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

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FISCAL YEAR 2020 QUARTER 1 (OCTOBER–DECEMBER 2019) REPORT

USAID
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FISCAL YEAR 2020
QUARTER 1
(OCTOBER–DECEMBER 2019) REPORT

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PROJECT OVERVIEW

Program Name:		USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program
Reporting Period:		Fiscal year (FY) 2020 Quarter 1 (October–December 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
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

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USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program
Management Sciences for Health
4301 North Fairfax Drive, Suite 400
Arlington, VA 22203 USA
Telephone: 703.524.6575
Fax: 703.524.7898
Email: mtaps@msh.org

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
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
eAMS	electronic asset management system
ECOWAS	Economic Community of West African States
EDT	electronic dispensing tool
eLMIS	electronic logistics management information system
EML	essential medicines list
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
IDDS	Infectious Diseases Detection and Surveillance Program
IPC	infection prevention and control
IPCAF	Infection Prevention and Control Assessment Framework
IPCAT2	IPC assessment tool
JAG	joint action groups
KM	knowledge management
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
MOU	memorandum of understanding
MSC	multisectoral coordination
MSH	Management Sciences for Health
MTC	medicines and therapeutics committee
NEPAD	New Partnership for Africa's Development
NGO	nongovernmental organization
NTP	national tuberculosis program
OIE	World Organization for Animal Health
PEPFAR	US President's Emergency Plan for AIDS Relief
PMIS	pharmaceutical management information system
PQM+	Promoting the Quality of Medicines Plus Program
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 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).

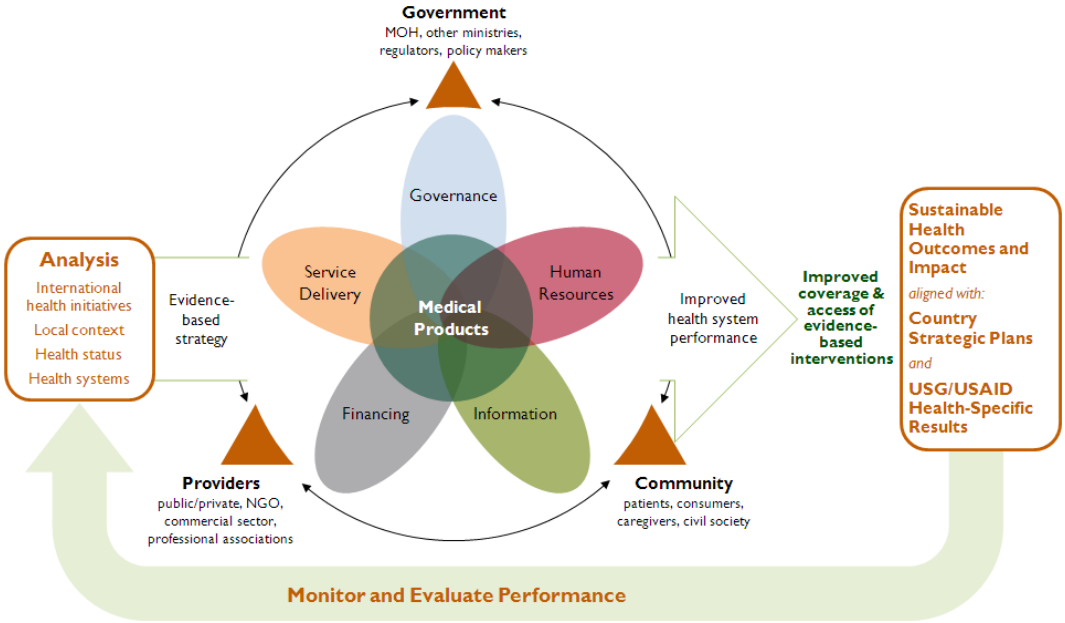

Figure 1. USAID pharmaceutical systems strengthening approach

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 adopted 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 2020 quarter 1 (October-December 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.

PROGRESS BY CORE-FUNDED PORTFOLIO

GLOBAL HEALTH SECURITY AGENDA

GHSA-supported countries:

Bangladesh
Burkina Faso
Cameroon
Côte d'Ivoire
Democratic Republic of Congo
Ethiopia
Kenya
Mali
Senegal
Tanzania
Uganda

SUMMARY OF ACTIVITIES THIS QUARTER

MTaPS continued to make progress implementing year 1 work plan activities in the 10 (Global Health Security Agenda) countries. In the newest GHSA focus country, Bangladesh, MTaPS conducted a scoping visit and drafted an initial work plan.

MTaPS finalized four more technical mini-guides with process checklists to help countries plan, jump start, and stepwise implement activities that are common to MTaPS/GHSA countries. The four additional guides relate to infection prevention and control (IPC) assessment and improvement, continuous quality improvement (CQI) for IPC, pre-/in-service training and eLearning, and implementing facility-level antimicrobial stewardship (AMS) programs. The GHSA indicators were finalized with USAID input this quarter, and MTaPS received comments on the draft performance indicator reference sheets. MTaPS also developed materials for a generic three-day AMS training course.

During the reporting period, MTaPS interacted with the World Health Organization (WHO); the UN Food and Agriculture Organization (FAO); One Health Central and Eastern Africa; multiple universities, including Addis Ababa University; and the US Government's implementing partners, the Infectious Diseases Detection and Surveillance (IDDS) Project and Metabiota, to share information about the program's GHSA/AMR work and collaborate on AMR-related activities to accelerate progress and produce synergy. MTaPS also presented on antimicrobial resistance (AMR)-related themes at two conferences in Kenya:

- Kenya's first Clinical Officers, Ear, Nose & Throat, Audiology and Speech Therapy Conference
- Infection Prevention Network Kenya Annual Conference, where MTaPS staff made presentations and chaired sessions; MTaPS-supported counterparts gave eight presentations, five of which won awards

QUARTER PROGRESS

The focus of the MTaPS approach and implementation framework is to help countries make progress on the pathway to the next level of JEE capacity in multisectoral coordination (MSC), IPC, and AMS.

EFFECTIVE MSC ON AMR

To implement national action plans on AMR (NAP-AMR), MSC is paramount, but requires strong country governance structures with clear roles and mandates—and often the creation of new structures, depending on the country.

Establishing MSC governance structures: MTaPS provided technical leadership to expedite first steps to establish an MSC governance body in **Côte d'Ivoire** by supporting the Antimicrobial Resistance Technical Working Group (TWG) in convening 25 participants from the human, environmental, and animal health sectors to establish and validate the membership of the Multisectoral Coordination Group, which will be the primary AMR governance body. In May, the new group will develop an activity roadmap. In **Ethiopia**, MTaPS provided technical support to the Ministry of Health's (MOH) Pharmaceuticals and Medical Equipment Directorate to finalize the design of a three-tiered national AMR governance and coordination structure, comprising a National Inter-Ministerial

Committee at the top, followed by the National AMR Advisory Committee that will oversee six proposed multisectoral TWGs. The structure is awaiting approval.

Holding multisectoral meetings: MTaPS also helped newly formed bodies finalize roles and responsibilities and start carrying out their mandates, including implementation of the NAP-AMR; for example, in **Cameroon**, MTaPS supported the National AMR Technical Secretariat in organizing three MSC meetings during quarter 1 with the departments of the Ministry of Public Health, Ministry of Fishery and Animal Husbandry, Ministry of Environment, Ministry of Agriculture, and other One Health platform stakeholders, including FAO, USAID/IDDS, and US Centers for Disease Control and Prevention-Metabiota. The meetings focused on formalizing the IPC and AMS TWGs; stakeholders designated representatives to serve on the different TWGs. MTaPS also participated in a workshop organized by the AMR Technical Secretariat to inventory AMR activities being implemented to advance the NAP-AMR and coordinate those efforts among relevant groups. MTaPS/**Senegal** kicked off MSC activities and met other GHSA partners by attending the first meeting of the One Health Permanent Secretariat of the National High Council of Global Health Security platform. MTaPS also presented the program to **Mali's** One Health platform focal points from key ministries, including health, agriculture, environment, and fish and livestock. MTaPS collaborated with the line director/Communicable Disease Control/Directorate General of Health Services, who is the national AMR focal person in **Bangladesh**, to hold a workshop to map the implementation status of the NAP-AMR with 28 AMR stakeholders from different ministries and organizations working on animal and human health. The exercise results drove the identification of priority areas in MSC, AMS, and IPC that MTaPS and other partners can potentially support. MTaPS supported **DRC's** AMR-TWG in convening a workshop that established IPC and AMR subcommittees, which developed six-month roadmaps.

Developing and updating governance documents: In **Cameroon**, MTaPS and IDDS co-supported the AMR Technical Secretariat in organizing a five-day workshop of 42 participants to draft a costed AMR operational plan for the NAP-AMR and associated monitoring and evaluation framework. Continuing their goal of establishing One Health governance structures and systems to strengthen IPC and AMS in two counties in **Kenya**, MTaPS disseminated results of baseline assessments of IPC and AMS and sensitized 24 officials on AMR in Nyeri County and 19 officials in Kisumu County. The purpose was to get health officials' commitment to ensuring that target health facilities implement IPC and AMS activities. MTaPS provided technical and financial assistance to Kenya's Patient and Health Worker Safety Division (the national AMR secretariat) to review and update the 2015 edition of the national IPC policy for health care workers and the national strategic plan for IPC for health care services. MTaPS also reviewed the national IPC training curriculum and IPC quality improvement tools. In **Mali,** the MSC Group met for the second time in December with participants from international organizations, including USAID, FAO, World Organization for Animal Health (OIE), and WHO and national experts; MTaPS helped the group revise the NAP-AMR and set up structures to implement it. In **DRC**, MTaPS worked with the AMR-TWG to prioritize NAP-AMR activities, which is the first step in developing a costed operational plan.

Organizing and participating in events during World Antibiotics Awareness Week: MTaPS supported several countries' events during World Antibiotics Awareness Week (November, 18-24, 2019): MTaPS/**Ethiopia** sponsored a multisectoral panel discussion on translating the NAP into practice—MTaPS-oriented journalists also contributed AMR messages in the media; MTaPS/**Kenya** presented at an AMR symposium, while MTaPS/**Tanzania** brought together around 700 health workers, university students, and members of the public to attend an AMR symposium organized by the Tanzania Pharmaceutical Students' Association where MTaPS' senior technical advisor was a panelist. MTaPS supported **Uganda's** MOH to disseminate the national IPC survey findings during the national AMR conference attended by more than 500 people working in AMR. MTaPS/**Burkina Faso** helped organize and participated in a multisectoral conference.

IPC IMPROVED AND FUNCTIONAL

In the implementation of IPC-related activities this quarter, MTaPS focused on four key areas.

Strengthening governance structures for IPC at the national and facility levels: In **Côte d'Ivoire**, MTaPS visited two hospitals and a veterinary clinic where IPC committees were established in the last quarter of FY19. MTaPS worked with the committees to develop capacity-building plans and oriented them on roles and reporting, IPC precautions, and health care-associated infections. MTaPS worked with the committee at Cocody University Hospital to establish a baseline through an Infection Prevention and Control Assessment Framework (IPCAF) process; the hospital scored "intermediate." The veterinary facility's IPC committee adapted the IPCAF for use in that setting.

Using IPC baseline information to develop action plans: To understand the status and quality of national IPC programs, it is important to systematically collect standardized data. WHO offers tools and guidance, including an IPC assessment tool (IPCAT2) for the national level, the IPCAF for health facilities, and the Hand Hygiene Self-Assessment Framework. Some countries adapt the WHO tools or have their own national tools. This quarter, MTaPS worked with several countries to take assessment results and turn them into action plans; for example, **Tanzania**, which uses its own IPC tool, assessed two regional hospitals during the quarter and developed action plans, and **Senegal** used assessment results from program year 1, quarter 4 (PY1Q4) to prioritize IPC activities in three hospitals. MTaPS worked with the MOH Clinical Services Directorate to develop a draft national IPC plan for **Ethiopia** using IPCAT2 results. Scores out of 100% ranged from 5% for health care-acquired infection surveillance to 81% in IPC guidelines. Countries will continue to use these assessment tools to track the impact of their action plans.

Developing and implementing IPC policy and guidance documents: In **Ethiopia**, MTaPS supported the MOH in conducting a national workshop to launch the newly revised national IPC guidelines, which was televised. Nine hospitals have begun producing alcohol-based hand rub using standard operating procedures MTaPS helped draft in PY1Q4; MTaPS also funded the printing of 1,000 of the operating procedures to disseminate to 400 hospitals and regional health bureaus. MTaPS **Tanzania** printed and distributed 2,000 copies of new IPC guidelines to hospitals in 9 regions. In **Mali**, MTaPS worked with the MSC Group and Direction Générale de la Santé to revise IPC guidelines for the human sector and draft associated training materials.

Developing individual and local capacities: To make progress in IPC practices, countries need to have adequate human resources and institutional and infrastructural capacity; national and facility assessments have pointed out significant gaps in these areas. Most of MTaPS' activities are currently focused on developing training opportunities for health care workers—both for traditional in-person training and also through eLearning. Training goes hand-in-hand with CQI programs that MTaPS is promoting in its target countries as a way to increase JEE scores. In collaboration with **Ethiopia's** MOH, MTaPS supported two rounds of training-of-trainers (TOTs) on IPC for 62 health professionals during the quarter. Participants came from seven MTaPS-supported hospitals, regional health bureaus, and other hospitals selected by MOH. The cascaded training is one of the strategies to implement the revised national IPC guidelines at health facilities. In addition, trainees are expected to lead IPC activities at their hospitals based on the revised IPC guidelines.

In **Cameroon**, findings from the recent IPC survey that MTaPS conducted in collaboration with WHO revealed the need to strengthen the IPC capacity of health care workers. Consequently, MTaPS supported the Ministry of Public Health in organizing a 5-day workshop for 25 participants from multiple sectors to develop an IPC training package of 15 modules based on the WHO IPC core components. MTaPS then supported the Ministry of Public Health in conducting a 5-day workshop to train 10 health experts on how to design curricula adapted for adult learning. In collaboration with county health management teams and IPC coordinators in **Kenya**, MTaPS conducted IPC CQI training in Nyeri

County (36 participants) and Kisumu County (30 participants). The trainings resulted in the development of 16 IPC action plans at facilities (8 in each county). MTaPS later remotely followed up with the 16 facilities to track progress and offer technical guidance. MTaPS trained 230 health care workers, regional and district officials, and implementing partners in **Tanzania** on the country's updated IPC guidelines; in addition, MTaPS began converting IPC training materials into an eLearning format to be used by the MOH for online training. In **Senegal**, MTaPS worked with the MOH to select, adapt, and upload three IPC modules to the MOH's eLearning platform. MTaPS worked with the multisectoral technical committee for IPC and other stakeholders in **Côte d'Ivoire** over five workshops in this quarter to adapt and finalize the WHO training packages on IPC into training materials for both the human and animal health sectors.

USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

In the implementation of AMS-related activities in FY20Q1, MTaPS focused on four key areas.

Strengthening governance structures for AMS at the national and facility levels: Although drug and therapeutics committees (DTCs) are a proven and WHO-recommended intervention to improve medicine use, DTCs often function poorly, if at all, even if they exist. In addition, many countries are just now putting into place national-level AMS bodies to lead country strategies and to liaise with other sectors and One Health platforms. MTaPS is working at both levels in its countries and guiding newly formed national bodies to launch action plans. For example, established in the previous fiscal year, the multisectoral technical committee for AMS in **Côte d'Ivoire** held two meetings this quarter to discuss activity implementation and finalize a tool to evaluate DTCs. MTaPS conducted joint visits with the multisectoral technical committee for AMS at two university teaching hospitals to assess their DTC capacity, and although both DTCs existed on paper, neither functioned—one had not met in four years. Following an AMS orientation that MTaPS previously facilitated in **Ethiopia**, 11 referral hospitals established AMS teams under the leadership of existing DTCs, conducted their first meetings, developed facility-specific action plans for AMS, and organized onsite AMR sensitization for staff. Six of these hospitals also conducted a baseline assessment on AMS practices using the US Centers for Disease Control and Prevention's *Core Elements of Hospital Antibiotic Stewardship Programs Checklist*. MTaPS also helped conduct baseline assessments of DTC functions in six hospitals and will use the results to strengthen the DTCs to lead AMS activities in their facilities. In **Uganda**, MTaPS supported six regional referral hospitals to develop AMS action plans.

Developing and implementing AMS policy and guidance documents. In **Kenya,** MTaPS collaborated with MOH and 19 experts to revise the Kenya essential medicines list according to the WHO access, watch, and reserve (AWaRe) classification. After internal and external validation meetings, the revised 2019 list was approved in December, leading the way for national rollout of using the classification approach in prescribing.

Developing AMS information and communication materials: MTaPS collaborated with the MOH to orient 52 media professionals on **Ethiopia's** AMR situation and containment measures resulting in media stories appearing during World Antibiotics Awareness Week in November. In **Tanzania**, MTaPS brought together around 300 people from different health and non-health sectors, including journalists, to participate in a road show event in Morogoro to raise community awareness on the proper use of antimicrobials. MTaPS also provided technical support to revise and print communication materials on antimicrobial use for country-wide use. Antimicrobial misuse is a problem at all levels, including among patients, which is why raising public awareness is an important facet of AMS.

Developing individual and local capacities: As previously noted, AMR-related training builds skills and knowledge in health care workers, but also dovetails with the CQI approach to improving rational medicine use practices. In **Kenya,** MTaPS collaborated with the county health management teams in

Kisumu and Nyeri Counties to conduct AMS trainings for 36 and 40 health care workers, respectively. The participants developed action plans to revive DTCs and establish AMS programs in their facilities. In December, MTaPS remotely conducted follow-ups with health facilities in the two counties. MTaPS collaborated with **Ethiopia's** MOH in conducting training on prospective prescription audit and feedback (where AMS program team members interact directly with prescribers to customize antimicrobial therapy for each patient) and AWaRe categorization of antibiotics for 40 health professionals drawn from 15 MTaPS-supported hospitals and health leaders from 4 regional health bureaus. Staff from Tikur Anbessa Specialized Hospital, who have hands-on experience on audit and feedback, led the training sessions. During the training, a draft AMS review/audit and feedback tool was developed with technical support from MTaPS, reviewed, and inputs gathered.

In **Tanzania**, MTaPS trained 10 people from government agencies on how to conduct a national-level antimicrobial consumption analysis using the Anatomical, Therapeutic and Chemical (ATC) classification system and the Defined Daily Dose (DDD) methodology; in addition, MTaPS trained 20 people from hospitals and the MOH on the methodology for point prevalence surveys in health facilities. After piloting the forms, MTaPS supported data collection on consumption at the Medical Stores Department, Tanzania Medicines and Medical Devices Authority, and two pharmaceutical manufacturers as well as point prevalence data collection at six referral hospitals. Being able to conduct these types of surveys will allow Tanzania to track its medicine consumption and health care-associated infections and to compare its performance against other countries. In **DRC**, MTaPS organized a workshop to develop a protocol to conduct a national assessment on the use and consumption of antimicrobials based on WHO guidance as well as a timeline and budget. MTaPS also met with leadership from three hospitals serving as pilot facilities for IPC and AMS strengthening activities to discuss the creation of DTCs to lead AMS activities and the revitalization of existing hygiene committees for IPC activities; in addition during the quarter, MTaPS collaborated with WHO to help the University of Kinshasa's pharmacovigilance center finalize DTC training modules and a DTC implementation protocol.

MTaPS conducted assessments in **Tanzania** and **Cameroon** using a variety of methods, such as site visits, focus group discussions, and phone interviews, to identify capacity gaps and develop national capacity-building plans for AMS and IPC. Results in Tanzania, for instance, showed a lack of knowledge from country leadership to community level due to a dearth of AMR awareness programs in the country.

Also this quarter, MTaPS developed generic training materials for a three-day AMS course comprising five modules, including AWaRe classification and how to develop a facility AMS action plan. After translation into French and Portuguese, DRC, Mozambique, Tanzania, and Uganda have plans to conduct courses using the new materials.

ACTIVITIES FOR NEXT QUARTER		
ACTIVITY	DESCRIPTION	DATES
Finalize mini-guides on implementation of key MTaPS GHSA activities: • Develop AMS strategy/plan for human and animal health sectors • CQI approaches to improving AMS practices	Practical, stepwise activity implementation mini-guides	January-March 2020
Revise the MTaPS technical implementation framework	USAID COR team has reviewed the framework and provided comments and suggestions; MTaPS will revise framework documents based on the feedback.	
Finalize GHSA performance indicator reference sheets	MTaPS will finalize GHSA performance indicator reference sheets addressing feedback from USAID.	
Attend First Global Technical Partnership Meeting on Antimicrobial Stewardship	Two MTaPS technical staff will attend the meeting in Bangkok, Thailand, February 24 to 26, 2020.	

MATERNAL, NEWBORN, AND CHILD HEALTH

Preventing child and maternal deaths requires treatment with safe, effective, and quality medicines and pharmaceutical services. 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 safe, effective, and quality medicines and supplies and effective pharmaceutical services to reduce maternal, newborn, and child mortality by strengthening pharmaceutical systems.

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.

Under the PY1 activity to support registration of MNCH medicines and technologies, USAID mission concurrence was obtained for nine countries. A data collection tool was finalized in English, French, and Portuguese; a detailed orientation on the instrument was given to staff in Mozambique, Senegal, Bangladesh, and Rwanda; data were collected and reviewed for completeness in Mozambique and Rwanda and plans were made in DRC, Nepal, Bangladesh, and Senegal for MTaPS staff to gather data; and consultants are being recruited in Mali, Tanzania, and Uganda. For the second part of the activity, to study manufacturers' perspectives on registration, a topic guide/questionnaire to speak with manufacturers and associations of manufacturers was finalized, and a consultant is being recruited to interview manufacturers next quarter.

Under the activity to review best practices to ensure quality of medicines in local procurement from Tanzania and Nigeria, USAID concurrence was obtained, and after initial discussions with the World Bank team at HQ and in Nigeria, recruitment of consultants is under way. The data collection instrument is being finalized.

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

During this quarter, MTaPS developed content for a series of microlearning videos on pharmaceutical systems strengthening for MNCH as a complement to the MTaPS online and face-to-face training program on pharmaceutical systems strengthening. A consultant started developing the videos, and a narrator was recruited. The content (storyboard) of two of three videos has been drafted and is undergoing review, and the content of the final video is being finalized and will be reviewed next quarter. It is expected the videos will be completed next quarter.

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

MTaPS continued revising the RMNCH quantification supplement developed under the UN Commission on Life-Saving Commodities during this quarter. Several partners provided input on the supplement update, including John Snow Inc., Gynuity, Path, Clinton Health Access Initiative, Inc., USAID-funded Global Health Supply Chain Program/Procurement and Supply Management Program, and Feering. Sections for postpartum hemorrhage and eclampsia were drafted, consolidating the product-specific sections from the previous version and integrating comments or sections received from partners.

MTaPS plans to finalize and disseminate job aids on amoxicillin dispersible tablets to promote adherence to treatment of pneumonia, engaging the UNICEF supply division. Discussions were held with PATH on the changes to be applied to the tool, and a graphic designer was positioned to make the final changes. A discussion was planned between the UNICEF supply division and UNICEF program division on the job aids and possible mechanisms to disseminate them, but it was postponed to January 2020.

The activity on oxygen and the respiratory ecosystem is under way with a mapping of partner interventions and document review.

MTaPS Country Activities to Prevent Child and Maternal Deaths

This section highlights selected areas of work and achievements of the MTaPS country portfolios during PY2Q1 to improve access to and appropriate use of safe, effective, and quality medicines and pharmaceutical services for women and children. Of the five MTaPS countries receiving mission funding, four - **Bangladesh, Mozambique, Nepal,** and **Rwanda** - receive MNCH funding. In addition, in **DRC**, where MTaPS had to date only received GHSA funding, has received MNCH funding to work in the eastern region's fragile settings to strengthen pharmaceutical systems for maternal and child health outcomes. During this quarter, MTaPS prepared for a scoping visit to North Kivu (Goma) and Ituri (Bunia), started mapping partners and existing activities related to MNCH and pharmaceutical systems, and interviewed candidates to staff this component.

In **Rwanda**, MTaPS recently received additional MNCH funds from USAID Rwanda and presented a work plan to USAID Rwanda targeting activities to improve access to and use of MNCH medicines, such as improving conservation of oxytocin and use of MH medicines, improving access to and use of oxygen, streamlining registration of MNCH medicines and medical devices, and supporting management of medicines at the community level.

Regulatory systems strengthening

In **Mozambique, Nepal, Bangladesh,** and **Rwanda**, MTaPS is supporting the regulatory authorities to improve the regulatory system and raise the maturity level as per the WHO global benchmarking tool (GBT) assessments and thereby assure quality of medicines and pharmaceutical services for women and children. These activities will standardize the regulatory system and make it more efficient for ensuring the quality and safety of medicines, including those for women and children.

In **Bangladesh**, MTaPS and the Bangladesh Association of Pharmaceutical Industries are expanding the use of Pharmadex, a web-based tool that helps a national drug regulatory authority streamline and track medicines registration, to more companies. Training on Pharmadex and common technical document (CTD) guidelines was provided to 22 Directorate General of Drug Administration (DGDA) reviewers and master trainers, and a related seminar was attended by 52 technical personal from 38 pharmaceutical industries.

In **Rwanda**, MTaPS provided technical assistance to review and update the Institutional Development Plan to increase the maturity level of the regulatory system from maturity level 1, where some elements of a regulatory system exist, to maturity level 3, which is a more stable, well functional and integrated regulatory system, per the GBT assessment carried out in November 2018. This updated plan will be used to identify the pending gaps in support required from the various development partners. During this quarter, MTaPS continued to support the Rwanda FDA to develop regulations and guidelines, including regulations on medicines registration, inspection, and licensing of pharmaceutical establishments; guidelines for submission of an application for a medical product and variation to a registered product; post-marketing surveillance guidelines; and guidelines for clinical trial oversight and medicines advertisement and promotion. In addition, MTaPS continues supporting the Rwanda FDA to render the electronic Pharmaceutical Regulatory Information Management System (PRIMS) for handling key regulatory functions fully operational.

In **Mozambique**, MTaPS finalized the technical review of the legal framework in the country, which was used to devise a roadmap for addressing the identified gaps in the legislation and prioritization of key regulations required to operationalize the national medicine regulatory authority (ANARME). In addition, MTaPS worked with the Directorate of Pharmacy (DNF) team to support drafting of key regulations and guidelines and a list of nonprescription/over-the-counter medications. To streamline registration, MTaPS continues to support the enhancement and expansion of Pharmadex in Mozambique.

Use of pharmaceutical information for MNCH decision making

In **Bangladesh,** MTaPS worked closely with Directorate General of Family Planning (DGFP) to roll out the upgraded versions of inventory management tools in 263 upazilas and 21 regional warehouses. A total of 544 DGFP staff were oriented with the goal of maintaining reproductive health commodities and contraceptives stock within a satisfactory level at the service delivery points. As a result, the percentage of stock-outs of any family planning method decreased from 0.4% in October and November 2018 to 0.2% and 0.1% in October and November 2019, respectively.

Pharmacovigilance

Pharmacovigilance for medicine safety is equally relevant for medicines used for women and children. In **Bangladesh,** MTaPS continued to provide technical assistance to the DGDA to improve the current reporting and monitoring system for adverse drug events, including for MNCH medicines, by incorporating it to the common platform of DHIS2.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
2.1.1 Review of registration of MNCH commodities	Complete the data gathering, discuss the findings with the NMRAs, develop the country summary reports and action plans, and interview pharmaceutical manufacturers	February
	Draft technical brief	March
2.1.2 Document quality assurance in local procurement	Collect information on local procurement	February
	Draft best practices document	March
3.2.2 Global learning on pharmaceutical systems for MNCH	Finalize the content for the microlearning modules on MNCH for the PSS training program	February
	Develop videos	
	Launch microlearning sessions on eLearning platform	March
5.1.1 Revise RMNCH quantification guide	Revise guide with comments from collaborators	February
	Send out for review	March–April
	Finalize guide	
5.2.1 Improve adherence to amoxicillin DT for pneumonia	Finalize job aids and dispensing envelopes	February
	Discuss possibility of dissemination with UNICEF	January
5.2.2 Define respiratory package	Mapping of global landscape of implementation and support on respiratory package	February/March
	Review assessments to identify bottlenecks in safe use of oxygen	

OFFICE OF HEALTH SYSTEMS, CROSS BUREAU FUNDING

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

This quarter, MTaPS engaged with Boston University School of Public Health (BUSPH) to execute the indicator selection protocol developed during PY1Q4. Through this engagement, MTaPS aims to reduce the number of PSS Insight indicators from 117 to no more than 50. BUSPH and the MTaPS HQ team met in November for a progress update, during which several points were clarified regarding PSS Insight's scope and proposed content. A report by BUSPH detailing the results of the indicator reduction exercise will form the basis for continued development of the tool and ongoing discussions with the WHO regarding the access dashboard its team is developing.

In early December, MTaPS re-engaged with the WHO regarding the potential integration of PSS Insight and WHO's access dashboard to form a jointly developed tool that measures pharmaceutical systems strengthening and expands on the work already undertaken by the WHO to measure access to pharmaceuticals. Increased involvement of the WHO would help to institutionalize PSS Insight and promote uptake of the tool beyond the life of the project. MTaPS is still exploring this collaboration and has a meeting planned with the WHO in March 2020 to unify the two previous approaches and determine the parameters for combining the existing frameworks and indicator sets. This collaboration would include the continued involvement of BUSPH, and discussions among all three parties are continuing to determine next steps and expedite a combined approach moving forward.

ACTIVITY 2: ENHANCE THE GLOBAL PHARMACEUTICAL SYSTEMS LEARNING AGENDA

The Joint Learning Network for Universal Health Coverage (JLN) hosted its global meeting in Manama, Bahrain, December 4–5, 2019, where MTaPS and BUSPH presented the proposed learning exchange entitled Medicines in UHC. MTaPS and BUSPH facilitated a mini-exchange on the topic, and 20 participants from 13 countries joined the session. Participants were divided into three discussion groups focused on medicines pricing strategies, accountability and transparency, and other topics of interest that align with the theme of medicines in UHC. Based on the outcomes of the discussions, the facilitation team proposed that the learning exchange focus specifically on medicines pricing strategies, which was the area of strongest interest among participants. The JLN steering group agreed to move forward with the learning exchange and has requested a statement of work that provides more technical details on the topic, the structure of the exchange, and the budget. MTaPS will work with BUSPH to develop the statement of work and, if approved by the JLN steering group, will use it to issue a request for expression of interest among JLN country participants as a first step to launching the exchange.

MTaPS convened the inaugural meeting of the Pharmaceutical Systems Strengthening Technical Advisory Group (PSS TAG) October 23–24, 2019, at the Management Sciences for Health (MSH) offices in Arlington, Virginia. Of the 11 TAG members, 3 attended in person, 4 attended virtually, and 4 were unable to attend due to prior commitments. The objectives of the meeting were to introduce PSS TAG members and finalize the terms of reference, identify critical PSS evidence and knowledge gaps, advise on activities to fill the identified gaps, and generate political priority for PSS on the global health agenda. Among the key meeting outcomes, TAG members agreed on the need for advocacy and better communication to position PSS on the global health agenda and proposed ways to improve the framing and messaging of the concept. Members also provided recommendations on how to engage a broad range of stakeholders and offered to facilitate necessary introductions for planning and participating in global meetings. The program is working with the PSS TAG chair to plan the next series of meetings and hopes to convene the group on a quarterly basis for a series of virtual meetings.

During this quarter, the program completed development of the face-to-face version of the PSS 101 course. The training session took place November 4–5, 2019, at USAID's Washington Learning Center with six USAID employees. The goal of the course is to teach participants the basic principles of PSS, including how addressing pharmaceutical management problems can contribute to improving current concerns such as UHC, AMR, HIV and AIDS, malaria, tuberculosis, and maternal and child health. The course is modeled on a competency-based training package and consisted of six modules:

1) The Goal: Improving Access to and Appropriate Use of Safe, Effective, Quality-Assured, and Affordable Medical Products and Pharmaceutical Services
2) How to Achieve the Goal? Overview of Pharmaceutical Systems Strengthening (PSS)
3) Why Pharmaceutical Regulatory Systems Are Crucial to PSS
4) Improving Health Outcomes through Strengthening Pharmaceutical Financing Systems
5) Ensuring Availability and Use of Pharmaceutical Data for Evidence-Based Decision Making
6) Bolstering Governance in Pharmaceutical Systems

Each module employed participatory learning methods such as case studies, small group activities, hands-on exercises, interactive PowerPoint presentations, panel discussions, and energizers to provide participants an optimum learning experience. Results from the pre- and post-training quizzes showed improvement in participant's knowledge of PSS. Participants also had an opportunity to evaluate the training with respect to relevance, pace, content, and exercises and provide general feedback. The feedback indicated that participants thought they had learned a great deal and appreciated the knowledge and skills learned in the training course. The program is revising the course using the feedback gathered from the first cohort for a second training course scheduled for March 2020.

With respect to the program's implementation research, MTaPS completed the redrafting of its multiyear research plan. The plan outlines the program's proposed research agenda and aims to document and analyze the processes and results of PSS interventions in low- and middle-income countries and understand the factors that facilitate or hinder success. The questions and learning themes in the research agenda closely align with the program's technical objectives and more broadly reflect the intersection among areas of work under MTaPS, traditional areas of work under MTaPS' predecessor programs, and themes salient to health systems strengthening and UHC. The research agenda is aspirational and a dynamic work in progress to be reviewed and updated pending USAID and country priorities and new input as technical implementation activities unfold. The program's internal research group will serve as stewards of the program's research agenda and help identify emerging implementation research and other documentation opportunities across the program's technical portfolios. MTaPS further strengthened the functioning of the group with the finalization of its terms of reference.

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 participated in the 54th meeting for the WHO Expert Committee on Specifications for Pharmaceutical Products, where it provided expert review of technical documents, including specifications for pharmaceutical products and guidelines on various aspects of medicines regulation. Two key documents on which the program provided technical advice were:

A. Guidance on shelf life for supply and procurement of medicines. This included policy on the remaining shelf life of medical products and points to consider on remaining shelf life of medical products upon delivery by both regulators and procurement agencies.

B. A concept note on the framework for evaluating and publicly designating regulatory authorities as WHO-listed authorities. Consultation is ongoing prior to the concept being piloted.

MTaPS also continued to support the strengthening of institutional and human resource capacity for pharmaceutical regulatory systems in Africa through collaboration with the New Partnership for Africa's Development's African Union Development Agency (AUDA-NEPAD). During PY1Q3, MTaPS conducted a workshop to validate the monitoring and evaluation (M&E) tool for regional centers of regulatory excellence (RCOREs), previously developed with support from USAID. During this reporting period, MTaPS engaged a consultant to use the tool to complete data collection on the performance of 11 selected RCOREs and analyze the data. Key findings from the M&E exercise include:

- The disparate performance of the 11 selected RCOREs
- Evidence of active involvement in regional harmonization initiatives in the East African Community, Southern African Development Community, Economic Community of West African States, Intergovernmental Authority on Development, and African Vaccine Regulatory Forum
- Instances of comparatively advanced organizations assisting others within their regions, such as Food and Drugs Authority Ghana assisting Guinea in the review of the protocol for Ebola in West Africa and Uganda National Drug Authority partnering with Rwanda on the twinning process leading to the establishment of the Rwanda Food and Drugs Authority
- Two RCOREs, Tanzania Food and Drugs Authority and Uganda National Drug Authority, Quality Control Laboratory, were designated at Maturity Level 3 according to the WHO Global Benchmarking Tool

The evaluation provides baseline data on the performance of the selected RCOREs, which can be used as a reference point for tracking progress on regulatory systems strengthening.

Following the discussions at the Joint Action Groups meetings held in Victoria Falls, Zambia, MTaPS continued developing plans with AUDA-NEPAD for the harmonization of medicines regulation in Africa. MTaPS and AUDA-NEPAD discussed areas for support that were aligned with USAID priorities and the AUDA-NEPAD 2020 work plan. One agreed area of work is supporting the establishment of a pharmacovigilance (PV) web-based platform that would provide a one-stop center and database for the status of PV systems across the continent. This activity is being initiated as part of the PY2 Cross Bureau portfolio. The program also explored other opportunities for the harmonization of medicines regulation. A presentation by WHO on the harmonization of regulation of medical devices in Africa revealed a need to improve the control of safety and performance of medical devices on the continent. WHO shared a concept note on cloud-based solutions for medicines development and access in Africa to explore the possibility of establishing a cloud-based platform. This platform would allow regulators secure access to third-party controlled datasets to support evidence-based regulatory decisions or recommendations across the region. Further discussions will be held with USAID and partners to explore the feasibility of implementation.

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

MTaPS is developing a roadmap for HTA institutionalization in low- and middle-income countries and will be conducting a regional workshop in Sub-Saharan Africa to introduce the document and gather feedback on the proposed institutionalization models. In this reporting period, the team prepared an early draft of the roadmap and has circulated it for internal review. In anticipation of finalizing the draft of the roadmap, the program also created a list of global and regional experts, who will be asked to serve as external reviewers of the document. MTaPS expects to distribute the final draft of the roadmap to the external global experts at the end of January 2020.

ACTIVITY 6: EXAMINE OPPORTUNITIES FOR AND BARRIERS TO THE USE OF DRUG SELLERS IN INCREASING ACCESS TO MEDICINES AND OTHER HEALTH TECHNOLOGIES IN LOW- AND MIDDLE-INCOME COUNTRIES IN SUPPORT OF UNIVERSAL HEALTH COVERAGE OBJECTIVES

During this quarter, MTaPS collaborated with Launch DSI, a project funded by the Bill and Melinda Gates Foundation, to initiate a case study in Tanzania on the engagement of retail drug outlets by the National Health Insurance Fund (NHIF) in the national benefits program. The team developed interview instruments and identified key informants. During the fieldwork, which occurred in December, the team conducted interviews with key informants from the government and retail outlet sectors. The interview data will be analyzed to identify enablers and barriers for engagement of retail drug outlets by the NHIF.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
1	Meet with WHO to determine next steps for aligning the two tools	January-March
2.1	Work with BUSPH to develop a statement of work on the medicines pricing strategy learning exchange and submit it to the JLN steering group for approval	
2.1	Pending approval of the statement of work, develop and disseminate a request for expressions of interest to JLN countries to join the learning exchange	
2.2	Work with the PSS TAG chair to host the next TAG virtual meeting	
2.3	Complete development of the eLearning course	January-June
2.4	Complete process for formalizing the adoption of the program's research agenda	January-March
2.4	Initiate one research study	January-June
3	Disseminate a technical report on RCOREs' M&E status	January-March
3	Participate in collaborative meetings of NEPAD, the AMRH steering committee, and technical working group	
5	Finalize the draft of the roadmap after internal reviews and share with external experts for feedback.	
5	Finalize list of target pilot countries and identify host country for regional workshop	
6	Conduct supplementary interviews with retail drug outlets and complete analysis of qualitative data	
6	Draft and submit a manuscript for peer-reviewed publication	January-June

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 universal health coverage.[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 on MTaPS governance activities in this reporting period.

TRANSPARENCY AND ACCOUNTABILITY OF COUNTRY PHARMACEUTICAL SYSTEMS IMPROVED

MTaPS is providing support to the **Philippine's** Department of Health (DOH) to boost its capacity to plan, implement, and sustain an integrated and well-functioning supply chain that will ensure adequate availability of health commodities across numerous vertical programs. A key component of this support involves working with the procurement and supply chain management (PSCM) team of the DOH and stakeholders to institute and capacitate a governance body that will steward and foster coordination and oversight of PSCM across various DOH public health programs and levels (central, regional, and local) of the decentralized health system. This governance body will also guide and manage PSCM-related reforms and have the mandate to establish working groups and oversight entities for the different PSCM functions. In addition to clarifying roles and responsibilities for PSCM and mitigating related inefficiencies in the context of fragmentation of PSCM functions and DOH devolution, another important objective is improving oversight of third- and fourth-party logistics contractors. In this reporting period, MTaPS staff met with key stakeholders to understand expectations with respect to the scope and function of the proposed governance body and priority functions to focus on; solicit input on its structure, mandate, and reporting requirements; map existing governance structures with mandates relevant to the proposed body and enquire about the feasibility of leveraging them to improve horizontal collaboration at the central level; and identify anticipated capacity-building needs and other issues. This information gathering exercise will inform the development of a draft structure and accountability framework for the governance body, including associated working groups and an organizational development plan for the PSCM team.

In **Rwanda**, the recently established Federal and Drugs Authority is now responsible for regulating the pharmaceutical sector, and the Pharmacy Unit of the Ministry of Health's (MOH) Directorate of Clinical Services is in charge of pharmaceutical policy formulation, implementation, and oversight. In addition to providing technical assistance to operationalize the new pharmaceutical regulatory authority, a key area of work for MTaPS is assisting the MOH to fully establish its Pharmacy Unit, advocate for an increase in human resources, and build the Unit's capacity to carry out its mandate. As a first step toward supporting the MOH to define roles and responsibilities of the Pharmacy Unit and develop terms of reference, job descriptions, and operating procedures, MTaPS mapped the current structure of the Unit

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. Available at: http://www.who.int/medicines/areas/governance/EMP_brochure.pdf?ua=1

and the roles of the existing pharmacy staff. This information will be used to propose options for reconfiguring the Unit and identify needed human resources and skills to enable it to fulfil its mandate.

As part of Global Health Security Agenda (GHSA)-funded efforts to support countries to improve their Joint External Evaluation scores for antimicrobial resistance (AMR), MTaPS assisted **Ethiopia** to finalize the three-tier structure of its national platform for AMR governance and coordination. The structure, which consists of a national interministerial committee and a national AMR advisory committee that oversees six technical working groups, is awaiting approval. Also in this reporting period, **Uganda's** MOH appointed interim working groups for antimicrobial stewardship (AMS) and infection protection and control (IPC) based on the draft terms of reference developed in year 1 with assistance from MTaPS. The two interim working groups are now holding quarterly meetings. For more detail on MTaPS' AMR activities and the GHSA, refer to the GHSA section and objective 5/AMR activities in this report.

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

In 2017, **Mozambique** promulgated a new law on Medicines, Vaccines and Other Biological Products for Human Use, which provides for the establishment of a semi-autonomous national medicines regulatory authority. The act also created the National Directorate of Pharmacy (DNF) as an interim measure, which will later transform into the NMRA. MTaPS is assisting the newly formed DNF to develop regulations for operationalization of the new NMRA. In this reporting period, MTaPS partner, the International Law Institute African Centre for Legal Excellence (ILI-ACLE), finalized a technical report that reviews the existing pharmaceutical legal framework and the draft regulations developed to create the new regulatory body and define its mandate, functions, and roles and responsibilities. The report identifies and prioritizes regulatory gaps and analyzes DNF's existing organizational structure. MTaPS worked with the DNF to use the recommendations of the report to develop a roadmap for addressing the identified regulatory gaps to operationalize the new NMRA. MTaPS also participated in a two-week intensive workshop organized by the DNF to draft regulations for licensing of pharmaceutical manufacturers, importers and distributors, and pharmacies and for inspecting pharmacies. The program also helped to develop draft guidelines for registration of pharmaceutical products and oversight of clinical trials.

In **Rwanda,** MTaPS is providing technical assistance to develop and validate regulations to support the newly enacted medicines act. In this reporting period, MTaPS worked with the Rwanda FDA to organize and facilitate a workshop to validate draft regulations and guidelines for registration of medicines and inspection of pharmaceutical establishments. Another important area of work is MTaPS' collaboration with the MOH, Rwanda FDA, and national Pharmacy Council to develop pharmaceutical care standards to complement the well-established clinical care standards. MTaPS met with key stakeholders to solicit input to inform the drafting of the standards and helped to develop and finalize the standards and related performance assessment tools.

More than 50 procurement practitioners from regional offices, government hospitals, and local governments units in the **Philippines** met to discuss the DOH's new guidelines on framework agreements, which were developed with assistance from MTaPS. Beginning in the next quarter, MTaPS will help the DOH apply the guidelines to develop multiyear framework agreements, which is anticipated to address some key constraints associated with fiscal year-bound procurements.

As part of GHSA-funded activities to strengthen AMS in **Cameroon**, MTaPS initiated a desk review of the policies and regulations pertaining to the management and use of antibiotics. In **Mali**, MTaPS worked with the MOH and the national multisectoral coordination group to revise the IPC guidelines for the human sector to integrate a water, sanitation, and hygiene (WASH) component and World Health Organization (WHO) recommendations on IPC.

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

More than 50 professionals from public and private electronic media in **Ethiopia** attended a one-day AMR sensitization workshop organized by MTaPS in collaboration with the country's MOH. In addition to providing updates on the national and global AMR situation, participants also discussed the roles and responsibilities of the media in AMR containment and interventions that use media outlets to raise public awareness on AMR. As a result of the workshop, the media more actively participated in World Antibiotic Awareness Week later in the quarter.

Additionally, journalists from various media outlets were invited to participate in a road show event to raise community awareness on AMR in Morogoro in **Tanzania** during this reporting period.

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

INSTITUTIONALIZATION OF PROVEN, INNOVATIVE APPROACHES TO BUILDING HUMAN RESOURCE CAPACITY

IPC training materials and curricula design/reform

MTaPS supported the development of a complete IPC training package in **Tanzania**. Building on curriculum design activities started last quarter, MTaPS/Tanzania helped develop an IPC training of trainers guide to supplement the facilitator and participant guides produced in the previous quarter. These three guides will serve to train all tutors from various local institutions and will help ensure that quality training is provided to nursing students across the country using the revised IPC curriculum.

In **Cameroon**, the MTaPS team developed 15 training modules that follow the WHO core components of an IPC program by working with 25 staff from different departments in the Ministry of Public Health, representatives from the Ministry of Environment, as well as partners, such as IDDS and WHO. Subsequently, the team began the process of transforming these modules into a competency-based curriculum, which will comprise an instructor guide and participant manual. A key element of this process was the implementation of a five-day curriculum design workshop led by the MTaPS team to equip 10 health experts to teach counterparts how to design a curriculum following standard training guidelines and adult learning principles. Counterparts are expected to use the curriculum design skills acquired during the workshop to design or refine future curricula on their own.

eLearning

MTaPS' support to **Tanzania, Senegal, Cameroon,** and **Kenya** in eLearning involved several steps, including an eLearning assessment, selection of a suitable institution to host the eLearning platform, design of eLearning courses, and capacity building of local teams responsible for managing the platforms. Although Kenya and Cameroon are at their initial stages, teams in Tanzania and Senegal have made tremendous progress in their eLearning program designs. The process started in Tanzania with an eLearning assessment to identify an institution to implement the eLearning programs. Based on the results, the team selected Morogoro Center for Distance Education (CDE), which is currently under the Ministry of Health with an existing Moodle open source platform, as the local institution to host the IPC/AMS eLearning programs. In addition, the Moodle eLearning platform is the logical solution to AMS/IPC challenges as it will contribute to expanding the reach of capacity-building efforts in Tanzania. Following the eLearning assessment, the MTaPS team began working the CDE team to adapt the face-to-face IPC training materials into the eLearning format. Ten modules have been adapted to storyboards, two of which are already in alpha versions. Once completed, all eLearning courses will be deployed through the CDE and used for online in-service training of health care providers.

In **Senegal**, the design of the eLearning program experienced some challenges due in part to staff turnover within the Ministry of Health and Social Action (MSAS), which was the institution identified to serve as the platform host. Despite these challenges, the MTaPS team was able to work with counterparts through a series of cross-sectorial meetings and reach consensus on the first three modules to convert to eLearning. A first meeting convened by MTaPS in December allowed the team to select three modules, revise their content, and adapt them to storyboards. Following this meeting, the Informatic Unit of MSAS convened another meeting to adapt the storyboards to alpha versions and upload them to the MSAS platform. As next steps, MTaPS will review the alpha version modules, finalize

them, and make them available to Senegal health care providers. In addition, MTaPS will continue supporting the MSAS eLearning team to improve the platform look and feel to increase uptake.

Competency-based training

In **Kenya**, the MTaPS team continued providing support to the country to plan and conduct a training to strengthen the capacity of county and sub-county health care workers (HCWs) on IPC and Medicines and Therapeutics Committees (MTCs) on AMS. In Nyeri county, the MTaPS team helped train 40 HCWs October 23–25. At the end of the training, participants were asked to develop post-training action plans, which they were required to implement upon return to their health facilities. The purpose of these action plans was to enhance ongoing MTC activities in health facilities where they existed and establish new ones where they did not. In addition, the Kenya MTaPS team conducted follow-up meetings remotely with health facilities that had received the training in previous months to determine progress made by trainees on the implementation of their action plans. Feedback from the follow-up revealed that health facilities are generally behind schedule with implementing their plans.

In **Ethiopia**, MTaPS supported the MOH this quarter with organizing and carrying out two rounds of training of trainers workshops on IPC for 62 health professionals from seven MTaPS-supported hospitals, regional health bureaus (RHBs), and other hospitals selected by the MOH. The training is expected to help reinforce their knowledge and skills on the revised national IPC guidelines. As part of their post-training action plans, participants are expected to replicate the training in their respective health facilities and cascade the skills acquired down to other staff.

STRONGER CAPACITY OF GOVERNMENT TO MANAGE PHARMACEUTICAL SYSTEMS

An effective governance structure within the Ministry of Health is crucial for managing pharmaceutical services. In **Rwanda**, MTaPS is working to support the establishment of a Pharmacy Unit within the Ministry of Health to provide oversight for pharmaceutical services in the public sector. MTaPS has developed reference standards for pharmaceutical services that will be used in conjunction with clinical care standards to measure practices in pharmacies in district hospitals and other levels of pharmaceutical service delivery.

IMPROVED CAPACITY OF PRIVATE-SECTOR ORGANIZATIONS TO SUPPORT PHARMACEUTICAL OPERATIONS

As a starting point to implement the accredited medicine sellers' initiative, MTaPS collaborated with DFID in **Bangladesh** to develop a strategy and tools for inspection and monitoring of private retail medicine shops and pharmacies. Private-sector organizations will be involved in capacity enhancement and training for delivery of quality services, thereby ensuring access to safe and quality-assured medicines and technologies.

STRONGER MEDICINES REGULATORY CAPACITY, INCLUDING THROUGH REGIONAL REGULATORY HARMONIZATION

In a bid to address weaknesses in the regulation of medicines and technologies in countries, MTaPS has employed strategies to improve regulatory capacity. MTaPS is working with countries of interest to improve the pharmaceutical legal and regulatory framework (discussed under objective 1), establish quality management systems, perform assessments of the regulatory systems using global tools, and implement interventions that strengthen key regulatory functions in national medicines authorities.

During PY2Q1, MTaPS worked with the national medicines authorities in **Mozambique, Nepal,** and **Rwanda** to develop a scope of work for supporting documentation and implementation of the quality management system (QMS) based on the current systems. Given the importance of a QMS in improving

the efficiency of the regulatory system toward self-reliance, MTaPS's long-term plan is to support these national medicines regulatory authorities (NMRAs) to obtain ISO 9001:2015 certification for their regulatory systems. The program is in the process of engaging Celsian to provide technical assistance in this area in some countries.

MTaPS worked with NMRAs in Mozambique and Rwanda to develop standard operating procedures for key regulatory functions, such as medicines registration and import and export control. The documented procedures that form part of the QMS are used with the electronic information management systems to operate Pharmadex in Mozambique and Pharmaceutical Regulatory Information Management System (PRIMS) in Rwanda.

Ensuring an efficient marketing authorization process is key to increasing access to quality-assured medicines. MTaPS worked with the Directorate General of Drug Administration (DGDA) in **Bangladesh** to build capacity of medicines assessors in applying common technical document (CTD) guidelines while evaluating product dossiers before registration. In Rwanda, support was offered to organize the recruitment of new personnel, including medicine assessors, to increase the capacity of the human resources required to undertake regulatory services.

Capacity-building sessions on medicines registration and pharmacovigilance were delivered to National Regulatory Authorities in Bangladesh, Rwanda, and Mozambique. The medicines registration sessions helped to improve on the dossier evaluation skills in compliance with CTD guidelines that are aligned to international best practices. Health professionals in Mozambique were equipped with knowledge and techniques for monitoring and implementing active safety surveillance of HIV/TB patients treated with the dolutegravir-based regimen.

To improve on the status of retail medicine outlets and in collaboration with implementing partner DFID, MTaPS organized a workshop for regulators in Bangladesh to develop a strategy for inspection of medicines retail outlets. The strategy incorporates requirements for a model pharmacy and medicine shop that will be used as a guide for inspectors while enforcing compliance to the stipulated inspection regulations and guidelines.

Harmonization of medicines regulation is considered beneficial to improve access to medicines and reduce the barriers to regulation of medicines. Under the **Asia Regional Bureau** portfolio, MTaPS participated in a meeting on enhancing implementation of the WHO collaborative registration procedure, which shortens the registration process and enables NMRAs to speed up access to critical medicines for diseases of global health interest, among others. MTaPS plans to support Rwanda to join the WHO collaborative procedure.

MTaPS participated in African Medicines Regulatory Harmonization (AMRH) Technical Working Group meetings for the creation of the African Medicines Agency, which is envisaged to provide oversight of medicines regulation on the continent in a harmonized manner.

MTaPS uses standardized global tools to measure national regulatory systems in countries of interest. In Rwanda and Mozambique, the outcomes of previously conducted WHO Global Benchmarking Tool findings were used as a reference to update institutional development plans.

Working with implementing partners such as PQM+, WHO, and UNICEF under the coalition of interested partners coordinated by WHO, MTaPS participated in strategic meetings to support NMRAs in Bangladesh and Nepal to address gaps and weaknesses identified in the regulatory systems.

During this quarter, MTaPS/Mozambique supported the Directorate of Pharmacy (DNF) to submit and obtain approval to implement the protocol for active safety surveillance of HIV/TB patients treated with the dolutegravir-based regimen tenofovir/lamivudine/dolutegravir. Eleven DNF and national HIV program staff who will drive implementation of the protocol have been trained, and their capacity to conduct active safety surveillance has been built.

In the **Philippines**, MTaPS supported a survey to understand the knowledge, attitudes, and practices of health practitioners in relation to monitoring and reporting adverse events from patients. MTaPS also supported efforts to train health care providers in Rwanda on national guidelines for implementing a pharmacovigilance system by reviewing critical elements of the training activity. Similarly, it supported staff of the Rwanda FDA to install and use the pharmacovigilance information management system (PViMS) to collect information on adverse effects following immunization during a mass campaign for an Ebola vaccine.

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

INTEROPERABILITY OF PHARMACEUTICAL MANAGEMENT INFORMATION SYSTEMS THAT LINK PATIENTS AND PRODUCTS

MTaPS/**Philippines** supported the Department of Health (DOH) to develop and finalize the electronic Logistics Management Information System (eLMIS). MTaPS' support for the pre-procurement process and requirements will enable the DOH to launch the tender and fund the procurement and deployment of a standard eLMIS, which will enhance data visibility and logistics management in the DOH. In **Mozambique** and **Rwanda**, MTaPS has supported medicines regulatory authorities to integrate and link pharmacovigilance information management system (PViMS), a tool for collecting and analyzing data on adverse effects of medicines and vaccines, and the importation of medicines into the regulatory functions of Pharmadex and other tools used in the agencies. Overall, in the regulatory space, MTaPS is supporting Mozambique and Rwanda to achieve more efficiency in their regulatory functions and enhance access to data across these functions to improve decision making.

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

The finalization and implementation of the electronic Asset Management System (eAMS) in **Bangladesh** creates an opportunity for MTaPS to support the management of health technologies. This is the first opportunity that MTaPS has had to tap into the complicated arena of managing health technologies, from oxygen cylinders to X-ray machines. The MTaPS team in Bangladesh will support the analysis of health technologies data captured in the eAMS to identify opportunities for efficiency and enhance availability of critical lifesaving technologies (e.g., oxygen concentrators, neonatal incubators) used in preventing maternal and neonatal deaths. During this quarter, MTaPS/Bangladesh also achieved the official adoption of e-TB Manager as the national tool for tracking TB patients. With the planned rollout of the tool to more than 600 facilities across the country, data collection on TB management will improve availability and use of patient and commodity data for the TB program, thereby resulting in uninterrupted access to TB medicines and achievement of health outcomes for TB patients.

In the **Philippines** and in collaboration with MTaPS partner IQVIA, data from the private and public sectors were analyzed for Couple Years of Protection (CYP). The CYP analyses for 2018–2019 are now available for program managers and development partners to monitor progress in the delivery of contraceptive services in the Philippines. MTaPS/**Nepal** developed system requirement specifications for an integrated electronic regulatory management information system. This tool will enhance efficiency in the management of medicine regulatory functions. MTaPS/**Mozambique** upgraded Pharmadex to improve the registration of medicines function and add the import process module. The team is working hard to get all approvals necessary to have Pharmadex online. In the next quarter, the latest version of Pharmadex will be implemented to enhance efficiency in the regulatory authority.

Enhancing patient safety requires availability and use of good quality data and effective data management. With support from MTaPS, PViMS was introduced in **Rwanda** to support the collection and analysis of adverse events following immunization that may occur during a mass immunization campaign for a newly introduced Ebola vaccine. In the **Philippines**, PViMS was updated to enhance effective management of adverse drug reaction (ADR) data from public health programs. MTaPS/**Bangladesh** focused its efforts on data for decision making on supporting the integration ADR reporting into the national DHIS2-based data management system.

ADVANCEMENTS IN PHARMACEUTICAL SYSTEMS STRENGTHENING RESEARCH AND THE GLOBAL LEARNING AGENDA

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

IMPLEMENTATION OF EVIDENCE-BASED MEDICINES STRATEGIES AND PHARMACY BENEFITS PROGRAMS

Health Technology Assessment (HTA) is a policy practice that examines the consequences of health technology application and is closely related to evidence-based medicine. HTA aims to: 1) support decision-making in health care and promote appropriate resource-allocation; 2) strengthen credibility, transparency, and accountability of different, decision-making levels; and 3) achieve better quality of health services. The MTaPS/**Asia Regional Bureau** portfolio continued making progress on the roadmap for HTA institutionalization in LMICs. A first draft is still undergoing internal review and it is anticipated that the final draft will be reviewed early next quarter by global experts. To initiate the testing phase of the roadmap, MTaPS has submitted a proposal for a pre-conference workshop in April 2020 to present and discuss the roadmap. MTaPS/**Philippines** and MTaPS/Asia Regional Bureau portfolio are supporting the Philippines's Department of Health (DOH) in operationalizing its HTA. Next quarter, MTaPS/Philippines will collaborate with the DOH and WHO to conduct a situational assessment to address identified gaps.

MTaPS/Asia Regional Bureau portfolio drafted an analysis of existing guidance and costing tools for pharmaceutical benefits packages and anticipates that it will be finalized early next quarter. The analysis reviewed 41 costing tools and 58 costing studies in and outside of the Asia region to determine which would be most appropriate in estimating expenditures for drug benefits. Initial results suggest that the OneHealth Tool may be the most useful in this context.

INCREASED EFFICIENCY OF PHARMACEUTICAL RESOURCE ALLOCATION AND USE

MTaPS/**Bangladesh** reviewed the country's Health Care Financing Strategy (2012–2032) and identified areas in the universal health coverage expansion program that MTaPS could support, specifically, the lack of costed packages. Based on the recommendations, MTaPS shared a draft implementation and operational plan with USAID, which is pending approval. Next quarter, MTaPS/Bangladesh plans to review and update the list of medical and surgical items and conduct a costing exercise to enable efficient resource allocation within the public health sector.

MTaPS/**Cameroon** conducted a costing exercise of the country's One Health platform operational, monitoring, and evaluation plans. In the **Philippines**, MTaPS is in the process of conducting a market capacity and cost-benefit analysis to support DOH in making informed decisions about outsourcing components of for procurement and supply chain management.

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

INCREASED AVAILABILITY OF ESSENTIAL MEDICINES AND OTHER HEALTH TECHNOLOGIES

Continuous availability of safe, effective, quality-assured, and affordable medicines and health technologies is critical for effective health outcomes. Implementing regular demand planning and monitoring and efficient and coordinated procurement with optimized warehousing, inventory management, and delivery systems, supported by reliable data with strong local institutional and individual capacity, are pillars to ensure availability.

In the **Philippines**, to facilitate the formal approval and launch of the three-year National Strategic Plan (NSP) for Procurement and Supply Chain Management (PSCM), MTaPS assisted the Department of Health (DOH) in revising Administrative Orders that will direct stakeholders at different levels to support implementation. While the planned launch of the NSP in November 2019 was postponed due to health emergencies and UHC implementation role clarification, MTaPS, in collaboration with the Procurement and Supply Chain Management Team (PSCMT), is working to re-align the NSP with the recent role clarification on UHC implementation, which has funding implications for the NSP at different levels. In **Bangladesh**, MTaPS assisted in the final review of the procurement strategic plan, which is expected to be vetted and approved during the next quarter. This will help to align Ministry of Health and Family Welfare (MOHFW) and MTaPS activities with the strategic plan during the project period.

In **Bangladesh**, MTaPS assisted the National Tuberculosis Program (NTP) in developing the PSM components of the five-year TB elimination strategy by defining strategic objectives and related key interventions that would support the overall goal of the NSP of TB elimination. In addition, MTaPS assisted the NTP in crafting a concept note on PSM components for latent TB infection (LTBI) prevention as the country has embarked on adopting LTBI prevention global targets. The PSM component of the concept note will guide the development of procedures and guidelines to ensure product availability for the achievement of LTBI prevention targets.

After reactivating the PLMC (a procurement oversight and coordination mechanism for transparency and accountability), MTaPS/**Bangladesh**, in collaboration with the MOHFW, facilitated the second-round quarterly meeting with stakeholders to discuss procurement-related issues. One critical challenge discussed was capacity gaps identified in the PLMC membership, and MTaPS has been requested to organize training to address this. In addition, MTaPS facilitated the revision and approval of the terms of reference (TOR) for the overall PSM coordinating mechanism (through the Procurement and Logistics Coordination Forum, previously called Supply Chain Coordination Form) in the MOHFW with the addition of new members to enhance participation and improve procurement and logistics processes, including streamlining regular physical inventory at central medical stores.

MTaPS/**Philippines** and the PSCMT facilitated a one-day workshop with regional offices and the field implementation and coordination team and health system and policy development team of the DOH to align supply chain governance and stewardship strategies at the central and local government unit (LGU) levels, taking into consideration the changing policy direction of UHC implementation roles.

With the goal of building institutional capacity for PSM, MTaPS/**Philippines**, in collaboration with the Procurement Service Unit, drafted framework agreement guidelines for procurement of health commodities during PY1Q4. This quarter, MTaPS facilitated the presentation and discussion of the guidelines in the context of the UHC law to procurement officers and practitioners from different levels (central, regional, and LGU) responsible for procurement activities to obtain feedback. Once finalized

and approved, the guidelines are expected to address current bottlenecks associated with rigid, fixed quantity, and fiscal year-based procurement policy. They will also reduce the process lead time and workload in executing procurement packages.

Also in the **Philippines**, MTaPS assisted the PSCMT in drafting functional roles and competency areas for the recently approved supply chain positions at different levels. Once the positions are filled, MTaPS will assist the new recruits by providing focused orientation. During the next quarter, MTaPS will assist the DOH to conduct a systematic functional analysis for a comprehensive workforce development plan for PSM and PV.

To ensure that an appropriate supply chain information system is introduced, MTaPS/**Philippines** assisted the DOH in the development and finalization of the functional and nonfunctional requirements for the eLMIS. During this quarter, MTaPS assisted the DOH to finalize the technical specification and the TOR required to execute the procurement of the eLMIS. Pre-procurement meetings to clarify the steps, vendor evaluation criteria, and terms and conditions were facilitated. This assistance improves the DOH's readiness to launch the tender and allocate budget to procure and deploy the eLMIS.

In **Bangladesh**, MTaPS, in collaboration with the Directorate General of Family Planning, trained 544 users on the enhanced version of the inventory management tool in 263 upazila and 21 regional warehouses. The training helped users to maintain and update reproductive health commodity stock information to make informed decisions. With the recently updated inventory report (November 2019), the stock-out rate of any family planning method was reported to be 0.1%, which is lower than the stock-out rate of 0.4% reported in November 2018. Also in the **Philippines**, MTaPS supported the DOH in the collection and analysis of TB and family planning (FP) consumption data to inform quarterly allocation to health facilities.

In **Bangladesh**, MTaPS assisted the MOHFW to update the standard list of medical equipment by involving clinicians and managers at different levels and hospitals. The updated table of equipment will facilitate equitable allocation of the right medical equipment to the right service delivery points and ensure uninterrupted quality health services. In addition, nearly 1,200 medical and surgical devices/items and associated prices were catalogued with appropriate specifications which will inform equitable resource allocation. MTaPS/**Bangladesh** also assisted in the development and finalization of the electronic asset management system (eAMS) nationwide rollout training plan to district hospitals. The training will facilitate ownership and system use in managing assets at service delivery points.

MTaPS/**Bangladesh** assisted the NTP finalization of the quantification of second-line TB medicines, which was used to coordinate with Global Fund and Global Drug Facility advisors to inform supply plan and budget requirements through December 2020. Second-line TB medicine quantity and budget requirements were also developed through September 2021, which helped to secure sufficient funding allocation. Similarly, in the **Philippines**, MTaPS finalized and disseminated the quantification result for TB and FP commodities, which generated multiyear quantity needs and budget requirements and identified possible gaps.

IMPROVED PATIENT SAFETY AND THERAPEUTIC EFFECTIVENESS

In **Mozambique**, MTaPS supported the National Directorate of Pharmacy pharmacovigilance team to finalize the protocol for the active surveillance of tenofovir/lamivudine/dolutegravir. In addition, MTaPS provided technical and financial assistance to the country's HIV program to train 11 health workers on the protocol, pilot the data collection forms at Machava General Hospital, and revise and finalize them for national rollout. In the **Philippines**, MTaPS finalized the rapid assessment report of the pharmacovigilance system, which the Food and Drug Administration will use to complement findings from the WHO Global Benchmarking self-assessment. MTaPS also finished collecting data from health care workers on knowledge, attitudes, and practices related to medication safety reporting practices.

The Department of Health will use the results to help develop the multiyear national pharmacovigilance strategy. **Rwanda's** Food and Drug Authority (FDA) installed the pharmacovigilance information management system (PViMS), which is a tool developed under SIAPS for managing reports of adverse drug reactions. PViMS will be integral in documenting any untoward events during a mass Ebola immunization campaign. MTaPS trained FDA staff to use the tool, which will be incorporated into a larger training on pharmacovigilance for health care providers to increase adverse drug reaction reporting in Rwanda. MTaPS will also provide logistics support to the Rwanda FDA to conduct training for health care providers on the national guidelines for pharmacovigilance, which is scheduled for the end of January 2020.

BETTER CONTAINMENT OF ANTIMICROBIAL RESISTANCE AND INFECTION PREVENTION AND CONTROL

In **Jordan,** USAID reviewed the work plan and approved it in December 2019. Approved activities include strengthening the capacity of the national steering committee, technical sub-committees, and national focal point on AMR to coordinate and monitor implementation of the country's national action plan on AMR (NAP-AMR) and working with selected health facilities to pilot AMS programs through national accreditation and quality certification frameworks. USAID/Jordan sent letters to the WHO and the MOH to introduce the MTaPS program and activities and pave the way for implementation. MTaPS worked with the Hospital Pharmacy Department of **Mozambique's** MOH to finalize the implementation plan for the NAP-AMR, focusing on promoting IPC and AMS among health care workers in seven provincial hospitals. MTaPS provided technical support to the Hospital Pharmacy Department to finalize in-service AMS training materials for health care workers. MTaPS/**Bangladesh** presented the results of the MSC situational analysis to the national AMR focal person and agreed that MTaPS will strengthen MSC to effectively implement the NAP-AMR. MTaPS will also ensure that these activities, such as conducting a national-level AMS and IPC assessment, will complement newly developed activities to be funded through the GHSA.

In addition to Bangladesh, MTaPS supports GHSA activities in **Burkina Faso, Cameroon, Côte d'Ivoire, DRC, Ethiopia, Kenya, Mali, Senegal, Tanzania,** and **Uganda**, focusing on promoting AMS, IPC, and MSC.

For more details on GHSA portfolio progress, refer to the GHSA section of this report.

PROGRESS BY REGIONAL BUREAU PORTFOLIO

ASIA REGIONAL BUREAU

OBJECTIVE 1: CAPACITY TO CONDUCT AND USE HEALTH TECHNOLOGY ASSESSMENT TO SUPPORT THE INSTITUTIONALIZATION OF TRANSPARENT AND EVIDENCE-BASED DECISION MAKING IN ASIA REGIONAL COUNTRIES STRENGTHENED

Activity 1.1.1: Adapt and pilot a roadmap for HTA implementation in three Asia regional countries

MTaPS continued to work on the roadmap for HTA institutionalization in LMICs following the extensive literature review and data extraction completed in the last quarter. An early draft of the roadmap is under internal review and revision prior to being circulated to external experts.

MTaPS will circulate the final draft of the roadmap to external experts in the region after internal review. This is estimated to be toward the end of January 2020. MTaPS and the Asia Bureau exchanged a list of potential experts to be targeted for the review. These include global experts from Sweden's and Canada's HTA agencies; leadership from international HTA networks, including INAHTA and HTAi; and experts from WHO. Regional experts include those from HTA bodies from Thailand, Malaysia, China, Indonesia, and the Philippines. MTaPS will confer with the Asia Bureau prior to sending out the roadmap to regional experts and requesting their feedback.

MTaPS has submitted a proposal for a preconference workshop to the HTAsiaLink board in collaboration with Indonesia's HTA Committee and Asia Bureau. HTAsiaLink, which will be held in Indonesia April 13–16, 2020, will provide opportunities to use the platform for knowledge exchange (such as the proposed workshop). Based on a previous scoping mission to Indonesia in July/August 2019, Indonesia's HTA Committee expressed significant interest in engaging with MTaPS and requested support for HTA promotion in the country. In addition, since it is hosting HTAsiaLink in 2020, the HTA Committee and associated MOH research agency PP2K proposed that this would be an opportune time for a regional workshop and that HTAsiaLink would be the appropriate forum. MTaPS awaits the decision of the HTAsiaLink board in January 2020.

MTaPS will leverage the proposed regional workshop in April and include sessions for countries to share their status of establishing and/or institutionalizing HTA in the country. MTaPS experts facilitating the workshop will work with focal countries in developing action plans for HTA institutionalization, including identifying key activities toward their medium-term goals for HTA, potential platforms for collaboration, and opportunities for knowledge exchange. MTaPS will follow up remotely with the countries for subsequent updates and potential for additional support after consultation with Asia Bureau.

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

Activity 2.1.1: Support the development of national processes for defining pharmaceutical benefits package and the size and scope of coverage

MTaPS continued its analysis of pharmaceutical benefits packages within select Asia region countries. Across the included countries, the analysis first considers how a country defines its service benefits package for each coverage arrangement (e.g., national health insurance or direct provision of services

through public system) and then defines—if applicable—how a country defines and pays for drug benefits. In the last quarter, MTaPS reviewed data for nine countries. As many countries use their essential medicines list (EMLs) as drug benefits or as a starting point to define a more specific package of drugs, MTaPS also updated an existing database of countries' EMLs and conducted a quantitative analysis of the degree of alignment of these lists against WHO's 2019 model EML and analyzed patterns in the content of these lists to identify possible regional patterns. In Q2, MTaPS will produce a synthesis of these findings in a short brief.

Activity 2.1.2: Establish guidance for estimating financial outlays for pharmaceutical benefits packages in Asia regional countries

MTaPS completed a draft report for its analysis on existing guidance and tools for estimating costs for pharmaceutical benefits packages. The analysis reviewed 41 costing tools and 58 costing studies in and outside of the Asia region to determine which tool(s) would be most useful and comprehensive in estimating financial outlays for drug benefits. Initial results from the analysis suggest that the One Health Tool may be the most useful in this context. MTaPS will be finalizing the analysis and report early next quarter.

Activity 2.2.1: Promote transparency in pricing through development of regional pricing database

MTaPS is continuing to explore the interest in and feasibility of conducting case studies on pharmaceutical pricing policies in Indonesia and other countries within the region. The team is awaiting receipt of a similar UNDP case study on how Indonesia sets prices for 45 selected drugs before determining if a separate case study is needed. MTaPS continues to face challenges in identifying other countries in which the pricing case studies could be conducted, which has a potential impact on the timeline for laying the groundwork for the planned regional pricing database. MTaPS discussed these challenges with the USAID Asia Bureau team during its FY19Q4 review and will continue to discuss these activities in Q2.

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

Sub-Objective 3.1: Regional/sub-regional medicines regulatory systems in Asia strengthened

As part of efforts to map initiatives, networks, and stakeholders supporting regional or sub-regional regulatory systems strengthening, including pharmacovigilance, in Asia regional countries and identify potential opportunities for collaboration, MTaPS participated as an observer in the seventh WHO annual meeting on collaborative registration procedure (CRP) in Bangkok, Thailand, November 13–15, 2019. The meeting was organized by the Regulatory System Strengthening Group, Department of Essential Medicines and Health Products, WHO, Geneva. MTaPS' participation at the meeting was an opportunity to interact with stakeholders, learn more about areas for potential collaboration with global initiatives, and identify areas that MTaPS can support to advance the work of the Asia bureau.

MTaPS also participated in a brief side meeting of the WHO South East Asia Regional Office (SEARO) NMRAs on day two of the meeting, which aimed to sensitize them on an upcoming pilot to register a WHO prequalified antiretroviral medicine combination (tenofovir/lamivudine/dolutegravir) using the WHO CRP in some countries in the region through a regional approach.

Under the CRP, WHO, with consent from an applicant whose product has been WHO prequalified and subject to confidentiality undertakings from a participating country, provides the country(ies) supported with reports of the technical assessment of dossiers and inspection of manufacturing sites conducted by WHO experts prior to prequalification of the product. The NMRA uses the WHO prequalification assessment reports to decide whether to register the product and informs both WHO and the applicant

of the outcome. The goal is for the product to be registered within 90 days by the NMRA, thus improving access through a fast-track mechanism.

MTaPS also completed the strategy document and data collection tool for conducting the stakeholders mapping exercise. The data collection tool, which is a google form, has been sent to identified respondents within MTaPS and partners. Responses will be collated and reviewed. Additional information will be collected using desktop review and targeted information obtained from key informants outside MTaPS if necessary, after which a final report will be compiled.

Sub-Objective 3.2: Transparency and accountability in pharmaceutical systems increased

During this quarter, discussions continued with the regional advisor for essential medicines and technologies at the WHO SEARO on potential country interest and possible collaboration to support regulatory or supply chain committees in low-resource countries in the Asian region; conduct transparency and accountability assessments (workplan activity 3.2.1: Assist one country in the Asian region to assess transparency and accountability and develop an action plan for improvement); and develop guidelines on managing conflicts of interest (COI) (workplan activity 3.2.2: Develop guidance on managing COI). Given that countries that have used the WHO Good Governance for Medicine transparency assessment tool in SEARO regions previously needed support to implement recommendations, it was determined that activity 3.1.1 would work better as a country-specific activity, with MTaPS assisting with the implementation of the recommendations. For activity 3.2.2, WHO SEARO and MTaPS (and potentially the WHO Collaborating Center for Governance, Transparency and Accountability in the Pharmaceutical Sector in Toronto) are proposing to collaborate to help countries in the region, particularly LMICs, strengthen policies used to guide key pharmaceutical committees and bodies in managing COI and their implementation. However, the approach and sub-activities will change from those originally proposed. A baseline study will be conducted as a first step to identify what COI management policies are in place in the SEARO region, explore if and how policies are applied, and collect copies of existing policies and examples of good practices. Based on this and a targeted literature search to identify model guidance, policies, and procedures on managing COI, we will work with local partners to develop and pilot a manual that identifies model COI management policies and principles and showcases country examples and good practices for the Asia region/sub-region. The manual will also provide practical guidance to countries, particularly LMICs, on how to implement these model policies and principles. MTaPS revised the activities for sub-objective 3.2 to align with this proposed collaboration and received USAID Asia Bureau concurrence. Next steps are to revise the work plan to incorporate the activity and submit it for the COR approval.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
1.1.1: Share draft roadmap with global and regional experts for feedback and feasibility of proposed frameworks/models	Finalize the draft of the roadmap for HTA institutionalization after internal review. Share with global (WHO, INAHTA) and regional (Thailand, Indonesia, Philippines) experts for their feedback on proposed best practices and approaches to introduce, scale, and institutionalize HTA in Asian LMICs. Proposed approaches would be based on the current stage the country is in its HTA journey and current capacity plus resource constraints	
1.1.1: Planning and preparation for regional workshop to further test the feasibility of proposed approaches in the roadmap	Develop the schedule, proposed sessions, session content, facilitation approach, and facilitators for proposed regional workshop on the sidelines of HTAsiaLink in April 2020	
2.1.1: Support development of national processes for defining pharmaceutical benefits package	Complete synthesis of pharmaceutical benefits analysis through creation of a brief; begin regional analysis of the processes through which Asia region countries define their drug benefits packages, culminating in creation of a brief	January-March
2.1.2: Establish guidance for estimating financial outlays for pharmaceutical benefits packages in Asia regional countries	Finalize report synthesizing existing methodologies related to costing pharmaceutical benefits policies and determine possible needs and/or country-level demand for further capacity building or guidance (as needed) on pharmaceutical costing methodologies and tools	
2.2.1: Promote transparency in pricing policies through development of regional pricing database	Continue to assess the feasibility of conducting a case study on pharmaceutical pricing policies in Indonesia and determine whether other countries are interested	
3.1.1 and 3.1.2: Data collection on regional/sub-regional regulatory systems strengthening initiatives, including pharmacovigilance	Collate input from all respondents from the google data collection form	January 25,
3.1.1 and 3.1.2: Additional information gathering	Review all input obtained from the google form, determine the need for additional information gathering, and gather information	February 15,
3.1.1 and 3.1.2: Final report	Compile report of mapping exercise with recommendations on potential areas for regional support on regulatory system strengthening, including pharmacovigilance, in Asia bureau	March 25,
Revised activity 3.2.1: Submit for COR approval, decide on roles, and initiate baseline survey	Incorporate the revised activity into the work plan and submit it for USAID COR approval. Continue discussions with WHO SEARO and the WHO Collaborating Center to agree on roles. Follow up with WHO WPRO interest. Work with WHO SEARO (and potentially WHO WPRO) to develop a memorandum of understanding that sets out roles. Initiate the baseline survey.	January–March

INTERGOVERNMENTAL AUTHORITY ON DEVELOPMENT AND EAST AFRICAN COMMUNITY

IGAD countries

Djibouti
Eritrea
Ethiopia
Kenya

EAC countries

Burundi
Kenya
Rwanda
South Sudan
Tanzania
Uganda

SUMMARY OF PROGRESS

On November 19-20, MTaPS participated in a USAID/Kenya and East Africa regional partners and stakeholders forum, which drew participation from all IGAD and EAC implementing partners, USAID, and the private sector. The meeting objectives were to:

- Review lessons learned from cross-border health activities to inform current and future activities
- Define the critical problems and barriers to achieving positive health outcomes among beneficiaries in the cross-border areas
- Identify areas of synergy and collaboration between bilateral and regional programs to advance the journey to self-reliance

In November and December, the MTaPS team met with the IGAD secretariat, EAC secretariats and the regional lead country for pharmacovigilance, and the Kenya Pharmacy and Poisons Board to develop joint activity implementation plans to promote synergy and capacity building of the IGAD and EAC secretariats. Specific activities under each result area will commence next quarter.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
Meeting and capacity building of IGAD PV expert working group	Review TOR and joint work plan development Adapt EAC PV indicator-based assessment and monitoring tools Train for gap and needs assessment at member states' level	January
Baseline assessment of PV systems in IGAD, report writing, and dissemination of results	Undertake a gap and needs assessment in IGAD using EAC PV indicator-based assessment tools Write report writing and disseminate results	February-March
Meeting of EAC PV expert working groups	Review TOR and joint work plan development	February
Development of EAC and IGAD PV training curriculum and package	Develop a harmonized EAC and IGAD PV training curriculum and package for training border sites in both IGAD and EAC	February-March
Monitoring and telling the story	Develop monitoring, evaluation, and learning matrix for IGAD and EAC to support collaborative learning and adaptation	January-February

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 is using both USAID's pharmaceutical systems strengthening approach and MTaPS' approach to contribute to the Government of Bangladesh's fourth Health, Population, and Nutrition Sector Program (HPNSP) for 2017–2022 objectives and commitment to achieving universal health coverage.

MISSION-FUNDED ACTIVITIES

OBJECTIVE 1: PROCUREMENT AND SUPPLY CHAIN SYSTEMS IMPROVED AND MODERNIZED

MTaPS has provided technical assistance to the Ministry of Health and Family Welfare (MOHFW) to strengthen Procurement and Logistics Management Cell (PLMC) functions. In this regard, a meeting of MOHFW's PLMC was held with concerned stakeholders to discuss issues related to capacity building of newly appointed officials in the development wing of MOHFW's Health Services Division (HSD). It was agreed that MTaPS will provide support for basic training on procurement.

MOHFW's Strategic Plan on Procurement has been revised, and the final version will be submitted to the government for vetting during the next quarter.

MTaPS worked with the Central Medical Stores Depot (CMSD) to review the updated terms of reference (TOR) and member list of the reconstituted Procurement and Logistics Coordination Forum (formerly the Supply Chain Coordination Forum) and get it approved by the director general of the Directorate General of Health Services (DGHS) so that procurement and logistic functions could be coordinated with line directors, MOHFW officials, and the CMSD. Procurement supply-management efficiency was maintained by reducing lead time and increasing the percentage of procurement packages that were on schedule.

MTaPS provided technical assistance to the CMSD during the process of planning and structuring the physical inventory for the CMSD as part of Good Storage Practice initiatives.

Information on more than 1,200 medical and surgical requisite (MSR) items used in MOHFW health facilities was collected for developing correct specifications and updated costing.

MTaPS provided technical assistance to update the standard list of equipment with active engagement of clinicians and managers from related disciplines at different levels of the hospitals. The updated list of equipment has been submitted to the director of Hospitals and Clinics in the DGHS, for review and further submission to the secretary of the HSD for approval. The updated list will facilitate MTaPS collaboration with the MOHFW administration wing and the DGHS planning section for developing a comprehensive table of organization and equipment (TOE). The TOE will contribute to more effective allocation of resources in public sector health facilities, enabling improved access to quality services for the population.

MTaPS worked closely with Directorate General of Family Planning (DGFP) to roll-out the upgraded version of inventory management tools in 263 upazilas and 21 regional warehouses. A total of 544 DGFP staff (377 male and 167 female) were oriented on the goal of maintaining reproductive health commodities and contraceptive stock within a satisfactory level at service delivery points. As a result, the percentage of stock-outs of any family planning method decreased from 0.4% in October and

November 2018 to 0.2% and 0.1% in October and November 2019, respectively. The timeliness of reporting was also improved with the deployment of the upgraded version.

MTaPS provided technical inputs to the procurement and supply management section of the country concept note on TB preventive therapy (TPT) of latent TB infection (LTBI), as the country adopted the global targets for preventive therapy. The concept note will be the basis for developing TPT/LTBI guidelines, SOPs, and multi-year national plans in the future with support from MTaPS. The National Tuberculosis Program (NTP) is developing the five-year National Strategic Plan (NSP) 2021-2025. MTaPS provided technical assistance to NTP in mapping objectives and activities under procurement and supply management of TB drugs and supplies in the country. The NSP is expected to be finalized in the next quarter.

MTaPS supported NTP in finalizing the quantification of second-line drugs (SLDs) through December 2020 and assisted in coordinating Global Fund and Global Drug Facility advisors for developing the supply planning and ordering process. As a result, NTP submitted the order on time, thereby ensuring the availability of the required drugs. Additionally, MTaPS supported NTP in developing forecasting and budgeting exercises for SLD needs up to September 2021. As a result, an adequate budget has been duly secured, and the order will be submitted toward the end of next quarter.

OBJECTIVE 2: PHARMACEUTICAL REGULATORY SYSTEMS STRENGTHENED

MTaPS has agreed with the Association of Pharmaceutical Industries (BAPI) to expand the use of Pharmadex to more companies with some modifications, refresher training on the updated version of the tool, and assistance for submitting product registration applications. Training on Pharmadex and common technical document (CTD) guidelines was conducted for 22 Directorate General of Drug Administration (DGDA) reviewers and master trainers. As a result, the first online approval of a marketing authorization holder by Pharmadex was granted in October 2019; in addition, a seminar on CTD guidelines on dossier submission was attended by 52 technical personal from 38 pharmaceutical companies.

MTaPS facilitated a meeting with the DGDA, WHO, and other partners to review the Strategic Plan 2017-2021 and develop an action plan for 2020-2021. It was decided that all partners should focus on integrated, innovative, and sustainable strategies to achieve the program goal of a strong pharmaceutical system and contribute to the Government of Bangladesh's 4th HPNSP (2017-2022) objectives and its commitment to achieving universal health coverage.

MTaPS provided technical assistance to the DGDA to improve the current reporting and monitoring system for adverse drug events (ADEs) by incorporating it into the common platform of DHIS 2. As a result, patient safety improved by increasing the number of adverse drug reaction reports submitted and actions taken.

MTaPS, in collaboration with the UK AID-funded Better Health in Bangladesh Project, organized a workshop with DGDA officials to finalize the inspection and monitoring strategy for a model pharmacy and model medicine shops and to revise and finalize an inspection checklist for new submission and renewal of licenses.

OBJECTIVE 3: SYSTEMS FOR EVIDENCE-BASED DECISION MAKING INSTITUTIONALIZED

MTaPS finalized the electronic Asset Management System (eAMS) countrywide rollout plan, which was approved by the MOHFW Technical Working Committee (TWC). The TWC decided that one MOHFW official will attend each capacity-building event to take ownership and ensure that hospital authorities commit to using the system moving forward.

In collaboration with the WHO, MTaPS/Bangladesh provided technical assistance to set up a web-based video conferencing system and end-user training for the DGDA to facilitate communication, supervision, and capacity building of district officials countrywide. MTaPS and the DGDA conducted the first batch of trainings (40 participants each), and the director general of the DGDA had the very first conference call with 45 drug superintendents across the country by using the system.

The NTP has officially adopted e-TB Manager as the national tool for digital tracking of TB patients, and the system will be rolled out countrywide by December 2020. MTaPS finalized the e-TB Manager countrywide rollout plan for all remaining sites, including enhancing functions identified as critical and improving interoperability with DHIS 2. Continued supervision has identified and addressed issues at low-performance sites in collaboration with other partners, such as the Damien Foundation.

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

MTaPS discussed with the line director, Communicable Disease Control (CDC), DGHS, the technical report on the situation analysis of the multi-sectoral coordination platform. It was agreed that MTaPS will provide technical assistance to strengthen multisectoral coordination for effective implementation of the NAP-AMR.

OBJECTIVE 5: PHARMACEUTICAL FINANCIAL RESOURCE ALLOCATION AND USE OPTIMIZED

The report on the status of implementation of the pharmaceutical-related component of the Bangladesh Health Care Financing Strategy (2012-2032) was shared with the Mission. Based on recommendations, it was agreed that MTaPS will develop a practical implementation and operational plan.

GLOBAL HEALTH SECURITY AGENDA-FUNDED ACTIVITIES

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

MTaPS conducted a scoping visit to Bangladesh to understand the Global Health Security Agenda (GHSA)/AMR landscape; to identify gaps, priorities, and potential activities in three priority MTaPS working areas (multisectoral coordination on AMR, infection prevention and control [IPC], antimicrobial stewardship [AMS]); and to develop a draft MTaPS/Bangladesh GHSA/AMR work plan.

MTaPS facilitated a workshop on mapping the status of implementation of the national action plan on AMR at the MSH office during the visit. A total of 28 AMR focal points from different organizations working on animal and human health participated in the workshop. This was a One Health workshop and a milestone for the line director, CDC, and DGHS. The outputs of the mapping exercise contributed to identifying specific priority areas in multisectoral coordination, AMS, and IPC that MTaPS and other partners can potentially support. The workshop report will be shared next quarter.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
Review and update the list of MSR items, including specification and gender consideration	List of MSR equipment and specifications prepared/finalized	March
Implement baseline data collection for M&E indicators	Data collection	By January 15
	Data entry and analysis	By January 31
	Report finalization	By February
Build capacity of relevant officials of MOHFW and its directorates on public procurement management	2-day training on public procurement management for 25 senior MOHFW officials and line directors by Engineering Staff College of Bangladesh (ESCB)	March
	3-day training on public procurement management for 25 officials and assistants of MOHFW and other entities by ESCB	
Enhance technical capacity of quantification cell within NTP and develop a sustainability plan	Prepare a sustainability plan for quantification activities	March
	Capacity-building workshop for NTP and partners on quantification	
Provide technical assistance to DGDA for strengthening Good Review Practices (GRP) for medical product registration, including vaccines and biologicals to contribute to improvement of maturity level in the WHO GBT	Course contents on GRP	January
	Provide training on dossier review, evaluation, and assessment for biologics and vaccines for DGDA	
	Training on updated Pharmadex tool and refresher training on dossier evaluation of generic products for DGDA	
Work with DGDA and other partners to implement the five- year strategic plan 2017-2022 focusing on the action plan for 2020	Meeting with DGDA and other development partners (PQM); finalize in a workshop with all development partners; activities will be shared by DGDA and all partners	January
Support DGDA in improving current reporting and monitoring system for ADEs	Identify interventions to address gaps and explore improvement of digital system of reporting and monitoring (DHIS 2 set up and implementation)	March
	Workshop at DGDA	
Provide technical assistance to DGDA for scaling-up pharmacovigilance program	Work with DGDA to identify the means of collaboration to roll out	PY2Q2 and PY2Q4
	Readiness assessment of sites	
	Conduct workshops	
eAMS training	8 batches of training as part of the countrywide roll-out of eAMS for district-level hospitals	January-March
Assist NTP in updating and rolling out e-TB Manager to selected sites/divisions	e-TB Manager roll-out in one division	March
Develop the GHSA FY20 work plan	Develop and share draft work plan with the Mission and COR team	January

BURKINA FASO

RESULTS AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Activity 1.1.1: Provide support to the AMR-Technical Thematic Committee (AMR-TTC) to improve its organizational, governance, and practical management capacities

While the AMR-TTC is in the process of becoming official, representatives of the human, animal, and environmental health sectors met in Bobo Dioulasso to commemorate World Antimicrobial Stewardship Week using the One Health approach. MTaPS participated in discussions held during the conference and roundtable under the theme, The Future of Antimicrobials Depends on All of Us.

The conference's recommendations to the administrative and health authorities are to:

- Improve the multisectoral coordination of the control of AMR
- Adopt and apply regulations at the level of dispensing, importing, and using antibiotics
- Implement public awareness sessions on self-medication and inappropriate use of antimicrobials
- Effectively control the movement of illegal drugs

The conference recommended that MTaPS become more involved in organizing World Antimicrobial Stewardship Week in Burkina Faso through technical and financial support.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1: Provide technical support to the AMR-TTC and stakeholders to develop a national plan to strengthen AMS in the human and animal health sectors

To inform the development of an AMS plan in both animal and human sectors, the MTaPS/Burkina Faso team is conducting a rapid situational analysis of AMS environment focusing on AMS policies, legislation, regulations, and implementation activities. The MTaPS team has:

- Amended rapid assessment tool for the animal health sector (the revised tool is under review)
- Performed a literature review of the AMR situation for both sectors
- Planned a validation workshop involving both sectors to finalize the review and report; the workshop will take place by the end of January

Activity 3.5.1: Support implementation of guidelines and policies at the peripheral level

Through this activity, MTaPS/Burkina Faso will establish and strengthen the capacity of pharmaceutical and therapeutic committees in five health facilities (one university teaching hospital [CHU], one regional hospital center [CHR], and three district hospitals) on the management of rational use of antibiotics. The Directorate of Hospital Pharmacy and Health Quality, with reference to the following selection criteria—implementation of IPC activities, level of hospital attendance, willingness of health care professional to support the functioning of a pharmaceutical and therapeutic committee, irrational use of medicines and particularly antibiotics, structural and geographic representation—suggested the following hospitals:

- CHU Bogodogo (Ouagadougou)
- CHR Tenkodogo
- Hospital of Boulmiougou (Ouagadougou)
- Hospital of Leo
- Hospital of Zorgho (Central Plateau Region)

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
1.1.1: Provide support to the AMR-TTC to improve its organizational, governance, and practical management capacities	Task 1.1.1.1.c: Review and dissemination of international conventions on the protection of the environment in collaboration with the Directorate General for the Preservation of the Environment	January
3.1.1: Provide technical support to the AMR-TTC and stakeholders to develop a national plan to strengthen AMS in the human and animal health sectors	Task 3.1.1.1.a: Rapidly assess stewardship policies, tools, and activities in the field to uncover gaps and challenges that perpetuate poor adherence to rational antibiotic use	January
	Task 3.1.1.1.b: Develop a national regulatory framework for appropriate use of affordable, quality-assured antimicrobials in human and animal health sectors as part of the national AMS action plan	March
	Task 3.1.1.4.a: Update the infectious diseases national standard treatment guidelines	February
	Task 3.1.1.4.b: In collaboration with the National Drug Regulation Authority/Drug Information and Documentation Center, print copies of the essential medicines list and organize three two-day workshops to disseminate the essential medicines list	March
3.5.1: Support implementation of guidelines and policies at the peripheral level	Task 3.5.1.a: Develop a plan to establish and strengthen DTCs in health facilities	January
	Task 3.5.1.b: Support the Division of Quality and Patient Safety (DQSS) and the Technical Inspection of Health Services to develop tools to build DTCs' capacity	February
	Task 3.5.1.d: Support the DQSS and the AMR-TTC in conducting a joint four-day induction workshop for selected staff from all five targeted facilities	March

CAMEROON

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 three coordination meetings with departments of the Ministry of Public Health; other ministries (Ministry of Fishery and Animal Husbandry, Ministry of Environment, and Ministry of Agriculture); and other stakeholders of the One Health platform (FAO, USAID/IDDS, CDC-Metabiota).

These meetings mainly focused on formalizing the IPC and AMS Technical Working Groups (TWGs), considering a recent prime ministerial decision regarding the establishment of TWGs that has become more stringent. Terms of reference and member profiles were drafted, and ministries and sectors were asked to designate their representatives to TWGs following the profiles. One meeting served as a preparatory meeting for a second workshop to validate the AMR operational plan.

MTaPS attended a workshop organized by the AMR Technical Secretariat with the aim to coordinate the efforts of partners and sectors involved in AMR containment, create an inventory of AMR activities already implemented following the AMR national action plan, and discuss perspectives on the implementation of those activities. All partners supporting the AMR Technical Secretariat, including CDC-Metabiota, WHO, and USAID/IDDS, attended this workshop. The workshop was an opportunity for MTaPS to interact with other partners supporting AMR activities in Cameroon for more efficiency in the planning and implementation of future AMR activities.

MTaPS also participated in a workshop on the pilot project for a human resource workforce development prototype using the One Health approach that was organized by the One Health platform. This meeting provided an opportunity for MTaPS/Cameroon to present the program and advocate for multisectoral collaboration in the implementation of AMR activities.

Activity 1.1.2: Support the Technical Secretariat of the AMR Multisectoral Coordination Committee (CCM) to develop and validate a detailed and costed AMR operational plan

MTaPS partnered with IDDS to support the AMR Technical Secretariat to organize a five-day workshop to draft a detailed AMR operational plan following the AMR national action plan. The workshop brought together 42 participants from departments in the Ministry of Public Health and other related ministries (Ministry of Fishery and Animal Husbandry, Ministry of Environment, and Ministry of Agriculture) in the One Health platform, as well as partners (WHO, CDC-Metabiota, FAO, and IDDS). During this workshop, AMR priority activities were identified and costed with a monitoring and evaluation plan. The draft document is ready and will be validated in a subsequent workshop.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

Activity 2.2.1: Develop a national training package and strengthen master trainers' capacity to plan and carry out cascaded competency-based training

The findings from the recent IPC survey MTaPS conducted in collaboration with WHO revealed the need to strengthen the capacity of health care workers in IPC. MTaPS supported the Ministry of Public Health to organize a five-day workshop to develop an IPC training package. The workshop brought together 25 participants from departments in the Ministry of Public Health; representatives of the Ministry of Environment; and partners such as IDDS and WHO. MTaPS assisted in developing 15 training modules following the WHO core components of an IPC program. Following the development of these modules, MTaPS supported the Ministry of Public Health to organize a five-day workshop to

train health experts on designing curricula adapted for adult learning. This training of 10 experts led to the development of macro- and micro-designs from the IPC modules, which will lead to the finalization of a facilitator guide and participant manual. Participants were expressed appreciation of the knowledge they acquired; one participant commented, "This training has changed my perspective of how I perceive adult learning; thank you very much MTaPS, but please we need more of such trainings".

MTaPS envisages to help the country set up an eLearning platform that will complement the face-to-face trainings in IPC and AMS. MTaPS conducted a capacity assessment, and the findings will be used to design and implement capacity-building and eLearning activities. The latter is expected to contribute to increasing health care professionals' knowledge and skills in IPC and AMS. This, along with other ongoing MTaPS activities, is expected to contribute to raising Cameroon's scores for AMS and IPC to meet the priorities of the GHSA and WHO's Benchmarks for AMR.

During this assessment, face-to-face meetings and individual phone interviews were conducted, and qualitative data were collected from 12 respondents from nine partner institutions. Preliminary results confirm the need for a multipronged eLearning strategy that offers AMS/IPC-related information through a variety of bandwidth-friendly platforms. Interviewees felt that, in addition to producing curricula and eLearning platforms, adapting IPC/AMS content to various interactive communicative streams would be an effective approach.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1: Provide technical support to the AMR-CCM and stakeholders to develop a national plan to strengthen antimicrobial stewardship in the human and animal health sectors

Prior to supporting the country to develop a national plan to strengthen antimicrobial stewardship in the human and animal health sectors, MTaPS started a situational analysis of stewardship and regulatory status with regard to the management and use of antimicrobials. An assessment tool was developed, and MTaPS/Cameroon is conducting a desk review of policies and regulations regarding the use of antibiotics. This process will continue with the active collection of AMS data from stakeholders.

At the facility level, interviews were done with key informants in three health facilities (one national level 2, one public level 3, and one faith-based level 3), including facility in-charges, nursing officers, heads of hospital departments, and pharmacists. Data were also collected regarding the number of new health care-acquired infections (HCAIs) through review of the previous quarter's reports. At the national level, the assessment revealed that the AMR-related multisectoral coordination mechanism is still at its early stage in Cameroon, while at the facility level, no HCAIs were reported or documented.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
Finalize situational analysis of stewardship and regulatory status with regard to the management and use of antibiotics	MTaPS will support the AMR Technical Secretariat to finalize the situational analysis of stewardship and regulatory status with regard to the management of antimicrobial use (data collection, analysis, and report writing).	February
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.	March
Validate operational plan for the AMR national action plan	MTaPS will work with the IDDS Project, AMR Technical Secretariat, and other stakeholders to validate the operational plan for the AMR national action plan.	January
Carry out a training of trainers on IPC	MTaPS will support the IPC TWG to conduct a five-day workshop for the training of trainers in IPC.	February

CÔTE D'IVOIRE

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Activity 1.1.1: Finalize and validate the NAP-AMR

Support the National AMR Secretariat in finalizing the NAP-AMR with a budget and an M&E plan

In May 2019, MTaPS supported the antimicrobial resistance (AMR) technical working group (TWG) in finalizing the national action plan on AMR (NAP-AMR) through a one-day multisectoral coordination (MSC) meeting. MTaPS facilitated the reproduction of the NAP-AMR, governance manual, and AMR policy. The president of the Multisectoral Coordination Committee will lead the dissemination process and present the NAP-AMR to the respective ministries for appropriation.

Activity 1.1.2: Strengthen the AMR secretariat

Support the National Institute of Public Hygiene (INHP) and the National AMR Secretariat in establishing and building capacity within the AMR, IPC, and AMS technical sub-working groups

MTaPS, through a one-day meeting organized on November 5, 2019, supported the AMR-TWG to establish the Multisectoral Coordination Group (MCG). The MCG is a key governance body of the AMR governance structures. It is composed of 15 members, key opinion leaders, and experts on AMR. Twenty-five participants from the human, environmental, and animal health sectors attended the workshop to validate the list of members. The next step is to organize a meeting by May 2020 to allow members to develop and validate a roadmap for the MCG.

On October 2, 2019, MTaPS provided technical and financial support to the AMS TWG Multisectoral Technical Committee (MTC 5) in organizing a coordination meeting to revise MTC 5's work plan and inform the members on activities undertaken; 14 participants met to discuss ways to improve implementation of planned activities and set up groups to work on a desk review for the situational analysis of AMS policies and drafting of the AMS plan and policy.

On December 19, 2019, MTaPS provided technical and financial support to MTC 5 in organizing its monthly coordination meeting; 16 people attended the meeting to revise the list of members and update and validate the tool to evaluate drug and therapeutic committees (DTCs).

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 supported the AMR-TWG in organizing site visits to establish hygiene and IPC (HIPC) committees at Bouake and Cocody Teaching Hospitals, Bouake Veterinary Clinic, and Cocody Antirabic Center. Starting at the Bouake Teaching Hospital where the HIPC committee was installed and the Bouake Veterinary Clinic, this activity ended in Abidjan with the installation of HIPC at the Cocody Teaching Hospital and at the Cocody Antirabic Center. The terms of reference (TOR) and capacity-building plans of the HIPC committees at these heath facilities were developed in a participatory approach with the members of established HIPC committees. They were also oriented on their roles and responsibilities, standard precautions in hygiene, prevention of health care-associated infections, and reporting HIPC committee activities.

Following the installation of the HIPC committee at Cocody Teaching Hospital, MTaPS, with HIPC committee members, facilitated the IPC baseline assessment of the same facility by using the WHO Infection Prevention and Control Assessment Framework (IPCAF) tool. The baseline assessment showed that Cocody Teaching Hospital is at an intermediate IPC level, with 402.5 points out of 800.

The IPCAF tool, which the HIPC committee of the Bouake Veterinary Clinic adapted, was also reviewed by the Cocody Antirabic Center and the Directorate of Veterinary Services (DVS) team. The tool will then be validated before use in veterinary clinics.

Activity 2.5.2: Strengthen capacity of health care providers to implement IPC and AMS standards

Provide technical assistance to the AMR Secretariat, INHP, and DPML to strengthen the capacity of health care professionals

MTaPS, in collaboration with the Multisectoral Technical Committee in charge of IPC and sanitation (MTC 4), the General Directorate of Health (DGS), the Directorate of Hospital and Proximity Medicine (DMHP), the Directorate of Training and Health Research (DFRS), and the DVS, supported the adaptation of WHO training packages on IPC into training materials for AMS and IPC in human and animal health. The process was conducted through five workshops organized on October 28-31 (attended by 21 experts), November 4-5 (attended by 8 experts), November 11-15 (attended by 18 experts), December 2-6 (attended by 18 experts), and December 16-20 (attended by 22 experts). Those experts came from the targeted ministries (MOH, Ministry for Animal Resources and Fisheries, Ministry of Environment, DGS, DMHP, DFRS, and DVS), and USAID, and the AMR TWG attended the various sessions.

A total of 14 training modules in HIPC in the human health sector were reviewed, updated, developed, and validated.

Eight updated and validated modules:

- Module 1: Introduction to Hygiene in Health Care Settings
- Module 2: Nosocomial Infections: Prevention and Surveillance
- Module 3: Notions on Antiseptics, Disinfectants, and Detergents
- Module 4: Hand Hygiene
- Module 5: Processing Reusable Medical Devices
- Module 6: Maintenance of Premises, Furniture, and Ambulances
- Module 7: Sanitary Waste Management
- Module 8: Accidents with Exposure to Blood

Six new modules developed and validated:

- Module 9: Fight Against Nuisance (Vector Control)
- Module 10: PCI Program in Health Care Settings: Action Plan
- Module 11: Antimicrobial Resistance
- Module 12: Multimodal IPC Strategy
- Module 13: Safety of Injections
- Module 14: Standard Precautions

The following 3 new modules specific to animal health were added:

- Module 15: Notion of Pharmacovigilance
- Module 16: Hygiene and Inspection at Slaughterhouses
- Module17: Biosecurity in Livestock

Following the development of the modules, the experts also reviewed and validated the trainer's guide and participant's handbook in hygiene and prevention and control of infection in human health. The trainer's guide and participant's handbook for HIPC for the animal health sector were also validated.

The adaptation/development of training modules, trainers' guides and participants' handbooks for HIPC in human and animal health will increase the capacity of providers and governance structures for IPC and AMS at the pilot sites. They will eventually serve as models for scale-up.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

MTaPS supported the AMR-TWG in establishing an AMS multisectoral committee. The committee is coordinating stewardship activities through bi-monthly meeting and activities on the ground. During the past quarter, MTaPS helped the AMS-TWG implement the following activities.

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

Support the AMR Secretariat in developing/updating a policy and plan for infectious diseases in the human and animal health sectors that covers national and facility levels

MTaPS supported the AMR-TWG in organizing a meeting of MTC 5 on December 19, 2019, which:

- Reviewed the list of the MTC members to include more fields of expertise and national structures, such as the PNDAP, the Pharmacology and the Medicinal Chemistry Departments of Felix Houphouet Boigny University, and the Central Medical Stores
- Reviewed and validated the tool to be used to assess DTCs in health facilities
- Updated the MTC 5 on progress made on the rapid assessment of stewardship policies and regulations and on use of antimicrobials
- Presented the report of the evaluation of the functionality and capacity of DTCs of the two teaching hospitals

Activity 3.5.1: Establishing and/or strengthening the capacities of members of DTCs

MTaPS, in collaboration with MTC 5, supported the AMR-TWG in assessing the functionality and capacity of DTCs in two teaching hospitals (CHU Bouake December 9-10, 2019, and CHU Cocody-Abidjan, December 12-13, 2019). Representatives from DPML, MTC 5 (represented by the Service of Infectious and Tropical diseases of Treichville), Leadership Management and Governance Project (the other MSH project in Cote d'Ivoire), and the AMR-TWG visited CHU Bouake and Cocody to evaluate the functionality of the DTC and collect baseline data for MTaPS. The assessment focused on the organization and functioning of the committee, activities carried out, regulatory framework and policies, monitoring antimicrobial prescription and dispensing, assessment of drugs before selection and inclusion in the formulary, pharmacovigilance, and studies done on drug safety and efficacy. The following are the main findings from the assessment:

- DTCs exist in the two teaching hospitals, but they are not functional. The DTC at the Cocody Teaching Hospital stopped meeting four years ago. The DTC at the teaching hospital in Bouake has also stopped functioning since 2018.
- DTCs are not equipped with detailed TOR and tools to guide them while conducting stewardship activities.
- Demotivation of the respective DTC members is due to the lack of dedicated time for DTC activities, lack of incentives, and no recognition of their efforts.
- Regarding the baseline assessment, overall, patients are not satisfied with the quality of services provided at the dispensing areas at the two teaching hospital pharmacies; 65% (Cocody) and 66% (Bouake) of patients were serviced by a pharmacist, and more than 80% did not know about the dosage of the prescribed antimicrobials (Figure 2).

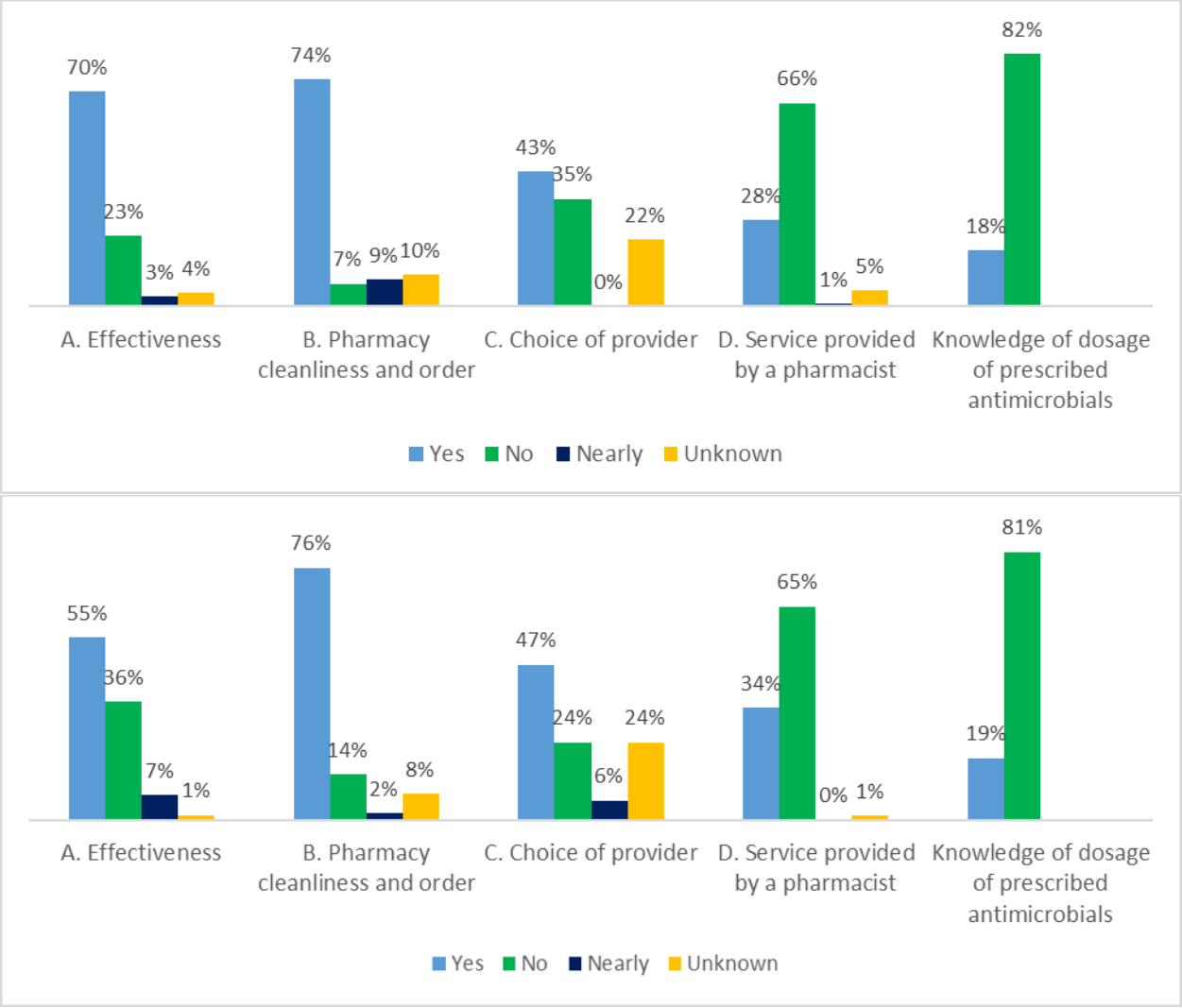

Figure 2. Assessment of customers' satisfaction and their knowledge of antimicrobial prescription indicators at (top) CHU Bouake and (bottom) CHU Cocody.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
1.1.1: Support the National AMR Secretariat in finalizing the NAP-AMR with a budget and an M&E plan	MCG to use printed copies of the NAP-AMR for advocacy to ministries for official endorsement	February
1.1.2: Support the INHP and the National AMR Secretariat in establishing and building capacity within the AMR, IPC, and AMS technical sub-working groups	One quarterly meeting of the MCG One meeting of IPC-TWG and one meeting for AMS-TWG	March 3 February 4-7

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
2.1.1: Support the AMR Secretariat in conducting a rapid assessment of HIPC conditions in both animal and human health	Conduct two-day meeting to evaluate national IPC program using the WHO IPCAT tool	February 19-20
	Hire national consultant to conduct rapid assessment of HIPC conditions in the animal health sector	February 15-March 30
	Hold five-day workshop in Dabou to validate report of the rapid assessment of HIPC conditions in the animal health sector	March 16-20
2.1.1: Support the AMR Secretariat and the DSV in developing a national plan to implement IPC guidelines and develop guidelines on IPC in the animal domain, including an implementation plan	Hold five-day workshop in Yamoussoukro to review and validate the national IPC plan in the human health sector	February 24-28
	Hold five-day workshop in Dabou to validate IPC guidelines in the animal health sector	March 30-April 3
2.5.2: Provide technical assistance to the AMR Secretariat, INHP, and DPML to strengthen the capacity of health care professionals	Hold five-day workshop in Jacqueville to develop speaker notes for the IPC training modules in the human and animal health sectors	January 20-24
2.5.2: Support building a pool of national IPC facilitators in the human and animal health sectors	Hold two five-day TOT workshops on IPC in the human and animal health sectors, attended by 10 participants per sector, in Yamoussoukro	February 3-14
3.1.1: 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	Recruit two consultants to conduct situational analysis, develop data collection tools, and draft an AMS plan for the both human and animal sector	January 2-15
	Hold one-day workshop in Abidjan to validate consultancy preliminary report	February 12
3.1.1: Support the AMR Secretariat to draft a national AMS plan covering human and animal health sectors	Recruit national consultants for the situational analysis to support the drafting of a national AMS plan for both the human and animal health sectors, based on both the situational analysis and WHO-led assessment findings; draft national plan will be validated later with other AMS policy documents during a five-day workshop	February 24-28
3.1.1: Support the AMR Secretariat in developing/updating a policy and plan for infectious diseases in the human and animal health sectors, covering national and facility levels	Support the AMR-TWG in developing national AMS policy in the human and animal health sectors through a five-day workshop attended by experts from both sectors	March 17-21
3.1.1: Organize a workshop, including experts from both human and animal sectors, to validate policy and the national AMS plan	Hold five-day workshop to develop policy that will be validated later; this policy document will be used to train members of DTCs in selected health facilities	March 2-6

DEMOCRATIC REPUBLIC OF CONGO

The USAID COR team visited MTaPS/DRC November 3–8, 2019. The COR team took this opportunity to participate in the AMR-TWG workshop organized by MTaPS, where members of the IPC and AMS sub-committees finalized their TORs. The COR team visited some key stakeholders working in collaboration with MTaPS/DRC in AMR containment (i.e., WHO, FAO, DRA, University of Kinshasa, National Pharmacovigilance Center). The COR team's visit helped the country team better understand USAID's expectations for MTaPS interventions.

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

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

During the previous quarter, MTaPS/DRC provided support to the AMR-TWG to hold its first MSC meeting, at which members from all sectors involved in the fight against AMR, including One Health coordination, WHO, FAO, MOH, Ministry of Agriculture, and Ministry of Livestock and Fishing, were represented. During this meeting, two AMR-TWG sub-committees (IPC and AMS) were formed and produced TORs. To ensure that the AMR detection and surveillance components are accounted for, participants agreed that the IPC sub-committee should cross-cut and include in its scope matters pertaining to AMR detection and surveillance.

The ministerial note (Arrêté Ministériel) instituting and regulating the AMR-TWG was revised to include the established sub-committees. The Arrêté Ministériel was submitted to the Minister of Heath's office for approval and signature. In addition, a six-month roadmap was developed by the members of each sub-committee to guide their interventions. The roadmap will be presented to the AMR-TWG for validation during the next quarter.

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

During the previous quarter, MTaPS 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 showed that little effort has been made toward 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.

During the quarter, MTaPS supported the MOH Drug Regulatory Authority (DRA) AMR-TWG to develop NAP-AMR priority activities, including conducting a rapid assessment on AMS policies and regulations in the human and animal sectors, conducting a rapid assessment on the use and consumption of antimicrobials in the human sector, reviewing and revising the national essential medicine list to include the WHO AWaRe classification on antimicrobials, developing an AMS action plan, and establishing the drug and therapeutics committees (DTCs) to oversee IPC and AMS interventions in hospital settings.

The NAP-AMR priority activities were presented at the quarterly National Medicine Committee meeting on December 13, 2019, for adoption and partner engagement. This represents the first phase of the development process of the costed NAP-AMR operational plan, and the process will continue during the next quarter by appointing a local consultant to coordinate the development process.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1: Support the drafting of a national strategy or plan to strengthen antimicrobial stewardship (AMS)

Activity 3.1.1a: 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

For the purpose of this assessment, discussions between MTaPS and the DRA, the AMR-TWG secretariat, took place during this quarter. Focal persons from MTaPS and the DRA were identified, the TOR for both the study and the consultant were developed and validated, and MTaPS started the process for hiring a local consultant for a short-term technical assistance (approximately 14 days). It is expected that the assessment will be completed next quarter.

Activity 3.1.1b: In collaboration with WHO, conduct a rapid assessment of antimicrobial use and consumption in the human health sector

In collaboration with the WHO, MTaPS is supporting the AMR-TWG through the DRA to conduct a rapid assessment on the use and consumption of antimicrobial medicines in the human health sector. MTaPS organized a two-day workshop (November 22 and 27, 2019) to develop a rapid assessment protocol based on and aligned with the WHO protocol; other countries' protocols were consulted to inform the development process. A subsequent meeting was held in December 2019. The TOR and budget for this assessment were intended for a national study. In addition, a timeline for the assessment (December 2019–March 2020) was developed. This study will be coordinated by a local consultant who will be appointed during the next quarter under the supervision of WHO AFRO technical group.

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

Previously, MTaPS introduced 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). This quarter, MTaPS held a series of meetings with the DRA and WHO to coordinate efforts to include AWaRe classification in the NEML to facilitate national AMR containment efforts. During these meetings, it was agreed that this activity should start independently and concomitantly with the rapid assessment on the use and consumption of antimicrobials (previously it had been decided to wait for the findings from the rapid assessment to inform AWaRe categorization).

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

During the previous quarter, MTaPS/DRC worked with the DRA and the University of Kinshasa National Pharmacovigilance Center to lay the groundwork for the implementation of three DTCs in Kinshasa province to serve as pilot sites to oversee AMS and IPC interventions at the health facility level. This quarter, MTaPS organized three introductory meetings with the management teams (including the health director and the head of pharmacy department) of the three selected health institutions, where they AMR issues and introduced the DTC concept. An understanding was reached on the need to tackle the causes of AMR and to establish DTCs to oversee IPC and AMS interventions. During the discussion, it was determined that all three health institutions have existing Hospital Hygiene Committees, which need to be strengthened to play the role of IPC sub-committees.

MTaPS, in collaboration with WHO, supported the University of Kinshasa's Pharmacovigilance Center to finalize the DTC training modules and implementation protocol. The training modules and protocol will be presented to the AMR-TWG for validation during the next quarter.

Training module on AMR and eLearning platform

MTaPS/DRC started discussions with the University of Kinshasa Medical and Pharmacy Schools on the development of a training module on AMR that would be part of their training curricula. The AMR module will be developed and loaded on the medical school's existing eLearning platform. MTaPS will provide support for the customization of the eLearning platform to ensure that health care providers can access the AMR module through the platform to facilitate in-service training on AMR containment and promote rational use of antimicrobial medicines.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
Provide technical support to the AMR-TWG	Organized a two-day workshop to validate the IPC and AMS six-month roadmaps	February
Develop a costed operational plan for the NAP-AMR	Recruit a local consultant to develop a costed NAP-AMR plan	
Conduct a rapid assessment of stewardship policies and regulations governing the management of antimicrobials	Recruit a local consultant to conduct a rapid assessment on AMS policies and regulations	
In collaboration with WHO, conduct a rapid assessment of antimicrobial use and consumption	Finalize and validate the assessment protocol and start the recruitment process for a local consultant	February–March
Integrate the WHO AWaRe classification into the revised essential medicines list	Conduct a two-day workshop to share the tool and engage in discussion with stakeholders on the protocol to be used	March
Establish/strengthen DTCs to oversee implementation of AMS and IPC interventions	Present the training modules and protocols to the AMR-TWG for adoption and validation	February
	Conduct the training and establish three DTCs in Kinshasa	February–May
MNCH Activities	Conduct scoping visits in Nord Kivu and Ituri	January
	Finalize the recruitment of MNCH staff	January–March

ETHIOPIA

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

An antimicrobial stewardship (AMS) technical working group (TWG) meeting was conducted in December 2019. The TWG reviewed the draft audit tool and decided to organize trainings on prospective audit and feedback for AMS team members selected from 15 referral hospitals.

MTaPS participated in the work of the national taskforce responsible for revising the Essential Medicines List (EML). The revision of the EML will incorporate access, watch, and reserve (AWaRe) categorization for antibiotics. MTaPS will provide technical and financial support, including covering consultant fees, to the Ministry of Health (MOH) for revising the list.

During the quarter, MTaPS provided technical support to the Pharmaceuticals and Medical Equipment Directorate (PMED) of the MOH to finalize the three-tier structure of the national AMR governance and coordination platform. The platform consists of a national inter-ministerial committee at the top, followed by the National AMR Advisory Committee, which provides oversight to multisectoral TWGs. The governance structure has been proposed to higher officials and is awaiting approval.

The six TWGs that have been proposed cover:

- Education and awareness
- Infection prevention and control (IPC) and hygiene
- Surveillance and research
- AMS
- Resource mobilization for AMR
- Regulatory and pharmacovigilance

Of these, the AMS TWG has been functional since September 2019 and has conducted six meetings so far.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

MTaPS has been providing technical and financial support to the MOH in developing the standard operating procedure (SOP) for alcohol-based hand rub (ABHR) production. The MOH had planned to initiate production of ABHR in 30 hospitals this program year. So far, nine hospitals have begun production, and more than 10 hospitals are in the process. In the reporting quarter, MTaPS supported the MOH higher-level delegation visit to Gondar Comprehensive Specialized Hospital to inaugurate ABHR production and observe implementation of ABHR production at Felegehiwot Hospital in Bahir Dar. In addition, based on MOH's request, MTaPS financially supported printing 1,000 copies of the SOP. To prevent the spread of hospital-acquired infections (HAIs) through effective hand hygiene, the printed SOP will be distributed to 400 hospitals for use by the hospitals' drug information services and to regional health bureaus (RHBs) to serve as a guide and to monitor ABHR production in hospitals.

In collaboration with the MOH, MTaPS supported two rounds of TOT on IPC for 62 health professionals (15 females and 47 males) during the quarter. Participants came from seven MTaPS-supported hospitals, RHBs, and other hospitals selected by MOH. Over 72% of the participants were from MTaPS-targeted regions. The training is one strategy to implement the revised national IPC guidelines at health facilities by cascading the training to staff at health facilities where the current trainees came from. In addition, trainees are expected to lead IPC activities at their hospitals based on the revised IPC guidelines.

MTaPS provided technical support to 15 hospitals to conduct the Infection Prevention and Control Assessment Framework (IPCAF) assessment, of which all reported their assessment results. According to the IPCAF assessment score, five hospitals were classified as "basic", five hospitals are "intermediate,"

and one hospital was assessed to have "advanced" IPC status; the scores of the remaining four hospitals are still under review. Nine of the 15 hospitals have developed facility-level IPC action plans so far. A sample IPC action plan developed by one of the MTaPS-supported hospitals is shown in Table 1 below.

Table 1. Saint Paul Millennium Medical College Hospital IPC action plan, December 2019

Gap identified based on IPCAF baseline	Implementation action plan item to fill gap		Timeline	Responsible body
	Short term	Long term		
Core component 1: IPC program				
Demonstrable support for IPC objective and indicators within the facility (e.g., at executive-level meetings, executive rounds, participation in morbidity and mortality review meetings)?	Participation in morbidity and mortality review meetings to discuss the IPC aspect of the cause with executive department leaders and recommended scientific intervention		January 2020	IPC members
Core component 2: IPC guidelines				
Are frontline health care workers involved in both planning and executing the implementation of IPC guidelines in addition to IPC personnel?		Encouraging frontline workers to develop implementation action items based on the gap in IPC guidelines observed in their departments after basic IPC training	July 2020	IPC members/ focal person
Core component 3: IPC education and training				
How frequently do health care workers receive training regarding IPC in your facility?	Provide basic IPC training for all health care professionals who did not take training		February 2020	IPC members/ focal person

Note: Short-term: action achieved in less than 6 months; long-term action achieved in more than 6 months

During the quarter, MTaPS provided financial and technical support to the MOH to organize and conduct a national workshop to launch the recently revised national IPC guidelines. The workshop was attended by the director general of Medical Services and other directors of the MOH, RHB heads, hospital medical directors, and IPC focal persons drawn from 83 hospitals selected by the MOH as lead and co-lead facilities. Ethiopian Television and other broadcasting outlets broadcast the launch ceremony. During the occasion, copies of the guidelines were distributed to hospitals and RHB representatives.

MTaPS provided technical support to the MOH to conduct a national IPC self-assessment to measure the implementation status of the WHO guidelines on the six core components of IPC programs at the national level using the IPCAT2 tool. The assessment is scored out of 100% for each of the six core components. Accordingly, the assessment finding revealed the country's IPC core component implementation status was 43% for IPC programming, 81% for IPC guidelines, 41% for IPC education and training, 5% for HAI infection surveillance, 33% for multimodal strategies, and 56% for monitoring/audit of IPC practices, feedback, and control activities. Based on the IPC self-assessment findings, the MOH's Clinical Services Directorate (CSD) drafted a national IPC action plan with support from MTaPS. The draft was submitted to the CSD for review and alignment with other MOH activities.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

MTaPS supported the Ethiopian Pharmaceuticals Association (EPA) in conducting a workshop on validating the curriculum revision tool. The School of Pharmacy, Addis Ababa University (AAU), revised the tool to identify core competency gaps in the existing curriculum, including coverage of AMR. Thirty-one pharmacists (28 males and 3 females) from 16 universities that offer pharmacy courses and student representatives of the universities participated in the tool validation process. The main purpose was to gather input from stakeholders to standardize the curriculum revision tool. The final tool will be ready to examine implementation status and identify gaps, if any, in early January 2020.

MTaPS collaborated with the MOH to conduct training on prospective audit and feedback (a setup whereby AMS program [ASP] team members interact directly with prescribers to customize antimicrobial therapy for each patient) and AWaRe customization for 40 health professionals (30 males and 10 females) from 15 MTaPS-supported hospitals and health leaders from 4 RHBs. The main objective of this training was to build the knowledge and skill of AMS team members to conduct prospective audit and feedback interventions at their respective hospitals per the recommendations of the national practical guide on AMS. During the training, a draft AMS review/audit and feedback tool was developed with technical support from MTaPS, reviewed, and inputs gathered. Participants exercised using the audit and feedback tool based on real case scenarios by reviewing medical charts.

In addition, the AWaRe classification for antibiotics and customization of existing facility-specific drug lists to accommodate AWaRe categorization was discussed during the training. Staff from Tikur Anbessa Specialized Hospital (Black Lion Hospital), who have hands-on experience on audit and feedback, lead the training sessions.

Following a two-day sensitization on AMS practice, 11 referral hospitals out of 15 established AMS teams under the leadership of existing drug and therapeutics committees (DTCs), developed facility-specific action plans for AMS, organized onsite sensitization on AMR, developed terms of reference for the AMS teams, and conducted their first meeting. Six of these hospitals also conducted baseline assessments on AMS practices using the checklist for core elements of hospital antibiotic stewardship programs. Analysis of the six hospitals' data on DTC functionality and core elements of ASP is as follows: total for DTC functionality, 53.8%; total for core elements of ASP, 47.5%; combined total for DTC and ASP, 50.7%.

This quarter, MTaPS, in collaboration with the MOH, organized a one-day sensitization workshop to orient media professionals on the AMR situation in the country and on measures to prevent and contain AMR. A total of 52 professionals (39 males and 13 females) representing the public and private electronic media, as well as the staff of MOH's Public Relations and Communication Directorate (in charge of health communication) attended the workshop. The following major topics were discussed:

- National and global update on AMR prevention and containment, rational use of medicines, and AMR in human health
- Overview of the AMR situation in Ethiopia and its consequences
- Roles and responsibilities of media professionals in the prevention and containment of AMR
- Roles and responsibilities of national AMR stakeholders
- Health care reporting

This orientation helped media professionals become familiar with AMR issues and identify potential areas of intervention to raise public awareness by using media outlets. The sensitization workshop contributed to the active participation of media professionals during World Antibiotics Awareness Week (November 18-24, 2019). The commemoration aimed to increase awareness of antibiotic resistance and encourage the responsible use of antibiotic among the public and health workers. This year's theme was "The future of antibiotics depends on all of us." Activities conducted during the week-long event included: a press release, panel discussion, airing of short messages on radio and TV,

distribution of information, education and communication materials (brochures, fliers, paper folders, posters, banners, and T-shirts), and a site visit. MTaPS provided technical support to the PMED to prepare for the event and actively participated in all events, in addition to financing the panel discussion on AMR.

The panel discussion was attended by 68 individuals (56 males and 12 females) representing academia; professional associations (human and animal health); implementing partners; MOH; Ministry of Agriculture; Environment, Forestry, and Climate Change Commission; RHBs; public and private health facilities/laboratories; FAO; WHO; and CDC Ethiopia. The three panelists from MTaPS, Aklilu Lemma Institute of Pathobiology (AAU), and the Ethiopian Environment and Forestry Research Center discussed strategic directions required to translate the national action plan into practice. The panelists stressed the importance of revitalizing governance mechanisms for multisectoral coordination, contextualizing action plans into measurable outcomes, and integrating AMR into existing programs. In addition to the panel discussion, a research paper entitled "Feasibility and impact of antimicrobial stewardship program in a tertiary care hospital in Ethiopia" was presented and discussed. This is a cross sectional survey conducted among physicians and pharmacists working in Tikur Anbessa Specialized Hospital to assess general awareness on AMR and perceptions toward stewardship and other potential containment strategies prior to the launch of an HAI and AMR research document in a tertiary care hospital in Ethiopia.

ACTIVITIES FOR NEXT QUARTER		
ACTIVITY	DESCRIPTION	DATES (2020)
Facilitate monthly AMS and IPC working group meetings, and follow-up on their decisions	Strengthen operational and functional capacity of TWGs by supporting regular meetings	January-March
Support implementation of IPC guidelines in designated health facilities	Strengthen the institutional and individual capacity of IPC committees and their members in selected health facilities	January–March
Standardize checklists and supportive supervision tools in collaboration with CSD and RHBs	Standardize the check list and conduct joint supportive supervision Compile, analyze, and share data collected during supportive supervision with stakeholders to guide further action and national roll-out	March
Provide support to MOH and RHBs to establish a process for organizing quarterly review meetings	Follow progress and share lessons learned among IPCCs of supported referral hospitals	March
Support Ethiopia FDA in incorporating AWaRe groupings into the next revision of the national EML and use watch and reserve antibiotic group utilization activities	Revise national EML and monitor antibiotic use through drug use reviews and other drug utilization monitoring activities undertaken by DTCs and RHBs	January–March
Strengthen DTCs and IPCCs in selected referral hospitals using capacity-building exercises to develop hospital-specific action plans and IPC monitoring mechanisms	Develop hospital-specific action plan and monitor IPC activities	January–March
Facilitate EPA, AAU, and MOH dialog on information and awareness messages and strategies for delivering them to public	Work with community organizations (mothers and youth/student groups) already engaged in awareness creation on AMR initiatives to build upon and sustain existing efforts to bring BCC on AMR to community members	January–March
Support AAU School of Pharmacy and EPA to conduct series of trainings and information briefs for journalists to write articles and hold discussions on the threat of AMR and strategies for prevention and containment	Support institutions (medical, nursing, and pharmacy schools) to address prevention and containment of AMR by: • Updating their curricula for pre-service training • Conducting seminars and workshops	January

JORDAN

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

After submission, the draft year 1 work plan was reviewed by both the USAID Mission and COR team. MTaPS discussed all comments and inputs internally and with the client and made the necessary changes. The final work plan was approved by the COR team on December 11, 2019.

The planned activities are strengthening the capacity of the national steering committee (SC), technical sub-committees (TCs), and the national focal point (NFP) on AMR to coordinate and monitor implementation of the NAP-AMR; and working with selected health facilities to pilot antimicrobial stewardship (AMS) programs through national accreditation and quality certification frameworks. The most suitable approach and tools to implement and monitor activities and the immediate next steps were agreed on during a conference call among MTaPS teams, USAID Mission, and COR team.

As part of the program kickoff, USAID Mission sent formal letters to the MOH and WHO to introduce the MTaPS Program in Jordan. Tailored communication and introductory meetings with other key partners will be conducted during the next quarter.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
Strengthen the capacity of the SC, TCs, and NFP to coordinate and monitor implementation of the NAP-AMR	Hold introductory and technical meetings with MOH and key stakeholders (e.g., WHO and Health Care Accreditation Council)	January–February
	Finalize AMR stakeholders' mapping	February
	Draft revised TOR and performance monitoring framework (for MOH endorsement)	March
Work with selected MOH hospitals to pilot AMS programs	Identify the two pilot MOH hospitals	February–March
	Conduct technical meetings and awareness sessions with the pilot hospitals for AMS program planning	

KENYA

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Activity 1.1.1: Strengthen the capacity of the National Antimicrobial Stewardship Interagency Committee (NASIC) as a leadership, governance, and oversight body for One Health implementation in Kenya

Sensitization of Policy Officials on Antimicrobial Resistance

MTaPS sensitized Nyeri and Kisumu County health officials on the burden of antimicrobial resistance (AMR) during the infection prevention and control (IPC) and antimicrobial stewardship (AMS) baseline assessment results dissemination meetings held in the two counties. The meeting in Nyeri was held on November 12 with 24 health officials present (15 females and 9 males) whereas the one in Kisumu was held on November 25 and attended by 19 participants (10 males and 9 females). The health officials committed to ensuring implementation of IPC and AMS activities in targeted health facilities in their respective counties.

MTaPS offered financial support to Nyeri County to hold an IPC and AMS continuing professional development (CPD) meeting on December 10. Thirty county health officials, including the county director for health and the county minister for health were sensitized on IPC and AMS. During the meeting, the recently formed County Infection Prevention and Control Advisory Committee (CIPCAC) was formally introduced to the county health management team (CHMT) and the terms of reference (TOR) were shared.

High-Level Communique on AMR

MTaPS disseminated copies of its high-level communique on AMR in various forums in Nairobi, Nyeri, and Kisumu Counties. These were the Kenya Essential Medicines List (KEML) review and validation workshops; IPC trainings of trainers (TOTs); Medicines and Therapeutics Committee (MTC)/AMS trainings; review and validation workshops of the national AMS guidelines; and AMR conferences.

NASIC'S IPC and AMS Technical Working Groups

The IPC and AMS technical working groups' (TWGs) TORs and work plans that were developed in the previous quarter were to be fine-tuned, but this did not take place. Instead it will be done next quarter.

National IPC Policy and Guidelines

In October, MTaPS provided technical and financial assistance to the Patient and Health Worker Safety Division (National AMR Secretariat) to review the 2015 National Infection Prevention and Control Policy for health care workers (HCWs) and the National Strategic Plan for IPC for health care services. The workshop was attended by 20 IPC TWG members (14 females and 6 males) drawn from academia, research institutions, Kenyatta National Hospital (KNH), National Nursing Association of Kenya, Ministry of Health (MOH), and other non-state actors.

MTaPS participated by offering its technical expertise in a stakeholders' workshop organized by the MOH's Division of Patient and Health Workers Safety (National AMR Secretariat) to review the IPC training curriculum and IPC quality improvement tools from October 28 to November 1 in Thika County. The workshop was financially supported by the International Training and Education Center for Health.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

Activity 2.2.1 - Technical assistance to develop a CPD re-licensure-linked, in-service IPC training course for delivery through professional associations

MTaPS met with the National AMR Secretariat to plan for a meeting targeting professional associations with the aim of developing a half- to one-day IPC-CPD re-licensure-linked IPC course. It was resolved that the national IPC training curriculum should be revised and used as the basis for developing IPC-CPD content.

MTaPS participated and offered technical input in an IPC training curriculum review workshop December 2-6 in Machakos County.

Activity 2.5.1 - Support to county, sub-county, and facility-level IPC activities

In collaboration with Nyeri CHMT and IPC coordinators, MTaPS conducted a training on IPC continuous quality improvement (CQI) on November 5-6; 36 participants (11 males and 25 females) were present, and 8 health facility action plans were developed. During this training, results of the county and health facilities' IPC baseline assessment conducted in July 2019 were disseminated.

MTaPS held a meeting with the Nyeri CHMT on November 12 where results of the county's and health facilities' baseline assessment on IPC and AMS practices were disseminated; 24 health officials (15 females and 9 males) attended. County health officials committed to ensuring implementation of IPC and AMS activities in the county and targeted health facilities.

In December, MTaPS remotely conducted follow-ups with health facilities in Nyeri County to determine progress with implementing action plans developed after the IPC/AMS trainings held in September and October and IPC-CQI trainings held in November. Health facilities are on course with implementing their plans.

In collaboration with Kisumu CHMT and IPC coordinators, MTaPS conducted an IPC-CQI training on November 18-19, 2019. A total of 30 participants (15 males and 15 females) were involved in the training that resulted in the development of 8 health facilities' action plans. During this training, results of the county and health-facility IPC baseline assessment conducted in July 2019 were disseminated.

On November 25, MTaPS met with the CHMT in Kisumu to disseminate the county's and health facilities' IPC and AMS baseline assessment results; 19 health officials attended the meeting. County health officials committed to ensuring implementation of IPC and AMS activities in the county and targeted health facilities.

MTaPS visited and conducted supportive supervision and mentorship on IPC and AMS interventions at Chulaimbo and Kombewa County Hospitals. During the visits, the MTaPS team met with facility health management teams, IPC committees, and AMS teams. Action plans developed after IPC/AMS trainings held in September and October were reviewed to assess the extent of implementation. There were discussions on gaps and strengths identified during implementation of interventions and areas that the teams would be working on over the next year.

In December, MTaPS remotely conducted follow-ups with health facilities in Kisumu County to determine progress with the implementation of action plans developed after IPC and AMS trainings held in September and October and IPC-CQI trainings held in November. Health facilities in this county are generally behind schedule with implementing their plans due to protracted industrial action.

MTaPS offered financial support to Nyeri County to hold an IPC and AMS CPD meeting on December 10. Thirty county health officials, including the county director for health and the county minister for health were sensitized on IPC and AMS. During the meeting, the recently formed CIPCAC was formally introduced to the CHMT and TOR were shared.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1 - Support the development and implementation of national AMS guidelines

A workshop was held on October 11 in Nairobi County to validate the draft of the national AMS guidelines for health care facilities. Various health care cadres participated in the workshop, including clinical microbiologists, clinical pharmacists, clinical pathologists, nurses, pharmacists, infectious disease physicians, chief pharmacists of hospitals, the National AMR Secretariat, and Health Products and Technologies (HPT) staff from MOH; 39 people attended (14 males and 25 females). Comments from the validation workshop were incorporated into the final draft and submitted to senior MOH officials for signing. Once signed, copies will be printed, and an official launch held next quarter.

Activity 3.1.2 - Support to revise the KEML and classify EML antibiotics into access, watch, and reserve categories

MTaPS continued to work with the MOH National MTC (NMTC) Secretariat to review and consolidate various inputs from stakeholders on the daft KEML 2019 developed in September.

On October 1, MTaPS, in collaboration with MOH, held a workshop to categorize antibiotics according to the World Health Organization (WHO) recommended access, watch, and reserve (AWaRe) classification. The 19 participants who attended comprised of hospital chief pharmacists, infectious disease physicians, HPT staff from MOH, clinical microbiologists, a pathologist, clinical pharmacists, a nurse, a clinical pharmacist in academia, and pharmaceutical systems strengthening experts. The newly generated AWaRe list of antibiotics was added to the draft KEML 2019.

Following the workshop, MTaPS, together with the NMTC, held an internal MOH validation meeting to review the draft KEML 2019, after which MTaPS and the NMTC held an external stakeholder validation meeting. Thirty-seven stakeholders (19 males and 18 females), including donors, implementing partners, and representatives from the public and private sectors from counties, health facilities, training institutions, and professional associations. After the external validation meeting, MTaPS had several working meetings with the MOH NMTC Secretariat to consolidate inputs from the meeting, and the final draft was submitted to senior MOH officials for signing. The Cabinet Secretary for health signed the final version of the KEML 2019 at the end of December. A tentative official launch is planned for next quarter.

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

MTaPS met with the UON/SOP AMS curriculum development team to revise the first draft of the training needs assessment tool on October 2, 2019. A subsequent meeting was held on October 30 to review the first draft and expand the target audience to include non-One Health participants.

In November, the AMS assessment tool was finalized and the process of developing a digital version began. It was completed in December, and the survey is currently underway. The survey will close on January 10, 2020, data will be analyzed, and a workshop held during the first week of February to develop an AMS training curriculum and trainer's guide.

Activity 3.2.2 - Technical assistance to develop a CPD and re-licensure-linked, in-service AMS training course for delivery through professional associations

A partnership agreement between MTaPS and the Pharmaceutical Society of Kenya (PSK) was developed and signed in the first week of December. PSK is the lead professional association developing the AMS CPD curriculum with technical and financial assistance from MTaPS.

On December 19, MTaPS held a planning meeting with the chief executive officer (CEO) and operations manager of PSK to discuss the approach for developing AMS CPD content. An AMS CPD needs

assessment tool will be developed in January 2020; a CPD needs assessment will be conducted in February; and a workshop to develop the AMS CPD curriculum will be held in March 2020.

Activity 3.5.1 - Support county, sub-county, and facility-level AMS activities

MTaPS and the Kisumu CHMT conducted a training on MTCs and AMS from October 15-17 for 36 health care workers (HCWs) (17 females and 19 males). They comprised medical superintendents, pharmacy in-charges, laboratory scientists, nurses, and medical officers. These HCWs were from public, private, and faith-based health facilities. At the end of the training, participants developed action plans that focused on establishing or reviving dormant MTCs and establishing AMS programs in their facilities.

MTaPS held a meeting with the Kisumu CHMT on November 25 to officially disseminate county and target health facilities' AMS and IPC baseline assessment results; 19 county health officials (10 females and 9 males) attended the meeting. County health officials committed to ensuring successful implementation of IPC and AMS activities in the county and targeted health facilities.

In late October, MTaPS and the Nyeri CHMT, conducted a training on MTCs and AMS for 40 HCWs (24 females and 16 males). Post-training action plans focusing on enhancing on-going MTC activities in health facilities where they existed and establishing new activities where there were none.

MTaPS held a meeting with the Nyeri CHMT on November 12 to officially disseminate county and target health facilities' AMS and IPC baseline assessment results. County health officials committed to ensuring successful implementation of AMS and IPC activities in the county and targeted health facilities.

In December, MTaPS remotely conducted follow-ups with health facilities in Nyeri County to determine progress with implementing action plans developed after the MTC and AMS trainings held in October. Generally, health facilities are on course with implementing their plans.

Kenyatta National Hospital (KNH)

MTaPS and officials of the KNH AMS committee held an initial meeting on November 8. AMS and MTC support areas were identified to include in the partnership agreement that is to be signed by both parties during a meeting with the KNH CEO in January 2020. Thereafter, an in-depth baseline assessment will be conducted, and prioritized interventions implemented over the next year.

Gertrude's Children's Hospital

In December, Gertrude's Children's Hospital (GCH) commenced an audit on adherence to its standard treatment guidelines (STGs) for managing infectious diseases ahead of an AMS training for its clinicians on January 23, 2020. Results of the audit will be disseminated and discussed during the training. A work plan that runs until September 2020 has been developed with the aim of improving adherence to GCH's STGs for infectious diseases. A series of AMS workshops will be held in the hospital to discuss managing priority infectious diseases and implementing evidence-based AMS practices.

MTaPS/Kenya Participation in Conferences

AMR Conference

MTaPS attended the first Clinical Officers, Ear, Nose & Throat (ENT), Audiology and Speech Therapy (COESTA) Conference held October 18-19, 2019, in Nakuru County and gave a talk on AMR and the WHO AWaRe categorization of antibiotics.

World Antibiotics Awareness Week

MTaPS attended a high-level meeting of key stakeholders in Nairobi on November 18, 2019, as part of World Antibiotics Awareness Week (WAAW) activities. MTaPS staff made two oral presentations and

participated in two panel discussions at a two-day AMR symposium in Nairobi on November 21-22, 2019, as part of the key events of WAAW.

Infection Prevention Network Kenya Conference

MTaPS participated in the Infection Prevention Network Kenya (IPNET) Conference held November 26-29, 2019, in Kisumu County. The theme of the conference was Putting IPC and Quality at the Centre of Universal Health Coverage. MTaPS staff made one oral presentation, chaired five sessions, and participated in one panel discussion. MTaPS offered financial assistance to eight MOH counterparts (seven females, one male) from four MTaPS-supported health facilities in Kisumu and Nyeri Counties to attend the conference. The MTaPS-supported counterparts gave six oral and two poster presentations. Three of the oral and both poster presentations won awards in the oral and poster categories. The IPNET conference is held annually with the aim of creating a platform for multidisciplinary collaboration and promotion of patient and staff safety in health care settings by promoting IPC measures and standards that facilitate the containment of AMR.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
Activity 1.1.1 - NASIC'S IPC and AMS TWGs	Review of NASIC's IPC and AMS TWGs' TOR	January 22
	Review action plans of NASIC's IPC and AMS TWGs	
	Participation in quarterly meetings to support technical advice in implementing work plans	January 22 and 23
Activity 1.1.1 - National IPC policy and guidelines	Revise national IPC strategic plan, policy, and guidelines	January 11-12
	Validation of national IPC strategic plan, policy, and guidelines	February 18-19
	Official launch of national IPC policy and guidelines	March 31
	Review of national IPC training curriculum and resources	February 3-6 March 16-19
Activity 1.1.1 – M&E framework for AMR national action plan (NAP)	Develop and validate M&E framework for AMR NAP	January-March
Activity 2.2.1 - Technical assistance to develop a CPD re-licensure-linked, in-service IPC training course for delivery through professional associations	Meeting with professional associations for consensus on IPC and AMS CPD curricula	January 20
	Reviewing/updating existing IPC in-service training materials for CPD-linked delivery for health professionals	March

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
	Application of updated IPC/CPD materials in target CPD sessions	March
	e-Learning course development and piloting	March
Activity 2.5.1 - Support to county, sub-county, and facility-level IPC activities and Activity 3.5.1 - Support to county, sub-county, and facility-level AMS activities	Supportive supervision visits in the implementation of county and health facility IPC interventions in Nyeri and Kisumu	January-March
Activity 3.1.1 - Support development and implementation of national AMS guidelines	Finalize and official launch of national AMS guidelines for health care facilities	January-March
Activity 3.1.2 - Support revision of KEML and classify EML antibiotics into AWaRe categories	Official launch of KEML 2019	January-March
Activity 3.2.1 - Support UON/SOP to reform pre-service curriculum to integrate AMS-related topics of practical importance	Training needs assessment, data analysis, and reporting	January 24
	Development of AMS training curriculum and a trainer's guide	February 3-7
Activity 3.2.2 - Provide technical assistance to develop a CPD- and re-licensure-linked, in-service AMS course for delivery through professional associations	Development of AMS training needs questionnaire	January 17
	Meeting with professional associations for consensus on AMS and IPC CPD curricula	January 20
	Conducting AMS training needs assessment	February
	Workshop to develop AMS CPD curriculum and resources	March
	Application of AMS CPD resources in target CPD sessions	March

MALI

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

MTaPS supported the Multisectoral Coordination Committee for AMR (Groupe de Coordination Multisectoriel National-RAM [GCMN-RAM]) in holding its second quarterly meeting at the National Institute of Public Health (INSP) on December 5th, 2019. The meeting participants included representatives from the several government institutions, implementing partners, the WHO, and World Organisation for Animal Health (OIE). Eighty-four percent of experts who are members of GCMN-RAM attended this meeting, chaired by a member of the Multisectoral Coordination Group (MCG). Two of three recommendations of the previous quarterly meeting were executed.

MTaPS supported the MCG in revising the national action plan for AMR (NAP-AMR). The meeting for appropriation of activities supported by MTaPS was held with IPC and AMS technical groups, and the working groups were set up. During this reporting period, MTaPS supported the development and validation of the terms of reference (TOR) for MCG and IPC and AMS technical groups.

With MTaPS support, the NAP-AMR was submitted to the One Health platform, MOH, Ministry of Livestock and Fisheries (MOLF), and Ministry of Environment (MOE), and the Ministry of Agriculture (MOA). The MTaPS team is currently working with the national AMR focal point and permanent secretary of the One Health platform for approval of this plan.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

During this reporting period, MTaPS provided support to MCG and Direction Generale de la Santé (DGS) to revise IPC guidelines for the human sector. Experts from MOH, MOLF, MOE, Intrahealth, and MTaPS attended this workshop chaired by the representative of DGS. The revised guidelines integrate the water, sanitation, and hygiene component and the WHO recommendation about IPC. This activity made it possible to have a more complete document of directives, which largely covers the issues of IPC in the country. The next steps identified during this activity included:

- Validation workshop for the revised directives, which was scheduled for December 2019, but postponed to January 2020
- Development of a national IPC strategic plan in March 2020
- Development of training modules in January 2020
- Development and dissemination of toolkit in March 2020

The draft of training modules was developed in December and will be reviewed by a small group in February.

Also, MTaPS supported the National Directorate for Veterinary Services (DNSV) and MCG to finalize recruitment of a consultant to conduct a rapid assessment of practices in the animal health sector. This selection was done by a panel made up of MCG, DNSV, and MTaPS teams. As a result, the achievement of limited capacity (level 2) for benchmark 3.3, prevention and infection control, increased from 0% in September to 25% in December 2019**.**

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

The DPM is leading the implementation of all AMR activities in this area as part of Mali's NAP-AMR. AMR activities were presented in detail to the director of DPM and his technical staff during a meeting held November 21, 2019, at DPM by MTaPS/Mali.

Activity 3.1.1: strengthen AMS

To rapidly assess stewardship policies, regulations, and supply chain management of antimicrobials in the human health sector, an orientation and ownership workshop for the collection tool was organized. This workshop brought together several stakeholders, including those in the animal sector. A first data collection based on the documentary review was done. This results were shared with the DPM team to review. MTaPS is working on an assessment report and the next steps are: 1) finalize the collection with the contributions of the DPM and the preparation of the evaluation report; 2) organize a workshop for sharing the results of the evaluation and identify the axes for the development of the AMS plan.

Concerning AWaRe classification, Mali revised its national essential medicine list (LNME) in August 2019. Thus, MTaPS supported the DPM in organizing a workshop to introduce the AWaRe categorization concept and identify activities needed to implement each stage of the categorization. The comparison of antibiotics on the WHO list to those on the LNME considering the AWaRe categorization indicates that approximately 75% of LNME antibiotics belong to the access class. An implementation plan for AWaRe classification was prepared. Assessment activities for antimicrobial consumption and use are included in the WHO Mali work plan and DPM will implement them.

For infectious diseases, treatment guidelines for managing pathologies in health programs (HIV, malaria, TB) are regularly updated with a mechanism for monitoring application of these guidelines. Regarding the infectious diseases, no national treatment guidelines are available except the National Referential for Antibiotic Therapy (Referenciel National d'Antibiotherapie du Mali [RENAM]) developed in 2014. MTaPS, in collaboration with DPM and the AMS working group, will revise the RENAM with contributions from key stakeholders so that the RENAM can be used as the national standard. In addition to the members of the AMS working group, eight learned societies on using antibiotics were identified. Exchanges and working sessions were organized with the presidents of these societies. They expressed interest and support for the revision of the RENAM.

Activity 3.5.1: Support the DPM to establish the DTCs in the five selected sites

The MTaPS team met the DPM to prepare the forthcoming joint visits to the five facilities in January 2020. MTaPS oriented DPM personnel on the DTCs' roles and responsibilities. According to the National Pharmaceutical Policy, the establishment of DTCs is mandatory. However, there is no regulatory framework for their installation. Also, MTaPS supported the DPM in drafting TOR for the DTCs.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
1.1.1: Provide technical and operational support to the GCMN-RAM, including organizing quarterly GCMN-RAM meetings and its two sub-committees (IPC and AMS)	Provide technical and logistical support to the organization of quarterly GCMN-RAM meetings to review NAP-AMR activities supporting the IHR-2005	March
	Work with two of the six GCMN-RAM TWGs (AMS and IPC) to support related interventions	February
1.1.2: Facilitate 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 organization of the biannual workshop	January
	Support the AMR and TWG focal points to prepare reports and presentations for these meetings	
2.1.1: Strengthen IPC programming at the central and peripheral levels	Conduct a rapid assessment of practices in the animal health sector	January-March
	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	
3.1.1: Strengthen AMS	Conduct a rapid assessment of stewardship policies and regulations and the supply chain management of antimicrobials in the human health and animal sectors	January-February
	Develop the national action plan for AMS and develop AMS guidelines in the human sector	
	Assist the DPM and GCMN-RAM with grouping antibiotics on the essential medicines list into AWaRe categories	
3.5.1: Support the DPM in establishing DTCs in the five selected sites	Support the GCMN, DPM, and the Agence nationale d'évaluation des hôpitaux to establish DTCs in five selected sites	January and March

MOZAMBIQUE

OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

Activity 1.1.1: Support the MOH in Mozambique to operationalize new legislation for establishing ANARME, a semi-autonomous regulatory authority

This quarter, MTaPS, in conjunction with the International Law Institute-African Centre for Legal Excellence, finalized the technical review of the legal framework in the country. A report entitled "Technical Review of the Pharmaceutical Legal and Regulatory System in Mozambique" was finalized. The report presents a review of existing and draft legislation for the proposed Autoridade Nacional Reguladora de Medicamentos de Moçambique (ANARME), including an analysis of the organizational structure of the Directorate of Pharmacy (DNF), and provides recommendations for strengthening or reinforcing the legal framework of the National Medicines Regulatory Authority. Findings from the report were used to devise a roadmap for addressing the identified gaps in the legislation and prioritizing the key regulations required to operationalize ANARME.

In September the MTaPS team participated in a two-week workshop convened by the DNF to assist with operationalizing law 12/2017 through the elaboration of regulations specified in the law and to develop key guidelines that were recommended in the World Health Organization Global Benchmarking Tool (WHO GBT) assessment. MTaPS worked with the DNF team to support drafting of five regulations, three guidelines, and one list (Table 2). In addition, the MTaPS team provided technical input during session discussions on some of the standard operating procedures recommended by the WHO GBT assessment report for the DNF.

Table 2: Regulations and Guidelines Drafted and Reviewed

No.	Regulatory Area	Regulations and Guidelines
1	Licensing Premises	Regulation on Licensing of Pharmaceutical Manufacturing
		Regulation on Licensing of Drug Importers and Distributors
		Regulation on Establishing and Operation of a Pharmacy
2	Regulatory Inspection	Regulation on Exercise of the Pharmacy Profession
		Regulation on Compounding of Medicines
3	Registration/Marketing Authorization	Guidelines for Fast Track Registration of Medicines
		Guidelines for Post-Drug Registration
		List of Non-Prescription/Over-the-Counter Medications
4	Clinical Trials Oversight	Guidelines for Good Clinical Practice

Some of the drafted regulations need further technical review prior to approval at the level of the Ministry of Health (MISAU) and by the Council of Ministers. USAID will continue to provide technical assistance through its technical experts and partners to fulfill this need.

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

Activity 2.1.1: Strengthen use of electronic information technology solutions for efficient and transparent medicine regulatory processes

The MTaPS team gathered input from DNF counterparts and drafted the scope of work for hiring an IT company on a temporary basis to assist with reconfiguring the Pharmadex server and setting up the online version of Pharmadex.

Continuing the process of supporting the DNF with the development of system requirement specifications to expand Pharmadex modules into other regulatory functions, the MTaPS team presented the demo version of the Pharmadex import license module to the DNF inspection team and collected information to define the business process of import function of Pharmadex.

Activity 2.1.3: Support DNF to develop a QMS

MTaPS worked with the DNF to refine the areas for support and improvement to implement a Quality Management System (QMS) for effective medicines regulation. The identified areas comprise the development of a quality manual for effective management of regulatory activities leading to ISO 9001:2015 accreditation in subsequent years. MTaPS plans to engage one of the partners, Celsian, and developed a scope of work for the consultancy.

The consultant will support implementing a QMS at the DNF to comply with international standards with well-defined and controlled procedures that promote transparency and accountability in carrying out specified key regulatory functions.

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

Activity 3.1.1: Provide technical assistance to establish an active surveillance system for newly introduced medicines in HIV and TB programs

With technical assistance from MTaPS, the DNF pharmacovigilance team revised the protocol for implementing an active safety surveillance system for the dolutegravir-based regimen tenofovir/lamivudine/dolutegravir (TLD) to incorporate corrections and recommendations of the MOH ethics committee. Subsequently, the DNF pharmacovigilance team re-submitted the revised protocol to the ethics committee. The ethics committee accepted the revisions and approved the protocol.

The DNF, in collaboration with the national HIV program and with technical assistance and financial support from MTaPS, trained 11 national-level health workers from the DNF (7), the HIV program (2), the Department of Hospital Pharmacy (1), and MTaPS (1) on the protocol for implementing the active safety surveillance of patients treated with the dolutegravir-based regimen.

Further, the MTaPS team participated in piloting the active surveillance data collection forms at Machava General Hospital under the leadership of the hospital's clinical director. MTaPS helped in revising the data collection forms based on the recommendations from the pilot. The revised forms and training materials are now ready to be translated into Portuguese and printed for rollout at the health facility level.

Activity 3.2.1: Strengthen DTCs to promote appropriate use of medicines and antimicrobial stewardship

MTaPS worked with the Hospital Pharmacy Department (HPD) of the MOH to finalize the detailed sub-activities and plan for supporting implementation of the national plan on antimicrobial resistance (AMR) containment, focusing on promoting infection prevention and control and antimicrobial stewardship

(AMS) among health care workers. The HPD identified seven provincial hospitals across the country (Pemba, Lichinga, Chimoio, Tete, Inhambane, Xai Xai, and Matola) for MTaPS to focus on in promoting AMS programs.

The MTaPS team provided technical support to the HPD to finalize the development and adaptation of in-service AMS training materials for health care workers.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
Protocol implementation for active surveillance on DTG	Training of health care providers at health facilities on the protocol and proper data collection Enrollment of HIV/TB patients Supervisory site visits	January February February
Support antimicrobial resistance initiatives	Train DTCs on how to optimize the use of antimicrobials when providing health care to patients (antimicrobial stewardship training) Supervisory site visits	February March
Country-level registration questionnaire for MNCH products (Core-funded activity)	Report on the registration process, including barriers; completed questionnaire for the MNCH products; summary of the reflections with DNF	January
Hire an IT company	Launch the process of procurement Receive and evaluate proposals; select IT company Prepare the contract and sign it with the successful company	January–February
Implement new version of Pharmadex on the new server at DNF	Acquire static IP for the national server with USAID approval Reconfigure the Pharmadex server and set up the online version of Pharmadex Test new version of Pharmadex on the new server at DNF	January–February
Support reviewing the regulations to be approved	Support DNF to review/clean up regulations to be ready for approval at the level of MISAU and the Council of Ministers (Proposed STTA by consultant Alberto Alfaro)	January–March

NEPAL

OBJECTIVE 1: PHARMACEUTICAL SECTOR GOVERNANCE STRENGTHENED

MTaPS subcontracted its core partner, the International Law Institute Uganda-African Center for Legal Excellence (ILI-ACLE) to review regulatory legal documents, map strengths and weaknesses, and identify priority areas for improvement. The ILI-ACLE consultant is expected to visit Nepal during PY2Q3 and, along with the MTaPS country team, conduct consultative meetings with the Department of Drug Administration (DDA), Ministry of Health and Population (MOHP), and key stakeholders to reach consensus on the gaps in the draft amendment to the Drug Act and suggest regulations and codes needed to implement the revised Drug Act.

Next quarter, MTaPS will identify a technical consultant to review, along with MTaPS experts, the existing organizational structure of DDA and propose a new one that considers the decentralized model and its role in stewardship, coordination, oversight, and enforcement. During FY2Q3, the proposal will be reviewed for final agreement with key stakeholders and endorsement by DDA and MOHP.

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

WHO Geneva, WHO South-East Asia Region (SEARO), WHO Nepal, the director general of DDA, the director of Promoting the Quality of Medicines Plus (PQM+) Program, and the PQM+ scoping team have agreed that stakeholder coordination is critical to strengthen DDA; it was confirmed that the Coalition of Interested Parties (CIP) approach is applicable to Nepal. WHO proposed to perform in the next quarter an online validation (review of documents) of the Global Benchmarking Tool (GBT) self-assessment conducted in August 2019, following which an interim assessment is proposed during PY2Q3. The MTaPS and PQM+ teams will participate as observers during this upcoming interim assessment. Results from the WHO's GBT assessment forms the basis for updating the Institutional Development Plan (IDP) with prioritization of regulatory functions, development of the five-year strategic plan, and the yearly action plan, all of which will be supported by MTaPS. It was agreed that a technical working group, led by the DDA, will be established with participation of all stakeholders and donors, including USAID.

The MTaPS country team joined the PQM+ program scoping visit team in several meetings, including at DDA, MOHP, WHO, and debriefing at the USAID Mission. It was agreed that MTaPS and PQM+ programs will work in synergy and full collaboration to achieve the expected results in Nepal.

The SOW for establishing a quality management system (QMS) in Nepal was finalized. Next quarter, an MTaPS partner or a consultant will start conducting a situational analysis of all procedures, manuals, and guidelines to identify gaps and opportunities for improvement, in accordance with the ISO 9001:2015 standard.

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

The MTaPS home office team has been developing the system requirement specifications (SRS) for an integrated electronic regulatory management information system (MIS), which will continue during the next quarter, along with the MTaPS country team. The draft SRS for selected modules will be discussed with DDA and stakeholders for adaptation to the country context; it is expected to be completed by the next quarter.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
Review draft amendments to the Drug Act and map and assess current rules and codes	ILI-ACLE to provide technical report with strengths and weaknesses and priority areas for improvement of legislation	January–February
	ILI-ACLE consultant to travel to Nepal for consultation with stakeholders to finalize the report with recommendations on suggested rules, codes, and legislative framework for DDA	March–April
Review the organizational structure, considering the decentralization policy	Consultant and MTaPS experts to review, along with DDA and MOHP, the organizational structure and provide a draft technical report	January–March
Conduct external GBT assessment	WHO to perform an online validation (review of documents) of the GBT self-assessment (August 2019) in preparation for another interim assessment during PY2Q3	January–March
Assist DDA in developing a QMS	MTaPS partner or consultant to conduct a situation analysis to identify gaps and opportunities for improvement	January–March
Develop the SRS for an integrated regulatory MIS	MTaPS to provide draft SRS for selected modules adapted to Nepal context	January–March
Baseline assessment for MTaPS performance indicators	MTaPS to provide report with final indicators and baseline data	February 2020

THE PHILIPPINES

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:

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

OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

National Strategic Plan for PSCM

During PY1, MTaPS supported the DOH to develop and finalize a national strategic plan (NSP) for PSCM. The NSP will guide the Philippines in designing and implementing an effective PSCM system throughout the country to minimize stock disruptions, ensure uninterrupted access to essential medical products, and contribute to an increased TB treatment success rate and reduced teenage pregnancy.

During PY2Q1, MTaPS supported the DOH in revising the Administrative Order that provides policy direction, on the formal approval and launch of the NSP. The planned launch of the NSP in November 2019 was postponed by the DOH due to emergencies arising from dengue and polio outbreaks and the finalization of the Universal Health Coverage (UHC) Implementation Rules and Regulations, which would have implications on the NSP. MTaPS is supporting the DOH in reviewing the NSP to align it with the UHC law and address budgetary implications for devolution of roles and funding to local governments. During the next quarter, MTaPS will support the submission of the NSP to the DOH Executive Committee and its launch. In subsequent quarters, MTaPS will provide technical assistance to develop PSCM regional action plans for provincial and city health offices.

PSCM Governance

MTaPS supported the Procurement and Supply Chain Management Team (PSCMT), regional offices, the Field Implementation and Coordination Team, and the Health System and Policy Development Team (HSPDT) of the DOH to align PSCM governance mechanisms. Working with these partners, MTaPS has been facilitating the review and design of necessary governance and stewardship mechanisms for the DOH and local government units (LGUs) at the central, regional, and local government levels within the changing context of DOH devolution. Once implemented, the governance and stewardship mechanisms will provide much needed leadership and coordination to organize PSCM systems in the Philippines to help the country move from the current fragmented state to an organized state for improved systems performance.

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

Engagement of Local Academic Institutions

During PY1Q4, MTaPS and its partner, the University of Washington, assessed local institutions to explore the feasibility of pairing them with international institutions for continuous institutional and professional development in PV. During this quarter, the assessment report was finalized, and two institutions have been identified. During the next quarter, MTaPS will expand this approach to identify and pair more local and international institutions for institutional and professional capacity development

in the areas of PV and PSCM. In addition, MTaPS will assist the DOH to conduct a systematic functional analysis for a comprehensive workforce development plan for PSCM and PV.

Procurement and Supply Chain Management Team

MTaPS drafted functional roles and competency areas for the recently approved PSCMT positions at different levels. Once the positions are filled, MTaPS will assist the new recruits by providing focused orientation.

Gender Exploratory Assessment

MTaPS undertook an exploratory assessment to identify gender inequalities in PSCM and PV and possible interventions. MTaPS worked with the DOH in a participatory manner through key informant interviews and focused group discussions to assess gaps and opportunities on how PSCM and PV systems will contribute to gender equality and vice versa. MTaPS also conducted advocacy and sensitization sessions with DOH policy makers to promote gender awareness for PSCM and PV. Next quarter, MTaPS will share the gender analysis report with the DOH and USAID implementing partners to facilitate discussion on gender-sensitive and gender-inclusive PSCM and PV systems. The report will also highlight recommended interventions and expected outcomes during the life of MTaPS in the Philippines.

PSCM Performance Monitoring Framework

MTaPS facilitated a discussion with the DOH on aligning key performance indicators (KPIs) among PSCMT, Office of Strategic Management (OSM), HSPDT, and LGU representatives. MTaPS supported pilot testing and baseline data collection for the NSP KPIs. MTaPS is currently supporting the DOH in the revision of NSP KPIs and streamlining PSCM KPIs in the existing Office Performance Commitment Report (OPCR) and Division Performance Commitment Report (DPCR) mechanisms of the DOH. During the next quarter, MTaPS will support the DOH in finalizing the aligned NSP, OPCR, and DPCR KPIs to have an integrated PSCM Performance Monitoring Framework for the DOH.

Framework Agreement

MTaPS has drafted the Guidelines on Framework Agreement with the Procurement Services Unit and Pharmacy Division of the DOH to include pooled procurement and the use of international procurement mechanisms in the context of UHC law implementation and devolution of DOH budgets. During this quarter, the guidelines was presented to more than 50 government procurement practitioners from regional offices, government hospitals, and LGUs for discussion. During the next quarter, based on the agreed guidelines, MTaPS will support the DOH in developing, approving, and implementing framework agreements for multiyear procurement obligations, pooled procurement, and use of procurement agents to remove current procurement bottlenecks associated with fiscal year-bound cash-based procurement.

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

Electronic Logistics Management Information System (eLMIS)

MTaPS supported the DOH to develop and finalize the eLMIS technical specifications and TOR required for procurement process and vendor evaluation. MTaPS provided support and technical guidance to the DOH to complete the pre-procurement requirements, including briefing the DOH Procurement Services, Supply Chain Management Office, and Knowledge Management and Information Technology Services teams on the TOR and providing technical clarification to procurement committee members. The DOH is now ready to launch the tender and fund the procurement and deployment of a standard eLMIS to address its data visibility and logistics management issue across the supply chain. During the

next quarter, MTaPS will support the DOH in technical clarification and negotiation with the selected vendor, co-design the deployment roadmap, project manage the implementation, and re-engineer change management and systems for a smooth transition to the eLMIS.

MTaPS supported the ongoing collection and analysis of consumption data for TB and FP commodities. In the future, MTaPS will support the development of standard flows and procedures to be integrated with the eLMIS for improved distribution of commodities from the regional to health facility level using consumption data and max-min inventory management principles.

Pharmacovigilance Information Management System (PViMS)

MTaPS has been working with the DOH and the PViMS developer to upgrade software and address issues faced by users. MTaPS is working with the Pharmacy Division, the Food and Drug Administration (FDA), and the World Health Organization (WHO) to develop a comprehensive strategy and identify software solutions for active surveillance and spontaneous reporting needs in the country. MTaPS will support the DOH to include PViMS in the national PV strategy and to build long-lasting institutional capacity in the use of PV information.

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

Private-Sector Capacity in PSCM

MTaPS and the DOH are organizing a national expo in February 2020 to identify local capacity in the private sector to perform PSCM functions such as warehousing, distribution, product registration, performance monitoring, training, and emergency supply. Based on the outcomes of the expo, MTaPS will conduct a market capacity and cost-benefit analysis to support the DOH in making informed decisions about outsourcing PSCM components.

Health Technology Assessment (HTA)

MTaPS/Philippines, the DOH, and the MTaPS/Asia Regional Bureau portfolio agreed on the required support for the Philippines to operationalize HTA. MTaPS will conduct a situation assessment and work with DOH and WHO to address the identified gaps.

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

Quantification

MTaPS finalized and disseminated reports for national quantification exercise on TB and FP commodities, which generated multiyear quantity, budget requirements, and possible gaps. MTaPS provided quantification and supply planning learning session to TB program coordinators and public health pharmacists of the Pharmaceutical Division.

Warehouse Operations Manual

MTaPS continued supporting the DOH in finalizing and launching the Warehouse Operations Manual. MTaPS supported the Philippines Commission on Population (POPCOM) in designing a subregional-level distribution system and drafting the Guidelines on Logistics Management of Modern FP Commodities.

Pharmacovigilance

MTaPS finalized the Rapid Assessment Report of the PV system in the Philippines. The FDA will use the report to complement its findings from the WHO Global Benchmarking self-assessment. MTaPS finalized the data collection phase of the knowledge, attitudes, and practices (KAP) assessment among health practitioners in the Philippines, which seeks to gather data on current medication safety reporting

practices. The results from the rapid assessment and KAP study will be shared with the DOH and used to develop the multiyear national PV strategy, along with other sources of information.

CROSS-CUTTING ACTIVITIES

Data Collection for Couple Years of Protection (CYP) for Family Planning Program

MTaPS engaged partner, IQVIA, to collect data from the private and public sectors for calculating CYP for the whole country. CYP results are now available for January 2018–June 2019.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
Launching of PSCM NSP	Approval by Executive Committee and formal launching of NSP	February–March
PSCM and PV workforce assessment	Functional analysis of new structures and PSCM and PV workforce needs	Jan–Apr
Support procurement and deployment design of eLMIS	Support technical clarification and deployment roadmap development	January–March
PSCM system design	System analysis, optimization, and options analysis	February–April
Private-sector capacity in PSCM	National expo and cost-benefit study for leveraging private-sector capacity in PSCM	February–May
Scoping visit for AMR and rational use of TB medicines	Identify gaps in AMR containment response and intervention design to improve rational use of TB medicines in the private sector	January–March
Scoping visit for HTA	Situation assessment and needs identification	February–March
Quantification training	Build the capacity of SCMO to take over responsibility of quantification function	February–March
National PV strategy	FDA-led strategic planning workshop with key PV stakeholders to develop a multiyear national PV strategy	March

RWANDA

OBJECTIVE 1: IMPROVE PHARMACEUTICAL-SECTOR GOVERNANCE

Activity 1.2.1: Regulations and guidelines for Rwanda FDA medicine registration and inspection processes developed

With the main Medicines Act in place, the Rwanda Food and Drugs Authority (FDA) requires that accompanying regulations be established to effectively control the safety, quality, and efficacy of medicines and other health products circulating on the market. During PY2Q1, MTaPS continued to support the Rwanda FDA to develop regulations and guidelines building on the work done by another implementing partner, USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM). Several guidance documents required review and validation prior to approval by the Rwanda FDA Board and subsequent implementation.

MTaPS organized and facilitated a validation workshop on November 1, 2019, in Kigali. The workshop was attended by officials from departments in the Rwanda FDA, including Product Registration, Inspection, and Pharmacovigilance, in accordance with the plan to validate the draft regulations and guidelines on medicines registration and inspection of establishments.

Drafted regulations on medicines registration, inspection, and licensing of pharmaceutical establishments and the relevant guidelines are pending validation before consideration for approval.

The guidelines for submission of an application for a medical product and variation to a registered product have been validated by the Rwanda FDA, but the guidance regulations have not yet been approved.

MTaPS offered technical assistance for the development of the following guidelines:

- Validation of the post-marketing surveillance guidelines, which are awaiting approval by the management board of the Rwanda FDA. This guidance will help streamline the surveillance of quality of MNCH medicines and other categories of medicines on the market in Rwanda.
- Drafting of the guidelines for clinical trial oversight and medicines advertisement and promotion, which will be submitted to the Rwanda FDA for further review and validation.

Work is ongoing to update the list of regulations and guidelines for key regulatory functions and the status (approved or validated), focusing on medicines registration and inspection processes, to ensure that appropriate, evidence-based guidance documents are in place for effective regulation.

The Rwanda FDA is aspiring to increase the maturity level of its regulatory system from maturity level 1, where some elements of a regulatory system exist, to maturity level 3, which is a more stable, well-functional, and integrated regulatory system. Based on the results and findings from the November 2018 assessment using the WHO Global Benchmarking Tool and the accompanying Institutional Development Plan, MTaPS provided technical assistance to review and update the plan. The updated plan will be used as a resource in the upcoming Coalition of Interested Partners meeting coordinated by WHO to identify gaps toward reaching maturity level 3 and the support required from development partners.

OBJECTIVE 2: STRENGTHEN GOVERNMENT CAPACITY TO MANAGE PHARMACEUTICAL SYSTEMS

Activity 2.1.2: Standards for pharmaceutical services as part of Ministry of Health accreditation system developed

The Ministry of Health (MOH) in Rwanda has well-established clinical care standards across all health care facilities; however, the pharmaceutical care standards are still weak. MTaPS is working with the MOH, Rwanda FDA, and National Pharmacy Council to develop pharmaceutical standards. MTaPS hired a local consultant to lead this exercise.

The MTaPS/Rwanda country team and the consultant met key stakeholders and gathered their input for the draft pharmaceutical standards. It was extremely important to meet with the stakeholders to gain their input and buy-in to increase the ownership and relevance of the standards.

The consultant has finalized the standards and the performance assessment tools. The next step is to have a joint meeting with the MOH, Rwanda FDA, and National Pharmacy Council to agree on the roles of each party in the implementation.

The MOH expressed interest in MTaPS' support to strengthen a Pharmacy unit in the Ministry and capacitate it carry out its policy formulation and pharmaceutical-sector oversight role, as stipulated in the National Pharmacy Policy. The consultant is working to map the current roles of Pharmacy unit staff (if any) and the existing structure and to make proposals with the MOH for an effective Pharmacy unit in the Ministry.

Activity 2.2.1: Capability and functionality of the electronic Pharmaceutical Regulatory Information Management System for medicine reviewed

The Rwanda FDA has an electronic Pharmaceutical Regulatory Information Management System (PRIMS) for handling key regulatory functions, but it is not yet operational. During this quarter, MTaPS worked with the IT expert seconded to the Rwanda FDA by TradeMark East Africa (TMEA) to spearhead the operationalization of the dormant modules of PRIMS and make it fully functional.

The MTaPS team has worked with TMEA and the Rwanda FDA IT team to activate the two PRIMS modules (Finance Management and Premises licensing), which are now fully functional. The MTaPS IT team will continue to work with the Rwanda FDA IT team to make the product registration/variation and GMP modules functional as well. Ultimately, the Rwanda FDA will have a fully functional electronic system.

MTaPS recommended the use of PViMS, a pharmacovigilance electronic management tool, which was accepted by the Rwanda FDA. PViMS was installed to improve monitoring and reporting of adverse drug reactions to medical products, including medicines for HIV/AIDS, MNCH, and vaccines. Due to the inter-relations among the key regulatory functions, MTaPS supported the Rwanda FDA to integrate both PRIMS and PViMS.

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

Activity 3.1.1: Reporting of adverse drug reactions using the spontaneous reporting system strengthened and use of safety data for the management of patients improved

In FP2Q1, PViMS, a tool for collecting and managing reports of adverse effects of medicines developed under the MTaPS-predecessor project, was installed on the Rwanda FDA server. The tool is part of a mass immunization campaign to reach about 200,000 at-risk persons with an Ebola vaccine. Pharmacovigilance staff at the Rwanda FDA were trained to use the tool. MTaPS will provide logistics support to the Rwanda FDA to conduct training for health care providers on the national guidelines for

pharmacovigilance, which is scheduled for end of January 2020. This training will also have a module on PViMS. The expected result of the training is an increase in adverse drug reaction reporting, particularly for medicines used for HIV and MNCH, through the spontaneous reporting system.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
1.1.1: Strategic plan, regulations, and guidelines on medicines regulation for Rwanda FDA updated and developed	Support Rwanda FDA in finalizing the strategic plan. Continue working on pending regulations and guidelines	January–February
2.1.2: Standards for pharmaceutical services as part of Ministry of Health accreditation system developed	Support MOH to adopt pharmacy standards as the comprehensive quality assurance framework for rating, monitoring, and evaluating and for improving the quality of pharmacy services provided to patients in Rwanda	January–March
2.2.1: Support Rwanda FDA to develop a QMS and establish an effective inspection and licensing system	Review existing QMS and provide technical assistance to build a robust QMS. MTaPS plans to use the country team and an external consultant for the activity.	January–March
3.1.1: Reporting of adverse drug reactions using the spontaneous reporting system strengthened and use of safety data for the management of patients improved	Conduct a workshop to develop a framework for active monitoring of HIV patients using TLD	January–March

SENEGAL

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Strengthen the functionality of the One Health permanent secretariat and its AMR technical working group by supporting effective coordination through regular meetings

The One Health platform was not functioning following the dissolution of the prime minister's office in the Senegalese government in May 2019. The One Health platform has been revitalized and was recently reorganized under the auspices of the general secretariat of the government. On November 18, 2019, MTaPS attended the first meeting of the One Health Permanent Secretariat of the National High Council of Global Health Security platform. This was an opportunity to meet all partners involved in Global Health Security Agenda (GHSA) activities in Senegal. MTaPS shared its objectives, some achievements of the project, and the main implementation areas for year 1. MTaPS reassured the One Health Permanent Secretary of its commitment as the USAID implementing partner to support the Government of Senegal in improving its antimicrobial resistance (AMR) containment strategy through AMR multisectoral coordination and IPC and AMS technical assistance activities. MTaPS plans to provide technical and financial assistance to the permanent secretary to organize regular meetings to elaborate and strengthen the functionality of TOR of thematic groups in collaboration with other One Health stakeholders.

On December 30, 2019, MTaPS attended the technical meeting of the One Health Secretariat to prepare for the first meeting of the AMR technical working group (TWG). Several partners, such as FAO, Merieux Foundation, and the national laboratory control of medicines (LNCM), were present as members of the TWG.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL POLICIES AND PRACTICES STRENGTHENED

Activity 2.3.2: Conduct a baseline assessment in three targeted hospitals (1 tertiary, 1 regional, and 1 district) based on agreed criteria with MOH

MTaPS, in collaboration with the Ministry of Health and Social Welfare's (MOHSW) and PRONALIN, conducted a baseline situation analysis in three targeted hospitals based on the selected criteria:

- The administrative level of the hospital: in Senegal, the health pyramid shows three level of hospitals based on the geographical area, the size of the population, and other factors. For equity, the MOHSW has selected the three types of structures existing in the health pyramid.
- Another criterion was the hospital's performance level in terms of PCI organization through its ICC. The analysis of last supervision data conducted by PRONALIN in April 2018 made it possible to choose three structures having different levels of functionality of their ICC, from low to medium.
- The ethical criteria based on the choice of structures belonging to the public sector (2 hospitals) and the private sector (1 hospital).
- Two hospitals were already assessed on IPC implementation using the WHO IPCAF in year 1, and the team (i.e., MTaPS and MOHSW) finalized the baseline situation analysis in the targeted hospitals by assessing the last hospital involved in this first cohort by the end of October 2019. The results of these assessment are summarized in the table 3.

Table 3. Hospital IPCAF assessment scores and findings

ASSESSMENT DATE	HOSPITAL	SCORE	MAJOR FINDINGS	COMMENTS
August 28–30, 2019	Hospital Mame Abdou Aziz Sy in Tivaouane (level 1)	100/800 Inadequate	ICC with total lack of HAI surveillance. No multimodal strategy approach applied; inappropriate management of the health environment. The IPC program existed in the hospital with the ICC and its coordinator, but the core components are not efficiently implemented.	Priorities and activities to improve the implementation level of the IPC program have been identified and planned for each health facility.
September 23–25, 2019	Saint John of God Hospital in Thies (level 2 private)	565/800 Intermediate	IPC program well implemented and good management of the environment. Several core components are implemented, but there is no documentation available for monitoring and evaluation. The major finding for this hospital is related to monitoring and audit of IPC practices. Training is also needed for the several agents in the hospital.	
October 28–30, 2019	General Hospital Idrissa Pouye (level 3)	315/800 Basic	The IPC program is in place and some core components have been implemented. However, the implementation level is insufficient, and there is a real need for staff training on IPC. The training will be on basic IPC competency using a multimodal strategy and continuous quality improvement approach for sustainability.	

In collaboration with the MOHSW, MTaPS is working on the implementation and monitoring of the action plans elaborated after the baseline assessment in the selected hospitals. MTaPS has selected a set of trainings to support each hospital on the IPC core component modules, the CQI approach, and the WHO multimodal approach. Prior to the training, a training of trainers will be organized in January 2020 for 15 members of the ICCs in three hospitals (3 from EPS1, 4 from EPS2, and 8 from EPS3). These 15 trainers will then train other staff from the three selected hospitals and actively participate in the implementation of IPC activities in their hospitals. In collaboration with the MOHSW, MTaPS has elaborated the scope of work of IPC consultants who will conduct the training of trainers. These consultants will elaborate the timelines of the trainings in the hospitals in collaboration with the ICC coordinator, train the set of selected trainers from each hospital, and follow up by monitoring and evaluating the trained trainers.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1: Provide technical support to formulate and implement a national AMS strategy plan to facilitate improvement of adherence to treatment guidelines

MTaPS elaborated the first draft of a consultancy scope of work for developing the national AMS strategy/plan in collaboration with its Headquarters office and the MOHSW's Directorate of Pharmacy and Medicines (DPM). MTaPS held several meetings with human, animal, and environmental health sector stakeholders, including ECTAD/FAO. The consultancy scope of work for developing the national AMS strategy was validated by the key stakeholders (DPM, FAO, LNCM, Ministry of Environment) during a meeting held by the FAO on December 11, 2019. These stakeholders also agreed on the roadmap activities, such as completing the consultant's recruitment process and starting the elaboration of the AMS strategic plan by February 2020. The consultancy scope of work was released through the national newspapers, and the submission process is ongoing.

Activity 3.5.2: Incorporate IPC training modules into the eLearning platform and use them as components of safe, effective, and qualitative hospital care

The Directorate of Hospital Quality, Security and Hygiene (DQSHH) has selected three modules to be integrated into the eLearning platform. MTaPS convened a workshop December 4–6, 2019, to review and adapt the selected modules in compliance with the storyboard used in the MOHSW eLearning platform. Following this, the Informatic Unit of the Ministry of Health and Social Action (MSAS) convened a second workshop December 9–13, 2019, to upload the IPC modules to the platform. All selected modules are now uploaded on the platform. In collaboration with its HQ office, MTaPS will continue supporting the MOHSW to improve the eLearning platform design to include competency-based and andragogic approaches while providing technical review of the integrated IPC modules.

ACTIVITIES EVENTS FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
Strengthen the functionality of One Health permanent secretary and its AMR technical working group by supporting effective coordination through regular meetings	Support the organization of the first meeting of the AMR TWG for the One Health permanent secretariat	January
Support the MOHSW to assess the IPC program at the national level	Support the DQSHH to organize a workshop to conduct a baseline assessment of the IPC program at the national level using the WHO IPCAT2	February
Support the DQSHH to assess the IPC program at the facility level	Work with the DQSHH to select two additional hospitals and organize a field visit prior to the assessment	March
Monitor and evaluate the implementation of the action plans and convene a joint lessons-learned workshop	Organize training of trainers session for 15 selected ICC members in three hospitals Organize training sessions for all staff in three selected hospitals Organize monitoring field visits for IPC implementation	January February March
Apply the WHO-recommended multimodal approach and implement a CQI approach with incremental self-improvement plans and targets to address the core components of IPC in three hospitals		
Support ICCs in three hospitals to perform regular measurements and iterative reviews		
Support the National Committee on Antibiotic Therapy to develop the national AMS strategy/plan	Plenary meeting of the national committee followed by a workshop in January to finalize the STGs.	January 8–9
Provide technical support to formulate and implement a national AMS strategy plan to facilitate improvement of adherence to treatment guidelines	Organize a prevalidation workshop of the updated STGs	March
Provide technical support to formulate and implement a national AMS strategic plan to facilitate improvement of adherence to treatment guidelines	Finalize the recruitment of the consultant for the AMS strategic plan. Support the organization of the technical meetings for the elaboration of the AMS strategic plan	January–March
Incorporate IPC and AMS training modules into the eLearning platform and use them as components of safe, effective, and qualitative hospital care	Support the improvement of the eLearning platform design to include competency-based and andragogic approaches while providing technical review of the integrated IPC modules	January–March

TANZANIA

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

MTaPS held a consultative meeting with various Ministry of Health, Community Development, Gender, Elderly, and Children (MOH) directorates (Quality Assurance Unit, Human Resource Development Division, Pharmaceutical Services Unit (PSU), and Curative Service Division) to discuss project implementation progress, challenges, and the way forward. The project requested MOH's continued support in building infection prevention and control (IPC) and antimicrobial stewardship (AMS) capacity at health care facilities.

MTaPS advocated for and brought together approximately 700 health workers, university students, and members of the public to attend an AMR symposium organized by the Tanzania Pharmaceutical Students' Association (TAPSA). These included representatives from TAPSA, university lecturers and students from Kampala International University, St. Augustine University, Muhimbili University of Health and Allied Health Sciences, and Hubert Kairuki Memorial and Tumaini Universities to commemorate World Antimicrobial Awareness Week (November 18-24, 2019) at Muhimbili University. An MTaPS senior technical advisor was one of the panelists in the discussion of the theme "The future of antibiotics depends on all of us." The panelist discussed the need for strong behavioral change of health care providers on prescribing and dispensing antimicrobials in a prudent manner, as well as strengthening IPC in hospital settings. The panelists emphasized the importance of incorporating AMR/IPC into pre-service training curriculum of colleges to produce a knowledgeable health workforce; reviving Medicine and Therapeutic Committees (MTCs) at facilities while improving the doctor/pharmacist relationship; and researching the magnitude of AMR in Tanzania.

MTaPS brought together approximately 300 people from different health and non-health sectors to participate in a road show event in Morogoro to raise community awareness on the proper use of antimicrobials. The different sectors included journalists from various media and representatives from Sokoine University of Agriculture, the AMR awareness technical working group of the Multi-Sectoral Coordination Committee (MSCC), and One Health Central and Eastern Africa.

MTaPS organized and conducted a meeting with the Infectious Diseases Detection and Surveillance Project to jointly discuss progress and challenges. We agreed on conducting joint support to health care facilities as part of collaboration and using existing structures and focal persons at health care facilities for our project.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

MTaPS actively disseminated the updated IPC guidelines in Kigoma, Dar es Salaam, and Songwe through facility-based training sessions. A total of 230 health care workers and representatives were trained on the updated IPC guideline. The health care workers were from Regional Referral Hospital, district hospitals, and big health centers; the representatives were from regional health management teams, the council health management team, and development partners (ICAP Tanzania, USAID Boresha Afya Southern and Northern Zones, and Baylor Tanzania). In addition, MTaPS printed 2,000 extra copies of the IPC guidelines and distributed them to selected hospitals in Mbeya, Njombe, Dodoma, Dar es Salaam, Kagera, Mwanza, Kigoma, Songwe, and Pwani regions.

MTaPS conducted IPC baseline assessment in Maweni and Sekou-Toure regional hospitals in Kigoma and Mwanza regions, respectively, using the Tanzania IPC standards tools. The aim was to assess whether key IPC practices are performed according to the national IPC guideline. National IPC standards that were developed with support from MTaPS were used. The overall performance for Maweni and Sekou-Toure was 28% and 44%, respectively. Action plans for the gaps identified were developed for

implementation. MTaPS, in collaboration with MOH, will provide mentorship visit follow-up to further strengthen their IPC practices.

MTaPS developed an IPC/AMS capacity building strategy. It assessed the country by using a variety of methods, such as site visits, focus group discussions, and individual phone interviews with relevant stakeholders, to identify capacity gaps and develop a capacity-building plan. Primary target groups for this assessment included staff from MOH, three academic institutions (Muhimbili University of Health and Allied Sciences, Aga Khan Hospital, and Kilimanjaro Christian Medical Center), other implementing partners, and MTaPS. Initial data analysis shows:

- There is a knowledge gap among health care professionals, both from the leadership level of the country down to the community level, due to a lack of antimicrobial awareness programs in Tanzania
- Inadequate coordinating among different implementing partners to jointly resolve AMS/IPC challenges and expand the reach of capacity-building efforts
- Inadequate planning capacity in AMS/IPC at all levels, hence IPC/AMS activities are not prioritized, including procurement of IPC/AMS-related commodities

MTaPS is currently working with various stakeholders to develop the capacity-building strategy on the basis of the assessment results and recommendations.

MTaPS developed an IPC TOT guide to train tutors from various local institutions and that will help ensure that quality training is provided to nursing students across the country, using the revised IPC curriculum.

Also, MTaPS began converting the IPC training materials into an e-learning format to be used by MOH-Centre for Distant Education for online training. So far, three sessions have been converted.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

MTaPS assisted the MOH and the Catholic University of Health and Allied Sciences in developing a proposal and detailed protocol for medicine utilization survey, i.e., a point prevalence survey (PPS). The lead MTaPS partner for this assistance was the University of Washington. The survey was implemented after clearance from the National Institute for Medical Research (NIMR) as required by the MOH.

MTaPS supported the MOH in collecting data for the national antimicrobial use survey at the Medical Stores Department (MSD), Tanzania Medicines and Devices Administration (TMDA), and two pharmaceutical manufacturers located in Dar es Salaam. The PPS data collection was done at six MTaPS-selected health facilities (two zonal referral hospitals and four regional referral hospitals).

MTaPS conducted a baseline assessment in six MTaPS program-selected facilities to determine the existence and functionality of the MTC in promoting and implementing AMS activities. A total of 20 national-level data collectors (17 male and 3 female) were involved in the activity. The activity was meant to aggregate useful information to strengthen MTCs in carrying out AMS-related activities at the facility level. When the capacity of the national and individual MTCs in the public and private sectors are enhanced, governance structures for AMS will be strengthened, thus helping Tanzania move toward a JEE capacity-level 3 rating. In addition, the latter progress will be enabled by implementing the recommended actions in benchmark 3.4 on optimal use of antimicrobials in WHO's 2019 IHR capacities benchmarking tool. MTaPS Tanzania also conducted project-level M&E baseline data collection at the MOH level and at the six health facilities supported by MTaPS Tanzania.

MTaPS Tanzania also provided technical support in revising and printing various IEC materials for commemorating World Antibiotic Awareness Week 2019. The materials related to promoting BCC on antimicrobial use across the country. These activities contribute toward attaining JEE capacity level 3. In addition, progress will be enabled by implementing the recommended actions in benchmark 3.4 on optimal use of antimicrobials in WHO's 2019 IHR capacities benchmarking tool, because a community

that is aware and informed about AMR is more likely to engage and support IPC/AMS activities at the local community level, thus promoting the rational use of antimicrobial agents.

Other activities are as follows:

- Trained 10 people from the MOH (TMDA, MSD, and PSU) on the protocol for conducting the national-level antimicrobial consumption analysis using Anatomical Therapeutic Chemical/Daily Defined Dose (ATC/DDD) methodology
- Trained 20 people from regional and zonal hospitals and 3 people from MOH on the protocol for conducting the PPS in health facilities
- Piloted the data collection forms and data entry methods for each study
- Supported the MOH and regional and zonal hospital teams in developing analysis and dissemination plans, once the data are collected
- Received approval for the PPS protocol from the Medical Research Coordinating Committee of the National Institute for Medical Research (NIMR)

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
Finalize capacity-building strategy	Finalize capacity-building strategy on IPC/AMS	January
Conduct IPC baseline assessments in 4 facilities	Both the national and the WHO IPC standards will be used to assess them	January
Conduct TOT for tutors from local nursing institutions	120 tutors will be trained across the country	February/March
Final review of the AMR communication strategy and approval by the MSCC	Final review expected to be carried out by experts before approval	January
PPS data compilation, analysis, and interpretation in collaboration with University of Washington		January-March
DDD data collection and compilation		January

UGANDA

RESULT AREA 1: 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

MTaPS submitted terms of references (TORs) for AMS and IPC technical working committees (TWCs) during PY1Q3. Based on the draft TORs, the Ministry of Health (MOH) has appointed interim IPC and AMS TWCs, pending final approval of the TORs. Other partners, such as the Fleming Fund, have supported the TWCs to hold quarterly meetings. MTaPS has played a catalytic role in helping the MOH to set up the IPC and AMS TWCs.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

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

Findings of the National IPC survey conducted in PY1Q3 were shared with MOH hospital and lower health facility TWGs for approval. MTaPS also supported the MOH to disseminate the survey findings during the national AMR conference in November 2019. More than 500 guests working in the area of AMR, including representatives of civil society, health facilities, government agencies, and partners, attended the conference. The survey report will be shared with MOH senior management for final approval and dissemination during PY2Q2.

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

MTaPS contracted Makerere University (School of Pharmacy and College of Veterinary Medicine) to provide technical leadership on the development of the essential medicines list (EML) for the veterinary sector in Uganda. Due to the need for wider consultation, Makerere University has requested more time to deliver the draft EML. The draft EML and guidelines on the use of antibiotics will be shared with the MAAIF during PY2Q2.

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

MTaPS supported six regional referral hospitals to develop their action plans for AMS improvement. An additional health facility (private, not-for-profit [PNFP]) was also identified for MTaPS support. The MTaPS country team carried out initial facility preparatory visits to the PNFP, and a baseline survey will be conducted for this facility in PY2Q2.

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

MTaPS continued to engage the National Drug Authority (NDA) about approaches to activity implementation. The MTaPS team accessed ports of entry to assess the use and capacity of the current NDA information management system to capture data on import of antibiotics. The MTaPS team also submitted a request for sample antibiotic import data from the NDA. A technical report will be written once the data are available. The findings of the report will be used to inform further discussions on approaches to activity implementation.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES (2020)
Conduct IPC training for IPC committees	IPC training for IPC committee members at supported health facilities	February
Present draft EML and guidelines to the MAAIF	The consultant will submit the draft EML and guidelines on use of antibiotics to the MAAIF and present them to senior management for consideration	February
Conduct supportive supervision for IPC	Supportive supervision of IPC work being done at MTaPS-supported health facilities	March
Present and disseminate AMR awareness messages	Consultant will share the final AMR messages with the MAAIF and disseminate them to stakeholders	March
Share standard dataset for monitoring in-country antibiotic consumption	Identify and standardize data sets required for comprehensive monitoring of volumes of antimicrobials imported and manufactured in Uganda	January
Conduct seven facility-based trainings on AMS	Stewardship training for facility MTCs/AMS teams	February
Supportive supervision for the MTC and AMS teams	Conduct supportive supervision to monitor progress on facility improvement plans	March
Conduct baseline surveys for IPC and AMS in Naggalama hospital	Conduct facility-based IPC and AMS baseline surveys to establish the state and level of IPC and AMS in Naggalama hospital	January
Develop improvement plans for IPC and AMS in Naggalama hospital	Develop baseline survey-informed IPC and AMS improvement plans for Naggalama hospital	March
Support the development of facility AMS and IPC supervision plans for lower-level health facilities	Support facility MTCs and IPC committees to develop AMS and IPC supervision plans for lower-level health facilities	March

MONITORING, EVALUATION, AND LEARNING

PROGRESS WITH ESTABLISHING INDICATORS

MTaPS Indicators and Performance Indicator Reference Sheets

MTaPS submitted revised indicators and performance indicator reference sheets (PIRS) to USAID in the first quarter of PY2. The USAID COR team reviewed and provided feedback on the indicators and PIRS. The input from USAID is being incorporated through a consultative process with technical staff, and the indicators and PIRS will be resubmitted next quarter.

Global Health Security Agenda Indicators and Performance Indicator Reference Sheets

MTaPS developed indicators to effectively monitor GHSA country program outputs and outcomes, guided by the program results framework and theory of change (TOC). Sources of GHSA indicators included USAID, WHO, JEE 2.0, and GHSA country strategies and work plans. MTaPS internally finalized the GHSA indicators and PIRS this quarter and submitted to USAID, receiving USAID feedback within the quarter. MTaPS will finalize all documents related to the GHSA indicators (PIRS and annex) using USAID feedback in the second quarter of PY2.

BASELINE ASSESSMENT

In PY2Q1, MTaPS continued baseline activities that started in PY1Q4, with data collection carried out in Tanzania, Côte d'Ivoire, and Senegal. This quarter MTaPS collected baseline data in Bangladesh, Burkina Faso, Cameroon, Democratic Republic of Congo, Ethiopia, Kenya, Mali, Mozambique, Nepal, Philippines, and Uganda. In countries with adequate local capacity, remote support from the MEL team was sufficient. Baseline data collected for most countries were on core indicators, which will be monitored routinely during implementation. Nepal, Tanzania, Philippines, Ethiopia, and Côte d'Ivoire have collected data on long-term/integrated outcome indicators.

In the second quarter of PY2, MTaPS will collect baseline data in Rwanda and Jordan, submit baseline summary reports for all countries, and finalize a global program baseline report.

KNOWLEDGE MANAGEMENT AND LEARNING

This quarter, MTaPS developed a number of key guidance documents and tools to inform knowledge management (KM) and learning activities.

MTaPS developed a PY2 implementation plan to guide and track global and country-level KM and learning activities.

MTaPS developed guidance for staff on the practical application of lessons learned—a step-by-step process to collect, review, and use lessons. MTaPS learns continuously from implementation and the experiences of its staff, implementing partners, government counterparts, and other stakeholders. To be ready for such continuous learning and adaptive management, MTaPS developed this guide for staff tasked with the collection, review, and use of lessons learned. When lessons learned are collected and made easily available, they can inform future interventions and help MTaPS translate knowledge into action.

MTaPS developed guidance for staff on technical documentation. This guide is intended for MTaPS staff tasked with planning and developing high-quality technical documentation that showcases the program's technical strategies, implementation experiences, results, and lessons consistently and efficiently. Technical documentation broadly refers to knowledge products that advance the goals and objectives of the program, including research, capacity development, KM, and communications goals. This guidance is

focused on two document types: technical highlights and technical briefs. Highlights and briefs—together with quarterly and annual reports, advocacy products, event-specific resources, and promotional posters—comprise a suite of knowledge and communications options for MTaPS.

Additionally, MTaPS developed terms of reference (TOR) for an internal documentation and evidence technical working group (TWG) to guide the implementation of KM activities and to link the program's technical implementation, monitoring, evaluation, research, learning, KM, and communications functions. This TWG will work to ensure that program data, information, lessons, knowledge, and evidence are captured, assessed, synthesized, shared among intended users, and applied for adaptive work planning and management.

Next quarter, MTaPS will roll out a series of internal and external brown bags and webinars to share knowledge gained from implementation activities. MTaPS will also hold a virtual knowledge exchange where country programs will share implementation experiences and lessons learned from regulatory systems strengthening activities.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES
MTaPS PIRS	Finalize MTaPS indicators and PIRS	January 2020
GHSA PIRS	Finalize GHSA indicators and PIRS	
Country baseline assessment summary reports	Submit Nepal, Kenya, Uganda, Burkina Faso, Mali, Cameroon, DRC, Bangladesh, Ethiopia, Mozambique, Tanzania, Uganda, Senegal, Côte d'Ivoire, and Philippines baseline summary reports	
Baseline data collection	Complete data collection in Jordan and Rwanda	February 2020
Global baseline assessment report	Submit aggregated global baseline report	
Baseline data	Submit baseline data set to USAID DDL	March 2020
Mapping of indicators	Map indicators to countries	
MTaPS data system	Build, test, and validate system	
MTaPS data system training	Train system users	
Routine data collection	Develop and share SOP	
MEL quarterly report	Develop and share template	
Country MEL plan(s)	Develop country MEL plans for PY2	