

*Partner Contributions*

The collaboration among SIAPS, the USAID-funded ARM3 project, and the NMCP was a key factor that contributed to the success of this activity.

*Constraints to progress*

Despite the short notice for conducting the EUV survey based on the availability of NMCP staff to be involved, SIAPS engaged a local consultant and provided administrative support to the NMCP team.



## Mali

**Goal:** The overall goal of SIAPS is to ensure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes. In Mali, the specific emphasis is on malaria, FP, MNCH, HIV and AIDS, nutrition, and Ebola commodities; however, the processes and tools designed by SIAPS and its partners can be easily applied to other pharmaceutical products, and synergies are considered whenever possible to contribute to health systems strengthening.

### **Overall Quarterly Progress**

SIAPS supported the Ministry of Health (MOH) in Mali to strengthen pharmaceutical management and services through improved governance, capacity building, and availability of information for decision making. During the quarter working with the MOH and other partners, SIAPS provided technical support at the national, regional, district, and peripheral levels to restore the conditions leading to a sustainable and resilient pharmaceutical supply system.

SIAPS supported the preparation and implementation of a comprehensive assessment of the national drug regulatory system. The regulatory functions were assessed using the WHO Global Benchmarking Tool, which determines the maturity level of regulatory systems. Based on the status of the regulatory functions assessed, the Direction de la Pharmacie et du Médicament (DPM) was classified at maturity level 1. Supervision and coaching were conducted in the regions and the district of Bamako, in collaboration with the Direction Régionale de la Santé; 144 health centers (24 per region) were visited.

### **Objective 1: Pharmaceutical sector governance strengthened**

SIAPS provided support to the MOH to organize a meeting of the Comité technique de coordination et de suivi de la gestion des médicaments essentiels scheduled for December 20, 2017, and meetings to update supply planning for malaria and family commodity procurement. The preparatory session was held December 4-5, 2017, at the DPM. It focused on preparing technical documents to be presented to the larger committee. The technical documents included forecasted results, supply plans, and commodity stock situations in the different health programs.

The supply plans have been updated, according to variations in consumptions, shipments to arrive, partner commitments of procurement, stock available and usable at all levels, and consumptions for the past quarter (July to September). The number of updated plans has increased from 22 to 24.

The supply planning meetings took place November 29-30, 2017, at the DPM, chaired by the DPM director.

### **Malaria**

USAID delivered the products they had committed to (96,000 artesunate 60 mg). On the other hand, the World Bank was not able to deliver the quantities of ACT and RDTs expected within

the timeframe, resulting in stock-outs for RDTs during this quarter. The members of the SIAPS-supported Malaria Quantification Technical Group made the following recommendations to the Pharmacie Populaire du Mali (PPM):

- Accelerate the distribution process of RDTs urgently ordered by the PPM upon receipt of this emergency order
- Launch an emergency order for the purchase of ACT, 18 tabs

### *Family Planning*

During a coordinating meeting among the governments and donors, it was noted that USAID delivered the contraceptive quantities that were planned, but UNFPA was unable to meet its commitments for the period in question.

SIAPS supported the regional directorates in organizing the quarterly coordination meetings with regional and district actors to monitor management of essential medicines and commodities for health programs. Two coordination meetings were held in the Mopti region on October 9 and December 5; coordination meetings were also held in Koulikoro and Bamako on December 5, 2017, and in Segou and Sikasso on December 6, 2017. In general, the availability of essential medicines is fairly good in the different regions across the country. The increasing rates of stock-out are mainly related to low-demand products on the different lists monitored. For this quarter the overall reporting rate is 91%.

### *Support the DPM in conducting an in-depth assessment of the product registration management system*

A comprehensive evaluation of the medicine regulatory system using the WHO Global Benchmarking Tool was conducted by SIAPS from September 27 to October 6, 2017. The scope of the evaluation covered the following five regulatory functions: the national regulatory system, product registration and market authorization, pharmacovigilance, market surveillance and control, and monitoring of clinical trials.

The assessment established that regulating medicines is accomplished by different institutions under the MOH: DPM, Laboratoire National de la Santé, Inspection de la Santé, and Centre National d'Appui à la lutte contre la Maladie. The legal framework for medicine regulation goes back several years and has been modified to address gaps over the years. All medicine laws, ministry orders, SOPs, and guidelines need to be reviewed to ensure a clear and concise mandate for the various institutions, including possible consolidation of all medicine regulatory functions under one agency. In the meantime, it is important to strengthen collaboration and coordination between these institutions.

Based on the findings and recommendations of the assessment and the proposed action plan for improvement, a clear roadmap on how to address gaps and weaknesses in the medicine regulatory system should be developed within DPM with the support of partners. A high priority should be given to setting up a quality management system and computerizing the registration system for medicines. There are opportunities to implement changes and improvements given the

political will of the government and the potential that currently exists at DPM in terms of human capital and infrastructure.

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

***Strengthen the capacity of the MOH (national, regional, and district levels) to manage OSPSANTE***

SIAPS supported the MOH in providing an Internet connection package for health commodity data capture in OSPSANTE to 50 districts in the Kayes, Koulikoro, Sikasso, and Mopti regions and Bamako district. This has helped to improve the preparation, monitoring, and implementation of coordination meetings organized in the regions and at the central level.

***Provide support to the PPM to improve storage conditions***

SIAPS collaborated with the Resolve team (who are supervising construction of the foundation) during its monthly missions to Mali in October, November, and December 2017 to support the Bamako Warehouse in a Box (WiB) project. During the quarter, monthly meetings were held, bringing together the different stakeholders involved in the WiB project (PPM, Architect's Office, Resolve engineers, etc.) to discuss progress and address any challenges.

The progress of the Bamako WiB is as follows:

- Warehouse foundations: 100%
- Administration building foundations: 0%
- Wall construction: 80%
- Platforms, generators, and tanks: 0%
- Septic tanks: 100%
- Electricity (medium voltage): 95%
- Construction of the caretaker's house: 76%
- Electric chamber construction: 76%
- Compaction of the soil of the foundation: 10%

The main site preparation work concerns:

- Acquiring a new building permit
- Evaluating the capacity of the access bridge to the site to withstand heavy loads
- Finalizing phase 3 of the project, namely ordering prefabricated materials

For implementation of the WiB project in the Kayes, Koulikoro, and Mopti regions, SIAPS participated in working sessions between the PPM and Resolve, which focused on adoption and validation of Resolve's technical and financial offers.

A request for a direct agreement has been submitted to the Directorate General of Public Procurement.

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

During this quarter, SIAPS developed and submitted the PPMRm's and PPMRc's, respectively, for malaria and contraceptive products. As a result, the number of PPMRm's and PPMRc's submitted increased from 24 to 25 and from 14 to 15, respectively. Based on the stock levels of the different products the following recommendations have been formulated:

- Malaria: The PPM should make available AL 20 mg/120 mg, 18 tablets by issuing an emergency order to be received in March 2018
- Family planning: The MOH and Keneya Jemu Kan should continue their communication efforts with the population to increase the use of female condoms and necklaces.

***Support the DPM to strengthen interoperability between OSPSANTE and DHIS 2***

To achieve interoperability between DHIS 2 and OSPSANTE, conference calls were held between OSPSANTE and DHIS 2 consultants. The SIAPS consultant for OSPSANTE traveled to Mali from September 30 to October 7, 2017, to assist DPM, MEASURE Evaluation, and the DHIS 2 committee in incorporating LMIS data entry into DHIS 2 and customizing OSPSANTE to enable the import of data. A training of trainers (TOT) for key stakeholders on data capture and interoperability management is planned at the end of this activity.

The SIAPS consultant worked with the members of the technical team (DPM, Direction Nationale de la Sante, Cellule de Planification et de Statistique, and MEASURE Evaluation) to link the health facilities registered in OSPSANTE and DHIS 2.

During a work session, the technical teams designed the LMIS entry form in DHIS 2, created warehouse forms in DHIS 2, and tested data capture and import.

The SIAPS OSPSANTE consultant, representatives of the technical team, and the SIAPS team carried out a test on data entry and import from DHIS 2 to OSPSANTE with a demonstration of interoperability. The SIAPS consultant's next visit is scheduled for January to finalize the interoperability process and conduct the TOT at the central level.

**Objective 4: Pharmaceutical services improved to achieve desired health outcomes**

***Provide technical assistance to the MOH (national, regional, and district levels) to conduct post-training coaching and supportive supervision on pharmaceutical management***

In November, SIAPS supported the Kayes, Koulikoro, Sikasso, Segou, and Mopti regions and the district of Bamako in organizing targeted supervisions/coaching in 144 health centers. These centers had been identified as underperforming and in need of assistance to improve the performance of the LMIS.

During this activity, the existence of stock cards and compte rendu de gestion de stock (CRGS) in all the facilities visited was noted; 97% of the supervised facilities sent their CRGS monthly. The supervision visits identified certain insufficiencies:

- Many trained managers departed and were replaced by other managers who have not been trained on the LMIS SOPs manual
- Hard copy stock cards were abandoned in lieu of electronic support in two health centers (Lessagou and Dimbal) in the region of Mopti
- 59% of facilities visited had a stock-out of three days or more for at least one tracer medicine
- Only 25% of facilities visited used logistics data to make decisions

During this targeted supervision/coaching, technical support was provided to all managers and directeurs technique de centre to improve their day-to-day medicine management practices, including:

- Distribution of SOP manuals to Depot de Vente managers not trained in Koulikoro and Kangaba districts in the Koulikoro region and in Bougouni and Sélingué districts in the Sikasso region
- Practical exercises on keeping adequate records (daily scorecards, weekly scorecards, stock cards, CRGS, and purchase orders)
- Practical exercises on calculating the average monthly consumption and estimating needs, how and when to order, the purchase and receipt of medicines, good storage practices, dispensing periodic inventory review and development, and analysis and submission of the CRGS
- Removal of expired products from the shelves
- Setting up stock cards for products that did not have them
- Advising on the conservation requirements of thermosensitive products (vitamin K1 and oxytocin)
- Routing of redeployed RDT stock from Bougouni to Sélingué and Yanfolila in the Sikasso region
- Delivery of redeployed RDT stock from Sélingué DRC to Tièguécourouni, Tagan, Faraba, Siekorolé, and Solenkoro health centers

### *Constraints and Lessons Learned*

Implementation of a computerized system will reduce delays in the registration of medicines.

A clear roadmap developed by the DPM based on the regulatory assessment results will ensure follow up on implementation of the recommendations and options available.

The main challenge faced by the program is the nonavailability of a working group responsible for key technical activities, in particular LMIS and the quantification process. Although there is a national coordination committee and working groups, the country needs to set up a logistics management unit to handle all the problems of medicine logistics with less technical support.

Verification of the completeness and consistency of the data transmitted as well as the orientation of the stakeholders on the ground facilitate ownership of the directives while influencing the quality of the data.

The involvement of the highest authorities and stakeholders allows for joint decision making to remove bottlenecks in the supply chain.

Noncompliance with commitments to the national procurement plan and limited ownership of LMIS management by stakeholders, through data analysis and relevant decision making, were the main causes of stock-outs, compromising efforts to achieve constant availability of life-saving products at service delivery points.

Strong leadership from decision makers has been critical to the success of technical assistance in developing a strategic plan for PPM.

## **Mozambique**

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

### ***Overall Quarter Progress***

SIAPS continued to work with the MOH on reviewing the performance of Pharmadex, developing and launching antimicrobial resistance (AMR) activities, and collecting data to respond to the SIAPS indicator performance.

During this quarter, SIAPS organized the logistics for the Gaza Province trip. SIAPS assisted technicians in the procurement process for a training for journalists on AMR in Maputo and started the procurement process for a video documentary on AMR.

### ***Objective 1: Governance in the pharmaceutical sector strengthened***

During this quarter, there was a 10% increase in the average number of days to register a product, from 258 days in the previous quarter to 285 days this quarter (the target is 287 days). A total of 266 of the 556 essential medicines list products were registered (48%). The Pharmacovigilance (PV) Center received 717 adverse event reports but continues to be unable to review or give immediate feedback to the received notifications.

SIAPS performed a data quality assessment in Gaza Province to verify the reliability of the data reported for the main indicators of PV, quality control of medicines, and training, as well as how data are reported and registered in various locations. Recommendations had been made to improve the reporting system during a previous visit, and 85% of the activities defined were achieved, including:

- All health facilities have PV focal points who collect and code notifications from the services.
- A spreadsheet to track samples and adverse drug reaction notifications was developed.
- The Provincial Drug Depot is manually placing a batch number on all electronic delivery notes for drug samples.
- An analytical sheet of samples analyzed in the minilab has the institution stamp and signature of the head of the pharmacy division.

However, there are still discrepancies between provincial and central-level data. Efficient data recording and reporting must be ensured.

Also during this quarter, three more applicants were trained by Pharmacy Department (PD) staff on the electronic medicine registration submission process using Pharmadex. A complete shift in the submission of dossiers in the PD was observed. Through June 2017, 81% of the dossiers were submitted by registration sector staff. An analysis this quarter showed that only 20% of

medicine market applications were submitted by staff, implying that PD staff had much more time for technical work.

### *Partner Contributions*

Collaboration between SIAPS, the National Pharmacy Directorate (DNF), and applicants played an important role in the progress observed on the use of Pharmadex.

### **Objective 3: Pharmaceutical services improved to achieve health outcomes**

During this quarter, SIAPS worked with the DNF on the first objective of the global action plan, which is to "improve awareness and understanding on Antimicrobial Resistance (AMR)". SIAPS and the DNF developed activities aligned with national strategies to reduce antibiotic resistance described in the Mozambique Situation Analysis and Recommendations report (GARP 2015), as the national AMR action plan has not yet been approved.

In collaboration with the DNF and the International Research and Exchanges Board (IREX), SIAPS prepared materials for a training of 15 journalists on AMR in October 2017. Participants included MOH General Health Inspector Dr. Martinho Djedje, DNF Head Dra. Tânia Sitoie, and IREX Media Specialist Dra. Dércia Materula. The objective of the workshop was to train journalists in their role in combating AMR, starting with raising awareness and understanding of strategic action. Specific goals were to provide the theoretical basis of AMR, present global and national situations and strategies to combat AMR, reflect on the main strategies and the role of the different actors in AMR, and train journalists in writing and disseminating information about AMR. At the end of the workshop, journalists felt ready for the challenge of leading the circuit of information to combat AMR. They were enthusiastic about what they had learned and were able to define AMR and key terms; recognize different actors, combat strategies, and public threat situations; know their role in AMR containment; and list interventions for triggering behavior changes in the target audience. Since the training, 16 newspapers articles on AMR have been printed and reached an estimated 80,000 readers, three AMR live radio interviews were done, and a DNF online article on the training had nearly 25,000 page views.

A workshop to determine the role of universities in containing AMR was held in November 2017, in Beira City for 25 participants, including representatives from various health courses. The purpose was to improve awareness of AMR as an urgent global health problem; reflect on the impact of AMR and irrational medicine use as the main contributors to the emergence and spread of resistance; discuss the WHO recommendation to include AMR in curricula as a sustainable low-cost intervention; and begin developing guidelines for a university action plan to contain AMR, based on the specific and prioritized activities outlined during the workshop and aligned with the strategic objectives of the WHO AMR Global Action Plan. Based on the assumption that all universities can contribute to achieving the objectives of the Global Action Plan, SIAPS used brainstorming to initiate an extensive discussion and stimulate creativity regarding actions that can be taken to meet these goals. At the end of the workshop, data were compiled to support the development of the guideline.



In collaboration with the DNF, MOH Office of Communication and Image, Minister of Agriculture and Food Safety, and USAID, SIAPS developed three educational storyboards to record spots on AMR to raise public awareness and understanding, warn of AMR's dangers, and trigger behavior change. Each spot will record a strategic message from USAID Director Jennifer Adams, Minister of Health Nazira Abdula, or Minister of Agriculture and Food Safety Higinio Marrule, who have reviewed and approved the storyboards

### *Partner Contributions*

IREX and the MOH Office of Communication and Image shared their knowledge and experience working with journalists. They also shared contacts for top journalists, including those being trained to report about health.

The DNF collaborated to review materials. All partners contributed to the educational spots, including the recording company. USAID provided support, was expedient in its decision making, and appointed the USAID chief of communication to work directly with SIAPS.

### *Constraints to Progress*

Approvals from counterparts for workshops and educational spots were delayed.

## **Namibia**

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

### ***Overall Quarter Progress***

SIAPS continued supporting the Namibia Medicines Regulatory Council (NMRC) to further reconfigure Pharmadex, the medicines registration tool. All changes requested by the NMRC were completed and installed on the NMRC server.

SIAPS supported the efforts of the MoHSS and other partners to improve ART data quality. In collaboration with the USAID Technical Assistance Project (UTAP), SIAPS reviewed strategies to make the electronic dispensing tool (EDT) and electronic patient management system (EPMS) interoperable and to reduce discrepancies in ART patient data between the two systems. SIAPS and UTAP developed actions plans to update the two systems to ensure that the data between them are comparable. Activities included the installation of more EDT and EPMS service points at decentralized ART sites and the utilization of hardware at these sites to accommodate the installation of both systems on the same computers. SIAPS then supported the installation of the EDT at nine facilities in Ohangwena region and 28 computers for Nurse Initiated and Managed ART (NIMART) implementing sites in Kavango East and West regions.

SIAPS and the pharmacy and PHC teams in Ohangwena, Oshikoto, Oshana, Omusati, and Kavango East and West regions discussed inventory management of nutritional products RUTF and RUSF, including their storage in pharmacy warehouses and integration into the Facility Electronic Stock Card (FESC) and pharmaceutical information dashboard. PHC staff and supervisors were trained on using the FESC to complete stock transactions and inventory management for products.

SIAPS and the USAID Global Health Supply Chain - Procurement and Supply Management (GHSC-PSM) program helped the Nutrition Assessment and Counseling Support (NACS) team at the MoHSS draft letters requesting that the MoHSS Permanent Secretary extend the lease for the rented warehouse for TSF. The contract for the warehouse expired on December 30, 2017.

SIAPS enhanced the capacity of more than 125 pharmacy assistant students, pharmacy staff, nurses, nurse mentors, and administration officers through training on the EDT, mEDT, FESC, dashboard, and general inventory management.

SIAPS supported ART data quality improvements at 16 ART facilities in Ohangwena region by engaging the regional management team (RMT) and the MoHSS and training/retraining pharmacy staff and nurses on the use of the EDT and mEDT for ART data capture and management. The meeting discussed ways to improve the management of ART patients at decentralization sites, identified challenges, developed and implemented an action plan to address data gaps in ART databases in the region, determined resources required to improve the management of patients at ART decentralization sites, and assigned responsibilities for ensuring quality ART service provision at those sites. The RMT agreed to install the EDT at all ART sites

in the region and train nurse mentors, nurses, and administration officers in capturing data in the EDT. In October 2017, SIAPS supported the MoHSS to install the EDT at 13 NIMART sites serving more than 5,000 patients.

To make it easier for nurses working at decentralized ART sites to record the dispensing of ARVs to patients, SIAPS reconfigured the mEDT for use on android-supported tablets and phones. This measure was meant to address data gaps in decentralized ART sites.

SIAPS supported the Div:PhSs to review the first edition of Namibia Standard Treatment Guidelines (STGs), published in 2011. SIAPS technical assistance included reviewing some sections of the guidelines, facilitating consultative meetings of the essential medicines list committee (EMLC) to review the final document, and coordinating the appointment and supervision of external reviewers for the STGs. The changes were reviewed for production of the second edition of the STGs.

SIAPS supported the Div:PhSs to disseminate lessons learned on the use of the pharmaceutical information dashboard to enhance evidence-based decision making in the ARV treatment program in Namibia at the December 4, 2017, Global Digital Health Forum in Washington, DC.

***Objective 1: Registration of new HIV/AIDS medicines and licensing of new indications by the NMRC is expedited***

SIAPS continued supporting the NMRC to further reconfigure Pharmadex. SIAPS and the NMRC discussed the migration of data from the old Pharmadex to the new web-based system. The discussions laid out the way forward for the implementation of the web-based Pharmadex. SIAPS also started preparing a guide on the use of Pharmadex for NMRC staff. SIAPS will be working on migrating data and information from the desktop version to the web-based version of Pharmadex.

SIAPS compiled a technical report on its project support to the NMRC from 2011 to 2017. The report is under review for publication.

***Partner Contributions***

The NMRC collaborated on the implementation of Pharmadex.

***Constraints to Progress***

Continuous requests for updates by the NMRC delayed completion of the upgrades to the web-based version of Pharmadex. SIAPS and the NMRC discussed and developed a way forward to complete the improvements and implement the improved tool.

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

SIAPS trained 40 pharmacy assistant students on the EDT and FESC at the NHTC. The training prepared these final-year students to use the tools upon deployment at public health facilities in Namibia. The students were trained on using the EDT and FESC for patient and inventory management for ART patients. They were also trained on compiling and generating reports from the EDT and FESC and on the importance of uploading the reports to the pharmaceutical information dashboard.

SIAPS oriented 27 health workers (5 pharmacy staff, 12 nurses, 6 administration officers, 3 nurse mentors, and the regional clinical mentor) on the use of the EDT and mEDT for ART patient and stock management in Ohangwena region. New EDT sites were created at nine PHC facilities in Engela, Okongo, and Eanhana districts in the region, bringing the total number of SIAPS-supported EDT main sites to 81 during this quarter.

SIAPS, in collaboration with I-TECH, trained 23 health facility staff, including pharmacy assistants and administration officers, on the use of the EDT for stock and inventory management in Kavango East and West regions. SIAPS also provided technical assistance to district hospital pharmacy staff at Rundu, Nyangana, Nankudu, and Andara district hospitals and Nkurenkuru Health Center on using the FESC for stock management of ARVs and other essential medicines. All of these facilities had been affected by staff attrition after the initial implementation of the FESC in 2016. Pharmacy staff were retrained on site on the key modules and inventory control principles used by the FESC. The training also included giving access and orienting pharmacy staff on uploading FESC and ART reports to the pharmaceutical information dashboard.

SIAPS supported the MoHSS to train 35 pharmacy staff and nurses in Khomas region in October 2017. The health workers were trained on inventory control and good storage practices.

**Partner Contributions**

- The MoHSS (Directorate of Tertiary Health Care & Clinical Support Services, Division: Pharmaceutical Services and Sub Division: National Medicines Policy Coordination) supported continued enhancement of the skills of health workers for implementing the EDT, mEDT, FESC, and dashboard for pharmaceutical service delivery and inventory management.
- The NHTC collaborated on training pharmacy assistant students on the EDT, FESC, dashboard, and inventory management.

**Constraints to Progress**

Staff turnover at public health facilities necessitated continued training and on-the-job mentoring.

***Objective 3: Electronic tools for pharmaceutical service delivery and the use of data for decision making are optimized***

SIAPS reoriented pharmacists and pharmacy assistants on the use of the FESC at four hospitals in Kavango East and West regions and solved IT challenges. This enabled continued use of the FESC for inventory management and reporting to the pharmaceutical information dashboard for data visibility.

SIAPS and facility managers discussed the basic requirements for integrating NACS products into the national pharmaceutical logistic system through the use of the FESC for inventory management. SIAPS supported the NACS unit to draft discussion points to be used during regional visits regarding integration of the TSF.

SIAPS provided technical assistance at ART facilities implementing the SMS reminder system, the mEDT, and the FESC. A two-day training familiarized health workers with the ART patient management, dispensing ARVs, and appointment keeping modules of the EDT. The health workers were oriented on uploading FESC and ART reports to the dashboard.

SIAPS' presentation at the Global Digital Health Forum, which was featured in a session on digital technologies supporting data for decision making in Africa, described how electronic systems could be used to improve availability and visibility of patient and pharmaceutical commodity information and contribute to enhanced availability of medicines through evidence-based decision making. SIAPS will use some of the lessons learned to design a sustainability plan for the health technologies and tools that it has supported in Namibia.

SIAPS is supporting the Div:PhSs to upgrade the mEDT to improve ART dispensing and data capture at NIMART and ART outreach sites. The updated mEDT technology, which can operate on desktop computers and android devices, is expected to reduce the data gap that has been created in the EDT databases as a result of decentralizing ART services. SIAPS obtained expert advice on testing the tool in Namibia.

***Partner Contributions***

- Div:PhSs, DSP, Ohangwena RMT, Enhana District Management Team (DMT), Engela DMT, Okongo DMT, IntraHealth (clinical mentor), and CDC nurse mentors on EDT usage for ART data quality improvement in Ohangwena region
- Div:PhSs, I-TECH, Kavango RMT, Kavango RMT, Andara DMT, and Nyangana DMT on EDT training for pharmacy assistants and administration officers in Kavango East and West regions
- Directorates, Special Programs and Tertiary Health Care and clinical support services, and Div:PhSs on support for health facilities using the EDT, mEDT, FESC, and pharmaceutical services dashboard, including data capture for TSFs (RUTF and RUSF)
- USAID GHSC-PSM on supporting the NACS team at the MoHSS to draft letters requesting the MoHSS Permanent Secretary extend the lease for the rented warehouse for TSF

- The Global Digital Health Network Advisory Board for a scholarship for SIAPS staff to present at the 2017 Global Digital Health Forum in Washington, DC

### *Constraints to Progress*

Staff changes at SIAPS-supported facilities affected the continued and efficient use of electronic tools for inventory and ART patient management. Inefficient use of the electronic tools affects the quality of ART and logistics data that managers use for decision making for pharmaceutical services and the ART program. SIAPS continued supporting the MoHSS to train or enhance knowledge of nurses, pharmacy staff, and managers on the use of the tools and data generated for decision making.

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

SIAPS supported the Div:PhSs to review the first edition of the Namibia STGs. SIAPS reviewed some sections of the STGs, facilitated consultative meetings of the EMLC to review the final document, and coordinated the appointment and supervision of external reviewers for the STGs. The STGs are essential guidelines for health workers to manage common illnesses in consistent, predictable ways, which enhances rational medicine use for optimum benefit to the patient. SIAPS facilitated a meeting with Ohangwena RMT, Div:PhSs, the Directorate of Special Programs (DSP), USAID, and nurse and clinical mentors and pharmacists from the three districts in Ohangwena region to resolve ART data gaps and strategize for improving ART data quality. Ohangwena region is one of the hardest hit by the AIDS epidemic, with more than 16,000 patients on ART, representing more than 10% of the national ART population as of September 2017. In June 2017, it was estimated that there were more than 6,000 discrepancies in data between the EDT and EPMS.

During this quarter, SIAPS consolidated a technical report on its support to the MoHSS on implementing CBART and ensuring access to ARVs through the differentiated care model. Examples of SIAPS support were also presented at the Global Digital Health Forum in Washington DC.

SIAPS supported the TIPC in providing and adapting training materials for a training of trainers meeting in Windhoek with regional, district, and facility managers in October 2017. A total of 32 health workers from 13 regions attended the training.

SIAPS attended the National TB and Leprosy Program (NTLP) update on the TB Disease Prevalence survey of 2017 at Heja Lodge in Windhoek.

A success story on the use of technology for reminding patients on taking medicines on time was developed and submitted for the MSH storytelling contest.

### *Partner Contributions*

- Div:PhSs, DSP, Directorate of Tertiary Health Care and Clinical Support Services, regional health directorates, public health facilities, and PEPFAR-implementing partners in Namibia on CBART implementation
- NMRC and TIPC for continued collaboration of trainings on reporting ADRs
- NTLP for continued support on the use of the e-TB Manager for the management of DR-TB patients

### *Constraints to Progress*

SMS reminders have not gone out from facilities since November 2017 due challenges with the network provider. The limited roll out and use of the mEDT in Ohangwena region resulted in a number of patients not captured in main EDT databases, resulting in an ART data gap for the program. SIAPS is working with the RMT to improve ART data capture, especially at ART decentralization sites.

## Philippines

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

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

During this quarter, to support Phase 1 of the Philippine Strategic TB Elimination Plan, 2017–2022, and as part of the ongoing SIAPS technical leadership on the National TB Control Program (NTP) Laboratory Training Decentralization Strategy, SIAPS collaborated with the National TB Reference Laboratory (NTRL) Training and Development Unit; the regional NTP coordinators for regions 4-A, 7, and 11; and the provinces of Bohol, Cebu, and South Cotabato to provide 12 medical technologists with the enhanced DSSM training for implementers in October 2017. The trainees were from nine government-sector and three private-sector facilities. Trainees were awarded certificates of training, and four passed the preceptorship as a requirement for certification. The trainers will be recommended by SIAPS for certification by the NTRL.

SIAPS collaborated with the NTRL to finalize training materials for the Xpert MTB/RIF training of trainers course and the Xpert MTB/RIF understudy training program. The program also collaborated with the NTRL Training and Development Unit, Department of Health (DOH) Region 7, Vicente Sotto Memorial Medical Center, and the City Health Office of Cebu to conduct a training of trainers on Xpert MTB/RIF in November 2017 at the Cebu TB Reference Laboratory (CTRL). Fresh specimens for the training were provided by Vicente Sotto Memorial Medical Center and the Cebu City Health Office. Xpert machines were provided by the NTRL and CTRL for the training, and the NTRL provided cartridges. The NTRL also provided funds for the materials, accommodations for trainees, and travel expenses for regional staff. SIAPS shared the travel costs for provincial staff of Tarlac, Nueva Ecija, and Bohol.

In addition, SIAPS organized and facilitated a workshop to draft pharmacovigilance (PV) SOPs in support of aDSM. The SOPs focused on active surveillance, including identifying serious adverse events (AEs) and AEs of special interest, recording and reporting AEs, causality assessment and providing feedback to reporters and programs, data analysis, and development of safety bulletins and risk minimization plans. Twenty participants from FDA, NTP, LCP, Pharmaceutical Department (PD), TC/STC TB treatment facilities, and regional PD staff attended. Participants came up with preliminary drafts of SOPs for recording and reporting AEs, completing AEs, causality assessment and risk, and analysis and feedback. The preliminary drafts were sent to the DOH-PD for circulation and finalization. A clearly delineated flow of data and information for the aDSM program was agreed upon by stakeholders (NTP, PD, and FDA) during the workshop.

SIAPS supported the NTP in updating the aDSM roadmap. The roadmap guides ongoing and planned PV/aDSM activities in support of the introduction and scale up of new medicines and shortened treatment regimen targets through 2019.



### *Partner Contributions*

For the enhanced DSSM training for implementers, the DOH Regional Office contributed PHP 140,196.

For the GeneXpert training of trainers course, the DOH Regional Office provided the training venue and shared the cost for transporting the specimens from the Cebu City Health Office. The NTRL provided training materials and participant accommodations.

### *Constraints to Progress*

Activities of the NTRL/TDU and attendance at the international training delayed the development of SOPs for maintaining Xpert MTB/RIF assay machines, training materials, and the training itself. The delay in generating documentation for the two RTDL expansion and enhancement of EQA workshops for the DSSM by the NTRL delayed the final report.

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

SIAPS facilitated drafting SOPs for consumption-based demand and supply planning for the Family Planning (FP) Program and NTP. Three consultation workshops were held to harmonize efforts on demand and supply planning. Data collection and management concerns were reviewed in the first workshop, while the second covered current supply chain management activities of different programs and offices. This also provided an opportunity to initiate consensus building, identify priority areas for improvement, promote consumption-based allocation planning, and formally document agreements on demand and supply planning and related activities during the third workshop. These agreements were utilized in drafting SOPs for:

- Conducting facility monitoring visits
- Consolidation and feedback at the regional level
- Consolidation and initial analysis at the central level
- Conducting demand and supply planning meetings
- Validating data at the facility level

SIAPS also provided technical assistance to draft updated warehousing and distribution SOPs to harmonize the Logistics Management Division's (LMD) processes and information flow with the demand and supply planning SOPs.

In addition, SIAPS conducted a PViMS analytical workshop for 10 participants from the PD, LCP, and FDA. Participants gained an understanding of the roles and responsibilities of their organizations in the PV reporting process. SIAPS also organized a meeting with the PD and KMITS to discuss the process of providing PViMS user accounts to PMDT facilities. The DOH-PD will create the user accounts in PViMS in coordination with KMITS. To kick start the process, SIAPS created 470 accounts for PMDT staff that were provided by the DOH-KMITS and NTP.

SIAPS met with the PD, NTP, LCP, and TREATTB to discuss the way forward on making the operational research database analyzable. The group agreed to make PViMS the official operational database of the LCP-NCPR for both safety data and other research data. SIAPS supported the LCP-NCPR in the management of 9MTR OR data and prepared and shared an analysis of the initial AE data stratified by age group and system organ class with the LCP-NCPR. SIAPS and the PD attended a meeting organized by the HIV/AIDS program on procurement and supply management and PV.

### *Partner Contributions*

The PD provided consumption data for the FP Program and NTP by conducting field monitoring of their public health pharmacists. The LMD provided its warehouse inventory data, and the programs consolidated their available data from reports from program coordinators. These data were used in the quantification exercises. The PD also presented its Pharmaceutical Management Information System (PMIS) during the workshops. The PMIS is an IT system intended to be used to monitor FP Program and NTP commodities beginning in 2018. The PMIS is expected to be integrated in the LMD's National Online Stock Inventory Reporting System after it is rolled out nationally.

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

During this quarter and after the South Africa training and updating selected warehousing SOPs, SIAPS further supported the LMD in developing a training guide for the warehousing and distribution of FP, TB, and other health commodities of the DOH. The guide can be used as supporting material in the training and for the development of current and new staff involved in warehouse and distribution operations at all levels, particularly those involved in the process of receiving, putting away and storage, picking and packing, and dispatching FP, TB, and other health commodities in DOH warehouses.

SIAPS organized a three-day training on PV with a focus on data management, causality assessment, and signal detection. The training capacitated participants on various aspects of PV, including the concept and principles of PV and why it is important to monitor the safety of medicines, PV strategies, how to detect and report adverse drug reactions, how to conduct a causality/relationship assessment, signal detection, and the basics of safety communication. All 10 participants from the NTP, LCP, PD, and FDA have an important role in the aDSM implementation of new medicines and novel TB regimens. Participants gained first-hand experience on reporting ADRs, conducting causality assessments, and the basics of signal generation.

### *Partner Contributions*

The LMD chief and staff led the prioritization and writing of warehouse SOPs to be updated, which became the basis for the training guide.

*Constraints to Progress*

The competing schedules of partners participating in SIAPS technical assistance-related activities caused delays.

## Sierra Leone

**Goal: Strengthen pharmaceutical management systems for ensuring availability of quality pharmaceutical products and rational use to achieve desired health outcomes**

### ***Overall Quarterly Progress***

During this quarter, SIAPS Sierra Leone implemented the following key activities:

- Concluded project activities
- Conducted project status briefings for key partners, including local USAID, UNICEF, WHO, and UNFPA offices, to identify and take advantage of any opportunities for synergy and support in the immediate future to ensure sustainability. The Global Fund has shown interest and has agreed with its PR to fund some ongoing USAID/SIAPS activities.
- Held a project close-out event
- Transitioned project activities to the DDMS by encouraging it to be more proactive regarding resource mobilization from the government and partners
- Drafted a strategic paper for the DDMS to serve as a guide for engaging partners and mobilizing resources

### ***Relocation to New Premises at the Radisson Blu/Mammy Yoko Hotel***

To minimize logistics and management needs of the project during the close-out phase, SIAPS moved its office to the Radisson Blu/Mammy Yoko Hotel. SIAPS kept the office space provided by the DDMS for transitioning work and mentoring.

### ***USAID Sierra Leone Learning Conference***

The USAID/SIAPS Sierra Leone project participated in “Building Back Better: Sierra Leone’s Path to Sustainable Development”—a USAID-organized one-day learning conference on November 16, 2017, in partnership with the Government of Sierra Leone. The conference highlighted results and lessons learned by USAID-funded projects that focused on Sierra Leone's recovery and stability after the Ebola crisis over the last 18 months. The conference included four sectors—health, governance, food security/agriculture, and innovation/private-sector engagement. The country project director participated in presentations by USAID/SIAPS, JSI, UNICEF, and IOM at a satellite health "deep dive" panel discussion.

### ***Meetings with Partners***

A project update meeting was held with a visiting World Bank mission on health supply chain. The mission appreciated the work of USAID/SIAPS in Sierra Leone and would like to align any immediate future investment with project achievements to date.

Project Last Mile fielded a mission to Sierra Leone in November, and SIAPS/Sierra Leone had a successful meeting with the team. To support coordination among key pharmaceutical-sector partners, SIAPS arranged a meeting with the DDMS, PBSL, and CHAI.

### *Transition and Sustainability Initiatives*

The project focused on conducting meetings with partners and the DDMS to engage them in plans to continue activities and demonstrate national-level acceptance. SIAPS made presentations to the World Bank, UNICEF, FHCI Forum, PSM, and the Global Fund, among others. Several partners have already included activities in their plans to support the DDMS in continuing what was initiated by USAID/SIAPS.

### *Procurement and Distribution of Equipment and Office Furniture to Hospitals, the DDMS, and DHMTs*

As part of the system strengthening effort, the project finalized the procurement and distribution of computers, printers, projectors, tables, and chairs to six hospital drug and therapeutics committees (DTCs), 13 districts, the DDMS, and other entities that worked closely with the project. In addition to these supplies, equipment and furniture used by SIAPS over the last two years were distributed to selected stakeholders in consultation with USAID/Sierra Leone.

### *Global Fund and NAS Engagement*

Recent Global Fund missions to the country have raised concerns about the weak and fragile state of the supply chain; SIAPS reiterated the issue in a meeting with the Global Fund technical team. In response, a Global Fund lead consultant visiting Sierra Leone made special reference to the opportunities created by the USAID/SIAPS Sierra Leone project. SIAPS had a meeting with the NAS director to propose items as part of an MOU to be included in the Global Fund budget proposal, including:

- Air time for Sierra Leone pharmaceutical dashboard modems
- Dashboard monitoring
- Procurement and supply chain management supervision (national and district levels)
- Quarterly coordination meetings with district pharmacists
- CRMS orientation exercises
- Post-CRMS review meetings
- Printing of paper-based tools (treatment register, summary sheets, RR&IVs)

## *NMSA Law*

The NMSA Act was signed into law by the President. SIAPS joined the team that has informally started discussing the next steps toward setting up a functional unit that will execute the plan developed by the Steering Committee.

## *Project Close-out*

SIAPS held a meeting with the USAID Sierra Leone Health Portfolio Team Lead and Project Management Specialist-Health to brief the team on project status, the transition plan, and close-out activities.

The close-out event was held on December 13, 2017, at the MOHS. The event was well-attended by key personnel who will be responsible for and involved in taking this important work forward. The close-out was ushered in with an event that brought the MOHS, USAID, partners, and other stakeholders together for a presentation of the project's achievements. At the event, USAID formally presented up-to-date reference books to the DDMS, PBSL, DPPI, NAS, NMCP, Faculty of Pharmaceuticals Sciences, College of Medicines and Allied Health Sciences, and districts.

Presentations were made on USAID/SIAPS achievements to date, including CRMS, quantification, PMIS/LMIS, DTCs, the dashboard, and DDMS restructuring and capacity building, and the ongoing efforts to have key partners buy into and support the pharmaceutical sector's strengthened infrastructure.

## *Challenges*

- The third CRMS cycle could not be implemented in three of the 13 districts due to time and budget constraints. However, the CRMS has been earmarked for Global Fund support, and all districts will be taken care of going forward.
- Due to competing priorities, quantification of FHC products, which should have started at the beginning of the quarter, was postponed.
- With the new PMIS tools (treatment registers and RR&IVs) in place, there was no time to review the reporting status of health facilities and districts. SIAPS is expecting the DDMS to ensure close monitoring of reporting to reflect the value of the new tools.
- Technical/operational challenges to creating an interface between the pharmaceutical dashboard and DHIS2, including a need to match the health facility lists in the two systems, is pending. It is hoped that the DDMS and DDPI will continue their collaboration to address this.

## **Swaziland**

**Goal: The goal of the SIAPS program in Swaziland is to ensure the availability of quality pharmaceutical products and effective pharmaceutical services to achieve desired health outcomes for HIV/TB care and treatment**

### ***Overall Quarter Progress***

The availability of quality antiretrovirals (ARVs) for the management of HIV and the provision of quality pharmaceutical services to people living with HIV remain the focus of SIAPS' work in Swaziland. In pursuit of these goals, SIAPS engaged in the following activities during this quarter.

SIAPS has conducted routine supportive site visits to all 14 SIAPS-supported hospitals and health centers, and 20 pharmacy personnel were mentored during these visits. Challenges encountered at some of the hospitals and health centers included poor availability of cotrimoxazole 960mg, a lack of thermometers to measure room and refrigerator temperatures, and soon-to-expire stock of lopinavir/ritonavir 80/20mg syrup. SIAPS instituted a number of interventions aimed at improving inventory management and pharmaceutical care at the facility level, including printing SOPs developed by facilities and supporting the regular updating of stock cards at selected facilities. Support to facilities was also provided in the form of diagnosing, troubleshooting, and debugging errors with RxSolution encountered during the quarter and providing refresher training on the eLMIS, which tracks commodities for three laboratory technicians at Baylor Clinic.

Antimicrobial resistance (AMR) has been identified as a major threat to health systems worldwide. In this regard and in line with its mandate to strengthen governance in the pharmaceutical sector, SIAPS has made significant strides in supporting and capacitating the Ministry of Health (MOH) in developing the five-year national AMR containment strategic plan as well as in assisting the Ministry in effecting Pharmacy and Therapeutics Committees (PTCs). The final version of the national AMR containment strategic plan has been produced.

During this quarter, SIAPS supported the MOH in quantifying the three-year requirements for ARVs, TB medicines, sexual reproductive health commodities, malaria medicines, and medicines for hypertension and diabetes. Financial constraints within the Government continue to threaten the uninterrupted availability of life-saving health commodities; a 73% budget gap was identified for FY17/18 Q3 and Q4 combined.

### ***Objective 1: Strengthen Governance in the Pharmaceutical Sector***

One of the mandates of SIAPS is to capacitate the MOH in establishing and having functional PTCs in health facilities to monitor rational medicine use and contain AMR. In 2015, the World Health Assembly (WHA) declared AMR a global threat and urged countries to work toward having AMR containment strategies in place. Countries were expected to present their strategies for combating AMR at the WHA meeting in May 2017. In April 2016, the MOH, through the office of the Principal Secretary, requested SIAPS to support the development of the national

AMR containment strategic plan, which would assist PTCs in health facilities and other stakeholders to implement activities that will reduce AMR in the country and comply with WHA objectives.

During this quarter, SIAPS continued to support the office of the Deputy Director of Pharmaceutical Services by developing the national AMR containment strategic plan. The next steps in this process include:

- Working with the Deputy Director of Pharmaceutical Services, get the AMR strategic plan signed by the MOH, Ministry of Agriculture, and Ministry of Natural Resources.
- Print the strategic plan for dissemination.
- Launch the strategic plan by the end of February 2018.

### ***Objective 2: Increase capacity for pharmaceutical supply management and services***

SIAPS has continued to provide support to health facilities to improve pharmaceutical service through supportive supervision on inventory management, good dispensing practices, counseling of patients on ARV and TB treatment, and monitoring of ADRs to improve patient adherence to treatment.

Challenges in regular recording and updating transactions (receipts and issues) in stock cards, monthly physical stock counts, and monthly consumptions, especially at Nhlangano Health Center and Hlathikhulu Government Hospital, were addressed during the routine supportive supervision and mentorship visits. Four health facilities—Makayane Government Hospital, Sithobela Health Center, Good Shepard Hospital, and the AIDS Healthcare Foundation (AHF) Clinic—were still neither recording monthly consumption nor monitoring refrigerator and room temperatures, and they were mentored on the importance of recording this information and obtaining thermometers if needed.

During this quarter, the availability of cotrimoxazole 960mg tablets has been a challenge at health facilities visited. Most facilities were using cotrimoxazole 480mg tablets as a substitute, which increased pill burden to patients as they had to take two tablets instead of one. Only Dvokolwako Health Center still had enough cotrimoxazole 960mg tablets. All health facilities had lopinavir/ritonavir 80/20mg syrup expiring at the end of January 2018, which meant patients could not be given a three-month supply. The Central Medical Stores (CMS) had assured health facilities that new stock of lopinavir/ritonavir 80/20mg syrup would be available in January before the existing supply expired.

Sithobela Health Center had stock-outs of malaria medicines due to a poor communication channel with the CMS, which was addressed after discussion with the CMS pharmacist. The National TB Hospital improved all of its pharmacy services after a continuous supervision and mentorship by SIAPS, including good storage practices, the inventory management system, and the hospital's PTC. The AHF Clinic at Lamvelase is still struggling with its storage system. Neither room nor refrigerator temperatures were monitored due to a lack of thermometers. Air conditioning has not been installed in the warehouse, but the facility is planning a move to another well-equipped warehouse in March 2018. The same challenges have been observed at



Mankayane Hospital, which also lacks thermometers. Other health facilities in need of supervision and mentorship include the National Psychiatric Hospital and Good Shepherd Hospital, which both have challenges in managing stock and monitoring storeroom conditions.

To enhance proper storage of medicines and improve stock management, SIAPS placed stock cards on the shelves to make them more accessible and to ensure that each stock card is always right in front of its product in selected health facilities in the Manzini (National TB Hospital and Mankayane Hospital) and Lubombo (Sithobela Health Center) regions.

SIAPS has printed 18 SOPs for three health facilities to improve inventory management and pharmaceutical care, including the dispensing of medicines to patients and counseling patients on rational medicine use.

During this quarter, SIAPS also supported the Pharmacovigilance Unit in capturing adverse drug reaction (ADR) reports in health facilities and identifying the number of ADRs and suspected medicines reported. SIAPS prepared the Medicines Safety Newsletter and disseminated it to facilities and stakeholders. Technical advisors from SIAPS assisted the National TB Hospital with presentations on PTC and pharmacovigilance to pave the way for the implementation of the facility's quality improvement plan.

Health facilities will be followed up on the gaps identified to monitor improvement.

There was one SIMS visit this quarter to the Mkhuzweni Health Center, and the facility scored well on the SIAPS supply chain indicators.

### ***Objective 3: Address Information Utilization for Pharmaceutical Management Decision Making***

SIAPS Swaziland has been supporting the MOH CMS by working with the developer of the eLMIS to update reports and improve the functionality of the system. During this quarter, SIAPS held collaborative meetings with the CMS team and IT consulting firm Softworks to map out the progress of the activity and list the remaining tasks. The tasks completed include an updated facility stock-out report, export data entry form, and a patient dashboard and user-friendly interface to import data from the CMS ERP.

SIAPS Swaziland will continue to support the CMS team until the system update is complete. One of the major activities that is to take place in the next quarter is a full system user training for the data management team, a system analyst, and the IT officer. This training will cover the use of the system and the backend functionality.

SIAPS Swaziland continues to support health facilities on the use of both RxSolution and the eLMIS. As noted in the previous quarterly report, some facilities had stopped using the eLMIS for reporting due to connectivity issues and another had problems with the system itself. SIAPS supported Baylor Clinic on a refresher training of the system for three laboratory technicians. With regard to the CTS system, SIAPS also supported the CMS data management unit team and the laboratory to capture LMIS monthly reports and orders through the eLMIS.

For most facilities, SIAPS supported RxSolution, and 86% of health facilities are utilizing the system optimally. Of the 14 facilities supported, two do not use RxSolution because they have their own information system customized for the facility. Among the facilities supported on RxSolution, 42% reported issues such as a loss of connectivity, system errors, and reporting errors. SIAPS Swaziland supported these facilities by diagnosing, troubleshooting, and debugging the errors and will continue to support facilities to improve the quality of data.

### *Constraints to Progress*

To complete the activities for updating the eLMIS, SIAPS Swaziland conducts regular meetings with the CMS team and Softworks to monitor and evaluate the progress made by the developer. Due to competing priorities within the CMS team, there has been, on occasion, a delay in progress, and deadlines have been extended.

### **Objective 4: Improve Pharmaceutical Services to Achieve Desired Health Outcomes**

During this quarter, SIAPS supported the MOH to quantify the three-year requirements for ARVs, TB medicines, sexual reproductive health commodities, malaria medicines, and medicines for hypertension and diabetes. The table below shows the three-year budget requirements for ARVs and medicines for opportunistic infections.

<b>Fiscal Year</b>	<b>Cost (USD and SZL)*</b>
2018/19	USD 29,686,373.08 (SZL 403,734,673.88)
2019/20	USD 28,635,771.68 (SZL 400,900,803.58)
2020/21	USD 23,237,740.26 (SZL 316,033,267.56)

\*1 USD = 14 SZL

During the quantification, SIAPS continued to prioritize interventions that seek to ensure uninterrupted availability of priority health products for HIV and TB management in Swaziland. Building local capacity and skills of MOH counterparts in quantification is one strategy that SIAPS employs to achieve its goals.

During this quarter, in conjunction with collecting more information and conducting trainings on quantification, the technical team from CMS, UNFPA, and USAID | SIAPS continued to develop forecasts and supply plans for the three-year period of April 2018–March 2021 for the program commodities specified above, except for medicines for noncommunicable diseases. The morbidity and consumption method of quantification was applied using different electronic quantification tools (e.g., Quantimed, QuanTB, RealtyCheck) for different program commodities. PipeLine was used to generate quantity and cost for all commodities. SIAPS also conducted a funding gap analysis to advocate for more resources.

### *Constraints to Progress*

The quarterly disbursement of funds for the procurement of ARVs (the proportion funded by government) is still inconsistent, and the funds disbursed fell short of the supply plan requirements.