

USAID MEDICINES, TECHNOLOGIES, AND PHARMACEUTICAL SERVICES (MTAPS) PROGRAM

Improved Access. Improved Services. Better Health Outcomes.



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FISCAL YEAR 2019 ANNUAL REPORT AND QUARTER 4 (JULY–SEPTEMBER 2019) REPORT

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PROJECT OVERVIEW

| | | |
|--------------------------------------------|----------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Program Name: | USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program | |
| Reporting Period: | Fiscal year (FY) 2019 and FY19 Quarter 4 (July–September 2019) | |
| Activity Start Date and End Date: | September 20, 2018 – September 19, 2023 | |
| Name of Prime Implementing Partner: | Management Sciences for Health | |
| Contract Number: | 7200AA18C00074 | |
| USAID MTaPS Partners: | Core Partners: | Boston University, FHI360, Overseas Strategic Consulting, Results for Development, International Law Institute-Africa Centre for Legal Excellence, NEPAD |
| | Global Expert Partners: | Brandeis University, Celsian Consulting, Deloitte USA, Duke-National University of Singapore, El Instituto de Evaluacion Technologica en Salud, ePath, IC Consultants, MedSource, IQVIA, University of Washington |
| | Capacity Resource Partners: | African Health Economics and Policy Association, Ecumenical Pharmaceutical Network, U3 SystemsWork, University of Ibadan, African Collaborating Centre for Pharmacovigilance and Surveillance, Kilimanjaro School of Pharmacy, Muhimbili University, Pharmaceutical Systems Africa |
| | Collaborators: | International Pharmaceutical Federation, Howard University, University of Notre Dame, WHO, World Bank |

Recommended Citation

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2019. *USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program: Annual Report Fiscal Year 2019 and Quarterly Report Fiscal Year 2019, Quarter 4 (July–September 2019)*. Submitted to the U.S. Agency for International Development by the USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program. Arlington, VA: Management Sciences for Health, Inc.

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ACRONYMS AND ABBREVIATIONS

| | |
|--------|----------------------------------------------------|
| aDSM | active drug safety monitoring and management |
| AIDS | acquired immunodeficiency syndrome |
| AMR | antimicrobial resistance |
| AMRH | African Medicines Regulatory Harmonization |
| AMS | antimicrobial stewardship |
| AMS | asset management system |
| ARV | antiretroviral |
| CDC | US Centers for Disease Control and Prevention |
| CDC | Communicable Disease Control (Bangladesh) |
| COR | contracting officer representative |
| CPD | country project director |
| CQI | continuous quality improvement |
| CTD | common technical document |
| DOH | Department of Health |
| DRC | Democratic Republic of the Congo |
| DTC | drug and therapeutics committee |
| ECOWAS | Economic Community of West African States |
| EDT | electronic dispensing tool |
| eLMIS | electronic logistics management information system |
| EMP | essential medicines and health products (WHO) |
| FAO | Food and Agriculture Organization |
| FDA | US Food and Drug Administration |
| FP | family planning |
| FY | fiscal year |
| GBT | Global Benchmarking Tool (WHO) |
| GFF | Global Financing Facility |
| GHSA | Global Health Security Agenda |
| HIV | human immunodeficiency virus |
| HTA | health technology assessment |
| IPC | infection prevention and control |
| JAG | joint action groups |
| LGU | local government unit |
| LMICs | low- and middle-income countries |
| LMIS | logistics management information system |
| M&E | monitoring and evaluation |
| MCH | maternal and child health |
| MDG | Millennium Development Goal |
| MDR | multidrug resistant |
| MEL | monitoring, evaluation, and learning |
| MNCH | maternal, neonatal, and child health |
| MOH | Ministry of Health |
| MOHFW | Ministry of Health and Family Welfare |

| | |
|--------|-------------------------------------------------------------|
| MOHSS | Ministry of Health and Social Services |
| MOU | memorandum of understanding |
| MSH | Management Sciences for Health |
| NEPAD | New Partnership for Africa's Development |
| NGO | nongovernmental organization |
| NTP | national tuberculosis program |
| PEPFAR | US President's Emergency Plan for AIDS Relief |
| PMIS | pharmaceutical management information system |
| PSM | procurement and supply management |
| PSS | pharmaceutical systems strengthening |
| PV | pharmacovigilance |
| PY | program year |
| RCORE | regional center of regulatory excellence |
| RHSC | Reproductive Health Supplies Coalition |
| SADC | Southern African Development Community |
| SCMP | Supply Chain Management Portal |
| SIAPS | Systems for Improved Access to Pharmaceuticals and Services |
| SOW | scope of work |
| STG | standard treatment guideline |
| TB | tuberculosis |
| TOR | terms of reference |
| TOT | training of trainers |
| TWG | technical working group |
| UHC | universal health coverage |
| UN | United Nations |
| UNDP | United Nations Development Programme |
| USAID | US Agency for International Development |
| WASH | water, sanitation and hygiene |
| WHO | World Health Organization |

INTRODUCTION

PURPOSE

Funded by the US Agency for International Development (USAID) and implemented by a team led by Management Sciences for Health (MSH), the purpose of the five-year USAID MTaPS Program (2018–2023) is to provide pharmaceutical system strengthening assistance for sustained improvements in health system performance and to advance USAID’s goals of preventing child and maternal deaths, controlling the HIV/AIDS epidemic, and combatting infectious disease threats, as well as expanding essential health coverage.

GOAL

The goal the MTaPS Program is to help low- and middle-income countries strengthen their pharmaceutical systems to ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable essential medicines, vaccines, and other health technologies and pharmaceutical services.

MTAPS APPROACH TO STRENGTHENING PHARMACEUTICAL SYSTEMS

USAID awarded the MTaPS Program to enable low- and middle-income countries to strengthen their pharmaceutical systems to ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable essential medicines, vaccines, and other health technologies and pharmaceutical services. In this context, “access” refers specifically to affordability, acceptability (or satisfaction), geographical accessibility, availability, and equity (the extent to which pharmaceutical systems deal fairly with population subgroups differentiated along various parameters). “Use” refers to prescribing, dispensing (or sale or supply to the user), and consumption (or end use).

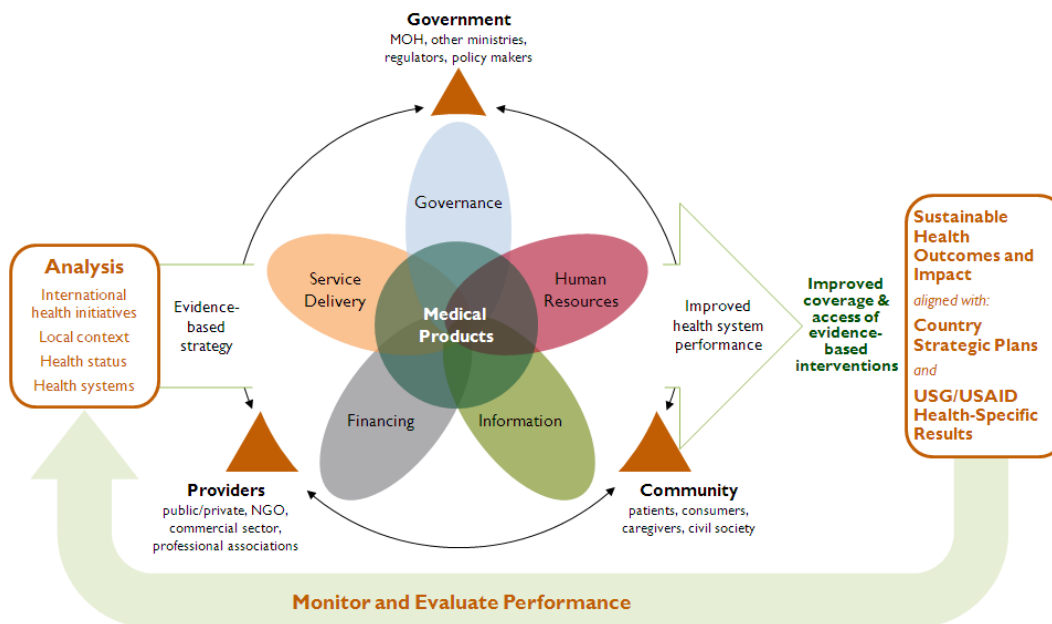


Figure 1. USAID MTaPS’ pharmaceutical systems strengthening approach

The program's theory of change is based on USAID's Vision for Pharmaceutical Systems Strengthening (PSS),¹ which posits six functions of health systems that must be strengthened to achieve sustained and equitable access to essential, high-quality services: human resources, health finance, health governance, health information, medical products/vaccines/technologies, and service delivery. MTaPS has adapted this framework to the pharmaceutical sector as per figure 1, which illustrates a comprehensive set of dynamic relationships among a health system's functions with an overarching focus on the role medical products are expected to play in improving health system performance.

ABOUT THIS REPORT

We are pleased to present highlights from our performance for fiscal year 2019 and quarter progress for quarter 4 (July–September 2019). This report summarizes program performance and key challenges and is organized by core funding, objective, and country.

¹ US Agency for International Development. USAID's vision for health systems strengthening, 2015–2019. Available at: <https://www.usaid.gov/sites/default/files/documents/1864/HSS-Vision.pdf>.



Where we work

Africa

Burkina Faso

Cameroon

Côte d'Ivoire

*Democratic Republic
of Congo*

Ethiopia

Kenya

Mali

Mozambique

Rwanda

Senegal

Tanzania

Uganda



Middle East

Jordan

Asia

Bangladesh

Nepal

Philippines

A MESSAGE FROM THE MTAPS PROGRAM DIRECTOR



Our first year of work on MTaPS has been an exciting blend of stabilizing foundations and creating new collaborations and activities.

While building on the work of our previous programs in a number of countries, we're taking the critical next step to building strong pharmaceutical systems that focuses on patient-centered pharmaceutical care systems that contribute to good health outcomes and universal health coverage.

An initial focus has been helping a number of countries bolster their global health security measures, increase their capacity to be resilient against infectious disease threats, and fight antimicrobial resistance (AMR), which is a grave threat to all of our work thus far. Our activities center on promoting coordination among diverse sectors, infection prevention and control (IPC), and optimizing the use of antimicrobials.

For example, MTaPS has helped establish or strengthen IPC and antimicrobial stewardship (AMS) technical working groups in eight countries that include multisectoral stakeholders, such as animal and human health and agricultural stakeholders. In Tanzania, we helped update IPC standards for hospitals, health centers, and dispensaries. We helped Côte d'Ivoire, Tanzania, Kenya, and Senegal bolster governance and policies and revise training curricula on the use of antimicrobials.

In other countries, we're scaling up proven interventions that we helped implement under predecessor programs, particularly those that support accurate data for sound decision making. In Bangladesh, that includes a national roll-out of an electronic logistics management information system and of e-TB Manager, a digital tool for managing TB programs. We're working with the Philippines on a national strategic plan for procurement and supply chain management that strengthens governance and coordination, workforce, information systems, private-sector engagement, and pharmaceutical services.

MTaPS is involved in regulatory systems strengthening in Bangladesh, Côte d'Ivoire, Mozambique, Nepal, the Philippines, and Rwanda and is promoting regional collaboration on pharmacovigilance and regulatory systems capacity in Asia. As part of our agenda to contribute to global learning, we have formed a technical advisory group on pharmaceutical systems strengthening, are developing an online and in-person training program, and are finalizing a multiyear research agenda.

We have also embarked on an exciting, creative collaboration with our partners. They bring diverse knowledge, local expertise, and a great deal of energy to our mission.

Our solid beginning is thanks in great part to support from our leadership team at USAID, our partners, and our colleagues in the countries in which we are privileged to work. I thank them all, and look forward to implementing our strategies with creativity, wisdom, and determination in the coming year.

– Francis Aboagye-Nyame, MTaPS Program Director

PROGRESS BY CORE-FUNDED PORTFOLIO

GLOBAL HEALTH SECURITY AGENDA (GHSA)

HIGHLIGHTS FROM PROGRAM YEAR I

Key performance indicators

The MTaPS/GHSA team has developed a set of key performance indicators, including outcome indicators, to measure the progress of GHSA country portfolios toward meeting their goals and objectives. These indicators are aligned with and mapped to the joint external evaluation (JEE) 2.0 tool and WHO benchmarks for international health regulations (IHR) capacity and the MTaPS project monitoring, learning, and evaluation indicators, which were conditionally approved by the COR in August 2019.

Implementation framework

MTaPS developed a two-part technical implementation framework that lays out MTaPS' technical approach to working with the 10 countries to identify and carry out the most effective activities to move quickly from the countries' JEE baseline levels. Part 1 aligns our strategies and activities to JEE 2.0 indicators, JEE contextual questions, and the WHO Benchmarks for IHR capacities. Part 2 gives more in-depth but easy-to-access information to help in-country MTaPS technical staff streamline their technical assistance activities to achieve objectives.

Technical mini-guides

MTaPS finalized and disseminated three technical mini-guides with process checklists to country teams to help with planning, jump starting, and stepwise implementation that are common across MTaPS/GHSA countries. The three completed guides relate to implementation of the WHO AWaRe classification of essential medicines list (EML), effective multisectoral coordination (MSC) on antimicrobial resistance (AMR), and conducting assessments of antimicrobial stewardship (AMS) policies and activities. An additional six guides are under development and will be completed by the next quarter.

Partner mapping exercise

MTaPS completed a partner mapping exercise that lays out the organizations working on MSC, infection prevention and control (IPC), and AMS in each of the 10 MTaPS/GHSA countries. The document will help the program align activities among partners and eliminate duplication of efforts. During the reporting period, MTaPS interacted with WHO/Afro, the UN Food and Agriculture Organization (FAO), the Ecumenical Pharmaceutical Network, Action on Antibiotic Resistance (ReAct), and two USAID-supported projects—the Mother and Child Survival Project and Infectious Diseases Detection and Surveillance project—to share information about our GHSA/AMR work and look for mutual opportunities for coordination and collaboration.

High-profile AMR events

MTaPS also participated in and contributed to AMR-related interactions at two events:

- A policy roundtable on bridging the gap between WASH and global health on June 11, 2019, hosted by the Kaiser Family Foundation

GHSA-SUPPORTED COUNTRIES:

Burkina Faso

Cameroon

Côte d'Ivoire

Democratic Republic of Congo

Ethiopia

Kenya

Mali

Senegal

Tanzania

Uganda

- The ReAct Africa Annual Conference, co-hosted with South Centre, on the theme “Achieving Universal Health Coverage while Addressing Antibiotic Resistance”, Nairobi, Kenya, July 23–25, 2019

Following up on the year 1 activities and building on the acquired experience and adjusted timelines, MTaPS developed and submitted draft program year 2 (PY2) work plans in both GHSA Excel and MTaPS narrative formats for USAID review.

QUARTER PROGRESS FOR FY19Q4

In **Bangladesh**, MTaPS has been requested to provide support through GHSA funding for program year 2, in addition to the current field funding. GHSA activities in Bangladesh will focus on: 1) strengthening sub-national level MSC mechanisms on AMR; 2) strengthening IPC systems and activities at national and facility levels; and 3) strengthening AMS systems and activities at national and facility levels. Activities will commence next quarter after MTaPS receives approval from USAID.

EFFECTIVE MULTISECTORAL COORDINATION ON ANTIMICROBIAL RESISTANCE

MSC is crucial for effective implementation of national action plans (NAPs) on AMR. MTaPS provided technical leadership in expediting first steps for the establishment of AMR governance bodies in **Cameroon** by convening AMR MSC One Health stakeholders and USAID projects in a coordination and strategy meeting and in the **DRC** and **Burkina Faso** by collecting data and feedback from stakeholders for establishing AMR technical working groups (TWGs). In **Mali**, MTaPS was instrumental in convening the first quarterly meeting of the MSC committee for AMR, which is expected to meet regularly.

In **Côte d’Ivoire**, MTaPS supported the AMR TWG in finalizing and approving a national AMR implementation plan. In **Ethiopia**, MTaPS assisted in the dissemination of the NAP AMR to the Somali Region and supported the revision of the terms of reference (TOR) for the National Advisory Committee on Antimicrobial Resistance Prevention and Containment to establish its new role as a national MSC body and support initial MSC meetings. MTaPS also conducted an AMR stakeholder assessment to inform actions for broader engagement of government stakeholders in the prevention and containment of AMR.

MTaPS/**Kenya** supported the National Antimicrobial Stewardship Interagency Committee’s five TWGs to review their TOR, align them to the NAP, and develop one-year work plans and well-articulated strategies to meet the NAP strategic objectives in their areas of expertise. MTaPS helped Kenya expand its MSC support to the regional level, taking steps to establish One Health governance structures and systems to strengthen IPC and AMS at the county level in Nyeri and Kisumu counties. In **Tanzania**, MTaPS conducted a third technical workshop for stakeholders from the FAO, Ministry of Livestock and Fisheries, and Tanzania Mainland Ministry of Health (MOHCDGEC) to finalize the review of the AMS policy and guidelines. The MTaPS team supported setting up **Uganda’s** national IPC and AMS TWGs under the Uganda National AMR sub-committee and organized quarterly meetings for the AMS technical working committee; MTaPS is also supporting Uganda in the development of a national electronic AMR platform. In Q4, after initial discussions and evaluation of the needs and system capacity, MTaPS began supporting the development of a SharePoint database on antimicrobials for the National Drug Authority.

INFECTION PREVENTION AND CONTROL IMPROVED AND FUNCTIONAL

Strengthening governance structures for IPC at the national and facility levels

MTaPS supported re-establishment of the **Ugandan** national IPC committee and secretariat at the Ministry of Health (MOH) Clinical Services Division, which is tasked with coordinating the development

of a national IPC program for human health. In **Côte d'Ivoire**, MTaPS was instrumental in developing SOPs and establishing IPC committees in four target health facilities.

Developing IPC baseline information

To understand the status and quality of national IPC programs, it is important to systematically collect standardized sets of data. WHO offers tools and guidance, including an IPC assessment tool (IPCAT2) for the national level, the Infection Prevention and Control Assessment Framework (IPCAF) for health facilities, and the Hand Hygiene Self-Assessment Framework (HHSAF). In Q4, MTaPS helped several countries conduct IPC assessments using these tools, including at the national and facility levels in **Cameroon** (38 facilities), **Côte d'Ivoire** (4 facilities), **Ethiopia** (15 referral hospitals), **Kenya** (16 facilities in Kisumu and Nyeri counties), **Senegal** (3 facilities), and **Uganda** (42 facilities). The baseline obtained through these standardized assessments will inform interventions in the subsequent quarters, underpin the development of quality improvement efforts, and enable monitoring of progress toward higher IPC capacity scores.

Developing and implementing IPC policy and guidance documents

The MTaPS team in **Ethiopia** helped draft guidelines on hand sanitizing product management and provided technical and financial support to the FMOH Clinical Services Directorate to finalize the National Infection Prevention and Control Guidelines. In **Tanzania**, MTaPS helped the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) launch the IPC guidelines, which were updated with MTaPS' assistance in Q3, and disseminated them through a training of 97 health care workers in Mwanza region—the first cadre to be trained on the new guidelines. Trainings were then rolled out to other Kagera and Dar es Salaam regions.

Developing individual and local training capacities

In **Ethiopia**, MTaPS conducted a training of trainers for 16 professionals (15 male; 1 female), capacitating them to support the implementation of guidelines on the management of hand sanitation products; an additional 30 trainers from all regions were trained on IPC capacity strengthening. MTaPS conducted an IPC training in **Kenya** for 32 clinicians, pharmacists, nurses, and lab technicians in Nyeri county. In **Tanzania**, MTaPS collaborated with the MOHCDGEC's Department of Quality Assurance and Department of Human Resource Development to bring together tutors from various training institutions to the Centre of Distance Education to develop an IPC curriculum, including modules, a facilitator guide, and a participants' manual, that aligns with Tanzania's national CPD framework.

USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Strengthening governance structures for AMS at the national and facility levels

In Côte d'Ivoire, MTaPS supported the establishment of a multidisciplinary group for drafting AMS policy and guidelines. In Uganda, MTaPS developed TOR for the AMS Secretariat at the MOH and initiated the development of indicators for monitoring the use of antimicrobials at the national level.

Developing and implementing AMS policy and guidance documents

In Kenya and Senegal, MTaPS supported the revision of national EMLs based on the WHO AWaRe categorization guideline of 2019 and initiated steps toward the development of national AMS guidelines in compliance with AWaRe categorization and subsequent integration into the AMS practices and standard treatment guidelines. The MTaPS team in Uganda identified consultants to work with the Ministry of Agriculture and Ministry of Animal Industry and Fisheries to revise the EML for animal health.

Developing AMS information and communication materials

MTaPS conducted the AMS practices assessment in Kisumu and Nyeri counties in Kenya in eight health facilities and one community pharmacy in each county, which will establish a baseline for monitoring progress in the improvement of AMS practices. In Tanzania, MTAps developed a communication strategy for AMR that addresses the use of multimedia approaches and behavior change communication activities. MTAps/Uganda initiated the development of a communication message on AMS for farmers.

Developing individual and local training capacities

MTaPS trained 26 pharmacists in Ethiopia on medicines information services to strengthen the knowledge of health professionals related to antimicrobial medicines; a two-day consultative workshop on AMS implementation was conducted for 53 professionals from 15 hospitals (38 male; 15 female); and a continuing medical education session titled “The Role of Pharmacists in Containing the Emergence and Spread of AMR” was delivered during the 39th annual conference of Ethiopian Pharmaceutical Association in Addis Ababa. In Senegal, MTAps held meetings with administrators of the MOH’s eLearning platform and human resources training division and other partners to plan for the integration of IPC and AMS modules into the platform.

| ACTIVITIES FOR NEXT QUARTER | | |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| ACTIVITY | DESCRIPTION | DATES |
| Finalize mini-guides on the implementation of key MTAps GHSA activities | <ul style="list-style-type: none"> • Develop AMS strategy/plan for human and animal health sectors • Strengthen DTCs to advance facility AMS practices • Strengthen IPC committees to advance facility IPC practices • Develop CQI approaches to improve IPC and AMS practices and reduce HCAs • Assess policies, structure, procedures, and regulations for antimicrobial use and stewardship to inform AMS improvement plans • Review/revise pre-service/in-service training/curricula, including the use of eLearning methodologies (IPC/AMS) | December 2019 |
| Revise the MTAps technical implementation framework | USAID COR team has reviewed the framework and provided comments and suggestions. MTAps will revise the framework documents based on the feedback. | November 2019 |
| Complete work on GHSA indicators | USAID has provided feedback on draft GHSA indicators. MTAps will update the list of indicators based on the feedback, complete development of performance indicators reference sheets, and map indicators to specific countries. | November 2019 |
| Bangladesh scoping visit to initiate GHSA/AMR work | Bangladesh is 11th MTAps GHSA country supported by year 2 funding | December 2019 |

MATERNAL, NEWBORN, AND CHILD HEALTH

The maternal, newborn, and child health (MNCH) portfolio contributes to achieving the Sustainable Development Goals and ending preventable child and maternal deaths by increasing global awareness of the barriers to access to essential maternal and child health medicines and supplies and by providing technical assistance to reduce these barriers at both the global and country levels. The goal of the MTaPS/MNCH portfolio is to ensure availability and appropriate use of quality medicines and supplies and effective pharmaceutical services to reduce maternal, newborn, and child mortality by strengthening pharmaceutical systems.

HIGHLIGHTS FROM PROGRAM YEAR I

Global Financing Facility activities

The package of draft documents on quality in procurement of pharmaceuticals was finalized and is currently under review by the World Bank (WB) pharmaceutical team prior to being shared with the WB procurement team. This package of documents, once finalized, will be disseminated to the WB task team leaders who approve WB procurements and used to better consider quality of medicines in WB procurements.

In Liberia, MTaPS supported the Ministry of Health and the WB performance-based financing (PBF) team to ensure availability of quality medicines in counties implementing PBF. A framework agreement has been established for county procurement of specific MNCH medicines and supplies from approved wholesalers when the Central Medical Stores are unable to supply. The procedures for local procurement and for monitoring and enforcement of the approach were finalized. The first procurement using this framework agreement will be conducted at the beginning of PY2.

A technical brief, mapping commodity management in the GFF investment cases to highlight the variety of interventions for managing medicines and supplies prioritized in most GFF countries, was produced and presented at the Reproductive Health Supplies Coalition General Meeting in Nepal in March 2019. This has been disseminated to the Inter-Agency Supply Chain group for consideration in the group's involvement in the investment case process in the new GFF countries.

MTaPS developed a standalone document on management of medicines and supplies as a resource for country focal points to accompany the GFF investment case guidelines, which are still being finalized by the GFF secretariat. This will support new countries beginning the GFF approach to consider and include pharmaceutical issues in their investment cases to ensure availability and effective use of safe and quality MNCH medicines and technologies. MTaPS prepared and shared documents on managing medicines and supplies and a country mapping of USAID support in pharmaceutical systems to the new GFF countries during their orientation workshop in September 2019. The aim was to stimulate thinking in country teams of the importance of a robust pharmaceutical system to support MNCH interventions and to consider it among the priorities of the investment case.

To finalize the secondment, a scope of work for a GFF staff person to continue in management of commodities with a focus on the specific niche offered by the GFF and a final report on the assistance provided during the secondment were developed.

Microlearning courses

Other key activities in the MNCH portfolio that started during program year I included a review of country registration practices and processes for MNCH medicines in up to 11 countries and the development of content for a series of microlearning videos on pharmaceutical systems strengthening for MNCH. This MNCH microlearning series will complement the online and face-to-face training program on pharmaceutical systems strengthening that MTaPS is developing.

Commodities sub-group of the Child Health Task Force

In support of management of medicines and supplies at the community level, during this fiscal year MTaPS supported the formation of a commodities sub-group of the Child Health Task Force, which is a mechanism to align efforts and optimize coordination around ensuring availability and quality of child health commodities. MTaPS' participation in the WHO/UNICEF technical consultation Institutionalizing Integrated Community Case Management to End Preventable Child Deaths in Ethiopia in July 2019 resulted in mainstreaming the discussion of the importance of robust pharmaceutical systems and the inclusion of interventions in the country action plans.

MTaPS country activities to prevent child and maternal deaths

Of the five MTaPS countries receiving mission funding, only four (Bangladesh, Mozambique, Nepal, and Rwanda) receive MNCH funding. While the activities in-country are to strengthen pharmaceutical systems and are not necessarily focused specifically on MNCH medicines and technologies, they will contribute to improving women's and children's health through regulatory systems strengthening, supporting antimicrobial stewardship, strengthening use of information for decision making, building human resource capacity for pharmaceutical management, and strengthening pharmacovigilance and financing.

Regulatory systems strengthening

In **Mozambique, Nepal, and Rwanda**, MTaPS is supporting the regulatory authority to improve the regulatory system and raise the maturity level on the WHO's Global Benchmarking Tool and thereby ensure quality of medicines and pharmaceutical services for women and children. These activities will help standardize the regulatory system and make it more efficient for ensuring the quality and safety of medicines, including those for women and children.

MTaPS/**Rwanda** is providing technical support in drafting and developing regulations and guidelines in line with the institutional development plan of the Rwanda Food and Drug Authority. MTaPS is also working to update the electronic pharmaceutical regulatory information management system. In **Nepal**, MTaPS, in collaboration with other international partners, has supported the DDA to update the self-assessment of its regulatory functions for medicines and vaccines and to develop a road map to support the DDA to prepare for the formal benchmarking. In **Mozambique**, MTaPS has reviewed the current pharmaceutical legislative framework of the National Directorate of Pharmacy (DNF) and will support the DNF legal team in drafting the internal regulations required for set up of the semi-autonomous national medicines regulatory authority. To streamline registration, MTaPS/Mozambique is working to enhance functions of the electronic medicines registration tool (Pharmadex) and its interoperability with other systems, and a demo version was provided to DNF registration team for their review and feedback.

Use of pharmaceutical information for MNCH decision making

In Bangladesh, management of MNCH medicines and technologies will be improved through the ongoing nationwide roll out of the updated eLMIS, which includes 25 priority MNCH commodities, and the ongoing training of district and sub-district staff in updated inventory management tools for quality logistics data to be available for decision making purposes.

MTaPS/Bangladesh has supported the convening of the Procurement and Logistics Management Cell, a central monitoring cell for the procurement activities and a forum for decision making for procurement of essential medicines, including MNCH medicines, in the Ministry of Health and Family Welfare.

Pharmacovigilance

In **Bangladesh**, MTAps is supporting the DGDA to strengthen the PV program, which will capture information on medicines for MNCH; target health care providers working in maternity, pediatrics, and neonatology; and expand the PV program through the preparation of a draft five-year pharmacovigilance plan.

Financing

Also in **Bangladesh**, MTAps assessed the status of implementation of the pharmaceutical-related component of the Bangladesh Health Care Financing Strategy (2012–2032) to explore gaps and the support needed—for example, in the rational allocation of the budget to health facilities, including for MNCH medicines. This work builds on the analysis of financial flows for MNCH medicines and supplies conducted under the MTAps predecessor program, Systems for Improved Access to Pharmaceuticals and Services (SIAPS).

QUARTER PROGRESS FOR FY19Q4

OBJECTIVE 2: INSTITUTIONAL AND HUMAN RESOURCE CAPACITY FOR PHARMACEUTICAL MANAGEMENT AND SERVICES, INCLUDING REGULATION OF MNCH PRODUCTS, STRENGTHENED

MTaPS continues to support countries to ensure quality of MNCH medicines by strengthening the registration of MNCH medicines and improving procurement practices at sub-national levels.

The scope of work for the activity to support registration of MNCH medicines and technologies was finalized, and draft instruments were developed. This activity will proceed in PY2 to obtain Mission concurrence in the target countries.

For a review of best practices to ensure quality of medicines in local procurement from Tanzania and Nigeria, the scope of work was finalized, the draft instruments developed, and the scope of work for consultants drafted. This activity will move forward in PY2, once Mission concurrence is obtained.

OBJECTIVE 3: AVAILABILITY AND USE OF PHARMACEUTICAL INFORMATION OF MNCH MEDICINES FOR DECISION MAKING INCREASED AND GLOBAL LEARNING AGENDA ADVANCED

MTaPS activities under this objective fall into two groups, with one supporting the GFF to consider different aspects of management of pharmaceuticals at the secretariat level and in their country activities, which has been completed, and the other supporting global learning on pharmaceutical systems for MNCH.

During Q4, MTAps began developing the content for a series of microlearning videos on pharmaceutical systems strengthening for MNCH, which will complement the online and face-to-face training program on pharmaceutical systems strengthening that MTAps is developing. A consultant was recruited to develop the videos.

OBJECTIVE 5: PHARMACEUTICAL SERVICES FOR WOMEN AND CHILDREN, INCLUDING PRODUCT AVAILABILITY AND PATIENT-CENTERED CARE, IMPROVED

MTaPS started the revision of the RMNCH quantification guide developed under the UN Commission on Life-Saving Commodities this quarter, incorporating comments from other implementing partners, and will continue this work into the first part of PY2.

During this quarter, MTAps attended the Institutionalizing Integrated Community Case Management (iCCM) meeting hosted by WHO and UNICEF in Ethiopia in July 2019, moderated a panel session, and facilitated group work. This contributed to raising the awareness and importance of the management of medicines and supplies and of a strong pharmaceutical system to ensure availability and safe, effective use of quality medicines and technologies at the community level. As a result, several countries included this as a priority in their country plans.

MTaPS plans to finalize and disseminate amoxicillin dispersible tablets (DT) job aids to promote adherence to treatment of pneumonia, engaging the UNICEF supply division. This quarter, the scope of work was developed, and the activity will move forward in PY2.

The activity on oxygen and the respiratory ecosystem started with some preliminary brainstorming discussions, and the scope of work was developed. The activity will move forward in PY2.

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------|
| 2.1.1 Review of registration of MNCH commodities | Finalize the data collection instrument | Oct. 2019 |
| | Collect and analyze data from the countries | Nov.–Dec. 2019 |
| | Draft technical brief and develop action plans in each country | Dec. 2019–Jan. 2020 |
| 2.1.2 Document quality assurance in local procurement | Draft standard topic guide | Oct. 2019 |
| | Collect information on local procurement | Nov.–Dec. 2019 |
| | Draft best practices | Dec. 2019–Jan. 2020 |
| 3.2.1 Finalize GFF transition | Final report of activities | Oct. 2019 |
| 3.2.2 Global learning on pharmaceutical systems for MNCH | Develop content for the microlearning modules on MNCH for the PSS training program | Oct.–Nov. 2019 |
| | Develop videos | Nov. 2019 |
| | Launch microlearning sessions on e-learning platform | Dec. 2019 |
| 5.1.1 Revise RMNCH quantification guide | Develop new sections for tranexamic acid | Nov. 2019 |
| | Revise and finalize guide with comments from collaborators | Nov.–Dec. 2019 |
| 5.2.1 Improve adherence to amoxicillin DT for pneumonia | Finalize job aids and dispensing envelopes | Nov. 2019 |
| | Discuss possibility of dissemination with UNICEF | Nov. 2019 |
| | Assess interest of adaptation for use on newborns | Dec. 2019 |
| 5.2.2 Define respiratory package | Mapping of global landscape of implementation and support on respiratory package | Nov. 2019 |
| | Define standard package of equipment and medical devices required for the treatment of a hypoxic child or newborn with pneumonia | Dec. 2019–Jan. 2020 |
| | Review assessments to identify bottlenecks in safe use of oxygen | Dec. 2019 |

OFFICE OF HEALTH SYSTEMS, CROSS BUREAU FUNDING

HIGHLIGHTS FROM PROGRAM YEAR I

PSSI01 course

Year I saw the development of the e-learning and face-to-face PSS I01 course. The face-to-face course will be ready for delivery to USAID field-based staff at a two-day workshop scheduled for November 2019, while the e-learning course is still being finalized. The two course formats were developed within a very tight timeframe, unlike normal curriculum development processes. However, the program worked assiduously, coordinating closely with internal subject matter experts and MTaPS partner, ePath, to develop the required content and ensure high quality. This course, a key deliverable for the Cross Bureau portfolio, will increase USAID staff's understanding of the basic principles of pharmaceutical systems strengthening (PSS), including how addressing pharmaceutical management problems can contribute to improving current concerns such as universal health coverage (UHC), antimicrobial resistance, HIV and AIDS, malaria, tuberculosis, and maternal and child health. It is anticipated that the PSS I01 course will help increase investment in MTaPS and advance the global learning agenda.

Research and global learning agenda

MTaPS has also laid the groundwork in year I for advancing PSS research and the global learning agenda. The program has refocused the strategic direction for PSS Insight with an emphasis on aligning it with the World Health Organization's (WHO) recent work on measuring access and reducing the number of indicators to lessen the implementation and reporting burden for countries, which are the primary end users. These changes are intended to complement WHO's measurement and analytical efforts and leverage their convening authority to promote the sustainable uptake of PSS Insight. MTaPS has also worked with Boston University School of Public Health (BUSPH) and the Joint Learning Networking (JLN) team to develop a concept for a learning exchange, which will be launched in PY2. Through this learning exchange, the program will engage with policy makers and health managers from JLN-participating countries regarding their experiences in strengthening pharmaceutical systems in support of UHC goals. Finally, the program drafted its multiyear research plan, which will be used to inform the adoption and implementation of the program's research agenda in support of advancing the global PSS learning agenda.

Validation of the M&E tool for the African Medicines Regulatory Harmonization's (AMRH) Regional Centers of Regulatory Excellence (RCOREs)

During year I, MTaPS facilitated the development of institutional capacity for pharmaceutical regulatory systems through the validation of the monitoring and evaluation tool for Regional Centers of Regulatory Excellence (RCOREs) under the African Medicines Regulatory Harmonization (AMRH) Initiative. MTaPS collaborated with the African Union Development Agency NEPAD (AUDA-NEPAD) to organize a workshop for participants drawn from 11 selected RCOREs to validate the tool. Ongoing data collection with the tool will create a baseline for RCOREs performance, which can be used to inform strengthening interventions.

Health governance and anticorruption initiatives

MTaPS is positioned to engage with and support global initiatives working on health governance and anticorruption. Such initiatives include the WHO/Global Fund/UNDP Anticorruption, Transparency, and Accountability in Health Sector (ACTA) and WHO Collaborating Center for Governance, Transparency, and Accountability in the Pharmaceutical Sector. MTaPS participated in the ACTA consultation on forming a global network to coordinate work in anticorruption, transparency, and accountability and facilitated sessions at the Combating Corruption and Promoting Equity in the Health

Sector workshop organized by the WHO Collaborating Center for Governance, Transparency, and Accountability in the Pharmaceutical Sector and the University of California, San Diego School of Medicine. Continued discussions with global stakeholders working on health governance and anticorruption programs have resulted in them being more aware of MTaPS' and its predecessor programs' framework, approaches, and activities focused on strengthening governance in pharmaceutical systems. Year 1 activities will help MTaPS and USAID continue to participate in defining priorities with global initiatives, share lessons learned, and be aware of and incorporate effective new interventions to advance the program sub-objective of improving transparency and accountability in pharmaceutical systems.

QUARTER PROGRESS FOR FY19Q4

ACTIVITY 1: REFINE/VALIDATE PSS INSIGHT IN MTAPS-SUPPORTED COUNTRIES

MTaPS reevaluated the strategic direction of its work on PSS Insight. This reevaluation led to the postponement of pilots for the tool in the Philippines and Bangladesh. Since MTaPS' participation in consultations with WHO to select indicators as part of a dashboard to measure access to medicines earlier in the year, it has become apparent that the number of indicators and associated assessment questions in PSS Insight will likely pose too big a data collection burden for countries. The program thinks it is important to complement work on WHO's access dashboard by incorporating the access indicators as much as possible into PSS Insight to ensure consistency between the two tools. The program also determined that the primary end users of PSS Insight, beyond the MTaPS program, are national ministries and departments of health, rather than USAID global programs. MTaPS has therefore decided that a critical next step is to reconfigure the tool, reducing the number of indicators to lessen the data collection burden and associated costs and to better align with the needs of users and decision makers at the central government level. During this quarter, MTaPS therefore developed a protocol for the indicator reduction process and initiated engagement with BUSPH to execute the protocol. Once the indicator set is reduced, the program can proceed with piloting and finalizing the tool.

ACTIVITY 2: ENHANCE THE GLOBAL PHARMACEUTICAL SYSTEMS LEARNING AGENDA

The program continued to make tremendous progress on the PSS 101 course. MTaPS has worked with partner ePath to develop alpha versions for the completed storyboards of four modules for the e-learning course. During this quarter, MTaPS also developed the face-to-face course for USAID staff and is on track to finalize it for delivery in November 2019.

MTaPS has finalized the concept note for the learning exchange on medicines in UHC on JLN. The learning exchange aims to bring together JLN country participants to share and compare country experiences in strengthening national pharmaceutical systems and the facilitating role PSS plays in achieving UHC goals. MTaPS has proposed that participants in the learning exchange discuss experiences related to identifying and implementing effective pricing strategies for medicines and diagnostics or addressing transparency and accountability issues in national pharmaceutical systems. The program worked with its partner BUSPH and the JLN team to create a preliminary plan for the launch of the learning exchange at the JLN global meeting scheduled for December 2019, where MTaPS will engage with country participants and other funders to generate interest in the proposed topics.

MTaPS completed recruitment of members for the PSS technical advisory group (PSS TAG). The PSS TAG now has 11 members representing academia, national ministries of health, international nongovernmental organizations, and multilateral agencies. MTaPS also finalized plans for the inaugural meeting in Arlington, Virginia. This meeting, a key deliverable for this activity under Cross Bureau, will focus on finalizing the operation and governance of the group and facilitate technical discussions for the development of the PSS global learning agenda.

MTaPS has developed a multiyear research plan to document and analyze the processes and results of PSS interventions in low- and middle-income countries (LMICs) and understand the factors that facilitate or inhibit success. As part of this plan, the program will be adopting a formal implementation research agenda and using it to implement several research studies throughout the program's life cycle. Additionally, the program established an internal PSS research group during the fourth quarter. The formal name of the group is yet to be determined, but it comprises a core group of technical staff who will help identify potential implementation research and other documentation opportunities across the different portfolios and engender a collaborative atmosphere for knowledge collection, analysis, and dissemination. The group will also serve as technical reviewers of the program's research agenda and its implementation. The group has already initiated discussions on strategies for producing research within the program's budget constraints and will work on refining and implementing these strategies in support of the research agenda.

ACTIVITY 3: IN COLLABORATION WITH CORE PARTNER NEPAD, SUPPORT THE AMRH INITIATIVE TO INCREASE INSTITUTIONAL AND HUMAN RESOURCE CAPACITY FOR PHARMACEUTICAL REGULATORY SYSTEMS IN AFRICA

MTaPS continued to implement the monitoring and evaluation tool for RCOREs by engaging a consultant to use the tool to collect and analyze data on the performance of RCOREs. The output of this exercise will inform RCOREs of their current status and form the baseline for routine monitoring and evaluation of their performance.

From September 30 to October 4, 2019, MTAps participated in the Fourth Biennial Scientific Conference on Medicines Regulation in Africa (SCoMRA) and the African Medicines Regulators Conference in Victoria Falls, Zimbabwe. The theme of SCoMRA was *A decade of regulatory harmonization in Africa: Where are we? Where do we want to go from here?*, and MTAps gave a poster presentation on the work done to validate the monitoring and evaluation tool for measuring the performance of RCOREs. The program participated in discussions for the AMRH Technical Working Group (TWG) on Policy and Regulatory Reforms. The Regulatory Capacity Building TWG, which MTAps was supporting, has been diffused into the Pharmaceutical Policy and Regulatory Reform TWG. As an observer, MTAps also engaged in discussions at the African Medical Products Regulatory Conference, where participants agreed on actions to improve the regulation of medical products. MTAps' participation in these conferences allowed the program to interact directly with regulatory authorities in the African region and get an update on the regulatory landscape and some of the challenges countries are facing as they work to strengthen regulatory systems and improve access to quality-assured medicines.

ACTIVITY 4: COLLABORATE WITH AND PARTICIPATE IN MEETINGS WITH WHO AND OTHER GLOBAL INITIATIVES TO ENHANCE TRANSPARENCY AND ACCOUNTABILITY IN THE PHARMACEUTICAL SECTOR

In July 2019, MTAps presented at a workshop entitled Combating Corruption and Promoting Equity in the Health Sector in San Diego, California, which was co-organized by the WHO Collaborating Center for Governance, Transparency, and Accountability in the Pharmaceutical Sector at the University of Toronto, Leslie Dan Faculty of Pharmacy, and the University of California, San Diego School of Medicine. In addition, MTAps' lead for governance and partner Boston University's technical advisor participated in a follow-on half-day consultation with experts working to strengthening governance and tackle corruption in health and pharmaceutical systems.

MTaPS facilitated two of the workshop sessions, one of which focused on MTAps' and its predecessor programs' work, including the framework and approaches for assisting countries to strengthen pharmaceutical-sector governance to promote evidence-based decision making, enhance accountability, improve efficiency, and reduce opportunities for corruption. MTAps-moderated small-group discussions

enabled participants to analyze the change model that underpinned USAID-funded work to improve governance for the contraceptive and reproductive health supply in Bangladesh through interventions that included the application of technology, changes to strengthen institutions, and capacity building for oversight. On the second day, MTaPS participated in discussions on approaches and strategies for accelerating action on anticorruption, transparency, and accountability in the health sector, which included topics of interest to the program such as mechanisms for sharing good country examples for advancing accountability, transparency, and anticorruption efforts; creating space for interdisciplinary collaboration that advances research goals and the health corruption agenda; and keeping attention on good governance and anticorruption in the pharmaceutical sector at the global level.

In addition to enabling the program to raise awareness of USAID-funded work to improve pharmaceutical-sector governance and share lessons learned, the workshop enabled MTaPS to connect with initiatives, countries, and partners, including the Director of the WHO Collaborating Center, to discuss opportunities for joint collaboration and coordination going forward, including to support USAID Asia Bureau-funded governance activities.

ACTIVITY 5: DEVELOP A ROADMAP FOR HEALTH TECHNOLOGIES ASSESSMENT INSTITUTIONALIZATION FOR LMICS

The program completed the data extraction for the systematic literature review and has started writing the roadmap, with the draft of two chapters in progress. Delays in the original timeline for the activity resulting from the number of articles reviewed mean even greater time constraints for the regional workshop to review and gather feedback on piloting of the roadmap. The program will try to mitigate for this constraint by doing the workshop planning in advance and engaging stakeholders to review the draft roadmap in progress.

ACTIVITY 6: EXAMINE OPPORTUNITIES FOR AND BARRIERS TO THE USE OF DRUG SELLERS IN INCREASING ACCESS TO MEDICINES AND OTHER HEALTH TECHNOLOGIES IN LMICS IN SUPPORT OF UHC OBJECTIVES

MTaPS conducted a literature review and drafted a background document for internal review.

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| 1 | Conduct a workshop to finalize indicator selection and scoring methodology | October-December 2019 |
| 1 | Complete peer review of the reduced set of indicators | October-December 2019 |
| 2.1 | Launch the Medicines in UHC Learning Exchange at the JLN Global Meeting | December 4–5, 2019 |
| 2.2 | Convene the inaugural meeting of the PSS TAG | October 24–25, 2019 |
| 2.3 | Conduct the USAID staff face-to-face PSS 101 training course | November 4–5, 2019 |
| 2.3 | Complete the storyboards and alpha versions for the remaining PSS 101 e-learning course modules | October-December 2019 |
| 2.4 | Formalize the adoption of the program's research agenda | October-December 2019 |
| 2.4 | Initiate one implementation research study | October-December 2019 |
| 3 | Draft and disseminate a technical report on RCOREs' M&E status | October-December 2019 |
| 3 | Participate in collaborative meetings of NEPAD, the AMRH steering committee, and technical working groups | October-December 2019 |
| 4 | Discuss with the MTaPS COR team opportunities for MTaPS to collaborate with the WHO Collaborating Center, Transparency International UK (TI-UK)'s Pharmaceuticals & Healthcare Programme, and others and strategize for continued engagement and support to WHO-supported and other global initiatives going forward | October-December 2019 |
| 4 | Continue discussions with the WHO Collaborating Center, WHO SEARO, and WPRO on opportunities to support WHO's governance activities and joint collaboration on Asia Bureau activities and with TI-UK and the SOAS ACE research consortium on opportunities for coordination and collaboration | October-December 2019 |
| 5 | Complete a draft of the roadmap and policy brief | October-December 2019 |
| 5 | Finalize dates and plans for the regional workshop in PY2Q2 | November 2019 |

PROGRESS TOWARD OBJECTIVES

OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

Promoting transparency and accountability is a prerequisite for improving access to essential medicines and strengthening health systems to achieve UHC.² Poor governance in pharmaceutical systems can reduce access to pharmaceutical products, inflate medicine prices, and waste scarce health system resources.³ Governance plays a critical role in minimizing opportunities for corruption and mitigating other system inefficiencies. It also shapes the ability of the health system to respond to challenges. This section highlights selected areas of work and key achievements in the first year of the program and reports on MTaPS governance activities in this reporting period.

HIGHLIGHTS FROM PROGRAM YEAR I

Revitalizing and reconfiguring Bangladesh's supply chain oversight and coordination structures to enhance transparency, accountability, and efficiency

In the first year of the program, MTaPS supported the Ministry of Health and Family Welfare (MOHFW) in **Bangladesh** to reactivate the Procurement and Logistics Management Cell (PLMC), a central oversight and decision-making cell for MOHFW procurement. Established under MTaPS' predecessor program, the PLMC stopped meeting after a restructuring of the MOHFW led to responsibilities for procurement oversight being divided between two divisions. MTaPS' advocacy and support culminated in a high-level decision to reconstitute the cell with members of both divisions, and new terms of reference (TOR) were developed. The reconstituted PLMC held its first meeting in August 2019, and MTaPS will continue to help build the capacity of members to fulfil their oversight role and promote transparency, accountability, and efficiency in procurements.

Reviewing the enabling regulatory framework for national medicines regulatory authorities in Mozambique and Rwanda

As a first step toward ensuring that an adequate regulatory framework is in place that provides for the establishment and/or effective operation of a national regulatory authority, MTaPS helped **Mozambique** and **Rwanda** map and review selected existing regulations and guidance and identify regulatory provisions that are weak, outdated, or missing.

Fortifying national governance structures to advance antimicrobial stewardship (AMS) and infection protection and control (IPC)

MTaPS has supported seven countries (**Cameroon, Côte d'Ivoire, Democratic Republic of Congo [DRC], Ethiopia, Kenya, Tanzania, and Uganda**) to develop or update the TOR of national and institutional committees and working groups that play crucial roles in leadership, coordination, management, and technical implementation of AMS and IPC activities. For more detail on MTaPS' AMR activities and the Global Health Security Agenda (GHSA), refer to the [GHSA](#) and [objective 5/AMR](#) sections of this report.

2 Wirtz VJ, Hogerzeil HV, Gray AL et al. 2017. Essential medicines for universal health coverage. *The Lancet* 389(10067), 403-476.

3 WHO. 2013. Good Governance in the Pharmaceutical Sector. Geneva: World Health Organization. http://www.who.int/medicines/areas/governance/EMP_brochure.pdf?ua=1

Engaging with global stakeholders and initiatives working on improving health and pharmaceutical systems governance

In the first year of the program, MTaPS was invited to participate in the consultation convened by WHO, the Global Fund, and the United Nations Development Programme to discuss the formation of a global network to coordinate work in anticorruption, transparency, and accountability. MTaPS also presented at a workshop co-organized by the WHO Collaborating Center for Governance, Transparency, and Accountability in the Pharmaceutical Sector in Toronto on combating corruption and promoting equity in the health sector. These events enabled MTaPS to connect with and learn about global initiatives and stakeholders working in this area to explore opportunities for supporting global programs and joint collaboration and coordination with partners working in this area. For additional information on this activity, refer to [activity 4 in the Cross Bureau section](#) of this report.

QUARTER PROGRESS FOR FY19Q4

TRANSPARENCY AND ACCOUNTABILITY OF COUNTRY PHARMACEUTICAL SYSTEMS IMPROVED

MTaPS has been assisting **Bangladesh's** MOHFW to reactivate the PLMC, which is an important central mechanism for oversight and data-driven decision making for MOHFW procurements of medicines and commodities. The TOR were revised, and the cell held its first meeting in August 2019, which is an important step toward advancing efficiency and accountability in MOHFW procurements. Two mechanisms that are crucial for coordination of supply chain activities at the directorate level— the Logistics Coordination Forum (LCF) at the Directorate General of Family Planning (DGFP) and the Supply Chain Coordination Forum (SCCF) at the Directorate General of Health Services (DGHS) — convened meetings after a long interlude. MTaPS support to the directorates to help reactivate these committees, included updating the TOR and membership lists, to better position them to realize the objectives set out in the TOR for supply chain planning, coordinating, and decision making.

In the **Philippines**, as part of efforts to institutionalize systematic multiyear quantification to reduce ad hoc procurements and mitigate risks for TB and family planning commodity stock-outs, MTaPS helped the Department of Health develop TOR for a quantification TWG and briefed potential members on the roles and responsibilities of the new structure as a first step toward building their capacity.

As part of Global Health Security Agenda-funded efforts to support countries to improve their Joint External Evaluation scores for AMR, during this quarter MTaPS assisted several countries to develop or update the TOR of entities that play crucial roles in leadership, coordination, management, and technical implementation of AMS and infection control activities. As a result of MTaPS' technical assistance:

- **Cameroon's** AMR Technical Secretariat established two TWGs that are responsible for implementation of AMS and IPC activities, defined member profiles, and drafted TOR for review by other One Health stakeholders.
- **DRC's** two AMR-TWG subcommittees (IPC and AMS) were formed and produced terms of reference.
- The role of **Ethiopia's** National Advisory Committee for Antimicrobial Resistance and Containment changed from an advisory to a multisectoral coordination committee in support of the One Health approach, its structure was revised, and its TOR were updated and aligned with WHO model guidance for such committees.
- **Kenya's** AMR Secretariat and key stakeholders reviewed the TOR and developed action plans for the National Antimicrobial Stewardship Inter-Agency Committee's four TWGs on awareness and advocacy, surveillance, IPC, and AMS.
- National and sub-national stakeholders and development partners in **Uganda** provided input on the draft TOR for the national IPC technical working committee and agreed on an approach for

appointing members. The hospital and lower-level TWG reviewed and approved the TOR, and the next step is to present it to the Ministry of Health for review and endorsement.

- In **Côte d'Ivoire**, four health facilities have established IPC committees with clear TOR.

EVIDENCE-BASED MEDICINES POLICIES, LAWS, REGULATIONS, GUIDELINES, NORMS, AND STANDARDS IMPROVED AND ENFORCED

Mozambique promulgated a new Law on Medicines, Vaccines and Other Biological Products for Human Use in 2017 that provides for the creation of a national medicines regulatory authority. In this reporting period, MTaPS worked with the National Directorate of Pharmacy to review and validate the findings of the report produced by MTaPS partner International Law Institute-Africa Centre for Legal Excellence (ILI-ACLE), which maps and reviews existing regulations and outlines recommendations for the development of regulations for the newly enacted law. The report will provide the basis for assisting the National Directorate of Pharmacy's legal team to draft the regulations needed to set up the semi-autonomous national medicines regulatory authority.

At the invitation of the **Rwanda** Food and Drugs Authority, MTaPS provided technical input during an internal exercise that involved staff from the product registration, inspection, and pharmacovigilance departments to review and validate regulations and guidelines that provide for registration of biosimilar and generic products and set service fees for the Rwanda Food and Drugs Authority.

MTaPS has been supporting the Department of Health in the **Philippines** to develop the procurement and supply management component of the implementing rules and regulations (IRRs) for the recently enacted Universal Health Care (UHC) Act, which automatically enrolls all Filipino citizens in the National Health Insurance Program and prescribes complementary reforms in the health system. In this reporting period, MTaPS conducted a final review of the procurement and supply management components of the UHC IRRs.

MTaPS country teams worked with partners and counterparts to draft/revise a number of policies, guidelines, norms, and standard operating procedures (SOPs) that support implementation of AMS and IPC activities.

- Stakeholders at an MTaPS-facilitated multisectoral workshop in **Côte d'Ivoire** developed a national AMR policy that identifies the roles and responsibilities of various government entities tasked with improving prevention, detection, and surveillance of AMR and a governance manual for AMR containment to guide AMR decision making and health security actions, among other objectives.
- MTaPS helped the Federal Ministry of Health in **Ethiopia** complete the update of the 2004 national IPC guidelines, which are now awaiting approval. The program also helped to develop an SOP on the preparation, storage, and use of alcohol-based hand rubs at the health facility level.
- In **Tanzania**, MTaPS helped the Ministry of Health bring together stakeholders to provide expert opinion and finalize the AMS policy guideline, which had been pending since 2017. The guideline is expected to be approved in the next quarter.

STAKEHOLDER ENGAGEMENT AND EMPOWERMENT, INCLUDING CIVIL SOCIETY AND CONSUMERS, INCREASED

As a first step toward better equipping members of the **Ethiopian** Pharmaceutical Association (EPA) with the knowledge and skills that they need to raise public awareness on AMR, MTaPS gave a continuing medical education session during the recent EPA annual conference. The session highlighted the contribution that pharmacists can make toward educating the public about using antibiotics appropriately, promoting hygienic practices, ensuring that leftover medicines are safely disposed of, and collaborating with other health alliances in implementing stewardship program, among other activities.

OBJECTIVE 2: INSTITUTIONAL AND HUMAN RESOURCE CAPACITY FOR PHARMACEUTICAL MANAGEMENT AND SERVICES INCREASED, INCLUDING REGULATION OF MEDICAL PRODUCTS

HIGHLIGHTS FROM PROGRAM YEAR I

During the first year of implementation, MTaPS worked with four countries to develop curricula. In **Kenya** and **Tanzania**, MTaPS is helping to incorporate AMR components in preservice curricula; IPC training curricula are being developed as part of a continuing professional development (CPD) in Kenya and Tanzania and as part of in-service training in **Senegal**. In **Bangladesh**, MTaPS contributed to the training curriculum on basic logistics management.

Institutional capacity building in regulatory systems is essential for sustainable access to and appropriate use of safe, effective, quality-assured, and affordable essential medicines and pharmaceutical services that contribute to better health care delivery systems. To strengthen the regulatory framework for AMS this fiscal year, MTaPS developed a tool to assess AMS policies and regulations and map stakeholders in **Côte d'Ivoire, Cameroon, Burkina Faso, DRC, and Mali**.

In an effort to support regional harmonization for medicine regulation, MTaPS supported the New Partnership for Africa's Development (NEPAD) in conducting a validation workshop for members of designated regional centers of regulatory excellence (RCOREs). The validated RCOREs M&E tool will assist in measuring the performance of training institutions that are in the process of building pharmaceutical regulatory capacity on the continent.

In **Mozambique**, MTaPS assessed the pharmaceutical legislative framework and the current electronic medicine registration system, Pharmadex, to identify gaps requiring MTaPS assistance. MTaPS is now assisting the National Directorate of Pharmacy (DNF) in modifying Pharmadex to make the registration process more effective and interoperable with of health information systems.

QUARTER PROGRESS FOR FY19Q4

INSTITUTIONALIZATION OF PROVEN, INNOVATIVE APPROACHES TO BUILDING HUMAN RESOURCE CAPACITY

MTaPS helped several GHSA countries with planning and implementing a number of innovative capacity-building and training activities ranging from curriculum design/reform and e-learning course development to in-service training of trainer (TOT) workshops. These activities aim to strengthen the capacity of the workforce in **Ethiopia, Senegal, Tanzania, and Kenya** and equip them with knowledge and skills required to prevent health care-associated infections and institutionalize IPC practices.

MTaPS helped **Ethiopia** and **Kenya** with the design and implementation of the training and TOT workshops. In Ethiopia, MTaPS worked with the Federal Ministry of Health's Clinical Services Directorate to implement IPC TOTs. The purpose of the workshop was to enable participants to plan and carry out facility-level trainings to introduce the revised IPC guidelines using the new IPC training resource package, which also covers AMS topics. Similarly, MTaPS helped the Kenya National AMR Secretariat organize and conduct TOT workshops on IPC for Nyeri and Kisumu Counties, sub-counties, and facilities for 68 health workers across laboratory, pharmacy, nursing, and clinical departments.

As part of pre-service capacity building initiatives, MTaPS/**Kenya** collaborated with University of Nairobi, School of Pharmacy (UON/SOP) to introduce AMS and One Health principles into postgraduate and undergraduate pharmacy courses. MTaPS developed a training-needs assessment

questionnaire, which is currently being piloted. Results from this needs assessment will inform the design of the actual AMS curriculum next quarter. MTaPS supported **Tanzania's** MOH's Health Quality Assurance Unit and Directorate of Human Resource Development, in collaboration with nursing institutions, to revise the nursing education curriculum to include new IPC practices and align it with WHO's 2018 recommendations and the Global Antibiotic Resistance Partnership assessment.

This quarter, MTaPS/**Kenya** has taken initial steps toward designing and implementing the IPC CPD e-learning platform. Similarly, in **Senegal**, MTaPS helped organize a three-day e-learning curriculum development workshop to customize/redesign the IPC modules before adapting them to the e-learning platform. Next quarter, the MOH's In-Service Training Department and Informatics Unit will follow up with stakeholders for a second seminar to customize/design and adapt the remaining IPC modules to the e-learning platform.

STRONGER MEDICINES REGULATORY CAPACITY, INCLUDING THROUGH REGIONAL REGULATORY HARMONIZATION

This quarter, MTaPS identified potential stakeholders, networks, and initiatives that the program could collaborate with to strengthen regional regulatory harmonization in the **Asia Bureau**. In **Bangladesh**, MTaPS conducted a refresher training on dossier evaluation using the common technical document (CTD) format; strengthened collaboration with the Bangladesh Association of Pharmaceutical Industries to build the capacity of its members to use Pharmadex and the CTD for dossier submission; and drafted a five-year pharmacovigilance (PV) plan and an implementation plan for active drug safety monitoring and management. MTaPS/**Nepal** supported the Department of Drug Administration in updating the self-assessment of its regulatory functions in preparation for the formal benchmarking.

MTaPS/**Mozambique** continued efforts to develop institutional capacity through on-the-job training, knowledge sharing, and innovative learning methods. MTaPS helped to convene a regional Southern African Development Community (SADC) meeting for dossier assessment and participation of National Directorate of Pharmacy (DNF) in the ZAZIBONA (regional collaboration in medicines evaluation and registration) dossier assessment sessions. This provided an opportunity for DNF assessors to obtain updated information and expedited processes for product registration.

In collaboration with NEPAD, MTaPS supported the validation of RCOREs M&E tool that will be used to measure performance, thus monitoring the capacity of these institutions. Generation of baseline information and data is in progress. MTaPS worked with NEPAD by participating in several meetings to promote harmonizing medicine regulation in Africa and the transition from African Medicines Regulatory Harmonization to the African Medicines Agency.

In **Rwanda**, MTaPS mediated and helped revive the collaboration between the Rwanda Food and Drugs Authority (FDA) and the supplier Trademark East Africa (TMEA), the developer of the Pharmaceutical Regulatory Information System (PRIMS), a result of which is that TMEA deployed an IT expert to spearhead operationalization of the dormant PRIMS modules to make it fully functional. MTaPS also worked with the Rwanda FDA to develop standard operating procedures for the operational (import and export) module of PRIMS.

Digitization of processes helps improve efficiency and promote transparency. Building on the systems existing in countries, MTaPS supported the use of Pharmadex, the electronic medicine registration tool, through direct troubleshooting, training, and modification to improve the registration process. In **Mozambique**, technical assistance was offered to modify their version of Pharmadex currently in use to handle variations and to negate the need to use Excel sheets outside the system. MTaPS worked with DNF to ensure that the procedures for medicine registration are compliant with national regulations and international best practices. Furthermore, the team supported DNF's PV unit to finalize and submit

to the national ethics committee the protocol for active safety monitoring of patients using the new HIV TLD regimen.

Finally, as part of efforts to foster north-to-south learning and collaboration, build institutional capacity, and ensure self-reliance in PV in the **Philippines**, MTaPS commenced the process of identifying local tertiary institutions that will collaborate with its capacity resource partner, the University of Washington, to capacitate individuals on PV and increase the pool of in-country PV experts.

OBJECTIVE 3: AVAILABILITY AND USE OF PHARMACEUTICAL INFORMATION FOR DECISION MAKING INCREASED AND GLOBAL LEARNING AGENDA ADVANCED

HIGHLIGHTS FROM PROGRAM YEAR I

MTaPS aims to change to improve poor data availability, accessibility, and use by strengthening local capacity for data governance, analytics, interoperability, and integration. This will help streamline data collection, collation, and analysis; improve data availability and accessibility; and help countries reap the benefits of evidence-based decision making.

Working toward interoperability, MTaPS has successfully interfaced pharmaceutical information tools; in **Bangladesh**, MTaPS is supported interoperability of DHIS 2 with other health system tools, and in **Mozambique**, MTaPS is ensuring interoperability of the national electronic medicine registration systems, Pharmadex, with other platforms. MTaPS/**Philippines** is working to guarantee that the country's new electronic logistic management system (eLMIS) is fully interoperable with other systems.

MTaPS has also made strides in its global learning agenda through the finalization of the concept note on medicines in universal health coverage for the Joint Learning Network (JLN), the recruitment and establishment of a technical advisory group of pharmaceutical systems strengthening, and the creation of an internal MTaPS research group.

QUARTER PROGRESS FOR FY19Q4

INTEROPERABILITY OF PHARMACEUTICAL MANAGEMENT INFORMATION SYSTEMS THAT LINK PATIENTS AND PRODUCTS

MTaPS supported the **Philippines** Department of Health (DOH) to develop specifications and a pathway to procuring a stand-alone inventory management system that is a fully integrated, end-to-end eLMIS that is interoperable with other information management systems. This is part of a long-term strategy to improve information systems at the DOH that will enhance interoperability; this lesson serves as an opportunity for other LMICs to allocate resources to sustain and improve information systems that include GSI barcode systems. In **Bangladesh**, MTaPS supported the Health Information System Program to strengthen interlinkage and interoperability between DHIS 2 and the Supply Chain Management Portal (SCMP) and DHIS 2 and e-TB Manager. MTaPS also supported updating the DGFP's eLMIS with unique data fields to enable interoperability with MEASURE Evaluation's electronic management information system. MTaPS continues to identify opportunities for interoperability to ensure that commodity and patient data are linked to enhance evidence in decision making in all countries the project supports.

INCREASED AND BETTER USE OF INFORMATION ON PHARMACEUTICAL SYSTEMS FOR DECISION MAKING

MTaPS continues to support national regulatory authorities in implementing electronic tools. This quarter, support included establishing the data and information platform for national-level activities to monitor use of antimicrobials; developing standard operating procedures; and enhancing functionality of both Pharmaceutical Regulatory Information System (PRIMS) in **Rwanda** and Pharmadex in **Mozambique**, including the addition of the pharmacovigilance module.

In **Nepal**, **Mozambique**, and **Rwanda**, MTaPS is developing local capacity internally in the regulatory agency to support implementation of the regulatory information system. It has been recognized that the

agency or MOH IT teams will require a lot of support to get them to a level where the regulatory authorities are conversant and comfortable using the tools and thus generating reliable data for evidence-based decision making.

MTaPS continues to support the **Philippines's** DOH in analyzing and using data generated through existing systems, including the Pharmaceutical Management Information System (PMIS) and Integrated TB Information Systems (ITIS), for quantification and distribution allocation decision making.

In **Bangladesh**, a number of activities for decision making were undertaken. First, the MTAaPS team started analyzing trends in the supply chain management portal. This analysis will identify patterns to guide the Directorate General of Family Planning and other stakeholders in making evidence-based and targeted decisions to improve the availability of commodities and minimize the risk of interrupted access to medicines and other commodities. Second, the eLMIS was upgraded from v3.5 to v4.0 and rolled out to 225 facilities. Third, the electronic asset management system was rolled out to four additional district hospitals. Finally, the National TB Control Program contributed to the roll out of e-TB Manager countrywide. These are significant decision making developments in Bangladesh, and MTAaPS is preparing to develop the capacity of different teams to manage and utilize data for decision making.

ADVANCEMENTS IN PHARMACEUTICAL SYSTEMS STRENGTHENING RESEARCH AND THE GLOBAL LEARNING AGENDA

MTaPS finalized its concept note on medicines in universal health coverage for the Joint Learning Network (JLN). The program is working with its partner, Boston University School of Public Health (BUSPH), and the JLN team to launch the learning exchange at the JLN global meeting scheduled for December 4–5, 2019, in Bahrain. After the launch, the program will work with BUSPH to facilitate the exchange through virtual meetings to discuss and co-develop a technical report on experiences in identifying and implementing effective pricing strategies for medicines and diagnostics and addressing transparency and accountability issues in national pharmaceutical systems.

During this quarter, the program recruited members for the PSS technical advisory group (PSS TAG) and finalized plans for the first meeting scheduled for October 24–25, 2019. The program also established an internal PSS research group comprising a core group of technical staff who will identify potential implementation research and other documentation opportunities across the different portfolios. Initial discussions in the group have focused on strategies for producing research within the program's budget constraints. The group will work on refining and implementing these strategies in the coming months.

Please refer to [Cross Bureau activity 2](#) for a full description of progress on this activity.

OBJECTIVE 4: PHARMACEUTICAL-SECTOR FINANCING, INCLUDING RESOURCE ALLOCATION AND USE, OPTIMIZED

HIGHLIGHTS FROM PROGRAM YEAR I

The MTaPS team using funds from **Asia Bureau** are working with USAID/Indonesia and USAID/Bangladesh to develop case studies for medicine pricing and procurement policies. The program conducted data collection on each country's pharmaceutical pricing policy to inform activities for the next program year.

To improve health financing strategies, MTaPS/**Bangladesh** conducted a situational analysis of pharmaceutical financing and explore options for supporting the pharmaceutical component of the health financing strategy.

MTaPS helped plan and monitor the transition of procuring and financing second-line TB medicines from the Global Fund to the Government of the **Philippines**, thus improving sustained resource allocation for TB medicines.

QUARTER PROGRESS FOR FY19Q4

REDUCTIONS IN FINANCIAL BARRIERS TO ACCESSING MEDICINES

In the **Philippines**, MTaPS conducted a gap analysis for TB medicines and GeneXpert machine financing by estimating the quantity and budget requirements for three years compared to the current budget commitments of the government and donors. The results of this will inform discussions to overcome any identified funding gaps.

IMPLEMENTATION OF EVIDENCE-BASED MEDICINES STRATEGIES AND PHARMACY BENEFITS PROGRAMS

This quarter, MTaPS completed an extensive literature review and data extraction of health technology assessments (HTAs) using data from 283 articles with funding from USAID/Asia Bureau. Currently the team is drafting the roadmap, showing evidence of best practices and lessons learned and proposed models/pathways for introduction and scale up of HTAs depending on country context and capacity.

Also under the Asia Bureau portfolio, MTaPS visited Indonesia to scope a series of activities related to defining, pricing, costing, and strengthening governance of a pharmaceutical benefits package. Potential MTaPS activities include strengthening evidence-based pharmaceutical pricing, pharmaceutical expenditure tracking, and costing to promote evidence-based pharmaceutical planning. MTaPS is currently developing a work plan focused on pharmaceutical expenditure tracking that will be finalized next quarter.

INCREASED EFFICIENCY OF PHARMACEUTICAL RESOURCE ALLOCATION AND USE

Under the **Asia Bureau** portfolio, MTaPS assessed barriers and recommended mitigating actions to identified gaps to implement pharmaceutical-related component of the Bangladesh Health Care Financing Strategy (2012–2032). MTaPS will finalize the report next quarter.

MOBILIZATION OF ADDITIONAL AND SUSTAINABLE RESOURCES

MTaPS/**Philippines** supported identifying and allocating resources for procurement and supply chain management (PSCM) through the national strategic plan's implementation plan. MTaPS is advocating for leveraging private-sector capacity to outsource certain components of the PSCM, which is already part of the strategy for increasing PSCM efficiency in the national strategic plan.

OBJECTIVE 5: PHARMACEUTICAL SERVICES, INCLUDING PRODUCT AVAILABILITY AND PATIENT-CENTERED CARE TO ACHIEVE DESIRED HEALTH OUTCOMES, IMPROVED

HIGHLIGHTS FROM PROGRAM YEAR I

Reestablishing procurement coordination mechanisms

In **Bangladesh**, MTaPS assisted the Ministry of Health and Family Welfare (MOHFW) in reestablishing the Procurement and Logistics Management Cell (PLMC), Logistics Coordination Forum (LCF) of the Directorate General of Family Planning (DGFP), the Supply Chain Coordination Forum (SCCF) of the Directorate General of Health Services (DGHS), and the Procurement and Supply Management working group of the National Tuberculosis Program. Assistance was to revise and update the terms of reference (TOR) for the three coordinating bodies, which will improve efficiency and increase transparency and accountability within the MOHFW.

Continuing the roll-out of the electronic asset management system in Bangladesh

In **Bangladesh**, MTaPS successfully assisted with the enhancement and roll out of electronic tools, such as eLMIS and the Asset Management System (eAMS). The eAMS was rolled out to four additional districts and will be used nationwide in 2020. The system has created substantial demand across the MOHFW and key development partners/stakeholders to effectively manage resources, particularly medical equipment.

Philippines national strategic plan for procurement and supply chain management

In PYI, MTaPS/**Philippines** worked with the Department of Health and other stakeholders to develop a three-year national strategic plan (NSP) for procurement and supply chain management (PSCM). The NSP for PSCM is the first of its kind, and DOH and stakeholders will use it to identify areas of PSCM support and develop and implement PSCM annual action plans. Following development of the NSP, MTaPS supported the DOH in implementing the strategic objectives laid out in the NSP. The main highlights of the year include: drafting the procurement framework-agreement guideline (administrative order [AO]); incorporating PSCM components into the universal health coverage (UHC) implementing rules and regulations (IRRs); facilitating a vendor conference for eLMIS solution providers and developing requirements for end-to-end eLMIS; and determining three-year FP and TB commodity and budget requirements and analyzing gaps in funding to mobilize resources.

QUARTER PROGRESS FOR FY19Q4

INCREASED AVAILABILITY OF ESSENTIAL MEDICINES AND OTHER HEALTH TECHNOLOGIES

Procurement and supply chain strategy

Ensuring the availability of safe, effective, quality assured, and affordable medicines and health technologies is critical for effective health outcomes. It also requires sustainable demand planning; efficient and coordinated procurement systems; optimized warehousing, inventory management, and delivery systems; and reliable data for decisions supported by local institutional and individual capacity.

In **Bangladesh**, MTaPS facilitated a meeting of the PLMC, chaired by the Additional Secretary for Development, with the revised TOR, which provides the cell with the role to oversee procurement activities and ensure transparency and accountability. In addition, MTaPS provided technical and secretarial assistance to the Central Medical Stores Depot (CMSD) for organizing the Supply Chain Coordination Forum (SCCF), a mechanism that provides guidance for timely, efficient procurement. The

SCCF, which was formed in 2012 and was inactive for 18 months, was revived with revised TOR to execute its roles. Also in Bangladesh, the MOHFW DGFP, with technical assistance from MTaPS, organized the meeting of the LCF. This was a long-awaited meeting held after a year and a half interval. The present director general instructed the forum to organize the meeting regularly and follow-up on all decisions made in the meeting.

In the **Philippines**, MTaPS continued to work with the DOH in finalizing and endorsing the NSP for PSCM. MTaPS assisted the PSCM team in drafting the AO, preparing the presentation to the DOH Executive Committee (ExeCom), and documenting all national consultation processes for NSP development. The NSP is now planned to be presented to the ExeCom in October 2019 for endorsement. Once endorsed, it will serve as a strategic document to be used by central DOH, local government units (LGUs), and stakeholders to identify areas of support, supply chain action planning, and implementation.

In previous quarters, MTaPS/Philippines assisted the PSCM team in incorporating PSCM components into the UHC IRRs, which will facilitate the implementation of the UHC Act. This quarter, MTaPS reviewed and provided final inputs for the UHC IRRs and the NSP for PSCM. Once the IRRs are finalized, they will guide institutionalization of PSCM reforms initiated at the central level down to LGUs and service delivery points.

To strengthen institutional capacity, MTaPS/Philippines assisted DOH's Procurement Service (PS) in adapting a procurement framework-agreement guideline for a multiyear obligatory authority procurement mechanism to address current bottlenecks related to a rigid, fixed quantity, and fiscal year-based procurement method. The administrative order to endorse the guideline has been prepared and submitted and is waiting for final feedback from all stakeholders. MTaPS is supporting the PSCM team in developing job descriptions and position requirements for hiring staff and will provide orientation and capacity-building support to the newly recruited staff under the PSCM team. In addition, MTaPS/Philippines supported the DOH in finalizing and rolling out a warehouse operations manual.

Logistics and information management tools

In an effort to strengthen medical equipment management and address frequent staff turnover in **Bangladesh**, MTaPS introduced the master register for medical equipment this quarter to 22 district hospitals under the DGHS as the basis for implementing an eAMS. Two rounds of training workshops were facilitated for 78 staff from 22 district hospitals. This will strengthen pharmaceutical services, including patient-centered care, to achieve desired health outcomes for the MOHFW.

MTaPS/**Philippines** organized an expo for eLMIS providers to demonstrate their products to assist in a market analysis that will result in the DOH procuring an eLMIS. In addition, MTaPS supported the DOH in analyzing and using data generated through existing systems, such as the pharmaceutical management information system and integrated TB information systems, for quantification and distribution allocation decision making.

In the previous quarter, MTaPS/**Bangladesh** facilitated a technical workshop to critically review the MOHFW's existing electronic supply management tools to identify requirements for further improvement. Following the review, in this quarter, MTaPS worked closely with the MOHFW and a local IT vendor to enhance supply chain management tool functionalities to improve usability and decision-making capabilities. User acceptance testing was successfully done with four sub-district-level users. Three batches of training of the trainers (TOT) were organized jointly with the MOHFW, in which participants were mostly troubleshooters and champion users of inventory software (Upazila Inventory Management System [UIMS]). The enhancements and upgrades will assist MOHFW line directors and directorates in the development and submission of online procurement plans for goods through Reimbursable Project Aid (RPA) and Government of Bangladesh (development) financing of operational plans for FY 2019–2020 in the supply chain management portal.

Assessment of the current status of e-government procurement in **Bangladesh's** MOHFW was completed in this quarter, and a situation analysis report was prepared. MTaPS worked with the World Bank and MOHFW to review use of contract management guidelines and prepared recommendations on next steps for advancing contract management.

Procurement financing and quantification

In the **Philippines**, MTaPS has been supporting the DOH in identifying and allocating required resources for PSCM through the NSP's implementation plan. MTaPS is also advocating for leveraging private-sector capacity in the country to outsource some components of the PSCM. Leveraging private-sector capacity for increasing efficiency of PSCM has been adopted as one of the strategies in the NSP. In addition, MTaPS conducted a gap analysis for TB medicines, GeneXpert instruments (tuberculosis diagnosis equipment), and family planning commodity financing by estimating the quantity and budget requirements for three years and comparing them with the current budget commitments through the Government of the Philippines and donors.

To facilitate coordination and institutionalization of the quantification function, in this quarter, MTaPS/**Philippines** developed TOR with clear roles and responsibilities and provided orientation to 49 DOH staff and stakeholders for the establishment of a quantification TWG through the leadership of the PSCM team and involving all health programs. In **Bangladesh**, MTaPS facilitated a two-day workshop on quantification and early warning for TB commodities for 22 participants from the NTP, leprosy, and HIV/AIDS programs.

IMPROVED PATIENT SAFETY AND THERAPEUTIC EFFECTIVENESS

During this quarter, MTaPS helped advance patient safety and therapeutic effectiveness activities in **Bangladesh** and **Mozambique**. MTaPS/Bangladesh developed and shared a draft aDSM implementation plan, following the previous quarter's workshop on stakeholder views on the nationwide expansion of PV (also described in Objective 2). In Mozambique, MTaPS supported the MOH to finalize its protocol and informed consent forms for its tenofovir disoproxil fumarate, lamivudine, and dolutegravir (TLD) patient safety monitoring program and submit the documents to the MOH Ethics Review Committee. MTaPS also held discussions with the drug-resistant TB program on sharing data from Mozambique's aDSM program with the national PV center.

In the **Philippines**, MTaPS supported the DOH's Pharmaceutical Division, in collaboration with the FDA, to conduct rapid PV system diagnostics; engage local academic institutions identified for partnering with international academic institution; and support the DOH in the design and planning of a KAP assessment among health practitioners.

BETTER CONTAINMENT OF ANTIMICROBIAL RESISTANCE AND INFECTION PREVENTION AND CONTROL

MTaPS conducted startup activities for AMR containment in **Jordan**. In late August 2019, the MTaPS technical strategy lead and a local consultant conducted a scoping visit to identify stakeholders and assess AMR containment activities and plans in the country. The scoping visit facilitated the development of a draft work plan for year 1 in Jordan for strengthening MSC and antimicrobial stewardship (AMS). The work plan is pending approval from USAID.

Quarter 4 included activating and strengthening the functionality of MSC mechanisms for AMR containment in **Bangladesh**. This activity included conducting a situational analysis of MSC on AMR, collaborating with the Directorate General of Health Services Communicable Disease Control (DGHS-CDC) to hold a workshop to strengthen MSC, and supporting the DGHS-CDC to begin meeting regularly to implement the national action plan (NAP) for AMR.

In **Mozambique**, MTaPS began to develop a detailed implementation plan for the NAP for AMR, with a focus on infection prevention and control (IPC). MTaPS/Mozambique also held discussions on adapting and incorporating AMR content from pre-service training modules from university degree programs to in-service trainings for health care workers.

MTaPS/Mozambique agreed this quarter to support the Hospital Pharmacy Department of the MOH to build the capacity of pharmacy staff and other health care workers to conduct routine antimicrobial use audits. The Hospital Pharmacy Department also identified seven target hospitals for MTaPS to focus its AMS activities.

MTaPS provided support this quarter to countries' achievement of GHSA objectives. MTaPS is mandated to assist GHSA activities in 10 countries (**Burkina Faso, Cameroon, Côte d'Ivoire, DRC, Ethiopia, Kenya, Mali, Senegal, Tanzania, and Uganda**), focusing on promoting AMS, IPC, and MSC.

MSC activities this quarter included supporting steps toward the establishment of AMR governing bodies with terms of reference in Cameroon, DRC, Burkina Faso, Kenya, and Ethiopia; convening MSC committees for AMR in Cameroon and Mali; finalizing Côte d'Ivoire's AMR implementation plan; convening multisectoral stakeholders to finalize Tanzania's AMS policy and guidelines; and strengthening IPC and AMS technical working groups in Kenya and Uganda.

IPC activities included strengthening IPC committees in Uganda and Côte d'Ivoire; collecting baseline IPC information in Cameroon, Côte d'Ivoire, Ethiopia, Kenya, Senegal, and Uganda; developing and implementing IPC guidance documents in Ethiopia and Tanzania; and training professionals in Ethiopia, Kenya, and Tanzania.

MTaPS AMS activities included strengthening AMS committees in Côte d'Ivoire and Uganda; developing and implementing AMS guidance documents in Kenya and Senegal; working to revise the essential medicines list for animal health in Uganda; developing AMS communication materials in Kenya, Tanzania, and Uganda; training professionals in Ethiopia; and developing eLearning materials in Senegal.

For more details on GHSA portfolio progress, refer to the [GHSA section](#) of this report.

PROGRESS BY REGIONAL BUREAU PORTFOLIO

ASIA REGIONAL BUREAU

For countries in the Asia region to improve access to medicines, move toward self-reliance, and ultimately meet their universal health coverage (UHC) objectives (equitable access to quality health services and protection from financial risk), countries must place a greater emphasis on transparency, governance, evidence-based decision-making, and local capacity to improve resource allocation and efficiencies in the system. Consequently, MTaPS will build Asia regional countries' pharmaceutical systems by strengthening their ability to institutionalize transparent and evidence-based decision-making, building their capacity to use robust information to define and cost pharmaceutical coverage, promoting strategic sharing of pharmaceutical pricing to improve value in purchasing, and strengthening medicines regulatory capacity and pharmaceutical sector governance in the region.

HIGHLIGHTS FROM PROGRAM YEAR I

Completion of extensive literature review, data extraction, and stakeholder discussions to develop health technology-assessment roadmap documents with a strong evidence-based foundation

A strong and evidence-, feedback-, and collaboration-based blueprint for pathways toward health technology assessment (HTA) institutionalization will provide countries with options that are context specific. Based on discussions, experience working with countries, and literature, the initial barrier for many countries with respect to HTA is lack of technical capacity, especially comprehensive support to do analyses and data collection. However, models for HTA institutionalizations exist, where the implementation can be gradual and based on country health system needs and not everything needs to meet the standards of high-income models. Highly resource-constrained countries, such as Ghana, Ethiopia, Vietnam, Philippines, etc., are carving out pathways that align with their current and future capacities, financing, and vision and not simply emulating a pathway set by high-income countries. This activity under MTaPS will set the stage for providing innovative, disruptive, context-based multi-country networks and pathways for countries to select health technologies for health programs on the basis of strong evidence, within resource constraints, to achieve sustainable and manageable UHC.

By the end of FY19, MTaPS completed the systematic literature review with 11,297 article titles and abstracts screened, 1,417 full text articles assessed for eligibility, and 283 articles selected for quality assessment and data extraction. Refer to objective I for additional details.

Collaborations and networks under development and/or established with international and country stakeholders

There is a lot of innovation and capacity building underway within the systematic priority setting umbrella right now. Working with existing networks and stakeholders will further expand the evidence base, support peer-to-peer learning, and avoid duplication of efforts for more effective resource utilization. The goal of establishing these networks and conducting future workshops is to let countries lead in how they want to contextualize HTA/priority setting for their health systems with MTaPS providing the technical and financial support through a process that is sustainable and self-sufficient.

Achievements during FY19 are:

- Conducting international and country expert interviews for further evidence collection and collaborative work planning, including WHO, the Indonesian HTA committee, national health insurance stakeholders, and Association of Southeast Asian Nations (ASEAN)

- Establishing a series of discussions with International Decision Support Initiative partners

MTaPS engagement with Indonesia and Bangladesh

MTaPS began engaging with Indonesia and Bangladesh to define scopes of work that would support both countries in improving the efficiency of resource allocation for pharmaceuticals, strengthen pharmaceutical expenditure tracking, and improve the financial sustainability of national health insurance schemes. MTaPS also began laying the groundwork for the possibility of a pharmaceutical pricing case study in Indonesia and began its review of the essential medicines list to assess pharmaceutical benefits coverage within the region, which will continue into FY20.

QUARTER PROGRESS FOR FY19Q4

OBJECTIVE I: CAPACITY TO CONDUCT AND USE HTA TO SUPPORT THE INSTITUTIONALIZATION OF TRANSPARENT AND EVIDENCE-BASED DECISION MAKING IN ASIA REGIONAL COUNTRIES STRENGTHENED

Contextualizing roadmap for HTA institutionalization in LMICs to Asia Bureau countries

The ultimate goal for the review of the latest evidence of literature on systematic priority setting processes is to develop a practical guidance document for LMICs on potential pathways for introduction or scale up of health technology assessment (HTA) based on their country contexts and technical capacities. The evidence review focuses on how HTA has been utilized in various contexts and multiple purposes including for designing cost effective benefits packages for UHC, determining decisions related pharmaceutical access of expensive medicines, pricing negotiations, and quality of health care. This quarter, MTaPS completed a systematic literature review with 11,297 article titles and abstracts screened, 1,417 full text articles assessed for eligibility, and 283 articles selected for quality assessment and data extraction. The data extraction from the articles has been completed. With the completion of the data extraction, the writing of the roadmap document is underway. The overall outline for the document has been finalized and the drafts of the first two chapters are in progress. Chapter 1 focuses on the background, need, and brief status of HTA around the globe. Chapter 2 focuses on experiences of countries in identifying windows of opportunity for introducing HTA, key actors, and stakeholder mapping for seizing the opportunity and generating political will for HTA in the country. The first draft of the roadmap document is scheduled to be completed by November 25th 2019. This draft will be shared with external experts in the field of HTA for their review and feedback by early December 2019.

As demonstrated by the number of articles reviewed, there is a significant amount of literature and evidence on introduction, utilization, and institutionalization of HTA. This has affected the timeline originally slated for the activity (end of June). Additionally, approval for a contract with a technical partner (Brandeis University) on completing the methods chapter was delayed by almost 12 months. MTaPS has prioritized the addition of staff to support progress, however, given commitments of existing staff to other projects, progress has been slow. Additional hiring for other projects has now been completed, so staff can be refocused to accelerate completion of the first draft.

Feedback and testing feasibility of recommended approach/models with global and regional Asian experts and interviews with key global stakeholders familiar with LMICs in Asia

Once the draft roadmap document is completed MTaPS will share the document with global and regional experts in the field of priority setting for its review. Potential stakeholders include WHO global and regional experts, members of the International Decision Support Initiative (iDSI), and Asian HTA organizations and networks. MTaPS has initiated the process of identifying experts in preparation for sharing the draft roadmap document in first week of December 2019. MTaPS will revise the roadmap document based on the feedback and interviews from experts. Timelines for review and feedback are

tight, since MTaPS hopes to share the roadmap and receive feedback through regional workshop for selected countries in Asia in PY2Q2.

Pilot introduction through a regional workshop for testing the feasibility of a recommended approach and provision of capacity building on HTA methods

MTaPS will disseminate the revised roadmap in Asia i.e. (a) evidence of best practices and lessons learned (b) proposed models/pathways for introduction and scale up of HTA depending on country context and capacity. The dissemination will be done through a regional workshop planned for PY2Q2. Relevant experts, policy makers, and HTA institution staff from selected Asian countries will be invited to participate and provide their feedback on the proposed pathways for HTA introduction and scale up. It will be an additional opportunity to learn for other innovations and/or steps countries are currently taking in their progress towards HTA institutionalization. MTaPS has also begun identifying other countries that will participate in the workshop and discussions with stakeholders in Philippines have been initiated.

Support one to three selected Asia Bureau countries to finalize their action plans to incorporate HTA within priority-setting processes

Based on the interviews, and regional roadmap dissemination workshop MTaPS will identify one to three Asia Bureau countries to finalize their actions plans to incorporate HTA in their countries. This quarter, MTaPS staff conducted on a scoping mission to Indonesia, it was discussed to be one of the potential countries. MTaPS will work with other partners providing similar technical assistance, such as WHO, ASEAN, and Imperial College, to harmonize and avoid duplication.

OBJECTIVE 2: CAPACITY TO DEFINE AND COST EVIDENCE-BASED PHARMACEUTICAL COVERAGE AND PROMOTE SHARING OF PHARMACEUTICAL PRICES TO IMPROVE VALUE IN PURCHASING IN THE ASIA REGIONAL COUNTRIES STRENGTHENED

MTaPS visited Indonesia to scope a series of activities related to defining, pricing, costing, and strengthening governance of a pharmaceutical benefits package. USAID/Indonesia also expressed interest in MTaPS' support to improve the efficiency of pharmaceutical resource allocation within Indonesia's national health insurance program and to integrate funding for vertical disease commodities into the insurance program. The scoping team sensitized and sought feedback from relevant government stakeholders on possible MTaPS support to strengthen evidence-based pharmaceutical pricing, pharmaceutical expenditure tracking, and costing to promote evidence-based pharmaceutical planning. As a result of this engagement, MTaPS was asked to develop a full scope of work for potential funding from USAID/Indonesia (focused on pharmaceutical expenditure tracking) and is continuing to engage with regional and local stakeholders to refine the scope of work.

MTaPS also explored the feasibility of conducting a case study on pharmaceutical pricing policies in Indonesia as part of sub-objective 2.2 (promote transparency in pharmaceutical pricing in the Asia region). The team noted that UNDP plans to release a similar case study on how Indonesia sets prices for 45 selected drugs; this will be an important input.

MTaPS visited Bangladesh in September 2019 to define a possible scope of work for field-funded activities. Potential activities include supporting pharmaceutical expenditure tracking on a selected set of priority medicines (e.g., MNCH drugs and commodities); strengthening evidence-based medical and surgical requisite (medicines and supplies) budget allocations from state budgets to health facilities; improving the financial sustainability of Bangladesh's social health protection scheme (Shasthyo Surokhsa Karmasuch) through the costing of a benefits package and setting up a central and provider-based claims management and submission system for adjudicating claims in a timely manner; conducting pharmaceutical expenditure tracking for MNCH and family planning in collaboration with the Health Economics Unit; and supporting routine data collection on essential medicines in support of total

pharmaceutical tracking. MTaPS will continue to develop a full scope of work in collaboration with USAID/Bangladesh and USAID/Asia Bureau and will continue to engage with other regional and local stakeholders to refine the scope of MTaPS' support in PY2 Q1.

MTaPS continued its review of essential medicine benefits packages within the Asia region (sub-objective 2.1), collecting resources from multiple countries and identifying possible analysis themes. The team obtained a copy of Indonesia's national formulary and began mapping this to the WHO essential medicines list. In PY2, MTaPS will finalize their key learning questions on this analysis and a corresponding plan to synthesize trends in pharmaceutical coverage within the region.

OBJECTIVE 3: MEDICINES REGULATORY CAPACITY AND PHARMACEUTICAL SECTOR GOVERNANCE IN ASIA REGIONAL COUNTRIES STRENGTHENED

Support regional and sub-regional collaboration and advocacy to advance pharmacovigilance (PV) for new essential medicines

MTaPS continued to gather information about mechanisms for regional and sub-regional collaboration, actions and events underway or planned, and opportunities for collaboration to inform a landscaping exercise to map regional and sub-regional organizations and entities as well as development partners and collaborations that are working to strengthen PV systems (activity 3.1.1) and regulatory systems (activity 3.1.2). As many of the organizations and stakeholders supporting PV activities are the same as those working to build regulatory systems in the region, MTaPS is using the opportunity of a regional workshop, other regulatory meetings, and technical assistance visits, including to Bangladesh, Nepal, and the Philippines, to gather intelligence to inform the mapping for both activities. MTaPS participated in the Regional Alliance's Eighth Workshop for National Regulatory Authorities (NRAs) for Medical Products in the Western Pacific Region, Tokyo, Japan, August 27-29, 2019. The Regional Alliance for NRAs was formed in 2011 as a mechanism for member states to address regulatory challenges and raise the overall level of regulations for medical products in the region. The workshop was organized by the WHO Regional Office for the Western Pacific (WPRO). At the invitation of the organizers, MTaPS gave a podium presentation on the program and outlined key approaches and current and predecessor program activities to support LMICs in strengthening their regulatory systems.

The workshop enabled MTaPS to engage with key stakeholders to learn about initiatives that are underway for PV and for regulatory systems more broadly. Some of the initiatives that could be of potential collaborative interest for USAID and MTaPS include:

- The WHO Collaborative Registration Procedure (CRP), which is a mechanism that allows participating country NMRAs access to dossiers and review reports used by WHO to pre-qualify products of interest.
- The Indo-Pacific Regulatory Strengthening Program (RSP) of the Australian government's AUD 300 million Health Security Initiative of 2017; the RSP was launched in October 2018 with the goal of strengthening the capability of NRAs to increase the availability of safe and effective medicines and medical devices through improved regulatory practice and regional coordination. The six target countries are Cambodia, Indonesia, Lao PDR, Myanmar, Papua New Guinea, and Vietnam, in partnership with Thailand.
- The International Vaccine Institute in the Republic of Korea, which developed the vaccine adverse events information monitoring system and supports countries to implement the system to strengthen PV and monitoring.
- The New Zealand Pharmacovigilance Centre, which is working on an initiative to strengthen PV efforts in LMICs, focusing on the Pacific Island Nations.

Following communications with the WHO Regional Office for South-East Asia (SEARO), MTaPS has been invited to attend the seventh annual meeting on the WHO's CRP in Bangkok, Thailand, November

13-15, 2019. MTaPS participation at this meeting will further help identify other initiatives and networks in the region and regulatory system strengthening gaps that the program can discuss with USAID Asia Bureau. Additionally, MTaPS is following up with the WHO regarding participation at the forthcoming meeting for the ASEAN Pharmaceutical Products Working Group (PPWG) slated for December 2019 in Indonesia. The ASEAN PPWG meeting will provide an opportunity to crystallize the potential identified areas of support and verify interest and demand.

Assist one country in the Asian region to assess transparency and accountability and develop an action plan for improvement

MTaPS had a call with the regional advisor for essential medicines and technologies at WHO SEARO to discuss interest and potential demand from regulatory or supply chain committees in the Asian region, particularly in low-resource countries, for conducting transparency and accountability assessments (activity 3.2.1) and/or developing guidelines on managing conflicts of interest (COIs) (activity 3.2.2). The feasibility of engaging with committees on these activities, as well as WHO SEARO’s interest and opportunities for collaboration with MTaPS, are also considered. MTaPS will further explore interest of WHO SEARO (and potentially WPRO) for collaboration, specifically on COI activity in October following WHO SEARO’s internal discussions on priorities.

In July 2019, MTaPS took the opportunity at the workshop entitled Combatting Corruption and Promoting Equity in the Health Sector (reported under Cross Bureau activity 4) to discuss and identify some potential areas of collaboration, including on USAID Asia Bureau governance activities with Jillian Kohler, Director, WHO Collaborating Center for Governance, Transparency, and Accountability in the Pharmaceutical Sector.

Activity 3.2.2: Develop guidance on managing conflicts of interest

Refer to 3.2.1 for a description of progress under this activity.

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|-----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| 1.1.1. Writing and reviewing roadmap | Draft roadmap document and policy brief will be developed for sharing with local and international partners for review | Early November 2019 |
| 1.1.1. Regional workshop to share roadmap and approaches/models for HTA scale up | Showcase findings, country experiences, frameworks, and lessons learned on HTA introduction to institutionalization; understand country needs and feedback on future capacity building on relevant scale-up models | Potentially end of November 2019 and/or February/March 2020 |
| 2.1.1. Support development of national processes for defining pharmaceutical benefits package | MTaPS will continue to review existing evidence on pharmaceutical coverage within the region by obtaining essential medicines lists from a set of countries and reviewing existing literature. MTaPS expects to complete a set of preliminary findings by the end of Q1. | October-December 2019 |
| 3.1.1 and 3.1.2. Annual meeting on WHO’s CRP | Attend meeting in Bangkok, Thailand | November 13-15, 2019 |
| 3.1.1 and 3.1.2. ASEAN PPWG | Attend meeting in Indonesia, if participation is approved | December 2019 |

INTERGOVERNMENTAL AUTHORITY ON DEVELOPMENT AND EAST AFRICAN COMMUNITY

The Intergovernmental Authority on Development (IGAD) consists of eight states in Africa: Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan, and Uganda. IGAD member states are committed to strengthening regional health systems for marginalized, cross-border, mobile populations to achieve improved life expectancy and socioeconomic prosperity of their citizens.

HIGHLIGHTS FROM PROGRAM YEAR I

The MTaPS IGAD and EAC year I work plan was reviewed and approved in August 2019 by the USAID Kenya and East Africa (USAID KEA) and MTaPS COR teams. MTaPS will apply its pharmaceutical systems strengthening approach and systemic capacity building in the two regional economic communities (RECs) to achieve results in the following focal areas:

- Pharmacovigilance (PV) and patient safety
- Good medicines regulatory practices
- Antimicrobial resistance (AMR) containment

The IGAD/EAC work plan covers the period October 1, 2019–September 30, 2020, and activity implementation will begin in FY20Q1.

QUARTER PROGRESS FOR FY19Q4

After the work plan was approved, MTaPS was requested by USAID KEA to assist the EAC team to revise its work plan to tighten the milestones and align them to the IGAD and MTaPS work plans. Pending receipt of obligated funds for the approved IGAD/EAC work plan, MTaPS requested that the Pharmacy and Poisons Board (PPB) host the consultative meeting, given that the PPB is the PV Regional Center for Regulatory Excellence and lead for PMS/PV in both RECs. Ms. Wairimu Gakuo of the USAID-Kenya/East Africa Mission participated in this regional pharmacovigilance design meeting September 23–27 and shared the mission's regional vision and expectations.

IGAD COUNTRIES

*Djibouti
Eritrea
Ethiopia
Kenya
Somalia
South Sudan
Sudan
Uganda*

EAC COUNTRIES

*Burundi
Kenya
Rwanda
South Sudan
Tanzania
Uganda*

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|----------------|
| Work plan implementation | Develop a joint implementation plan with IGAD and EAC | Oct.–Nov. 2019 |
| Baseline assessment of PV systems in IGAD | Undertake a gap and needs assessment in IGAD using the EAC-PV indicator-based assessment tools | Oct.–Dec. 2019 |
| Monitoring and telling the story | Develop monitoring, evaluation, and learning matrix for IGAD and EAC to support collaborative learning and adaptation | Nov. 2019 |

PROGRESS BY COUNTRY

BANGLADESH

MTaPS/Bangladesh focuses on integrated, innovative, and sustainable strategies to strengthen the pharmaceutical system and ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable essential medicines and pharmaceutical services. The program uses both USAID's pharmaceutical systems strengthening approach and MTAAPS' approach to contribute to the Government of Bangladesh's fourth Health, Population and Nutrition Sector Program (2017–2022) objectives and the goals and objectives of the USAID's Country Development Cooperation Strategy to achieving universal health coverage.

HIGHLIGHTS FROM PROGRAM YEAR I

MTaPS started its technical activities in Bangladesh in February 2019 and in that time period, the program has garnered some achievements in different areas of intervention. A crucial issue has been the reconvening of the Procurement and Logistics Management Cell (PLMC) in the Ministry of Health and Family Welfare (MOHFW), Bangladesh. The cell was formed with technical assistance from the USAID-funded SIAPS program. It has been acting as a central monitoring cell for procurement activities and a forum for decision making for MOHFW procurement. After the MOHFW was split into two divisions in March 2017, the PLMC became stopped meeting. To provide support to the two divisions, the PLMC was reconstituted with representatives from both divisions. The new terms of reference (TOR) have been approved, and the first meeting of the reconstituted PLMC was held on August 5. The PLMC will oversee the procurement activities of the procuring entities under both divisions, which will ultimately bring efficiency, accountability, and transparency to procurements.

MTaPS also assisted convening multiple pharmaceutical management-related coordination mechanisms under the MOHFW. Both the Logistics Coordination Forum (LCF) of the Directorate General of Family Planning (DGFP) and the Supply Chain Coordination Forum (SCCF) of the Directorate General of Health Services (DGHS) had undergone changes, including revising and updating their TORs and member lists. After a long gap, each forum has organized one meeting. MTAAPS has also assisted in establishing an antimicrobial resistance (AMR) containment coordination mechanism comprising multiple directorates and partners. The biggest challenges with regular coordination activities are lack of adherence to the TOR, initiative, and accountability among members. MTAAPS advocated repeatedly at the policy level and eventually overcame the challenges to resume the functioning of the forums.

This year has also seen e-TB Manager, a SIAPS-developed electronic tool for recording and reporting TB patient data, officially become the tool of choice for individual patient recording and reporting for the National TB Control Program (NTP) Bangladesh. Under SIAPS, e-TB Manager was functioning in 255 sites (approximately one-third of the country). With the recent global recommendation on maintaining an individual patient-level data tracking system, NTP Bangladesh has committed to establishing a country-wide system. e-TB manager faced competition from another system and with the patronization of the local USAID mission and through multiple coordination meetings with the NTP, the Global Fund, and other partners, MTAAPS was successful in corroborating the comparative benefits of the tool. Eventually, all stakeholders agreed on a roadmap for e-TB Manager implementation in the country. As part of the country-wide roll out, Rangpur division was covered in the first year, and it is expected that it will be rolled out to the whole country by the end of December 2020.

MTaPS technical assistance contributed to the upgrade and enhancement of additional features in the DGFP electronic logistics management information system (eLMIS) to ensure quality logistics data in a

timely manner. The DGFP has long used electronic inventory management tools to manage its day-to-day logistics functions. In 2019, MTaPS worked with the DGFP to upgrade those tools and rolled them out through successful user acceptance testing in selected sites. Now the DGFP will have more real-time logistics data available for decision making purpose, which will increase the product availability in different level of the supply chain.

As part of systems strengthening in the DGHS, SIAPS introduced standard inventory management tools in DGHS stores at all level. MTaPS is continuing the implementation of that intervention and successfully completed it in 10 new districts in 2019. MTaPS worked closely with the DGHS to build human resource capacity on basic logistics management systems by introducing standard inventory management tools. Efficient use of these tools will support the DGHS in gathering quality logistics data for program improvement.

MTaPS has successfully rolled out an electronic asset management system (eAMS) to four additional districts, with a goal of rolling it out to all districts by the end of 2020. The system has created substantial demand across the MOHFW and key development partners/stakeholders. MTaPS has facilitated strong coordination and collaboration among stakeholders in scaling up the system country wide.

QUARTER PROGRESS FOR FY19Q4

OBJECTIVE I: PROCUREMENT AND SUPPLY CHAIN SYSTEMS IMPROVED AND MODERNIZED

MOHFW

MTaPS has introduced the concept of a comprehensive asset acquisition planning system combining a table of organization and equipment, product catalog, specifications, and price guide in an interlinked and stepwise framework. The concept has been shared with the MOHFW and DGHS to incrementally build a digitalized and modern system. As part of this overall goal, MTaPS completed a workshop on standardization of departments in different tiers of hospitals in the country. MTaPS facilitated the first meeting of the newly reconstituted PLMC, which was chaired by the Additional Secretary (Development), MOHFW. The PLMC TOR were revised, and the minutes of the August 5 meeting have been approved. MTaPS enhanced and updated the supply chain management portal (SCMP) functionalities during this quarter. Thus, both the procurement planner and procurement tracker received input for upgrades. MTaPS assisted line directors and directorates in the online development and submission of the procurement plan for goods through reimbursable project aid and Government of Bangladesh (Development) financing of the operational plans for FY2019–2020 in the SCMP. The status of e-Government Procurement in the MOHFW was assessed during this quarter, and a situation analysis report was prepared. MTaPS worked with the World Bank and MOHFW to review the use of contract management guidelines and prepared recommendations on next steps for advancing contract management.

Directorate General of Health Services

The MTaPS team worked with the DGHS to roll out the standard manual inventory tools to 10 new districts as part of a country-wide scale-up initiative. MTaPS regional technical advisers organized basic logistics management training for DGHS logistics officials in those 10 districts using government facilities. A total of 264 participants (224 male, 40 female) from district, sub-district, and union level-health facilities attended the training. Each health facility was given a sufficient number of printed tools at the end of the training so they could start using those standard tools after returning from the training. These tools will help them produce quality logistics information for program improvement.

MTaPS also collaborated with the MaMoni program of Save the Children by providing technical assistance in rolling out the same tools in two selected districts.

The MTaPS technical team worked with the DGHS to organize two trainings on manual asset registry for 79 Government of Bangladesh officers and staff from 22 district hospitals. This manual asset registry will contribute to establishing the eAMS, which is a priority demand of the MOHFW this year.

The MTaPS technical team provided technical and secretarial assistance to the Central Medical Stores Depot (CMSD) for organizing an SCCF meeting during this quarter. The SCCF is a coordination body that provides guidance for timely and efficient procurement. The forum proposed revisions to the TOR and to its membership.

MTaPS has introduced a master register for medical equipment in 22 district hospitals under the DGHS as the basis for implementing the eAMS. The team facilitated training workshops for 78 managers, officers, and staff from these hospitals. Strengthening medical equipment management will improve pharmaceutical services, including patient-centered care, to achieve desired health outcomes for the MOHFW. Frequent turnover of managers and officers was the major challenge for this activity.

Directorate General of Family Planning

During this quarter, MTaPS facilitated a technical review workshop, organized by the DGFP, to critically review its existing electronic supply management tools with an aim to identify requirements for further improvement of the tools. As a follow on, MTaPS worked closely with the DGFP and the IT vendor to upgrade the tools. User acceptance testing was done with four sub-district-level users.

Three trainings of trainers (TOT) were organized with the DGFP for the troubleshooters and champion users of the UMIS inventory software. Ninety participants (83 male, 7 female) attended the TOT. The main objective was to involve DGFP officials and staff in the installation process of UIMSv4. MTaPS regional technical advisers and DGFP troubleshooters completed the installation of UIMSv4 in 225 upazilas by September 30, and the upgraded version is functioning well with new features.

The DGFP organized a meeting of the LCF with technical assistance from MTaPS during this quarter. This was a long-awaited meeting, with an 18-month gap since the previous meeting. The Director General instructed the forum to organize regular meetings regularly follow up on all the decisions made during the meeting.

National TB Control Program

MTaPS assisted the NTP in holding the eighth Joint Monitoring Mission in September 2019. The area of involvement was procurement and supply management. Major recommendations were made on sustaining and increasing government funding for first-line TB medicines and improving the overall storage system at the central and peripheral levels.

MTaPS also facilitated a two-day workshop for 22 participants from the NTP and other programs (i.e., leprosy, HIV/AIDS) on quantification, forecasting, and early warning systems (EWS) in September. The workshop highlighted the benefits of using an optimally functioning EWS for supply chain management, and participants discussed the feasibility of its inclusion in their programs.

OBJECTIVE 2: PHARMACEUTICAL REGULATORY SYSTEMS STRENGTHENED

Registration

One of the major MTaPS activities in FY19 was to establish an online registration system by minimizing the gaps and reviewing and upgrading Pharmadex to make it more user friendly. MTaPS also facilitated training in online dossier submission for applicants and in online dossier assessment and evaluation to build the capacity of Directorate General of Drug Administration (DGDA) officials.

In April 2019, the MOHFW directed the DGDA to use previous procedures for new drug registration until further notice and to stop following CTD guidelines for dossier submission or using Pharmadex for

dossier assessment and evaluation. The previous DGDA Director General took a lot of initiative to improve DGDA systems and achieve maturity level 3 in the Global Benchmarking Tool. However, the Bangladesh Association of Pharmaceutical Industries (BAPI) has significant influence on the DGDA, and BAPI believes that preparing dossiers following CTD guidelines takes too much time and money and hinders a quick registration process. Because of this, only one refresher training on dossier evaluation, organized by the DGDA and facilitated by MTaPS, was held for 26 DGDA officials to strengthen their capacity to register medicines.

The adaptation of CTD modules 4 and 5 was discussed, and the DGDA informed the MOHFW that it was not in a position to adapt the CTD guidelines for modules 4 and 5 at this stage. Over 26 DGDA officials were present in the discussion session.

MTaPS' current strategy is to improve coordination with BAPI to have a common understanding by reducing gaps and strengthening the medicine registration procedure by establishing an online registration system. The first meeting, on September 17, 2019, was a successful one, at which the Secretary General of BAPI agreed to and appreciated MTaPS' proposal for refresher training for pharmaceutical companies on CTD dossiers.

MTaPS has upgraded the Pharmadex server and moved it to another location, but as the DGDA is currently not using Pharmadex, MTaPS decided to hold off on further upgrades to the tool.

The DGDA web portal was upgraded by MTaPS to enhance the online adverse drug reaction monitoring (ADRM) reporting system and improve adverse drug report (ADR) monitoring and assessment.

A meeting was held with the DFID-funded Better Health for Bangladesh project to collaborate and strengthen inspection and monitoring functions for retail medicine shops, and it was found that the DGDA is not in a position to assume responsibility for the activity related to strengthening of inspection and monitoring.

MTaPS, in collaboration with the WHO, assisted the DGDA to establish the video conferencing equipment provided by the WHO for effective monitoring and strengthening of field-level regulatory functions. DGDA officials started using this system to directly communicate with district-level drug superintendents to strengthen post-marketing surveillance and field level regulatory inspections.

Pharmacovigilance

The DGDA is now in a better position to manage the ADRM cell, arrange Adverse Drug Reaction Advisory Committee (ADRAC) meetings, and upload ADR data to the VigiFlow Upsala Center. MTaPS held a stakeholder workshop on June 13 to discuss the nationwide expansion of the PV program. A training on causality assessment and good vigilance practices were held on June 17 for ADRM cell members and ADRAC members. A training on uploading data to VigiFlow was also held. A draft five-year PV plan was prepared and disseminated by MTaPS to all stakeholders for finalization.

Following the meeting on active drug safety monitoring and management (aDSM), MTaPS drafted and shared an aDSM implementation plan during this quarter. Once the plan is approved, activities will begin in year two.

OBJECTIVE 3: SYSTEMS FOR EVIDENCE-BASED DECISION MAKING INSTITUTIONALIZED

MOHFW

MTaPS has completed the contract with the Health Information System Program, Bangladesh—the in-country organization for DHIS2 development, maintenance, and support for the DGHS—to provide support for DGHS eLMIS interoperability with the SCMP and DHIS2 with e-TB Manager. The DGFP eLMIS has also been updated with unique data fields to be interoperable with the eLMIS of MEASURE Evaluation.

The MTaPS/Bangladesh team completed the upgrade of the DGFP's eLMIS to version 4.0 and has rolled out the new version to 225 of the 488 sites in the country.

MTaPS attended two MOHFW meetings to finalize the eAMS operational guidelines and strategies and the roll out plan. Based on discussions during these meetings, the documents were reviewed several times and submitted for sign off.

The eAMS was rolled out to four more district hospitals (Jamalpur, Gopalganj, Meherpur, and Chuadanga) by MTaPS during this quarter. With MTaPS' support, Better Health in Bangladesh rolled out the eAMS to an additional four district hospitals (Bagerhar, Barguna, Narsingdi, and Patuakhali). Including the roll out at four hospitals (Jhenaidah, Manikganj, Moulvibazar and Sirajganj) under SIAPS, 12 district hospitals are now running the eAMS. User feedback was collected at a workshop with 22 participants (17 male, 5 female), led by the Director, Hospitals and Clinics, DGHS.

The TOT on the eLMIS for the DGHS was completed for two districts with 17 participants (all male). The goal of the TOT was to train upazila-based trainers so that end-user training can be conducted by upazila-level staff. The primary targeted staff were statisticians, who are very familiar with DHIS2-based data entry. The TOT ended with an action plan on end-user training for 327 users and a roll out plan.

National TB Control Program

After e-TB manager was selected as the tool for individual TB data recording, MTaPS started rolling out the tool country wide. As a first step, it has successfully completed eight two-day trainings for 193 participants in Rangpur division. NTP HQ officials; local government health authorities (divisional director, eight civil surgeons, and the divisional TB expert); and the MTaPS regional technical advisor were present during this training. The new sites in Rangpur have already started inputting data into the system. Like previous sites, interoperability with DHIS2 has been ensured in these sites.

Before this roll out, MTaPS facilitated a TOT for NTP officials; divisional TB experts; and the program organizer-civil surgeon office, Rangpur division, who contributed to the training sessions.

OBJECTIVE 4: PHARMACEUTICAL SERVICES THAT PROMOTE APPROPRIATE MEDICINES USE AND ANTIMICROBIAL RESISTANCE CONTAINMENT IMPROVED

In Bangladesh, a National Action Plan on AMR containment (2017–2022) and a multisectoral coordination mechanism are in place. MTaPS led initiatives to work with key stakeholders (e.g., WHO, CDC, FAO) to reactivate and mobilize the multisectoral coordination mechanism for antimicrobial stewardship in Bangladesh.

The MTaPS senior principal technical advisor conducted a situation analysis to understand the status of multisectoral coordination, stakeholders, and the implementation status of the National Action Plan on AMR. A stakeholder workshop on strengthening multisectoral coordination was held on July 13 under the leadership of the line director of Communicable Disease Control/DGHS. The line director also started regular technical working group meetings to initiate the National Action Plan.

OBJECTIVE 5: PHARMACEUTICAL FINANCIAL RESOURCE ALLOCATION AND USE OPTIMIZED

International experts on health financing from MTaPS and R4D assessed the status of implementation of the pharmaceutical-related component of the Bangladesh Health Care Financing Strategy (2012–2032) to explore gaps and the support needed to address them. The team included stakeholders from the government and private entities. The report is expected to be completed this month.

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|------------------------|
| Rolling out of e-TB Manager | Continue training, ensuring data quality, and monitor reporting | Throughout the quarter |
| Continue facilitating SCCF | Regular organization of SCCF meetings | Middle of the quarter |
| Assist DGFP to implement updated eLMIS nationwide | Complete the installation of UIMsv4 | By November 2019 |
| Assist DGHS to implement manual inventory management tools in the remaining 10 districts (print tools; capacity building) | Organize basic logistics management training in 10 new districts and print tools | By December 2019 |

BURKINA FASO

SUMMARY OF ACTIVITIES THIS QUARTER

MTaPS received USAID approval of its PYI work plan and staffing plan in Q4, and onboarding of staff and office set up are under way. Staff will continue to be oriented to MTAps/Burkina Faso's approaches, begin developing a detailed implementation plan, and meet with stakeholders to present the plan of activities.

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Support the AMR-TTC to establish an online learning and collaborative solutions platform to: | The MTAps senior technical advisors for animal health and AMS will work with the relevant government ministries to establish the eLearning platform | October–December 2019 |
| Support the AMR-TTC to roll out the national guidelines for the use of antibiotics in the animal health sector | The MTAps senior technical advisor for animal health, in collaboration with the Directorate of Veterinary Services, will roll out the national guidelines for antibiotic use | October–December 2019 |

CAMEROON

HIGHLIGHTS FROM PROGRAM YEAR I

MTaPS/Cameroon activities officially launched in Q4, after the approval of the year I work plan and staff on boarding at the beginning of the quarter; therefore, all PYI highlights are captured below.

QUARTER PROGRESS FOR FY19Q4

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Activity 1.1.1: Provide technical and operational support to the AMR Technical Secretariat to improve multisectoral coordination

MTaPS supported the National AMR Technical Secretariat to organize two coordination meetings with departments of the Ministry of Public Health and other stakeholders of the One Health Platform. Ministries included the Ministry of Fishery and Animal Husbandry, Ministry of Environment, and Ministry of Agriculture. The first meeting had 23 participants, with representation from other USAID partners (IDDS and FAO) implementing AMR activities. During this meeting, MTAps presented the year I plan of activities and advocated for the engagement and availability of stakeholders for successful implementation. It was also an opportunity for the AMR Technical Secretariat to have a clearer understanding of AMR activities implemented by other USAID partners.

During the second coordination meeting, MTAps supported the AMR Technical Secretariat to establish technical working groups (TWGs) as stipulated in the country's AMR National Action Plan. During this meeting, the member profiles for the IPC and AMS TWGs were agreed upon. Further, the terms of reference for the TWGs were developed and will be reviewed and validated in a subsequent meeting with other stakeholders from the One Health Platform. MTAps also held two working sessions with the AMR Technical Secretariat to identify activities to be considered in the PY2 work plan.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

Activity 2.5.1: Strengthen the governance and technical operations of IPC Committees in the three selected hospitals and three referral centers

Prior to implementing the IPC program in the selected health facilities, MTAps partnered with the WHO Cameroon office and other national counterparts to conduct the country's first baseline assessment of national and facility-level IPC programs and practices using WHO standard tools (IPCAT2, IPCAF, and hand hygiene tools). This assessment took place in 38 public and private health facilities in four regions of Cameroon in August and September 2019. Pre-assessment activities included:

- Reviewing the site selection criteria and method of assessment
- Training data collectors in IPCAT2, IPCAF, and hand hygiene data collection tools
- Supervising data collection and guiding report writing

The findings of these assessments will guide the drafting and validation of the national IPC plan and the tracking of IPC progress as activities are being implemented. Preliminary findings showed that the country has adopted a guide on hospital hygiene, and most facilities have hygiene committees through which an IPC program can be used for further capacity building. Further, most facilities have clean running water, generators for electricity backup, and incinerators for waste management. However, the country doesn't have an IPC guideline with all necessary components, and there are no trained IPC focal persons. Surveillance of health care-associated infections is not done in any of the health facilities visited,

and no health facility has adopted the guide on hospital hygiene. Finally, hand hygiene observations are not done in any health facilities.

The assessment team received a positive and eager response from the health facilities, acknowledging this was the first time they have been observed and supervised by the Ministry of Public Health. One doctor remarked, “This is the first time I am being supervised by an IPC team in my 28 years working at the hygiene department. Despite the fact that I will be soon be retiring, I am glad that the Ministry finally thought to take the IPC in hand.”

| ACTIVITIES FOR NEXT QUARTER | | |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| ACTIVITY | DESCRIPTION | DATES |
| Formalize IPC and AMS TWGs with terms of reference | MTaPS will support the AMR Technical Secretariat to put in place the IPC and AMS TWGs with their terms of reference. These groups will be responsible for the implementation and follow-up of activities. | October 2019 |
| Begin implementation of IPC program in six selected health facilities in three regions | MTaPS will support the AMR Technical Secretariat to implement the IPC program in six of the 38 health facilities assessed. Results from these sites will help in scaling up to other health facilities in the coming years. | October 2019 |
| Conduct an AMS situational analysis | MTaPS will partner with national counterparts to carry out an AMS situational analysis of policies and regulations in place prior to developing the AMS national plan. | October–November 2019 |
| Develop operational plan for the AMR National Action Plan | MTaPS will work with the IDDS Project, AMR Technical Secretariat, and other stakeholders to develop the operational plan for the AMR National Action Plan. | November 2019 |
| Develop IPC training modules and set up e-learning platform | MTaPS will support the IPC TWG to develop IPC training modules and set up an e-learning platform where these modules will be used to train pre- and in-service health staff. | November– December 2019 |
| Draft IPC guidelines | MTaPS will support the AMR technical secretariat to draft IPC guidelines following WHO updated recommendations. These guidelines will later be disseminated to health facilities to help strengthen IPC practices. | November– December 2019 |

CÔTE D'IVOIRE

HIGHLIGHTS FROM PROGRAM YEAR I

In Côte d'Ivoire, surveillance data from the National Reference Center showed alarming levels of antibiotic resistance, and the December 2016 JEE noted that the country needed to strengthen its capacity in antimicrobial resistance (AMR) control. In response, the Ivorian government created a national One Health platform in April 2019 to institutionalize a national multisectoral coordination (MSC) mechanism to address public health threats, including AMR. A technical working group (TWG)-AMR was established that is connected to the One Health platform through a national coordinating body called the MSC Group on AMR. The TWG-AMR will be key to implementing the national action plan on AMR (NAP-AMR).

Effective multisectoral coordination on AMR

MTaPS helped revise the NAP-AMR through an MSC meeting and it is now finalized and approved. The NAP-AMR will be used to advocate for high-level commitment within various ministries, such as the Ministries of Health (MOH), Education and Research, Agriculture, and Environment. The document is now being printed for endorsement by various ministries.

MTaPS supported national counterparts to establish multisectoral technical committees for sanitation and infection prevention and control (IPC) (MTC 4) and antimicrobial stewardship (AMS) and sale of illegal drugs (MTC 5). The MTCs are the main instruments MTaPS has been using to carry out activities of the validated work plan. These committees gather very strong experts from various sectors and ministries. The MTCs had several meetings that identified priority activities for IPC and AMS and their respective roadmaps for implementation of the NAP-AMR. MTCs developed TOR in collaboration with MTaPS and then implemented the activities. MTC 4 led site visits to establish hygiene and IPC (HIPC) committees where none existed and to evaluate the functionality of existing HIPC committees.

Infection Prevention and Control

MTC 4 developed the TOR to recruit two consultants to conduct a rapid assessment of HIPC committees' capacity and functionality in two teaching hospitals and two veterinary facilities. The evaluation team used an evaluation tool developed by the MOH and shared the results with facility staff. Initial assessment results showed that HIPC committees exist in both teaching hospitals, but they are insufficiently functional; they demonstrated "an inadequate IPC level," meaning below 80%, which is the acceptable compliance rate. According to the evaluation tool, the HIPC committees at Bouake and Cocody teaching hospitals had respective scores of 45% and 31%. The veterinary clinics do not have HIPC committees.

For the teaching hospitals (Bouake and Cocody), the next steps are:

- Developing a capacity-building plan for the HIPC committee in the four targeted health facilities
- Revitalizing the HIPC committees and the hospital hygiene services
- Sharing the findings of this evaluation with all care services
- Putting strategies in place for good hygiene practices
- Increasing collaboration with the technical structures in charge of hygiene and the HIPC committees

For the animal health facilities, the next steps are:

- Setting up HIPC committees (identifying actors, roles, and responsibilities; planning; training program)
- Sharing the findings of this evaluation with all care services

Antimicrobial Stewardship

This fiscal year, MTaPS supported developing MTC 5's TOR. This multidisciplinary expert group has the mandate to draft the country's first AMS policy, guidelines, and all tools needed to implement stewardship activities in national and local health facilities, and for competency-based training in facilities. MTC 5 has supported desk review, gathering existing policy documents, and documenting ongoing initiatives on AMS. MTC 5 is finalizing the composition of the expert group by adding experts from clinician's societies in Côte d'Ivoire. The next step will be the drafting process.

QUARTER PROGRESS FOR FY19Q4

RESULT AREA I: EFFECTIVE MULTISECTORAL COORDINATION

MTaPS facilitated a recent multisectoral workshop that produced two important guiding documents: an AMR national policy and a governance manual for AMR containment.

- The AMR policy lists the various government entities in human and animal health, agriculture, and the environment that are tasked with improving prevention, detection, and surveillance of AMR and describes their roles and responsibilities in a coordinated response across sectors. Recommendations for additional support include a unified multidisciplinary and multisectoral information exchange mechanism, an AMR communication plan, and an information-sharing platform.
- The governance manual for AMR containment was drafted to facilitate data sharing, joint evaluation of identified issues, and creation of solutions by TWG-AMR stakeholders in the public and private sectors. Specifically, the manual aims to 1) strengthen the organizational and operational framework of AMR control efforts; 2) define the guiding principles concerning the roles, responsibilities, and limits of TWG-AMR members; 3) frame decision making and guide health security actions that are linked to AMR; and 4) ensure that the TWG-AMR's actions and interventions are sustainable and coherent.

MTaPS supported the AMR-TWG in organizing a three-day workshop September 9-11, 2019, to identify priority activities and develop an implementation plan that will move the country to the next JEE level; the AMR-TWG is finalizing the plan. The prioritization exercise used results from the Côte d'Ivoire JEE report from December 2016, the JEE 2.0 tool, and WHO benchmarks to evaluate progress and identify continuing gaps, particularly related to MSC, which was added since the previous evaluation.

Priority IPC activities identified during the workshop include:

- Review the WHO core components for effective IPC; review the previous evaluation on IPC and list existing documents to highlight gaps
- Use IPCAT2 and IPCAF to assess the core components of IPC at the national and facility levels
- Develop and validate an action plan on IPC that builds on the NAP-AMR plan
- Establish HIPC committees with TOR
- Develop a policy/plan for animal health with support from FAO, if possible

Priority AMS activities include:

- Undertaking an assessment of stewardship policies, activities, and regulatory framework; set up a group of experts to do the situational analysis based on previous evaluations; conduct three surveys on antimicrobial dispensing, antimicrobial use/regulation in animal health, and the existence of antimicrobial use monitoring; and list all regulatory documentation available for the human and animal health sectors
- Review the essential medicines list and clinical guidelines and categorize antimicrobials using AWaRe
- Update the national AMS plan or strategy that builds on the NAP-AMR

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

Activity 2.5.1: Strengthening the functionality of HIPC committees in the human and animal sectors

Develop and implement a plan to strengthen oversight capacity of HIPC committees

MTaPS provided support to the AMR-TWG to organize site visits to establish HIPC committees at Bouake and Cocody University Hospitals, the Bouake Veterinary Clinic, and the Cocody Anti-rabic Center. HIPC committees in the four health facilities were established with clear TORs and capacity-building plans. This activity began on September 23, 2019, in Bouake where the HIPC committee was installed at the hospital and veterinary clinic. The capacity-building plans of the HIPC committees were developed in a participatory approach with the members of established committees. They were also oriented on their roles and responsibilities, standard precautions in hygiene and prevention of health care-associated infections, and reporting HPCI committees' activities. The team adapted the different presentations to the animal sector.

The IPC baseline assessment for Bouake University Hospital was done in collaboration with HIPC committee members using the WHO IPCAF tool. This baseline evaluation showed that the Bouake University Hospital is at a basic IPC level, with 395 points. The team also adapted the IPCAF tool during working sessions with the members of the Bouake Veterinary Clinic HIPC committee, and this adapted version will be proposed internally to the DVS and MTC 4 for validation before being applied to the animal sector. The activity is underway at Cocody University Hospital and the Cocody Anti-rabic Center and will end on October 16, 2019.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1: Improve the rational use of antimicrobials in the human and animal health sectors

Support the AMR Secretariat in conducting a rapid situational analysis of structures in charge of antimicrobial use and regulation in the human and animal sectors

MTaPS has helped establish several expert groups to rapidly assess AMS policies, the regulatory framework, and monitoring antimicrobial use. MTC 5 started by looking for reports on previous evaluations done by the Pharmacy and Medicines Directorate (the national drug regulatory authority) and doing a desk review before completing the assessment by interviewing stakeholders as needed. The final report will be validated later during a workshop.

Support the AMR Secretariat in drafting a national AMS plan covering human and animal health sectors

MTC 5 has also set up a group of three local experts to draft the updated AMS plan by building on the NAP-AMR. The members pulled out from the NAP-AMR all activities related to AMS and shared them with MTC 5 for their review and inputs. In addition to those activities already included in the NAP-AMR, the expert group will be using the findings of the rapid assessment to draft an updated AMS plan; a larger group of experts from various ministries, professional groups, and civil society organizations will validate the updated AMS plan during a five-day workshop.

MTC 5 has put in place three expert groups to conduct a rapid situational analysis of antimicrobial use, monitoring, and regulation in the human and animal sectors. They also agreed on the selection of criteria and constituted a committee of 17 local experts to draft the tools needed to support rational use of antimicrobials.

The MTC 5 roadmap was updated, and previous evaluations done on antimicrobial use and the regulatory framework were reviewed at a meeting of the team that lead MTC 5 held on September 4, 2019, at the MSH office. Following the meeting organized on September 9-11 to identify priority

activities, MTC 5 organized a second meeting on September 18 to integrate those priorities and finalize the MTC 5 roadmap.

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Provide technical assistance to the AMR Secretariat, Institut National d'Hygiene Publique (INHP), and Direction de la Pharmacie du Medicament et des Laboratoires to strengthen the capacity of health care professionals | A four-day workshop will be held to update and validate the existing IPC training modules for the human health sector. | October 21-26, 2019 |
| | A three-day workshop will be held to update and validate the existing trainer's guide and student's manual on IPC for the human health sector. | November 11-15, 2019 |
| | A five-day workshop will be held to update and validate the validated training materials in the human sector for the animal sector. | November 25-December 1, 2019 |
| Support building a pool of national IPC facilitators in the human and animal health sectors | Two six-day TOT workshops on IPC in the human and animal health sectors, attended by 10 participants per sector will be conducted in Yamoussoukro. | December 8-15, 2019 |
| Support INHP and the national AMR Secretariat to establish and build capacity within the AMR, IPC, and AMS TWGs | One-day workshop in Abidjan to set up the MSC committee | October 18, 2019 |
| | Two one-day meetings for MTC 5 | October–December 2019 |
| | Two one-day meetings for MTC 4 | for both groups |
| Support the AMR Secretariat in conducting a rapid situational analysis of structures in charge of antimicrobial use and regulation in the human and animal sectors | One-day meeting of MTC 5 to establish expert groups to conduct the rapid assessment | October 2, 2019 |
| | Support MTC 5 and experts in conducting a rapid assessment in Bouake and Treicheville | October 2019 |
| | Conduct a five-day workshop to validate the AMS plan | November-December 2019 |

DEMOCRATIC REPUBLIC OF CONGO

HIGHLIGHTS FROM PROGRAM YEAR I

MTaPS/DRC activities launched in Q4, after the approval of the year I work plan and staff on boarding at the beginning of the quarter; therefore, all PYI highlights are captured below.

QUARTER PROGRESS FOR FY19Q4

RESULT AREA I: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Activity 1.1.1: Provide technical support to the AMR technical working group (AMR-TWG) to improve IPC and AMS coordination

MTaPS/DRC provided support to the AMR-TWG to hold its first MSC meeting on September 26 and 27 for 45 participants (10 female; 35 male) representing all sectors involved in the fight against AMR, including One Health coordination, WHO, FAO, MOH, Ministry of Agriculture, and Ministry of Livestock and Fishing. During this meeting, two AMR-TWG subcommittees (IPC and AMS) were formed and entrusted to produce terms of reference. To ensure that the AMR detection and surveillance components are accounted for, participants agreed that the IPC subcommittee should crosscut and include in its scope matters pertaining to AMR detection and surveillance.

Activity 1.1.2: Develop a costed operational plan for the National Action Plan on AMR (NAP-AMR)

The development and implementation of an NAP-AMR is a critical step in containing antimicrobial resistance. DRC has developed an NAP-AMR, but the plan remains high level and requires implementation details. There is a need to develop an operational plan that includes detailed, costed activities for each of the four components of AMR and a monitoring and evaluation component. This operational plan will facilitate resource allocation and help the AMR-TWG to monitor NAP implementation and advocate for additional resources. During this reporting period, MTAaPS conducted multiple visits to meet with key stakeholders and partners involved in the AMR containment effort to gather information and assess the progress of NAP-AMR implementation. Discussions with these key stakeholders showed that little effort has been made toward NAP-AMR implementation. Some piecemeal and uncoordinated activities have been conducted by some actors (in the context of One Health), but this remains insufficient for AMR containment efforts. Therefore, it was agreed that MTAaPS will support the AMR-TWG to further develop NAP priority activities. An operational plan with a detailed budget and monitoring framework will be developed to facilitate NAP activity implementation. It was further agreed that MTAaPS will support the AMR-TWG to organize a two-day meeting each quarter to assess the implementation of the costed operational plan. During this meeting, a quarterly roadmap (aligned with the operational plan) will be developed and presented to all partners/donors to allow their engagement with respect to funding and budget allocation for each planned activity.

Constraints:

- Lack of consensus regarding the institution that should take the lead and the coordinating role of the AMR-TWG, thereby hampering the multisectoral nature of the platform
 - **Action taken:** The issue was discussed during the first MSC meeting and corrective measures were agreed upon, such as information sharing among all sector actors, holding regular meetings, and ensuring that representatives from all sectors are invited.
- Agricultural-sector actors not involved in the effort to fight AMR

- **Action taken:** All sector actors, including agricultural-sector counterparts, were invited to the first MSC meeting.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.2: Integrate the WHO AWaRe classification into the revised essential medicines list and review, revise, and update the infectious disease component of the standard treatment guidelines as needed in the human health sector

During this reporting period, MTaPS started introducing the WHO AWaRe classification concept to the MOH and other key stakeholders to prepare and lay the groundwork for the inclusion of AWaRe classification in the current national essential medicines list (NEML). The latest revision of the NEML has not yet been disseminated, and MTaPS is working with the DPM and WHO to coordinate efforts to include AWaRe classification prior to NEML dissemination to facilitate national AMS and AMR containment efforts.

Activity 3.5.1: Establish/strengthen DTCs to oversee implementation of AMS and IPC interventions

During this reporting period, MTaPS/DRC worked with the drug regulatory authority (DRA) and the University of Kinshasa National Pharmacovigilance Center (CNPV) to lay the groundwork for the implementation of three Drug and Therapeutics Committees (DTCs) in Kinshasa province to serve as pilot sites to support AMR interventions at the point of care. The three selected health facilities are:

- 1) The University of Kinshasa's teaching hospital (CUK), which was selected because of its high use of antimicrobial medicines, especially antibiotics, in the four main departments (internal medicine, gynecology, pediatrics, and surgery) and because, as a training institution, it may facilitate pre-service training interventions
- 2) Saint Joseph Hospital, which operates in a network with other Catholic health institutions; this network may be helpful to facilitate the DTC roll-out/scale-up phase
- 3) Monkole Hospital, a health training center that has well-organized pharmaceutical services that may be useful for the implementation of effective DTCs

For the three DTC pilot sites, seven key health care providers or champions (five at CUK, one at Saint Joseph Hospital, and one at Monkole Hospital) have been identified to play a leading role in DTC implementation in their respective health institutions. MTaPS plans to organize a meeting with these champions to introduce the DTC concept and discuss the implementation plan.

MTaPS worked with the University of Kinshasa (CNPV team) to gather all DTC documents and tools, including the training material and terms of reference. These documents and tools will be reviewed and updated to facilitate DTC implantation.

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| AMR-TWG quarterly meeting | MTaPS will support the AMR-TWG through the two established subcommittees (AMS and IPC) to develop roadmaps that help guide the implementation of AMS and IPC activities for a better AMR containment effort. | December 2019 |
| DTC implementation in three health facilities in Kinshasa | MTaPS will support the MOH to review and update documents related to DTCs in terms of structure, organization, evaluation, training curriculum, terms of reference, and mandate. MTaPS will conduct a medicine use evaluation in the three selected health facilities, train and appoint DTC members, and establish the DTCs. | October 2019 November–December 2019 |
| Include WHO AWaRe classification in the NEML | In collaboration with WHO, MTAps will provide technical and logistical support to the National Drug Regulatory Authority (NDRA) to classify the currently used antimicrobial medicines into Access, Watch, and Reserve groups to facilitate national AMS and AMR containment efforts. | November–December 2019 |
| Conduct a rapid assessment of stewardship policies and regulations governing the management of antimicrobials in the human health sector, including mapping of stakeholders involved in AMS work | MTaPS will provide support to the MOH through the NDRA/DPM and the National Medicines Procurement Program to conduct a rapid assessment and gap analysis of stewardship policies and legislation governing the management of antimicrobials in the human health sector. | October 2019 |
| Conduct a rapid assessment of antimicrobial use and consumption in the human health sector | In collaboration with WHO, MTAps will provide technical and logistical support to the DPM to conduct a rapid situational analysis to uncover the gaps and challenges that perpetuate poor adherence to rational use of antimicrobials in the human health sector. | November–December 2019 |

ETHIOPIA

MTaPS/Ethiopia goal is to support AMR containment by strengthening the capacity of in-country stakeholders to implement a national AMR action plan. To achieve this goal, MTAps/Ethiopia has supported two result areas of the AMR action package during FY19: optimize the use of antimicrobials and strengthen IPC practices by engaging the Federal Ministry of Health's (FMOH) Pharmaceuticals and Medical Equipment Directorate (PMED) and the Clinical Services Directorate (CSD); and the National Advisory Committee on Antimicrobial Resistance Containment (NACARC) as key partners.

HIGHLIGHTS FROM PROGRAM YEAR I

- MTAps provided technical support for the establishment of an AMR Prevention and Containment Coordinating Case Team within the Federal Ministry of Health (FMOH) to harmonize and coordinate activities and to identify and allocate adequate resources to support the implementation of antimicrobial resistance (AMR) prevention and containment activities.
- The terms of reference (TOR) for the National Advisory Committee for Antimicrobial Resistance and Containment (NACARC) were revised to follow WHO's sample TOR for a national multisectoral coordinating (MSC) group. The revision amends NACARC's role from an advisory committee to an MSC committee.
- Technical support was provided to the FMOH's Clinical Services Directorate (CSD) to finalize the revision of the National Infection Prevention and Control (IPC) Guidelines that were issued in 2004. The revision was made in line with the WHO recommendations. It provides both national and facility-level guidance on IPC.
- MTAps supported the identification of 25 public and 5 private hospitals for implementation of antimicrobial stewardship (AMS)/IPC. Priority was given to hospitals with microbiology testing capacity, including culture and susceptibility testing; as a result, 20 of the 30 hospitals (67%) have facilities for culture and susceptibility testing, which enables them to design and implement evidence-based AMS interventions.

QUARTER PROGRESS FOR FY19Q4

RESULT AREA I: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

MTaPS/Ethiopia supported revising the NACARC's TOR. The TOR were revised following WHO's sample TOR for a national MSC group. The revision amends NACARC's role from an advisory committee to an MSC committee. Two consultative meetings were conducted by the Pharmaceuticals and Medical Equipment Directorate (PMED) of FMOH to restructure the NACARC, following the transfer of leadership for AMR from the Ethiopian Food and Drug Administration to FMOH. According to the proposed structure, the AMR country-level governance framework for Ethiopia will comprise a high-level National Inter-Ministerial Committee, national AMR focal point (AMR Secretariat), National AMR Steering/Advisory Committee (NAC) and multisectoral technical working groups (TWGs) who will address the strategic objectives of national action plan (NAP). Members of the NAC are drawn from relevant government organizations, professional associations, and partner and international organizations in line with the One Health and multisectoral approaches. The advisory work will be done by TWGs established under the leadership of the MSC committee.

MTaPS also supported PMED's AMR stakeholder assessment of the level of engagement of government stakeholders in the prevention and containment of AMR. A report is being prepared and will be shared with stakeholders. The preliminary result of the assessment reveals that there is a weak coordination mechanism for AMR stakeholders; lack of a monitoring and evaluation framework, including indicators,

to measure progress; lack of a central reporting channel on AMR-related activities; and the absence of functional TWGs in line with the One Health approach to combat AMR.

During the quarter, MTaPS supported adaptation of the NAP-AMR to a regional action plan (RAP) in the Somali Regional State. The event was attended by 16 from federal and regional offices of human health, animal health, academia (Jigjiga University), and the regional lab. The Somali regional health bureau (RHB) was supported to adapt the NAP to the realities on the ground in the region to prevent and contain AMR. TOR for the Somali AMR regional advisory committee were drafted, the monitoring and evaluation points reviewed, and a roadmap/plan of action for implementing the RAP developed.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

MTaPS/Ethiopia supported the FMOH to develop standard operating procedures (SOPs) for alcohol-based hand rub (ABHR) preparation at the health-facility level. Access to WASH amenities is a bottleneck to practicing proper hand washing in the majority of public health facilities in Ethiopia, and when available, it is a time-consuming procedure. Alcohol-based products are convenient to use and can easily be made available at the point of care. The purpose of the SOP is to provide detailed guidance regarding the preparation, storage, and use of ABHR for standard infection control purposes in health and social care settings. In addition, MTaPS provided technical and financial support to the PMED to organize a four-day workshop to finalize production of the SOP by engaging stakeholders from FMOH, referral and university hospitals, and MTaPS; 16 professionals (15 males and 1 female) participated.

Similarly, MTaPS provided technical support to conduct an IPC assessment using the IPC assessment framework (IPCAF) tool at designated health facilities. A two-day workshop was facilitated to orient infection prevention focal persons drawn from 15 hospitals on the IPCAF self-assessment tool and to do the corresponding planning and implementation of their IPC program. At the end of the workshop, the following tasks were identified as action points: conducting IPCAF assessments in the designated 15 hospitals; reporting findings of the assessment (using reporting format); drafting an IPC plan based on the findings of the assessment; and drafting a plan for a validation workshop. Opportunities and challenges related to ABHR preparation were also discussed at this workshop.

Moreover, MTaPS provided technical and financial support to the Clinical Services Directorate (CSD) to finalize revision of the national IPC guidelines that were issued in 2004. The revision was made in line with WHO recommendations. It provides both national and facility level guidance on IPC. The guidelines are not yet approved, and MTaPS will support the printing and dissemination of the guidelines.

MTaPS also supported a TOT on IPC for 30 health professionals drawn from all regions. The CSD organized the training in collaboration with MTaPS. The 440-page training manual used in the TOT, entitled *IPC Training Resource Package*, adequately covers topics related to AMS as well. The major objective of the training was to create a pool of trainers who would cascade down trainings on IPC in preparation for the introduction of the revised IPC guidelines to health facilities.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

In the quarter, a joint work plan with the PMED was developed to harmonize activities and identify and allocate adequate resources to support the implementation of AMR prevention and containment. An AMR prevention and containment team was established within the PMED to take the coordinating role.

MTaPS provided technical and financial support to the PMED to conduct a familiarization workshop on AMS. Participants of this workshop were physicians (including infectious disease specialists), pharmacists (clinical pharmacists and DTC secretaries), and an ad-hoc AMS TWG member. In total, 53 professionals (38 males and 15 females) attended the workshop. The objective of the workshop was to introduce the concept of AMS programs at the health-facility level. The immediate outcome of the workshop was an

agreement to prepare a facility-specific draft action plan for the coming six weeks. During the workshop, orientation was given on the use of the tool Checklist for Core Elements of Hospital Antibiotic Stewardship Programs. The respective focal persons have agreed to conduct baseline assessments and share the data with FMOH/PMED within one week after return to their hospitals. The baseline assessments will help health facilities identify gaps regarding AMS and serve as input when drafting facility-specific action plans.

Technical support was provided to PMED by facilitating a six-day TOT on drug information services, including information on antibiotics for health professionals and the public. AMR and the role of drug information pharmacists in AMR prevention and containment were among the topics discussed during the training. A total of 28 pharmacists drawn from 26 federal and referral hospitals attended the training; they are expected to train pharmacists in their respective hospitals and from cluster hospitals, in addition to providing adequate information to patients when dispensing medicines.

During the quarter, 25 public and 5 private hospitals were identified in consultation with PMED, for implementation of AMS/IPC with support from MTaPS. Priority was given to hospitals with microbiology testing capacity, including culture and susceptibility testing; 20 of the 30 hospitals (67%) have facilities for culture and susceptibility testing, which enables them to design and implement evidence-based AMS interventions.

In the quarter, a continuing medical education (CME) session titled “The Role of Pharmacists in Containing the Emergence and Spread of AMR” was delivered during the 39th annual conference of the Ethiopian Pharmaceutical Association (EPA) held at African Union hall in Addis Ababa. The CME emphasized the critical roles of community and facility pharmacists in educating the public about rational drug use, promoting hygienic practices, ensuring the quality of medicines, optimizing treatment, safely disposing of leftover medicines, and collaborating with other health alliances in implementing stewardship programs.

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------|
| Support the establishment and functioning of AMS and IPC working groups, under the umbrella of NACARC | Establish TWGs, facilitate monthly working group meetings, and follow-up on their decisions | October-December 2019 |
| Support the AAU School of Pharmacy and the EPA in conducting a series of trainings on the threat of AMR and strategies for prevention and containment | Facilitate training to for journalists drawn from different media outlets | October 2019 |

JORDAN

SUMMARY OF ACTIVITIES THIS QUARTER

The USAID/Jordan Mission has designated the MTaPS Program to support efforts to contain antimicrobial resistance (AMR) by slowing the emergence of resistant bacteria and preventing the spread of resistant infections. In late August 2019, the MTaPS technical strategy lead, along with a recently hired local consultant, conducted a scoping visit to Jordan. During this visit, they met and interviewed government officials and key stakeholders, conducted field visits, and interacted with the Mission to assess AMR containment activities and plans in the country. The findings of the visit have instructed the development of the draft country work plan with the objective of improving governance for multisectoral operationalization of the national action plan on AMR (NAP-AMR).

The main planned activities are strengthening the capacity of the national steering committee, technical sub-committees, and focal point on AMR to coordinate and monitor implementation of the NAP-AMR and working with selected health facilities to pilot antimicrobial stewardship programs through national accreditation and quality certification frameworks. MTaPS submitted the draft work plan to the Mission, with a copy to the USAID COR team, for concurrence on October 4, 2019.

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------|
| Submission of final year 1 work plan for USAID COR team comments and approval | Revision based on the Mission's comments on the submitted draft | October 2019 |
| Start implementation of activities | Upon work plan approval | November 2019 |

KENYA

HIGHLIGHTS FROM PROGRAM YEAR I

- Development and dissemination of a high-level communique on antimicrobial resistance (AMR); MTaPS supported the development of a high-level brief on One Health-oriented AMR, in collaboration with the AMR secretariat, which has been disseminated in several meetings to over 700 people. These meetings include the National Antimicrobial Stewardship Interagency Committee (NASIC) inauguration and MTaPS/Infectious Disease Detection and Surveillance (IDDS) launch, World Safety Day (September 17), World Pharmacist Day (September 25), and Kenya Essential Medicines List (KEML)-related access, watch, and reserve (AWaRe) validation workshops.
- Review of terms of reference (TOR) for NASIC's four technical working groups (TWGs): advocacy and awareness, research and surveillance, infection prevention and control (IPC), and antimicrobial stewardship (AMS). The four TWGs also developed one-year action plans.
- Update of AMR stakeholder matrix
- IPC and AMS baseline assessments in Nyeri and Kisumu Counties
- Training of IPC trainers/champions (TOTs) in Kisumu and Nyeri Counties; teams comprised of four staff members from 16 health facilities; 32 and 36 TOTs were trained in Nyeri and Kisumu Counties, respectively

QUARTER PROGRESS FOR FY19Q4

RESULT AREA I: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Activity 1.1.1. Strengthen capacity of NASIC as a leadership, governance, and oversight body for One Health implementation

Sensitization of Policy Officials on AMR

MTaPS/Kenya held a joint launch of the two USAID-funded projects supporting the Global Health Security Agenda (GHSA) AMR agenda i.e. MTaPS and Infectious Disease Detection and Surveillance (IDDS) at a high-level breakfast meeting of the NASIC, held on August 29, 2019. The event was attended by over 110 participants, comprised of high-level Government of Kenya officials, including the chief administrative secretary (CAS) of the Ministry of Health (MOH); principal secretary, Ministry of Agriculture Livestock and Fisheries (MOALF); director general, MOH; director general, MOALF; Council of Governors; county executive members of health, county health management committees (CHMTs) from MTaPS and IDDS focus counties; regulators for human and animal health; professional associations; academia, research organizations, Centers for Disease Control and Prevention; USAID; FAO; and other partners.

During this meeting, Dr. Rashid Aman, (CAS-MOH), cited the need for strengthening medicines and therapeutics committees (MTCs) at national, county, and health-facility levels to enhance appropriate use of quality medicines, including AMS against the backdrop of universal health coverage.

MTaPS/Kenya supported and participated in the first World Patient Safety Day commemorations held on September 17, 2019, in Nairobi, Nyeri, and Kisumu Counties. The theme of the day was "Patient Safety: A Priority for Universal Health Coverage" with the accompanying slogan of "Speak up for the Patient;" it was aimed at creating awareness on patient safety and to urge stakeholders to show their commitment to making health care safer for patients. The national and county-based campaigns were aligned with the MOH's goal of providing quality universal health coverage.

MTaPS supported a National Infection Prevention and Control Advisory Committee meeting held on September 30, 2019. The meeting was attended by 21 officers drawn from the public and private sectors, nonprofit nongovernmental organizations, parastatal organizations, training institutions, and public hospitals.

NASIC's Terms of Reference and Action Plans

MTaPS collaborated with the AMR secretariat and hosted a workshop on July 16-17, 2019, to review NASIC's terms of reference (TOR) and develop action plans for NASIC's four TWGs (advocacy and awareness, research and surveillance, IPC, and AMS).

Monitoring and Evaluation Framework for the AMR National Action Plan

MTaPS supported the development of one-year action plans for the four NASIC TWGs aligned along the national action plan on containment of AMR. Development of a monitoring and evaluation framework for the AMR national action plan will commence during NASIC's next meeting in late 2019/early 2020.

National AMS Guidelines for Human Health

A meeting was held August 1, 2019, with various stakeholders to review the national AMS guidelines. Members were allocated various chapters to fine tune and submit ahead of the validation workshop. The validation workshop is scheduled for October 11, 2019, and will involve representatives from various counties in Kenya. The AMS guideline is to be launched during World Antibiotics Awareness Week in November 2019.

National IPC Policy and Guidelines

Revising the national IPC policy and guidelines has been transferred to the PY2 work plan and will begin in late 2019/early 2020.

High-Level Communique on AMR

MTaPS/Kenya developed a high-level communique for advocacy on AMR in collaboration with the animal and human health members of the AMR secretariat representing MOH and MOALF. MTAps disseminated the high-level One Health-oriented communique in various forums, including the high-level AMR advocacy meeting targeting Government of Kenya officials on August 29, 2019; IPC trainings in Nyeri and Kisumu Counties; World Patient Safety Day; and the KEML validation workshop.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

Activity 2.2.1. Provide technical assistance to develop a continuing professional development and re-licensure-linked in-service IPC training course for delivery through professional associations

The MTAps/Kenya team met officials of the National Nurses Association of Kenya (NNAK) and discussed the development of a continuing professional development (CPD) and re-licensure-linked in-service IPC training course for delivery through various professional associations. The MTAps/NNAK memorandum of understanding was signed and, subsequently, a meeting was held on August 26, 2019, to develop a road map for the activity. Regarding the IPC CPD e-learning platform, an initial meeting between MTAps and potential vendors was held on July 31, 2019. This sub-activity has been transferred to the PY2 work plan.

Activity 2.5.1. Support Nyeri and Kisumu Counties, sub-counties, and facility-level IPC activities

MTaPS/Kenya, in collaboration with the national AMR secretariat, supported the county health departments of Nyeri and Kisumu in conducting IPC TOTs September 2-6 and 16-20, respectively. Eight

health facilities were targeted in each county with 32 and 36 health care workers, respectively, being trained. They were pooled from laboratory, pharmacy, nursing, and clinical departments.

Both trainings aimed to build the capacity of the relevant IPC workforce with the relevant knowledge and skills required to prevent health care-associated infections and to institutionalize the IPC program, an important component in the containment of AMR. The participants undertook a pre-test and a post-test to assess the knowledge, skills, and practices of infection control among the represented health professionals. The poor performing domains in both trainings were lack of knowledge on processing equipment, health care-associated infections, and sterilization.

In Kisumu County, the mean pre-test score was 54% and post-test was 74% (gain of 20 percentage points), and the Nyeri pretest was 53.8% and post-test was 69% (gain of 15 percentage points). To apply the knowledge acquired during the TOT sessions, the participants undertook practical sessions that involved IPC audits in selected hospitals. The audit results were shared with hospital management teams for subsequent interventions at the end of the practical exercise. At the end of the IPC TOT trainings, the trained teams from the 16 facilities developed post-training action plans. MTaPS will collaborate with CHMTs in post-training follow-up interventions, supportive supervisory visits, and mentorship to promote successful implementation of county- and facility-specific IPC work plans.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1. Support development and implementation of national AMS guidelines

MTaPS/Kenya collaborated with the AMR secretariat and other stakeholders to advance the process of developing the Kenya national AMS guidelines through consultative meetings. Meetings were held in July and August to review the guidelines. A validation meeting will be held on October 11, 2019. The guidelines will be officially launched during World Antibiotic Awareness Week in November 2019.

AMS Mentorship Center– Gertrude’s Children’s Hospital

A project initiation meeting between MTaPS and Gertrude’s Children’s Hospital (GCH) was held in July 2019 and a partnership agreement developed. Subsequently, an AMS baseline assessment was conducted and the results revealed the following areas that require support:

- 1) Improved adherence to guidelines (STGs for common infections, surgical antibiotic prophylaxis, and waste management, and low reporting of health care-associated infections)
- 2) Additional AMS interventions incorporated into hospital antimicrobial use guidelines
- 3) Capacity development of clinical team leaders and AMS/MTC members on AMS practices

A detailed work plan will subsequently be developed and implementation of interventions will commence in late 2019/early 2020.

AMS Mentorship Center–Kenyatta National Hospital

A project initiation meeting between MTaPS and the Kenyatta National Hospital (KNH) has yet to be held, however, informal discussions have begun. The initial meeting is to be held in late 2019/early 2020.

Activity 3.1.2. Support revision of the KEML and classification of EML antibiotics into AWaRe categories

MTaPS offered technical and financial support to MOH’s Pharmaceutical Services Unit, national MTC, and KEML TWG to revise the KEML and classify antibiotics according to AWaRe categories. MTaPS held four meetings with MOH’s Division of Health Products and Technologies (HPT) between July and September 2019 to plan and develop a road map for reviewing the KEML and categorizing antibiotics into AWaRe groups. A consultant was recruited to coordinate the KEML review exercise with specific deliverables, including dissemination of the revised version of KEML.

As a result, MTaPS hosted two workshops on September 9-13 and 18-19, 2019, with members of the national MTC, KEML TWG, and HPT to revise the KEML. During the first workshop, the national MTC was officially inaugurated and assigned the task of overseeing review of the KEML and providing oversight of county and facility MTCs.

Activity 3.2.1. Support the University of Nairobi/School of Pharmacy (UON/SOP) in integrating AMS-related topics of practical importance into the pre-service curriculum

MTaPS/Kenya collaborated with University of Nairobi, School of Pharmacy (UON/SOP) to introduce AMS and One Health principles into the postgraduate and undergraduate pharmacy courses. MTaPS/Kenya met every fortnight with the focus team at UON/SOP to discuss, develop, and fine tune the roadmap for the activity. A training needs assessment to inform development of the scope, outline, delivery techniques, and experiential learning of the UON/SOP AMS curriculum is to be conducted. A training needs assessment questionnaire was developed and is currently being tested. Data collection using the questionnaire, analysis, and compilation of needs is to be completed by the end of October 2019. Developing the actual AMS curriculum and trainer’s guide exercises is scheduled to take place in November 2019.

Activity 3.2.2. Provide technical assistance to develop a CPD re-licensure-linked in-service AMS training course for delivery through professional associations

An initial meeting between MTaPS/Kenya and Pharmaceutical Society of Kenya (PSK) officials was held on July 31, 2019, to discuss development of AMS CPD content. A partnership agreement and work plan are yet to be developed.

Activity 3.5.1. Support Nyeri and Kisumu Counties, sub-counties, and facility-level AMS activities

The MTaPS/Kenya team held project sensitization meetings with Nyeri and Kisumu County government officials and members of the CHMTs. Subsequently, Nyeri and Kisumu AMS baseline assessments were conducted with focal teams (county, sub-county, and facility). Data analyses and reports for baseline assessments are in progress. AMS/MTC training sessions are scheduled for the first quarter of FY20 in October 2019.

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------|
| AMS/MTC trainings | Building capacity of health care workers on AMS/MTC | Third and fourth weeks of October |
| Finalization and launch of KEML categorized by AWaRe | KEML is a key medicine selection and appropriate use tool for containment of AMR | October-November |
| Finalization and launch of AMS guidelines | The guidelines will ensure appropriate use of medicines, including antimicrobials | October-November |
| Developing pre-service AMS curriculum with UON/SOP | Roll out curriculum for university students | First week of November |

MALI

HIGHLIGHTS FROM PROGRAM YEAR I

MTaPS/Mali met with key stakeholders involved in Global Health Security Agenda work to establish and strengthen collaboration. These stakeholders included the IDDS Project, Intrahealth, Farmer to Farmer, FAO, WHO, and the Directorate of Veterinary Services. The meetings were conducted to discuss activities to avoid duplication of efforts and identify areas in which MTAps could collaborate and align synergies.

MTaPS provided technical and financial support to the National Multisectoral Coordination Group on Anti-Microbial Resistance (GCMN-RAM) to organize its first quarterly meeting. This meeting included participants from key ministries (health and social affairs, agriculture, and livestock and fisheries, as well as the environment), in line with the multisectoral approach. The lack of regular communication among group members was clearly recognized. Therefore, regular quarterly meetings will allow MTAps to address this challenge and encourage ownership of activities that will be implemented by the GCMN-RAM with MTAps' support. It was also decided that these representatives from key ministries will follow up on any documents and messages sent to their respective ministry about the GCMN-RAM's activities.

QUARTER PROGRESS FOR FY19Q4

RESULT AREA I: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

MTaPS supported the GCMN-RAM to hold its quarterly meeting on September 26, 2019. Participants included representatives from 10 government institutions and several NGOs and implementing partners. The meeting focused on presenting the MTAps project, validating the MTAps activity implementation plan, sharing the status of the NAP-AMR political validation and next steps, and presenting the National RAM Surveillance Strategy. The following key points were discussed during the meeting:

- The institutional link between the GCMN-RAM and the One Health platform
- Difficulties related to the political validation of the NAP-AMR
- Training of health workers on the rational prescription of antibiotics
- Review of the 2016 IPC guidelines
- Participation of members of the multisectoral coordination group in sub-regional and international congresses

It has been noted that the GCMN and its IPC and AMS technical working groups (TWGs) have no terms of reference. The participants of the meeting made the following recommendations:

- Develop terms of reference for the GCMN-RAM and TWGs
- Accelerate the political validation and adoption of the NAP-AMR
- Meet with the IPC and AMS TWGs to share and discuss IPC and AMS activities supported by MTAps

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Activity 1.1.1: Provide technical and operational support to the National Multisectoral Coordination Group (GCMN-RAM), including the organization of quarterly meetings of the GCMN-RAM and its IPC and AMS TWGs | Provide technical and logistical support to the organization of quarterly GCMN-RAM meetings to review NAP-AMR activities supporting the IHR-2005 | December 2019 |
| | Work with two of the six GCMN-RAM TWGs—AMS and IPC—to support related interventions | October 2019 |
| Activity 1.1.2: Facilitate collaboration and a biannual one-day joint learning workshop between animal and human health sector professionals to enhance implementation of health regulations, guidelines, and policies governing IPC and antimicrobial use | Provide technical and logistical support to facilitate the organization of the biannual workshop | December 20, 2019 |
| | Support the AMR and TWG focal points to prepare reports and presentations for these meetings | |
| Activity 2.1.1: Strengthen IPC programming at the central and peripheral levels | Conduct a rapid assessment of practices in the animal health sector | October–December 2019 |
| | Produce an implementation/dissemination toolkit for IPC guidelines for human health with feedback from local subject matter experts and in collaboration with the GCMN-RAM | |
| Activity 3.1.1: Strengthen AMS | Conduct a rapid assessment of stewardship policies and regulations and of supply chain management of antimicrobials in the human health sector | October–December 2019 |
| | Develop a national action plan for AMS and AMS guidelines in the human sector | |
| | Assist the DPM and GCMN-RAM with grouping essential medicines list antibiotics into AWaRe categories | |

MOZAMBIQUE

HIGHLIGHTS FROM PROGRAM YEAR I

The technical report by the MTaPS consultant from the International Law Institute-Africa Centre for Legal Excellence (ILI-ACLE), who reviewed the current pharmaceutical legislative framework of the Directorate of Pharmacy (DNF), was finalized. This report informs MTaPS' strategy for supporting the DNF legal team in drafting the internal regulations required for set up of Autoridade Nacional Reguladora de Medicamentos de Mozambique (ANARME), the semi-autonomous national medicines regulatory authority.

In Q2, MTaPS provided technical support to the DNF to plan and execute the ZAZIBONA (regional collaboration in medicines evaluation and registration) workshop in Maputo, Mozambique, March 18–22, 2019. In Q3, MTaPS funded participation of an additional DNF medicines registration pharmacist to the next session of the joint ZAZIBONA dossier evaluation workshop in Botswana June 17–22, 2019.

A demo version of the improved Pharmadex that was recently developed by MTaPS was provided to the DNF registration team for their review and feedback, including ascertaining that all requested changes had been made.

With technical assistance from MTaPS, the protocol and informed consent forms for ethical approval of the active tenofovir disoproxil fumarate, lamivudine, and dolutegravir (TLD) patient safety monitoring program were finalized, translated from English to Portuguese, and submitted it to the MOH's Ethics Review Committee for ethical clearance.

MTaPS learned that information on the adverse events experienced by drug-resistant TB (DR-TB) patients is shared with the national PV program using a yellow form. Importantly, these data should be analyzed and used to guideline clinical and programmatic decisions of the DR-TB program.

MTaPS worked with the Hospital Pharmacy Department (HPD) of the MOH to develop detailed sub-activities and an implementation plan for supporting implementation of the national plan on antimicrobial resistance (AMR) containment, focusing on promoting infection prevention and control and antimicrobial stewardship among health care workers. The HPD identified seven provincial hospitals across the country (Pemba, Lichinga, Chimoio, Tete, Inhambane, Xai, and Matola) for MTaPS to focus on in promoting antimicrobial stewardship programs.

QUARTER PROGRESS FOR FY19Q4

OBJECTIVE I: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

Activity 1.1.1: Assist developing medicine registration regulations for the new medicines act

MTaPS held clarifying discussions with the DNF and received further input that was required to finalize the technical report of the consultancy by ILI-ACLE, whose first draft was compiled in Q3. These follow-up discussions were crucial to cross-check and validate the status of the regulations that have been or are being developed by the NDF. The final technical report with recommendations will be submitted to the Mission and DNF in October 2019. In addition, a scope of work has been developed to engage a legal consultant highly conversant in pharmaceutical regulations to support mentorship of the DNF legal team in drafting the internal regulations required for set up of ANARME.

OBJECTIVE 2: INSTITUTIONAL AND HUMAN RESOURCE CAPACITY FOR PHARMACEUTICAL MANAGEMENT AND SERVICES INCREASED, INCLUDING REGULATION OF MEDICAL PRODUCTS

Activity 2.1.1: Enhance functions of the electronic medicines registration tool (Pharmadex) and its interoperability with other systems

MTaPS continued working with the Pharmadex programmer to make the changes in Pharmadex and worked with the DNF team to test the changes before online deployment. The program worked with the DNF to ensure the documented step-wise procedure for medicines registration is compliant with national regulations and international best practices.

Activity 2.1.3: Support DNF to develop a QMS

MTaPS continued consulting with the DNF to identify and plan for areas of support for the development of a quality management system (QMS) for the DNF, taking into consideration ongoing support of WHO and the Global Fund. These discussions culminated in a DNF request to MTAps for technical assistance in addressing some of the critical gaps that were identified in the assessment of the DNF regulatory capacity using the WHO Global Benchmarking Tool (WHO-GBT). Based on the WHO-GBT assessment, the DNF formulated an institutional development plan to address identified capacity gaps. In line with this, the DNF has specifically requested MTAps' technical assistance in implementing the QMS training program, mapping DNF processes, and designing and implementing a complaints management and client satisfaction system.

Activity 3.1.1: Implement active PV of DTG, other ARVs, and anti-TB medicines and mitigate safety risks

Pending ethical clearance, MTAps continues to work with the DNF and the HIV program to prepare the training for health care workers at health facilities on the protocol and tools for conducting active dolutegravir, lamivudine, and TLD surveillance. These include developing and customizing training materials; identifying participants, venue, dates, and trainers; and developing/translating training materials.

In addition, MTAps held discussions with the DR-TB program at the MOH on how data from the active TB drug safety monitoring program can be shared with the national pharmacovigilance center at the DNF.

Activity 3.2.1: Support antimicrobial resistance initiatives

There is a database at the HPD that collects data from facilities that can be analyzed to evaluate the prescribing and dispensing of antibiotics. MTAps agreed to work with the HPD to build the capacity of pharmacy staff and other health care workers in hospitals to carry out routine medicines use review activities and includes reviewing the use of antibiotics.

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|--------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------|
| Preparations for implementing the active surveillance activity once ethical clearance is secured | Finalize development and translation of training materials | October-November 2019 |
| Test improvements to Pharmadex and prepare for online deployment | Hire an IT company to assist with reconfiguring and setting up the online version of Pharmadex | October 2019 |
| Continue preparations for training on antimicrobial stewardship | Finalize development and translation of training materials and conduct training | First week of November 2019 |
| Collection of baseline data for MTaPS performance indicators | Collect data for the Mozambique-specific performance monitoring plan for MTaPS | October 20–26, 2019 |

NEPAL

HIGHLIGHTS FROM PROGRAM YEAR I

Based on the statement of work developed by the USAID Nepal Mission, the home office-based MTaPS team conducted a scoping visit to Nepal in May 2019. During the scoping visit, the team met the USAID team in Nepal and stakeholders, especially the Department of Drug Administration (DDA), Ministry of Health and Population (MOHP), Nepal Pharmacy Council, pharmaceutical industries association, etc. The MTaPS team also had a consultative workshop with DDA to discuss and agree on priority areas of regulatory systems strengthening work, including tentative initial activities to be incorporated into the work plan. After work plan approval for the period July 16, 2019-September 30, 2020 (covers both years 1 and 2), one of the key activities, “an interim external Global Benchmarking Tool (GBT) assessment,” was conducted in joint collaboration with the WHO team to strengthen the regulatory capacity of DDA.

QUARTER PROGRESS FOR FY19Q4

OBJECTIVE 1: PHARMACEUTICAL SECTOR GOVERNANCE STRENGTHENED

During the scoping visit in May 2019, the MTaPS team conducted a quick review and identified a number of important provisions to consider for inclusion in the current draft amendments to the Drug Act. MTaPS and one of its core partners, the International Law Institute Uganda-African Center for Legal Excellence (ILI-ACLE), jointly developed the scope of work (SOW) to work with the DDA and key stakeholders to identify current gaps in the draft amendment to the Drug Act (based on proposed provisions) and to suggest regulations needed to implement the revised Drug Act. The SOW also includes a review of the existing organizational structure of DDA and proposal of a new structure considering the decentralized model and its role in stewardship, coordination, oversight, and enforcement.

OBJECTIVE 2: INSTITUTIONAL AND HUMAN RESOURCE CAPACITY TO REGULATE MEDICINES, FAMILY PLANNING COMMODITIES, AND HEALTH TECHNOLOGIES INCREASED

To strengthen regulatory capacity the DDA, MTaPS planned to conduct interim external GBT assessment in joint collaboration with WHO to assist the DDA in updating the institutional development plan (IDP) and developing a five-year strategic plan. During August 2019, the MTaPS principal technical advisor collaborated with a team from the WHO Geneva, South East Asia, and Nepal offices to assist the DDA in updating the self-assessment of its regulatory functions for medicines and vaccines that was done in mid-2017. The joint assessment Mission identified critical areas to assist the DDA in moving to the next maturity level on the GBT and developed a road map to support the DDA in preparing for the formal benchmarking.

OBJECTIVE 3: AVAILABILITY AND USE OF PHARMACEUTICAL INFORMATION FOR DECISION MAKING INCREASED, AND GLOBAL LEARNING AGENDA ADVANCED

The MTaPS home office team started developing the SOW to engage a private-sector IT firm to outsource either the customization of an existing system or the design and development of a new one.

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Conduct interim external GBT assessment in collaboration with WHO and assist DDA in updating the IDP and developing a five-year strategic plan | MTaPS to discuss with WHO HQ and clarify its role in the formal benchmarking exercise before the exercise is conducted at the end of the calendar year MTaPS to discuss with DDA, WHO, and other partners the modalities for setting up the coalition of interested partners or regulatory TWG for Nepal | November–December 2019 |
| Review draft amendments to the Drug Act and map and assess current rules and codes | ILI-ACLE will provide support to review draft amendments to the Drug Act and initiate stakeholder consultations to provide recommendations on suggested rules, codes, and legislative framework for DDA ILI-ACLE will start working with MOHP and DDA to review the organizational structure, taking into account the decentralization policy | October–December 2019 |
| Assist DDA in developing a quality management system | Finalize the SOW and engage MTAps partners or consultant to conduct a situation analysis to identify gaps and opportunities for improvement | October–December 2019 |
| Collection of baseline data for MTAps performance indicators | Collect data for the Mozambique-specific performance monitoring plan for MTAps | October 20–26 |

THE PHILIPPINES

In line with the MTaPS global objectives, the MTaPS/Philippines program aims to establish and institutionalize an integrated health supply chain and pharmaceutical management system to ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable essential medicines, vaccines, and other health technologies and pharmaceutical services. To reach this goal, MTaPS/Philippines provides technical assistance and capacity building support to the Department of Health (DOH) to achieve two objectives:

- 1) Institutionalize an integrated and effective procurement and supply chain management (PSCM) system for TB, family planning (FP), and other health program commodities
- 2) Establish a fully functional pharmacovigilance (PV) system and improve pharmaceutical services to ensure patient safety and rational use of health commodities

HIGHLIGHTS FROM PROGRAM YEAR I

During FY19, MTaPS supported the DOH on the above-mentioned objectives and achieved the following:

- Conducted a diagnosis of the PSCM and PV landscape to identify gaps and key areas of intervention
- Developed a three-year National Strategic Plan (NSP) for PSCM
- Identified and incorporated PSCM components in the implementing rules and regulations (IRR) of the UHC Act
- Designed guidelines and implementation modalities for a procurement framework agreement
- Developed a plan and monitored transition of procurement and financing of second-line TB medicines from the Global Fund to the Government of the Philippines as the funding source
- Conducted national quantification to develop three-year quantity and budget requirements for TB and FP commodities
- Defined high-level requirements for an end-to-end electronic logistics management information system (eLMIS) to identify fit-for-purpose software
- Developed key performance indicators for monitoring PSCM performance
- Reviewed and finalized a warehouse operations manual and used available supply chain data for making evidence-based decisions regarding distribution of TB and FP commodities to health facilities
- In consensus with the Undersecretary of the Health of Health Regulation Team, Officer in Charge of the FDA, and Heads of the FDA and the DOH's Pharmaceutical Division (PD), reached agreement on areas for PV support. Three main PV activities took place during the first year of the program: a rapid PV system diagnostics; engagement with local academic institutions identified for partnering with international academic institutions; and support to the DOH for the design and planning of a knowledge, attitude, and practices (KAP) assessment among health practitioners.

National Strategic Plan for PSCM

Starting in November 2018, MTaPS worked with the DOH to conduct a rapid diagnostic assessment of the PSCM and PV systems and engaged in a national participatory and consultative process to support the DOH in developing a three-year NSP for PSCM strengthening. MTaPS organized and facilitated a national strategic planning workshop in February 2019, followed by a national consultation workshop in May 2019, and supported the DOH to draft, review, and finalize the NSP and its implementation plan. The NSP is now ready to be presented to the highest policy approval body of the DOH Executive Committee (ExeCom) in October, with a planned launch in November 2019 through a national PSCM consultative workshop. Once approved, the Philippines will be one of few countries with a fully developed NSP for PSCM.

Strengthening PSCM Governance Mechanism

Following up on MTaPS predecessor program's (SIAPS) activity to successfully advocate for establishing a PSCM team (PSCMT) under the leadership of an undersecretary, MTaPS continued to work with the leadership of the PSCMT to clarify their roles, enhance their capacity, and enable their confidence and willingness to take full ownership of the PSCM cycle—from product selection to ensuring rationale use of commodities from the central to the rural health unit level. MTaPS conducted six learning sessions and held frequent meetings and brainstorming sessions with DOH senior officials and technical officers to help them manage changes and make informed decisions. These sessions and meetings helped formulate and incorporate PSCM components into the IRR of the UHC law and initiated several reforms, including adapting a framework agreement as a procurement mechanism. The PSCMT is now fully functional and got approval for 32 additional staff for 2020 and another 37 staff for 2021.

Mobilizing Support for eLMIS

MTaPS supported the DOH to move away from a plan to procure a standalone inventory management system in favour of a fully integrated, end-to-end eLMIS, which will be interoperable with other information management systems to provide a state-of-the-art PSCM logistics and information management solution. MTaPS conducted a learning session on eLMIS with the DOH, advocated for internationally agreed target eLMIS standards, and organized an international expo for inviting and showcasing readily available and fully compliant eLMIS solutions in the international market. The DOH accepted the advocated eLMIS standards, allocated its own resources, and decided to procure and deploy an off-the-shelf eLMIS solution with capability to integrate with GSI barcode systems. In addition to organizing an international expo, MTaPS supported the DOH to develop terms of reference (TOR) to identify functional and non-functional requirements for the procurement of the eLMIS. Once the eLMIS is procured and deployed, the Philippines will be among the first of the lower- and lower-middle income countries to utilize its own budget to procure and deploy such a large-scale eLMIS solution for health commodities country-wide. MTaPS will continue to support the DOH in eLMIS project implementation and business process alignment for smooth functioning and data use for PSCM decisions.

Designing a Family Planning Commodity Management Process

Due to the government's decision to have the DOH and an independent Population Commission (POPCOM) co-manage the FP program, the roles of FP commodity management have often been overlapping and confusing. At the request of the DOH FP program, MTaPS took part in the FP Logistics Technical Working Group (TWG) and engaged with the DOH FP program and POPCOM to clarify and design an FP commodity management system based on the strengths and mandates of the DOH and POPCOM. MTaPS facilitated joint workshops with the DOH FP program and POPCOM and conducted a number of meetings with both parties. It was found that the DOH had been struggling with inadequate warehouse space at the regional level, whereas POPCOM has underutilized warehouses in all regions. Through facilitation by MTaPS, the DOH agreed to utilize POPCOM warehouses and staffing for storing and distributing FP commodities from regions to the rural health unit level. While the DOH will be procuring all FP commodities for the country, it was agreed that POPCOM will take part in product selection and quantification with the DOH and will conduct the last mile delivery of FP commodities, including outreach to the community. Moving forward, MTaPS will be technically assisting POPCOM in renovating its warehouses and developing a workforce for warehouse management and subnational-level supply chain management systems for FP commodities.

Conducting National Quantification for TB and FP Commodities

TB and FP programs in the Philippines suffer from a lack of systematic, multiyear quantification, resulting in erratic procurement with implications for stock-outs and expiry of products. MTaPS supported the DOH to conduct a three-year quantification of FP and TB commodities. The results of the quantification informed three-year quantity and budget requirements and resource gaps. MTaPS also supported the

DOH to develop TOR for a Quantification TWG and provided orientation to proposed TWG members to develop their capacity and institutionalize a regular practice of quantification led by the PSCMT for national programs and other DOH units.

QUARTER PROGRESS FOR FY19Q4

OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

MTaPS continued to work with the DOH in finalizing the NSP for PSCM. MTAps assisted the PSCMT in drafting the Administrative Order (AO), preparing the presentation to the ExeCom, and documenting the national consultation process for NSP development. The NSP will be presented to the ExeCom in October 2019. In previous quarters, MTAps assisted the PSCMT to incorporate PSCM components into the UHC IRR; after the initial draft of the PSCM was incorporated, during this quarter MTAps provided final review and input for the UHC IRR aligned with the UHC Act and the NSP for PSCM. To facilitate coordination and institutionalization of the quantification function, MTAps developed TOR with clear roles and responsibilities and provided orientation for the establishment of the Quantification TWG through the leadership of the PSCMT and involving all health programs.

OBJECTIVE 2: INSTITUTIONAL AND HUMAN RESOURCE CAPACITY FOR PHARMACEUTICAL MANAGEMENT AND SERVICES INCREASED, INCLUDING REGULATION OF MEDICAL PRODUCTS

During this quarter, MTAps assisted the DOH's Procurement Service in adapting a procurement Framework Agreement guideline for a multiyear obligatory authority procurement mechanism to address current procurement bottlenecks related to a rigid, fixed quantity and fiscal year-based procurement method. MTAps conducted a series of consultative workshops and meetings with stakeholders, and the AO to endorse the guideline was prepared and submitted and is awaiting final feedback from all stakeholders.

MTaPS also conducted various advocacy and change management activities for PSCMT capacity development. MTAps is supporting the PSCMT in developing job descriptions and position requirements for hiring those staff and will provide orientation and capacity building support to the newly recruited staff under the PSCMT.

From August 14 to 21, 2019, MTAps interviewed six Schools/Colleges of Pharmacy in the Metro Manila area: Adamson University, Our Lady of Fatima University, Philippine Women's University, University of Makati, University of Santo Tomas, and University of the Philippines. This activity marks the first step toward fostering partnership arrangements between local and international institutions as a means to implement long-term institutional capacity development interventions and achieve sustainable improvements. Moreover, this activity is one of MTAps' capacity building strategies designed to strengthen the Philippines PV system. Since all six institutions expressed interest in engaging with an international partner to help build their pre-service and support the DOH's in-service capacity development in PV and patient safety, MTAps is considering a phased approach for engaging the local institutions. Collaboration with the University of Washington (UW) will serve as model for this type of agreement. During the next quarter, UW expects to formally engage with one or two schools and put memoranda of understanding in place to develop the schools' institutional capacity for addressing the DOH's PV capacity building needs.

OBJECTIVE 3: AVAILABILITY AND USE OF PHARMACEUTICAL INFORMATION FOR DECISION MAKING INCREASED AND GLOBAL LEARNING AGENDA ADVANCED

In supporting the DOH to make an informed decision for procuring and deploying a state-of-the-art, end-to-end eLMIS solution, MTAps organized an international expo for eLMIS solution providers. During

the expo, high-level requirements for eLMIS solutions were communicated to solution providers. Solution providers who participated in the expo demonstrated their products. The outcome from the expo was used to conduct a market analysis and develop TOR for the procurement of an eLMIS solution. The eLMIS procurement process is expected to be completed by the beginning of 2020.

In addition, MTaPS supported the DOH in analyzing and using data generated through existing systems, such as the pharmaceutical management information system and integrated TB information systems, for quantification and distribution allocation decision making.

OBJECTIVE 4: PHARMACEUTICAL-SECTOR FINANCING, INCLUDING RESOURCE ALLOCATION AND USE, OPTIMIZED

MTaPS has been supporting the DOH in identifying and allocating required resources for PSCM through the NSP implementation plan. MTaPS is also advocating for leveraging private-sector capacity in the country to outsource some components of the PSCM to the private sector. Leveraging private-sector capacity for increasing efficiency of PSCM has been adopted as one of the strategies in the NSP. In addition, MTaPS conducted a gap analysis for TB medicines and GeneXpert machine financing by estimating the quantity and budget requirements for three years compared to the current budget commitments of the government and donors.

OBJECTIVE 5: PHARMACEUTICAL SERVICES, INCLUDING PRODUCT AVAILABILITY AND PATIENT-CENTERED CARE TO ACHIEVE DESIRED HEALTH OUTCOMES, IMPROVED

During this quarter, MTaPS conducted a national quantification exercise for TB and FP commodities for 2019 to 2022 to inform resource allocation and procurement requirements. In addition, MTaPS supported the DOH in finalizing and rolling out a warehouse operations manual and developed and used an evidence-based tool to guide rational allocation and distribution of commodities to address stock imbalances at the health facility level. To support the rational use of medicines, MTaPS advocated the PD to train public health pharmacists and expand their role in ensuring rationale use of commodities, good storage practice, PV, and antimicrobial resistance monitoring at the health facility level.

| ACTIVITIES FOR NEXT QUARTER | | |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| ACTIVITY | DESCRIPTION | DATES |
| M&E baseline assessment | Conduct baseline assessment for the MTaPS and NSP M&E indicators | October 7–21, 2019 |
| Gender assessment | Conduct gender analysis for PSCM related to TB and FP commodities | November 3–23, 2019 |
| AMR scoping study | Conduct scoping study to assess current status of AMR containment and monitoring practices and identify gaps and priority interventions | November–December 2019 |
| PV KAP study | Complete data collection, conduct analysis, and share report on the PV KAP study | October–December 2019 |
| Launching of NSP for PSCM | Approval and launching of NSP through a national consultative workshop | November 25–26, 2019 |

RWANDA

MTaPS/Rwanda supports the country's quality improvement in the development of standards for pharmacy services to accelerate the accreditation system; policy issues to support medicine registration, the regulatory framework, combating antimicrobial resistance (AMR), treatment protocols, and essential medicine listing and monitoring (including for maternal, newborn, and child health); and improving the establishment and function of hospital drug and therapeutic committees (DTCs).

HIGHLIGHTS FROM PROGRAM YEAR I

Once the country team was set up, MTAaPS embarked on providing technical assistance to the Rwanda Food and Drugs Authority (FDA) to improve their regulatory system and raise the maturity level of the Rwanda FDA from a score of 1 to 3. Based on the gaps identified in the assessment using the WHO Global Benchmarking Tool (GBT) in September 2018, MTAaPS supported mapping Rwanda's FDA regulations and guidelines to determine the status of the guidance documents and ensure they are in place for effective governance. MTAaPS worked to revive the electronic Pharmaceutical Regulatory Information Management System (PRIMS) through dialogue with the system developer. Work is still in progress to set up the inactive modules of PRIMS.

QUARTER PROGRESS FOR FY19Q4

OBJECTIVE 1: IMPROVE PHARMACEUTICAL-SECTOR GOVERNANCE

On the invitation of Rwanda FDA, MTAaPS participated in the workshop that validated regulations/guidelines for operationalization of the medicines regulatory authority. The workshop involved Rwanda FDA staff from product registration and inspection and pharmacovigilance departments and was organized by GHSC-PSM. In this workshop, the MTAaPS country team offered technical assistance to validate the following regulations and guidelines:

- Guidelines for variations of registered pharmaceutical products
- Guidelines for registration of biosimilar pharmaceutical products
- Guidelines for the registration of generic Pharmaceutical products
- Rwanda FDA service fees

Next steps will involve external stakeholder consultation for wider input, feedback, and validation, prior to approval and subsequent implementation by Rwanda FDA. MTAaPS will continue to provide technical support in drafting and developing pending regulations and guidelines and mapping pending documents in line with the institutional development plan of Rwanda FDA.

OBJECTIVE 2: STRENGTHEN GOVERNMENT CAPACITY TO MANAGE PHARMACEUTICAL SYSTEMS

Rwanda FDA is in the process of implementing PRIMS for key regulatory functions. However, PRIMS is not fully operational. During this quarter, MTAaPS mediated and helped revive the collaboration between Rwanda FDA and Trademark East Africa (TMEA), the developer of PRIMS. As a result of this intervention, TMEA deployed an IT expert to spearhead operationalization of the dormant PRIMS modules to make it fully functional.

The MTAaPS team also worked with Rwanda FDA to develop the standard operating procedures (SOPs) for the currently operational module of PRIMS (import and export) so that users can process and manage the import/export function and activities in a systematic way and for easy training on these modules for new users.

MTaPS' information systems experts are continuing working with TMEA and the Rwanda FDA IT team to activate the remaining PRIMs modules, including product registration and variations and licenses for pharmaceutical premises. Further, MTAps is assisting Rwanda FDA to establish a more structured quality management system (QMS) for effective delivery of regulatory services.

OBJECTIVE 3: STRENGTHEN SYSTEMS FOR PROVIDING PATIENT-CENTERED PHARMACEUTICAL CARE AND SERVICES

Currently, the Ministry of Health (MOH) in Rwanda has well-established clinical care standards across all health care facilities. However, pharmaceutical care standards are not yet well defined.

MTaPS worked with the MOH, Rwanda FDA, and the Pharmacy Council to begin developing pharmaceutical care standards for both the public and private sectors. MTAps has engaged a local consultant to lead this exercise. The country team and the consultant met key stakeholders and gathered their input; the consultant is currently drafting the standards in preparation for stakeholder consultations. It is expected that this activity will be completed by the end of next quarter.

In addition, the MOH requested that MTAps provide support to strengthen the Pharmacy Unit in the MOH to capacitate it to carry out its policy formulation and pharmaceutical sector oversight role, as stipulated in the National Pharmacy Policy.

The consultant is mapping the current roles of the Pharmacy Unit staff, is reviewing the existing structure, and will make recommendations for making the Pharmacy Unit more effective.

| ACTIVITIES FOR NEXT QUARTER | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| ACTIVITY | DESCRIPTION | DATES |
| Activity 1.1.1. Strategic plan, regulations and guidelines on medicine regulation for Rwanda FDA updated and developed | Support Rwanda FDA in finalizing the strategic plan; continue working on pending regulations and guidelines | October-December 2019 |
| Activity 2.2.1. Support Rwanda FDA in developing a QMS and establishing an effective inspection and licensing system | Review existing QMS and provide technical assistance to build a robust QMS; MTAps plans to use country team and an external consultant for this activity | October-December 2019 |
| Activity 2.2.2. Use of electronic tools for pharmaceutical regulatory data management and decision making strengthened | PRIMS was designed and donated by a third party to Rwanda FDA; we managed to bring back the system developer to activate the remaining modules; MTAps IS team will provide technical assistance to Rwanda FDA and the TMEA IT expert to fully operationalize PRIMs | October-December 2019 |
| Activity 3.1.1. Reporting adverse drug reactions using the spontaneous reporting system strengthened and using safety data for managing patients improved | Support Rwanda FDA to develop pharmacovigilance training and reporting tools; hold a workshop to train trainers; support Rwanda to establish PViMS and link it with the regulatory information management system | October-December 2019 |

SENEGAL

HIGHLIGHTS FROM PROGRAM YEAR I

MTaPS completed the IPC baseline assessment using IPCAF in two of the three selected hospitals for year 1: Tivaouane district hospital, August 28-30, and St. Jean de Dieu hospital in Thies, September 23-25. For each hospital, 25 staff members, including 18 members of the infection control committee and the heads of different hospital departments, participated in the assessment and worked together to draft an action plan at the end of the assessment workshop. The two hospitals' infection control committees finalized and shared their action plan with the Ministry of Health and Social Welfare's (MOHSW) directorates (DGES/DQS2H/DEPuS/DEPrS⁴). MTaPS is working with the MOHSW and hospitals to plan agreed priority activities, including training on and implementation of a multimodal approach and steps, continued quality improvement (CQI), and routine monitoring of progress based on data from regular measurements.

MTaPS supported the National Committee on Antibiotic Therapy (NCAT) to hold meetings for four technical working groups (TWGs) to revise standard treatment guidelines (STGs) from 2009 on antibiotic therapy. The four TWGs represent antibiotic therapy policy, antibiotic therapy for adults and children, community infections, antibiotic therapy of health care-associated infections, and antibiotic prophylaxis. MTaPS successfully advocated for integrating World Health Organization (WHO) recommended AWaRe (access, watch, reserve) categories into the STGs to improve antimicrobial stewardship (AMS) practices. During the meeting on September 4, MTaPS raised awareness of and provided tools to NCAT members on WHO's AWaRe categorization for rational use of antibiotics and the steps needed to integrate it into AMS practices and STGs. MTaPS is working with the TWGs to produce content for the updated STGs for the validation workshop, expected by the end of November 2019.

In addition to the overall startup delay, MTaPS encountered the following challenges

The MOHSW's restructuring process that started in July offered hope that advancing the antimicrobial resistance/IPC agenda in the newly created directorates, including DQS2H, would become a higher priority. However, DQS2H is still struggling to operate due to lack of sufficient and qualified human resources (HR). The delay in appointing the latter has contributed to the lack of progress in implementing MTaPS' activities.

Despite the above challenges, MTaPS staff commitment helped advancing the implementation of project activities, including mobilizing their personal resources and being reimbursed afterwards to avoid the cycle of postponing and rescheduling priority activities.

⁴ Direction Générale des Etablissement de Santé (DGES); Direction de la Qualité, de la Sécurité et de l'Hygiène Hospitalière (DQS2H); Direction des Etablissements Publics de Santé (DEPuS), Direction des Etablissements Privés de Santé (DEPrS)

QUARTER PROGRESS FOR FY19Q4

RESULT AREA 2: IPC POLICIES AND PRACTICES STRENGTHENED

2.3.1 Conduct a baseline assessment in three targeted hospitals (one each tertiary, regional, and district) with MOHSW, based on agreed criteria

Following a joint field visit of targeted hospitals on July 26 and 30, MTaPS and the PRONALIN team confirmed the final selection of the three hospitals: Mame Abdoul Aziz hospital in Tivaouane (level 1 hospital), St. Jean de Dieu hospital in Thies (private, considered a level 2 hospital), and General Hospital of Grand Yoff in Dakar (level 3 hospital).

MTaPS collaborated with MOHSW to conduct the three-day IPC baseline assessment workshop using IPCAF at Tivaouane district hospital (August 28-30) and St. Jean de Dieu hospital in Thies (September 23-25) as detailed in the highlights section.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

3.1.1. Provide technical and financial support for meetings and workshops to develop the national AMS strategy/plan, including completing the ongoing revision of the policy and STGs on antibiotic therapy

On July 11-25, MTaPS provided technical support to the meetings of the four TWGs⁵ of NCAT. Each group reviewed the STG document related to its group theme; identified areas using evidence-based information from reliable, scientific local and international sources; and proposed recommendations that take into account feasibility in the local context. During the meetings, MTaPS provided information on WHO's AWaRe categorization of antibiotics.

On July 30, with support from PATH/CDC, NCAT organized a plenary meeting discussion on the report presented by each of the four sub-technical groups on proposed updates and recommendations that consider feasibility in the local context. MTaPS emphasized the need to include the WHO recommended AWaRe categorization of antibiotics, which reduces antimicrobial resistance by using antibiotic therapy appropriately.

Following the plenary meeting, MTaPS started preparing the workshop planned for September 3 and 4 to finalize the antibiotic therapy policy and STGs. At the same time, the MOHSW explored possibilities for additional funding in anticipation an increasing number of participants. WHO has agreed to provide financial and technical contributions to the NCAT workshop to complement MTaPS's support, given that NCAT can postpone the workshop to allow them enough time to mobilize the needed resources. MTaPS supported NCAT in organizing a one-day technical meeting on September 4. MTaPS led the orientation of NCAT's members using the French version of WHO's slides on integrating AWaRe categorization for rational use of antibiotics into the policy and STGs prior to finalizing them. At the end of the one-day technical meeting, NCAT decided to reschedule the workshop for finalizing the antibiotic therapy policy and STGs till end of November 2019 to have the four sub-groups produce their advanced draft, incorporating WHO's AWaRe categorization and presenting during the next NCAT plenary meeting (late October 2019).

⁵ Sub-technical groups' themes: antibiotic therapy policy, community antibiotic therapy of adults and children, community infections, antibiotic therapy of health care-associated infections, and antibiotic prophylaxis.

3.2.1. In close collaboration with USAID HRH2030, conduct meetings with MOHSW (General Secretary, HR Directorate, and Informatics Unit) and other stakeholders to secure buy-in to include IPC and AMS in the Ministry’s e-learning platform

The In-service Training Department of the MOHSW’s HR Directorate organized a meeting to go over the roadmap to introduce IPC modules into the e-learning platform. At the end of the meeting attended by the MOH’s Informatics Unit, DQS2H, and MTaPS, it was agreed that a workshop has to be organized to customize (stabilize) the IPC modules before uploading them into an e-learning format. The Informatics Unit organized and funded a three-day workshop with other MOH departments and implementing partners on September 26-28, 2019. The workshop was an opportunity for the In-service Training Department and Informatics Unit to provide an orientation session on the e-learning platform and to advocate for all stakeholders to use and disseminate it while contributing to improving it. The stabilization was about clearly defining the objectives of the modules, selecting the content and the content format (pdf, Word, PowerPoint) and outlining the sections for each module. At the end of the workshop, two IPC modules were customized. The In-service Training Department and Informatics Unit will agree on the tentative schedule to be confirmed after consultation with MTaPS and other stakeholders to organize a second workshop to customize the remaining IPC modules.

Implementation challenges

The newly created General Directorate of Health Facilities and its three sub-directorates (DQS2H, DEPuS, and DEPrS) do not have sufficient qualified and experienced technical staff, which slows implementation of MTaPS’ activities. MTaPS will engage with USAID HSS+ and HRH2030 to explore the feasibility of providing HR support for an interim period based on their experience, especially to DQS2H in charge of IPC and CQI activities.

| ACTIVITIES FOR NEXT QUARTER | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| ACTIVITY | DESCRIPTION | DATES |
| Provide technical and financial support to the MOHSW DQS2H/DEP to conduct baseline assessment in one hospital and monitor implementation of the three hospitals’ action plans from the baseline assessment | Provide technical and financial support to MOHSW to organize a three-day workshop at the General Hospital of Grand Yoff in Dakar to conduct the baseline assessment using the WHO IPCAF | October 29-31, 2019 |
| | Support the agreed priority activities of the three hospitals’ action plans from the baseline assessment, including CQI, training and implementation of multimodal approach and steps, and routine monitoring of progress based on data from regular measurements | By December 31, 2019 |
| Support NCAT in developing the national AMS strategy/plan | Support NCAT in organizing a one-day technical meeting on October 31 for the sub-groups created to present the updated STGs that include WHO’s AWARe categorization of antibiotics | October 31, 2019 |
| | Work with WHO and other stakeholders to jointly support NCAT in organizing a two-day workshop to finalize the revised antibiotic therapy policy and STGs. | By December 15, 2019 |
| Support the MOH in monitoring and documenting the implementation process of the IPC and AMS e-learning modules | Support the DQS2H in organizing a workshop with the In-service Training Department of MOHSW’s HR department for customizing the IPC training modules to be uploaded in the e-learning platform. | By November 30, 2019 |
| Generate baseline values for evaluating MTaPS’ Senegal program | Obtain MOHSW clearance and conduct data collection activities in year 1’s three targeted hospitals for the following indicators: <ul style="list-style-type: none"> Percentage of patients surveyed that are satisfied with results of last visit to a public health facility Percentage of patients surveyed that know correct information about their (prescribed) antimicrobials(s) | By November 20, 2019 |

TANZANIA

HIGHLIGHTS FROM PROGRAM YEAR I

Dissemination of the latest (2018) infection prevention and control guideline

Infection prevention and control (IPC) guidelines are an important tool for promoting safe patient care in health care facilities. Tanzania reviewed IPC guidelines in 2018, but has not yet disseminated them to health care workers at facilities. MTaPS worked with the Ministry of Health (MOH) to ensure that the health system has the latest guidelines needed to mitigate or prevent the spread of health care-associated infections (HCAIs), hence promoting safe patient care.

MTaPS conducted consultative meetings with MOH and developed a plan for dissemination of the guideline. The agreed upon approach was to use the guideline as the basis for training health care workers to ensure that implementers got the new guideline as quickly as possible. The trainings are planned countrywide, in each region; participants should come from the regional hospitals, regional health management teams (RHMTs), council health management teams (CHMTs), and quality improvement (QI) focal persons from regional and council levels. The expectation is that RHMTs will oversee IPC implementation at all facilities in their region; CHMT will oversee and support IPC within their councils. MTaPS will collaborate with MOH and other partners to disseminate the IPC guideline countrywide, however, priority will be given to nine Ebola risk regions: Mwanza, Kagera, Kigoma, Dar es salaam, Mbeya, Katavi, Rukwa, Songwe, and Njombe.

Thereafter, MTaPS, in collaboration with MOH, private hospitals, and other partners, developed the training materials (slides) for dissemination of the IPC guideline. The IPC technical working group (TWG) members ensured that all training materials represented the latest (2018) IPC guideline.

The launch and first training took place in Mwanza region in July 2019; 97 health care workers as per the dissemination plan were trained on IPC in Mwanza; a soft copy of the IPC guideline was also distributed. To date, three regions have been trained on IPC: Mwanza (MTaPS), Kagera (CDC), and Dar es salaam (Medipiece). A total of 229 health care workers have been trained on IPC.

Lesson learned: The chosen approach of IPC dissemination is expensive, but it has helped reach IPC implementers (health care workers) with all the details of the guideline in a very short period.

Activity 2.2.2. Support pre-service curricula reform to ensure that the latest IPC approaches are included, particularly for higher levels of nursing education

Because the IPC guideline was revised to include World Health Organization (WHO) 2018 recommendations and the Global Antibiotic Resistance Partnership (GARP) assessment recommendations, the pre-service curriculum needed to be substantially revised on IPC to sensitize and educate all future health care providers prior to their entering the professional workforce. To address this need, MTaPS supported the MOH (Health Quality Assurance Unit [HQUA] and Directorate of Human Resource Development), in collaboration with nursing institutions, to revise the nursing education curriculum to include new IPC practices in the pre-service curriculum.

To achieve this goal of curriculum revision, MTaPS conducted consultative meetings with MOH and local nursing institutions; it was agreed that competence-based curriculum design was to be developed to tailor the course to students' needs. The tutors from the nursing institutions and subject matter experts were convened at different sessions to develop the following documents:

- Facilitator guide that explains how to lead the training program
- Timed agenda for face-to-face training
- Participant guide for students to use during the classroom training session

- PowerPoint slides based on IPC guidelines with up to two additional group activities in each session

The pre-service IPC curriculum is now ready; the plan is to orient tutors on how to facilitate it at nursing institutions.

Lesson learned: The process of developing a curriculum was an eye opener to tutors, especially on the huge developments that have occurred in IPC, including the availability of the new IPC guideline.

Activities 1.3.1 and 1.3.3: Finalized AMS policies and guidelines on human and animal sectors

The policy guideline for implementing antimicrobial stewardship (AMS) was mentioned under strategic intervention 8.1 of the Tanzania national action plan on antimicrobial resistance (AMR) and specifically activity 8.1.1, which calls for developing policy guidelines for handling and preservation of antimicrobial agents in the country. The tool helps the MOH coordinate AMR activities and guide implementation of the AMS program under the One Health approach. The MOH through the Awareness, Education and Communication TWG of the Multisectoral Coordination Committee (MCC) have been drafting the document since 2017, but, because of the lack of resources, the document was unfinished, waiting for finalization, printing, and dissemination.

The MOH approached MTaPS to support finalization of the policy guidelines document. The MCC recommended that the document incorporate inputs of stakeholders from the human, animal, plant, and environmental sectors to satisfy implementation of the One Health approach requirements.

The following were done to finalize the document:

- Stakeholders' workshop to solicit their inputs regarding the draft document
- Two small group meetings of technical persons from relevant ministries to accommodate stakeholders' inputs and finalize the document
- Printing a few copies for submission to the MCC for approval
- MCC meeting to approve developed policy guidelines

Lessons Learned

- Commitment of focal persons and engagement of key stakeholders right from the beginning is important in the development and approval of the document.
- Ample time is needed by members of the approval committee (MCC) to go through any submitted document before they approve.

Activity 5.3.1. Promote community awareness and preparedness through information, education, and communication (IEC)/behavior change communication (BCC) activities on IPC/AMS for patients and the public

Tanzania's national action plan on AMR priority action I on IEC and BCC recommends implementation of activities, such as, but not limited to, developing and disseminating a communication strategy for AMR, conducting an antibiotic awareness week, and implementing AMR multi-media awareness campaigns.

MTaPS is currently supporting the MOH in developing a multisectoral communication strategy that promotes behavior change in health care providers to prescribe, dispense, and administer antimicrobials in a prudent manner and in the community at large to appropriately use medicines issued to them.

To implement the activity, the following were carried out during this quarter:

- Developed stakeholder mapping tool and electronically collected feedback from members of the MCC and others regarding the need to have a strategy in place
- With support from the MTaPS country team, had sub-contractor Overseas Strategic Consulting (OSC) conduct in person interviews with stakeholders from hospitals, professional associations, the

animal sector, pharmacies, universities, etc., who are implementing AMR activities to gather information on what to include in the strategy

- Conducted a two-day workshop with stakeholders to aggregate their inputs for development of the AMR communication strategy

Lessons Learned

- Securing permission to interview some officials in public, semi-autonomous agencies/ institutions is still a challenge. Early, informal communications with expected interviewees is crucial and may help resolving the challenges to some extent.
- Exchange of information between stakeholders implementing AMR activities needs to be encouraged. For example, the Aga Khan Hospital's vast experience in carrying out AMS/IPC interventions could be tapped and replicated to benefit other health facilities, but little has been done in sharing that experience.

QUARTER PROGRESS FOR FY19Q4

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

MTaPS facilitated an MCC meeting and provided expert opinion on the membership of the AMS TWG. Having identified the capacity of Aga Khan Hospital (one of the biggest private hospitals in Tanzania), MTaPS advocated inclusion of the hospital in both IPC and AMS TWGs. Members of the MCC were receptive and promised to work on this recommendation from MTaPS.

MTaPS conducted a situational analysis to identify partners working on different interventions and prioritized six hospitals to provide more intense support. MTaPS identified partners providing technical support to selected hospitals and triangulated with other criteria to inform the decision for selecting intervention sites. This approach will ensure that MTaPS complements other programs in Tanzania by building synergy and complementarity with existing interventions at the selected facilities offered by other partners.

MTaPS brought together various partners (Sokoine University, FAO, IDDS, MOH, and Ministry of Agriculture and Fisheries) to finalize the AMS policy guideline as detailed below. MTaPS managed to bring together different sectors and partners to provide expertise and opinion on the contents of the document; approval of the document is expected at the coming MCC meeting in November 2019.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

MTaPS supported the MOH (Health Quality Assurance Unit and Directorate of Human Resource Development) in aligning IPC facilitation slides with the facilitator guide, student manual, and curriculum. MOH and local nursing institutions will use these materials to build the capacity of health care providers at the facility level and to train nursing students. This activity contributes to achieving results 2: Institutional and HR capacity to manage IPC strengthened.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

MTaPS supported the MOH's Pharmaceutical Service Unit in finalizing development of the policy guidelines for implementing AMS. The document will guide stakeholders on appropriate implementation of AMS interventions and will contribute to achieving result 3.1: Governance for AMS strengthened. In addition, MTaPS also started development of a multisectoral AMR communication strategy as requested by the MOH.

Thereafter, data collection on all indicators per result area was done and a strategy agreed on for collecting data on long-term outcome indicators at the facility level.

| ACTIVITIES FOR NEXT QUARTER | | |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| ACTIVITY | DESCRIPTION | DATES |
| Orient tutors on IPC updates | Orienting and training tutors on IPC updates who will later impart knowledge to students who will then be able to improve quality of care upon graduation. | November |
| Baseline IPC assessment | Three facilities will be visited for IPC baseline assessment; gaps will be identified and an action plan developed for improvement. The central system of supervision will be strengthened as well. | October/ November |
| Needs/baseline assessment | The national MTC and six selected health facilities' MTCs will be visited to ascertain functionalities. | October |
| Train national trainers on AMS | Build capacity of a team of national trainers on developed/adapted AMS training materials to be used to train the six selected health facilities. | November |
| Training health facility staffs on AMS | Build capacity of health facility staffs on AMS to enable them to carry out AMS activities. | December |
| Train data collectors | Train and provide guidance to individuals that are going to collect data for the activities | November/December |

UGANDA

HIGHLIGHTS FROM PROGRAM YEAR I

Uganda's GHSA strategy aims to work with the government to set up a national program for antimicrobial resistance (AMR) that uses multi-sectorial coordination mechanisms to implement evidence-based recommendations to improve the country's JEE scores for AMR, emphasizing infection prevention and control (IPC) and antimicrobial stewardship (AMS).

MTaPS conducted a collaborative gap analysis of IPC practices in Uganda. The survey, supported by the Ministry of Health (MOH), was conducted in 42 health facilities across the country as part of the World Health Organization's (WHO) 2019 global IPC survey. MTAps developed and presented the concept for the survey to MOH, organized a validation meeting for survey tools with the MOH, and conducted a one-day refresher training for data collectors. Data was collected over two weeks, cleaned, and analyzed and the report was written. A consultant was hired from Makerere University to support the baseline survey.

Standard WHO tools, including the WHO Infection Prevention and Control Assessment Framework, the hand hygiene self-assessment framework, and hand hygiene compliance self-observation tools were used to conduct the survey. The goal of the survey was to establish baseline IPC capacity and build a foundation for regular national IPC audits. The survey was completed and findings shared with the MOH for validation. Findings have been used to support health facilities develop work plans for improvement of IPC services. The findings and action plans will be disseminated to key stakeholders during the national AMR conference in November 2019.

This survey supported strengthening of the national IPC program, consolidated the level 3 score obtained by Uganda on benchmark 3.3, and built capacity for progress to JEE-2 level 4. The activity also contributed to the Uganda National Action Plan for AMR, objective 3 "strengthen IPC at health facilities," specifically activity 3.2.1 "undertake an assessment of the current status and needs of IPC in health facilities (regional referral hospitals) with an aim to address the gaps."

QUARTER PROGRESS FOR FY19Q4

RESULT AREA I: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Activity 1.1.1: Work with Ugandan National AMR Sub-Committee (NAMRSC) to set up IPC and AMS technical working committees

In collaboration with the MOH, MTAps organized a one-day national IPC stakeholders meeting for both key national- and sub-national-level stakeholders to obtain buy-in and input into the draft terms of reference (TOR) for the national IPC technical working committee (TWC). The meeting was attended by key staff from MOH and Makerere University and representatives of implementing partners, including WHO, UNICEF, UNHCR, the One Health Platform, Infectious Diseases Institute, and WASH partners.

The meeting agreed on the composition of the TWCs and the approach for appointing members to the committees. The chairperson of the NAMRSC has been tasked with requesting that the line ministries formally appoint identified members of the AMS TWC. Formalization and orientation of the members will follow the appointments.

The MTAps team presented the draft TOR for the national IPC committee to MOH's lower health facilities technical working group. The TORs were approved and forwarded for presentation to the next level, i.e., MOH's senior management team (SMT), for review and approval. The SMT provided their inputs, including corrections and recommendations. The revised draft of the TOR is to be resubmitted

to the SMT for second review and endorsement. MTaPS plans to make a follow-up presentation to the SMT in Y2Q1 to obtain final approval for the TOR.

Meetings were held with MOH's Health Information Systems Department to identify needs and explore existing GHSA information exchange platforms to scope needs for the data exchange platform. Indicators from the IPC and AMS surveys are currently being used to trial the data-sharing platform during the internal development process prior to sharing with MOH and the NAMRSC for input, validation, and approval.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

Activity 2.5.1: Identify gaps in IPC implementation at select referral hospitals and implement action plans

Makerere University undertook data cleaning, entry, analysis, and report writing for the baseline IPC survey with support from MTaPS and the Infectious Diseases Institute. The MTaPS team shared the report with the MOH IPC focal person for review. When MOH has completed the review, a national validation meeting will be held.

MTaPS, in collaboration with the MOH's Clinical Services Department and Pharmacy Department, held activities to launch the project in six regional referral hospitals (Moroto, Hoima, Gulu, Masaka, Lira, and Soroti). Activities included; presentation of the hospital IPC survey findings, overview of the MTaPS project, presentations by the Ministry of Health officials and meetings with staff critical to AMR work in the hospitals. Health facilities were also requested to nominate members to their IPC and medicines and therapeutics committees (MTCs) in preparation for trainings and work plan development that are planned for the next quarter.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1: Work with National Drug Authority and Ministry of Agriculture, Animal Industry, and Fisheries (MAAIF) to update the EML for veterinary use and develop guidelines on the use of antimicrobials in the animal sector

The process for identifying a consultant to support the National Drug Authority (NDA) and MAAIF to implement this activity has been completed and a schedule of activities shared among key stakeholders. Activity implementation will be undertaken starting in quarter 1 of PY2.

Activity 3.2.1: Set up centers of excellence for AMS in select referral hospitals

MTaPS held follow-up planning meetings with MOH's Pharmacy Department to plan for launching activities in selected MTaPS-supported health facilities. Data collection tools and methodology for collecting baseline AMS data from six regional referral hospitals were also reviewed and approved by the Pharmacy Department. Subsequently, the tools were applied to collect baseline data on AMS during the facilities' MTaPS launch activities.

Activity 3.5.1: Increase AMR awareness in the animal sector

MTaPS has engaged the MAAIF to scope key activities, partners, and timelines for delivery of key AMR messages in the animal sector. An inception meeting and a national stakeholders meeting will follow to agree on activity implementation strategy.

Activity 3.3.1: Work with the NDA to establish the data and information platform for national-level activities to monitor the use of antimicrobials

MTaPS held meetings with the NDA to determine their needs and to jointly plan interventions that take into consideration the capacity of the existing data management system. NDA has since assigned a

technical lead to work with the MTaPS team. Plans are also underway to hire a local consultant who will assess the current mechanisms of capturing this data and advise on what it would take to measure volume and consumption data at this level as well as what the existing and required resources (human, hardware, software) will be to accomplish this task.

| ACTIVITIES FOR NEXT QUARTER | | |
|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| ACTIVITY | DESCRIPTION | DATES |
| Half-day validation meeting for IPC survey report | Half-day meeting of different stakeholders to improve quality of the report | October 2019 |
| Meeting with MOH TWG to present IPC survey report | Meeting to present IPC survey report to hospitals and MOH's lower health facilities TWG | October 2019 |
| Presentation of IPC survey report to MOH SMT | Meeting to present IPC survey report to MOH SMT meeting for secondment | November 2019 |
| Disseminate IPC survey results at AMR conference | Presentation of the IPC survey results at the 4th Annual National AMR Conference in November 2019 | November 2019 |
| Training IPC, MTC, and AMS committees | Conduct IPC training for supported health facilities with so they prioritize interventions and develop work plans for improving IPC and AMS | October 2019 |
| Support implementation of IPC and AMS work plans in supported health facilities | Conduct support supervision activities and visits to support the implementation of IPC and AMS work plans in supported health facilities | November 2019 to March 2020 |
| Conduct a one-day AMS stakeholders meeting | One-day meeting for all stakeholders supporting AMS activities in Uganda | December 2019 |
| One-day stakeholders meeting to develop messages to increase awareness about AMR in the animal sector | One-day stakeholders meeting with identified stakeholders to develop messages for increasing awareness about AMR in the animal sector | November 2019 |

MONITORING, EVALUATION, AND LEARNING

Program Monitoring, Evaluation, and Learning Plan

MTaPS received conditional approval from USAID for its monitoring, evaluation, and learning (MEL) plan, which lays out the program's MEL and knowledge management (KM) approach, activities, and deliverables. The plan includes key performance indicators (KPIs); performance indicator reference sheets (PIRS); a data management plan; the program's baseline, midline, and endline methodology; and proposed mid-term evaluation questions. MTaPS will revise and finalize the PIRS in the first quarter of PY2.

Global Health Security Agenda Key Performance Indicators

MTaPS developed KPIs to effectively monitor Global Health Security Agenda (GHSA) country program outputs and outcomes, guided by the program results framework and theory of change (TOC). Sources of GHSA indicators include USAID, WHO, JEE 2.0, and GHSA country strategies and work plans. MTaPS will finalize GHSA indicators in consultation with USAID in the first quarter of PY2.

Mapping KPIs to Countries

MTaPS mapped global program indicators to supported countries to ensure alignment with the results framework and TOC. MTaPS will undertake a similar exercise for GHSA indicators and countries in the first quarter of PY2.

MEL Inputs to PY2 Work Plans

The MEL team developed MEL sections of PY2 work plans for all MTaPS-supported country programs and health portfolios.

Country MEL Plans

MTaPS incorporated feedback received from USAID into the country MEL plan template. In the first quarter of PY2, MTaPS will work with country teams to develop country-specific MEL plans.

MTaPS Analytics Platform (MAP)

MTaPS continued working on the configuration of an analytics platform to enable data collection, management, quality control, analyses, visualization, and reporting at the global, country, and health portfolio levels. The platform is currently undergoing testing in anticipation of roll-out to countries in the first quarter of PY2.

Data Management Plan

The MTaPS data management plan was approved by USAID. MTaPS will annually submit to the development data library required data sets created or obtained in the performance of the contract, including data sets produced by any subcontractor at any tier.

Baseline Assessment

MTaPS planned and implemented baseline data collection activities in Tanzania, Côte d'Ivoire, and Senegal. In the first quarter of PY2, MTaPS will complete baseline data collection in Bangladesh, Burkina Faso, Cameroon, Democratic Republic of Congo, Ethiopia, Kenya, Mali, Mozambique, Nepal, Philippines, Rwanda, and Uganda. MTaPS will also develop country monitoring and evaluation (M&E) profiles to provide a snapshot of each country's baseline findings and, subsequently, an aggregated program baseline report.

KM and Learning

MTaPS rolled out its conditionally approved KM and Learning plan. MTAps developed and shared tools, templates, and practical guidance on planning, implementing, and tracking country-level KM and learning activities. In the first quarter of PY2, country teams will receive virtual training on how to assess, capture, synthesize, store, share, and apply data, information, lessons, and knowledge from implementation to inform program planning and adaptation.

MEL Staffing

The MEL team structure has been updated and approved by the MTAps program director. An additional MEL technical advisor and one MEL officer positions have been created for a total of six MEL HQ positions, including the director, two MEL technical advisors, one KM technical advisor, one health informatics technical advisor, and one MEL officer (50%). The new structure also includes four regional MEL advisors—two for West Africa Francophone and two for East Africa Anglophone countries in those regions. The Philippines, Bangladesh, and Ethiopia each have one senior country MEL officer/advisor, and Indonesia, Nepal, and Jordan have designated MEL function to MTAps technical staff.

ACTIVITIES FOR NEXT QUARTER

| ACTIVITY | DESCRIPTION | DATES |
|---------------------------------|-------------------------------------------------------------------------|---------------|
| PIRS | Complete PIRS | October 2019 |
| GHSA key performance indicators | Finalize GHSA indicators | October 2019 |
| Mapping of indicators | Map key performance indicators to countries | October 2019 |
| Country MEL plan(s) | Develop country program MEL plans | November 2019 |
| MAP training | Provide remote training on use of DHIS 2-based platform | November 2019 |
| MAP launch | Launch the MAP at the global and country levels | November 2019 |
| Baseline assessment | Complete baseline data collection | November 2019 |
| Data verification strategy | Integrate country- and HQ-level data verification strategy into the MAP | December 2019 |
| Country M&E profile | Compile country baseline snapshots | December 2019 |