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

Improved Access. Improved Services. Better Health Outcomes.

PHOTO CREDIT: WARREN ZELMAN

FISCAL YEAR 2021 QUARTER 3 (APRIL–JUNE 2021) REPORT

USAID
FROM THE AMERICAN PEOPLE

FISCAL YEAR 2021
QUARTER 3
(APRIL–JUNE 2021) REPORT

DISCLAIMER: This document is made possible by the generous support of the American people through the US Agency for International Development (USAID) Contract No.: 7200AA18C00074. The contents are the responsibility of Management Sciences for Health and do not necessarily reflect the views of USAID or the United States Government.

TABLE OF CONTENTS

PROJECT OVERVIEW

Program Name:		USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program
Reporting Period:		Fiscal year (FY) 2021 Quarter 3 (April-June 2021)
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, IC Consultants, MedSource, IQVIA, University of Washington
	Capacity Resource Partners:	African Health Economics and Policy Association, Ecumenical Pharmaceutical Network, U3 SystemsWork, University of Ibadan, African Collaborating Centre for Pharmacovigilance and Surveillance, Kilimanjaro School of Pharmacy, Muhimbili University, Pharmaceutical Systems Africa
	Collaborators:	International Pharmaceutical Federation, Howard University, University of Notre Dame, WHO, World Bank

Recommended Citation

2021. *USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program: Quarterly Report Fiscal Year 2021 Quarter 3 (April-June 2021).* Submitted to the U.S. Agency for International Development by the USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program. Arlington, VA: Management Sciences for Health, Inc.

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

ABHR	alcohol-based hand rub
ADR	adverse drug reaction
ADRAC	Adverse Drug Reaction Advisory Committee
aDSM	active drug safety monitoring and management
AIDS	acquired immunodeficiency syndrome
AMR	antimicrobial resistance
AMRH	African Medicines Regulatory Harmonization
AMS	antimicrobial stewardship
ARTI	acute respiratory tract infection
ARV	antiretroviral
ASEAN	Association of Southeast Asian Nations
ATC	Anatomical Therapeutic Chemical
AWaRe	access, watch and reserve (WHO)
BCC	behavior change communication
CDC	Communicable Disease Control (Bangladesh)
CDC	US Centers for Disease Control and Prevention
CIAPOL	Ivorian Anti-Pollution Center
CLA	collaborative learning and adapting
COI	conflict of interest
COR	contracting officer representative
COVID-19	coronavirus disease 2019
CPD	continuous professional development
CQI	continuous quality improvement
CRO	Oceanography Research Center
CSL	Commodities Security and Logistics
CSO	civil society organization
CTD	common technical document
CUK	University of Kinshasa Teaching Hospital
D10	10ème Direction
DAMS	Drug Administration Management System (Nepal)
DDA	Department of Drug Administration
DDD	defined daily dose
DDL	Development Data Library
DEC	Development Experience Clearinghouse
DFRS	Directorate of Training and Health Research
DGDA	General Directorate of Drug Administration
DGFP	Directorate General of Family Planning (Bangladesh)
DGHS	General Directorate of Hospital Services
DGOGSS	General Directorate for the Organization of Health Care
DGS	General Directorate of Health
DMAP	Data Management and Analytics Platform
DMHP	Directorate of Hospital and Proximity Medicine

DOH	Department of Health
DPM	Directorate of Pharmacy and Medicine
DPS	division provinciale de la santé
DQSHH	Directorate of Hospital Quality, Security, and Hygiene
DRA	Drug Regulatory Authority
DRC	Democratic Republic of the Congo
DSFGS	Direction pour de la Santé de la Famille et Groupe Specifique (DRC)
DSV	Directorate of Veterinary Services
DT	dispersible tablet
DTC	drug and therapeutics committee
DTG	dolutegravir
EAC	East African Community
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)
EWG	Expert Working Group
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
GMP	Good Manufacturing Practices
GRevP	Good Review Practices
HCAI	healthcare-associated infection
HIPC	hygiene and infection prevention and control
HIV	human immunodeficiency virus
HTA	health technology assessment
HZ	health zone
ICC	infection control committee
IDDS	Infectious Diseases Detection and Surveillance Program
IGAD	Intergovernmental Authority on Development
IHR	International Health Regulation
ILI-ACLE	International Law Institute-African Center for Legal Excellence
IPC	infection prevention and control
IPCAF	Infection Prevention and Control Assessment Framework
IPCAF	Infection Prevention and Control Assessment Framework (WHO)
IPCAT2	IPC assessment tool
IPRA	Ivorian Pharmaceutical Regulatory Authority
JAG	joint action groups

JEE	joint external evaluation (of International Health Regulations [2005] core capacities)
KEML	Kenya Essential Medicines List
KM	knowledge management
KMITS	Knowledge Management and Information Technology Service
LANADA	National Laboratory for the Support of Agricultural Development
LDP+	Leadership Development Program Plus
LGU	local government unit
LMICs	low- and middle-income countries
LMIS	logistics management information system
M&E	monitoring and evaluation
MAAIF	Ministry of Agriculture, Animal Industry, and Fisheries
MCC	Multisectoral Coordination Committee
MCCH	Maternal Child and Community Health
MCG	Multisectoral Coordination Group
MCH	maternal and child health
MDG	Millennium Development Goal
MDR	multidrug resistant
MEL	monitoring, evaluation, and learning
MESRS	Ministry of Higher Education and Scientific Research
MINADER	Ministry of Agriculture and Rural Development
MIRAH	Ministry of Animal and Fisheries Resources
MNCH	maternal, neonatal, and child health
MOH	Ministry of Health
MOHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children
MOHFW	Ministry of Health and Family Welfare
MOHP	Ministry of Health and Population
MOU	memorandum of understanding
MSC	multisectoral coordination
MSH	Management Sciences for Health
MSHP	Ministry of Health and Public Hygiene
MSR	medical surgical requisites
MTC	medicines and therapeutics committee
MTC	Multisectoral Technical Committee (Côte d'Ivoire)
MUHAS	Muhimbili University of Health and Allied Sciences
NAMRAC	National Antimicrobial Resistance and Containment Advisory Committee (Ethiopia)
NAMRsC	National Antimicrobial Resistance (AMR) Sub-Committee
NAP	National Action Plan
NC-AMR	National Commission on Antimicrobial Resistance
NCAT	National Committee for Antibiotic Treatment (Senegal)
NDA	National Drug Authority
NEPAD	New Partnership for Africa's Development
NGO	nongovernmental organization
NMTC	National Medicines and Therapeutics Committee
NTP	national tuberculosis program

OH	One Health
OHP	One Health Platform
OIE	World Organization for Animal Health
ORMICI	Observatory on Antimicrobial Resistance in Côte d'Ivoire
OSC	Overseas Strategic Consulting
PD	Pharmacy Department
PEPFAR	US President's Emergency Plan for AIDS Relief
PLMC	Procurement and Logistics Management Cell (Bangladesh)
PMED	Pharmaceuticals and Medical Equipment Directorate (Ethiopia)
PMIS	pharmaceutical management information system
PNAM	National Medicines Supply Program (DRC)
PNDAP	National Program for the Development of Pharmaceutical Activity
POPCOM	Commission on Population (Philippines)
PPB	Pharmacy and Poisons Board (Kenya)
PQM+	Promoting the Quality of Medicines Plus Program
PSCM	procurement and supply chain management
PSCMT	Procurement and Supply Chain Management Team (Philippines)
PSM	procurement and supply management
PSS	pharmaceutical systems strengthening
PV	pharmacovigilance
PViMS	pharmacovigilance monitoring system
PY	program year
QMS	quality management system
RCORE	regional center of regulatory excellence
RH	reproductive health
RHSC	Reproductive Health Supplies Coalition
RMNCH	reproductive, maternal, newborn, and child health
RSS	regulatory systems strengthening
SADC	Southern African Development Community
SCMP	Supply Chain Management Portal
SEARN	Southeast Asia Regulatory Network
SEARO	WHO regional offices for South-East Asia
SIAPS	Systems for Improved Access to Pharmaceuticals and Services
SOW	scope of work
SPRINT	Scaling Pneumonia Response Innovations
STG	standard treatment guideline
TB	tuberculosis
TIMCI	Tools for Integrated Management of Childhood Illnesses
TLD	tenofovir/lamivudine/dolutegravir
TOR	terms of reference
TOT	training of trainers
TTC	Technical Thematic Committee
TWG	technical working group
UHC	universal health coverage

UN	United Nations
UNCoLSC	UN Commission on Life-Saving Commodities
UNDP	United Nations Development Programme
USAID	US Agency for International Development
VEML	Veterinary Essential Medicines List
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 combating infectious disease threats, as well as expanding essential health coverage.

GOAL

The goal of 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).

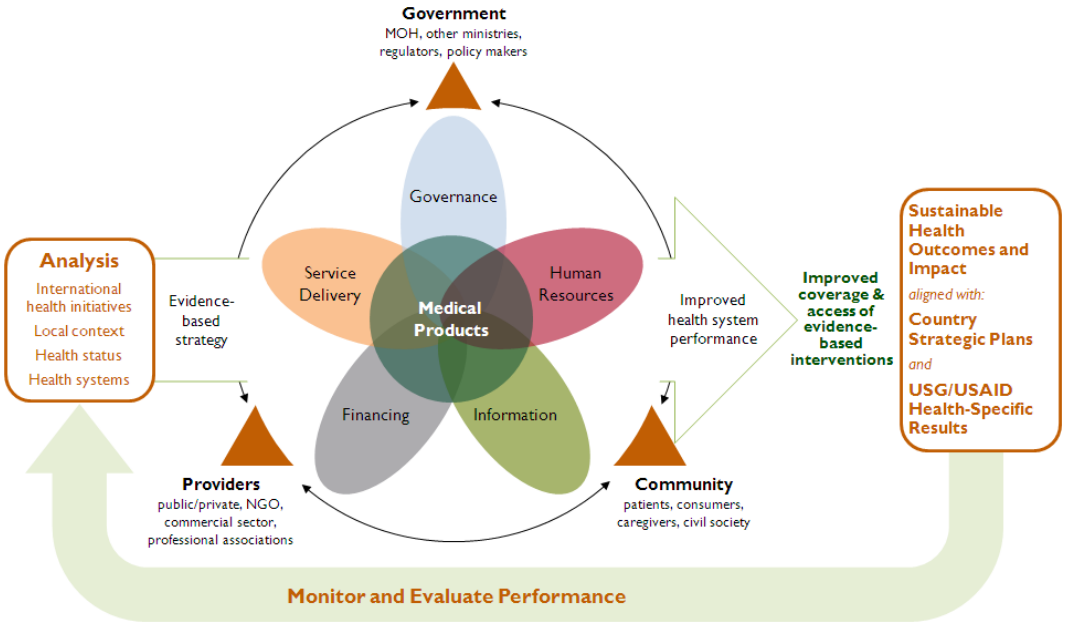


Figure 1. USAID pharmaceutical systems strengthening approach

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

This report presents a summary of achievements by portfolio for fiscal year 2021, quarter 3 (April-June 2021). It summarizes program performance and key challenges and is organized by core funding, objective, and country.

Implementation of planned activities this quarter continued to be impacted by the COVID-19 pandemic. Some activities have been delayed or postponed due to the general slowdown of activities and restrictions on gatherings/movement, as well as the limited availability of the staff.

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.

MTAPS PANDEMIC RESPONSE

COVID-19 VACCINE INTRODUCTION

MTaPS has been at the forefront of the GHSA, supporting the AMR package since 2018 in 13 countries, focusing on strengthening multisectoral coordination for AMR, IPC, and AMS. When COVID-19 struck last year, MTaPS received funding to build on its GHSA experience and networks to assist 13 countries in addressing gaps in pandemic-specific policies, strategies, and guidelines; providing direct assistance and capacity strengthening to health facilities in implementing end-to-end COVID-19 IPC measures; establishing systems for ongoing IPC performance monitoring and improvement; and sustaining the supply of essential IPC commodities. This package of assistance was completed in February 2021.

COVID-19-FUNDED COUNTRIES:

Burkina Faso
Côte d'Ivoire
Kenya
Mali
Mozambique
Philippines
Rwanda
Senegal

With the approval of COVID-19 vaccines by FDA and WHO, MTaPS shifted to supporting rapid and safe introduction of the vaccines in target countries. In April 2021, MTaPS received USAID funding to support eight countries (**Burkina Faso, Côte d'Ivoire, Kenya, Mali, Mozambique, Philippines, Rwanda,** and **Senegal**). The objectives of the support as defined by USAID are to 1) accelerate widespread and equitable access to and delivery of safe and effective COVID-19 vaccinations and 2) reduce morbidity and mortality from COVID-19, mitigate transmission, and strengthen health systems, including prevention, detection, and response to pandemic threats. MTaPS' country work plans were developed in conjunction with USAID Missions, ministries of health, global and national partners to reflect USAID and global efforts, such as the COVID-19 Vaccines Global Access (COVAX) facility, to safely deliver and introduce COVID-19 vaccines. The work plans were approved by USAID and local governments at the end of April/early May 2021. The MTaPS technical scope of assistance includes policy, planning, and coordination; PV and monitoring adverse events; supply chain and logistics management; service delivery; human resources for health, training, and supervision; communication and advocacy; and monitoring, evaluation, and HIS.

For more information about MTaPS COVID-19 activities, click here

EBOLA RESPONSE

Following resurgence of the Ebola threat in several countries in Africa, in March 2021, USAID tasked MTaPS with strengthening the preparedness capacities in five countries, including **Côte d'Ivoire, Mali, Rwanda, Senegal,** and **Uganda**. MTaPS is well-positioned to provide this support because of its role since 2018 as USAID's mechanism to support multisectoral coordination, infection prevention control (IPC), and antimicrobial stewardship under the GHSA and implementation of COVID-19 response activities in 2020. MTaPS already has an on-the-ground presence and access to local technical expertise in these countries, both of which are vital to mobilizing a quick response to contain the outbreak.

EBOLA RESPONSE COUNTRIES:

Côte d'Ivoire
Mali
Rwanda
Senegal
Uganda

MTaPS' response to the Ebola threat focuses on revising and updating the national Ebola response strategy and plan, IPC guidelines, and job aids; improving IPC management and performance at the national and facility levels by developing and introducing Ebola IPC compliance monitoring tools; updating training materials, training of trainers, and setting up e-learning options to ensure maximum safety of the trainees; supporting planning, quantification, and management of Ebola vaccines and therapeutics; and improving their safety by building the capacities of national and health facility staff on adverse event identification, notification, analysis, and investigation in accordance with WHO guidance.

For MTaPS Ebola Response monthly reports, click here.

PROGRESS BY CORE-FUNDED PORTFOLIO

COMMODITIES SECURITY AND LOGISTICS

ACTIVITY 1: INCREASING GOVERNMENT FINANCING OF FAMILY PLANNING COMMODITIES AND SUPPLY CHAIN IN A DECENTRALIZED HEALTH SYSTEM: A POLITICAL ECONOMY ANALYSIS

MTaPS has received funding from USAID's Commodities Security and Logistics (CSL) Division of the Office of Population and Reproductive Health to conduct a political economy analysis (PEA) in one country to examine the factors that influence domestic financing of family planning (FP) products and associated supply chain costs and that may shape decisions around increasing government financing within a decentralized health system. MTaPS completed a rapid situation analysis to identify a short list of potential countries for the PEA and following discussion between USAID CSL and the USAID Mission in Uganda, the MTaPS COR team submitted a request for concurrence for the activity to the Uganda Mission at the end of March 2021. At the start of May, the MTaPS COR team notified the Mission that as per ADS 201, the request was considered concurrent by default as of April 30. The Mission has since identified a point of contact for the activity, and a call is tentatively scheduled for July 14 with the Uganda Mission, MTaPS, and USAID CSL to discuss the activity and the timeline for implementation. Importantly, Uganda is experiencing a serious resurgence of COVID-19, and the timeline and implementation approach will need to take this into account.

Following the determination of concurrence by default, the MTaPS team held several internal planning meetings to map out roles and responsibilities and worked to identify a preliminary problem statement and primary research questions. The background desk review, which aims to identify foundational factors, formal and informal rules, and current events that are impacting domestic resource mobilization for FP products and supply chain in Uganda, was also initiated during this quarter, and a preliminary stakeholder mapping was completed. MTaPS had a call with the USAID-funded Uganda Strengthening Supply Chain Systems (SSCS) Technical Assistance Activity to discuss coordination, opportunities for leverage, and areas of collaboration.

ACTIVITY 2: ADVOCACY FOR GOVERNMENTS TO LEVERAGE PRIVATE-SECTOR LOGISTICS CAPABILITIES TO INCREASE ACCESSIBILITY AND AVAILABILITY OF FP COMMODITIES

This quarter, the team completed the desk review on the global fourth-party logistics landscape and its application in the global health supply chain and responded to feedback from the USAID CSL team in finalizing the report. The team also finalized the interview guide for the PEA component of the activity along with the cost benefit analysis and operational capacity audit tools. In anticipation of implementing the activity in Nigeria and the Philippines, the team also engaged with the respective Missions for insights regarding the FP commodity supply chain and selection criteria to identify geographic areas in each country for analysis. The team also shared the various assessment tools with the Missions and the CSL team for review and has started incorporating their feedback to finalize the tools. In June, the team conducted training for the PEA and started interviews in Nigeria, and it anticipates completing data collection in both countries in quarter 4.

ACTIVITY 3: USE OF RETAIL PHARMACIES AS A SOURCE OF FAMILY PLANNING PRODUCTS AND OTHER ESSENTIAL MEDICINES FOR PUBLIC-SECTOR CLIENTS IN LMICS—A THOUGHT LEADERSHIP PAPER

USAID CSL provided MTaPS with funding to develop a thought leadership paper on the use of retail pharmacies as a source of FP products and other essential medicines for public-sector clients in low- and middle-income countries (LMICs). In line with USAID's request to include an academic partner, MTaPS is collaborating with Boston University (BU), which is an MTaPS partner, to develop this paper. The paper aims to identify and document examples from high-income countries and LMICs on the use of private-sector outlets to serve public-sector clients with regard to FP and other essential medicines and to assess how these private-sector engagements are operationalized. In the last quarter, MTaPS received USAID input on the draft technical report outline. MTaPS also received approval for the countries to be included in the case studies for documenting global examples of retail pharmacies as a source of essential medicines and FP products. During this quarter, MTaPS completed the five country case studies, including two high-income and three middle-income countries. The country case studies were developed using a framework that focused on regulation, contracting, and reimbursement mechanisms; quality of services; and information technology and management systems. Finally, MTaPS presented a summary on the literature review and excerpts of the case study findings to USAID during the quarter's last monthly update meeting.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1: increasing government financing of family planning commodities and supply chain in a decentralized health system: a political economy analysis • The Uganda Mission, USAID CSL, MTaPS, and MTaPS COR call is tentatively scheduled for July 14 to introduce the activity and discuss timeline and approach for implementation • MTaPS will work with the Uganda Mission and SSCS to identify key country stakeholders to engage, including potential champions, and begin planning for the activity • MTaPS will finalize the background literature review, conduct a stakeholder mapping, refine the study design and research questions, and prepare the interview guides • Depending on the implementation timeline agreed on with the Mission and the COVID-19 situation in the country, MTaPS may hold the pre-assessment meeting and initiate key informant interviews later in the quarter	July–September 2021
Activity 2: Advocacy for governments to leverage private-sector logistics capabilities to increase accessibility and availability of FP commodities • Complete outstanding data collection • Conduct data cleaning and analysis • Draft final report based on the evidence generated from analysis • Present summary presentation	July–September 2021
Activity 3: Use of retail pharmacies as a source of family planning products and other essential medicines for public-sector clients in LMICs—a thought leadership paper • MTaPS to present first draft of technical report by the end July 2021 • Two rounds of reviews to be undertaken: a core set of five reviewers has been identified by MTaPS in consultation with USAID CSL. These reviewers will undertake the primary review, followed by a second review by WHO and the Global Fund. • MTaPS to submit a supplementary budget request for consideration by USAID for the production of a peer reviewed manuscript led by the BU team	July–September 2021

GLOBAL HEALTH SECURITY AGENDA

GHSA-SUPPORTED COUNTRIES:

Bangladesh
Burkina Faso
Cameroon
Côte d'Ivoire
DRC
Kenya
Mali
Mozambique
Nigeria
Senegal
Tanzania
Uganda

SUMMARY OF ACTIVITIES FOR THIS QUARTER

The focus of the MTaPS Global Health Security Agenda (GHSA) approach and implementation framework is to help countries make progress on the pathway to the next level of World Health Organization (WHO) Joint External Evaluation (JEE) capacity in multisectoral coordination (MSC), infection prevention and control (IPC), and antimicrobial stewardship (AMS).

During the reporting period, MTaPS finalized the draft of the revised Global Health eLearning (GHeL) antimicrobial resistance (AMR) 1 course and sent it to USAID for review before it is uploaded to the GHeL platform. MTaPS also sent the revised version of the two-part GHSA technical implementation framework to USAID for review.

MTaPS had two abstracts accepted to the American Public Health Association annual meeting: "Experiences and lessons from using Global Health Security Agenda approaches to implement antimicrobial resistance containment efforts in 11 countries" and "Improving infection prevention and control (IPC) practices: Interventions in six Tanzanian hospitals." MTaPS also collaborated with the national AMR focal point in Côte d'Ivoire to deliver an online presentation during the Global Health Science and Practice Technical Exchange (GHTechX) in April 2021 with the title "Using Global Health Security Tools to Combat Antimicrobial Resistance" (links below).

MTaPS' technical staff gave a presentation to USAID in June on MTaPS' GHSA AMR efforts as they relate to universal health coverage (UHC). They highlighted the similarities between the initiatives, including access and affordability, quality, safety, financial risk protection, MSC and One Health, health system strengthening, resilience, and pandemic preparedness. For example, in Côte d'Ivoire, MTaPS helped the national AMR governing bodies and key stakeholders develop more than 15 critical governance documents (including AMS guidelines) that contribute to AMR containment and UHC, while MTaPS Uganda is combating poor organizational structures and governance at all levels of the health system that affect UHC and health care delivery. MTaPS is also supporting Kenya's UHC goal of ensuring access to essential, quality health services without suffering financial hardship by, for example, implementing continuing professional development (CPD)- and relicensure-linked IPC training for delivery through professional associations that will safeguard patient and health worker safety.

In addition, MTaPS was invited to participate as an observer at the first meeting of the Strategic and Technical Advisory Group for Antimicrobial Resistance (STAG-AMR), which is the WHO's principal advisory group on AMR. The advisory group has the mandate to provide advice to the WHO director-general and the AMR Division on overall global policies and strategies to address AMR within the context of human health, while considering relevant World Health Assembly resolutions and decisions.

MTaPS published the following materials on its website or through social media from April to June:

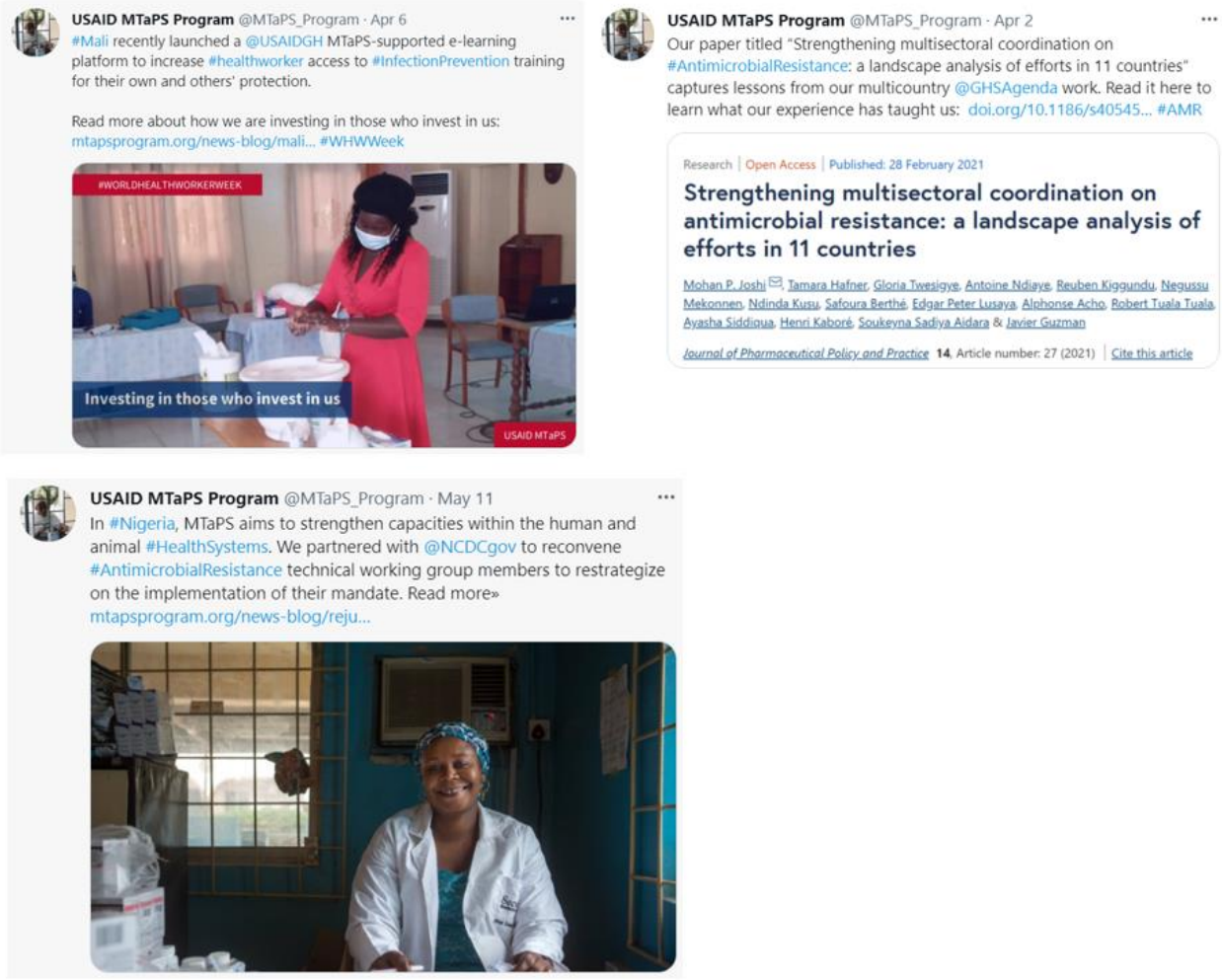
GHTechX Conference

- Using Global Health Security Tools to Combat Antimicrobial Resistance (AMR) - April 21, 2021
- Using Novel Capacity-Building Approaches to Prepare Health Workers and Systems for COVID-19 Infection Prevention and Control (IPC) Response - April 22, 2021

Success stories

- DRC completes its first national survey on antimicrobial consumption - June 10, 2021 (French, English)

- Tanzania Implements AWaRe Classification to Improve the Use of Antibiotics by Clinicians - May 25, 2021
- Rejuvenation of Antimicrobial Resistance Activities in Nigeria - May 10, 2021
- Kenya Innovates on Continuing Professional Development of Health Workers in Infection Prevention - April 6, 2021
-



Examples of social media posts

SUMMARY OF SELECT COMMON EFFORTS ACROSS COUNTRIES

Partner collaboration: MTaPS continued to collaborate with development and implementing partners at the country level. For example, MTaPS worked with USAID's partner, the Regional Health Integration to Enhance Services in South-West Uganda (RHITES-SW) in two districts to leverage their support to lower-level facilities on how to form medicines and therapeutics committees (MTCs) and AMS teams to address antimicrobial use practices. In addition, MTaPS coordinated with the Uganda Protestant Medical Bureau and Uganda Catholic Medical Bureau to implement continuous quality improvement (CQI) in 14 hospitals and worked with academic partner Makerere University to develop a newsletter from the AMS Technical Working Committee. And in Kenya, MTaPS collaborated with the Murang'a County government, FAO, and USAID's Infectious Disease Detection and Surveillance program to help the county antimicrobial stewardship interagency committee (CASIC) finalize its work plan.

Technical working group (TWG) meetings: MTaPS supported national AMS TWG meetings in Cameroon, Côte d'Ivoire, DRC, Nigeria, Tanzania, Kenya, and Mozambique and IPC TWG meetings in Cameroon, Côte d'Ivoire (two meetings), Kenya, and Mali.

Water, sanitation, and hygiene (WASH)-related efforts: During the reporting period, four countries supported WASH activities, including Cameroon, where a follow-up assessment showed that 42% of 12 facilities had improved their WASH and waste management infrastructure to facilitate IPC activities compared to baseline. In Côte d'Ivoire, the WASH manager at UNICEF presented the WASH-FIT tool to IPC TWG (MTC 4) members who recommended that the tool be adapted to national WASH standards and guidelines before the next supervision visits. MTaPS Senegal helped organize a two-day workshop to incorporate WASH components and WHO multimodal strategies into the national IPC supervision checklist. As part of a hand hygiene and IPC assessment in Uganda, MTaPS found that 93% of 14 health facilities did not have adequate infrastructure for those areas.

Animal sector-related activities: Countries where MTaPS had activities involving the animal sector during the quarter included Bangladesh, Cameroon, DRC, Nigeria, Côte d'Ivoire, and Mozambique. In Côte d'Ivoire, for example, the WHO's IPC Assessment Framework (IPCAF) was adapted for animal health; the Directorate of Veterinary Services will have to finalize and validate it before supervisory visits to two animal health sites scheduled for July. Through some diplomacy efforts in Mozambique, MTaPS helped ensure that animal sector representatives felt adequately involved in the MSC committee (MCC). MTaPS Cameroon advocated for health facility leadership to dedicate funds to IPC activities, and in Côte d'Ivoire, it was recommended that the IPC plan for animal health be presented to donors, such as the US Centers for Disease Control and Prevention (CDC), USAID, FAO, and the private sector to secure the funding needed to implement the plan.

WHO's access, watch, and reserve (AWaRe) classification: MTaPS continued to expand countries' use of AWaRe in prescribing. In Burkina Faso and Cameroon, MTaPS conducted training on AWaRe for pharmacists and physicians from 9 regions and DTC members from 11 hospitals, respectively. MTaPS printed and disseminated 1,500 copies of the revised list in Burkina Faso. In Kenya, MTaPS is helping Nyeri County implement the classification in four facilities; the new national formulary will also incorporate AWaRe. Notably, during the quarter, the Tanzanian Minister of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) officially launched the 2021 Standard Treatment Guidelines/National Essential Medicines List (STG/NEMLIT) on June 25 that incorporates an AWaRe list of antibiotics. The minister stressed the importance of adherence to the new guidelines. Cumulatively, MTaPS has thus far supported integration of AWaRe categories in STG/EML in eight countries—Bangladesh, Burkina Faso, Côte d'Ivoire, DRC, Ethiopia, Kenya, Senegal, and Tanzania; the process is complete in some countries and is ongoing in others.

DTC-focused support and AMS trainings: As an ongoing effort during the quarter, MTaPS provided technical assistance in six countries to establish, revitalize, train, or mentor DTCs in health facilities. Examples included helping the Directorate of Pharmacy and Medicine (DPM) establish DTCs in 7 new facilities in Mali and helping 11 hospitals in Cameroon develop AMS action plans and indicators for monitoring progress. Cumulatively, DTC members and other AMS champions have been trained using the MTaPS-developed generic AMS training course materials adapted for country context in Burkina Faso, Cameroon, Côte d'Ivoire, DRC, Kenya, Mali, Senegal, Tanzania, and Uganda. Modules typically covered topics, such as AMR overview, quality and quantity of antimicrobial use, AMS action plans and interventions in health facilities, AWaRe classification of antibiotics, and organization and functioning of DTCs. During the quarter, 170 DTC members were trained in Cameroon and 67 in Mali.

Training in MSC, IPC, and AMS: During the quarter, MTaPS continued to build the capacity of individuals in the three focus areas by supporting training courses. The MSC training included AMR-related topics and leadership in addition to multisectoral issues.

Table 1. Number of staff trained in the three mandate areas in Q3 (April-June 2021)

Training topic area	Bangladesh	Burkina Faso	Cameroon	Côte d'Ivoire	DRC	Kenya	Mali	Mozambique	Senegal	Uganda	Total
AMR/MSC		15						16		25	56
IPC	22			60		77			22	1,172	1,353
AMS		32	186	87		18	80			1,607	2,010

Cross-fertilization between countries: Cross-fertilization between MTaPS GHSA countries continues to bring efficiency and lessons learned to implementation. The MTaPS Francophone countries hold a joint meeting each month for each country to share activity progress and lessons learned, and selected countries have facilitated work elsewhere by sharing their relevant materials/products with countries that have similar activities. A select list of cumulative examples includes the following:

- A cross-country team call was organized between the Cameroon and Mozambique offices, facilitated by head office staff. The Cameroon team shared their operational experience in how to conduct the IPCAF assessment in health facilities. They shared their approach to planning, implementation design, and tips to involve hospital staff. This conversation enabled the Mozambique team to ask questions of another experienced country team.
- MTaPS Bangladesh got guidance from the Uganda team on establishing a web-based multisectoral AMR information exchange platform.
- Kenyan colleagues shared with Ugandan staff their experiences and lessons regarding the implementation of continuing medical education (CME)-credited AMS and IPC CPD programs in collaboration with professional associations. Uganda is now implementing a similar program.
- DRC shared information on the AWaRe categorization experience with Côte d'Ivoire.

EFFECTIVE MULTISECTORAL COORDINATION ON ANTIMICROBIAL RESISTANCE

Strengthening MSC governance structures and functions: MTaPS drafted the report from the first MCC on AMR that details participants' agreement on the new national AMR governance structure in **Mozambique** that includes the MCC-AMR, secretariat, and AMS and IPC TWGs. MTaPS also helped draft terms of reference (TOR) for these groups, which are under review. After the MCC-AMR held its first workshop, there was dissent among members about leadership, with the animal health sector feeling left out. Through many engagement meetings with government representatives and stakeholders during the quarter, MTaPS facilitated a common understanding between the National Directorate of Pharmacy, Ministry of Health, and Ministry of Agriculture on their roles, responsibilities, and commitment. Subsequent meetings were held to strengthen the communication between the animal and human sectors, and each sector identified focal points for communication.

Much of MTaPS' work during the quarter in **Kenya** centered on establishing and institutionalizing CASICs in four counties; for example, MTaPS worked with the AMR secretariat to review the draft orientation package for CASICs. In Kisumu County, with the National AMR Secretariat and the county Department of Health and Sanitation, MTaPS held a meeting to sensitize senior county officials from the Department for Agriculture, Irrigation, Livestock, and Fisheries and the Department of Water, Environment, Natural Resources, and Climate Change on the importance and role of a CASIC in fighting

AMR; CASIC members from the three departments are being nominated for the committee. Additionally, MTaPS collaborated with the Murang'a County government, FAO, and Infectious Disease Detection and Surveillance to organize a three-day workshop to resensitize CASIC members on their mandate and to finalize its two-year work plan.

To strengthen the functionality of the AMR TWG and its subcommittees in **Nigeria**, MTaPS supported the Nigeria Center for Disease Control and the National AMR Secretariat to organize an AMS pillars meeting during the quarter. Participants agreed to expand the group's membership to include representatives from the national pharmacists' council and veterinary council. MTaPS also engaged with MOH officials from Enugu state as a first step to launching an AMR program there. MTaPS and Makerere University worked with the AMS Technical Working Committee in Uganda to draft the first biannual newsletter. The newsletter is expected to be a vehicle to widely share AMS information and the AMS-related work done in health facilities and at the national level in the country; it will also help build capacity for data and information management within the committee. The newsletter will be a joint publication between the MOH, AMS TWG, and MTaPS.

The Department of Pharmacy, Drugs and Laboratories in **Cameroon** now has a Moodle platform with IPC modules to complement face-to-face training of stakeholders. Once the AMS eLearning module is developed, it will also be uploaded. The good news in **DRC** was that the MTaPS-supported Tripartite AMR Country Self-Assessment Survey (TrACSS) for 2021, which is used to monitor country progress on implementing the AMR action plan, revealed significant improvement from TrACSS 2020. For example, multisectoral and One Health coordination went from b (limited) to d (demonstrated) capacities; training and professional education on AMR in farming, food, and the environment sectors from a (no capacity) to b (limited) capacity; and adoption of AWaRe classification of antibiotics in the National Essential Medicines List from b (limited) capacity to c (developed) capacity.

Holding multisectoral meetings or activities: In **Mali** and **Senegal**, MTaPS participated in the countries' One Health meeting. During the quarter, the AMR Containment Program's Core Working Group in **Bangladesh** held two meetings, the second one focusing on AMR data collection and management, including looking at the system through a One Health lens. MTaPS **Mali** provided technical and financial support to several multisectoral meetings and workshops, including the quarterly MSC group meeting and a workshop to share the results of a mapping of civil society organizations. The 13th One Health platform meeting focused on surveillance, and IPC subcommittee meetings to evaluate progress.

MTaPS coordinated three TWG committee meetings in **Côte d'Ivoire**—one for the AMS TWG (MTC 5) and two for the IPC TWG (MTC 4). Participants came from the environment, civil society, and private sectors and professional associations. The AMS group shared updates on evaluating DTCs and categorizing antibiotics, planned for DTC trainings, established a sub-group to prepare for AMS training for private pharmacists, and developed a 2021 Q3 roadmap for the MTC 5. The MTC 5 also appointed focal points from among its members to monitor each DTC's activities through regular telephone calls. The MTC 4 recommended that the IPC plan for animal health be presented to donors and the private sector to get funding for implementation; at the second meeting, MTaPS and the UNICEF WASH manager oriented the group on using four IPC assessment tools—WASH-FIT, IPCAF, IPC assessment tool (IPCAT2), and the hand hygiene audit tools. The IPC TWG held a second meeting in June to present IPC activities in the animal sector. The AMS TWG meeting included senior representatives of the Ministry of Health and Ministry of Agriculture and Food Security.

MTaPS **Tanzania** supported the AMS TWG in meeting over two days to discuss the TWG's actions to implement the Policy Guidelines for Implementing Antimicrobial Stewardship, such as documenting and sharing the results as well as presenting at the MCC meeting in June. MTaPS **Kenya** and **Cameroon** supported AMS and IPC TWG meetings during the quarter to share updates. The TWGs in Cameroon also decided to expand stakeholder training to include AMR in general and not just IPC and AMS;

MTaPS will develop the training materials. The AMS and IPC TWGs in **Mozambique** met during the quarter to discuss TOR, and for the IPC TWG to present IPCAT2 and IPCAF results and discuss next steps. MTaPS conducted IPCAF assessments at three hospitals in person and four hospitals virtually (table 2, figure 2). The seven hospitals developed action plans based on the results.

Table 2. Baseline IPCAF scores from seven public hospitals in Mozambique

HOSPITAL NAME	TOTAL IPCAF SCORE
Hospitals receiving in-person and virtual technical support	
Xai-Xai	660.0
Inhambane	752.5
Tete	660.0
Hospitals receiving only virtual technical support	
Pemba	538.5
Lichinga	597.5
Chimoio	605.0
Matola	667.5

Drafting or updating multisectoral policies, plans, or guidelines: MTaPS supported a meeting in **Bangladesh** to lay out the steps to update the national AMR strategic plan and the National Action Plan on AMR (NAP-AMR); the next step is to conduct a situational analysis. Participants included officials from human and animal health as well as representatives from professional associations and development partners. MTaPS **Senegal** participated in the fourth One Health platform meeting and provided technical inputs to update the One Health MSC action plan. In June, MTaPS also participated in a WHO-led initiative to support the government's monitoring of the implementation of the National Health Security Action Plan (PANSS 2017-2021). PANSS was developed following the JEE conducted in 2016. In addition to inputting its AMR-, Ebola-, and COVID-19-related activities into the WHO data collection tool (REMAP), MTaPS contributed to the AMR section of the PANSS monitoring and evaluation framework.

MTaPS held a meeting with AMR stakeholders in **Mozambique** to plan the development of national AMS policies with the National Directorate of Pharmacy, National Institute of Health, and Ministry of Agriculture. MTaPS organized a workshop in collaboration with the **Burkina Faso** MOH, WHO, FAO, and Jhpiego to assess the expired NAP-AMR (e.g., results, strengths, weaknesses, lessons learned) as a first step toward revising it and developing a complementary action plan. In **DRC**, MTaPS, FAO, and WHO agreed to work together to support the national AMR committee to develop an operational plan for the NAP-AMR. MTaPS and FAO drafted the TOR to develop the plan.

INFECTION PREVENTION AND CONTROL IMPROVED AND FUNCTIONAL

Strengthening IPC governance structures: During the quarter, MTaPS **Bangladesh** collaborated with the Directorate General of Health Services to select two new facilities representing secondary and primary levels of care—Nilphamari District Hospital and Taraganj Upazilla Health Complex in the

Rangpur district. With the addition of these two facilities, MTaPS is now supporting four facilities. At the two new hospitals, MTaPS helped establish IPC committees with TOR in accordance with national IPC guidelines.

Assessing and reassessing IPC programs at the national and facility levels and developing action plans: MTaPS supported the IPC TWG in **Mali** to conduct a national-level reassessment with the WHO IPCAT2 in May 2021. The results showed that Mali had scores greater than or equal to 50% on four of the six IPC components assessed in 2021, compared to just one component in 2020 (figure 2). However, Mali's scores on health care-associated infection (HCAI) surveillance and IPC practice monitoring continued to remain low. The TWG agreed to develop an action plan based on the 2021 results and advocate with decision makers to prioritize the establishment of a national IPC program.

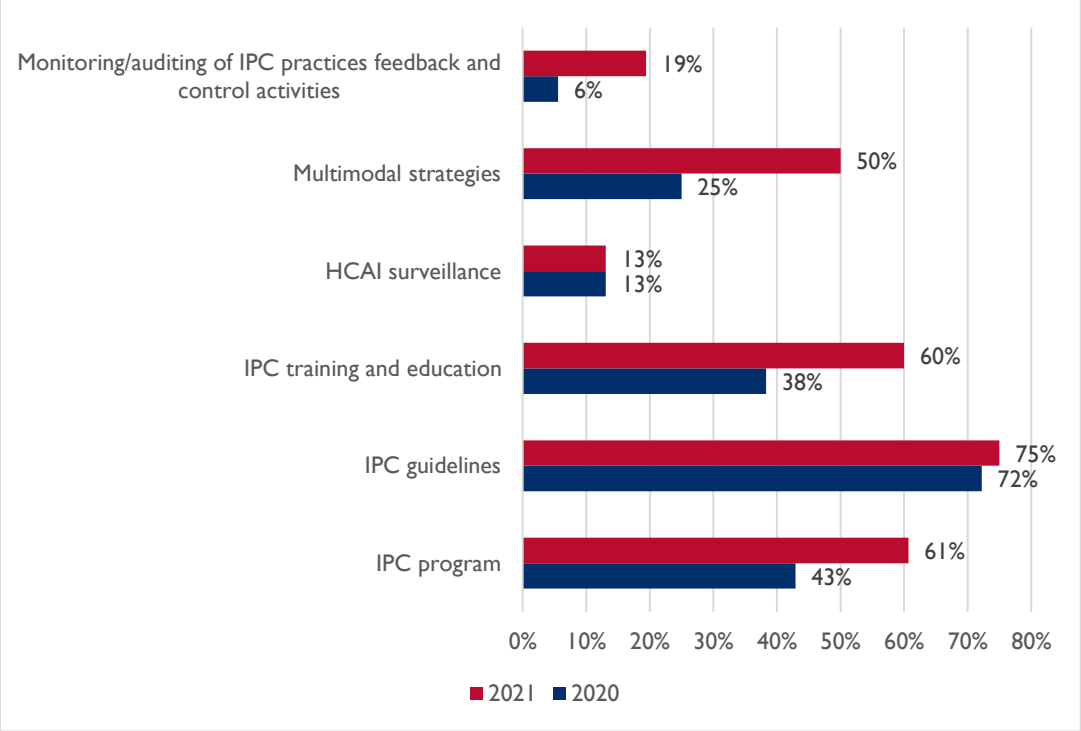


Figure 2. Comparison of 2020 and 2021 IPCAT2 scores in Mali

MTaPS supported the Directorate of Quality, Safety, and Hygiene for Hospitals (DQSHH) in **Senegal** to conduct an IPC assessment at Aristide LeDantec, a level 3 hospital, using the WHO IPCAF tool. With a score of 320.5/800, the hospital has basic IPC capacity, and it developed its action plan to address gaps. MTaPS **Mozambique** also worked with the MOH/IPC team to carry out an IPCAT2 assessment and draft an action plan in response, and the assessment report is under review; in addition, an on-site IPCAF assessment was done in person at the third of three hospitals that MTaPS supports, and virtual assessments were carried out for four provincial hospitals that MTaPS will be supporting remotely. These five hospitals, along with two assessed in the previous quarter, developed action plans.

In **Kenya**, MTaPS met with Kilifi County health officials and the county health management team to share the IPC baseline findings and discuss the establishment of a county infection prevention and control interagency committee. Health management team members acknowledged some of the gaps in the assessment, and county executives said that they would use the findings to prioritize interventions to fill the gaps. With the involvement of newly established IPC committee members, MTaPS **Bangladesh** and consultants collected information on the facilities' IPC and AMS status using a customized IPCAF tool and AMS checklist. Data analysis is complete and being reviewed by the team.

Developing and implementing IPC policy and guidance documents: MTaPS **Senegal** also supported the DQSHH in organizing a two-day workshop to review and update the 2017 version of the national IPC supervision checklist by including WHO's multimodal strategy and the components of WASH in health care settings. MTaPS contracted with the University of Dar es Salaam to provide technical support to the MOHCDGEC on incorporating IPC indicators into its DHIS 2 platform. Once incorporated, all facilities in **Tanzania** will be able to report on IPC indicators to the national level. In **Kenya**, MTaPS held a joint meeting with the MOH Patient and Healthcare Worker Safety Division to review the status of and plan for IPC-related GHSA activities. In **Nigeria**, MTaPS worked with the IPC TWG secretariat to support a workshop for 18 people who reviewed and validated 7 national IPC SOPs for use by all health care facilities. Stakeholders from the US, African, and Nigerian centers for disease control; WHO; the health ministry; professional bodies; and others also created a zero draft of the national IPC policy that will be widely circulated for review. The draft revises the 2013 version of the policy and emphasizes IPC training requirements and guidance for all IPC core components.

Developing individual and local training capacities: The IPC teams at Munshiganj District Hospital and Cumilla Medical College Hospital in Bangladesh are monitoring IPC practices in their departments and reporting weekly on those results to focal personnel who will develop guidance on improving hospital IPC practices with the IPC committee. At Cumilla Medical College Hospital, IPC committee members decided that practices for environmental cleaning and sterilization (autoclave) were not yet up to standard, so MTaPS facilitated a training for IPC teams on monitoring environmental cleaning practices and reporting on their departments' daily cleaning and IPC practices. The focal person and IPC team at Munshiganj District Hospital trained support staff, such as cleaners, on IPC, taking over the training responsibilities from MTaPS. IPC teams at the hospitals are monitoring how well cleaners are complying with standard precautions and providing guidance on cleaning and disinfecting agents, frequency of cleaning, and separating waste.

MTaPS **Mali** supported the Health Directorate in organizing a virtual meeting to monitor IPC activities in the 16 health facilities that MTaPS supports. During the meeting, participants provided action plan updates, assessed the functionality of the committees, and evaluated the facilities' prevention of COVID-19 by using the scorecard. According to the information shared by the facility teams, most of the health and safety technical committees had begun implementing their IPC action plans. MTaPS met with the DGSHP team on June 4, 2021, to revise the IPC activity implementation schedule, which had been delayed because of health care worker strikes. MTaPS also organized four working sessions with the Directorate of Health and Public Hygiene to prepare for the training on using the eLearning platform for IPC and is developing the storyboard for the AMS eLearning modules that will be integrated into the platform.

Handwashing demonstration for staff from four health facilities in Bamako et Ségou.
(Photo credit: Famory Samassa)

MTaPS supported the MTC 4 in **Côte d'Ivoire** to conduct three-day on-site IPC trainings for 60 health care workers (doctors, nurses, pharmacists, screening staff, etc.) from 4 regional referral hospitals. The trainings were led by two teams of IPC regional trainers and one master trainer from MTC 4. MTaPS, in collaboration with the **Senegal** DQSHH, conducted supportive supervision visits to three hospitals to use the new IPC checklist to measure progress in IPC practices. Overall, DQSHH and MTaPS observed many improvements for most IPC core components, such as hand hygiene, biomedical waste management, and bio cleaning. Level 2 and 3 hospitals are now using their own tool to regularly conduct HCAI surveillance, while the level 1 hospital is reporting on multidrug-resistant bacteria. In June, MTaPS helped organize a three-day training on IPC for the IPC committee members at three hospitals. The training included the use of the WHO multimodal strategy and CQI. The three committees were also trained on using IPC SOPs and guidelines developed by the piloted hospitals and the DQSHH with MTaPS' support. They adapted the IPC SOPs and guidelines for their local context by using the standardized guidance matrix that the DQSHH developed with MTaPS' support.

MTaPS **Mozambique** continued to help build IPC capacity in seven hospitals (three directly and four remotely) who are all using CQI with IPC performance measures quarterly. In addition, the hospitals receive monitoring visits from the central level in coordination with IPC implementing partners. Three hospitals conducted an internal review of their compliance with their action plans. The hospital IPC committee members from seven hospitals formed a WhatsApp group that MTaPS, National Directorate of Medical Assistance (DNAM), and the MOH are facilitating, so they can interact with other hospitals that are working to improve IPC performance. In **Tanzania**, MTaPS continued its eLearning collaboration with the Centre for Distant Education by training five trainers from the center on how to operate the platform in advance of its June launch. In addition, MTaPS conducted mentorship visits to 10 supported health facilities targeting their quality improvement and IPC teams. Other health care workers were mentored as needed on hand hygiene; waste separation, transportation, and disposal; instruments and linen processing; use of personal protective equipment, etc. About 150 staff received mentoring. MTaPS held several meetings during the quarter with the National Nurses Association of **Kenya** (NNAK) to discuss the IPC CPD eLearning course that the two organizations have collaborated on. MTaPS also trained 23 regional trainers from the public and private sectors and 5 NNAK national officials, including the president, on the course in June, which contributed to pharmacy reregistration/licensing credits. The trained NNAK members will increase in-country training capacity across multiple sectors.

Building IPC capacity in the health facilities in four target counties continued with MTaPS' collaborating with county health officials on training, mentorship, and supportive supervision as follows:

- Conducted supportive supervision and mentorship in eight public, private, and faith-based health care facilities in Nyeri County and eight in Kisumu County on the implementation of their IPC action plans and interventions to improve IPC practices; some had brought other partners on board to support implementation of action plans while some have yet to implement their plans.
- Conducted IPC CQI training for 25 health care workers from 2 hospitals in Murang'a County where findings were also disseminated on the IPC baseline assessments previously held; the hospitals also presented on the status of their action plans.
- Conducted IPC CQI training for 29 health care workers from 2 hospitals in Kilifi County; MTaPS helped develop tools for the hospitals to monitor their CQI implementation.
- Provided technical assistance to trainers (trained by MTaPS) at Nyeri County Referral Hospital to sensitize 45 health care workers on surgical site infections
- Provided CME sessions to sensitize hospital staff and patients on hand hygiene conducted by the Nyeri County Referral Hospital

MTaPS continued its work with the **Uganda** MOH and the Uganda Protestant Medical Bureau and Uganda Catholic Medical Bureau to implement CQI with a focus on hand hygiene. MTaPS conducted 16 mentorship visits and directly reached out to 503 health workers in 14 hospitals. During the visits, MTaPS complemented previous IPCAF assessments with several additional hand hygiene tools, such as hand hygiene observation, a handrub/soap consumption survey, and a ward infrastructure survey, which showed that 93% of facilities did not have adequate infrastructure to support IPC practices. Table 3 shows the IPCAF and health hygiene self-assessment framework (HHSAF) scores in 13 hospitals. In addition, a mentorship checklist developed by MTaPS Uganda with the health facilities was used to assess the IPC committees' progress on implementation of the eight WHO core components for IPC. Using the WHO Hand Hygiene Knowledge Questionnaire for Health-Care Workers tool, MTaPS surveyed 140 health care workers from the 14 hospitals (fig 3). The average score across all was 42.2%. A survey of alcohol-based handrub use was carried out in 13 hospitals. The average was 39.4 mL/patient day, whereas the recommended use is 20.0 mL/patient day, which may indicate misuse that requires additional training. These activities aim to help the facilities become centers of excellence in IPC.

Table 3. IPCAF and HHSAF scores and capacity levels in 13 hospitals

HOSPITAL	IPCAF SCORE	LEVEL	HHSAF SCORE	LEVEL
Gulu RR Hospital	602.5	Advanced	265	Intermediate
Hoima RR Hospital	602.5	Advanced	280	Intermediate
Masaka RR Hospital	540	Intermediate	235	Basic
Kagando Hospital	497.5	Intermediate	162.5	Basic
Kiwoko Hospital	342.5	Basic	252.5	Intermediate
Kumi Hospital	395	Basic	312.5	Intermediate
St. Mary's Hospital	590	Intermediate	217.7	Basic
Lira RR Hospital	229.5	Basic	165	Basic
St. Francis' Hospital	552.5	Intermediate	217.5	Basic
Ruharo Mission Hospital	346	Basic	220	Basic
Soroti RR Hospital	547	Intermediate	252.5	Intermediate
St. Anthony Hospital	532.5	Intermediate	192.5	Basic
Moroto RR Hospital	412.5	Intermediate	275	Intermediate

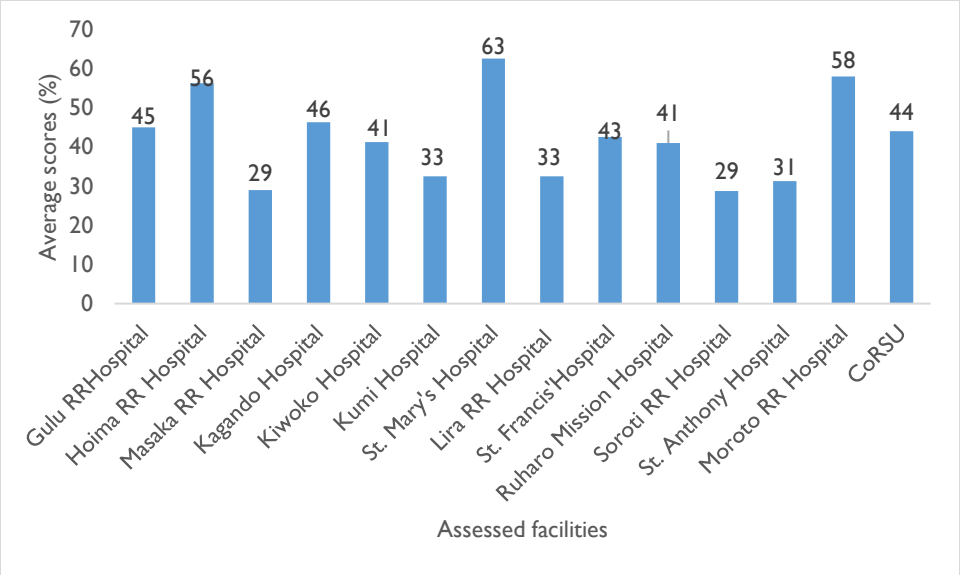


Figure 3. Average % or health hygiene knowledge scores from 140 staff in 14 facilities (RR hospital = regional referral hospital)

In **DRC**, MTaPS supported IPCAF, HCAI, and hand hygiene assessments in four of seven supported health facilities to establish baseline data for those areas and developed improvement plans. DRC selected a set of elements within the eight IPCAF core components to regularly assess at the facility level (table 3). For HCAI measurements, the hospitalization services targeted were surgery, gynecology/obstetrics, internal medicine, pediatrics, and resuscitation. Findings included an average HCAI prevalence of 7.2% in the facilities with a range from 1.5% to 14.4%. Surgical site and catheter infections were the primary problems.

Table 4. Findings from IPC assessment in four MTaPS-supported health facilities in l'ITURI and NORD KIVU provinces

IPC CORE COMPONENT	HGR BUNIA (%)	CME BUNIA (%)	HOPITAL HEAL AFRICA (%)	CH KYECHERO (%)
Existence of triage station	60	20	100	100
IPC organization	100	22	100	66
IPC standard precaution: Hand hygiene PPE Medical materials decontamination and sterilization Decontamination of hospital linens	 33 100 100 0	 22 0 100 100	 66 33 100 66	 33 33 100 100
Hospital environment	33	66	100	66
Hospital waste management	33	66	66	66
WASH infrastructure	50	100	100	100

IPC CORE COMPONENT	HGR BUNIA (%)	CME BUNIA (%)	HOPITAL HEAL AFRICA (%)	CH KYECHERO (%)
Active search	50	87	100	75
Communication	50	50	100	100
Average	54	58	93	72

MTaPS also promoted CQI in **Cameroon** as the approach to improve IPC practices in 12 facilities. MTaPS and the Directorate of Health Promotion (DPS) visited the facilities during the quarter to conduct follow-up IPCAF assessments (table 5). The facilities made good progress since the baseline assessment, and 67% had completed at least 50% of the activities in their IPC action plans. However, although 42% of facilities made great strides in WASH and waste management, others expressed difficulties in securing funding for this area; for example, four hospitals drilled boreholes, three dug pits to manage waste, and one got an incinerator. Likewise, some facilities said that there was a lack of dedicated budget for IPC activities and lack of a monitoring plan with indicators. MTaPS advocated for the health facility leadership to dedicate funds for IPC activities and helped the facilities determine indicators to monitor IPC.

Table 5. IPCAF re-assessments in MTaPS-supported hospitals in Cameroon.

HEALTH FACILITY	BASELINE SCORE/800	BASELINE STATUS	REPEAT SCORE (JUNE 2021)/800	REPEAT STATUS
Yaoundé Jamot Hospital	140 (Sept 2019)	Inadequate	427	Intermediate
Obala District Hospital	273 (Mar 2019)	Basic	456	Intermediate
Ebolowa Regional Hospital	405 (Sept 2019)	Intermediate	437	Intermediate
Sangmelima Reference Hospital	360 (Mar 2021)	Basic	512	Intermediate
Bafoussam Regional Hospital	343 (Sept 2021)	Basic	506	Intermediate
Mbouda District Hospital	408 (Mar 2021)	Intermediate	522	Intermediate
Foumbot District Hospital	175 (Sept 2019)	Inadequate	528	Intermediate
Bangangte District Hospital	303 (Mar 2021)	Basic	505	Intermediate
Edea Regional Hospital Annex	237 (Sept 2019)	Basic	519	Intermediate
Douala General Hospital	368 (Sept 2019)	Basic	515	Intermediate
Bonassama District Hospital	360 (Sept 2019)	Basic	705	Advanced
Nkongsamba Regional Hospital	238 (Mar 2021)	Basic	491	Intermediate

Below is summary information on three IPC indicators across the supported countries for the last three quarters covering the use of standardized tools, implementation of CQI, and functional committees.

Table 6. % of MTaPS-supported facilities that are using standardized tool(s) for monitoring IPC and informing programmatic improvement

COUNTRY	PY3Q1 TOTAL (%)	PY3Q2 TOTAL (%)	PY3Q3 TOTAL (%)
Bangladesh	0	100	100
Cameroon	100	100	100
Côte d'Ivoire	33	33	100
DRC	60	86	100
Kenya	80	100	100
Mali	75	100	100
Mozambique	0	43	100
Nigeria	0	0	0
Senegal	100	38	75
Tanzania	60	100	100
Uganda	100	100	100

Table 7. # and % of MTaPS-supported facilities implementing CQI to improve IPC

COUNTRY	PY3Q1 TOTAL (%)	PY3Q2 TOTAL (%)	PY3Q3 TOTAL (%)
Bangladesh	0	100	100
Cameroon	0	50	100
Côte d'Ivoire	33	100	100
DRC	60	43	43
Kenya	80	80	100
Mali	0	81	81
Mozambique	0	43	100
Nigeria	0	0	0
Senegal	100	38	75
Tanzania	60	100	100
Uganda	100	100	100

Table 8. % of MTaPS-supported facilities with functional IPC committees

COUNTRY	PY3Q1 TOTAL (%)	PY3Q2 TOTAL (%)	PY3Q3 TOTAL (%)
Bangladesh	50	100	100
Cameroon	100	100	100
Côte d'Ivoire	33	100	50
DRC	60	86	86
Kenya	80	80	92
Mali	75	88	88
Mozambique	0	43	100
Nigeria	0	0	0
Senegal	100	38	75
Tanzania	60	100	100
Uganda	100	100	100

USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Developing and implementing AMS policy, plan, and guidance documents, including AWaRe classification: STG development continued in **Bangladesh**, with MTaPS facilitating five CWG virtual meetings during the quarter. They are awaiting feedback from a review of the draft. The AMS-TWG in **Côte d'Ivoire** conducted two meetings to develop and finalize a protocol to collect data on rational use that will contribute to the antimicrobial categorization activity. MTaPS trained the collectors who collected data from 25 of 37 planned organizations. Two others were trained by two epidemiologists from the Pasteur Institute of Côte d'Ivoire and the PACCI program to conduct desk reviews, including searching databases. MTaPS Senegal partnered with the National Committee for Antibiotic Treatment to finalize the national antibiotic therapy policy and STGs with validation from the MOH service delivery commission. MTaPS arranged for the two documents to be printed and will support their dissemination.

MTaPS had meetings with National Directorate of Pharmacy, National Institute of Health, and Ministry of Agriculture in **Mozambique** regarding the development of national AMS policies. MTaPS **Burkina Faso** facilitated two workshops in April for 51 pharmacists and physicians from 9 regions on the revised essential medicines list and prescribing using AWaRe classification. MTaPS is helping **Kenya's** Nyeri County implement AWaRe categorization in 4 health care facilities and develop STGs for managing the top 10 infectious diseases; MTaPS also participated in a review of the draft scheduling guidelines that incorporate AWaRe. MTaPS and the MOH Division of Health Products and Technologies held a workshop to develop the first Kenya National Medicines Formulary, which will incorporate WHO AWaRe categorization. The formulary is currently being reviewed by medical specialists nominated by health professional associations. MTaPS also collaborated with the national AMS TWG and other experts to review and validate the national AMS training curriculum, which will be used to develop capacity in establishing AMS programs in health care facilities. The **Tanzanian** Minister of Health, Dorothy Gwajima (MP), officially launched the 2021 STG/NEMLIT with an AWaRe list of antibiotics on

June 25, where she emphasized the need to follow the STGs and AWaRe to increase rational use and accessibility and decrease health costs. She also appointed the AMR focal person to be the MOHCDGEC focal person for STG/NEMLIT compliance and acknowledged MTaPS' support to the revision.

Dorothy Gwajima (MP), the Minister of Health, Community Development, Gender, Elderly, and Children in Tanzania is joined by other officials to launch the 2021 STGs/NEMLIT. (Photo credit: MTaPS Tanzania)

Assessing AMS capacity at the national and local levels and developing action plans: MTaPS **Nigeria** helped the AMR TWG secretariat in conducting an AMS policy and supply chain assessment for human and animal sectors, which is ongoing, including securing the cooperation from the Federal Ministry of Agriculture and Rural Development (FMARD) and MOH. The results will inform the One Health AMS plan for the country. MTaPS **Uganda** collaborated with the MOH and Ministry of Agriculture, Animal Industry, and Fisheries to complete a rapid AMS assessment that is to be finalized. The desk review was complemented with stakeholder interviews. The assessment found that Uganda has many stand-alone laws and regulations that touch on drug use and consumption in both humans and animals; however, to support AMS, an overarching law or guideline is needed to link use and consumption across different sectors (animals, humans, aquaculture, environment, crop farming). Other key results included 1) existence of a regulatory structure to support the prudent use of antibiotics, 2) poor enforcement of antibiotic use laws, and 3) lack of guidance for prescribers and dispensers of antibiotics in the agricultural sector. Findings from the recent use surveys of 13 hospitals in Uganda found gross misuse of antibiotics, with 72-76% of hospitalized patients receiving at least 1 antibiotic (table 9). The average number of antibiotics prescribed per hospitalized patient was 2.1. The results will contribute to action plans.

Table 9. % encounter with antibiotic prescribed by 13 hospitals (FY 2020/2021)

OWNERSHIP	HOSPITAL	ANTIBIOTIC PRESCRIBED (N = 100)		TOTAL (%)
		Y (%)	N (%)	
Private not-for profit		**72 (avg)**	**28 (avg)**	
	A	51	49	
	B	48	52	
	C	86	14	
	D	59	41	
	E	84	16	
	F	76	24	
	G	94	6	100
Public sector		**76 (avg)**	**24 (avg)**	
	H	76	24	
	I	73	27	
	J	82	18	
	K	87	13	
	L	65	35	
	M	72	28	
Overall average %	**13**	**73**	**27**	100%

In **DRC**, MTaPS worked with the animal disease control department to prepare for field visits to animal facilities to assess IPC and AMS activities and identify areas for improvement. Preparation last quarter consisted of adapting supervisory/assessment tools for the animal sector using human sector tools and selecting facilities to be visited and experts to be involved. The same exercise will be conducted for the human and environmental sectors to produce a multisectoral tool.

Supporting medicine use and other assessments and surveillance: MTaPS is helping **Uganda's** National Drug Authority (NDA) to build its capacity to routinely monitor and report antimicrobial consumption and use, including an assessment of NDA's management information system abilities. In April, MTaPS collaborated with the DPM in **Mali** to train 67 DTC members from 4 hospitals in how to collect antimicrobial use data, such as patient surveys and prescription reviews. MTaPS is also helping the DPM establish DTCs in seven new facilities. Findings from the assessment included:

- Average of 4 drugs per prescription
- 59.3% of the 236 drugs were prescribed as generics
- Antimicrobials represented 20.3% of prescriptions

- 67.8% of drugs prescribed are on the national essential drugs list
- 60% of drugs prescribed were in the access category, 40% in the watch category, and none from the reserve category

Data collection training workshop for members of the Kayes therapeutic committee. (Photo credit: Ousmane Traore)

Developing individual and local training capacity: The **Burkina Faso** Directorate of Veterinary Public Health and Legislation and the Directorate of the National Livestock Laboratory, with technical and financial support from MTaPS, organized a three-day training of trainers workshop on the guidelines for rational use of antimicrobials in livestock for 15 veterinarians from the public and private sectors in June. MTaPS also helped the Directorate of Hospital Pharmacy train DTC members from one of five facilities on AMS; they also developed action plans.

MTaPS **Kenya** continued its support to four counties in their AMS action plans and interventions; for example, MTaPS oriented new CASICS in Kisumu and Murang'a Counties on AMS programs and worked with the county health departments in Nyeri and Kisumu Counties to make 16 visits to facilities to monitor their implementation of AMS CQI action plans. MTaPS also continued its technical and financial support to the Kenyatta National Hospital to review its antimicrobial consumption data. Data was collected on the use of 10 antibiotics from July 2017 to December 2019. Select findings included higher than desired ceftriaxone use, a need to ensure that cefazolin is used only for surgical prophylaxis, and the low use of ciprofloxacin and levofloxacin, which is good news. MTaPS met with the AMS curriculum development team from the School of Pharmacy, University of Nairobi, to plan for the official launch of the pre-service AMS curriculum. In addition, the Kenya Pharmaceutical Association and MTaPS held a virtual CPD session on AMS programs for 100+ participants; this CPD session gave continuing education credits which support pharmacy reregistration. MTaPS also supported the Pharmacy and Poisons Board (PPB) in publishing two regulatory guidance notices (images below) targeting health care workers and the public on the appropriate use of antimicrobial medicines. The PPB communiques appeared in the local *Daily Nation Newspaper* on April 7, 2021, as well as on the PPB Facebook page at: https://m.facebook.com/story.php?story_fbid=4172734412745145&id=110132515672042.

MINISTRY OF HEALTH
PHARMACY AND POISONS BOARD

REGULATORY GUIDANCE FOR HEALTHCARE PROFESSIONALS ON APPROPRIATE USE OF ANTIMICROBIAL MEDICINES

The Pharmacy and Poisons Board ("the Board") is the National Medicines Regulatory Authority established under the Pharmacy and Poisons Act, Chapter 244 of the Laws of Kenya. The Board regulates the Practice of Pharmacy and the trade of Medical Products and Health Technologies in Kenya.

The Board aims to implement appropriate regulatory measures to achieve the highest standards of safety, efficacy and quality for medical products and health technologies to ensure the protection of the consumer as envisaged by the laws regulating medicines in Kenya.

The Pharmacy and Poisons Board would like to notify all healthcare professionals that there is increasing resistance to antimicrobials in Kenya and globally. The World Health Organization (WHO) has declared AMR as one of the top ten (10) global public health threats facing humanity.

The Kenya National Policy and Action Plan documents on the Prevention and Containment of Antimicrobial Resistance (2017-2022) recognize that the misuse and overuse of antimicrobial medicines in humans, animals and food production poses a high risk of resistance to the health of the public considering that very few new antimicrobial medicines are being discovered over time.

In light of this, the Pharmacy and Poisons Board would like to guide as follows;

1. All antimicrobial medicines shall be prescribed by duly registered prescribers as outlined in the Medical Practitioners and Dentists Act, Chapter 253 and the Pharmacy and Poisons Act, Chapter 244 of the Laws of Kenya.
2. All antibiotic medicines shall be prescribed according to the Access, Watch, Reserve (AWaRe) classification outlined in the Kenya Essential Medicines List, 2019.
   - **Access** antibiotics have activity against a wide range of commonly encountered susceptible pathogens while showing low potential for development of resistance.
   - **Watch** antibiotics have higher resistance potential or higher toxicity concerns and should be prioritized as key targets of national, county and healthcare facility antimicrobial stewardship programs and monitoring.
   - **Reserve** antibiotics should be reserved for treatment of confirmed or suspected infections due to multi drug-resistant organisms and treated as 'last-resort' options. They should be protected and prioritized as key targets of national and international antimicrobial stewardship programs, involving monitoring and utilization reporting, with the aim of preserving their effectiveness.
3. All antimicrobial medicines shall be dispensed from duly registered pharmacies / chemists and healthcare facilities.
4. Healthcare professionals are advised to educate patients and the public on the risk of antimicrobial resistance and appropriate use of antimicrobial medicines.

CHIEF EXECUTIVE OFFICER
PHARMACY AND POISONS BOARD

USAID
USAID MEDICINES, TECHNOLOGIES, AND PHARMACEUTICAL SERVICES (MTaPS) PROGRAM
Improved Access. Improved Services. Better Health Outcomes.

MINISTRY OF HEALTH
PHARMACY AND POISONS BOARD

REGULATORY GUIDANCE FOR THE GENERAL PUBLIC ON USE OF ANTIMICROBIAL MEDICINES

The Pharmacy and Poisons Board ("the Board") is the National Medicines Regulatory Authority established under the Pharmacy and Poisons Act, Chapter 244 of the Laws of Kenya. The Board regulates the Practice of Pharmacy and the trade of Medical Products and Health Technologies in Kenya.

The Pharmacy and Poisons Board would like to caution the general public over the increasing resistance to antimicrobial medicines (antibiotics, antivirals, antifungals and antiparasitics) both in Kenya and globally. These medicines are used to prevent and treat infections in humans, animals and plants.

Antimicrobial Resistance (AMR) occurs when bacteria, viruses, fungi and parasites no longer respond to these medicines. The World Health Organization (WHO) has declared AMR as one of the top ten (10) global public health threats facing humanity.

The Kenya National Policy and Action Plan documents on the Prevention and Containment of Antimicrobial Resistance (2017-2022) recognize that the misuse and overuse of antimicrobial medicines in humans, animals and food production poses a high risk of resistance to the health of the public considering that very few new antimicrobial medicines are being discovered over time. Antimicrobial resistance leads to inadequate treatment of infections, longer hospital stays, higher medical costs and increased deaths.

In light of this, the Board would like to advise the public as follows;

1. The public is discouraged from self-medication with antimicrobial medicines.
2. The public should **ONLY** access antimicrobial medicines using valid prescriptions from registered pharmacies/chemists, clinics and hospitals.
3. Antibiotics are a class of antimicrobial medicines that are only effective against bacterial infections. Antibiotics are **NOT** the solution for infections caused by viruses such as common colds or flu. The correct diagnosis and the decision about whether antibiotics are necessary can only be made by a qualified healthcare professional.
4. The public should ensure that they complete the full dose of prescribed antimicrobial medicines.
5. Unused antimicrobial medicines should **NOT** be disposed of in toilets or waste bins but returned to the pharmacy/chemist where it was obtained from or taken to the nearest clinic/hospital.
6. Antimicrobial medicines should **NOT** be stored at home for purposes of future use.
7. The public should **NOT** share antimicrobial medicines with friends or relatives.
8. For more information on antimicrobial resistance, you can contact the Pharmacy and Poisons Board at pv@pharmacyboardkenya.org or call +254 795 743 049.

CHIEF EXECUTIVE OFFICER
PHARMACY AND POISONS BOARD

USAID
USAID MEDICINES, TECHNOLOGIES, AND PHARMACEUTICAL SERVICES (MTaPS) PROGRAM
Improved Access. Improved Services. Better Health Outcomes.

MTaPS partnered with the Pharmaceutical Society of **Uganda** and academic institutions to provide AMS training during the quarter for CPD for 89 pharmacists, which contributed 25% of the CPD points required for annual registration. They also conducted CME courses to raise awareness as a step toward the creation of a community of practice for AMS, specifically among community pharmacists where irrational use of antibiotics remains high. MTaPS also helped three medical schools launch student interest groups in AMR, including identifying 10 academic mentors and creating interest group charters. As a result, 478 students from the nursing, midwifery, medical, and laboratory fields (59% males, 41% females) were reached, who will contribute to a critical human resource pool that will support the national response to AMR. The charters will be followed up with a national-wide student AMR interest group that brings together all medical student charters from the various universities. WhatsApp groups have been set up involving student leaders and faculty patrons from individual universities, and then a national WhatsApp group was formed to continue engagement for the broader national group. MTaPS also supported health facilities in conducting CMEs on how to cascade skills and disseminate the results of the AMS survey that reached 245 health workers in 5 health facilities. Furthermore, prescribers' trainings in 6 health facilities reached 165 prescribers and stakeholders in antibiotic prescription that covered how to conduct a root cause analysis, determine interventions, and develop a prescription improvement plan, focusing on urinary tract infection, upper respiratory tract infection, and surgical prophylaxis for caesarean section. In addition, MTaPS worked with USAID partner RHITES-SW in two districts to leverage their support to lower-level facilities on how to form MTCs and AMS teams to address antimicrobial use practices. Discussions are ongoing to roll out this implementing partner collaborative model to other districts.

In **Cameroon**, MTaPS helped the Directorate for Pharmacy, Medicines and Laboratories (DPML) train 12 DTC champions and 170 DTC members in 11 hospitals on various topics related to AWaRe classification, DTC function, and others. MTaPS also helped the hospitals develop AMS action plans and indicators for monitoring progress. A WhatsApp forum for these DTCs was created to encourage interaction among the different DTCs. MTaPS **DRC** worked with stakeholders to define a set of CQI indicators, develop training materials, and adapt data collection and reporting tools in anticipation of upcoming CQI refresher training for DTC members in seven MTaPS-supported facilities.

Below is summary information on the indicator to track AMS action plan implementation across the supported countries for the last three quarters.

Table 10. % of MTaPS supported facilities' MTC/AMS committees or other relevant groups that implemented AMS improvement plans and/or monitoring framework

COUNTRY	PY3Q1 TOTAL (%)	PY3Q2 TOTAL (%)	PY3Q3 TOTAL (%)
Bangladesh	0	0	0
Burkina Faso	0	6	17
Cameroon	0	0	92
Côte d'Ivoire	17	17	75
DRC	60	43	57
Kenya	75	75	83
Mali	0	40	56
Mozambique	0	0	0
Nigeria	0	0	0
Senegal	0	0	0
Tanzania	0	20	20
Uganda	100	100	100

MATERNAL, NEWBORN, AND CHILD HEALTH

The MTaPS maternal, newborn, and child health (MNCH) portfolio contributes to achieving Sustainable Development Goal 3: Ensure healthy lives and promote well-being for all at all ages and prevent child and maternal deaths by increasing global awareness of the barriers to access to essential maternal and child health (MCH) 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-assured medical products and effective pharmaceutical services to reduce maternal, newborn, and child mortality by strengthening pharmaceutical systems.

During this quarter, MTaPS focused on starting implementation of recently approved activities in the year 2 workplan and in the year 3 work plan, which was approved at the beginning of this quarter.

OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

Year 2/activity 1.3.1: Strengthen civil society engagement to increase access to and use of safe, quality MNCH medicines and technologies and effective pharmaceutical services

Although the engagement of civil society is recognized as key for ensuring access to high-quality services and is included in community health platforms in many countries,[2] the involvement of civil society in supporting increased access[3] to and appropriate use of medical products, and specifically for MNCH, is not a commonly prioritized component.

This quarter, MTaPS completed the first draft of the discussion paper on civil society engagement interventions with, or that hold promise for including, a component on improving availability, affordability, and appropriate use of quality medical products, particularly for MNCH products. The discussion paper focuses on the implications of what has been learned from research and initiatives for policy and practice. The draft document has been shared with the USAID MNCH team for their review, in addition to other USAID teams from the Africa Bureau and the Democracy, Human Rights, and Governance Group to foster complementarity and to leverage from the investments in their portfolios.

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 the quality of MNCH medical products by strengthening product registration systems and improving procurement practices at sub-national levels.

Year 2/activity 2.1.1: Support the streamlining of registration of MNCH medical products in at least one country

As a follow-on to the year 1 registration mapping activity, MTaPS is supporting the regulatory authority in Mozambique (DNF) to streamline registration by using the findings and considerations from the mapping. During this quarter, activities have been confirmed with DNF, and a consultant is being recruited to conduct a training on bioequivalence for assessors at DNF.

MTaPS also aims to optimize registration of MNCH medical products by incorporating them into regional harmonization efforts. A concept note and timeline have been shared with the

2 https://www.communityhealthroadmap.org/
3 This activity is designed to influence the different dimensions of access (i.e., availability, accessibility, acceptability, and affordability).

SADC/ZAZIBONA Secretariat, and discussions have started and will continue at the next steering committee meeting scheduled for July.

Year 3/activity 2.1.1: Improve regulation of MNCH medical devices at regional level

The regulatory system is an important component of the pharmaceutical system to ensure the quality, safety, and efficacy of medical products, including medical devices. Medical devices for use in MNCH are considered essential commodities and are mostly procured by national governments for public-sector use, which highlights the important role of national regulators in ensuring their quality, safety, and efficacy. It is estimated that more than 30% of World Health Organization (WHO) member states do not have regulations to control medical devices, and WHO found that of low-income countries with data available, only 45% have a legal framework for medical devices in place.[4] The MTaPS mapping of registration showed that only three of nine countries studied were implementing regulation of medical devices and only six of the nine had a legal framework for regulating medical devices. Even if legal frameworks exist, guidelines for the regulation of specific MNCH medical devices are not available.

MTaPS aims to strengthen regulation in Africa of MNCH medical devices (e.g., oxygen concentrators, pulse oximeters, blood pressure meters), most of which are classified as moderate risk per the FDA classification.

During this quarter, MTaPS held discussions with African Union Development Agency-NEPAD and the African Medical Device Forum (AMDF) to define the scope and implementation plan for this activity. A draft scope of work and timeline have been shared and will be further revised as a result of the discussions. AMDF has already developed guidelines for regulating medical devices, which are in the final approval process, but sees value in a document highlighting considerations for regulating MNCH medical devices that goes beyond market authorization through the life cycle of the device. The AMDF also welcomes the support MTaPS proposes to build capacity of regulators for a joint assessment of medical device technical files at the regional level. This is expected to be a workshop of a hands-on training to conduct a joint assessment of a selected MNCH medical device as well as an orientation to the AMDF guidelines for market authorization of and considerations for regulating MNCH medical devices.

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

Year 2/activity 3.1.1: Support implementation of promising procurement practices to improve access to safe, effective, affordable, quality-assured medical products for women and children

To contribute to MTaPS' sub-objective—pharmaceutical system strengthening and global learning agenda advanced—MTaPS is working in Nepal to improve sub-national procurement. A mapping of practices at decentralized procurement units in a specific geographic area of the country is being conducted. As a result of the mapping, MTaPS will facilitate the Department of Health Services and their various stakeholders to generate recommendations for improving current local procurement practices and to develop new guidelines. This activity will use lessons learned from the technical brief developed under the year 1 activity to orient development of action plans and guidelines for improved sub-national procurement.

[4] Global Atlas of Medical Devices, WHO 2017. Available at: https://www.who.int/medical_devices/publications/global_atlas_meddev2017/en/

Year 2/activity 3.3.1: Map the institutionalization of pediatric amoxicillin formulations in countries

MTaPS is supporting USAID and UNICEF to plan for a series of consultative meetings to review the current situation of access and appropriate use of amoxicillin, to determine action steps, and to define the roles for ministries of health and partners. A concept note for the meeting was developed through several discussions between USAID, UNICEF, and MTaPS.

A meeting of the advisory group (UNICEF, USAID, R4D, PATH, CHAI, Gates, and MTaPS) was held on April 30. The group discussed multidimensions of access and heard about work on access to amoxicillin from PATH, R4D, CHAI, and MTaPS. A set of prioritized bottlenecks to access and appropriate use of amoxicillin and other newborn and child health medicines emerged and will be used to focus the planning of the consultative meeting. The concept note is under further review and discussions are ongoing with UNICEF and USAID on the next steps and roles of each partner.

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

Year 3/activity 1: Validation of RMNCH forecasting supplement

Quantification practices have a direct effect on product availability. In 2016, under the United Nations Commission on Life-Saving Commodities for Women and Children, a group of experts developed forecasting guidance for lifesaving essential reproductive, maternal, newborn, and child health (RMNCH) commodities. With year 1 funding, MTaPS updated the guidance, with support from various partners, including Global Health Supply Chain Procurement Supply Management (GHSC/PSM), to align with recent changes in WHO recommendations.

MTaPS had shared the updated RMNCH forecasting supplement with six country teams of the USAID GHSC/PSM Project to validate the updated supplement. By the end of this quarter, five of the PSM country teams (Ethiopia, Ghana, Nepal, Nigeria, and Pakistan) had used the forecasting supplement and provided feedback to MTaPS in the online feedback form. MTaPS has provided continued follow-up to the MNCH team from PSM (task order 4) and the PSM country teams, including advice and clarification on standard treatment recommendations from WHO, for example, on treating hypertension in pregnancy and possible serious bacterial infection. During this quarter, MTaPS also had one-on-one discussions with each of the country teams to explore their feedback further. MTaPS is consolidating the country feedback and plans to finalize the forecasting supplement next quarter to be published in English and French for global use.

Year 2/activity 5.2.1: Improve systems for managing and administering oxygen and other medical devices of the respiratory ecosystem

Oxygen is an essential medical product in the management of COVID-19 cases but also for children and newborns with hypoxia due to pneumonia and other conditions. After MTaPS completed a mapping of partner support in the respiratory ecosystem, it was seen that there was little support for countries to strengthen systems to ensure appropriate oxygen administration and particularly regulatory systems. MTaPS, with USAID, had designed an activity to ensure the quality of locally manufactured oxygen in one or two countries, but after further discussion with USAID, it was agreed that the focus of this activity should be on the quality of oxygen delivery systems rather than the production of oxygen itself. There is an urgent need to address piping standards to make adequate piping more accessible to countries as well as to address the issues of multiple standards of adapters, for example. During this quarter, MTaPS held discussions with several partners working in the field of oxygen to confirm the value and complementarity of such an area of focus and potential opportunities to leverage from their ongoing work. It was agreed that a discussion with WHO would be valuable to define the approach, which will be held next quarter and will orient the scope of the activity.

ACTIVITIES FOR NEXT QUARTER

	ACTIVITY AND DESCRIPTION	DATE (2021)
Year 2/activity 1.3.1 Strengthen civil society engagement to increase access to and appropriate use of safe, effective, quality-assured MNCH medicines, technologies, supplies, and pharmaceutical services	MTaPS will revise the discussion paper according to USAID feedback expected in mid-July. It is expected that another round of review will be required to finalize the paper by the end of the quarter.	September
Year 2/2.1.1: Support streamlining registration of MNCH products in at least one country	A consultant will be recruited to conduct bioequivalence training. Discussions will continue to confirm and plan for a joint regional assessment of select MNCH medical products.	September
Year 3/activity 2.1.1: Improve regulation of MNCH medical devices at the regional level	Once a revised scope of work and implementation plan are developed, a consultant will be recruited to draft considerations for regulating MNCH medical devices and plan for the capacity-building workshop.	September
Year 2/activity 3.1.1: Support implementation of promising procurement practices to improve access to safe, effective, affordable, quality-assured medical products for women and children	The mapping of procurement practices will be completed and presented in a workshop to develop a consensus of next steps to improve local procurement practices in Nepal.	September
Year 2/activity 3.3.1: Map the institutionalization of pediatric amoxicillin formulations in countries	Planning for the consultative meeting on improving access and appropriate use of amoxicillin will continue, and the documentation of the evidence and at least one of the series of consultative meetings will be held.	September
Year 3/activity 5.1.1: Validation of RMNCH forecasting supplement	Feedback from the countries will be incorporated into the final version of the supplement.	August
Year 2/activity 5.2.1 Improve systems for managing and administering oxygen and other medical devices of the respiratory ecosystem	A scope of work to ensure quality of oxygen delivery will be finalized, and a consultant biomedical engineer will be recruited.	August

OFFICE OF HEALTH SYSTEMS, CROSS BUREAU FUNDING

ACTIVITY 1: MEASURING PHARMACEUTICAL SYSTEMS STRENGTHENING, INCLUDING ACCESS TO MEDICINES

In May 2021, MTaPS had a call with WHO staff from WHO Geneva's Department of Health Products Policy and Standards, who will likely become the point of contact within WHO for this activity, to discuss MTaPS' upcoming piloting of the PSS Insight v2.0 tool. The pilots in at least three countries will inform the finalization of the v2.0 tool and will also allow MTaPS to keep moving forward with pharmaceutical systems strengthening (PSS) measurement work with WHO, as the pilot results can ultimately inform the development of WHO's measurement tool. A WHO staff member suggested that one area where PSS Insight v2.0 could be particularly useful for countries is to inform the development or updating of the national pharmaceutical policy and strategic planning process. Potential areas of engagement for WHO in the pilot include in the selection of countries, specifically identifying countries that are just beginning the process of updating their national pharmaceutical policy that would benefit from the results generated by PSS Insight v2.0. Additionally, the engagement of WHO regional advisors in the country pilots can help to encourage countries to use the assessment findings to inform their policy and strategic planning processes and, ultimately, to adopt the tool. MTaPS has since shared the criteria for country selection with WHO, and WHO has provided information on the countries that have implemented the WHO MedMon tool, as indicators and information generated from this tool on access to and affordability of pharmaceutical products have been incorporated into PSS Insight v2.0.

ACTIVITY 2: PHARMACEUTICAL SYSTEM STRENGTHENING COURSE (PSS 101)

MTaPS continued developing the eLearning PSS 101 course this quarter. The team reviewed the alpha version of the Quality of Medical Products module and initiated development of the beta version. The team also finalized the Information Systems module and started developing the alpha version. As next steps, the team anticipates completing development of both modules by the end of July and uploading them to the Global Health eLearning Center and USAID University platforms in early August. The plan is for USAID staff to take the course asynchronously with the option to attend a live session before receiving a training certificate. MTaPS is working with the USAID/COR team to plan this hybrid training session for the fourth quarter.

ACTIVITY 3: ROADMAP FOR HEALTH TECHNOLOGY ASSESSMENT (HTA) INSTITUTIONALIZATION

The focus for quarter 3 was to continue planning the regional dissemination and application of the HTA roadmap in selected countries through regional workshops targeted for August 31 and September 15, 2021. The first workshop will target Anglophone countries, which currently include Ghana, Ethiopia, Tanzania, and Uganda. The second workshop will target Francophone countries, which currently include Cameroon and Senegal. The concept note with the detailed agenda and curriculum of the workshop was shared with the MTaPS leadership and USAID COR teams. HTA experts from participating countries, such as Ethiopia, and agencies, such as WHO and the Kenya Medical Research Institute-Wellcome Trust, may be included to share their experiences and common challenges for HTA advancement with participants. MTaPS developed the presentation materials for the workshop based on feedback received from USAID.

MTaPS also developed publications based on the HTA roadmap findings. A balanced scorecard analysis for selected countries in Sub-Saharan Africa was presented in poster format at the Professional Society

for Health Economics and Outcomes Research 2021 conference in May. MTaPS has finalized a journal article based on the analysis, which will be submitted for publication in a peer-reviewed journal.

ACTIVITY 4: IMPROVE PHARMACEUTICAL EXPENDITURE TRACKING AND THE USE OF EXPENDITURE DATA FOR DECISION MAKING

Last quarter, the team submitted the draft resource to USAID as the first deliverable for the activity. In May, USAID provided feedback on the draft and approved the deliverable. MTaPS has since obtained Mission concurrence to pilot the resource in Benin and initiated recruitment of a local consultant to collect and organize pharmaceutical spending data. The team also engaged with the National Health Accounts team lead at the Ministry of Health (MoH) to discuss the process for the activity. The lead advised the team to draft a letter for USAID Benin to share with the MoH to formally introduce the activity. As of the end of the quarter, the team was still awaiting confirmation that the Mission has shared the letter. Once confirmation is received, MTaPS will proceed with scheduling a kick-off meeting with the MoH to discuss the timing and scope of the pilot.

MTaPS also started developing an illustrative policy brief on pharmaceutical expenditure tracking based on the data mapping effort in Burkina Faso. Ultimately, the brief will be used to disseminate the new guideline at a series of workshops where targeted attendees will include key pharmaceutical system decision makers.

MTaPS and LHSS also continued their outreach with the health accounts team at WHO Geneva and the health accounts and financing teams at WHO SEARO and EURO by providing an update on the resource, explaining its specificity to Burkina Faso, and proposing a meeting to share lessons and discuss policy priorities.

ACTIVITY 5: COMMON STANDARDS FOR REGULATORY INFORMATION MANAGEMENT SYSTEMS IN LMICS AND THEIR APPLICATION IN DESIGNING A SOFTWARE SUITE FOR NMRAS

Sub-activity 5.A. Develop common standards for regulatory information management systems (IMS) used by NMRAs

During this quarter, MTaPS and PQM+ held regular update meetings, some including the USAID AOR/COR, to decide on the approach for engaging stakeholders, the selection criteria for existing standards, and the approach for collating and presenting the standards for data elements. The activity implementation plan was adjusted to allow more time for desk review, generating the draft report, and preparing for the stakeholder engagement process. Most consequentially, the team reviewed the literature and compiled the proposed common standards in a draft report, which will serve as the basis for consultations at a global stakeholder meeting scheduled for quarter 4. MTaPS and PQM+ also finalized the letter for soliciting stakeholder interest and the terms of reference (ToR) for the virtual stakeholder workshop.

Sub-activity 5.B. Optimization and deployment of Pharmadex

MTaPS is building on existing system requirement specifications to define functionalities of Pharmadex version 2 in a modular fashion. The initial web-based application has a public-facing section for reports (e.g., list of authorized medicines) and user registration using a common standard called OAUTH2. The first prototype of the new international Pharmadex is ready and will first be tested in Nepal as a part of that portfolio's work plan. The prototype is designed with workflows catering to each regulatory function. The first workflow is for the registration of pharmacies and once completed, the team will add workflows for inspection of pharmacies and marketing authorization. The architecture of this new version allows each national medicines regulatory authority (NMRA) to configure its system to its needs.

MTaPS will make the source code available on GitHub and is planning to implement automated deployment to enhance sustainability and easy access to upgrades for countries.

ACTIVITY 6: ADVANCING EQUITABLE ACCESS TO QUALITY PHARMACY SERVICES IN THE PRIVATE SECTOR THROUGH RETAIL DRUG SELLERS

MTaPS conducted a review of literature and publicly available data sources to determine what data are available on the geographical accessibility of retail drug outlets and the quality of products and services they provide and identify critical gaps in available data. Based on institutional knowledge, the team searched FIP, MEASURE Evaluation, World Bank, and several WHO data sources. Of the eight datasets identified, none include specific information on the location or distribution of pharmacies. However, they all include information on the location of health facilities to varying degrees, and the team is exploring the feasibility of using data on health facility type as proxy for pharmacy location, at least in the public sector. Additionally, the team initiated a search for registries of licensed retail outlets in MTaPS-supported countries, from which it hopes to identify a potential case for deeper analysis.

ACTIVITY 7: INVESTIGATING THE USE OF INFORMATION FROM PHARMACEUTICAL MANAGEMENT INFORMATION SYSTEMS (PMIS) FOR EVIDENCE-BASED DECISION MAKING

This study aims to understand the facilitators and constraints of PMIS adoption and data use for decision making, focusing specifically on systems MTaPS or its predecessor programs have implemented. This quarter, MTaPS drafted the research protocol. The team is in the process of developing the data collection instruments and anticipates submitting the full protocol to USAID for approval by the end of July.

Sub-activity 8.B. PSS TAG engagement

MTaPS originally convened the PSS Technical Advisory Group (TAG) in October 2019 to facilitate global expert discussions of themes salient to PSS in low- and middle-income countries (LMICs) and to support activities aimed at advancing a global PSS learning agenda. Since then, the USAID AOR/COR team requested that PQM+ be included in the TAG, which warranted a redrafting of the ToR to explicitly incorporate the program's focus on regulatory quality assurance.

This quarter, MTaPS redrafted the ToR with input from PQM+. Feedback from the AOR/COR team on the revised ToR indicated that the TAG as currently conceptualized is infeasible given the lifetime of MTaPS and PQM+ and the limited resources available to manage such a group. Further, the AOR/COR team clarified that the priority for the group should be global advocacy and coordination for PSS and regulatory systems strengthening (RSS). The team also affirmed the critical need for USAID/PQM+/MTaPS to participate in international fora and meetings on PSS to continue advocacy for PSS, influence direction, and elevate the role and involvement of USAID in the discourse. As such, the AOR/COR team tasked MTaPS and PQM+ with proposing a mechanism for global advocacy and coordination for PSS and RSS.

In response, MTaPS, in collaboration with PQM+, developed a concept note for a global advocacy and coordination mechanism for RSS and PSS, proposing that the focus be on leveraging or strengthening existing internal mechanisms for stakeholder engagement, advocacy, and coordination on RSS and PSS. The concept note outlined several strategies for increasing global conference and meeting attendance and identifying and leveraging entry points for engaging with global stakeholders on RSS and PSS.

Sub-activity 8.C. Conference participation

This quarter, MTaPS presented four sessions at the Global Health Science and Practice Technical Exchange 2021, held April 21–24:

- Global tools to combat AMR: A close look at GHSA-supported interventions in Côte d'Ivoire
- Balancing equity and emergency response during the COVID-19 pandemic: The case of the Philippines
- Using novel capacity-building approaches to prepare health workers and systems for COVID-19 infection prevention and control (IPC) response
- The Global Benchmarking Tool: Experiences and lessons learned strengthening national regulatory systems

MTaPS had three of five abstracts accepted for oral presentations at the American Public Health Association (APHA) 2021 Annual Meeting, scheduled for October 24–27:

- Establishing an emergency supply chain system for continuous access to COVID-19 commodities in Bangladesh
- Improving infection prevention and control practices: Interventions in six Tanzanian hospitals
- Experiences and lessons from using Global Health Security Agenda perspectives and approaches to implement antimicrobial resistance containment efforts in 11 countries

The remaining two abstracts were waitlisted for oral presentations.

This quarter, MTaPS also submitted three abstracts to the American Society of Tropical Medicine and Hygiene (ASTMH) Annual Meeting, scheduled for November 17–21, 2021:

- Antimicrobial consumption surveillance in a resource limited setting: Findings from 13 hospitals in Uganda
- Building capacity on infection prevention and control (IPC) in healthcare settings during the COVID-19 pandemic in Bangladesh
- COVID-19 IPC Outcome Assessment in USAID MTaPS-Supported Health Facilities

Abstract status notification from ASTMH is still pending. One other abstract entitled Knowledge and Perception on Hand Hygiene and Correlation with IPC Practices and Structures in Health Facilities in Uganda was submitted to 6th International Consortium for Prevention and Infection Control Conference.

This quarter, MTaPS initiated the development of four peer-review publications. A zero draft has been produced for a paper on the registration status of maternal, newborn, and child health (MNCH) medical products. This is based on a study that was conducted under the MNCH Core portfolio. In addition, we have produced a zero draft of a commentary on the experiences and lessons from using Global Health Security Agenda approaches to implement antimicrobial resistance containment efforts. This commentary is based on the abstract that was accepted for APHA. The last two papers, one on the revision of Kenya's essential medicines list and the integration of AWaRe categories and the other reporting the lessons learned strengthening IPC capacity for the COVID-19 pandemic response, are in earlier stages of development.

EXTENDED YEAR 2 ACTIVITIES

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

Last quarter, MTaPS developed a concept note for piloting PSS Insight v2.0. The purpose of the pilot is to test the indicators and assess the suitability of the accompanying PIRS and training materials for data collection. This quarter, the team received and addressed feedback from USAID. While feedback was pending, MTaPS kept the activity moving by sharing country selection criteria, with contacts at WHO Geneva's Department of Health Products Policy and Standards. One selection criterion is implementation of the WHO MedMon tool because indicators from the tool on access to and affordability of pharmaceutical products have been incorporated into PSS Insight v2.0. The WHO team

provided information on the countries that have implemented the WHO MedMon tool to help guide country selection. The WHO team also encouraged early engagement of WHO regional advisors in the country pilots to help encourage countries to use the assessment findings to inform their policy and strategic planning processes and, ultimately, to adopt the tool.

While awaiting final approval of the revised concept for the pilot, the USAID COR informed MTaPS that the Office of Health Systems was adjusting its strategy and would be combining the PSS Insight V2.0 pilot (activities planned for the remainder of year 3 and the year 4 follow on) with an MTaPS evaluation. The COR requested that MTaPS redevelop the concept for the pilot into a preliminary protocol. The team submitted the draft protocol and is awaiting feedback or approval.

ACTIVITY 8: SUPPORT AFRICAN REGIONAL HARMONIZATION EFFORTS FOR PHARMACOVIGILANCE

MTaPS is collaborating with the West Africa Health Organization (WAHO) and the 15 ECOWAS to develop a web-based platform for improving pharmacovigilance (PV) systems in the ECOWAS region. WAHO is already working with a company called SIDMACH to develop a web-based platform called the Essential Medicines and Vaccines Portal to support sharing of data on all NMRA regulatory functions within the region. This quarter, MTaPS developed a scope of work and engaged SIDMACH to support development of the PV platform as part of the WAHO portal and processed payment for hosting the Essential Medicines and Vaccines Portal as part of the support requested by WAHO. In June, the first SharePoint site for PV went live and was up and running within the WAHO information technology infrastructure. The team has started setting up administrator access and sites country by country, after which it will launch one site to aggregate and present regional reports and dashboards.

This quarter, MTaPS also reconvened a meeting with WHO and WAHO to discuss potential collaboration on data sharing for the region. The group agreed that once countries agree to share their data on the platform, WHO will facilitate sharing of assessment data from the WHO Global Benchmarking Tool for the 15 countries. MTaPS also initiated discussions with WAHO with respect to drafting of the data sharing agreement with countries to facilitate uploading of data on the PV platform, which is now ready to receive data from countries.

ACTIVITY 10: IDENTIFY GAPS IN INTEGRATION OF IPC/WASH CRITICAL CONDITIONS INTO THE QUALITY OF CARE AND QUALITY IMPROVEMENT TOOLS AND PROCESSES

During this quarter, MTaPS recruited and contracted a consultant to conduct interviews with stakeholders to get their perspective on the use of quality of care/quality improvement guidelines related to IPC/WASH. The MTaPS Bangladesh and headquarters teams met with the consultant to discuss her scope of work, timeline, and next steps. MTaPS and the consultant translated the questionnaire into Bangla and pilot tested it at the two hospitals. Before the interviews began, the QIS/MOHFW requested a meeting to again review and formally sign off on the questionnaire; the meeting included 11 participants and was held in May. The QIS also provided an introductory letter and government order to facilitate the interviews. At the end of the quarter, the consultant had completed 43 of 45 planned interviews and had started drafting a report of the findings to submit early next quarter.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1: Measuring pharmaceutical systems strengthening, including access to medicines • Continue to seek WHO input on the PSS Insight v2.0 pilot and explore opportunities to collaborate, as appropriate, on the various aspects of the pilot • Continue to work with WHO to define how MTaPS can support WHO discussions on the way forward with the development of the WHO measurement tool	July–September 2021
Activity 2: Pharmaceutical system strengthening course (PSS 101) • Launch the course on the Global Health eLearning Center and USAID University platforms • Conduct the hybrid training session	July–September 2021
Activity 3: Roadmap for health technology assessment (HTA) institutionalization • Complete two planned workshops for HTA Roadmap dissemination • Share lessons learned from workshops	July–September 2021
Activity 4: Improve pharmaceutical expenditure tracking and the use of expenditure data for decision making • Conduct kick-off meeting with MoH in Benin • Finalize recruitment of the consultant • Conduct data collection	July–September 2021
Activity 5: Common standards for regulatory information management systems in LMICs and their application in designing a software suite for NMRAs • Engage stakeholders agreed upon in consultation with USAID and convene consultation workshop • Conduct virtual workshop • Draft advocacy brief	July–September 2021
Activity 6: Advancing equitable access to quality pharmacy services in the private sector through retail drug sellers • Complete analysis of findings • Plan and conduct webinar • Draft manuscript	July–September 2021
Activity 7: Investigating the use of information from pharmaceutical management information systems (PMIS) for evidence-based decision making • Submit research protocol to USAID for approval • Seek Mission concurrence • Initiate study pending protocol approval and concurrence	July–September 2021
Activity 8. General portfolio management Sub-activity 8.B. PSS TAG engagement • Inform existing TAG members of activity status • Next steps to be determined pending AOR/COR feedback on the concept	July–September 2021
Activity 8. General portfolio management Sub-activity 8.C. Conference participation • Register participation for accepted abstracts	July–September 2021
Year 2 Activity 1: Refine/validate PSS Insight in USAID MTaPS-supported countries • Revise data collection tool	July–September 2021

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
• Select countries for pilot and seek Mission concurrence • Develop training protocol and train data collectors	
Year 2 Activity 8: Support African regional harmonization efforts for pharmacovigilance • Support WAHO to develop a data sharing agreement with the member countries for shaping PV data • Support WAHO to convene meeting of member countries to discuss data sharing on the platform • Expand the current membership and scope of work of the ECOWAS PV Expert Working Group to include the duties of the community of practice	July–September 2021
Year 2 Activity 10: Identify gaps in integration of IPC/WASH critical conditions into the quality of care and quality improvement tools and processes • Complete analysis of qualitative data and draft report on findings • Finalize technical report for activity	July–September 2021

CROSS-CUTTING ACTIVITIES

GENDER ACTIVITIES

Key activities for this quarter focused on deliverables from a SOW that includes gender activities for MTaPS countries, writing and publishing Gender Gist blogs, and presenting to the COR, staff, and for Knowledge Exchange on various topics of how sex and gender impact pharmaceutical system strengthening (PSS).

MTaPS Philippines and MTaPS gender advisor worked on drafts of the methodology to begin an operational research study to assess TB sex-related adverse drug reactions and the broader gender effects from TB treatment from retrospective data from the Pharmacovigilance Monitoring System. The methodology includes focus group discussions and key informant interviews that will fill-in data gaps to assess the barriers to access and determine disparities based on sex and/or gender after preliminary analysis of these data. The methodology is included in the Institutional Review Board application. In addition, an analysis of gender training gaps and roadmap was written to supplement the Philippines workforce development capacity assessment .

Gender Gist includes useful and practical information on sex and gender considerations for different topics in PSS had its first blog published on how sex and gender impact PV and vaccines during this quarter. A second Gender Gist on AMS has been written and reviewed and is undergoing the final stages for publication.

Finally, a presentation entitled Sex, Gender, and PSS was given to the COR and MTaPS staff and another presentation for MTaPS Knowledge Exchange entitled Sex, Gender in PSS: A Focus on Antimicrobial Stewardship were given during this quarter. The MTaPS gender advisor was also asked to review the PY3 work plan for MTaPS Nepal as a means to include missing gender training in activities for next year.

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.[5] Poor governance in pharmaceutical systems can reduce access to pharmaceutical products, inflate medicine prices, and waste scarce health system resources.[6] 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 assisting **Nepal's** national medicines regulatory authority (NMRA), the Department of Drug Administration (DDA), and the Ministry of Health and Population (MOHP) in reviewing options and proposing a new organizational structure for the DDA that best supports its functional responsibilities in the country's federated system, as well as its role in stewardship, coordination, oversight, and enforcement. MTaPS, with assistance from its consortium partner Celsian, supported the DDA in organizing a workshop to finalize the organograms for the DDA and the National Medicines Laboratory. The DDA has submitted the organograms, which include new staffing norms, and TOR for the coordination and oversight mechanisms to the MOHP for approval. MTaPS also helped the DDA prepare job descriptions based on these new staffing norms and draft a concept note which sets out the ongoing strategies for supporting the reorganization and strengthening of DDA in the future. The job descriptions which will help the DDA to implement the new organogram are now pending MOHP approval.

In **Bangladesh**, MTaPS' technical assistance to the NMRA, the Directorate General of Drug Administration (DGDA) included working with other implementing partners to develop an organogram and related TOR, job descriptions, and SOPs as part of the Quality Management System for the DGDA.

MTaPS has received Mission funding to support **Jordan's** National Vaccines Procurement Modernization Committee (NVPMC) and a technical subcommittee to implement a set of approved interventions to modernize the Government of Jordan's vaccine procurement laws, policies, and processes to improve efficiency and effectiveness in vaccine planning and procurement. In this reporting period, MTaPS developed summaries of the pertinent sections of the procurement bylaw and health bylaw and formulated recommendations on the modifications needed to extend the maximum limit of framework agreement, institutionalize partial payment for vaccines, and permit the development of exceptional provisions for procuring vaccines. MTaPS presented the summaries and recommendations in June's NVPMC meeting and held one-on-one meetings with various MOH directorates, the national regulatory authority, the government procurement department, and other key stakeholders to review the recommendations and discuss the changes needed in the bylaws and next steps.

[5] Wirtz VJ, Hogerzeil HV, Gray AL et al. 2017. Essential medicines for universal health coverage. The Lancet 389(10067), 403–476.
[6] 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

In the **Philippines**, MTaPS is assisting the Department of Health (DOH) in redesigning the governance structure for procurement and supply chain management (PSCM) to support implementation of the country's UHC law and its transition from a centralized PSCM model with fragmented functions to a decentralized and integrated system. In this reporting period, the DOH, with support from MTaPS, completed a PSCM roadmap design exercise and convened two workshops to develop the roadmap. The design exercise included desk reviews of pertinent policies and regulations and an online survey to solicit information on the current PSCM situation at the local level from the DOH national office and LGUs. MTaPS also held discussions with the Disease Prevention and Control Bureau (DPCB), Center for Health Development, and LGUs to analyze the current state of PSCM and validate recommendations on potential options to support implementation of UHC. The exercise pinpointed notable overlaps in PSCM roles, responsibilities, and accountabilities across various units within the Central DOH office. To address this, MTaPS worked with DPCB and the Supply Chain Management Service to clearly delineate PSCM roles, responsibilities, and accountabilities at the central and regional levels and ensure they are aligned with DOH's requirements and direction. Two MTaPS-supported workshops in June brought DOH stakeholders together to develop the PSCM roadmap for UHC implementation. The report, which sets out the roadmap, will be finalized and disseminated to stakeholders at central and local levels in the next reporting period.

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

Robust national pharmaceutical policies and legislation provide the enabling framework for advancing equitable and sustainable access to and appropriate use of safe and efficacious medicines of assured quality. MTaPS worked with countries to develop, update, review, and establish national policies for medical products and legislation for regulating medicines and other health products using best practices and guidelines. Support was also provided to develop and review guidelines that provide direction and clarity on statutory requirements for compliance.

In **Nepal**, MTaPS is supporting the MOHP and DDA in revising the legal framework to incorporate the legislative recommendations identified through the WHO GBT regulatory maturity assessment. A new drug law is critical to enabling the DDA to increase its maturity level, improve regulatory practices in line with WHO-recommended best practices, and take on new roles for medical product regulation, such as PV. In this quarter, MTaPS helped the DDA draft a concept note for the MOHP to submit to the Council of Ministers requesting approval for MOHP to draft a new drug law. The program also hired a local lawyer to review the different versions of the draft laws, including the zero draft developed by MTaPS and various drafts formulated by the DDA over the years, and prepare a final draft law for submission to MOHP. The lawyer will work through a MOHP-constituted working group, which will include representation from DDA and key stakeholders to expedite the development and approval process, and the lawyer will also help in undertaking consultations and advocacy with stakeholders. As part of advocacy efforts, MTaPS met to discuss the critical need for a new drug law with the chairperson, Parliamentary Committee on Education and Health, who agreed to prioritize passing the law once it is tabled in parliament.

A report prepared by MTaPS that identifies Nepal's various regulations, codes, and guidelines and prioritizes those that need to be developed or updated was widely circulated and discussed in this reporting period. Recognizing that the passage of the new drug law is expected to take time, MTaPS will assist the DDA in prioritizing and revising the various instruments that can be updated under the existing drug law while formulating the regulations, codes, and guidelines that will be relevant to the new drug law, once approved. In line with this, MTaPS began updating the Good Distribution Practice guidelines, which were shared with the DDA inspectorate for review and finalized the updated Good Pharmacy Practice (GPP) guidelines and electronic tools that will support implementation of the GPP inspections.

MOHP and DDA requested that MTaPS assist with updating Nepal's national medicines policy (NMP), which dates back to 1995. MTaPS developed a concept note that proposed a roadmap for the policy formulation process and mechanisms for its implementation. Recognizing that an NMP's success depends on political commitment from the government and the support of a broad range of stakeholders across the pharmaceutical sector, the concept note pays special attention to the process of developing an NMP and engaging stakeholders to achieve collective ownership of the final policy.

In Mozambique and Rwanda, MTaPS is providing technical assistance to develop, review, and validate regulations and implementing guidance that supports the newly enacted medicines acts and operationalizes the new NMRAs, established by these acts. In this reporting period, MTaPS helped **Mozambique's** National Directorate of Pharmacy draft a price control regulation that will enable the new NMRA, *Autoridade Nacional Reguladora de Medicamentos de Mozambique* (ANARME), to regulate markups and introduce controls to prevent the addition of excessive charges to medicine prices as they move through the supply chain**.** The regulation sets out the basis for determining pricing for manufacturers and the selling price to end users, penalties for non-compliance, and pricing for health products that are not medicines. To inform the development of the regulation, MTaPS produced a report that summarized international experiences and outlined pros and cons and recommendations on price controls, including the regulation of markups.

MTaPS supported the **Rwanda** Food and Drug Authority (FDA) in validating two regulations, eight guidelines, and six SOPs in this reporting period. Draft guidelines for regulating medical gases (oxygen), draft guidelines and an SOP for registering vaccines and biological products, and a draft SOP for assessing registration applications for generic medicines, including WHO-prequalified products, were prepared with assistance from MTaPS and are now under technical review. MTaPS also assisted the MOH in developing a draft DTC manual, which has now been circulated for technical review. Rwanda FDA's Board of Directors approved a four-year strategic plan developed with support from MTaPS that sets out FDA's vision, priorities, and strategic objectives. Next, MTaPS will support the authority in operationalizing the plan by developing an annual action plan.

In the previous year, MTaPS supported the **Democratic Republic of Congo's (DRC's)** national regulatory authority in updating the *Directory of Registered Medicines*. In this reporting period, MTaPS conducted field visits to Ituri and Nord Kivu provinces to check on use of the directory in tracking unregistered products and solicit feedback for improvement. Inspectors and customs officers appear to be using the directory effectively to identify unregistered products, including those that are being imported by local companies and to alert wholesalers that they need to renew registration for products with marketing authorization expiring in six months or less. Also, officers of the national quality control agency, which is one of the customs services, now systematically use the directory to check whether medical products are registered before conducting any quality control analyses for such products at the points of entry in the two provinces. Among the gaps identified was the need to update the directory to include approximately 250 products newly registered as of June 2021.

STAKEHOLDER ENGAGEMENT AND EMPOWERMENT, INCLUDING CIVIL SOCIETY AND CONSUMERS INCREASED

In North Kivu and Ituri provinces in eastern **DRC,** MTaPS is providing assistance to increase the engagement of communities and civil society groups in managing medical products at the health center and community levels. At the health zone-level in DRC, community members serve on health area development committees (*comité de développement de l'aire sanitaire* [CODESAs]), which enables them to participate in planning, management, and monitoring of health activities and to meet with staff at the health center in their zone on a monthly basis to review results and discuss how to address concerns. In this reporting period, 106 community members from 3 health zones attended 1-day trainings organized by the North Kivu and Ituri provincial health divisions (*Division Provinciale de la Santé*) with support from MTaPS. The roles and responsibilities of the CODESAs in managing medical products was clarified during these trainings and a post-training plan developed for each committee to guide implementation of their activities. MTaPS also supported the finalization and dissemination of the TOR for the CODESAs based on this feedback.

As a result of MTaPS' technical assistance in governance to GHSA-supported countries:

Kenya's National Infection Prevention and Control (IPC) Technical Working Group (TWG) reviewed and adopted its TOR.

Also in **Kenya**, MTaPS assisted Kisumu, Murang'a, and Kilifi Counties in establishing and orientating members of their respective County AMS Interagency Committees. These committees are essential in coordinating and sustaining AMS activities within the counties.

In **Mozambique**, members of the newly formed national AMR Multisectoral Coordination Committee (MCC) continued their deliberations on the committee's governance structure and review of TOR for the MCC and its respective TWGs. With support from MTaPS, members worked on reaching a common understanding on the composition of the MCC and respective members' roles and responsibilities.

In **Nigeria**, the national IPC SOP was reviewed and validated at a two-day workshop facilitated by the AMR TWG secretariat.

Senegal's national IPC supervision checklist was updated to include WHO's multimodal strategy and the components of water, sanitation, and hygiene in health care settings.

Also, in **Senegal**, the updated policy and guidelines on antibiotic therapy, which now incorporates the WHO access, watch, reserve classification for antibiotics, were submitted to the minister of health for official approval.

Staff in **Uganda's** Gulu and Soroti districts were trained on how to constitute medicines and therapeutics committees and AMS teams at health centers and general hospitals. Topics covered included processes for developing and validating TOR for the two committees.

Also in **Uganda**, MTaPS supported two women leaders in developing success stories on AMR containment in the country. The stories will be published on the websites of the MOH and national AMR sub-committee, and MTaPS hopes that highlighting the contribution of women leaders will encourage more women and girls to engage in and contribute to AMR control.

MTaPS has received core MNCH funding to develop a discussion paper that reviews experiences and lessons learned from social accountability research and interventions to identify implications for policy and practice for initiatives to engage civil society in improving access and appropriate use of quality MNCH medical products and related services. The first draft of the paper was developed and submitted

to the USAID MNCH team for review and to share it with other USAID teams from Africa Bureau and the Democracy, Human Rights, and Governance Group, who work in this area, for their comments.

For more detail on MTaPS' AMR activities and the GHSA, refer to the GHSA section.

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

Workforce Planning and Development

As a following on to the capacity gap analysis conducted in the previous reporting period, MTaPS is assisting the **Philippines** Department of Health (DOH) to develop a Local Government Unit (LGU) capacity-building roadmap for setting up procurement and supply chain management (PSCM) and pharmacovigilance (PV) systems at the local government level. The proposed roadmap activities include drafting a scope of work for identifying and recruiting potential organizations (nongovernmental organizations [NGOs], academic institutions, and training organizations); developing a standard curriculum to be used by the LGU for capacitating local technical assistance providers (LTAPs); and training and deploying LTAPs in pilot universal health coverage (UHC) implementation sites. Once capacitated and deployed, the LTAPs are expected to conduct rapid capacity assessments at LGUs, advocate with local chief executives to set up the desired PSCM-PV structure, provide orientation to the LGU health office management, and train and mentor the PSCM and PV workforce at the LGU level. The trained LTAPs will also provide monitoring and follow up support to the LGUs in performing PSCM and PV functions.

Curricula and Training Materials

Building on curriculum design activities initiated in the last reporting period, MTaPS supported **Burkina Faso, Kenya, and Nepal** to develop comprehensive training materials and toolkits to support institutional capacity strengthening in antimicrobial stewardship (AMS) and PV. In Burkina Faso, the competency-based training package was developed based on the guidelines for the rational use of antimicrobials in the livestock sector. The training toolkit was the first of its kind in the country to focus on the animal sector. The toolkit consists of a facilitator guide that explains how to lead the training program, a timed agenda for face-to-face training sessions, a participant guide for learners to use during the classroom training session, PowerPoint slides, and a training of trainers (TOT) guide. Following validation, the toolkit was used to train 15 master trainers of veterinarians and livestock technicians from the public and private sectors through a three-day TOT workshop. By the end of the workshop, participants were more knowledgeable about emerging AMS guidelines and better equipped to handle their roles and responsibilities as veterinarians and livestock technicians.

In Kenya, MTaPS helped the Ministry of Health (MOH) organize a workshop to validate the national AMS training curriculum. This was a joint effort involving the country's AMS technical working group (TWG) and other experts. The curriculum will serve to train health care workers to strengthen their skills and enable them to establish AMS programs in health care facilities in Kenya. In addition to designing an in-service AMS curriculum, MTaPS collaborated with the University of Nairobi's School of Pharmacy to develop the country's first national preservice AMS curriculum. The curriculum will target postgraduate pharmacy students and is expected to help increase health care human resources skills in AMS. The next phase will consist of the official launch of the curriculum, which is expected to take place in the next reporting period.

In Nepal, MTaPS assisted the government to customize Pharmadex training materials that will be used to train Department of Drug Administration (DDA) staff. This new version of the Pharmadex registration module and the training will enhance staff capacity to carry out the registration, inspection, importation and exportation, and PV aspects of their work. To further enable DDA staff to fulfil their regulatory responsibilities, MTaPS helped the government secure additional infrastructure capacity by initiating procurement of 10 desktop computers and printers for DDA central and provincial offices, 15 notebooks for inspectors, and higher internet connectivity with local area networks for information sharing and by hiring a consultant.

eLearning Platforms and Course Materials

As part of MTaPS' capacity-building efforts for health professionals and students, the program continues to support the governments of **Cameroon, Kenya, Mali, Philippines, and Tanzania** with the establishment of eLearning platforms. With the exception of Mali, all MTaPS countries made progress in implementing the last phase of their eLearning initiatives. Following the launch of the local eLearning platforms in Mali in February, MTaPS held four meetings in collaboration with the *Direction Générale de la Santé et de l'Hygiène Publique* (DGSHP) to plan for a series of virtual orientation sessions on the use of the eLearning platform for the first cohort of health workers. However, due to political unrest, the team could not hold the training sessions as planned. MTaPS is in discussion with the DGSHP to confirm new dates.

In Cameroon, MTaPS collaborated with the Department of Pharmacy, Medicines and Laboratory (DPML), a technical department within the MOH, to finalize the installation of Moodle eLearning platforms on two of the DPML's local systems. The team also completed the last series of Moodle platform trainings of local eLearning resource persons at the DPML. The training concluded with a simulation exercise in which the resource persons were given the opportunity to demonstrate their skills. Twelve infection prevention and control (IPC) training modules (in both French and English) and eight pharmaceutical systems strengthening (PSS) 101 modules were uploaded to the platforms as part of this process. As next steps, the team will organize a virtual stakeholder meeting to launch the platforms. The team has also begun to design the AMS eLearning modules. Once completed, these AMS eLearning modules will be uploaded to the platforms and used for continuous training and capacity building of AMS champions.

During this quarter, MTaPS/Tanzania worked with Tanzania's Centre for Distance Learning teams to launch the national eLearning platform. This launch, which was held June 4, 2021, marked a paradigm shift in capacity-building approaches in Tanzania and showed increased commitment on the part of the Ministry of Health, Community Development, Gender, Elderly and Children to strengthen the skills of its workforce through distance education. The platform will allow Tanzanian health professionals to easily access eight IPC and six COVID-19 highly interactive modules and enhance their capacity virtually from anywhere and at their convenience. Subsequent steps will focus on training additional tutors to increase the numbers of eLearning trainers and on adapting AMS eLearning courses to the platform.

In the Philippines, MTaPS began the process of developing a PSS course to help increase institutional human resources capacity for pharmaceutical management and services, including regulatory products. The course will be based on the existing MTaPS generic PSS 101 course but adapted to the Philippines's context. Content for the first three modules (PSS-1, PSS-2, and Warehouse Operations Management) has been reviewed by the DOH Health Human Resource Development Bureau and is now awaiting feedback from the PSCM team. Once completed, the course will be customized to the DOH's eLearning platform, pilot tested, and launched through a series of webinars. Results from the pilot will serve to inform fine tuning of the materials and ensure that the course is glitch-free and user-friendly before it goes live.

Supportive Supervision and Mentoring

MTaPS teams in **Kenya and Tanzania** provided post-training mentoring support to central- and county-level facilities during supportive supervisory visits. The purpose of the visits is to promote a self-improvement culture through local teams that use continuous quality improvement (CQI) methodologies for IPC. The facilities supervised included public, faith-based, and private health facilities. These visits allowed the MTaPS team to monitor the implementation of IPC CQI action plans. They also provided an opportunity to further enhance the capacity of Nyeri and Kisumu IPC champions and enable them to successfully implement CQI methodologies for IPC in their own facilities. It is worth noting that Tanzania's supportive supervision visits targeted 150 IPC champions from the 10 targeted facilities, including health care workers from other institutions. Mentoring support was also tailored to meet each champion's need and address the gaps encountered. In both countries, activities preceding the field visits involved developing roadmaps for scheduled supportive supervision and mentorship exercises in the health facilities.

STRONGER CAPACITY OF GOVERNMENT TO MANAGE PHARMACEUTICAL SYSTEMS

Competency-Based Training Activities

This reporting period's highlights include the organization and implementation of competency-based training to reinforce the technical and managerial capacities of drug and therapeutics committees (DTCs), AMS committees, and IPC champions in **Burkina Faso, Cameroon, Côte d'Ivoire, Democratic Republic of Congo (DRC), Kenya, Mali, and Senegal**. In Burkina Faso, the team assisted the national drug regulatory agency to plan and conduct three series of workshops to build the capacity of 73 pharmacists and doctors on the essential medicines list (EML), which incorporates the WHO Antibiotic Access, Watch, and Reserve (AWaRe) categorization for the first time. This initiative was the first of its kind and involved participants from health districts, regional health directorates, and regional and university hospital centers. The EML is expected to help health care professionals apply proper prescribing practices and promote the safe use of antibiotics and other medicines. MTaPS/Burkina Faso also assisted the MOH's Directorate of Hospital Pharmacy to conduct capacity-building sessions for Tenkodogo's *Centre Hospitalier Régionaux's* DTC members. By the end of the competency-based training, participants demonstrated stronger understanding of the role of PV in improving the proper use of antimicrobials as well as the risks associated with antimicrobial resistance (AMR). The training culminated in the development of DTC action plans, which will enable participants to implement AMS activities in their respective health care facilities.

Similarly, the MTaPS/Côte d'Ivoire team provided a series of training sessions to the AMR TWG to support the integration of the WHO AWaRe categorization into the EML. The first workshop targeted resource persons responsible for data collection in cities outside of Abidjan. By the end of the workshop, which focused on the protocol for data collection and the table of indicators, participants were ready to collect data in 25 identified organizations in Abidjan. The workshop concluded with a simulation of the data collection using tablets. Subsequently, the MTaPS team conducted participatory sessions to strengthen the capacity of two observers for the antibiotic categorization data collection, and a refresher training was provided to the same observers after a week of practice to address inconsistencies in the data transmitted and further reinforce their skills. MTaPS also provided DTC and AMS training to 77 participants from the regional referral hospitals (CHRs) and private clinics of Daloa, Yopougon, Yamoussoukro, Aboisso, Abengourou, and Treichville. The training lasted three weeks and highlighted key aspects, including antibiotic prescription and use strategies to address specific issues such as surgical antibiotic prophylaxis, monitoring of antibiotic treatments, recommended standard treatments for some common infections, and antibiotic association principles. Time was also set aside on the last day of the training to allow participants to begin setting up the CQI process for each DTC. Each facility developed a challenge model and an action plan.

Also in Côte d'Ivoire, MTaPS organized and conducted a series of three-day IPC workshops for 60 health workers (e.g., doctors, nurses, pharmacists, screening staff). Participants came from CHRs in Abengourou, Daloa, Aboisso, and Yamoussoukro. Workshop participants took part in 14 highly interactive sessions focused on IPC, including practical sessions and demonstrations on hand hygiene, treatment of reusable medical devices, maintenance of premises, and management of sanitary waste. The sessions were led by two teams of IPC regional trainers and one master trainer from MTC4.

To reinforce DTC capacity to oversee the implementation of AMS interventions and conduct stewardship practices at designated health care facilities, MTaPS assisted the General Directorate for Health Services Organization and Management and the *Direction de la Pharmacie et du Médicament* (DPM) in DRC to hold a meeting to prepare for CQI refresher training for DTC members in the seven MTaPS-supported facilities. The meeting also allowed stakeholders to define the set of CQI indicators to include and to adapt the data collection and reporting tools and CQI training materials. These tools and materials will be integrated into the refresher training and will help strengthen the capacity of new DTC champions and ensure that they are able to conduct regular data collection, analysis, and reporting as part of the CQI program. Due to the delays caused by the volcanic eruption in eastern DRC, the CQI refresher training has been rescheduled for early in the next reporting period.

MTaPS/Kenya assisted the Nyeri County referral hospital to organize and conduct two sensitization workshops for 45 health care workers and a four-day facility-based training of health care workers on surgical site infections. Each sensitization meeting was led by MTaPS IPC master trainers, and the four-day facility-based training was led by MTaPS-trained trainers. MTaPS also collaborated with the Division of Patient and Health Worker Safety at the MOH and Murang'a County DOH staff to capacitate 25 (18 female, 7 male) health care workers (clinicians, pharmacists, nurses, laboratory officers, and public health officers) on IPC CQI in general and particularly on basic quality improvement concepts and readiness for implementation of CQI projects in their respective facilities.

In Mali, MTaPS helped the DPM train 67 DTC members from four facilities (regional hospital of Kayes and district hospitals of Yelimane, Kenieba, and Bougouni) to collect AMS data (e.g., patient surveys, drug prescription indicators). This training is part of MTaPS' support to the National Multisectoral AMR Coordination Working Group, the DPM, and the *Agence Nationale d'Evaluation des Hôpitaux* to establish DTCs in 11 new sites. To help revitalize IPC committees at selected district and regional hospitals, the team also assisted the Directorate of Hospital Quality, Security, and Hygiene (DQSHH) to organize and implement a two-day workshop to reinforce the skills of IPC champions. This event also allowed the team to jointly review and update the 2017 version of the national IPC supervision checklist to include WHO's multimodal strategy and the components of water, sanitation, and hygiene in health care settings. The team subsequently updated the supervision checklist and used it to carry out supervision visits in the level 3 Hospital General Idrissa Pouye. These efforts are expected to contribute to improvements for most of the IPC core components, such as hand hygiene, biomedical waste management, and bio cleaning.

MTaPS/Senegal's support to IPC committees this quarter targeted the level 2 and 3 hospitals of Dakar and Mnour, respectively, which had basic IPC capacity. Together with the DQSHH, the team assisted IPC committees to develop and implement their CQI action plans. Part of this process involved providing a three-day training on IPC core components, including the WHO multimodal strategy and the CQI approach. The trained hospitals adapted the IPC standard operating procedures (SOPs) and guidelines to their local context by using the standardized guidance matrix that the DQSHH developed with MTaPS' support. The training activities were followed by supportive supervision visits whereby IPC champions received additional coaching support as they implemented their action plans.

MTaPS/Uganda trained 165 prescribers (44% male, 56% female) and key stakeholders in antibiotic prescription. The training was well attended and involved participants from six health facilities. At the conclusion of the training, participants had a better understanding about appropriate antimicrobial

prescription; conducting a root cause analysis on the cause of inappropriate prescriptions and poor adherence to standard treatment guidelines; agreeing on key interventions for the medicines and therapeutic committees (MTCs) and AMS teams; and developing a prescription improvement plan focusing on urinary tract infection, upper respiratory tract infection, and surgical antibiotic prophylaxis for caesarean section. In addition, the team supported the organization and implementation of capacity-building activities to support lower-level health facilities to train MTCs and AMS teams. These activities were carried out in collaboration with regional partner USAID Regional Health Integration, whose mandate reaches these lower-level district facilities to promote application of the principles of medicines management, rational use of antibiotics, and AMS.

Continuous Professional Development

The MTaPS teams in **Kenya and Uganda** continue to support the MOH in establishing IPC continuing professional development (CPD) training courses to be implemented through professional associations. In Kenya, MTaPS conducted meetings to discuss the finalized IPC CPD course materials and plan for rolling out trainings for diverse professional associations. The team also supported National Nursing Association of Kenya (NNAK) officials to implement a virtual IPC CPD TOT workshop targeting its regional chapters. A total of 23 CPD trainers of trainers drawn from public, private, and faith-based health facilities in NNAK's regional chapters were capacitated and equipped with the skills to train their peers across multiple sectors. The trained members will help increase the pool of master trainers and ensure sustainable in-country human resources training capacity in IPC.

Using blended approaches, including both virtual and physical learning sessions, MTaPS/Uganda also conducted participatory capacity-building activities aimed at contributing to CPD. In collaboration with the Pharmaceutical Society of Uganda (PSU) and academic institutions, the team conducted a continuing medical education-linked CPD session on AMS for 89 pharmacists (65% male, 35% female). Subsequently, MTaPS/Uganda held a one-day online lecture series aimed at creating awareness of AMR and developing a community of practice for AMS specifically targeting community pharmacies, where irrational use, including over-the-counter sales of antibiotics, remains high.

Institutional Capacity Building

Well-functioning pharmaceutical systems depend on national departments of pharmacy, procurement agencies, contracting, accreditation, and other national and sub-national government departments and managers that have enough capacity to steward, manage, and coordinate stakeholders and effect positive change within the pharmaceutical sector.

The exercise undertaken by the **Philippines** DOH to develop a PSCM roadmap for supporting implementation of UHC presented an opportunity to examine the roles and responsibilities for PSCM across the different units within the DOH at the central level. MTaPS held a series of consultations with the Disease Prevention and Control Bureau and the Supply Chain Management Service and used the Responsible, Accountable, Consulted, Informed tool to help identify where roles, responsibilities, and lines of accountability overlapped among the different units and reach agreement for delineating them to ensure they are aligned with the DOH's requirements and direction. The outcomes of this process and the PSCM roadmap developed through the MTaPS-supported design exercise and two consultative workshops represent important steps toward identifying the needed capacities and competencies of the various DOH units and related institutional capacity-building strategies to enable them to effectively steward, implement, coordinate, and sustain an integrated and well-functioning supply system.

The **Rwanda** Food and Drugs Authority's (FDA) new four-year strategic plan (2021–2024) was approved by the FDA's Board of Directors during this reporting period. The plan, which was developed, reviewed, and validated by stakeholders with assistance from MTaPS, identifies the vision, strategic objectives, and actions that will enable the FDA to fulfill its mandate. MTaPS will now help the Rwanda FDA develop an annual action plan as a first step toward implementing the approved strategic plan. Also

in this reporting period, MTaPS and its consortium partner Pharmaceutical System Africa began to collect reference information as a first step toward developing a business plan for the Rwanda FDA that will set a pathway for achieving financial sustainability.

MTaPS assisted **Nepal's** DDA to finalize organograms for the DDA and the National Medicines Laboratory. The organograms and related staffing norms and job descriptions, along with the terms of reference (TOR) for the coordination and oversight mechanisms, are now pending approval by the Ministry of Health and Population. MTaPS also assisted the DDA in drafting a concept note that sets out the ongoing strategies for supporting the reorganization and strengthening of the DDA in future years to enable the regulatory authority to better fulfill its functional responsibilities and role in stewardship, coordination, oversight, and enforcement.

In **Bangladesh**, MTaPS collaborated with other partners to assist the Directorate General of Drug Administration (DGDA) to develop an organogram and related TOR, job descriptions, and SOPs as part of the quality management system (QMS) for the DGDA.

IMPROVED CAPACITY OF PRIVATE-SECTOR ORGANIZATIONS TO SUPPORT PHARMACEUTICAL OPERATIONS

As part of efforts to strengthen the inspectorate and improve the regulation of pharmacy practices in **Nepal**, MTaPS finalized the update of the Good Pharmacy Practice (GPP) guidelines and related electronic tools that will support implementation of GPP inspections in both public and private dispensing outlets. The GPP inspection tools, which provide for two levels of GPP inspections—one that is in line with WHO best practices and an abbreviated version that includes only the mandatory requirements as required by the existing legislation—were piloted by MTaPS and DDA inspectors in four districts. The Good Distribution Practice (GDP) guidelines were also updated and shared with the DDA inspectorate for review, and a GPP electronic inspection tool was developed for piloting.

As a follow on to an assessment completed in the previous quarter, MTaPS engaged industry stakeholders to discuss the support needed to enable local manufacturers in the **East African Community (EAC) and Intergovernmental Authority on Development (IGAD) regions** to better comply with regional and national pharmaceutical regulatory standards and requirements. Consultations with the Federation of Kenya Pharmaceuticals Manufacturers (FKPM) and other focal industry persons included discussions on how technical exchange networks and compliance groups could help to improve regulatory compliance among local manufacturers.

In **Kenya**, MTaPS has been collaborating with medical, pharmacy, nursing, and other professional associations to develop CPD and relicensure-linked in-service courses in AMS and IPC for the associations to deliver to their members working in both the public and private sectors. In this reporting period, MTaPS assisted the NNAK to deliver IPC CPD training of trainers. The 23 participants included five NNAK national officers, including the president, and staff drawn from public, private, and faith-based health facilities in NNAK's regional chapters. More than 100 participants attended a CPD virtual event entitled "Introduction to Antimicrobial Stewardship Programs", which was organized by the Kenya Pharmaceutical Association with support from MTaPS.

Following MTaPS' discussions with the PSU to explore opportunities for similar collaborative activities, the PSU conducted its first continuing medical education-linked CPD session during this reporting period. The one-day online lecture series on AMS was developed and delivered with assistance from MTaPS, which contributed 25% of the CPD points required for annual registration by the pharmacist and was attended by 89 pharmacists.

In **Côte d'Ivoire**, MTaPS is assisting a group of experts established by the national AMS TWG to prepare training materials and train private-sector pharmacists on improving stewardship practices and awareness on antimicrobial use in private pharmacies.

STRONGER MEDICINES REGULATORY CAPACITY, INCLUDING THROUGH REGIONAL REGULATORY HARMONIZATION

Enhancing the functional capacity of national medicines regulatory authorities through pharmaceutical regulatory systems strengthening

Improving the legal framework for pharmaceutical regulatory systems and regulatory functions

An appropriate and updated legal and regulatory framework is crucial for effectively regulating the pharmaceutical market in countries. MTaPS' support in this area is further elaborated under objective 1.2. Refer to Objective 1, Evidence-Based Medicines Policies, Laws, Regulations, Guidelines, Norms, and Standards Improved and Enforced, for more details.

Capacity to Manage Key Functions of the Regulatory System

MTaPS/**Bangladesh** worked in collaboration with WHO and other implementing partners to support implementation of the country's institutional development plan. The assistance is intended to raise the DGDA's maturity level to category 3, at which point it will be regarded as a functional regulatory authority with a focus on vaccine regulation. In preparation for the WHO GBT external assessment scheduled for the next quarter, MTaPS collaborated with the DGDA to conduct a self-benchmarking exercise. The work involved developing an organogram with TOR, job descriptions, and SOPs; identifying corrective and preventive action; conducting a training needs assessment and preparing a training plan; and carrying out a competency assessment. Other aspects addressed that were identified as lacking in previous assessments included the formulation of a legal provision, updating the quality manual as part of progress toward a functional QMS, and formulating an internal audit plan.

The MTaPS/**Nepal** team used the findings of the GBT assessment carried out in the last quarter to develop a two-year strategic plan with the goal of achieving at least maturity level 2 according to the GBT categorization and a one-year implementation plan that focuses on priority areas and measures that will improve regulatory service delivery and raise the maturity level of the DDA by addressing some of the 198 recommendations from the previous GBT assessment.

Improving the regulatory system by establishing a QMS

In partnership with Celsian, MTaPS continued to support the implementation of a QMS in **Nepal**. Capacity-building sessions encompassing QMS basic awareness, risk management in QMS, and internal quality auditing were conducted for DDA staff at all levels (e.g., top management, senior and operational staff) to create awareness of a QMS and increase the level of knowledge to aid the implementation process. QMS officers used the knowledge acquired to develop the required documentation, including SOPs to facilitate clear and consistent delivery of regulatory services. MTaPS helped to draft the quality manual and quality policy, which are important documents for a QMS.

QMS implementation in a national regulatory authority should follow a phased approach to facilitate a smooth process. After delivering sessions to create awareness about a QMS, MTaPS/**Rwanda** facilitated a capacity-building session on internal audits for Rwanda FDA quality officers. Building on the internal audit training, MTaPS will facilitate the hands-on application of the knowledge acquired to conduct an internal audit of the current QMS at the Rwanda FDA. Findings from the internal audit exercise will indicate the readiness of the Rwanda FDA for an external audit for ISO 9001:2015 certification.

Product Registration System Improvements

During this reporting period, MTaPS worked to improve the product registration system in **Mozambique** by incorporating the Common Technical Document (CTD) format in the registration software. The CTD format is a globally accepted standard for compiling product dossier information and once incorporated in Pharmadex, the registration software will enable easy exchange of information to facilitate dossier evaluation by National Directorate of Pharmacy (DNF) evaluation personnel and will

comply with international best practices as guided by WHO and Southern African Development Community guidelines, as desired by the DNF.

In **Nepal,** MTaPS is working to improve the product registration system by reorganizing the DDA reporting structure, introducing the product registration software (Pharmadex), and increasing the capacity of registration personnel to perform quality assessments.

In **Rwanda**, MTaPS supported improvement of processes for the registration of essential medicines and medical devices by developing key regulatory documents that include a draft SOP on assessing generic medicines, including WHO prequalified products, and a draft SOP and guideline on the registration of vaccines and biological products. The documents will serve as guidance for performing quality assessments.

MTaPS/**Jordan** facilitated a discussion with the Jordan Food and Drug Administration (JFDA) to explain the need to establish priority and abridged registration procedures for vaccines that have been approved by the WHO Prequalification Team. During the discussions, MTaPS emphasized the objective of the changes, which is to increase efficiency in performing assessments and avoid redundancy and time-consuming procedures that do not add value to the registration process. The interaction with the JFDA yielded successful results, culminating in the agreement by regulatory authority to revise the registration procedures and incorporate abridged procedures that would expedite the registration of WHO prequalified vaccines without undermining the national registration requirements.

MTaPS/**Philippines** organized a national dialogue on regulatory systems strengthening for product registration in collaboration with the Pharmaceutical and Healthcare Association of the Philippines, World Bank, Healthcare Technology Association of the Philippines, and WHO. During the dialogue, the importance of an effective product registration system was emphasized that facilitates stakeholder compliance to registration requirements and ultimately contributes to the better availability of quality medicines for improved health care service delivery.

Improving Regulatory Inspection, Enforcement, and Licensing of Establishments

MTaPS/**Nepal** arranged a meeting with the DDA to share experiences on the inspection of public and private pharmaceutical outlets and strategies for licensing pharmacies in the context of a limited inspection workforce. The discussions assisted the DDA to develop a strategy to conduct inspections for the 22,000 pharmacies and 3,000 wholesalers in the country. MTaPS also worked with the DDA to develop GPP inspection tools for both private- and public-sector inspections and for the abbreviated GPP inspection. The GPP tool comprises about 200 indicators covering six areas; the indicators are classified as critical, major, or minor to provide guidance on the criteria for licensing. MTaPS and DDA inspectors piloted the tools in Birgunj and Biratnagar provinces to ascertain the feasibility of using the tools to inform licensing decisions and identify areas for improvement. The MTaPS team also drafted GDP guidelines and presented the document to the DDA inspectorate for review.

MTaPS provided support to pharmacist inspectors in DRC to conduct enforcement field visits to pharmaceutical medicines distribution outlets (wholesalers) in Nord Kivu. The inspection team inspected wholesalers to verify the registration status of medicines sold and take action in case of noncompliance. In addition, the team checked the premises to identify unregistered medical products on sale and products with expired marketing authorization. The team also visited the General Directorate of Customs Services and the National Quality Control Agency (*Office Congolais de Contrôle* [OCC]) to establish the status of wholesaler compliance to the registration requirements and the failure status of analyzed medicines.

The enforcement field visits revealed that the OCC, which is one of the customs services, now systematically uses the Directory of Registered Medicines to check whether medical products are registered before engaging in any quality control analyses for such products at the country's points of entry. The OCC was able to detect products that do not have marketing authorization and halt

importation. The Directory of Registered Medicines needs to be updated with products granted marketing authorization in 2021.

MTaPS assisted the Provincial Health Inspectorate in taking remedial action following the identification of anomalies, such as advising importers to obtain marketing authorization for unregistered products within the next three months and wholesalers to renew the registration for all products with a marketing authorization expiring in the next six months. Further actions following the enforcement field visits involved raising awareness among wholesalers and implementing partners on product registration and advising them to select only registered and authorized products for distribution or sale; capacity building for wholesalers, retailers, and partners on marketing authorization processing; improving the availability of the current Directory of Registered Medicines at border entry points; ensuring funding for inspection visits and coordination meetings; and implementing a mechanism for the prequalification of wholesalers by the DPM and the *Programme National d'Approvisionnement en Médicaments.* MTaPS will support the DPM to update and disseminate the most recent Directory of Registered Medicines, extend inspections to retail pharmacies, and build the DPM's capacity to manage the update. MTaPS will also support the OCC to strengthen control mechanisms through the use of the Directory of Registered Medicines.

Improve PV Systems in Countries and Regions

Please refer to objective 5.3 for details.

Strengthen Use of Electronic Information Technology Solutions for Efficient and Transparent Medicine Regulatory Processes

Please refer to objective 3 for details.

Advancing Regional Regulatory Harmonization Efforts

MTaPS is working with regional and international organizations to augment harmonization of medicines regulation in ECOWAS. During this reporting period, MTaPS held a meeting with WHO and the West African Health Organization (WAHO) to discuss potential collaboration on PV data sharing in the region and reached agreement that WHO would facilitate data exchange on patient safety and PV. MTaPS supported the development and uploading of the SIDMACH Ltd PV platform to the WAHO Essential Medicines and Vaccines Portal. Further work will be undertaken to initiate uploading data generated from countries to the PV platform.

As part of fostering harmonization of medicines regulation within the **IGAD/EAC** regions, MTaPS engaged local manufacturers, including the FKPM, to discuss approaches for enhancing regulatory compliance using technical exchange networks and compliance groups.

MTaPS is collaborating with various networks in Asia such as the Association of Southeast Asian Nations (ASEAN) and South-East Asian Regulatory Network (SEARN) to promote convergence and harmonization in medicines regulation through adaptation of uniform medicine registration processes. Working with ASEAN's Pharmaceutical Products Working Group, MTaPS received feedback on priority areas for support, which were matched with the identified potential activities to promote harmonization of medicines regulation in Asia. MTaPS is now awaiting confirmation from ASEAN prior to implementation.

MTaPS held a meeting with SEARN/SEARO to discuss the roll out of the online Good Manufacturing Practice (GMP) training course for pharmaceutical manufacturers and regulators previously conducted in India with MTaPS' support. SEARN/SEARO awaits confirmation of readiness to roll out the GMP capacity-building course in the selected countries, including Bangladesh, Indonesia, and Sri Lanka.

To enhance pharmaceutical regulatory expertise among the region's workforce in product registration and PV, MTaPS embarked on performing a regional competency mapping for pharmaceutical regulation. The competency mapping exercise is planned to be conducted in Bangladesh, Nepal, Vietnam, and the Philippines after obtaining mission concurrence. MTaPS will utilize the WHO Competency Mapping framework and adopt it to each country's context.

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 has developed and shared a request for proposal (RFP) with the Department of Health (DOH) and USAID for engaging technical assistance from an off-the-shelf electronic logistics management information system (eLMIS) provider to acquire and implement in the Philippines. They have also conducted a high-level presentation on the eLMIS implementation approach, and a timeline was developed and endorsed by the DOH Supply Chain Management System (SCMS).

MTaPS Philippines is continuously working with Columbus Consulting to update and align Pharmacovigilance Information Management Systems (PViMS) to the Philippines context. MTaPS and Columbus Consulting are also preparing to automate the update and release cycle to ensure future sustainability for the DOH. MTaPS has also facilitated the approval of formal data sharing between the ITIS and PViMS. In July 2021, MTaPS will support the DOH Pharmacy Department and the Knowledge Management and Information Technology Service, encoding the adverse events reports in PViMS starting with 2 regions and 45 sites.

Pharmadex work was continued in Mozambique and Nepal. In previous quarters, MTaPS Mozambique developed the main functions of the import module for Pharmadex, conducted user acceptability testing sections, and implemented changes requested by the National Directorate of Pharmacy (DNF) to improve the system. However, DNF revealed that it had allowed development of a parallel import module by another software developer using support from the Global Fund. DNF requested that MTaPS link this parallel import module software to Pharmadex; hence, in the previous quarter, MTaPS prepared an options analysis showing two options and the pros and cons of each to help DNF decide on the best strategy. The Global Fund also worked with DNF counterparts to get approval from DNF to transfer the existing Pharmadex system to a cloud-based host, which was completed. During this quarter, MTaPS Mozambique continued to work on obtaining the requirements for enhancing Pharmadex to follow the common technical document format for marketing authorization dossiers. For MTaPS Nepal, Pharmadex 2.0 implementation is progressing, and registration module building has begun. The customization of Pharmadex to register pharmacies, wholesalers, and importers was finalized and testing by DDA staff was initiated. Training material has been developed as well as the training of DOH staff to operate the new version of the Pharmadex registration module. An IT consultant has been hired to transfer data from the DAMS software system into Pharmadex, beginning in mid-July. The DOH—assisted by MTaPS—will host Pharmadex on a government server after successful completion of Pharmadex testing and training for DOH staff.

MTaPS Bangladesh continued e-TB Manager training as part of the Dhaka division rollout. A total of 451 participants (126 females and 325 males) including TB and Leprosy control assistants, the program organizer of the civil surgeon office, and supervisors and other staff from implementing organizations in the Dhaka urban area were trained, and three more batches are planned during the quarter. MTaPS Bangladesh successfully incorporated the Active Drug Safety Monitoring and Management, aDSM electronic reporting system into e-TB Manager and is in the process of introducing it into the National Institute of Diseases. Implementation of aDSM was also discussed in the biannual coordination/partners meeting organized by NTP on June 2, 2021, to make it interoperable with the government pharmacovigilance reporting system. This will help increase the availability of information on drug safety and patient adherence to drug-resistant (DR) TB treatment.

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

MTaPS Philippines continues to support DOH in collecting data from public and private sectors to calculate and analyze couple years of protection (CYP), a key family planning program coverage indicator. MTaPS finalized and shared the draft of the July 2019–June 2020 CYP report to key stakeholders.

MTaPS Nepal initiated Pharmadex customization for DDA to implement registration, inspection, and pharmacovigilance modules in one common platform, and systems requirements specifications (SRS) for pharmacy, wholesaler, and importer registration was finalized. SRS of manufacturers registration is in the process of approval and SRS of medicines and medical devices are to be finalized by the end of June 2021. This means that the increased number of qualified assessors, due to the new system (Pharmadex), is critical for adherence to good dossier review.

MTaPS Bangladesh provided training that will increase the quality of data inputs to e-TB Manager, which will improve the availability of TB patient information. A paperless reporting and recording system for DR TB using e-TB Manager has been introduced during the last quarter for all DR TB treatment facilities. The transition to electronic reporting has reduced the reporting workload and created opportunities to use the information more effectively.

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

EVIDENCE-BASED MEDICINE STRATEGIES AND PHARMACEUTICAL BENEFITS PROGRAMS DEVELOPED

During this quarter, MTaPS shared the final concept note including a detailed agenda and curriculum for the Asia regional Health Technology Assessment (HTA) workshop with the USAID Asia Bureau and MTaPS' Contract Officer Representative (COR) team. The regional workshop is targeted at participants from Indonesia, Kyrgyz Republic, Philippines, and Vietnam, and it is in line with MTaPS' plan for regional dissemination and application of the HTA roadmap in selected Asian countries. The curriculum design of the regional workshop includes a ten-hour pre-workshop preparation that permits registered course participants to access pre-reading materials and country-specific presentation slides from MSH's LeaderNet platform. The workshop curriculum has also been tailored to meet the participating countries' varying needs. For instance, parallel sessions focused on HTA introduction basics, institutional structures, and methods will be set up to address the needs of countries that are at an earlier stage of HTA implementation. In addition, HTA specialists from other countries within the region and agencies such as the World Health Organization and the International Decision Support Initiative will be invited to share their experiences and common challenges of HTA advancement with participants.

MTaPS also developed publications based on the HTA roadmap findings. The balanced scorecard analysis included in the Asia addendum was presented in poster format at the International Society for Pharmacoeconomics and Outcomes Research 2021 in May. MTaPS also finalized and submitted a journal article based on the Asia addendum analysis to the Health Policy and Planning journal in May 2021. During this quarter, MTaPS received feedback from the USAID Asia Bureau on the brief on defining pharmaceutical benefits packages and has initiated revisions to incorporate feedback. The finalized report will be shared in quarter four (Q4). MTaPS is also working on Asia Bureau's feedback on the regional pharmaceutical pricing policies report; a final version is expected to be submitted to USAID in Q4.

Following the approval of the dissemination plan for the brief of pharmaceutical benefits and the costing of pharmaceutical benefits, MTaPS also began developing two blogs to be delivered in Q4: one on defining benefits packages and the other on costing pharmaceutical benefits packages. A webinar on the full suite of year two deliverables on pharmaceutical financing is currently being developed and will be delivered in Q4.

EFFICIENCY OF PHARMACEUTICAL RESOURCE ALLOCATION AND USE INCREASED

Efficient resource allocation and use are important elements of sustainable financing of pharmaceuticals and related health technologies. During this quarter, at the request of the Director General of Health Services, MTaPS Bangladesh reviewed its workplan to deprioritize the pricing guideline training on Medical Surgical Requisite (MSR) items in favor of conducting a pre-requisite capacity building program on core procurement management for Ministry of Health (MoH) line directors. The MSR pricing review has been rescheduled to year four, quarter one.

To support the National Health Care Financing Strategy, MTaPS Bangladesh also held discussions with the Health Economics Unit on health resource tracking and agreed to conduct a pharmaceutical expenditure tracking exercise focused primarily on maternal and child health product use in Bangladesh.

Following USAID workplan approval, MTAPS Indonesia initiated recruitment of key personnel for approved activities. A country coordinator/lead has been identified and will start work on the July 1,

2021. During this quarter, MTaPS Indonesia also met and discussed the pre-conference theme with the Directorate of Health Financing and Insurance (PPJK). In line with the support to Health Technology Assessment Asia Link (HTAsialink) , MTaPS presented an updated HTAsialink concept note to USAID and PPJK. MTaPS also developed the scope of work for a technical consultancy required to review and provide a landscape analysis of data sources for pharmaceutical expenditure tracking in Indonesia. MTaPS received 12 applications for this consultancy and interviewed 3 candidates. The successful candidate is an expert from the University of Indonesia's Faculty of Public Health and will start work on July 1, 2021.

MTaPS Jordan continues to work with MoH to review and develop potential activities for optimizing pharmaceutical sector financing and resource allocation relative to vaccine use and distribution.

To enhance pharmaceutical resource allocation and use, MTaPS Philippines continued its support to the procurement services of the Philippine Department of Health to finalize the Administrative Order for Framework Agreement and Pooled Procurement Mechanism by providing comments and suggestions. The framework agreements and pooled procurement mechanisms will enable a greater economy of scale and engender a more efficient procurement process for health commodities in preparation for the further devolution of health systems in the Philippines. MTaPS and USAID's Reach Health project are continuing collaboration to test out a Provider Integration and Engagement System (PIES). PIES, a digital platform for integrating public and private health service providers into local health systems, will help with cross referrals and cost reimbursements for health services including pharmaceuticals.

During this quarter, the MTaPS Asia Bureau continued planning for the proposed five-day training on the One Health Tool to be held virtually for stakeholders in Kyrgyzstan from July 26 to July 30, 2021. MTaPS hired a local consultant to support adaptation of training materials to the Kyrgyz context and translation of materials into the Russian language for delivery during the training. The Asia Bureau also continued conversations with other interested Asian country missions—including Bangladesh, Nepal, and the Philippines—for a second One Health Tool training planned for Q4. The MTaPS Cross Bureau developed a draft policy brief on pharmaceutical expenditure tracking using the data from Burkina Faso. The final version will be shared with the COR team in Q4 for review. During this quarter, MTaPS and the USAID COR team had a preliminary meeting with USAID Benin on the commencement of a pilot pharmaceutical expenditure tracking exercise. A consultant is being hired to initiate work based on approval received from USAID Benin.

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

Ensuring the availability of safe, effective, quality-assured, and affordable medicines and health technologies is critical for effective health outcomes. However, it requires a strong and coordinated supply chain management system that includes sustainable demand planning; efficient and coordinated procurement systems; optimized warehousing, inventory management, and delivery systems; reliable data for decisions supported by local institutional and individual capacity; effective and efficient management and monitoring; and sustainable financing.

Between April and June 2021, MTaPS **Bangladesh** continued working with and supporting the Ministry of Health and Family Welfare (MOHFW), its departments, and other stakeholders in different aspects of supply chain management of essential medicines and other health technologies.

MTaPS **Bangladesh** continued to support forecasting, supply planning, and procurement of TB and COVID-19 commodities. In this quarter, the National Tuberculosis Program (NTP), with technical assistance from MTaPS, completed its quantification of first- and second-line TB drugs and placed orders. In addition, MTaPS provided direct assistance to the NTP's Procurement and Supply Management (PSM) unit to prepare the TB preventive therapy (TPT) procurement plan for 2021 by finalizing the TPT medicine quantification exercises and placing the order. In addition to quantification, MTaPS assisted the NTP and USAID TB implementing partners to develop standard operating procedures (SOPs) for providing TPT and a complementary job aid. The TPT intervention started in the country in May 2021 and will be scaled up throughout the year. The uptake of TPT will help Bangladesh bend the TB incidence curve down. Timely quantification and order management are playing an important role in ensuring the availability of TB treatment and preventive medicines at the central and peripheral levels, which contributes to effective TB control.

During this quarter, MTaPS provided technical assistance to the Directorate General of Health Services (DGHS) in preparing the COVID-19 response mechanism fast tracked proposal to the Global Fund. This portion of the funding will address the immediate COVID-19 response and health system needs. MTaPS' involvement is in quantifying oxygen-related equipment and supplies. Once the proposal is approved, the funds will strengthen the country's preparedness for a surge situation that would escalate oxygen demand.

The availability of contraceptives has been satisfactory over the last couple of years; however, administrative procedures hindered the timely procurement of implants between 2019 and 2021. Two procurements with a total quantity of 575,000 sets were completed during this quarter, and the products were received at the Directorate General of Family Planning (DGFP) central warehouse (CWH). The MTaPS technical team worked closely with the Additional Director-CWH and other regional warehouses to prepare a distribution plan to all upazilas to ensure services to clients.

With the support from MTaPS and in coordination with the NTP, a consulting firm is conducting a peripheral TB commodities storage capacity assessment at an optimum pace amid a worsening COVID-19 situation. The largest and most important portion of the assessment—quantitative data collection—is complete. Onsite data validation is complete in the 30 target sites as well. About one-third of the qualitative data from the field have been collected to date. The assessment will be completed in time to

help the NTP plan to integrate and transition the TB storage from nongovernmental to government facilities.

MTaPS Bangladesh participated in the TB PSM coordination meeting on May 30. The NTP has started to arrange meetings twice per quarter, as per MTaPS' suggestion, which will help the NTP, and its partners coordinate better and make timely decisions regarding PSM.

MTaPS Bangladesh has also continued to support capacity building in supply chain management. During a training for supply officers and troubleshooters, which was organized and funded by the DGFP, MTaPS facilitated technical sessions on inventory management tools, such as the warehouse inventory management system, the upazila inventory management system, and the DGFP electronic logistics management information system, and on using data for making supply chain decisions to better ensure the availability of commodities. During the training, the Honorable Secretary of the Medical Education & Family Welfare (ME&FW) division of the MOHFW, Md. Ali Noor, and the Director General of Family Planning, Ms. Shahan Ara Banu, who were present in one of the sessions, expressed their appreciation for the collaboration with USAID and MTaPS and acknowledged USAID's contribution in developing the tools, which have played a vital role in ensuring the availability of family planning commodities throughout the country. A total of 108 participants (14 female, 94 male) attended the three-day training to enhance their skills on the inventory tools and troubleshooting scenarios. Participants learned how to view and analyze data in the supply chain management portal to replenish supplies and make adjustments. The DGFP is expecting better performance from the participating officials in reducing stock-outs of contraceptives at service delivery points.

MTaPS facilitated technical sessions during a virtual refresher training on supply chain management organized by deputy directors of different districts under the DGFP. A total of 255 participants attended the virtual training (70 female, 185 male), including deputy directors; assistant directors; upazila family planning officers; medical officers in maternal and child health; and storekeepers from upazilas from 11 districts (Cox's Bazar, Rangamati, Feni, Khagrachari, Chapainawabganj, Bhola, Sherpur, Chattagram, Satkhira, Sirajganj, and Gaibandha). The director general, the director (L&S), and divisional directors attended remotely and provided guidance to local-level officials to strengthen the monitoring of logistics functions and increase data use in decision making to ensure the availability of family planning commodities.

The MTaPS health information system team, eLearning lead, and eLearning content developers at headquarters viewed a demonstration of the MuktoPaath eLearning platform provided by the a2i focal point. The health information system team and a2i focal person answered a few questions from the content developers. Using the existing MuktoPaath platform, developed and maintained by a2i, will eliminate the need to develop a new platform or host a data center. The eLearning platform and courses will reduce the cost and time to build the capacity of the MOHFW and its staff.

During this quarter, MTaPS and DGFP representatives participated in a virtual orientation session on the transition of the Procurement Planning and Monitoring Report (PPMR) to the Global Family Planning Visibility and Analytics Network platform, which was organized by the Reproductive Health Supply Coalition and USAID Washington. Starting in July 2021, the DGFP will take responsibility from MTaPS for sending the PPMR to the Reproductive Health Supply Coalition, while MTaPS will work closely with the DGFP to prepare the report on time. Gradually, MTaPS' support will be transferred to the DGFP completely.

The DGHS requested MTaPS, through USAID, to build the capacity of its directorates in procurement management. This request came because the Central Medical Stores Depot, which is the procuring entity, has not been performing adequately, and DGHS line directors are stepping in for their directorates even though they have limited experience in procurement. MTaPS modified the workplan to prioritize this capacity building over the price guide update, which will be carried over to next year,

and mobilize the needed funding. MTaPS plans to conduct a training in the first half of July 2021 to improve procurement capacity of the different directorates with the aim of product availability.

In Jordan, MTaPS supported the Ministry of Health (MOH) Vaccine Procurement Modernization initiative by developing a summary of existing legislation in the procurement bylaws and health laws related to the conditions precedent (CP) agreed to by USAID and the Government of Jordan. MTaPS analyzed and drafted recommended modifications, including suggested changes to procedural requirements. The MTaPS team conducted several one-to-one meetings with MOH directorates, including the communicable disease directorate, finance and administration directorate, and project management directorate; the Jordan Food and Drug Administration (JFDA); the Government Procurement Department; UNICEF; WHO, and the World Bank and discussed the recommendations. Furthermore, MTaPS facilitated the National Vaccines Procurement Modernization Committee meeting on June 7, 2021, chaired by the MOH, to review all recommendations and decide on next steps for implementation. Agreement was reached on all recommendations and implementations for the Government to meet all CPs by September 2021. MTaPS will continue supporting the MOH toward the implementation of recommendations to modernize the procurement of life-saving vaccines in the country.

During this quarter, MTaPS **Philippines** developed two training modules on pharmaceutical systems strengthening and one on warehouse operations management that have been reviewed by the DOH Health Human Resources Development Bureau (HHRDB) and are awaiting feedback from the Procurement and Supply Chain Management Team (PSCMT). In addition, MTaPS is finalizing courses on supply chain management in the context of public health and on inventory management and good distribution practices. MTaPS will roll out a series of webinars on these five topics in quarter 4 to test them out. The materials will be revised based on feedback from the webinars and will be converted to an eLearning format prior to endorsement by the DOH Academy. The modules aim to capacitate the PSCM workforce. Corresponding continuous professional development credits will be applied through the DOH HHRDB and will be awarded to those who complete the whole training.

MTaPS is also supporting the Supply Chain Management Service (SCMS) office under the PSCMT to carry out capacity building activities on supply chain management as part of the DOH's Devolution Transition Plan. On June 24, 2021, MTaPS supported the SCMS and provided training on warehouse management and inventory management to universal health care integration sites under Center for Health Development Western Visayas to enable warehouse management staff to better manage warehouse operations and inventory to ensure an uninterrupted supply of health commodities.

MTaPS continues to support the DOH in collecting data from the public and private sectors to calculate and analyze couple years of protection (CYP), which is a key family planning program coverage indicator. MTaPS finalized and shared the draft of the CYP report for July 2019–June 2020 with key stakeholders, with the objective of receiving feedback. In addition, MTaPS has started working with the stakeholders to collect data for the July 2020–June 2021 CYP report.

IMPROVED PATIENT-CENTERED PHARMACEUTICAL CARE

In **Jordan**, MTaPS supported the MOH Directorate of the Pharmacy and Clinical Pharmacy by analyzing antimicrobial dispensary records across four hospitals (Prince Hamza, AL-Bashir, AL-Karak, and Jordan University) from 2019 and 2020 to understand whether the COVID-19 pandemic has had an impact on antimicrobial consumption. This retrospective descriptive observational study is using antimicrobial dispensing as a proxy for antimicrobial use. During this quarter, MTaPS received and cleaned the data. Next quarter, MTaPS will analyze prescriptions using WHO's Anatomical Therapeutic Chemical/defined daily dose methodology to compare trends and summary statistics of the outcome measures before and during the COVID-19 pandemic to see whether there are any observable changes in antimicrobial use.

IMPROVED PATIENT SAFETY AND THERAPEUTIC EFFECTIVENESS

MTaPS **Bangladesh** supported the Directorate General of Drug Administration's (DGDA) Technical Sub-Committee this quarter to assess the causality of adverse event reports received between March 2020 and March 2021. The committee evaluated 381 serious adverse event reports and classified them following the WHO-Uppsala Monitoring Center causality assessment scale. MTaPS assisted the DGDA in developing an adverse events investigation procedure and in reviewing the procedure for taking a risk-based approach for vigilance activities, including vaccines. This effort will help the DGDA identify safety issues and make decisions to ensure medicine safety. MTaPS/Bangladesh also successfully incorporated the active drug safety monitoring (aDSM) electronic reporting system into e-TB Manager and has introduced it in the National Institute of Diseases of Chest and Hospital; as of the end of the quarter, the hospital had reported 13 aDSM cases through e-TB Manager. Implementation of aDSM and the possibility of incorporating aDSM into e-TB manager and making it interoperable with the DGDA pharmacovigilance reporting system was discussed in the biannual coordination/partners meeting organized by the NTP on June 2, 2021. The activity will help increase the availability of information on drug safety and patient adherence to drug-resistant TB treatment. In addition, Bangladesh is scaling up TPT, and MTaPS is supporting the NTP and USAID TB implementing partners in developing an SOP and job aid for aDSM implementation for TPT. MTaPS also established a TPT reporting system in e-TB Manager.

MTaPS **Jordan** provided support to the Local Health System Sustainability (LHSS) activity in preparation for the telecounseling center's new technical task. While the telecounseling center was initially designed to enable follow-up of COVID-19 patients, it is also suitable for safety surveillance of adverse events following immunization. MTaPS participated in preparatory meetings with the MOH and JFDA to outline training requirements for 200 nurses. The MOH and JFDA developed the training materials with WHO. During a meeting on June 16, 2021, with the JFDA, MOH, and LHSS, it was decided that training should commence with the available material. MTaPS is to further work on strengthening the technical and systematic functions of both active and passive surveillance with the MOH and JFDA. MTaPS is providing support in ensuring systematic randomization to the sampling of those vaccinated.

During this quarter, MTaPS **Mozambique** continued to support the active safety surveillance programs on newly introduced HIV and TB medicines. A central-level supervisory team comprising staff from the National Directorate of Pharmacy (DNF) and HIV program, with support from MTaPS, finalized the previous quarter's supervision exercise to the nine implementing health facilities and provided guidance to health facility focal persons through monthly phone calls. During this quarter, another round of supervision visit started in June, and three health facilities were supervised by a supervision team comprising national focal persons from the DNF's pharmacovigilance (PV) department and HIV program and provincial focal persons from the HIV and PV departments of the Provincial Directorate of Health. The supervisory teams followed up on health facility implementation of recommendations from previous supervisory visits and calls. The supervision visits and calls confirmed that health facility teams continued to follow up with the enrolled patients, completed the required data collection forms, and entered data into the Pharmacovigilance Monitoring System (PViMS). Challenges related to data quality management were identified, and supervisory teams will work with health facility staff to develop action plans to overcome current challenges. The remaining six sites will be covered in the early part of the following quarter. MTaPS also continued to support the DNF on management of the data generated from the active safety monitoring program for the tenofovir-lamivudine-dolutegravir (TLD) regimen that were entered into PViMS to ensure high-quality data for better decision making. An increased number of adverse events were reported for TLD during this quarter (22 mild and 1 moderate) compared to the previous quarter (17). During this quarter, MTaPS supported the DNF to finalize and submit the protocol for active safety surveillance of TPT medicines to the Bioethics Committee for ethical approval after it had been reviewed by the National Public Health Directorate. Feedback from the Bioethics

Committee is awaited. MTaPS has also supported development of SOPs and training materials to be used in the implementation of the protocol. The SOPs and training materials are currently undergoing translation into Portuguese. MTaPS held coordination meetings with US Centers for Disease Control and Prevention implementing partners such as the Elizabeth Glaser Pediatric AIDS Foundation and the Center for Collaboration in Health to clarify implementation roles and responsibilities for the TPT active safety monitoring program.

MTaPS **Nepal** worked closely with the Department of Drug Administration (DDA) and other stakeholders, including Ministry of Health and Population disease-specific programs and referral hospitals, to clarify their roles in PV. A PV situational analysis that identifies strengths, weaknesses, opportunities, and threats for building a PV program was developed. The results from the WHO Global Benchmarking Tool (GBT) assessment formed the basis for the PV situation analysis based on which strategy to strengthen PV in Nepal was formulated. The GBT-recommended activities to strengthen the maturity level of PV were reviewed and prioritized. During the review, many GBT-recommended activities to reach maturity level of 2 were found to need a legislative revision and increase in staffing norms at the central and provincial levels; thus, MTaPS included these requirements in the updated zero draft version of the drug act. However, the approval of the updated drug act is not expected immediately, and there is a need to update regulations and guidelines in the interim—a process that has just started and will be carried forward in the new year. MTaPS also shared Management Sciences for Health's comparative analysis of different electronic PV data systems, which will facilitate and guide discussion on the best solution for Nepal. During this quarter, MTaPS strengthened the DDA in terms of its PV information sources and reference material. The procurement of pharmacopoeias was prepared in collaboration with the National Medicines Laboratory and the Promoting the Quality of Medicines Plus program. Procurements of pharmacopeia with online access, multiuser access, and/or hard copies were initiated. The procurement will be finalized in July. The DDA is in the process of becoming member of the International Society of Pharmacovigilance. MTaPS has submitted an application in its behalf and is in the process of approval and payment. In addition, a detailed workplan was drafted and a PV consultant was hired to support the DDA in establishing the PV unit. Implementation of these activities will ensure the establishment of stronger PV in Nepal in line with best WHO practices, raise the GBT maturity level in the area of PV, and strengthen medicines information and medicines safety.

In the **Philippines**, MTaPS organized an online forum to promote greater understanding of active PV systems for ensuring patient safety and pharmaceutical governance. During this forum, lessons learned from two operational research activities that used active surveillance methods for monitoring the safety features of a new TB drug (bedaquiline) and novel treatment regimen (nine-month drug-resistant TB regimen) were discussed. The forum highlighted the importance of active PV and shared the practical experience and lessons learned by the DOH in implementing active PV programs and utilizing PViMS. More than 90 participants from the DOH Pharmacy Division, NTP, Lung Center of the Philippines, Knowledge Management and Information Technology Service, Health Regulation Office, Public Health Services Office, Food and Drug Administration, WHO, the Global Fund, USAID, implementing partners, Centers for Health Development offices, and National AIDS and STI Prevention and Control Program benefited from the knowledge shared in the online forum. MTaPS continued to work with the FDA to push the agenda for issuing policy on active PV to further institutionalize pharmaceutical governance for ensuring the safety and efficacy of medical products.

During quarter 3, MTaPS and the **Intergovernmental Authority on Development (IGAD)** carried out several PV-related activities in the areas of baseline assessment, cross-border PV sensitization, strengthening of governance structures for PV, capacity building on PV data management and use, supportive supervision, and strengthening and harmonizing PV processes and tools.

- MTaPS, the IGAD secretariat, and the member state of Djibouti conducted the baseline assessment of PV systems in Djibouti using the Harmonized Indicator-Based Pharmacovigilance Assessment and Monitoring Tool. The assessment of PV systems in IGAD member states aims to identify gaps and aid the development of regional interventions to strengthen patient safety and enhance harmonization. The assessment was conducted by local staff from the Ministry of Health of Djibouti and staff from cross-border facilities. A training on PV and the Harmonized Indicator-Based Pharmacovigilance Assessment and Monitoring Tool was conducted to sensitize participants on the importance of PV and on the components and requirements of a functional PV system. Participants were equipped with skills to assess the current PV system.
- MTaPS, in collaboration with the IGAD secretariat and the Pharmacy and Poisons Board (PPB) of Kenya, trained health care workers from facilities within the MTaPS/IGAD priority cross-border areas of Kenya/Uganda (West Pokot County) and Kenya/Ethiopia (Marsabit county [Moyale]) on PV and Medicines and Therapeutics Committees (MTCs) as part of facility action plan implementation.
- MTaPS engaged the PPB on various occasions to co-create and agree on activities and timelines and on the level of support for the Pharmacovigilance Expert Review and Advisory Committee. This committee is responsible for reviewing and analyzing safety data of medical products and health technologies, including causality assessment, and assisting in signal detection and generation.
- MTaPS held several meetings with the IGAD secretariat to review, plan, and discuss MTaPS/IGAD activities. The planning meetings were important to ensure seamless implementation of activities in the IGAD region, including prioritization of activities and timelines.
- MTaPS continued to review and update the PV and post-market surveillance (PMS) training package for IGAD cross-border areas. The two training packages (a one-day package and a five-day course) are being used to train facility and county focal persons to create awareness, build capacity, and instill skills on PV/PMS as part of the action plan implementation and continuous quality improvement.
- MTaPS, in collaboration with the IGAD and in conjunction with the PPB, continually engaged the cross-border facility and county focal persons to follow up and offer guidance and technical assistance on the implementation of the facility/sub-county/county action plans developed during the PV training and sensitization for the IGAD/MTaPS priority cross-border areas of Turkana, West Pokot, Moyale, and Mandera, including:
    - Supportive supervision in Moyale cross-border facilities to offer technical assistance and mentorship to facility staff on the uptake and implementation of PV and patient safety activities
    - Technical assistance using a continuous quality improvement approach and mentorship to cross-border health facilities in West Pokot and Marsabit counties by holding two-day training workshops on PV and MTCs. The sensitizations were attended by 46 (9 female, 37 male) facility staff and county health management team members. During these workshops, implementation of the developed workplans was evaluated, and participants were equipped with the skills to report adverse drug reactions, particularly adverse events following immunization in the face of the COVID-19 vaccine roll-out, and how to institutionalize patient safety activities through the establishment of MTCs.

BETTER CONTAINMENT OF ANTIMICROBIAL RESISTANCE AND INFECTION PREVENTION AND CONTROL

Support to countries' achievement of Global Health Security Agenda (GHSA) objectives

MTaPS supports GHSA/AMR activities in **Bangladesh, Burkina Faso, Cameroon, Côte d'Ivoire, DRC, Kenya, Mali, Mozambique, Nigeria, Senegal, Tanzania,** and **Uganda**, focusing on promoting antimicrobial stewardship, infection prevention coordination, and multisectoral coordination. For more details 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

The focus for Q3 was to continue with the planning for regional dissemination and application of the HTA roadmap in selected countries. The dissemination and application will be conducted through a regional workshop targeted for August 2021 with participants from Indonesia, Kyrgyz Republic, Philippines, and Vietnam. The concept note with the detailed agenda and curriculum of the workshop was shared with MTaPS leadership and USAID Asia Bureau and COR teams. The program design includes 10 hours of curriculum beginning two weeks ahead of the workshop; at that time, participants will be invited to join a community of practice on MSH's LeaderNet platform that will allow them to access pre-reading material, templates for preparing country-specific slides, and networking with peers. Office hours with global and regional HTA experts will be held a week ahead of the workshop to address participants' questions about the workshop's pre-work and sessions. Similar post-workshop sessions will be held to follow-up on country action plans and provide troubleshooting support on the topics covered in the workshop.

The workshop curriculum has also been customized to meet the varying needs of the participating countries. Kyrgyz and Vietnam are at earlier stages of HTA implementation; therefore, parallel sessions will be organized focusing on basics of HTA introduction, institutional structures, and methods. HTA experts from other countries, such as India, and agencies, such as WHO and/or the International Decision Support Initiative, will be invited from the region to share their experiences and common challenges for HTA advancement with participants. MTaPS is currently developing the presentation materials and revising the workshop concept note based on the feedback received from USAID. The updated concept note will be circulated in July 2021.

MTaPS also developed publications based on the HTA roadmap findings. The balanced scorecard analysis included in the Asia addendum was presented in poster format at the Professional Society for Health Economics and Outcomes Research 2021 conference in May 2021. MTaPS has finalized a journal article based on the Asia addendum analysis and submitted it to *Health Policy and Planning* in May 2021.

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

Activity 2.1.1: Build capacities related to the use of the One Health Tool to cost pharmaceutical benefit packages

During Q3, MTaPS continued planning for the first One Health Tool (OHT) training to be held virtually for stakeholders in Kyrgyzstan July 26-30, 2021. MTaPS engaged a local consultant to tailor training materials to the Kyrgyz context, arrange logistics for venue and interpretation, and translated all training materials into Russian for delivery of the training. The USAID Mission in Kyrgyzstan has shared an introductory letter with the MOH to identify participants for the five-day training, who will gather at a local hotel in Bishkek.

MTaPS also continued conversations with other interested Asian country missions, including Bangladesh, Nepal, Philippines, and Vietnam (though Vietnam Mission colleagues confirmed they are not interested in sending participants for the second training). The second training will be planned for participants from Bangladesh, Nepal, and Philippines, and held in Q4.

FY20/PY2 Activities

MTaPS received feedback from USAID on the brief on defining pharmaceutical benefit packages (2.1.1b) and has begun revising to account for feedback. The finalized report will be shared early in Q4. MTaPS also received feedback from USAID on the report on pricing policies within the Asia region (2.2.1); the team has addressed the feedback and will submit a final version to USAID early in Q4.

MTaPS also began planning for dissemination of the Y2 deliverables, which will be shared through two blogs: one on each topic of defining and costing pharmaceutical benefit packages. MTaPS will also plan to deliver a webinar on the full suite of Y2 deliverables on pharmaceutical financing.

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

Activity 3.1.1: Collaborate with Asian networks, such as Association of Southeast Asian Nations and the South East Asian Regulatory Network, to adopt uniform medicine registration processes

During Q3, MTaPS used various strategies to obtain feedback from the Asian networks to implement support for regulatory system strengthening and promote regional harmonization in medicine regulation. MTaPS received feedback from the Association of Southeast Asian Nations' Pharmaceutical Products Working Group PPWG (ASEAN PPWG) in June 2021. The feedback was comprised of responses from the 10 member states compiled in the form of a survey report on the preferred areas for support in training and capacity building for improving the regulatory workforce. Based on the responses from the eight participating ASEAN member states, convergence of standards for medicines registration/marketing authorization garnered four votes from Indonesia, Philippines, Singapore, and Vietnam, representing 50% of the participating ASEAN member states and adjudging it as the greatest area for prioritization, followed by quality control and pharmacovigilance. MTaPS matched the areas identified for support by the ASEAN PPWG with the priorities documented in the concept note and has submitted a response through USAID to the ASEAN PPWG Secretariat for confirmation before implementation.

Activity 3.1.2: Establish collaboration between academic/research institutions to grow pharmaceutical regulatory expertise among the region's workforce in key regulatory functions

The report on capacity building of pharmaceutical manufacturers in Asia through an online course on current Good Manufacturing Practices was finalized and submitted to USAID. Benefits arising out of delivery of the course to the pharmaceutical industry in India were to be replicated in other countries in the Asian region.

A meeting was held with the South East Asian Regulatory Network/South-East Asia Regional Office (SEARN/SEARO) to discuss the roll out of the online Good Manufacturing Practices training course for pharmaceutical manufacturers and regulators conducted in India. Follow-on of the initial phase of the capacity-building sessions was to be deliberated in July 2021 after making in-country consultations and preparatory work to host the online course. MTaPS will follow up with SEARN/SEARO in the coming month to establish the roll out of the course to targeted audiences in Bangladesh.

Sub-Objective 3.2a: Strengthen the resilience of medical products regulatory systems

MTaPS initiated dialogue with the missions and government counterparts to seek mission concurrence and consent to implement activities supporting regulatory system strengthening using the bottom-up

approach while waiting for feedback from ASEAN and SEARN. Discussions were held in form of virtual meetings with the mission in the Philippines and Vietnam, both which provided positive feedback. MTaPS plans to finalize the discussions with Philippines Food and Drug Administration and submit a request for mission concurrence before implementing the planned activities.

Activity 3.2a.1: Enhance pharmaceutical regulatory expertise among the region's workforce in product registration and pharmacovigilance

Sub-activities:

a) Perform a regional competency mapping for pharmaceutical regulation

MTaPS engaged a consultant to undertake the competency mapping exercise in Bangladesh, Nepal, Vietnam, and the Philippines after obtaining mission concurrence. MTaPS will utilize the WHO competency mapping framework and adopt it to each situation. The exercise will also be undertaken in collaboration with WHO country offices.

b) Support virtual capacity-building on medicine registration for specialized products for regulators in the Asian region

Activity 3.2a.2: Facilitate policy convergence of regional technical requirements for medicine registration among Asian countries

After securing consent from the missions, MTaPS is in the process of engaging an expert to work in collaboration with CORE - Singapore to administer the capacity-building session in medicine registration and to facilitate convergence of technical standards.

MTaPS experienced delayed feedback from the Asian networks; it took more than six months to receive the feedback from ASEAN. In addition, there was also a delayed response from MTaPS' partner CORE in Singapore.

OBJECTIVE 4: PHARMACEUTICAL SECTOR GOVERNANCE IN ASIAN COUNTRIES STRENGTHENED

N.B.: As approved by USAID, this objective was developed for PY3 to include governance-related activities. Previously, objective 3 included both the regulatory and governance activities.

Activity 3.2b.1: Develop a how-to manual on managing conflicts of interest

N.B.: This activity was carried over from the PY2 work plan, and it was previously included under objective 3 and sub-objective 3.2: Transparency and accountability in pharmaceutical systems increased.

The report that summarized the findings of a study conducted as first step to developing a how-to manual on managing conflicts of interest (COIs) was shared with the MOHs of 11 countries in the southeast Asian region for verification of the findings. The study carried out by WHO SEARO's Department of Health System Development, WHO Geneva's Department of Health Products Policy and Standards, and MTaPS explores if and how COI policies are implemented in the southeast Asian region, particularly in low-resource countries. Unfortunately, responses from the MOHs to the findings have been delayed due to the rapidly escalating COVID-19 situation in many of the countries.

Similarly, country reviews of the new section on COI policies that will be included in the next WHO SEARO annual publication that reviews progress in improving access to medical products in the southeast Asian region have been delayed. Inclusion of study findings in this annual report is intended to raise awareness on the need for policies for managing COIs of pharmaceutical committee members that make decisions on medicine registration, selection, pricing, and procurement and to motivate countries to give this area more attention. In the meantime, work has begun on developing the publication that summarizes the results of the study as well as the literature search conducted by the WHO Collaborating Center for Governance, Transparency, and Accountability in the Pharmaceutical Sector,

which was conducted to identify model guidance, policies, and procedures on managing COIs in the pharmaceutical sector that can be applied or adapted to the Asian region.

Work continued on developing the manual in this reporting period based on the literature review and survey findings. The detailed outline prepared by MTaPS was reviewed by WHO, and MTaPS reviewed the key literature and is now working on drafting the report.

Activity 4.1.1: Support implementation and dissemination of the how-to manual on COIs

No activities in this quarter.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE (2021)
Activity 1.1.1: Conduct virtual regional capacity-building workshop on HTA methods and institutionalization action plans based on MTaPS HTA roadmap guidance Resubmit journal article on Asia addendum to peer reviewed journal	July - September
Activity 2.1.1: Build capacities related to using the OHT to cost pharmaceutical benefit packages; conduct virtual training for Kyrgyzstan and adapt training materials for second training to account for lessons learned during first training (as necessary); begin conducting interviews with stakeholders to understand whether OHT suits their needs and how it can be used in Asian contexts Determine logistics for second training (meeting venue, participants, etc.) and conduct second, multi-country workshop for Nepal, Philippines, and Bangladesh	July-September
3.1.1 & 3.1.2. Submit the revised proposal to ASEAN and continue discussions with ASEAN and SEARN on potential areas that MTaPS may support to build regulatory capacity among member states of both networks	July
3.2a. 1 Obtain mission concurrence from Bangladesh, Philippines, and Vietnam to undertake competency mapping of regulatory capacity in the countries; commence competency mapping of the regulatory capacity in Nepal where mission concurrence has already been obtained	July - September
3.2a.2. Onboard the consultant to commence collaboration with CORE - Singapore to build capacity in medicine registration and convergence of regulatory standards	July - September
Activity 3.2b.1 and 4.1.1: Follow up with 11 SEAR countries' revalidation of the draft report of study findings and the WHO SEARO regional medicines report; develop a publication that combines the situation analysis findings and literature review; develop first draft of how-to manual for WHO and internal partner review; revise and share second draft for review by experts nominated by WHO; identify a platform to host the eLearning course and begin development of content based on draft report	July-September

INTERGOVERNMENTAL AUTHORITY ON DEVELOPMENT (IGAD) AND EAST AFRICAN COMMUNITY (EAC)

IGAD countries

Djibouti
Eritrea
Ethiopia
Kenya
Somalia
South Sudan
Sudan
Uganda

EAC countries

Burundi
Kenya
Rwanda
South Sudan
Tanzania
Uganda

OBJECTIVE 1: IMPROVE PHARMACEUTICAL-SECTOR GOVERNANCE

IGAD Activity 1.1.1: Support IGAD in establishing and operationalizing governance structures for PV

MTaPS continually engaged the IGAD Secretariat and the member state of Djibouti to plan for the baseline assessment of the PV system in Djibouti. The assessment of the PV system in IGAD member states aims to identify gaps and aid the development of regional interventions to strengthen patient safety and enhance harmonization. The assessment was carried out April 4-9, 2021.

Dr. Enock Nyakundi, the County Pharmacist for West Pokot, contributes during the review of health facility action plans on May 20, 2021. (Photo credit: Margaret Ndungu)

MTaPS held meetings with the IGAD Secretariat, including on June 10 and 23, 2021, to review, plan, and discuss MTaPS/IGAD activities. The planning meeting was important to ensure seamless implementation of activities in the IGAD region, including prioritization of activities and timelines.

In collaboration with the IGAD Secretariat, MTaPS planned for an IGAD PV Expert Working Group meeting that took place on April 13, 2021, to discuss and validate the regional baseline PV report; however, because of the lack of a quorum, this meeting was rescheduled to a later date.

OBJECTIVE 2: STRENGTHEN INSTITUTIONAL AND HUMAN RESOURCE CAPACITY TO MANAGE PHARMACEUTICAL SYSTEMS

IGAD activity 2.1.1: Build capacity of selected NMRAs and cross-border sites in IGAD and East Africa Community (EAC) to analyze and use PV data for regulatory decision making

MTaPS engaged the PPB on various occasions, including April 9 and 21, May 12, and June 23, 2021, to co-create and agree on activities and timelines as well as on the level of support for the Pharmacovigilance Expert Review and Advisory Committee. This committee is composed of those in the medical field with the expertise required to review and analyze safety data on medical products and health technologies, including causality assessment and signal detection and generation.

MTaPS also held meetings with the IGAD Secretariat on June 10 and 24 to discuss implementation of activities to support the lead NMRA in analyzing PV data.

MTaPS also trained cross-border health facilities on establishing MTCs at county, sub-county, and facility levels to anchor PV activities. Part of the role of MTCs is to discuss and review facility PV cases, including management and reporting.

IGAD activity 2.2.1: Support PV activities along IGAD cross-border points to promote patient safety

MTaPS, in collaboration with IGAD and PPB (the NMRA for Kenya), continually engaged the cross-border facility and county focal persons to follow-up and offer guidance and technical assistance on implementing facility/sub-county/county action plans developed during the PV training and sensitization for the priority cross-border areas of Turkana, West Pokot, Moyale, and Mandera in November and December 2020, including:

- Providing support supervision in Moyale cross-border facilities (Moyale Sub-County Referral Hospital, Walda Health Center, and Sololo Mission Hospital) on June 15, 2021, to offer technical assistance and mentorship to facility staff on the uptake and implementation of PV and patient safety activities; facility staff were sensitized and mentored on current PV practices, including identification, documentation, reporting, and management of adverse events that may occur during treatment.
- Using a CQI approach and mentorship to cross-border health facilities in West Pokot and Marsabit Counties by holding two-day training workshops on PV and MTCs on May 19–20, 2021, and June 16–17, 2021, respectively. The trainings were attended by 46 (9 female, 37 male) facility staff (medical officer in-charge, nursing officer in-charge, and pharmacist in-charge from each facility) and county health management team (CHMT) members. During the training, MTaPS evaluated implementation of the developed work plans and equipped the facilities with the skills to report ADRs, particularly adverse events following immunization in the face of the COVID-19 vaccine roll-out, and how to institutionalize patient safety activities by establishing MTCs.
- Continuing review and update of PV and post-market surveillance (PMS) training packages for cross-border facilities and county focal persons to improve awareness on PV/PMS as part of implementing action plans in their facilities.

MTaPS, in collaboration with the IGAD Secretariat and the member state of Djibouti, conducted a training on PV and the Harmonized Indicator-Based PV Assessment and Monitoring Tool for participants from the central MOH in Djibouti and cross-border facilities. The participants were sensitized on the importance of PV and the components and requirements of a functional PV system and were also equiped with skills to assess the current PV system. Participants were able to assess the PV system and collect and review data for the baseline assessment. The training and assessment review was carried out April 4-9, 2021.

Throughout the quarter, MTaPS provided technical assistance and support to the IGAD Secretariat and NMRA PV experts to finalize the PV baseline assessment and draft a regional report.

IGAD/EAC activity 2.1.2: Support local manufacturers in the IGAD/EAC regions to better comply with regional and national pharmaceutical regulatory standards and requirements

MTaPS engaged industry stakeholders, including the Federation of Kenya Pharmaceuticals Manufacturers and focal industry persons, to discuss support for local manufacturers so they can sustain regulatory compliance through technical exchange networks and compliance groups.

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

IGAD/EAC activity 3.1.1: Strengthen and harmonize PV processes and tools in IGAD and EAC regions and support uptake by border sites and regional stakeholders

MTaPS engaged the IGAD Secretariat and the member state of Djibouti to train facility focal persons and provide technical support for implementing the PV baseline assessment using the Harmonized Indicator-Based PV Assessment and Monitoring Tool; 13 participants (2 female and 11 male) drawn from the MOH and IGAD cross-border facilities in Djibouti were sensitized on PV and had their capacity built on using the tool and the data collection process. The implementation process took place April 4-9, 2021.

MTaPS continued to review and update the PV/PMS training package for IGAD cross-border areas. The two training packages (a one-day package and a five-day course) are being used in the training of facility and county focal persons to create awareness, build capacity, and instill skills on PV/PMS as part of implementing action plans and CQI within their facilities with the expected outcome of improved patient safety and outcomes and increased reporting.

Dr. Rakuomi (in the plaid shirt) doing the demo and mentorship on an ADR reporting tool at Walda Health Centre on June 15, 2021. (Photo credit: Margaret Ndungu)

ACTIVITIES FOR NEXT QUARTER	
ACTIVITY AND DESCRIPTION	DATES (2021)
Support quarterly meetings of the PV Expert Working Group (EWG)	July-September
Provide CQI support and mentorship of cross-border facilities on work plan implementation	July-September
Support PPB Kenya to build capacity of the PV expert review and advisory committee to review and analyze safety data for regulatory decision making	July-September
Local Manufacturers' Stakeholders' Forum (IGAD-led): Undertake joint planning and preparation for the forum with IGAD; hold stakeholder webinars on regulatory compliance	July-September
Support the IGAD PV EWG to develop a roadmap and initiate development of a harmonized PV in-service training curriculum	July-September

PROGRESS BY COUNTRY

BANGLADESH

MISSION-FUNDED ACTIVITIES

OBJECTIVE 1: PROCUREMENT AND SUPPLY CHAIN SYSTEMS IMPROVED AND MODERNIZED

Medical surgical requisite procurement

The Ministry of Health & Family Welfare (MOHFW) reviewed the pricing process for medical surgical requisite (MSR) items and observed that the prices were based on quotes from one bidder. The committee for updating the MSR list has decided to hold a workshop to discuss a way forward. A notification to hold a workshop on July 7, 2021, is underway. In this quarter, the Procurement and Logistics Management Cell did not meet because of the worsening COVID-19 situation.

Price guide update modified to build procurement capacity

The Central Medical Stores Depot (CMSD) is the prime source of information to update the price guide for medical equipment. Clinicians from different disciplines check the accuracy of the information in the document. With the COVID-19 pandemic, both the CMSD and clinicians (frontline fighters) were too engaged to be involved in the update.

As the procuring entity, CMSD has not been playing its role adequately, and the different line directors for the Directorate General of Health Services (DGHS) are stepping in for their directorates, although they have limited experience in procurement. DGHS requested that MTaPS, through the US Agency for International Development (USAID), build capacity of the directorates in procurement management. MTaPS, therefore, modified the work plan to prioritize this capacity building over the price guide update (which will be carried over to next year) and mobilized the needed funding. MTaPS plans to conduct a residential training in the first half of July 2021 to improve the directorates' procurement efficiency and to ensure better product availability.

Quantification and forecasting

Tuberculosis

In this quarter, the National Tuberculosis Program (NTP), with technical assistance from MTaPS, completed its quantification of first- and second-line TB drugs and placed orders. In addition, MTaPS provided direct assistance to the NTP's Procurement and Supply Management (PSM) Unit to prepare the TB preventive therapy (TPT) procurement plan for 2021 by finalizing the TPT medicine quantification exercises and placing the order. In addition to quantification, MTaPS assisted the NTP and USAID TB implementing partners in developing SOPs for providing TPT and a complementary job aid. The TPT intervention started in May 2021 and will be scaled up throughout the year. The uptake of TPT will help Bangladesh bend the TB incidence curve down.

Timely quantification and order management are playing important roles in ensuring the availability of TB treatment and preventive medicines at the central and peripheral levels, which contribute to effective TB control.

COVID-19 response mechanism

MTaPS, as part of USAID's overall support, provided technical assistance to the DGHS, in preparing the COVID-19 response mechanism fast-tracked proposal to the Global Fund. This portion of the funding

will address the immediate COVID-19 response and health system needs to help the TB, HIV, and malaria programs run smoothly during the pandemic. MTaPS' involvement is in quantifying oxygen-related equipment and supplies. Once the proposal is approved, the funds will strengthen the country's preparedness for a surge situation that would escalate oxygen demand.

Peripheral TB storage assessment

With the help of NTP and MTaPS, a consulting firm is assessing peripheral TB storage at an optimum pace amid a worsening COVID-19 situation in some parts of the country. The largest and most important portion of the assessment, which is the quantitative data collection, is complete. All upazilas in the country (around 500) have submitted quantitative data, and onsite data validation is complete in 30 target sites. About one-third of the qualitative data from the field has been collected. The assessment will be completed in time to help the NTP plan to integrate and transition the TB storage from a nongovernmental organization to government facilities.

NTP coordination mechanism

MTaPS participated in the TB PSM working group meeting on May 30. Under the current Global Fund's funding cycle (2021-23) the NTP is arranging the meetings twice a quarter, as per MTaPS' suggestion; this will help the NTP, and its partners coordinate better and make timely decisions in PSM.

Training on supply chain management

The Directorate General of Family Planning (DGFP) used its own resources to organize a classroom training for supply officers and troubleshooters. MTaPS facilitated the technical sessions on the inventory management tools Warehouse Inventory Management System, Upazila Inventory Management System, and DGFP's electronic Logistics Management Information System (eLMIS) and will use the data for making supply chain decisions to better ensure the availability of commodities. The Honorable Secretary of the Medical Education and Family Welfare (ME&FW) Division of the MOHFW, Md. Ali Noor, and the Director General of Family Planning, Ms. Shahan Ara Banu, were present in one of the sessions. Both expressed their appreciation for the collaboration with USAID and the MTaPS Program and acknowledged USAID's contribution in developing the tools, which have played a vital role in ensuring the availability of family planning commodities throughout the country. A total of 108 participants (14 females and 94 males) in 5 batches attended the 3-day training to enhance their skills on the inventory tools and troubleshooting scenarios. Participants learned how to view and analyze data in the supply chain management portal to replenish supplies and make adjustments among facilities and service delivery points. The DGFP is expecting better performance from participating officials to reduce stock-outs of contraceptives at the service delivery points.

Md. Ali Noor, Secretary of ME&FW, and Shahan Ara Banu, Director General of DGFP, attended a training event on supply chain management. (Photo credit: Md. Riaz)

Contraceptive stock status in Bangladesh has been satisfactory over the last couple of years; however, administrative procedures in FY 2019-2020 and FY 2020-2021 hindered the timely procurement of implants. Two different procurements (275,000 + 300,000 = 575,000 sets) were

completed during this quarter, and the goods were received at the DGFP central warehouse (CWH). The MTaPS technical team worked closely with the additional director-CWH and other regional warehouses to prepare a distribution plan to all upazilas to ensure services to clients.

MTaPS facilitated technical refresher training sessions on supply chain management through virtual platforms; the sessions were organized by deputy directors of different districts under DGFP. A total of 255 attended the virtual training (70 females and 185 males) deputy directors, assistant directors, upazila family planning officers, medical officers, and storekeepers from different upazilas from 11 districts (Cox's Bazar, Rangamati, Feni, Khagrachari, Chapainawabganj, Bhola, Sherpur, Chattagram, Satkhira, Sirajganj, and Gaibandha). The director general, the director (Logistics and Supply), and divisional directors attended remotely and provided guidance to local officials to strengthen the monitoring of logistics functions and increase data use in decision making to ensure the availability of family planning commodities.

This quarter, MTaPS and DGFP representatives jointly participated in a virtual orientation session on the transition of the procurement planning and monitoring report (PPMR) to the Global Family Planning Visibility & Analytics Network platform organized by the Reproductive Health Supply Coalition (RHSC) and USAID Washington. Starting July 2021, DGFP will take the responsibility from MTaPS for sending the PPMR to the RHSC, while MTaPS works closely with DGFP in preparing the report on time. Gradually, MTaPS support will be withdrawn.

The MTaPS health information system team, eLearning lead, and eLearning content developers at headquarters viewed a demonstration of the MuktoPaath eLearning platform provided by the a2i focal point on May 20, 2021. The health information system team and a2i answered a few questions from the content developers to get a clear understanding of the platform and develop content that best suits it. Using the existing MuktoPaath platform, developed and maintained by a2i, will eliminate the need to develop a new platform or host a data center. The eLearning platform and courses will reduce the cost and time to build the capacity of the MOHFW and its directorates' staff.

OBJECTIVE 2: PHARMACEUTICAL REGULATORY SYSTEMS STRENGTHENED

In response to the World Health Organization (WHO) Global Benchmarking Tool (GBT) requirements for the Directorate General of Drug Administration (DGDA), MTaPS attended several discussions and provided guidance to address and implement institutional development plans (IDPs). Assistance included working as one of the mock assessors of DGDA functions and developing SOPs, corrective and preventive actions, a training needs assessment with training plan, competency assessment, legal provisions, and a functional quality management system, including updating an organogram with terms of reference, job descriptions, SOPs, the quality manual, internal audit plan, memorandum of understanding between DGDA and pharmacovigilance stakeholders, and so on. These efforts helped DGDA increase its GBT scores toward achieving WHO prequalification status.

MTaPS facilitated two workshops of DGDA's Technical Sub-Committee this quarter to assess the causality of adverse events received from March 2020 to March 2021. The committee evaluated 381 serious adverse event reports and classified them according to the WHO-Uppsala Monitoring Center causality assessment scale. In addition, MTaPS assisted DGDA in developing an adverse events investigation procedure and a review of the procedure for taking a risk-based approach for vigilance activities, including vaccines. This effort will help the DGDA identify safety issues and make decisions to ensure medicine safety.

OBJECTIVE 3: SYSTEMS FOR EVIDENCE-BASED DECISION MAKING INSTITUTIONALIZED

MTaPS met with the information technology vendor company several times to discuss the requirements and way forward to customize the eLMIS for TB logistics. The vendor has designed the architecture and data flow diagram of the proposed system and customization is ongoing. The eLMIS will help better manage TB items and make the logistics flow faster and smoother. The availability of stock will be visible to decision makers, and forecasting will be much better than ever before. TB patient care should also be improved.

MTaPS had a virtual meeting with USAID Washington about the status of and plan for the DGHS eLMIS. MTaPS provided a short presentation on the DGFP eLMIS, COVID-19 eLMIS, and quantification and discussed MTaPS' support of next steps. During the question-and-answer session, USAID shared their global vision on supply chain management. USAID referred to a video on the supply chain information system maturity model and discussed what is going well and what could be next steps for the DGHS eLMIS. USAID suggested building an architecture and roadmap for eLMIS implementation over the next 10 to 15 years. This activity can be included in the year 4 work plan after team discussion.

MTaPS had a meeting with USAID's MNCH focal point and Save the Children to discuss updating the list of MNCH commodities for the DGHS eLMIS and organizing the next technical working committee meeting. USAID and other partners want to update the list to better reflect current MNCH items to improve tracking.

e-TB Manager rollout

The regular training on e-TB Manager, as part of the rollout to Dhaka division, continued this quarter. A total of 451 participants (126 females and 325 males), such as TB and leprosy control assistants, program organizers at the Civil Surgeon Office, and supervisors and other staff from implementing organizations in the Dhaka urban area were trained, and three more batches are planned during the quarter. The training will increase the quality of data inputs to e-TB Manager, which will improve the availability of TB patient information. There are no government officials posted in urban TB centers, so it is a challenge to make e-TB Manager functional in urban sites.

Active Drug Safety Monitoring and Management

MTaPS successfully incorporated the active drug safety monitoring and management (aDSM) electronic reporting system in e-TB Manager and is in the process of introducing it at the National Institute of Diseases of Chest and Hospital, the biggest drug-resistant (DR) TB treatment site in the country. As of now, the hospital reported 13 aDSM cases through e-TB Manager. Implementation of aDSM was discussed in the biannual coordination/partners meeting organized by NTP on June 2, 2021, to make it interoperable with the DGDA pharmacovigilance reporting system. The activity will increase the availability of information on drug safety and patient adherence to DR-TB treatment.

TPT

Bangladesh is scaling up TPT, and MTaPS is supporting the NTP and USAID TB implementing partners in developing an SOP and a job aid for the aDSM implementation. MTaPS also established a TPT reporting system in e-TB Manager.

Interoperability between e-TB Manager and the Janao app

MTaPS established interoperability between e-TB Manager and the Janao app, in collaboration with USAID's Alliance for Combating TB, and incorporated NTP feedback. The system is running in the Rajshahi division, and, as of now, information on 39 patients has been sent from the Janao app to e-TB Manager. The activity will help increase the TB diagnostic network for better program management.

Paperless DR TB reporting

A paperless reporting and recording system for DR-TB using e-TB Manager has been introduced during the last quarter for all DR-TB treatment facilities. The transition to electronic reporting has reduced the reporting workload and created opportunities to use the information more effectively.

OBJECTIVE 4: PHARMACEUTICAL SERVICES THAT PROMOTE APPROPRIATE MEDICINE USE AND AMR CONTAINMENT IMPROVED

MTaPS revisited the result areas under this objective along with Global Health Security Agenda (GHSA) activities. As a result, the update of the national antimicrobial resistance (AMR) strategy was planned as the lone activity with field-supported funds. A lead consultant and another consultant for animal health, fisheries, and the environment are already working to complete the update by August 2021. A few meetings were held with Communicable Disease Control (CDC) and stakeholders during the quarter on next steps for updating the AMR strategy and national action plan (NAP). The MTaPS consultants are reviewing documents to draft an outline of the strategic action plan to be presented in an upcoming workshop for a wider group to finalize it. The strategy update will be followed by development of an action plan. The documents will provide a structured roadmap to better contain AMR.

OBJECTIVE 5: PHARMACEUTICAL FINANCIAL RESOURCE ALLOCATION AND USE OPTIMIZED

In line with MTaPS' plan to assist Bangladesh in implementing pharmaceutical-related components from the National Health Care Financing Strategy (2012-2032) and, based on the technical work developed through the USAID MTaPS Asia Bureau Program, MTaPS will support the MOHFW's Health Economics Unit (HEU) in conducting an exercise on pharmaceutical expenditure tracking, focusing on MNCH commodities. The activity will be implemented with support from experts from headquarters and from MTaPS' partner, R4D. Under the changed context of the COVID 19 pandemic, MTaPS is not going to engage STTA physically. HEU has experience in conducting similar activities on other commodities and now considers the activity finished for MNCH commodities. An informal discussion was held with the director general of HEU, and the team is planning a workshop for the beginning of next quarter to discuss options for carrying out the exercise. The activity will help the country follow the National Health Care Financing Strategy to ensure an equitable distribution of the health financing burden and improve access to essential health commodities and services.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1: Work with DGHS to develop a standardized price list of MSR in line with updated specifications • Facilitate a workshop to discuss better ways to fix prices for MSR items	July 7, 2021
Activity 1.1.3: Provide technical assistance to the MOHFW's procuring entities and its directorates to develop procurement performance monitoring indicators, track performance, generate evidence, identify gaps, and design interventions to improve procurement performance • Facilitate a discussion workshop under the leadership of the Procurement and Logistics Management Cell on the findings from the review of the procurement documents sent for approval	TBD
Activity 1.2.1: Enhance the capacity of national and sub-national-level managers to use data for decision making and compliance of monitoring the functionality of existing systems • Conduct workshops with national and sub-national-level managers on date use	September 2021
Activity 1.2.2: Assist the NTP in assessing the peripheral TB storage system and developing an integration plan • Draft the peripheral TB storage assessment final report	July 2021
Activity 1.3.2: Develop eLearning courses on procurement basics, generic logistics management, and e-TB Manager and introduce them within the MOHFW and its directorates to contribute to institutional capacity building	September 2021
Activity 1.3.3: Build capacity of DGHS officials on public procurement • Facilitate residential training on public procurement for DGHS officials	July 12-15, 2021
Activity 2.1.1: Assist DGDA in institutionalizing a periodic monitoring system by implementing IDP to contribute to attaining WHO GBT maturity level 3 • Organize group work for addressing the IDP in marketing authorization, licensing, and regulatory inspection • Prepare procedures, conduct training, provide guidance, and participate as an observer in WHO's inspection of DGDA	August 2021
Activity 2.1.2: MTaPS will work with DGDA in collaboration with Better Health Bangladesh to develop an electronic pharmacy inspection and licensing system • Develop an electronic system for pharmacy licensing • Write a report as a deliverable	July 2021
Activity 2.2.1: Work with DGDA to address relevant GBT IDPs, for example, development of investigation and risk-based management procedures for PV activities and continue to support ongoing PV activities • Conduct a workshop for the Technical Sub-Committee and Adverse Drug Reaction Advisory Committee on evaluating adverse events and making regulatory recommendations • Support to design, implement, and monitor IDP activities	August 2021

ACTIVITIES FOR NEXT QUARTER	
ACTIVITY AND DESCRIPTION	DATE
Activity 3.2.2: Enhance and integrate the existing eLMIS for DGHS and conduct a user acceptance test on the TB logistics system • Conduct user acceptance test and/or pilot comprehensive eLMIS in TB	September 2021
Activity 3.2.3: Assist NTP in addressing the new requirements and fix bugs in e-TB Manager identified by the donor, NTP, and end users and transfer knowledge to the local IT vendor	September 2021
Activity 3.2.4: Work with MOHFW to review the system requirements for linking the different procurement tools (i.e., product catalogue, table of equipment, price guide) and electronic asset management system for effective and efficient asset acquisition planning	September 2021
Activity 4.1.1 Support national counterparts to update the National Strategy for AMR Containment in Bangladesh • Review existing strategy and action plan (national, regional, international) and identify areas to incorporate • Conduct stakeholders' workshop and generate recommendations • Finalize updated strategic action plan along with technical report	September 2021
Activity 5.1.1 Support the HEU in tracking pharmaceutical expenditures for MNCH, nutrition, and FP • Conduct a workshop on best practices in pharmaceutical expenditure tracking to be adopted to MNCH commodities	September 2021

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

The second AMR Containment Program's Core Working Group meeting was held virtually on April 29, 2021, on the existing AMR data management system and improving the system through a One Health lens, to collect AMR data from other-than-surveillance sites (other government and private laboratories). The meeting discussed ways to improve AMR data collection and management. Another virtual meeting was held on June 16 on formulating the National Action Plan (NAP) and National Strategic Plan (NSP) on AMR. Discussions on the AMR newsletter, engaging laboratory groups and clinicians on AMR containment, and upcoming stakeholder activities were held. Before working on the national strategy for containing AMR, a situation analysis that engages stakeholders is needed to discern the status of implementing the NAP and its objectives and to review challenges and successes. MTaPS participated in every meeting as a co-opt member with high-level officials from DGHS and representatives from DGDA; Department of Livestock Services; Bangladesh Livestock Research Institute; Institute of Epidemiology, Disease Control, and Research; Institute of Public Health; professional associations; WHO; FAO; Fleming Fund Country Grant; and International Centre for Diarrheal Disease Research, Bangladesh.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

The infection prevention and control (IPC) teams at Munshiganj District Hospital and Cumilla Medical College Hospital are implementing the IPC action plan as developed by the IPC committee. The teams are monitoring IPC practices in their departments using IPC tools and reporting on those results as well as progress on implementing the action plan to focal personnel weekly to develop guidance on improving hospital IPC activities. The focal person coordinates with the member secretary and IPC committee regularly for logistics and technical support. In the monthly IPC Committee meeting in Cumilla Medical College Hospital, members decided that practices for environmental cleaning and sterilization (autoclave) are not yet up to standard, which raises the risk of COVID-19 infection for health staff and their patients. Areas of focus include best practices in cleaning and handling medical wastes and equipment sterilization/ decontamination. MTaPS facilitated a training for the IPC teams of 10 doctors, 11 nurses, and 1 medical technologist (14 females and 8 males) for monitoring environmental cleaning practices and reporting on daily cleaning and IPC practices in their departments to the focal person and IPC committee. The focal person and IPC team for Munshiganj District Hospital (MDH) conducted the training on IPC for support staff facilitated by MTaPS during the previous quarter. The support staff are one of the important members of the hospital's IPC team. IPC teams are monitoring how compliant cleaners are with standard precautions and are providing mechanisms for preparing cleaning and disinfecting agents, frequency of cleaning, and separating cleaning waste in different colored bins. They are also providing guidance and instructions on improvements as needed.

MTaPS collaborated with CDC/DGHS in selecting two new facilities representing secondary and primary levels of care: Nilphamari District Hospital and Taraganj Upazilla Health Complex in the Rangpur district. With these two facilities, MTaPS is now supporting four facilities. In these new facilities, MTaPS helped establish IPC committees with terms of reference in accordance with national IPC guidelines and based on a March 7, 2021, government order from the CDC/DGHS to establish an IPC committee in three levels of health care. With the involvement of IPC committee members, MTaPS and consultants collected information on the facilities' IPC and antimicrobial stewardship (AMS) status by using a customized WHO IPC assessment-for-facilities tool and an AMS checklist. Analysis of data has been completed, and database and analysis were reviewed by the team. A draft report was prepared late in the quarter.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

The standard treatment guideline (STG) on common infectious diseases was developed by the Core Working Group (CWG) with engagement of an MTaPS consultant. CWG met virtually five times to provide inputs in methodology and developed the STG. Group members had only one face-to-face meeting to finalize the developed document; CWG members from different professional associations/societies then shared it with their organizations' senior leaders. After additional review, no feedback was provided. Due to previous virtual experiences, CDC/DGHS planned to organize another physical consultative workshop for CWG members to finalize the document as soon as the COVID situation improved. MTaPS is advocating that CDC/DGHS organize a workshop as early as possible to make progress on the app version of the STG.

The CAPTURA project collected retrospective antimicrobial susceptibility surveillance data at Cumilla Medical College Hospital during the quarter. After the data is analyzed and shared, MTaPS will assist IPC Committee members with the engagement of the Quality Improvement Secretariat/MOHFW representatives to develop an AMS implementation plan to strengthen practices at the hospital. Accurate susceptibility surveillance information is essential for monitoring AMR trends and antimicrobial use in the facility.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1: Continue strengthening national multisectoral coordination mechanisms to facilitate operationalizing the NAP and its roadmap • Hold one joint stakeholder meeting, either physically or virtually, in collaboration with CDC/DGHS and other stakeholders, that was not possible because of the previous quarter's COVID-19 situation. • Advocate that CDC/DGHS and other stakeholders establish a public web-based platform. • Conduct a situation analysis using every component of the M&E framework with engagement of stakeholders before updating national strategy on AMR containment by organizing a joint stakeholders' meeting as early as possible.	July 2021
Activity 2.2.1: Develop training materials based on the hospital IPC manual and other guidelines and checklists issued by the Quality Improvement Secretariat/ MOHFW and train health care workers using those materials. • Review and finalize IPC modules, then collaborate with the CD/DGHS, Quality Improvement Secretariat/MOHFW, and other stakeholders to adapt IPC and AMS training materials for the eLearning platform.	August 2021
Activity 2.5.1: Continue to strengthen IPC activities in the two participating facilities, scale up similar initiatives in two new facilities, and support CDC/DGHS in developing and executing nationwide rollout plans. • Submit the draft report of the IPC and AMS assessments at the new district hospital and one upazila health complex • Repeat assessment on IPC and AMS in previous participating hospitals	July 2021
Activity 3.5.1: Support the finalizing of the national STGs for common infectious diseases, including converting them into an app, and facilitating its dissemination and training • Finalize treatment guidelines and converting them to the app version	July 2021

BURKINA FASO

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON ANTIMICROBIAL RESISTANCE (AMR)

Activity 1.1.1: Support the Technical Secretariat of the One Health Platform

The fight against AMR has become a national priority, leading to the 2017 development of a multisectoral action plan to combat AMR (PAN M-RAM 2017–2020) that is in line with the recommendations of the World Health Organization (WHO). After the three-year plan came to an end, it was necessary to evaluate it prior to revision. The purpose of the evaluation was to produce an overall assessment of achievements, identify shortcomings, lessons learned, and difficulties encountered in its implementation, and to develop a new three-year action plan.

MTaPS organized a workshop in Ziniaré from April 21 to April 23, 2021—in collaboration with the Ministry of Health (MoH), WHO, Food and Agriculture Organization, and Jhpiego—to assess the PAN M-RAM 2017–2020 implementation. The assessment highlighted achieved results, strengths, weaknesses, future perspectives, and lessons learned. The plan analysis also focused on coherence, efficiency, and sustainability. Following the assessment, participants identified challenges and made the following recommendations:

- Draft the evaluation report of the national multisectoral AMR action plan using the provided evaluation tools by the end of July 2021
- Hold a workshop to review and validate the developed national AMR action plan by the end of July 2021

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.2.1: Support the General Directorate of Veterinary Services (DGSV) to develop and validate an antimicrobial stewardship (AMS) training toolkit for the animal sector and organize a national training of trainers (ToT) workshop on AMS guidelines for veterinarians and livestock technicians

MTaPS provided technical and financial support to the DGSV to organize a workshop from May 16 to May 18, 2021, in Ziniaré to finalize and validate the training toolkit package for the animal sector, including facilitator and participant guides as well as training manuals and modules. The training package was developed based on the guidelines for rational antimicrobial use in the livestock sector. The goal was to emphasize the roles and responsibilities of veterinarians, livestock technicians, and producers. Following the finalization and validation of the training package, and to manage emerging AMR, the DGSV/Directorate of Veterinary Public Health and Legislation and the Directorate of the National Livestock Laboratory (DGSV/DSPVL/LNE)—with the technical and financial support of MTaPS—organized a three-day ToT workshop for 15 veterinarians from the public and private sectors on the guidelines for rational antimicrobial use in livestock. The workshop took place from June 2 to June 4, 2021, at Privilege Business Center of Ziniaré. MTaPS will support the training workshop for the livestock technicians in July 2021.

Activity 3.2.2: Support the National Drug Regulatory Agency (NDRA) to print and disseminate the standard treatment guideline annexes and the national Essential Medicines List (EML), integrating the Access, Watch, and Reserve (AWaRe) classification

MTaPS printed 1,500 copies of the EML—which integrated the AWaRe categorization of essential antibiotics for the first time—and other health products and disseminated them through three workshops. The first workshop was held January 28–29, 2021, in Bobo Dioulasso with 22 participants who were pharmacists and doctors from the Hauts-Bassins, Cascades, Sud-Ouest, and Boucle du Mouhoun health regions. These officers represented the health districts, regional health directorates, and regional hospital centers in these health regions. The second workshop took place April 15–16, 2021, in Ouagadougou with 25 participants from the health districts, the regional Directorates of Health, and the regional and university hospital centers. The participants were pharmacists and physicians from Central Region (Boulmiougou), Central Plateau Region (Ziniare), Central West Region (Nanoro), North Central Region (Kaya), Northern Region (Ouahigouya), and Sahel Region (Dori). The third workshop took place April 22–23, 2021, in Koupela with 26 participants from the South Central (Manga and Po), Eastern (Fada and Diapaga), and Central Eastern (Tenkodogo, Bittou, Ouargaye, Garango, Pouytenga, and Koupela) regions. The participants were pharmacists and physicians representing the health districts, the regional Directorates of Health, and the regional and university hospital centers of these health regions. The EML will help healthcare professionals with proper prescribing practices and ensuring patients' safety.

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

Establishing drug and therapeutics committees (DTCs) is critical for optimized use of antimicrobial medicines. MTaPS, in collaboration with the Directorate of Hospital Pharmacy (DHP) of MoH, established DTCs in five health care facilities. These facilities were the Centre Médical avec Antenne Chirurgicale (CMA) of Zorgho, the Centre Hospitalier Régional (CHR) of Gaoua, the CHR of Tenkodogo, the CMA of Boulmiougou, and the CHR of Ziniaré. Since their establishment, the DTCs of the Ziniare and Gaoua CHRs have received training in quarters one and two, respectively, using the MTaPS-developed interactive AMS training modules. From May 26 to May 28, 2021, MTaPS—in collaboration with the DHP—organized a training session in Tenkodogo to build the capacity of the DTC members of the Tenkodogo CHR.

- The main objectives of the training were to ensure that participants:
- Understood what was at stake with AMR
- Were familiar with antimicrobial management strategies
- Understood the role of pharmacovigilance in improving proper antimicrobial use

The training ended with the development of an action plan for the DTC. The session enabled members to begin implementing AMS activities within their health care facilities. The trainings in the two remaining facilities are scheduled for July 13–15, 2021 (Zorgho DTC), and August 10–12, 2021 (Boulmiougou DTC).

ACTIVITIES FOR NEXT QUARTER		
ACTIVITY	DESCRIPTION	DATE
Activity 1.1.1: Support the Technical Secretariat of the One Health platform	Task 1.1.1.a: Convene an induction meeting of the presidents and vice presidents of the seven technical thematic committees to finalize the ministerial order Task 1.1.1.b: Review and finalize the national multisectoral AMR action plan	July–September 2021
Activity 3.2.1: Support the DGSV to develop and validate an AMS training toolkit for the animal sector and organize a national ToT for veterinarians and livestock technicians on AMS guidelines	Task 3.2.1.d: Train 45 livestock technicians	July 2021
Activity 3.5.1: Support implementation of guidelines and policies at the peripheral level	Task 3.5.1.a: Train the two remaining established DTCs and establish and train five additional DTCs in new health care facilities, as well as assist them to develop action plans	July–September 2021

PRESIDENT'S MALARIA INITIATIVE (PMI)-FUNDED ACTIVITIES

USAID/PMI is supporting the pharmacovigilance of a malaria medicine called Pyramax (pyronaridine-artesunate). The work plan was approved on May 4, 2021. MTaPS shared this work plan with the focal points of the National Malaria Control Program (NMCP) and the National Medicine Regulatory Agency (NMRA)to begin its implementation. MTaPS has also shared the approved Pyramax pharmacovigilance work plan with other USAID/PMI implementing partners: Program Support and Management, Vector Link, WHO, Global Fund, UNICEF, World Bank/Global Financing Facility, Malaria consortium, US Centers for Disease Control, Bill and Melinda Gates Foundation, PMI/Malaria Operational Plans Team, Global Fund, Programme d'Appui au Développement Sanitaire, Health Policy Plus, Momentum, Progetto Mundo, World Bank/Sahel Women's Empowerment and Demographic Dividend, and Promoting the Quality of Medicines Plus. MTaPS has drafted the protocol with the implementation plan and data collection and management tools to support safety monitoring of two public health facilities. MTaPS has also drafted the terms of reference of the Pyramax active monitoring committee and will share both materials with the NMCP and NMRA focal points for review and finalization.

ACTIVITIES FOR NEXT QUARTER		
ACTIVITY	DESCRIPTION	DATE
Activity 5.3.1: Conduct active safety monitoring of Pyramax in two public health facilities	Translate Pharmacovigilance Monitoring System (PViMS) materials from French to English, including PViMS fields Obtain ethical or administrative approval Pilot and finalize the data collection tools (paper and electronic) Train site teams on active monitoring and their roles and responsibilities	July 2021 July 2021 August 2021 September 2021

CAMEROON

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Activity 1.1.1: Support multisectoral coordination of AMR activities through regular meetings of the AMR governance committee

MTaPS supported the organization of the bimonthly coordination meeting of the IPC and AMS TWGs. The meeting, held on April 29, 2021, brought together 15 AMR focal persons from the following ministries:

- Ministry of Public Health: Department for the Control of Epidemics and Pandemics; Department for Health Promotion (DPS); Department of Pharmacy, Medicines, and Laboratory (DPML); and Yaoundé University Teaching Hospital
- Ministry of Livestock, Fisheries, and Animal Husbandry
- Ministry of Environment and Nature Protection

The main objective of this meeting was to plan and prepare for the upcoming training of national stakeholders on AMR topics. Participants discussed the following points:

- Development of training modules
- Process for designating persons to train
- Development of training agenda

In the past, MTaPS supported the national counterparts in developing two training curricula specifically for capacity building of members of the IPC and AMS committees in health facilities. However, for the upcoming training of national stakeholders on AMR, the participants agreed that the national stakeholders should be trained on all aspects of AMR and not just on IPC and AMS. As a result, they decided that the USAID modules on AMR be adapted and used for the training. At the end of the meeting, MTaPS agreed to provide technical assistance to the national stakeholders in developing the above-mentioned materials, proposing an agenda for the training, and assisting in the training of the 20 national experts. The training workshop has been scheduled for July 2021.

Activity 1.2.1: Strengthen technical capacity of key government AMR stakeholders

As a first step in strengthening the technical capacity of key government stakeholders, during the previous quarter, MTaPS supported the establishment of an eLearning platform at the DPML, a technical department in the MOH, to complement face-to-face training, with the recent paradigm shift in capacity-building approaches. Throughout this quarter, MTaPS finalized the installation of the Moodle eLearning platform on the DPML's website and the training of resource persons on the management of the platform. Empower uploaded the IPC training modules on the Moodle platform and has also concluded the training of the resource persons at the DPML, which ended with a simulation exercise. The next phase will consist of the official launch of the platform, which has been scheduled for July 2021. Once the AMS eLearning module is developed, it will also be adapted and uploaded to Moodle. The platform will go a long way to complement the in-person training of 20 national experts on AMR.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

Activity 2.1.1: Support the development, validation, and dissemination of IPC guidelines for the human sector

After the national IPC guidelines were validated, MTaPS supported the translation of the guidelines into English as requested by the Ministry of Public Health. Under the technical leadership of the DPS, MTaPS hired a firm to translate the guidelines. The next step is printing and dissemination, which is pending the

public health minister's signature on the preface of the document. Printing is scheduled for July 2021. The guidelines will improve IPC practices in health facilities in Cameroon.

Activity 2.5.1: Improve IPC practices at designated health care facilities

To ensure effective progress of IPC activities in all 12 selected health facilities following the establishment of IPC committees, MTaPS supported the committees in designing and implementing a continuous quality improvement (CQI) approach with incremental self-improvement targets. The CQI started with the evaluation of IPC practices using the IPCAF tool, followed by the development of IPC action plans with an implementation timeline in the health facilities. MTaPS supported the DPS in carrying out supportive supervision of IPC activities in all 12 selected health facilities as a continuation of the CQI process, from May 24 to June 11, 2021. The 12 MTaPS-supported health facilities are Ebolowa Regional Hospital and Sangmelima Reference Hospital (South); Jamot Hospital Yaoundé and Obala District Hospital (Center); Mbouda, Bangangte, and Foumbot District Hospitals and Bafoussam Regional Hospital (West); and Edea Regional Hospital Annex, Nkongsamba Regional Hospital, Bonassama District Hospital, and Douala General Hospital (Littoral). The main objectives of the supervision were to:

- Assess the IPC status of the health facilities using the IPCAF assessment tool
- Assess progress made in implementing IPC activities as planned in the facility IPC action plans
- Identify implementation challenges and discuss possible solutions

Overall, the 12 health facilities have made great progress in their IPC status when compared with their respective baseline scores. Most of the health facilities (67%) have implemented at least 50% of the activities in their IPC action plans. Although a good number of the health facilities (42%) have made great strides in improving their water, sanitation, and hygiene and waste management infrastructure to facilitate IPC activities, others have expressed difficulties in securing funding for this area. The main implementation challenges in some of the health facilities include:

- Lack of dedicated budget for IPC activities
- Poor appropriation of multimodal strategy to improve IPC, especially hand hygiene compliance
- Poor documentation of IPC activities
- Absence of an IPC monitoring plan with indicators
- Inconsistent monitoring of IPC activities in the health facilities by region

Given the above-mentioned implementation challenges, MTaPS advocated for the health facility leadership to dedicate funds for IPC activities, reviewed the multimodal strategy to improve IPC compliance, especially for hand hygiene, helped the health facilities to select process and result indicators to monitor IPC activities, and encouraged the health staff to document all activities.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.5.1: Support the establishment of effective and functional DTCs in 12 selected health facilities

DTCs can provide the leadership and structure to select appropriate medicines, identify medicine use problems, promote rational use, and reduce pharmaceutical costs. During the previous quarter, MTaPS supported the DPML in organizing a workshop for training 12 DTC facility champions. Following this training, MTaPS supported the DPML in carrying out onsite trainings of DTC members in 11 pilot health facilities between April 30 and June 10. The number of staff trained per health facility is shown below (Table 11)

Table 11. Number of staff trained per health facility

REGION	HEALTH FACILITY	GENDER		TOTAL TRAINED
		MALE	FEMALE	
Adamawa	Ngaoundere Regional Hospital	17	8	25
Center	Yaoundé Jamot Hospital	2	9	11
	Mbalmayo District Hospital	7	10	17
	Yaounde Emergency Center	2	8	10
East	Bertoua Regional Hospital	9	13	22
Littoral	Douala Laquintini Hospital	9	13	22
	Bonassama District Hospital	1	10	11
West	Bafoussam Regional Hospital	12	10	22
	Foumbot District Hospital	4	6	10
South	Ebolowa Regional Hospital	8	2	10
	Sangmelima Reference Hospital	4	6	10
	Total	75	95	170

Participants were trained using the following modules:

- Overview of AMR
- Organization and functioning of DTCs
- Quality and quantity of antimicrobials
- AWaRe classification
- AMS interventions
- AMS action plan
- Notification of adverse drug effects

As a starting point for CQI, MTaPS supported the health facilities in developing AMS action plans and in selecting process and result indicators to monitor implementation. A WhatsApp forum has been created to encourage interaction between the DTCs in the different health facilities. The next steps will consist of carrying out supportive supervision of the DTCs in October 2021.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY	DESCRIPTION	DATES
Support the IPC and AMS TWG in organizing monthly coordination meetings	MTaPS will continue to support the organization of these routine meetings.	July 2021
Support the technical secretariat of the AMR-MSC committee in organizing quarterly coordination meetings	MTaPS plans to support the organization of this routine meeting to improve the governance of AMR activities.	August 2021
Support printing and dissemination of the national IPC guidelines	MTaPS will support the DPS in printing 500 copies of the IPC guidelines and in organizing a three-day workshop to disseminate them.	July-September 2021
Support drafting of the national IPC action plan	MTaPS will support the DPS in hiring a consultant to draft a national IPC action plan, which will subsequently be finalized and validated in a workshop.	July-September 2021
Supervise IPC committees and DTCs in health facilities	MTaPS will support the DPS and DPML in carrying out field supervision of IPC committees and DTCs in health facilities.	July-September 2021
Train national experts on AMR-related topics	MTaPS will support the AMR Technical Secretariat in training 20 national experts on AMR-related topics.	July-September 2021
Draft year 4 work plan of activities	In collaboration with national counterparts, MTaPS will draft the work plan of activities for year 4 of MTaPS.	July-September 2021

CÔTE D'IVOIRE

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON ANTIMICROBIAL RESISTANCE (AMR)

Activity 1.1.2: Strengthening functionality of the Multisectoral Coordination Committee (MCC)—organize effective coordination through regular meetings of the AMR-TWG

Support the AMR Technical Working Group (TWG) in organizing coordination meetings

MTaPS supported the AMR-TWG in conducting the following activities through multisectoral coordination:

Bimonthly coordination meetings of the antimicrobial stewardship (AMS) TWG

MTaPS supported the AMS-TWG to hold a meeting April 14, 2021, to review progress on activity implementation. The meeting was attended by 14 participants who validated the Drug and Therapeutics Committee (DTC) activity report template, shared updates on the evaluation of DTCs and antibiotic categorization, planned for DTC trainings, established a sub-group to prepare for the AMS training for private pharmacists, and developed a 2021 Q3 roadmap for the AMS-TWG.

During the meeting, the AMS-TWG appointed focal points from among its members to monitor activity implementation of each DTC through regular telephone calls.

As a next step, two meetings were tentatively scheduled, one for the group of experts working on Access, Watch, and Reserve (AWaRe) categorization on May 6, 2021, (activity 3.1.1) and one for the group preparing training materials to train private pharmacists, which was planned for May 18, 2021.

The next coordination meeting of the AMS-TWG is tentatively scheduled for June 30, 2021.

Bimonthly coordination meetings of the infection prevention and control (IPC) TWG

The IPC-TWG organized an online coordination meeting on April 30, 2021, with 15 participants from Multisectoral Technical Committee (MTC4). During the meeting, participants provided updates on the implementation of activities planned for January–April 2021:

- Most of the planned IPC activities that MTaPS supported were carried out. Only the facility trainings conducted at the subnational level were still ongoing and were completed on May 7, 2021.
- Regarding the animal sector, participants recommended that the IPC plan for animal health be presented to donors such as the Centers for Disease Control and Prevention, USAID, the Food and Agriculture Organization, and the private sector to secure funding for its implementation.

MTaPS supported MTC4 to organize another coordination meeting on May 27, 2021, at the MSH office in Abidjan. The main objectives of the meeting were to orient MTC4 members on the use of four IPC assessment tools (Water and Sanitation for Health Facility Improvement Tool [WASH-FIT], Infection Prevention and Control Assessment Framework [IPCAF], Infection Prevention and Control Assessment Tool 2 [IPCAT2], and the hand hygiene audit tool) and to schedule activities for the next quarter. Ms. Dina Rakotoharifetre, the WASH [water, sanitation, and hygiene] Manager at UNICEF Côte d'Ivoire, presented the WASH-FIT tool. MTC4 members then reviewed the IPCAF and hand hygiene audit tools. They discussed the points that need clarification to ensure that all members have the same level of understanding. Due to time constraints, the presentation of the IPCAT2 tool was postponed to another session.

Participants made the following recommendations:

- Adapt the WASH-FIT tool to national WASH standards and guidelines before the supervision missions to the 12 health facilities (July 15, 2021)
- The Directorate of Veterinary Services will have to finalize and validate the IPCAF grid, which was adapted to animal health, before the supervision mission to the two animal health sites (July 15, 2021)

The next meeting is scheduled for July 2021.

These efforts contribute to progress toward level 3 and 4 actions of WHO benchmark 3.1 for IHR capacities:

- Coordinate through regular meetings (level 3)
- Develop terms of reference (TOR) for a multisectoral governance mechanism, with clear lines of accountability between the AMR coordinating committee and the high-level One Health group making strategic and resourcing decisions (level 3)
- Review plans and progress at regular meetings of the AMR governance committee (level 4)

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

Activity 2.5.1: Strengthen the functionality of IPC committees in the human health sector and the capacity of health care providers to implement IPC

MTaPS supported MTC4 to conduct three-day onsite trainings of health workers (e.g., doctors, nurses, pharmacists, screening staff) on IPC April 28–30 at the regional referral hospitals (CHRs) of Abengourou and Daloa and May 4–6 at the CHRs of Aboisso and Yamoussoukro.

During the trainings, health care providers in each of the four targeted health facilities participated in 14 sessions on IPC led by two teams of IPC regional trainers and one master trainer from MTC4. The trainers gave practical sessions and demonstrations on hand hygiene, treatment of reusable medical devices, maintenance of premises, and management of sanitary waste. The various sessions consolidated the skills and knowledge of the trainees.

A total of 60 participants attended the trainings, with 13 participants at the CHR of Daloa, 14 at the CHR of Abengourou, 16 at the CHR of Aboisso, and 17 at the CHR of Yamoussoukro.

These efforts contributed to progress toward level 2, 3, and 4 actions of WHO benchmark 3.3 for IHR capacities:

- Establish a national IPC committee and develop TOR for it and for local IPC committees at the district and/or facility level, if an action plan is not in place (level 2)
- Identify and allocate adequate resources to support selected health care facilities/farms to implement IPC action plans, including IPC guidelines (level 3)
- Refer to the recommendations and requirements for IPC guidelines and train an adequate number of health care workers on issued guidelines (level 3)
- Share the plans with national, subnational, and local IPC committees and incorporate guidance from them (level 4)

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1: Support the AMR-TWG to improve the national essential medicines list (EML) using the WHO Antibiotic Access, Watch, and Reserve (AWaRe) categorization

MTaPS supported the AMS-TWG to organize a meeting on April 28, 2021, with 24 participants to validate the protocol for data collection for the antibiotic categorization. During the meeting, the two sub-groups (group 1 working on the antibiotic supply chain in the country to determine access and

availability and group 2 responsible for collecting data on the local epidemiology of infectious diseases) established previously to prepare for the categorization provided an update on progress made. Highlights from the meeting included:

- Review and validation of the draft protocol
- Desk review of the EML
- Assessment of existing surveillance systems

MTaPS supported the AMS-TWG to hold a meeting on May 6, 2021, with five participants to finalize the protocol for data collection for the antibiotic categorization, which was validated during the meeting of the group of experts on April 28, 2021.

The team agreed on the following next steps: training of resource persons who will collect data in Abidjan, which was scheduled for May 25, 2021; training of observers on May 31, 2021; training of resource persons who will collect data in other cities, to be held online on June 9, 2021; and data collection, tentatively planned for June 8–22, 2021.

MTaPS supported the AMS-TWG to train eight resource persons to proceed to data collection in 25 identified organizations in Abidjan. The training took place May 27, 2021, at MSH's office. Two trainers conducted the session under the leadership of a member of the AMR Secretariat. The trainers provided participants with general information on the use of antibiotics and the rationale for the study. They also presented the protocol for data collection and the table of indicators, with a focus on the data collection methodology and guidance on filling in the table. The meeting ended with a simulation of the data collection on tablets.

An online training scheduled for June 10, 2021, to train resource persons who will collect data in 12 organizations in other cities was postponed to June 29, 2021, to allow more time for the targeted organizations (e.g., universities, laboratories, research centers, health facilities) to identify resource persons for this activity.

MTaPS supported the AMS-TWG to train the two observers for the antibiotic categorization data collection on June 8, 2021. This training was led by two epidemiologists from the Pasteur Institute of Côte d'Ivoire and PACCI program (P for PNLS [National AIDS Control Program], A for ANRS [National AIDS Research Agency], C for *Coopération Française* [French Cooperation], and CI for Côte d'Ivoire). The aim of the training was to reinforce capacities of the two observers on desk reviews. The session focused on desk reviews in a database with a demonstration using PubMed. A focus was also put on the main keywords to be used for the research and the use of synonyms. After a week of practice, a second training of observers took place on June 21, 2021, to address inconsistencies in the data transmitted.

As a next step, the nine resource persons trained will start data collection in the 25 identified organizations in Abidjan on June 28, 2021.

This activity contributes to progress toward the following level 3 action of WHO benchmark 3.4 for IHR capacities:

- Develop/update and disseminate national stewardship and clinical/treatment guidelines that include the EML AWaRe categorization for antibiotics promoting appropriate use of antimicrobials

Activity 3.5.1: Support the AMR-TWG in establishing a governance and oversight system for AMS in health facilities, including monitoring implementation of related policies, guidelines, and standards

MTaPS supported the AMS-TWG to conduct competency-based trainings for DTC members in five public health facilities (the regional hospitals of Daloa, Yamoussoukro, Aboisso, and Abengourou and the university teaching hospital of Treichville) and two private clinics (Clinique Grand Centre of Yopougon

and Polyclinique Internationale Sainte Anne-Marie [PISAM]) May 25–June 18, 2021. Seventy-seven participants from the following facilities attended the trainings:

- CHR of Daloa: 10 DTC members
- Clinique Grand Centre of Yopougon: 12 DTC members
- CHR of Yamoussoukro: 10 DTC members
- CHR of Aboisso: 12 DTC members
- CHR of Abengourou: 12 DTC members
- PISAM: 12 DTC members
- CHU of Treichville: 9 DTC members

The trainings included materials on both DTCs and AMS. One day of the training was dedicated to antibiotic prescription and use to address specific issues (e.g., surgical antibiotic prophylaxis, monitoring of antibiotic treatments, recommended standard treatments for some common infections, antibiotic association principles). The final day of training was dedicated to setting up the continuous quality improvement process for each DTC. The session was led by a facilitator from the Leadership Development Program Plus. Each facility developed a challenge model and action plan.

The training of the DTC of the CHU of Angre initially planned for June 1–4, 2021, was postponed at the facility's request.

This activity contributes to progress toward the following level 3 actions of WHO benchmark 3.4 for IHR capacities:

- Conduct stewardship practices at designated health care facilities
- Implement AMS programs, including monitoring antimicrobial use, education/communication, and other interventions to improve antibiotic use at designated facilities

Activity 3.5.2: Support the AMR-TWG in strengthening capacities of pharmacists to implement stewardship activities in the private sector

Support the AMR-TWG in improving stewardship practices and raise awareness on antimicrobial use in private pharmacies

A group of experts comprising two members from the Ivorian Pharmaceutical Regulatory Authority (IPRA), two from the Directorate of Pharmaceutical Activity (DPA), one from the Association of Pharmacists, and one from the Red Cross was established by the AMS-TWG on April 14, 2021, to prepare the training materials and train private-sector pharmacists on improving stewardship practices and awareness on antimicrobial use in private pharmacies. The group of experts:

- Reviewed the draft TOR of the training
- Identified topics for the trainings
- Set up the training timeline
- Identified trainers to start drafting presentations for the training

As a next step, the AMS-TWG will organize the training for pharmacists on July 21, 2021.

This activity contributes to progress toward the following level 3 action of WHO benchmark 3.4 for IHR capacities:

- Implement AMS programs, including monitoring antimicrobial use, education/communication, and other interventions to improve antibiotic use at designated facilities

ACTIVITIES FOR NEXT QUARTER		
ACTIVITY	DESCRIPTION	DATES (2021)
Activity 1.1.1 Support the AMR-TWG in reviewing plans and progress on implementing the NAP-AMR with a view to defining priorities for 2021–2025		
Support the AMR-TWG in drafting an updated version of the National Action Plan (NAP) for AMR 2021–2025	Organize a five-day workshop to revise the NAP-AMR	June 28–July 2
Activity 1.1.2: Strengthen functionality of the MCC—organize effective coordination through regular meetings of the AMR-TWG		
Support the National AMR Secretariat in establishing and building capacity within the AMR, IPC, and AMS technical working sub-groups	One quarterly meeting of the AMR Secretariat Two meetings of the IPC-TWG to review the WHO WASH-FIT tool One meeting of the AMS-TWG	July 22 July 7–8 August 25
Activity 1.4.1: Support the AMR-TWG in identifying and mapping sustained funding for planned activities in the NAP-AMR		
Support the AMR-TWG in identifying potential partners, including from the private sector, to fund the updated NAP-AMR	One-day meeting of the AMR-TWG	August 17–20
Activity 2.3.1: Support the AMR-TWG to conduct a survey on the incidence of health care-associated infections (HCAIs)		
Support the AMR-TWG to carry out a pilot study at Bouake University Hospital on the prevalence of HCAIs.	Site visits at Bouake University Hospital to collect data related to HCAIs	August–September 2021
Activity 2.5.1: Strengthen the functionality of IPC committees in the human health sector and the capacity of health care providers to implement IPC		
Conduct quarterly supervision of IPC committee members in the 12 selected intervention facilities/hospitals (four from FY19 and FY20 and eight from FY21) during two days at each site	Site visits in 12 health facilities to conduct supervision of IPC committee members	July 2021
Activity 3.1.1: Support the AMR-TWG in improving the national EML by using the WHO antibiotic AWaRe categorization		
Support the AMR-TWG in improving the national EML by using the WHO antibiotic AWaRe categorization	Collect data on antibiotic resistance in 37 identified organizations	June 28–July 14
	Hold three meetings of the epidemiology sub-committee to analyze collected data and propose multicriteria evidence for review and decision making at the workshop	July 19–30
	Through the DPA, organize a three-day workshop to categorize antimicrobials	August 10–12
Activity 3.1.2: Support the AMR-TWG to update the national AMS guidelines		

ACTIVITIES FOR NEXT QUARTER		
ACTIVITY	DESCRIPTION	DATES (2021)
Support the AMR-TWG to review and validate the updated guidelines	Organize a two-day workshop to validate the updated guidelines	September 1
Activity 3.1.3: Support the AMR-TWG in establishing standard operating procedures (SOPs) and tools for monitoring antimicrobial use in humans and animals		
Support the AMR-TWG to conduct a national-level assessment of systems to monitor antimicrobial use using a multisectoral approach	Hold two one-day stakeholder meetings attended by IPRA and DPA to conduct the assessment and draft the report	June 29, July 7
	Organize a two-day workshop to review and validate the assessment report drafted by the group of experts	July 14–15
	Hold a one-day stakeholders meeting attended by IPRA and DPA to validate SOPs for monitoring antimicrobial use in the human sector	August 27
Activity 3.5.1: Support the AMR-TWG in establishing a governance and oversight system for AMS in health facilities, including monitoring implementation of policies, guidelines, and standards		
Support the AMR-TWG to train DTC members in eight additional health facilities in the human sector	Organize four-day onsite competency-based trainings for DTC members in one university teaching hospital (CHU of Angre)	July 6–9
Activity 3.5.2: Support the AMR-TWG in strengthening capacities of pharmacists to implement stewardship activities in the private sector		
Support the AMR-TWG in building capacity and raising awareness among pharmacists on AMS	Organize a one-day training workshop in collaboration with the National Association of Pharmacists board to train pharmacists on AMS	July 21

DEMOCRATIC REPUBLIC OF CONGO

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Activity 1.1.1: Provide technical and logistical support to the National Commission on AMR for effective monitoring and planning of AMR interventions

MTaPS supported the Direction de la Pharmacie et du Médicament (DPM) to organize partner programming and coordination meetings, which took place on April 20 and 26 with the participation of WHO, FAO, and the Ministry of Livestock and Fisheries. During the meetings, discussions focused on identifying a better way to collaborate and coordinate partner support to ensure synergy and rational utilization of resources. As a result, MTaPS, FAO, and WHO agreed to work together to support the National Commission on AMR (NC-AMR) to develop the AMR operational plan, which will facilitate implementation of the national AMR plan developed previously. MTaPS worked with FAO to draft the TORs for developing the operational plan, which is scheduled to take place early next quarter.

In addition, MTaPS supported the DPM in conducting the annual Tripartite AMR Country Self-Assessment Survey (TrACSS) 2021, which helps monitor country progress on implementing the AMR action plan. TrACSS 2021 revealed significant improvements from TrACSS 2020, specifically in the following areas:

- Improve governance and coordination
  - Multisectoral and One Health coordination: From limited to demonstrated capacities
  - Country progress on developing an AMR action plan: From developed capacity to demonstrated capacity
- Improve awareness and understanding of AMR
  - Rising awareness and understanding of AMR risks and response: From limited to developed capacity
  - Training and professional education on AMR in farming, food, and the environment sectors: From no capacity to limited capacity
- Strengthen knowledge through surveillance and research
  - National monitoring system for consumption and rational use of antimicrobials in human health: From no capacity to limited capacity
- Optimize the use of antimicrobials
  - Optimizing antimicrobial use in human health: from no capacity to developed capacity
  - Adoption of AWaRe classification of antibiotics in the National Essential Medicines List: From limited capacity to developed capacity

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

Activity 2.1.1: Support the NC-AMR in conducting a rapid assessment of IPC practices, including the implementation of guidelines and regulations in both the animal and human health sectors

From April 25 to May 22, MTaPS supported the NC-AMR and General Directorate for Health Services Organization and Management (DGOGSS) in finalizing the IPC rapid assessment in the seven MTaPS-supported facilities in Nord Kivu, Ituri, and Kinshasa provinces using the WHO's Infection Prevention and Control Assessment Tool for Facilities.

This assessment aimed to help strengthen implementation of IPC measures and provide baseline data to facilitate future comparative analyses and assess improvements with regard to IPC activities. During the visits, the team supported assessments of IPC and hand hygiene activities at the provincial level using standardized and validated tools, monitored the progress of planned IPC and hand hygiene activities, collected data on health care-associated infections (HCAIs, such as post-operative infections, etc.), and developed improvement plans.

Key findings include the following:

- The average prevalence of HCAIs in the establishments visited was 7.2%. The highest prevalence was noted at the Centre Médical Evangélique de Bunia with 14.4% prevalence. Surgical site infections, followed by gyneco-obstetric and urinary catheter infections, are reported as the main sources of contamination.
- Standard IPC precautions in four of the seven health facilities (HFs) visited were poorly applied. Weaknesses were identified in all IPC capacities of the WHO IPC scorecard.
- Heal Africa Hospital (Goma) and Monkole Hospital (Kinshasa) were the best performing of all HFs visited, with only around 1.5% prevalence of HCAIs and a score of 92.5% in implementing WHO IPC standards.

The next steps will include presentation of results of assessments conducted in Kinshasa, Ituri, and Nord Kivu provinces to the NC-AMR.

In the HFs visited, greater efforts are needed to educate health care workers and patients on the correct use of invasive devices/critical instruments (e.g., catheters, etc.), the rational use of antibiotics, and hand washing under aseptic conditions.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1: Support the NC-AMR in strengthening oversight of compliance to AMS policies and regulations in the human, animal, and environmental health sectors

From April 13 to 15, MTaPS supported the animal disease control department in preparing for field support visits in animal sector facilities that are planned for early next quarter. The aim of the visits is to assess IPC and AMS activities and identify areas for improvement. The preparatory phase consisted of adapting the supervision and basic IPC assessment tools for the animal sector using the human sector tools, selecting facilities to be visited, selecting experts to be involved in the visits, and drafting the TOR. The same exercise will be conducted for the human and environmental sectors to produce a multisectoral supervisory tool. These multisectoral field support supervisory visits will be conducted in the three sectors (human, animal, and vegetal), will also help assess the extent to which the AMS action plan is being implemented, and will result in recommended actions to address gaps.

Activity 3.5.1: Establish/strengthen DTCs to oversee the implementation of AMS interventions and conduct stewardship practices at designated health care facilities

In collaboration with the National Pharmacovigilance Center, MTaPS supported the DGOGSS and the DPM to prepare for the upcoming continuous quality improvement (CQI) refresher training for DTC members in the seven MTaPS-supported facilities. The preparatory meetings took place on May 14 and 24, during which the set of CQI indicators was defined, the data collection and reporting tools were adapted, and CQI training materials were prepared.

The aim of this CQI refresher training is to help members of the newly established DTCs become acquainted with AMS data and indicators that will be monitored in all MTaPS-supported health facilities. This will strengthen regular data collection, analysis, and reporting as part of the CQI program.

Due to the delays caused by the volcanic eruption in eastern DRC, the CQI refresher training has been rescheduled for early next quarter.

ACTIVITIES FOR NEXT QUARTER	
ACTIVITY AND DESCRIPTION	DATE (2021)
Provide technical and logistical support to the NC-AMR for effective monitoring and planning of AMR interventions	July-September
Support the AMS and IPC TWGs (sub-committees) of the NC-AMR to coordinate AMR interventions at the national, provincial, and facility levels	July-September
Support the NC-AMR in conducting a rapid assessment of IPC practices, including the implementation of guidelines and regulations in both the animal and human health sectors	July
Support the NC-AMR to conduct multisectoral support visits to assess compliance with AMS policies and regulations in the human, animal, and environmental health sectors	July-August
Strengthen DTCs to oversee the implementation of AMS interventions and conduct stewardship practices at designated health care facilities	July

MATERNAL, NEWBORN, AND CHILD HEALTH, FAMILY PLANNING AND TUBERCULOSIS

OBJECTIVE 1: PHARMACEUTICAL SECTOR GOVERNANCE STRENGTHENED

Activity 1.1.1. Assist the DPM in strengthening medicine registration procedures for essential medicines, especially MNCH, FP/RH, and TB medicines

From June 16 to 29, MTaPS supported the DPM in holding a two-week, quarterly medicine registration session to facilitate the timely registration of needed MNCH, FP/RH, TB, and other essential medical products. A total of 43 Medicine Registration Committee members attended the meeting, including internal and external assessors. Approximately 250 products were registered. Marketing authorizations (MAs) will be issued in early July.

Additionally, MTaPS continues to support the DPM in updating the *Directory of Registered Medicines* (DRM), which will be completed in July 2021. Once completed, the updated directory will be published on the DPM website. Pharmacist inspectors and customs officers are using the directory to track unregistered products, including MNCH, TB, and FP/RH products.

Activity 1.1.2. Assist Division Provinciale de la Santé (DPS), inspectors, and customs officers in accessing and using the updated directory of registered medical products for inspections and import control

From April 13 to 27, with MTaPS' support, pharmacist inspectors conducted field visits to seven pharmaceutical wholesaler companies in Nord Kivu to inspect whether imported products/medicines are registered and authorized for sale in the DRC market. The inspection consisted of identifying:

- Unregistered medical products that are being imported by local companies
- Products with MAs expiring in the next six months and notifying the wholesalers to renew their registration

The visits were extended to the General Directorate of Customs Services and the National Quality Control Agency (OCC). Key findings include:

- The OCC, which is one of the customs services, now systematically uses the MA directory to check whether medical products are registered before engaging any quality control analyses for such products at the country's points of entry.
- Around 50 products (antibiotics, pain relievers, malaria products, etc.) without MA were identified.
- Products with MAs granted in 2021 are not yet included in the directory.

Based on the findings, the Provincial Health Inspectorate (IPS) took the following actions:

- Importers are to obtain MAs for unregistered products within the next three months. A three-month moratorium has been granted for this purpose.
- Wholesalers are instructed to renew the registration for all products with an MA expiring in the next six months.

The next steps include:

- Raising awareness among wholesalers and implementing partners on product registration and helping them select only registered and authorized products
- Supporting the DPM in updating and disseminating the most recent DRM
- Supporting the Inspection Office to extend inspections to retail pharmacies
- Support the OCC in strengthening the control mechanism by using the directory and ensuring effective ownership of this tool

From May 13 to 23, MTaPS conducted a field visit to document the impact of using the directory to track unregistered products in Ituri and Nord Kivu. During the visit, the team noted with satisfaction that inspectors, custom officers, and the OCC are all using the directory effectively. This visit was also an opportunity to identify areas of improvement, particularly with inspectors, to ensure that products circulating in the provinces still have valid MAs.

The actions recommended to address the gaps identified include building capacity for wholesalers, retailers, and partners on MA processing; making the most recent directory available; ensuring funding for inspection visits and coordination meetings; and implementing a mechanism for the prequalification of wholesalers by the DPM and the Programme National d'Approvisionnement en Médicaments.

MTaPS supported IPSs in Nord Kivu and Ituri provinces to prepare for the first quarterly awareness raising meeting planned for mid-July 2021. These meetings aim to raise awareness among all stakeholders on product registration and help them select only registered and authorized products.

Activity 1.1.3. Improve the functioning of provincial TWGs on medicines in Nord Kivu and Ituri

To improve coordination among partners in Nord Kivu and Ituri, and as a first step to strengthen DPS' capacity to better steward partners' support in pharmaceutical systems strengthening at the provincial level, MTaPS supported the DPS in conducting provincial TWG meetings in Nord Kivu and Ituri on April 14 and June 8, respectively. Participants included representatives from partners, regional distribution centers (CDRs), and DPSs, and specific program members. During these meetings, participants analyzed LMIS data, medicine orders generated from health zones (HZs), and distribution reports presented by Association Régionale d'Approvisionnement en Médicaments Essentiels (ASRAMES) in Nord Kivu, and Centrale d'Achat et de Distribution des Médicaments Essentiels de Bunia (CADIMEBU) in Ituri.

Key results include the following:

- Medicine orders sent from HZs validated
- Distribution plans developed
- Malaria, HIV, and TB products, as well as family kits, at risk of expiration redistributed

A second TWG meeting was held on June 4 in Nord Kivu after the volcanic eruption. This was an emergency meeting to monitor and adjust orders and distribution plans for HIV, TB, and malaria products for April-June.

Activity 1.2.1. Enhance the role of health area development committees (CODESAs) and community outreach units (CACs) in medical product management at the health center and community levels

MTaPS supported the DPS in Nord Kivu to organize one-day trainings of CODESAs in Nyiragongo, Rwanguba, and Kitotshe HZs; 20 community members in Nyiragongo, 38 in Rwanguba, and 58 in Kirotshe attended the trainings. The trainings were an opportunity to clarify the roles and responsibilities of CODESAs in medical product management.

MTaPS supported the finalization and dissemination of the CODESA's TOR that clarify the roles and responsibilities of CODESAs in commodity management. A post-training plan has been developed for each CODESA to guide the implementation of their respective activities.

As a next step, the HZ offices, with MTaPS' support, will organize a one-day quarterly meeting for community members/organizations (Relais communautaires [RECOs], CODESAs, CACs, including civil society organizations as appropriate). These meetings will provide opportunities for community members to discuss issues pertaining to the transportation and distribution of medicines, analyze findings from the inventory conducted, monitor implementation of the post-training plan, and discuss any other issues related to medicine management.

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

Activity 2.2.1. Support DPS in strengthening technical and managerial capacities of HF staff in pharmaceutical management

From May 13 to 22, MTaPS supported the DPS in conducting joint field support supervision visits with HZ and DPS members to monitor pharmaceutical management, logistics data collection, and reporting at health centers in Ituri and Nord Kivu. For the purpose of these visits, 19 health facilities were selected. These visits were also an opportunity to coach staff as needed and to work with them to take appropriate actions to address issues. Findings include:

- Data collection and reporting tools are available in the 19 HFs visited.
- Tools are printed with HFs' own funds, which is a significant step toward MOH ownership.
- Good storage conditions of oxytocin are found in most HFs visited.
- There is low availability of FP products in the HFs visited in Ituri, including the CDR CADIMEBU.
- FP consultation sheets are not available in most HFs visited.

To ensure that the regional distribution center and central procurement ASRAMES maintain USAID pre-qualification, MTaPS worked with ASRAMES to develop a checklist that monitors the status and progress toward achieving and maintaining USAID's pre-qualification standards (requirements). This checklist is expected to be finalized and implemented by early July 2021.

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

Activity 5.2.1. Support DPS in strengthening MNCH health care capability by disseminating updated MNCH treatment protocols and related job aids to HFs and training health care providers on their appropriate use

MTaPS supported the national MNCH program in preparing the upcoming five-day workshop to develop protocols for using oxygen, carbetocin, and tranexamic acid, as well as to validate amoxicillin DT job aids and dispensing envelopes. During these preparatory meetings, participants conducted a quick review of some of the already drafted protocols, including amoxicillin DT and dispensing envelopes. Participants

also drafted and validated the TOR of the workshop, which is planned for July 2021, pending additional funding from the USAID/IHP project. The workshop will be supported jointly by MTaPS and the USAID/IHP project.

Activity 5.2.2. Collaborate with the USAID/MOMENTUM Safe Surgery in Family Planning and Obstetrics (MSSFPO) project, implemented by Engender Health in Ituri, and the USAID/MOMENTUM Integrated Health Resilience (MIHR) project, implemented by IMA World Health in Nord Kivu to support the DPS in integrating a reduced FP package for use at the community level in Nord Kivu and Ituri provinces

To help increase demand for FP and improve contraceptive prevalence, MTaPS is working to bring FP services closer to the community. To this end, MTaPS worked with the National Reproductive Health Program at the central level to prepare for the upcoming workshop to define the FP community package, specifically the contraceptive kit for the community care sites (CCSs). MTaPS supported the drafting of the TOR, which the program validated.

To ensure the successful implementation of the FP reduced package, MTaPS will collaborate with the USAID/MSSFPO project implemented by Engender Health in Ituri and the USAID/MIHR project implemented by IMA in Nord Kivu. The meetings between MTaPS and MIHR and MSSFPO are scheduled for the first week of July 2021.

The next steps include:

- Estimate of contraceptive needs for the CCSs
- Development of quarterly distribution plans
- Data collection and reporting from community to HF and then to HZ level

Activity 5.2.3. Strengthen community directly observed treatment, short-course (DOTS) strategy in the fight against TB in Ituri

To address issues that hinder the successful delivery of TB services, such as TB patients lost to follow-up, reductions in treatment adherence among certain patients, and the turnover and demotivation of RECOS, MTaPS worked with the TB program in Ituri to prepare for a four-day training course for RECOs in two pilot HZs (Bunia and Nizi). The training will address the direct treatment monitoring strategy and TB medicine management.

With MTaPS' support, the DPS worked to update/adapt community training materials with respect to DOTS and TB medicine management at the community level for RECOs and other centre de santé de dépistage et traitement/centre de santé de traitement members. MTaPS also supported the TB program to draft the TOR of the training workshop that is expected to begin early in the next quarter.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE (2021)
Continue working with MIHR and MSSFPO projects (in conjunction with Pathfinder and UNFPA) to define the FP community package, specifically the contraceptive kit for CCSs In collaboration with key implementing partners that procure FP commodities (MOMENTUM, Pathfinder, and UNFPA), support HZs and FP/RH provincial coordination to estimate the needs for contraceptives for HZs and CCSs; develop the distribution plan on a quarterly and monthly basis; and support the annual quantification and supply planning of contraceptives	July
Continue supporting the national MNCH program to develop protocols for using oxygen, carbetocin, and tranexamic acid, and to validate amoxicillin DT job aids and dispensing envelopes	July
Continue working with the TB program in Ituri to train RECOs in two pilot HZs (Bunia and Nizi) on direct treatment monitoring and TB medicine management	July
Support DPM in updating and disseminating a more recent DRM	August
Support the DPS, in collaboration with Action Damien, to organize mini awareness campaigns for active screening of TB and adherence to TB treatment in Ituri province	August
Support DPS in collecting contraceptive consumption information from the private sector to determine contraceptive information gaps	August-September

INDONESIA

OBJECTIVE 1: STRENGTHEN THE INSTITUTIONALIZATION OF MORE SYSTEMATIC, TRANSPARENT, AND EVIDENCE-INFORMED DECISION MAKING IN INDONESIA

After work plan approval was obtained May 4, MTaPS started implementing the following activities under objective 1:

- Activity 1.1.1: Strengthen the topic selection process for the HTA committee, InaHTAC
  - MTaPS hired a country coordinator to start July 1.
  - MTaPS interviewed one strong senior consultant candidate, however, he is unable to serve as a consultant.
  - On June 10, the Directorate of Health Financing and Insurance (PPJK) agreed to hold a meeting with USAID MTaPS to discuss planning for activity 1.1.1-1.1.2. However, the exact date will be determined later as they are still identifying available time for the HTA committee. In the short term, PPJK requested that the discussion focus on the topic of HTAsiaLink (activity 1.1.3)
- Activity 1.1.2: Build capacity of key stakeholders on HTA methods
  - No activities were held this quarter.
- Activity 1.1.3: Support HTAsiaLink 2021
  - MTaPS and PPJK to initiate discussion on activity 1.1.3 on HTAsiaLink support. The meeting was conducted over Zoom on June 14 and was opened by PPJK Director Bu Komaryani, followed by discussion led by Pak Armansyah and Prof. Budi. MTaPS and USAID reiterated their continuing support and interest in HTAsiaLink and will respond with an updated concept note for the HTAsiaLink preconference.
  - On June 21, Bu Lucy (PPJK) requested clarification of the preconference theme. We responded the same day, confirming the theme "Health Technology Assessment Pathways in LMICs: Scaling-Up for Sustainability of UHC in Asia."
  - On June 23, MTaPS shared the budget summary, HTAsiaLink concept note, and list of questions/clarification regarding HTAsiaLink to USAID. USAID Asia Bureau (AB) Health Advisor Sweta provided minor edits on the concept note, requested the need to justify the use of economic support funds (ESFs), and suggested that MTaPS engage with PPJK to get clarification on some of the technical aspects of the preconference. We received minor edits from Sweta on the concept note. No comment on the budget, except the need to provide justification to use ESFs.
  - MTaPS implemented AB recommendations and shared the updated preconference concept note to PPJK and Prof. Budi on June 24.

OBJECTIVE 2: PROMOTE TRANSPARENCY IN PHARMACEUTICAL EXPENDITURE TRACKING TO IMPROVE VALUE IN PURCHASING IN INDONESIA

MTaPS developed the scope of work for a technical consultant to review and landscape the sources of data for pharmaceutical expenditure tracking. The scope was reviewed and approved by MTaPS senior management and circulated on recruitment websites. MTaPS received 12 applications for the position and interviewed 3 candidates. MTaPS proceeded to engage an expert from the University of Indonesia, Faculty of Public Health, to lead this work; she will start on July 1.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Initial kick-off meeting and planning for HTA activities (1.1.1 and 1.1.2)	July-August 2021
Receiving approval for activities and budget for HTAsiaLink support (1.1.3)	July 2021
Hiring consultants to support MTaPS HTA activities	July-August 2021
The consultant will virtually convene experts from the PPJK, MOH's Pharmaceuticals Directorate, the National Public Procurement Agency, National Health Insurance Agency, and other agencies to develop a comprehensive description of available data sources for pharmaceutical spending.	July 2021

JORDAN

The Jordan team began working from the newly established office on June 6. The CPD was onboarded on May 17, and two senior consultants began their activities in support of meeting program objectives. Currently, the team includes four full-time employees and five consultants.

Moreover, and in addition to ongoing interventions, the team commenced high-level analysis of technical progress in COVID-19 vaccine introduction achieved in-country by stakeholders and counterparts and performed a stakeholder analysis that will enable a comprehensive approach to MTaPS' activities. These activities will guide the program's work planning and improve the design of its interventions. The two consultants are mainly supporting COVID-19 vaccine activities and other program objectives.

OBJECTIVE 1: STRENGTHEN PHARMACEUTICAL-SECTOR GOVERNANCE

MTaPS Jordan revolved around five main conditions precedent (CPs) agreed on between USAID and the Government of Jordan (GOJ). In Q2, the National Vaccine Procurement Modernization Committee (NVPMC) recognized the need to focus on the five CPs with a timeline for completion through September 2021. The five CPs (table 1) aim to institutionalize vaccine procurement best practices, facilitate market entry, and increase competitiveness.

Table 1: CPs for GOJ

DESCRIPTION OF CONDITIONS PRECEDENT
Amend Jordan Food and Drug Administration (JFDA) bylaws to ensure that WHO prequalified registered vaccines are accepted for fast-track registration, regardless of their registration status in reference countries, such as the USFDA or European Medical Agency.
Modify the principles of drug registration to include pricing of vaccines and using reference prices.
Add an article in the new government procurement bylaw or in its instructions permitting the development of exceptional provisions to procure pharmaceuticals, especially vaccines, under instructions permitting negotiations to take place.
Institutionalize partial prepayment for vaccines through activation of article 93, with further amendment to allow additional prepayment.
Extend the maximum limit of the framework agreement from two to three years in the amendment of the government procurement bylaw.

MTaPS continued engaging key stakeholders during Q3 to align understanding, coordinate efforts, and develop consensus on the required legislative reform. As planned in Q2, MTaPS developed summaries of existing legislation in the procurement bylaw and health law related to the CPs and drafted recommended modifications, including suggested changes to procedural requirements. MTaPS then conducted several one-to-one meetings to discuss the recommendations with different MOH directorates, including the Communicable Disease Directorate, Finance and Administration Directorate, and Project Management Directorate; JFDA; Government Procurement Department; UNICEF; WHO; and the World Bank.

Subsequently, MTaPS facilitated an NVPMC meeting on June 7, 2021, chaired by the MOH to review all recommendations and decide on next steps of implementation. All NVPMC members attended the meeting either in person or virtually. Agreement on all CPs was reached with the recognition that the GOJ must meet them by September 2021. The MOH also discussed additional technical and logistic

resources required in facing the COVID-19 pandemic, which was met with openness from USAID for further consideration in the upcoming MTaPS work plan. Following the NVPMC meeting, MTaPS took discussions again with stakeholders, according to each CP, to focus on actions required for full implementation. Accordingly, the MTaPS team met with each of the stakeholders, including with the MOH assistant secretary general for Financial and Administrative Affairs, to discuss providing partial prepayment for vaccine procurement, along with the Project Management and International Cooperation (PMIC) Director, Eng Huda Ababneh, who is also the focal point for the MTaPS Program. Based on this meeting, the MOH recommended that after informing the Government Procurement Department (GPD), an official communication with the Ministry of Finance (MOF), informing of the likely implementation of article 93, be produced.

On June 17, the MTaPS team met with the head of the Pharmaceutical and Medical Consumables Procurement Department of the GPD to inform him about enacting article 93 (CP 6) as directed by the MOH and to discuss CPs 9 and 5. Discussions covered the importance, challenges, and potential outcomes of both CPs as well as the legislative language required, which was agreed on during the meeting. Moreover, the head of the department requested to be given the opportunity to review material concerning procurement prior to NVPMC meetings and is willing to present some of his key findings based on his experience.

The preparatory meetings with MOH and GPD culminated in a key meeting with Dr. Omar Zureikat, the Legislation and Opinion Bureau (LOB) Legal Counselor and Head of the Procurement Bylaw Review Committee. The MOH successfully led this meeting with support from MTaPS and discussed the legislative reform and language for CPs 5, 6, and 9. Dr. Zureikat indicated his strong commitment to the content of the CPs outlined and presented his vision for the changes needed in the bylaw. Of note, Dr. Zureikat indicated that the maximum limit of the framework agreement, in the current drafts, has been extended to five years. Importantly, he outlined the steps required for finalization and requested support from the MOH and USAID in obtaining the support needed from the Ministry of Planning and International Cooperation and MOF before obtaining approval from the Prime Ministry. In his opinion, it is very challenging to complete all these steps by September but suggested that a commitment letter from LOB could state that the updates will be included in the bylaw.

OBJECTIVE 2: INCREASE THE INSTITUTION'S CAPACITY TO MANAGE PHARMACEUTICALS AND SERVICES, INCLUDING REGULATION OF MEDICAL PRODUCTS

CPs 2 and 4 concern the JFDA and GPD. In addition to regular communication, on June 22, MTaPS facilitated a meeting with the JFDA Registration Department, WHO, and USAID to further explain the use of WHO prequalification registration procedures as a reference for JFDA. The purpose of this activity is to establish priority and abridged registration procedures for vaccines and other medical products. MTaPS realized the importance of assuring the JFDA that the rigor of registration qualification would not be undermined, but that efficiency may be improved. The meeting was successful in obtaining the buy-in necessary from the JFDA, and the Registration Department is to review WHO procedures and compare them to their own. During the meeting, the head of the Registration Department began brainstorming ideas with WHO for revision of their procedures. WHO was to provide not only the most updated procedures, but also the results of a previously conducted study it coordinated with the JFDA in 2016.

The JFDA had also agreed to meet regarding the provision of reference prices to the GDP. However, the meeting, which was originally scheduled for June 26, was postponed and will be covered in the next quarter.

MTaPS' activities on vaccine introduction were being revisited with counterparts under USAID's guidance, given that much progress has been achieved. MTaPS is assessing emerging needs with stakeholders and will be providing proposals for interventions for USAID's consideration. Such

interventions will be implemented immediately upon approval and will be integrated into the upcoming work plan.

Finally, a comprehensive MTaPS draft report on the legal mechanisms available to accelerate the registration of vaccines has been completed and will be submitted to USAID for their review.

OBJECTIVE 3: OPTIMIZE PHARMACEUTICAL-SECTOR FINANCING, RESOURCE ALLOCATION, AND USE

No progress made under this objective during Q3. In work planning activities, MTaPS will work with the MOH to develop this component.

OBJECTIVE 4: IMPROVE PHARMACEUTICAL SERVICES, INCLUDING PRODUCT AVAILABILITY AND PATIENT-CENTERED CARE, TO ACHIEVE DESIRED HEALTH OUTCOMES

In Q3, the AMR senior technical advisor resigned and a search for a new candidate began. Significant effort was put forth in Q3 to identify candidates for both PV and AMR activities; a candidate has been identified and is in the final stages of hiring. The new candidate will lead both areas initially, with support provided by an additional technical advisor to be hired.

MTaPS provided support to the Local Health System Sustainability (LHSS) activity in preparation for the tele-counseling center's new technical task. Although the tele-counseling center was initially designed to enable follow-up of COVID-19-diagnosed patients, it was now suitable to shift its function to safety surveillance for adverse events following immunization (AEFIs). MTaPS participated in preparatory meetings with the MOH and JFDA to outline training requirements for 200 nurses. The MOH and JFDA had developed the training material with WHO and created forms in line with WHO standards. During a meeting on June 16 with JFDA, MOH, and LHSS, it was decided that training should commence with the available material, given its level of quality. MTaPS is to further work on strengthening the technical and systematic functions of both active and passive surveillance with MOH and JFDA. In the immediate term, MTaPS is providing support in ensuring systematic randomization of the sampling of those vaccinated. An initial follow-up meeting was held with the MOH Head of Information Analysis Unit, Dr. Mahmoud Yacoub, and the existing sampling process was studied and assessed. With Dr. Yacoub's consensus, a plan was laid out to strengthen the sampling process that will include the Electronic Transformation and Health Information Directorate and the director of the Communicable Disease Directorate. This activity will be performed in the first weeks of Q4.

To understand whether the COVID-19 pandemic has had an impact on antimicrobial consumption, MTaPS Jordan is supporting the MOH's Directorate of the Pharmacy and Clinical Pharmacy by analyzing antimicrobial dispensary records across four hospitals (Prince Hamza, AL-Bashir, AL-Karak, and Jordan University) from 2019 and 2020. Of the four hospitals, Prince Hamza is an MOH-designated COVID-19 treatment facility. This retrospective descriptive observational study is using antimicrobial dispensing as a proxy for antimicrobial use. This quarter, MTaPS received and cleaned the data. Next quarter, MTaPS will analyze prescriptions using WHO's Anatomical Therapeutic Chemical/defined daily dose methodology to compare trends and summary statistics of the outcome measures pre- and during the COVID-19 pandemic to see whether there are any observable changes in antimicrobial use.

IPC training was requested for the MOH field hospitals. In coordination with the MOH Nursing Department, MTaPS prepared a module covering general IPC training and specific COVID-19 updates. After review, feedback, and further editing with MOH, the training material was approved and ready for dissemination. Training includes 13 sessions in Amman, Maan, and Aqaba for 240 nurses from the four field hospitals.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Hold strategic technical meetings with key stakeholders and counterparts to discuss national priorities, inform work planning, and develop program activities, including key meeting with MOH secretary general for Epidemiology and Communicable Diseases Affairs	July
Continue providing technical, logistic, and coordination support to ensure all five CPs are on schedule for completion by the given deadline under the leadership of the NVPMC	July – September
Submit the drafted report on the legal mechanisms available to expedite registration of vaccines for USAID review and finalization	July 5
Provide technical support to MOH in the methodology for active monitoring of AEFI with COVID-19 vaccines, including randomization of samples, AEFI data collection, aggregating, and producing relevant reports	Randomizing sample: July
With the AMS committee, develop a complete curriculum for AMR/IPC training and consider key infection control clinical protocols for development and implementation using CQI methods	July

KENYA

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Activity 1.1.1: Continue strengthening the National Antimicrobial Stewardship Interagency Committee's (NASIC) capacity for coordination, policy direction, and M&E of the national AMR plan

Implementing the M&E framework for the AMR NAP: MTaPS in collaboration with the MOH national AMR secretariat held discussions on the launch of the M&E framework for the AMR national action plan (NAP). The final date of the launch is awaited. In the meantime, the M&E framework document is included as part of the orientation documents for the County Antimicrobial Stewardship Interagency Committees (CASICs).

National AMS technical working group's work plan update and meetings: MTaPS participated in NASIC's antimicrobial stewardship (AMS), and infection prevention and control (IPC) technical working group (TWG) meetings held within the quarter to review progress of its planned activities.

The NASIC calendar of meetings has not been updated as NASIC has not held a meeting for a while. MTaPS held discussions with the AMR secretariat on how to jumpstart the NASIC steering team meetings.

Review and updating of CASICs orientation package: MTaPS held discussions with the AMR secretariat on reviewing the draft orientation package for the CASICs. A review meeting will be held in July 2021 to finalize the orientation package.

Establishing and institutionalizing CASICs in target counties:

Kilifi County: MTaPS engaged county officials from the Departments of Health Services; Agriculture, Livestock and Fisheries; and Water, Environment, and Natural Resources to plan a meeting to outline the need, importance, and role of a CASIC in the county in the fight against AMR. The meeting will be held on July 6, 2021.

Kisumu County: MTaPS, in collaboration with the National AMR Secretariat and the Department of Health and Sanitation of Kisumu County, held a meeting on May 25, 2021, to sensitize senior county officials from the Department for Agriculture, Irrigation, Livestock, and Fisheries and the Department of Water, Environment, Natural Resources, and Climate Change on the need, importance, and role of a CASIC in the county in the fight against AMR. CASIC members from the three departments are currently being nominated. MTaPS will offer technical and financial assistance at a workshop where the new CASIC team will be inaugurated, inducted, and a two-year work plan developed July 27-30, 2021.

Murang'a County: MTaPS, in collaboration with the Murang'a County government, FAO, and Infectious Disease Detection and Surveillance Program held a three-day workshop June 28-30, 2021, to resensitize CASIC members on their mandate and to finalize its two-year work plan. The work plan focused on the four strategic areas of the NAP on AMR namely, awareness, surveillance, IPC and AMS. The work plan will be released in Q4 of year 3 (Y3).

Nyeri County: The county already has a functional CASIC in place. MTaPS is supporting implementation of the AMS component of its work plan. Ongoing activities include implementation of access, watch, and reserve (AWaRe) categorization of antibiotics in four health care facilities and development of standard treatment guidelines for the managing the top ten infectious diseases.

Dissemination of Government of Kenya core AMR documents: MTaPS disseminated various AMR documents during the engagements with Murang'a and Kilifi Counties. MTaPS utilizes various county-focused activities to disseminate these materials.

MTaPS also held discussions for launching the AMR NAP M&E framework, as well as the revised IPC policy and strategic plan documents. The launch is scheduled for July 2021.

RESULT AREA 2: IPC

Activity 2.1.1: Continue strengthening governance for IPC at the national, county, and facility levels

MTaPS, together with a smaller group of the MOH Division of Patient and Health Worker Safety officers, held a meeting on April 6, 2021, to develop the program and plan for the IPC TWG meeting.

MTaPS, in collaboration with the MOH, conducted the quarterly National IPC TWG virtual meeting held on April 7, 2021. The 22 members in attendance were drawn from MOH; Division of Veterinary Services; development and implementing partners, including Centers for Disease Prevention and Control, World Animal Protection, International Center for AIDS Care and Treatment Program, and Elizabeth Glaser Pediatric AIDS Foundation; among others. Deliberations during the meeting included the review and adoption of the national IPC TWG's terms of reference (TOR), updates from the ministries and relevant partners, among others.

MTaPS, in collaboration with MOH's Division of Patient and Healthcare Worker Safety, held a joint meeting on May 13, 2021, to review the status of the IPC GHSA activities and to schedule the upcoming national IPC-supported activities. MTaPS also held a virtual meeting with the team from the Division of Patient and Health Workers Safety and the National Nurses Association of Kenya (NNAK) program officer to plan for the introduction of IPC continuous quality improvement (CQI) training strategies in Murang'a and Kilifi Counties and scaling up the IPC continuing professional development (CPD) course through an e-learning platform, respectively, May 20-26, 2021. The meeting agreed to have IPC CQI 1 and 2 trainings combined into a single training for better implementation and monitoring.

Activity 2.2.1: Provide technical assistance to implement a CPD- and relicensure-linked in-service IPC training course for delivery through professional associations

USAID MTaPS held an engagement meeting with the NNAK on May 11, 2021. The association's president and program officer were in attendance. The agenda included updates on the finalized IPC CPD course materials and the trainings rolled out among diverse professional associations.

MTaPS held a virtual engagement meeting with the NNAK program officer on May 21, 2021, to plan for uploading the IPC CPD course onto an e-platform with the aim of scaling its uptake.

MTaPS had meetings with NNAK officials to plan for the IPC CPD training of trainers (TOT) targeting its regional chapters. This CPD TOT was held virtually on June 7, 2021, where 23 participants from the regional chapters were trained. In attendance were five NNAK officials, including their president. The participants were drawn from public, private, and faith-based organizations' health facilities in NNAK's regional chapters. The trained members will build a pool of TOT for sustainable in-country training capacity across multiple sectors, leading to cascade trainings and competency building in IPC programs among diverse sets of stakeholders.

Activity 2.5.1: Support county-, sub-county-, and facility-level IPC/occupational safety and health (OSH)/water, sanitation, and health (WASH) activities

MTaPS held a joint planning meeting with the Nyeri County IPC focal person on April 14, 2021, to develop a roadmap for a scheduled supportive supervision and mentorship exercise. The joint meeting also reviewed the status of the CQI IPC work plans to guide the focus areas for mentorship. Supportive supervision and mentorship were carried out April 19-23, 2021, in collaboration with the staff of Department of Health, Nyeri County in eight health care facilities (six public health facilities, one faith-based facility, and one private hospital). The aim of the supervision was to monitor implementation of

IPC CQI action plans. The supportive supervision findings informed areas of improvement and support for IPC.

USAID MTaPS staff holding mentorship sessions during IPC and AMS supportive supervision at Mukurwe-ini Sub-County and Nyeri County Referral Hospitals. (Photo credit: Dr. Oscar Agoro)

MTaPS participated and provided technical guidance during a meeting with the Nyeri County Referral Hospital (NCRH) IPC hospital committee held on May 5, 2021. During the meeting, the program made a presentation on the World Hand Hygiene Day celebrated every 5th May and that aims to maintain global promotion, visibility, and sustainability of hand hygiene in health care and to 'bring people together' in support of hand hygiene improvement around the world. The hospital IPC team conducted continuing medical education (CME) sessions to sensitize hospital staff and patients on hand hygiene and to commemorate the day. The meeting that was attended by the IPC Focal Contact, IPC Chairperson, Public Health Officer, Disease Surveillance Officer and Hospital Administrator among others saw the team give an update on the ongoing monitoring of surgical site infections (SSI), and findings following the MTaPS support supervision.

MTaPS program provided technical assistance to Nyeri County Referral hospital (NCRH) during a facility-based sensitization of forty-five (45) health care workers on surgical site infections (SSI) held on May 11 and 12, 2021. The sensitization meetings that were supported by the hospital were conducted by IPC TOTs trained by MTaPS. Further, the program provided technical assistance to NCRH during a facility-based training of health care workers on surgical site infections (SSI) held on May 11 and 12, 2021.The trainings that were supported by the hospital were conducted by IPC TOTs trained by MTaPS.

Further, MTaPS continued to provide IPC mentorship to the health facilities in Nyeri County, on the implementation of the work plans developed with targeted areas of interventions.

MTaPS in collaboration with the Department of Health, Kisumu County carried out an IPC supportive supervision in eight MTaPS-supported health care facilities in the county on May 24 to 28, 2021. The visit was aimed at following up on the implementation of interventions instituted as reflected in the facility action plans, while providing mentorship to further strengthen the facilities' IPC programs. The facilities supervised included six public health facilities, one faith-based and one private. From the supervision findings, it was revealed that some facilities were doing well and had brought other partners on board to support implementation of action plans while some were still yet to implement their plans.

MTaPS, in collaboration with officers from MOH's Division of Patient and Health Worker Safety and Department of Health, Murang'a County staff, conducted an IPC CQI training for 25 (18 female, 7 male)

health care workers (clinicians, pharmacists, nurses, and laboratory and public health officers) June 8-11, 2021. The training included a dissemination of findings from the February 2021 IPC baseline assessment to county health management and health facility staff from Murang'a County Referral and Maragua Sub-County Hospitals. TOT from the two hospitals also presented the status of implementation of their action plans developed at the end of the TOT held in early March 2021. The CQI training helped build the capacity of the participants in basic quality improvement concepts in readiness for implementation of CQI projects in their respective facilities.

Presentation of a fishbone diagram by a participant during the IPC CQI training in Murang'a in June 2021. (Photo credit: Helen Wangai)

MTaPS disseminated IPC baseline findings to Kilifi county management team members on June 15, 2021. Both the MTaPS country project director and the county executive committee (CEC) member for health for Kilifi County attended. The county health management team (CHMT) members accepted the assessment findings and acknowledged that they were aware of some of the challenges, such as inadequate ventilation systems in the operating theatres. The CEC said the assessment findings will guide identification of interventions to address the gaps. The team promised to identify and appoint IPC focal points and to integrate IPC activities as elements of the supervision and M&E tools. IPC activities will be costed in the county implementation plan and will also be part of the county performance contracting focus areas. MTaPS shared the management and coordination structure of the IPC program with the CHMT in anticipation of establishing a County Infection Prevention and Control Interagency Committee.

MTaPS in collaboration with the Department of Health, County Government of Kilifi successfully conducted a four-day IPC CQI training for health care workers and members of the hospital IPC committees June 16-19, 2021. A total of 29 health care workers were trained (18 female and 11 male); 15 were from Malindi Sub-County Hospital and 14 from Kilifi County Referral Hospital. The training helped build capacity of health care workers in applying CQI process for implementation of action plans developed at the end of the training; these plans focused mainly on hand hygiene compliance and infrastructure audit, surgical site infection surveillance, and health care waste management. MTaPS drafted tools for monitoring the implementation of the CQI process at the supported sites.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1: Strengthen national and county AMS governance structures

Establishing and operationalizing county AMS committees: MTaPS provided technical assistance for the establishment and operations of the CASICs in Nyeri, Kisumu, Murang'a, and Kilifi Counties. Once operationalized, these will support the AMS component of the county AMR work plan through the AMS committees that are linked to the CASICs. The CASICs are critical for sustaining and coordinating the AMS activities within the counties.

The CASICs in Kisumu and Murang'a were oriented during the quarter, with Kilifi CASIC scheduled for July 2021. Nyeri County already has a functional CASIC with MTaPS supporting implementation of the AMS component of its work plan. Ongoing activities in Nyeri include implementation of AWaRe categorization of antibiotics in four health care facilities and development of standard treatment guidelines for managing the top ten infectious diseases.

Biannual AMS publications: MTaPS is offering technical and financial assistance for developing a Nyeri County biannual AMS publication, which will be released in Q4 of Y3.

National AMS training curriculum and tools: MTaPS, in collaboration with the national AMS TWG and other AMS experts, reviewed and validated the national AMS training curriculum on May 17 and 18, 2021. The curriculum is currently being finalized and the final version will be ready in Q4. The curriculum will be used to develop the capacity of health care workers on establishing AMS programs in health care facilities in Kenya.

National AMS TWG's work plan: MTaPS offered technical input in the review of the national AMS TWG's work plan during its quarterly meeting on May 13, 2021.

Activity 3.1.2: Support the national medicines and therapeutics committee in institutionalizing and implementing AWaRe categorization of antibiotics

Regulatory brief on AWaRe concept implementation: MTaPS supported the national medicine regulatory authority, the Pharmacy and Poisons Board (PPB), in publishing two regulatory guidance notices targeting health care workers and the public on the appropriate use of antimicrobial medicines. The PPB communiques appeared in the local *Daily Nation Newspaper* (print media) on April 7, 2021, as well as the PPB Facebook page at https://m.facebook.com/story.php?story_fbid=4172734412745145&id=110132515672042.

National medicines formulary incorporating AWaRe concept: MTaPS in collaboration with the MOH Division of Health Products and Technologies, held a workshop to develop the first Kenya National Medicines Formulary from May 10 to 13, 2021. The formulary will include the WHO AWaRe categorization of antibiotics as a key intervention to optimize prescribing of antimicrobials. The formulary is currently undergoing review by medical specialists nominated by health professional associations and will be finalized in Q4 of Y3.

Scheduling of medicines by the PPB: MTaPS participated in a workshop held by PPB from June 2 to 6, 2021, to review the draft scheduling guidelines that incorporate the AWaRe concept for antibiotics.

Activity 3.2.1: Develop health care human resource capacity to manage AMS through pre- and in-service trainings

Implementation of pre-service AMS curriculum: MTaPS held consultative meetings with the AMS curriculum development team from the School of Pharmacy, University of Nairobi, to plan for the official launch of the pre-service AMS curriculum. The launch will take place on August 6, 2021. The course will first be taught to postgraduate pharmacy students and thereafter to third- and fifth-year undergraduate students.

Implementation of AMS CPD course with professional associations: MTaPS, in collaboration with the Kenya Pharmaceutical Association, held a virtual CPD session titled "Introduction to AMS Programs" on June 17, 2021. The event was attended by at least 100 participants. The next CPD event focusing on the core elements of AMS programs will be held in Q4 of Y3.

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

Kilifi, Kisumu, Murang'a, Nairobi, and Nyeri Counties: MTaPS continued monitoring implementation of county and facility CQI action plans on AMS and medicines and therapeutics committee (MTC) interventions in Nyeri and Kisumu Counties. The interventions are geared toward optimizing antimicrobial use and ultimately to contain AMR.

Nyeri: MTaPS, in collaboration with the Nyeri County Health Department, carried out supportive supervision and mentorship in eight health care facilities to monitor implementation of AMS CQI action plans. The activity was carried out April 19-23, 2021. The five-day activity was aimed at strengthening AMS programs to play a key role in preventing and containing AMR.

Kisumu: MTaPS, in collaboration with the Nyeri County Health Department, carried out supportive supervision and mentorship in eight health care facilities to monitor implementation of AMS CQI action plans. The activity was carried out May 24-28, 2021. The five-day activity was aimed at strengthening AMS programs to play a key role in preventing and containing AMR.

MTaPS offered technical input in the development of the medicine formulary of Jaramogi Oginga Odinga Teaching and Referral Hospital (JOOTRH). The JOOTRH MTC team is currently incorporating feedback received from MTaPS and submitting for final editing and printing.

Murang'a: MTaPS, in collaboration with the Murang'a CHMT, conducted a training for health care workers on AMS programs and MTC June 2-4, 2021. The goal of the training was to develop the capacity of health care workers to establish AMS programs and MTCs at county and facility levels with the aim of combating AMR.

Nairobi: The AMS committee at Kenyatta National Hospital (KNH) reviewed the antimicrobial consumption data that had been analyzed with MTaPS financial assistance. Below are some of the findings of the team:

- Ceftriaxone use is still higher than preferred across the hospital's units, and it is proposed that it be moved from access to watch in the hospital medicines formulary.
- Using cefazolin for surgical antimicrobial prophylaxis must be ensured, and, as such, the pharmacy department should enforce issuance of this antibiotic from theatre and not from the wards.
- The use of ciprofloxacin and levofloxacin is low, and this is a positive finding because their use is reserved for multidrug-resistant TB.
- The AMS team should examine the trend in the consumption of tigecycline in 'Pharmacy 40' (relatively high peaking between October and December 2020) and meropenem in 'Pharmacy 5' during the same period. Data from subsequent quarters is required to check whether the high consumption persists.

The AMS team made a request to MTaPS seeking further assistance in the analysis of the hospital's antimicrobial consumption data for the period January to June 2021.

MTaPS reviewed and offered technical input on the draft KNH surgical antimicrobial prophylaxis guidelines. The KNH team is currently reviewing and considering for adoption the input offered by MTaPS before final editing and printing of seed copies. This will be finalized in Q4 of Y3.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE (2021)
Activity 1.1.1: Continue strengthening NASIC's capacity for coordination, policy direction, and M&E of the national AMR plan	
Quarterly M&E reports generated by NASIC on the AMR NAP implementation	July - Sept
Updated NASIC work plans and AMR guidelines based on M&E results	July - Sept
Updated calendar of meetings for NASIC and its TWGs	July - Sept
Quarterly or biannual AMR bulletin or newsletter based on timelines agreed with the NASIC secretariat	July - Sept
Orientation package developed for CASICs and TWGs	July - Sept
Activity 2.1.1: Continue strengthening governance for IPC at the national, county, and facility levels	
IPC M&E framework	July - Sept
Updated IPC guidelines	July - Sept
High-level flyer/communique/brief on IPC	July - Sept
Dissemination and implementation package for the IPC policy, IPC/OSH guidelines	July - Sept
Formal IPC committees at county and facility levels with TOR and appointment letters (in two new counties of Murang'a and Kilifi)	July - Sept
Activity 2.2.1: Provide technical assistance to implement a CPD- and relicensure linked in-service IPC training course for delivery through professional associations	
IPC/CPD implementation reports	July - Sept
Activity 2.5.1: Support county-, sub-county-, and facility-level IPC/OSH/WASH activities	
IPC CQI implementation reports	July - Sept
IPC training reports	July - Sept
Publishing success stories	July - Sept
Activity 3.1.1: Strengthen national and county AMS governance structures	
Appointment letter and TOR for county AMS TWGs (Murang'a, Kilifi, and Kisumu)	July - Sept
Minutes of county AMS TWG meetings	July - Sept
AMS supportive supervision reports	July – Sept
Biannual AMS publications	July – Sept
Activity 3.1.2: Support the national MTC in institutionalizing and implementing AWaRe categorization of antibiotics	

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE (2021)
National medicines formulary incorporating AWaRe concept	July – Sept
Costed county AMS TWG work plans incorporating implementation of AMS guidelines and AWaRe concept	July – Sept
Activity 3.2.1: Develop health care human resource capacity to manage AMS through pre- and in-service trainings	
AMS CPD plan	July – Sept
AMS CPD implementation reports	July – Sept
Activity 3.5.1: Support county, sub-county, and facility-level AMS activities	
Implementation of AMS CQI action plans	July – Sept
AMS guidelines implementation report	September
AMS CQI implementation experience report	September

MALI

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON ANTIMICROBIAL RESISTANCE (AMR)

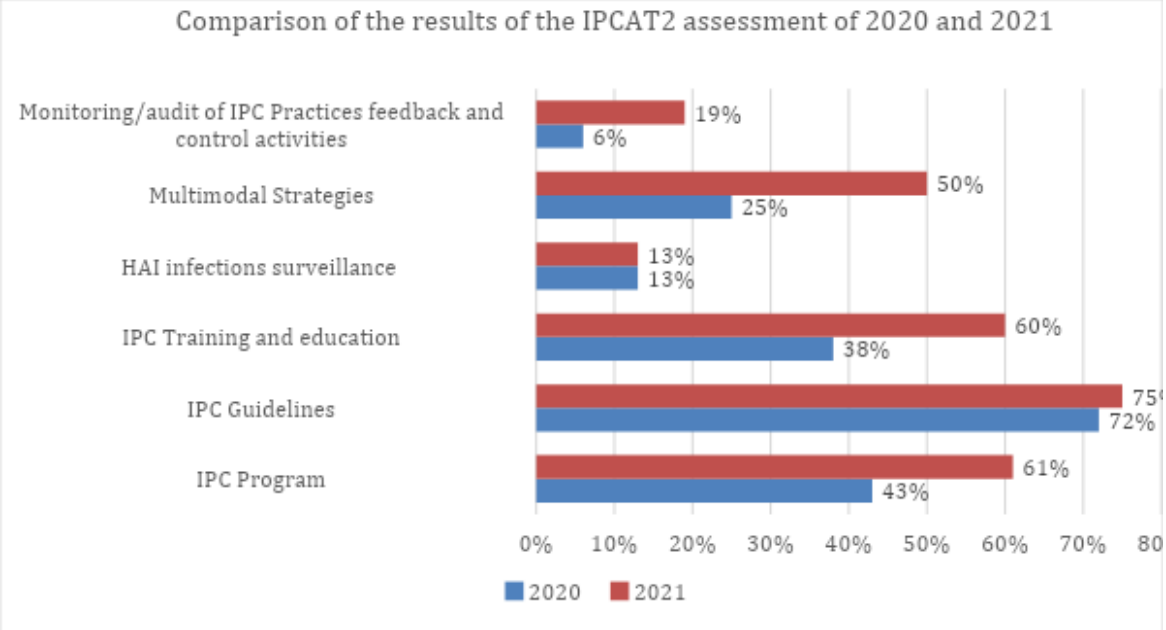
Activity 1.1.1. Provide technical and operational support to the National Multisectoral AMR Coordination Working Group (GCMN-RAM) and its two subcommittees (infection prevention and control [IPC] and antimicrobial stewardship [AMS]).

MTaPS provided technical and financial support to the multisectoral coordination group (Groupe de coordination multisectorielle national [GCMN]) to organize its quarterly meeting, which was held virtually on March 31, 2021. The objective of the meeting was to take stock of activities implementation that partners carried out in 2021 and to review the remaining activities.

On April 9, 2021, as part of the International Health Regulations, the Ministry of Health organized an online restitution workshop of the results of civil society organization mapping in Mali. This activity was supported by Tackling Deadly Diseases in Africa/Afrique Contre les Epidémies. Through its participation, MTaPS highlighted its contributions to the COVID-19 response in Mali.

The Directorate General of Health organized a workshop from April 12 to April 16 in the Segou region with the financial support of Water Aid and the technical support of MTaPS. During the workshop, MTaPS disseminated IPC protocols and fact sheets.

MTaPS supported the IPC technical working group meeting on May 10, 2021, which was focused on the completion of the WHO Infection Prevention and Control Assessment Tool 2 (IPCAT2). This activity found that Mali had a score of greater than or equal to 50% on four of the six IPC components assessed at the national level in 2021, compared to just one component scoring at this level in 2020. However, Mali received a low score for the other two components (HAI infection surveillance and monitoring/audit of IPC practice feedback and control activities) as indicated in the graph below.



Meeting participants made the following recommendations:

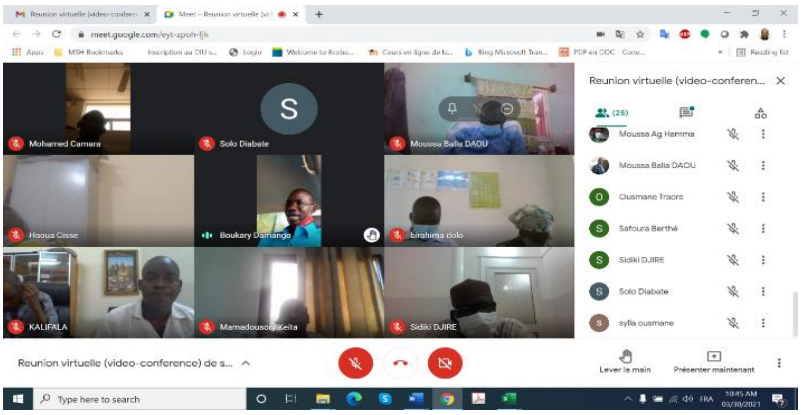
- Develop an action plan based on the results of the 2021 assessment done with the WHO IPCAT2 (by the end of December 2021)
- Engage in advocacy with decision-makers to prioritize the establishment of a national IPC program (by the end of December 2021)

MTaPS also participated in several other meetings during this quarter. On April 30, MTaPS participated in the One Health Platform 13th meetings, which focused primarily on surveillance. MTaPS also attended implementing partners meetings, which have recently addressed urgent questions related to COVID-19 and vaccination. MTaPS helped organize the recent IPC subcommittee meetings; during these meetings, participants evaluated progress made on IPC activities by the subcommittee members and planned for upcoming subcommittee activities.

RESULT AREA 2: IPC

Activity 2.5.2: Support the GCMN and Direction Générale de la santé et de l'hygiène publique (DGSHP) to monitor the implementation of IPC practices at health facilities

MTaPS supported the DGSHP to organize a virtual meeting on March 30, 2021, to monitor IPC activities in the 16 MTaPS-supported health facilities. During the meeting, participants provided updates on the implementation of developed action plans, assessed the functionality of the committees, and evaluated what has been done in facilities in terms of COVID-19 prevention using the scorecard. According to the information shared by the facility teams, the health and safety technical committees (comités techniques d'hygiène et de sécurité [CTHs]) are functional in all the sites except in Bougouni and Kangaba health districts. However, despite the non-functionality of their committees, the Centre de Santé de Référence of Bougouni and Kangaba have implemented some activities in their IPC action plans. The discussions also found that the majority of CTHs have begun implementing their action plans.



MTaPS met with the DGSHP team on June 4 to revise the IPC activity implementation schedule, which was delayed due to health care worker strikes. The IPC supervision visits in the 16 health facilities that were scheduled for May 23–June 12 were postponed to July 12–August 14, 2021.

Screenshot of the virtual IPC activity monitoring meeting
Photo credit: Famory SAMASSA STA MTaPS

Activity 2.5.3: Strengthen institutional capacity building for local training institutions to manage e-learning on IPC and AMS for both pre- and in-service health care workers

MTaPS organized four working sessions with the DGSHP to prepare for the training of 40 people on the use of the e-learning platform. The training was initially scheduled for April but was postponed to July. MTaPS is in discussion with the DGSHP to confirm new dates.

In the meantime, MTaPS is developing the AMS e-learning modules storyboard. These modules will be integrated into the e-learning platform, which was officially launched in February 2021 by the Minister of Health.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.5.1: Support the GCMN-RAM, Direction de la Pharmacie et du Médicament (DPM), and Agence Nationale d'Evaluation des Hôpitaux (ANEH) to establish drug and therapeutics committees (DTCs) in 11 new sites

Training workshop for members of the Kayes therapeutic committee: Data collection; Photo credit: Ousmane Traore STA MTaPS

From April 19 to April 30, 2021, MTaPS—in collaboration with DPM—supported the GCMN to train 67 DTC members from four facilities (Regional Hospital of Kayes and district hospitals of Yelimane, Kenieba, and Bougouni) and collect AMS data (patient survey, drug prescription indicators, etc.).

From May to June 2021, MTaPS supported the DPM to monitor the process of establishing DTCs in the seven targeted facilities—six public facilities (Hospital Gabriel Touré, Dermatologic hospital, Kati hospital, CSRef Kangaba, CSRef Kalabancoro, and Hôpital du Mali) and one private facility (Hospital Mali Gavardo). The DTC member training and AMS data collection will be conducted by the end of July 2021.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1: Provide technical and operational support to the GCMN-RAM and its two subcommittees (IPC and AMS)	July–September 2021
Activity 1.2.1: Strengthen technical capacity of key government AMR stakeholders	September 2021
Activity 2.5.2: Support the GCMN and DGSHP in monitoring implementation of IPC practices at health facilities	July–September 2021
Activity 2.5.3: Strengthen institutional capacity building for local training institutions to manage e-learning on IPC and AMS for both pre- and in-service health care workers	July–September 2021
Activity 3.5.1: Support the GCMN-RAM, DPM, and ANEH in establishing DTCs in 11 new sites	July-September 2021

MOZAMBIQUE

MISSION-FUNDED ACTIVITIES

OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

1.1.1: Support transformation of DNF to an autonomous authority, ANARME, by establishing an effective regulatory framework (activity continuing from FY20)

Development of regulations and guidelines to operationalize law 12/2017

MTaPS developed the draft Price Control Regulation requested by the DNF. In the document, MTaPS addressed DNF needs, including the rationale for regulating mark-ups in the pharmaceutical supply and distribution chain, the basis for pricing determination for manufacturers, determining the selling price to end users, penalties for noncompliance, and pricing for health products that are not medicines. To guide the preparation of the draft regulation, MTaPS produced an assessment and provided input regarding international experience, benefits, downsides, and recommendations on price control; issues for implementation regarding the rationale for regulation of mark-ups in the pharmaceutical supply and distribution chain; and the application of cost-plus pricing formulae for pharmaceutical product price setting.

The Price Control Regulation will enable elaboration of law 12/2017 and further allow *Autoridade Nacional Reguladora de Medicamentos de Moçambique* (ANARME), the national medicine regulatory agency, to regulate the pharmaceutical sector in terms of using mark-up controls to stop excessive charges being added to medicines as they move through the supply chain, hence securing the pharmaceutical supply chain and enabling initiatives to stimulate availability of and access to the medicines and other health products in manufacturing, import, procurement, distribution, and retail mechanisms.

GTM sub-group for regulatory systems strengthening

In the first quarter, MTaPS, in collaboration with the Mission, proposed to the DNF the creation of a Pharmaceutical Regulation sub-group, namely the *Grupo de Trabalho de Medicamentos* (i.e., Medicines Working Group [GTM]) sub-group for regulatory systems strengthening to promote coordination and collaboration of partners working in medical product regulation; maximize opportunities for knowledge sharing and financial and technical support; and promote the exchange of updated regulatory trends. In the second quarter, MTaPS drafted the terms of reference (TOR) for the sub-group. Proposed sub-group members included the DNF; donors (USAID, Global Fund, and the World Bank); and regulatory implementing partners (Promoting the Quality of Medicines Plus [PQM+], MTaPS, and WHO).

During this quarter, the sub-group TOR were shared with PQM+ for its input and have been sent to MTaPS for review. The TOR will be translated and shared with the DNF for validation before submission to the GTM for final approval.

OBJECTIVE 2: STRENGTHEN INSTITUTIONAL CAPACITY TO MANAGE PHARMACEUTICAL SYSTEMS

2.1.1: Enhance DNF management information systems by modifying Pharmadex to improve medicine registration and regulatory inspection processes (activity continuing from FY20)

Support for developing an import module for Pharmadex

In previous quarters, MTaPS developed the main functions of the import module for Pharmadex, conducted user acceptability testing sessions, and implemented changes requested by the DNF to

improve the system. However, the DNF revealed that it had allowed development of a parallel import module by another software developer using support from the Global Fund. The DNF requested that MTaPS link this parallel import module software to Pharmadex, and therefore in the previous quarter MTaPS prepared an options analysis showing two options and their pros and cons to help the DNF decide on the best strategy to follow. The DNF decided to retain the other import module and facilitate discussions with the parallel module developer and MTaPS on how to coordinate efforts and identify possible options to link the module to Pharmadex.

During this quarter, MTaPS met with the DNF and the developer of the parallel module to identify possible ways to link the module to Pharmadex. To address this, MTaPS has proposed two options to the DNF:

- Option 1: The Pharmadex import module: Since Pharmadex is currently deployed on a cloud server and available for the DNF to test and use, MTaPS can finalize the Pharmadex import module if the DNF commits to using it. The DNF would need to perform final user acceptance testing of the import certification module, work with MTaPS for any remaining adjustments, allow for final deployment, provide official approval, and start using the module. This option is the best solution for the DNF, being less expensive, allowing for easier interoperability with the Pharmacovigilance Monitoring System (PViMS) and linkage with future modules of Pharmadex, and benefitting from the global Pharmadex version under development.
- Option 2: Should the DNF decide to continue with the parallel import module, MTaPS will make available the technical documentation that the developer for the parallel import module needs, and it will be up to the DNF and the developer to ensure the linkage with Pharmadex.

CTD format for marketing authorization dossiers

During this quarter, MTaPS continued to work on obtaining the requirements for enhancing Pharmadex to follow the Common Technical Document (CTD) format for marketing authorization dossiers, which necessitated the DNF providing the current medicine registration standard operating procedures (SOPs) with information on work procedures that would inform software development. After extensive negotiations, the DNF provided the steps of the medicine registration process in response to a request from MTaPS last quarter. The CTD format will allow Pharmadex to better comply with international standards, guided by WHO and Southern African Development Community guidelines as desired by the DNF, and will facilitate higher-quality management of medical product applications filed for marketing authorization. Once Pharmadex is following the CTD format, the next step would be to migrate existing DNF data to the new structure.

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

3.1.1 Provide technical assistance to establish an active surveillance system for newly introduced medicines in HIV and TB programs (Activity continuing from FY19)

Support the DNF and HIV program to conduct quarterly supervisory exercises

During this quarter, the central-level DNF and HIV program supervisory team, with support from MTaPS, finalized the previous quarter's supervision exercise in the nine implementing health facilities (HFs) and provided guidance to strengthen implementation of the active surveillance protocol through monthly phone calls to the HF focal persons. The supervision checked that HF teams continued to follow the enrolled patients, completed the required data collection forms, and entered data into PViMS.

Last quarter, with the loosening of some COVID-19 pandemic-related restrictions, it was possible to start with on-site physical supervision visits, during which the national focal persons accompanied the provincial teams to the HFs. During this quarter, another round of supervision visits started in June that

also followed up on HF implementation of the central-level team's recommendations in the previous round on how to address HF-level challenges. This quarter's supervision also checked on data quality management and was to work with the HFs to develop action plans to be implemented to overcome current challenges.

So far, the DNF and HIV program have undertaken on-site support supervisory visits to three HFs—Cuamba HF in Niassa, Gondola DH in Manica, and Ndlavela HF in Maputo province. The supervision team visiting the sites comprised national focal persons from the DNF's Pharmacovigilance (PV) department and HIV program and provincial HIV and PV focal persons from the Provincial Directorate of Health. The remaining six sites will be covered in the early part of the next quarter.

Reporting of adverse events

Table 1 provides a breakdown of enrolled patients and adverse events (AEs) through March 2021.There was an increase in AEs reported from 17 in the previous quarter to 23; in terms of severity, 22 were mild AEs and 1 was moderate.

Table 12: Patients enrolled since from the start of the active surveillance system to March 2021

Health facility name	Date that HF enrollment of patients commenced	No. of patients enrolled (Form A)	No. of enrolled patients followed up (Form B)	No. of enrolled patients (Form C - Birth Outcome and Newborn Screening)	Adverse events (AEs) recorded
HF Carmelo	April 27, 2020	310	511	1	3
HF Cuamba	April 3, 2020	319	126	10	5
HF Machava II	April 4, 2020	390	308	3	0
HF Macia	April 2, 2020	412	100	15	0
HF Mavalane	April 20, 2020	364	413	3	0
HF Namacurra	March 19, 2020	434	279	3	0
HF Ndlavela	May 3, 2020	300	146	1	11
HD Gondola	March 17, 2020	338	997	18	4
HG Marrere	March 23, 2020	350	258	12	0
Total		3,217	3,138	66	23

Quarterly data cleaning and analysis

During this quarter, MTaPS continued to support the DNF on data cleaning to ensure adequate collection, management, and analysis of the data generated from the active safety monitoring program for the tenofovir/lamivudine/dolutegravir (TLD) regimen that were entered into PViMS, which enables electronic capture and analysis of patient longitudinal data, including analysis of the causality of the collected data. Last quarter, the two data clerks undertook cleaning, correction, and completion of birth dates and AEs in PViMS. During this quarter, they did the same for clinical conditions, AEs, medicines, and laboratory results. The cleaning process will ensure that high-quality data are in PViMS. These data are crucial to characterizing and quantifying AE profiles, estimating the incidence rate of AEs, assessing

the causality between the observed AEs and the use of TLD, and providing quantitative evidence for risk factors for the development of serious events and adverse drug reactions.

3.1.2: Develop and implement an active pharmacovigilance program for safety monitoring of TPT scale-up in Mozambique

During this quarter, MTaPS supported the DNF to finalize the review of the protocol and submit the protocol to the Bioethics Committee for ethical approval after it had been reviewed by the National Public Health Directorate. MTaPS has also undertake development of SOPs and training materials to support the protocol implementation. The SOPs are currently undergoing translation into Portuguese prior to review by the DNF and the TB and HIV programs. MTaPS has also engaged with the DNF in planning for training of trainers (TOT) and piloting the data collection forms.

MTaPS also held coordination meetings with CDC implementing partners EGPAF and CCS to clarify implementation roles and responsibilities for the active safety monitoring program of TPT.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE (2021)
Activity 1.1.1: Support the MISAU in operationalizing new legislation for establishing ANARME, a semi-autonomous regulatory authority • Review the draft Regulation on Price Control • Finish the draft Good Distribution Practices guideline to be inserted into the annex of the Regulation of Good Distribution Practices and Imports and Exports of Medical Products • Perform the training on Good Regulatory Practices (GRP) for the DNF and review the Guideline for GRP • Conduct a workshop to explain the main provisions included in the newly established regulations/guidelines • Develop how-to materials to facilitate implementation of and compliance with the newly established regulations/guidelines	July–September
Activity 2.1.1: Strengthen use of electronic IT solutions for efficient and transparent medicine regulatory processes • Implement an Amazon Web server to host the test version of Pharmadex as agreed with the DNF • Train the DNF's new IT staff on the optical fiber, internet, and system configuration for maximum performance • Complete requirements to update Pharmadex to meet the CTD format • Conduct a risk analysis and develop a plan to migrate the existing data to the new structure	July–September

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE (2021)
Activity 3.1.1: Provide technical assistance to establish an active surveillance system for newly introduced medicines in HIV and TB programs • Continue to support staff at participating sites in following up with enrolled patients to record any AEs that occur • Continue data cleaning • Support the DNF in performing on-site supervisions at the remaining six HFs (balance from this quarter) and start preparation for the next round of supervision • Prepare a quarterly progress update report showing number of patients enrolled and followed up and AEs reported from the nine implementing HFs with interpretation of results • Perform causality assessment	July–September
Activity 3.1.2: Develop and implement an active PV program for safety monitoring of TPT scale-up • Review the draft data collection tools, SOPs, and training materials; finalize and translate all materials • Perform TOT for national-level focal persons and perform training of health care providers on the protocol and their roles and responsibilities • Deployment of data management system (PViMS)	July–September

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

ACTIVITY 1.1.1: SUPPORT THE GOVERNANCE AND ORGANIZATIONAL CAPACITY OF THE AMR MCC

Quarterly meetings of AMR multisectoral coordination committee (MCC)

At the beginning of April, MTaPS generated the report for the first antimicrobial resistance (AMR) multisectoral coordination (MSC) workshop held virtually March 24–25, 2021. This workshop agreed on the general AMR governance structure comprising the MCC; MCC secretariat; and six technical working groups (TWGs), among them the antimicrobial stewardship (AMS) and infection prevention and control (IPC) TWGs.

The first workshop of the MCC-AMR observed that the various directorates of the Ministry of Health (MOH) and the Ministry of Agriculture (DNV) were not aligned in terms of who should lead the MCC-AMR, and the animal health sector was feeling left out. Therefore, MTaPS engaged in several meetings with government representatives and stakeholders to overcome these challenges. MTaPS first collected information about Global Health Security Agenda (GHSA) start up in Mozambique from the Mission; identified what the MOH National Institute of Health (INS) can offer in terms of collaboration with the DNF in AMR; planned to recognize the NAP leadership of the DNF in the AMR MSC and AMR TWG without jeopardizing implementation; and recognized the INS' role in One Health Approach. MTaPS briefed the DNF on initiating the GHSA in Mozambique based on the information from the Mission;

confirmed common understanding of the DNF, INS, and DNV on their roles and responsibilities; and ensured active participation and commitment from the DNF and DNV on work plan activities. Subsequent meetings were held to strengthen communication within the animal and human sectors, and focal points for communication were identified in both sectors.

MTaPS held a second meeting with key AMR stakeholders to plan and make decisions regarding the AMR MCC and to plan activities to support the development of AMS policies at the national level with the DNF, INS, and DNV. This meeting was important to reinforce the coordination of the DNF and INS and of human health and animal health stakeholders in the AMR MSC and AMS areas. The meetings also provided an agenda and dates for the TWG meetings and AMR MSC workshops.

Review of TOR for AMR MSC

In the previous quarter, MTaPS worked with the MOH and INS to draft and discuss the TOR for the MCC, secretariat of the MCC-AMR, and AMS and IPC TWGs. During this quarter, MTaPS shared the draft TOR with the DNF, INS, National Directorate of Medical Services (DNAM), other MOH institutions, and other ministries and partners working on GHSA for their input and later discussion. The TOR are under discussion by government representatives and implementing partners in the workgroups created in the MCC workshop to review the roles and composition of the MCC committee, Secretariat, and AMS TWG. MTaPS is working with the INS to organize meetings to validate the TOR.

With support from MTaPS, the IPC TWG met virtually on May 13, 2021. The meeting was used to validate the IPC TWG TOR, build capacity of government representatives on WHO reference indicators for IPC, present the results of IPCAT2 and IPCAF, review IPC actions in WHO reference tools to understand the country level in relation to IPC, and discuss the way forward. The IPC TWG TOR are awaiting input from the animal health sector prior to being validated at the second IPC TWG meeting, scheduled for the end of June 2021.

The MCC Secretariat and the AMS TWG met on June 11, 2021, as government representatives were opposed to having two separate meetings. This joint meeting of the Secretariat and the AMS TWG also included senior representatives from the MOH and DAV. This meeting helped align the objectives of the NAP to the respective TWGs and map the TWGs that do and do not have TOR. Those lacking TOR are:

- Knowledge, attitudes, and practices group (NAP objectives 1 and 3)
- Information, advocacy, and communication group (NAP objective 1)
- AMR epidemiology and investigation group (NAP objective 3)

The establishment of the AMR MCC will aid in operationalizing the NAP-AMR and track progress, which will contribute to addressing WHO JEE benchmark action 3.1 for multisectoral coordination on AMR (P.3.1).

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

Activity 2.2.1: Support the national IPC TWG in IPC oversight and management

National IPC TWG meetings

The report of the first IPC TWG meeting held in May was prepared by MTaPS and shared with the counterpart in MISAU.

IPCAT2 (national) assessment

In the previous quarter, MTaPS worked with the MISAU/IPC team to undertake an IPCAT2 assessment in March 2021 at MISAU. The IPCAT2 assessment report has been compiled and shared with the MOH

for its input and comments. An action plan for the National IPC TWG was developed with MTaPS' support following the IPCAT2 assessment.

IPCAF Assessments

In the previous quarter, on-site IPCAF assessments were done at Xai-Xai Provincial Hospital in Gaza province and Tete Provincial Hospital. During this quarter, an on-site IPCAF assessment was done at Inhambane Provincial Hospital. In addition, virtual assessments have been carried out for four provincial hospitals that will be supported remotely—Lichinga, Pemba, Chimoio, and Matola. The assessments were carried out in May and June at different times due to overlapping schedules at the hospitals. Action plans for the seven HFs were designed to respond to the gaps observed during the assessment and to design improvement actions.

The IPCAF assessment reports for the three hospitals with direct support have been developed and shared with DNAM/MISAU and approved. The IPCAF assessment reports for the four hospitals with remote support are being prepared and will be shared with MISAU for comments and approval.

Activity 2.5.1: Support implementation of prioritized IPC interventions in selected health facilities

Monitoring of progress of implementation of IPC interventions in the intervention health facilities

This is an ongoing activity. At this stage, it is centered on the hospitals with direct support—Xai-Xai, Inhambane, and Tete—and the four hospitals with remote support—Lichinga, Pemba, Chimoio, and Matola.

Continuous quality improvement (CQI) is carried out quarterly with IPC performance measurements internally at the hospital level. External measurements are carried out at the central level in addition to the scheduled monitoring visits to these hospitals, which are carried out in partnership with the cooperation partners that support IPC activities.

Action plans have been drawn up and are underway. Activities have been prioritized and some will be carried out before September 2021 and others after. An assessment of compliance with the action plans of Xai-Xai, Inhambane, and Tete hospitals was carried out recently. Capacity building was included in the scheduled monitoring visits to the three main provincial hospitals, and a WhatsApp Group was created so that members of the hospitals' IPC committees could interact with the different hospitals to improve IPC performance.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1: Support development of AMS policies at national level

Rapid assessment of AMS policies at national level

MTaPS met with the DNF, INS, and DNV regarding the development of AMS policies at the national level. The meetings also included discussion of a plan to conduct stakeholder interviews to collect information regarding AMS policies and of a regulatory framework to initiate a rapid assessment of AMS policies and activities.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE (2021)
Result area 1: Effective multisectoral coordination on AMR	
Organize in collaboration with FAO the three AMR MSC workshops	July–September
Finalize mapping of AMR stakeholder roles	
Identify other implementing partners who can support the AMR MCC in other activities	
Organize one regional workshop for monitoring and evaluation and planning of multisectoral AMR activities	
Create TWGs for AMR-MSC and support regular meetings for each TWG	
Finalize the updating of mapping of AMR stakeholders and activities	
Result area 2: Infection prevention and control	
Build the capacity of national IPC TWG members on using CQI methodologies	July–September
Build the capacity of the national IPC TWG to oversee IPC implementation and monitoring and reporting	
Continue to design a capacity building program that incorporates continuous assessments, coaching, mentoring, peer-to-peer learning, and microlearning	
Facilitate peer-to-peer learning by inviting health facility champions to present their work and share their experiences	
Result area 3: Use of antimicrobial medicines optimized	
In collaboration with the national AMS TWG, conclude rapid assessment of stewardship policies and activities	July –September
Provide technical support to the national AMS TWG to draft a multisectoral action plan for AMS in both human and animal health	
Support the HPD in following up and monitoring implementation of AMS action plans at the seven hospitals	
Provide a refresher on the application of the CQI approach to conduct a suitable baseline assessment and AMS audits	
Design a capacity building program that incorporates continuous assessments, coaching, mentoring, peer-to-peer learning, and microlearning	
Facilitate peer-to-peer learning by inviting health facility champions to present their work	

NEPAL

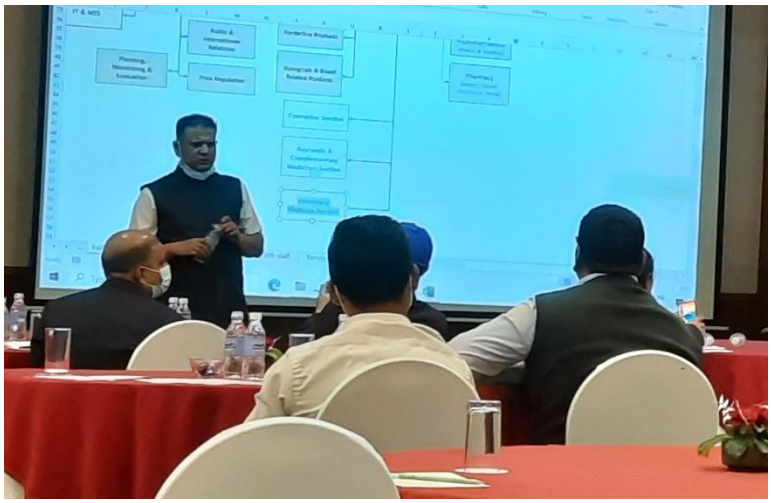
OBJECTIVE 1: PHARMACEUTICAL SECTOR GOVERNANCE STRENGTHENED

MTaPS worked on the following key activities and deliverables during the reporting quarter:

- Finalized a reorganized structure for the Department of Drug Administration (DDA) (central and decentralized levels) with updated staffing norms and terms of reference for coordination and oversight mechanisms; the job description format was approved, and key job descriptions were drafted. A concept note was developed to support the approval process with the Government of Nepal (GON) for the new structure and staffing norms.
- Merged existing updated drug laws, including the MTaPS-prepared zero draft of the drug law; a local lawyer was hired
- Finalized a mapping of existing regulations and a prioritized list of regulations, rules, and guidelines that will need updates prepared; began drafting the new updated regulatory framework with the drafting of Good Pharmacy Practices (GPP) and Good Distribution Practices (GDP) guidelines
- Developed a concept note detailing the process for the update and submitted it to the DDA to assist in updating the National Drug Policy

Activity 1.1.1: Assist DDA in organizational restructuring

MTaPS Nepal, with support from our partner Celsian, collaborated with the DDA and the National Medicines Laboratory (NML) to finalize the reorganization of the regulatory body, including autonomy, scope, and structure. Following the consultative workshop held at the end of last quarter, a follow-on workshop was organized by the DDA, with support from MTaPS. Staff from the DDA, NML, MTaPS, and PQM+ participated, and the organograms of the DDA and NML were finalized, including revised staffing norms. The DDA has submitted the organograms, terms of reference for coordination and oversight mechanisms, and staffing norms to the Ministry of Health and Population (MOHP) for its approval to begin a formal organization and management survey and formalize the proposals. The proposed reorganization of DDA and NML initially exempted food but now includes borderline products for DDA to regulate. This decision is the result of the government putting the establishment of a food and drug administration on hold. The format for job descriptions has been approved. MTaPS Nepal has submitted the first draft job descriptions based on the new staffing norms to support the DDA implementing the new organogram, a work that will be continued next year. The established Policy, Law, and Reorganization Technical Working Group (TWG) played a crucial role in the above process. To further support the reorganization and strengthening of the DDA, MTaPS assisted in drafting a concept note to be submitted to the GON.



Director General of DDA Bharat Bhattarai discussing finalization of DDA organogram (Photo credit: Prabin Tamang)

Activity 1.2.1: Update drug act, regulations, rules, and guidelines

With support from the MTaPS core partner, the International Law Institute-African Center for Legal Excellence, and the established TWG for policy, legislation, and reorganization, MTaPS initially prepared a zero draft of a drug law. The many legislative recommendations identified from the WHO GBT maturity level assessment are part of the revision. Around the same time the DDA itself drafted a new law but was not able to submit it to the MOHP to take it further. Seeing this deadlock and to help the DDA come up with a final draft for submission to the MOHP, MTaPS Nepal initiated the hire of a local lawyer to review the two draft laws, as well as two earlier ones, that the DDA had made a couple of years earlier and to undertake necessary consultations and advocacy with stakeholders. The lawyer will work through the MOHP working group involving the DDA and other stakeholders. This will expedite the making of a new drug law, once the MOHP receives consent from the Council of Ministers to draft bill to replace the existing drug act.

MTaPS has also been providing technical assistance to the DDA to finalize a concept note for the MOHP to submit to the Council of Ministers for approval. MTaPS met with the Honorable Jayapuri Gharti, Chairperson, Parliamentary Committee on Education and Health, to advocate for the importance of formulating a new drug law in Nepal and strengthening the DDA. Gharti assured that she would prioritize passing of the law once it is tabled in Parliament.

MTaPS also supported the DDA and TWG in mapping current regulations, codes, and guidelines to suggest a priority list of regulations to be updated and newly formulated, and the finalized mapping report was widely shared. MTaPS Nepal will focus on regulations, guidelines, and codes that can be updated under the existing drug act, while preparing same relevant to the new drug act, when it is approved.

Activity 1.2.2: Explore feasibility of and prepare background documents to update the Nepal national drug policy

MTaPS supported capacity building in pharmaceutical pricing and reimbursement policies for selected staffs from MOHP, DDA, and MTaPS to participate in a virtual one-week course organized by the WHO collaborating center, the Austrian National Public Health Institute in Vienna, for the beginning of July.

Following meetings with the MOHP and the DDA's Quality Control and Regulation Division, MTaPS was requested to support the updating of the national drug policy and to draft a concept note for the formulation of the national medicine policy. The concept note has been forwarded to DDA for the formation of a ministry-level steering committee and TWG. The concept note describes the background, need of a medicine policy, its scope, objective, rationale, and road map for formulating the policy, including preparing a policy option analysis. After approval of this concept and forming the steering committee and TWG, in the next year, in collaboration with WHO, MTaPS will assist the MOHP in finalizing the policy option analysis and, through a high-level policy conference with multistakeholder participation and international expertise, update the national medicine policy.

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

MTaPS worked on the following key activities and deliverables during the reporting quarter:

- Finalized and shared the confidential WHO GBT virtual self-assessment report along with the two-year institutional strategy development plan for 2020-2022
- Updated the GPP guidelines and inspection tool for public and private sector pharmacies and adapted them as electronic tools; an implementation strategy was discussed
- Drafted the new GDP guidelines and inspection tool for wholesalers and importers; it will be finalized next year along with an implementation strategy

- Drafted the DDA quality management system (QMS) manual; SOP development was started for all DDA functions, to be continued next year for ISO 9001:2015 certification

Activity 2.2.1: Develop a five-year strategic plan for strengthening functionality of medicine regulation

In 2019, 2020, and February-March 2021, DDA and the NML underwent a self-benchmarking exercise to determine the progress of building the regulatory system. Implemented with assistance from WHO and two assessors, the assessment documented the need to improve the regulatory maturity level and outlines 198 recommendations/actions to be implemented for DDA and NML to reach maturity level 3. The findings included the need to revise and amend the legal framework; document and establish a QMS, including developing SOPs and documentation for all DDA regulatory activities; and increase and reorganize the DDA and staffing norms. MTaPS produced a summary of the process and key findings to document the GBT assessment, along with a two-year strategic plan that was shared with USAID as a confidential report. The updated IDP details activities to be implemented through 2022. Based on the IDP, MTaPS drafted the annual implementation plan for indicators given the highest priority targeting maturity level 3. The annual GBT prioritized implementation plan will be finalized, following approval by the GBT TWG.

Activity 2.2.2: Strengthen regulatory systems for medicine and medical product registration, pharmacovigilance (PV), GDP, and GPP

Registration

The product registration process in Nepal is challenged by the huge workload with over 50,000 registration activities annually, including new registrations and renewals, with a limited number of qualified assessors. The dossier review challenges are evident—poor data quality and capacity of human resources. To strengthen dossier review practices and bring them in line with WHO best practices for dossier review, there is a need to build capacity among DDA assessors and registration holders. The transitioning from DAMS to Pharmadex will introduce procedures and practices that are in line with best dossier review practices whereby more experts and specialized assessors can be involved. Implementation of Pharmadex registration modules has started. An increase in qualified assessors is critical for good dossier review practices, and, although the increased staffing norms have been addressed as part of the DDA reorganization, it is not going to materialize immediately. However, introduction of Pharmadex is a step in the right direction.

Pharmacovigilance

The MTaPS PV/M&E technical advisor worked closely with the DDA PV focal person and other stakeholders, including MOHP disease-specific programs and referral hospitals, to clarify their roles in PV and adverse drug reaction monitoring. The PV/M&E technical advisor and the DDA focal person prepared a PV situational analysis that identifies strengths, weaknesses, opportunities, and threats for building a PV program. The international PV assessment tool used in other MTaPS countries was not used in Nepal because many of the assessment indicators overlap with the WHO GBT assessment that DDA already implemented. To avoid duplication of effort, the results from the GBT assessment formed the basis for the PV situation analysis. The GBT recommended activities to strengthen the maturity level of PV were reviewed and prioritized. Many of the recommended activities will need a legislative revision and increase in staffing norms at the central and provincial levels. To reach maturity level 2 in PV, most of the maturity level 1 indicators require that the drug act be updated, and MTaPS included these requirements in the updated zero draft version of the drug act. Since the updated drug act is not immediately expected the current regulations and guidelines will have to be updated as an interim provision. This process will be carried forward in the new year.

MTaPS also shared MSH's comparative analysis of different electronic PV data systems, which will facilitate and guide discussion on the best solution for Nepal. Implementation of these activities will

ensure the establishment of a stronger PV set up in Nepal in line with best WHO practices, increase the WHO GBT maturity level in PV, and strengthen medicine information and safety. A detailed workplan was drafted, and a PV consultant hired to support the DDA in establishing the PV unit. The PV consultant will begin work mid-July, working closely with the MTaPS PV/M&E advisor in implementing the detailed PV plan. This quarter, MTaPS strengthened the DDA in terms of its PV information sources and reference materials and ensured that the PV unit is adequately equipped and resourced. The procurement of pharmacopoeias was prepared in collaboration with the NML and PQM+, with procurement of on-line access, multiuser access, or hard copies where needed. The procurement will be finalized in July. DDA is in the process of becoming a member of the International Society of Pharmacovigilance; MTaPS has already submitted an application and is in the process of approval and payment.

GPP and GDP of Medical Products

A principal technical advisor with extensive experience in inspection who worked for DDA for many years was hired, and the strengthening of inspection has progressed well. The inspectorate, like other divisions in DDA, is challenged by the huge workload evident by over 22,000 pharmacies, 3,000 wholesalers and importers, and the increasing number of local manufacturers that all need to be licensed, inspected, and reauthorized on an annual basis and with only about 15 inspectors. The need to strengthen implementation of GPP and GDP and bring inspection requirements in line with WHO best practices is evident, with only about half of pharmacies meeting the GPP WHO best practices in both the private and the public sectors; problems include frequent dispensing and sale of prescription medicines without prescriptions, ownership issues with a high number of pharmacies not owned or managed by qualified pharmacists, and medicines not labeled appropriately. Strengthening GPP and GDP implementation requires a multipronged approach that involves legislative update, new inspection tools and guidelines, and revision of the sales and distribution code and guidelines on complaints, prosecutions, and recalls. In view of the staffing constraints and the huge workload, an implementation strategy that involves other stakeholders and private sector professional bodies needs to be jointly developed.

This quarter, the complex public-private sector strategy began development. To learn from countries that have faced similar constraints and challenges, a meeting with the principal technical advisor at the MSH home office, a manager with experience in the Inspection Division Uganda, was organized to discuss options and strategy appropriate for the context of Nepal and a stepwise approach was agreed. It was decided to implement the GPP inspection at two levels, one being a GPP WHO best practices inspection and another for routine regulatory inspections, which only includes mandatory requirements per the law. This strategy would allow building capacity in GPP WHO best practice inspection requirements, both by DDA inspectors and pharmacies, and would still allow DDA to best address the huge workload and start building the Pharmadex pharmacy registration module and information database. MTaPS, in close collaboration with DDA inspectors, finalized the GPP guidelines and electronic tools for GPP inspection. MTaPS developed GPP inspection tools for both private and public sector inspections and for the abbreviated GPP inspection. All tools were developed in Kobo-toolbox, which allows for easy data collection, report generation, and data storage. The tools were piloted by a team of MTaPS staff and DDA inspectors in two provinces (Birgunj and Biratnagar) which comprise four districts. The GPP tool comprises approximately 200 indicators covering 6 domains, with indicators classified into 3 groups (critical, major, and minor).

The GDP guidelines for Nepal were drafted and shared with the DDA inspectorate. An electronic inspection tool similar to the GPP inspection tool has been developed and is planned to be piloted and finalized next quarter.

Activity 2.2.3: Assist DDA in developing a QMS

The need to build capacity of DDA staff to comprehend QMS principles and to interpret the ISO 9001:2015 requirements correctly was recognized, and MTaPS conducted QMS training focusing on capacity building of DDA and NML staff, including senior management. The training was divided into QMS basic awareness, risk management in QMS, and internal quality auditing. A total of 28 participants successfully completed the test and were rewarded with certificates. The training material developed by Celsian will continue to be used to increase awareness among the maximum number of staff at DDA and NML, hence the virtual training sessions will continue into next year as well. Due to the increased awareness with QMS training, the QMS TWG was able to make good progress on the DDA quality manual, quality policy, and SOP format. To support and speed up quality assurance work at DDA, MTaPS employed a technical advisor in quality assurance. The quality manual is about to be finalized. The quality policy has been reviewed and sent back to the QMS TWG in the final draft version. The SOP for control of documents has been prepared as the standard format for preparing QMS documents, including SOPs, and submitted to DDA.

Meeting with Hon. Jaypuri Gharti, Chairman, Education and Health Committee (Photo credit: Sushmita Manandhar)

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

MTaPS worked on the following key activity during the reporting quarter:

- Implementation of Pharmadex has started with customization based on finalized system requirement specifications (SRS) for the registration module. The plan for data transfer from DAMS has been approved. Implementation of the pharmacies', wholesalers', and importers' registration modules has started. Training material has been finalized and staff training initiated.

Activity 3.1.1: Develop SRS for selected regulatory modules of an integrated electronic management information system

MTaPS Nepal has been providing technical assistance to the DDA to develop and implement new pharmaceutical information systems. MTaPS initiated the customization of Pharmadex for DDA to implement registration, inspection, and PV modules in one common platform; SRS for registering pharmacies, wholesalers, and importers was finalized. SRS of manufacturers' registration is in the process of getting approved, and SRS of medicines and medical devices will be finalized by the end of June 2021.

Activity 3.1.2: Assist in strengthening MIS for registration, inspection, importation and exportation, and PV

The customization of Pharmadex to register pharmacies, wholesalers, and importers was finalized, and testing by DDA staff initiated. Training material has been developed and training of DDA staff to operate the new version of Pharmadex of registration module will be implemented from July. An IT consultant has been hired to transfer data from DAMS into Pharmadex, beginning in mid-July. DDA, assisted by MTaPS, will host Pharmadex on the GIDC government server after successful completion of Pharmadex testing and training for DDA staff. MTaPS initiated procurement of 10 sets of desktop computers and printers for the DDA central and provincial offices for Pharmadex implementation, and 15 sets of notebooks for inspectors. Moreover, MTaPS has ensured high internet connectivity with local area networks for information sharing.

MTaPS has supported the DDA in reinstating tracking and reporting weekly on the stock status of essential medicines from importers and manufacturers by using data visualization using MTaPS-developed online stock collection tools. The tool was expanded to also report on COVID-19 essential medicines, including Remdesivir, from all public and private hospitals in Nepal.

OBJECTIVE 5: PATIENT-CENTERED CARE TO IMPROVE HEALTH OUTCOMES IMPROVED

MTaPS worked on the following key activities during the reporting quarter:

- An intervention strategy for capacity building in medicine management in public health facilities was agreed, and a concept note to implement the Supervision, Performance Assessment, and Recognition Strategy (SPARS) was outlined.

Activity 5.1.1: Explore strategies to strengthen GPP and medicine management in government and private-sector health facilities and pharmacies

A concept paper was developed for strengthening supply chain management, reporting quality, and prescribing and dispensing quality in public sector health facilities. The paper describes the study method for piloting SPARS in selected districts or municipalities and outlines the SPARS implementation plan, approach, resources needed, and impact assessment strategy for piloting in Nepal. SPARS is a new approach that builds essential medicines and medicine supply management capacity and improves medicine management in public health facilities. SPARS is a multipronged strategy that was developed based on evidence from Uganda and experiences of the Global Alliance for Vaccines and Immunization.[7,8]

The concept starts by justifying and documenting the need for strengthening medicine management in Nepal and then describes the SPARS concept and elements, proposed district selection, indicator-based impact assessment, and proposed tool. In the next quarter, the finalized concept paper will undergo thorough discussion and detailing.

MATERNAL, NEWBORN, AND CHILD HEALTH

MTaPS hired a local consultant to assist in implementing a study on decentralized and sub-national procurement and to clarify implementation of appropriate regulations, procedures, and systems for

[7] Trap B, Okidi Ladwar D, Olowo Oteba M, et al. Article 1: Supervision, Performance Assessment, and Recognition Strategy (SPARS) - a Multipronged Intervention Strategy for Strengthening Medicines Management in Uganda: Method Presentation and Facility Performance at Baseline. J Pharm Policy Pract. 2016. 9 (1):1–15. https://doi.org/10.1186/s40545-016-0070-x.
[8] Trap B, Kikule K, Vialle-Valentin C, et al. First regulatory inspections measuring adherence to Good Pharmacy Practices in the public sector in Uganda: a cross-sectional comparison of performance between supervised and unsupervised facilities. J Pharm Policy Pract. 2016. 9:18; doi:10.1186/s40545-016-0068-4; http://www.joppp.org/ content/9/1/18.

procuring MNCH medicines. The study has been transitioned into a virtual questionnaire and interview-based study. The tool was finalized, and data collection is expected to begin in July.

ASIA BUREAU ACTIVITIES

Training of MOHP staff in the use of the One-Health tool that was planned in this quarter has been pushed till next quarter due to COVID-19.

Discussion took place with the international MTaPS consultant to prepare a detailed implementation plan for the Asia bureau activity on competency mapping. The mapping will be implemented in several MTaPS countries starting in Nepal in July.

ACTIVITIES NEXT QUARTER	
ACTIVITY AND DESCRIPTION	DATES
1.1.1: Assist DDA in organizational restructuring Support implementation of new structure at central and provincial levels, staffing norms, and competency mapping	Q1
Identify training needs and develop training strategy and plan for central and provincial DDA staffs	Q1
1.2.1: Update drug law, regulations, and guidelines	Ongoing
Finalize and submit the new draft drug law Support updating regulations, guidelines, and codes based on the new act submitted for approval	Q1
1.2.2: Revise and update the Nepal national medicines policy Develop policy options analysis	Ongoing
2.2.1: Strengthening medical product and device regulations to increase maturity level Establish IDP taskforce or TWG and facilitate regular meetings, develop and implementation plan	Ongoing
2.2.2: Strengthen regulatory systems for medical products registration	Q1
Review and update all registration processes and update SOPs, guidelines, and regulations Harmonize and build capacity in dossier review (MTaPS Asia Bureau activity)	Ongoing
2.2.3: Strengthen regulatory system for medical device registration Develop and implement Pharmadex medical device registration module	Ongoing
2.2.4: Strengthen PV at national and provincial levels	Ongoing
Update regulation for PV to align with the revised Nepal drug act Implement PV strengthening strategy and train DDA staff in key PV functions	Ongoing
2.2.5: Strengthen GPP	Ongoing
Orient private sector organizations on revised GPP requirements and implementation strategy Support DDA to increase the number of inspections, train inspectors, and explore feasibility of new options	Ongoing
2.2.6: Strengthen GDP Finalize GDP guidelines and inspection tool in private and public sectors with critical indicators and reporting format	Q1

ACTIVITIES NEXT QUARTER	
ACTIVITY AND DESCRIPTION	DATES
2.2.7: Strengthen Good Hospital Pharmacy Practices Review current hospital pharmacy directives, consult with stakeholders, and update directives	Q1
2.2.8: Assist DDA in developing a QMS Finalize quality manual to be in line with ISO 9001:2015 and implement management audit	Ongoing
3.1.1: Implement management information system for registration, inspection, importation and exportation, and PV Finalize and implement registration module, transition from DAMS, and migrate data	Ongoing
5.1.1: Strengthen medicine management in government sector health facilities	Q1
Finalize intervention strategy, plan, and monitoring tools to strengthen medicine management/GPP at district level	Ongoing
Develop and print best practices guidelines (SOPs) and training materials in medicine management In collaboration with university, train Medicine Management System (MMS) from the districts	Ongoing
5.3.1: Improve AMR containment Implement a rapid situational analysis of the GHSA and AMR landscape	Ongoing
Collaborate on Asia Bureau activities Assist in implementing registration harmonization, joint dossier review of vaccines and biologicals, and capacity building in the One Health tool	Q1

NIGERIA

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Activity 1.1.2: Strengthening multisectoral coordination and functionality of the AMR-TWG and its subcommittees

To strengthen multisectoral coordination and the functionality of the AMR TWG and its subcommittees set out in the work plan, MTaPS Nigeria supported the Nigeria Center for Disease Control (NCDC) and the National AMR Secretariat in organizing the second quarter AMS pillars meeting on June 14, 2021.

The virtual meeting was well attended by members of the AMS multisectoral pillar. The secretariat provided an update of ongoing and planned activities in the human and animal sectors of the pillar. The meeting agreed on the need to expand the scope of its membership to include representatives from the pharmacists' and veterinary councils of Nigeria and directed the secretariat to invite the new members to the next quarter's meeting. The representatives of the animal health sector were encouraged to share their activity plans with the AMR TWG Secretariat, while ensuring that all data pooled from Nigeria are reviewed by the TWG before sharing with an external audience.

State-level engagement commenced following the selection of Enugu state in consultation with the TWG Secretariat. The commissioner for health for Enugu state and the management team of the state MOH were visited on May 28, 2021, to advocate for selection of the state as the host for the AMR containment program. Three health care facilities (one tertiary and two secondary) in the state have been selected for IPC and AMS program implementation based on WHO-adapted minimum criteria for setting up these programs in HCFs.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

Activity 2.1.1: Support IPC governance at the national and state levels

An effective IPC program is fundamental to the quality of care because it can reduce the disease burden on patients, health facilities, and the nation in general. A roadmap to guide program implementation is necessary and can only be achieved with a strategic plan. To support IPC governance at the national level, the recruitment process for a consultant to drive the IPC strategic plan development was initiated in consultation with the TWG Secretariat. The scope of work was developed by MTaPS Nigeria and reviewed by the TWG Secretariat. An advertisement was placed and circulated among all stakeholders. The best four applicants for the role have been shortlisted for interview the second week of July 2021.

MTaPS supported a national IPC SOP review workshop in Lagos for June 25-26, 2021. The two-day workshop was facilitated by the AMR TWG Secretariat and supported by MTaPS. A total of 18 participants, including 10 subject matter experts, from across Nigeria reviewed and validated the national IPC SOP for use by all health care facilities in the country. The final document will be shared by the AMR TWG Secretariat.

The second IPC policy review meeting was conducted on May 25-26, 2021. The main objectives of the meeting was to produce a final draft document, including stakeholder mapping, and conclude next steps with agreed timelines; 19 participants from academia, the US Center for Disease Control (CDC), Africa Center for Disease Control (ACDC), NCDC, WHO, MOH, tertiary health institutions, and professional bodies attended the workshop. The meeting achieved its objectives by harmonizing inputs from members of the TWG that reviewed the earlier draft to produce a zero draft document that will be circulated among a larger group of stakeholders for further review. At the end, the AMR TWG

Secretariat will share the zero draft policy document with all members for concurrence. MTaPS provided useful comments on the zero draft of the new IPC policy.

Next Steps

Factors	What	When
Technical expertise		
NACA, NPHCDA, WHO, NTBLCP, ACDC, ICAN US-CDC, RTSL, CHAI, RKI, FHI-360, USAID, DOD, IHVN, DRASA, CHIP, MSH, APIN, PHARMA, FLEMING FUND, NSIC, NIDS, SQHN, SMEs	Review, update and finalize technical content	One more meeting with the group June–July 2021
Regulation/compliance		
PCN, MDCN, MLSCN, NMCN, EHORECON, FMEnv, Servicom, CPC, DHS, Committee of CMDs, AGPNP, GMD, MOD-HIP, DMS, SMOH/Env (6)	Support implementation and ensure compliance	Last week of July 2021
Funding		
GON, FMFin, WB, RTSL, ACDC, US-CDC, WHO, CHAI, RKI, USAID, DOD	Financing of policy review and implementation	Immediately (continuous)
Influence/political		
NASS, NGF, FMOH, BMGF, TBI, WHO, NPHCDA, NHIS, RTSL, ACDC, ICAN, NSIC, DRASA, LAFIA, FLEMING FUND, Committee of CMDs, NCH	Buy in and leadership support	When document is ready
Policy administration (monitoring, dissemination, feedback, engagement)		
All professional bodies + media organizations/NGOs	Ensure adequate publicity and grassroot engagement/ monitoring and feedback	Develop policy briefs/launch: August

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1: strengthen AMS in human and animal health sectors (NAP objective 4.3)

To support the AMR TWG Secretariat in undertaking a rapid assessment of stewardship policies in both human and animal sectors, MTaPS Nigeria has engaged a consultant in the animal health sector to drive the rapid analysis. With technical support from MTaPS Nigeria, rapid assessment of stewardship policies and supply chain management of antimicrobial use in the human and animal sectors is ongoing. A biweekly touch base has been set up to monitor progress of the assessment.

Advocacy visits were made to the Federal Ministry of Agriculture and Rural Development to ensure their buy-in and support for the consultant leading the AMS plan development. MTaPS secured the assurance and cooperation of the MOH in carrying out the rapid assessment and development of the One Health AMS plan for Nigeria

ACTIVITIES FOR NEXT QUARTER	
ACTIVITY AND DESCRIPTION	DATE
Present proof of concept on MTaPS-developed AWaRe classification process to members of the essential medicines list and key stakeholders	From 3rd week in July 2021
Conduct baseline assessment using WHO IPCAF, evaluate functionality of the IPC Committee at the three facilities and draft TOR, and create feedback mechanisms for monitoring progress	From 3rd week in July 2021
Conduct baseline assessment of AMS at the three facilities by using the WHO assessment tool	From 3rd week in July 2021
Conduct SWOT analysis workshop to guide each hospital's management	From 5th week in July 2021
Conduct point prevalence survey in select wards of the three health care facilities	From 5th week in July 2021
Hold stakeholder workshop on adoption of national AMS plan for Nigeria	August 2021
Hold stakeholder workshop on adoption of national IPC strategic plan for Nigeria	August 2021
Carry out steps 1 and 2 in the AWaRe classification of antibiotics used in Nigeria	August 2021
Train health care providers at facilities on IPC and AMS	August 2021
Support establishment/strengthening of AMR multisectoral coordination at the state level in Enugu	August 2021
Develop a framework and TOR for the functionality of the state AMR committee mirroring the national-level organization	August 2021
Implement steps 3 and 4 in the MTaPS process of AWaRe classification of antibiotics in Nigeria	September 2021
Conduct workshop on what works, and lessons learned	September 2021

THE PHILIPPINES

OBJECTIVE 1: PHARMACEUTICAL SECTOR GOVERNANCE STRENGTHENED

In order to support the Department of Health (DOH) in designing a restructured procurement and supply chain management (PSCM) governance system for implementing the universal health care (UHC) law in the Philippines—in the context of a devolved health system—MTaPS collaborated with DOH to undertake a PSCM road map design exercise. The exercise included desk reviews of different policies and issuances on UHC and PSCM as well as technical discussions with the Disease Prevention and Control Bureau (DPCB), Center for Health Development (CHD), and local government units (LGUs). The exercise helped to analyze the current state of PSCM and validate recommended future states to support UHC implementation. In addition to these discussions, an online survey was conducted with the DOH national office, participating LGUs, and implementing partners. The objective of the survey was to get more data on local-level PSCM situations.

To support the PSCM roadmap for UHC implementation, the exercise identified overlapping responsibilities and accountabilities in different units across the central DOH office. To alleviate the situation—and to clearly define the roles and responsibilities—MTaPS conducted a series of consultations with DPCB and supply chain management service (SCMS) through the Responsible, Accountable, Consulted, Informed tool (a matrix for defining responsibility assignments aligned with DOH's requirements and direction) to confirm the delineation of roles, responsibilities, and accountabilities within the PSCM system through central and regional levels.

MTaPS further organized two workshops in June to enable DOH stakeholders to revisit the current and desired PSCM practices and develop a PSCM road map for UHC implementation. As a next step, a technical report with an implementation road map will be developed and disseminated to all stakeholders including central DOH, CHDs, and LGUs. MTaPS will then continue working with DOH to support implementation of the PSCM road map to help DOH reach the next level of PSCM maturity for ensuring uninterrupted supply of health commodities to implement the UHC law.

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

MTaPS conducted an initial analysis of the implementation status of the PSCM workforce development plan, which was developed by MTaPS earlier and endorsed to DOH. It was found that due to the shifting priorities arising from the COVID-19 pandemic, DOH could not start implementing the proposed workforce development plan. To help DOH implement the PSCM workforce development plan, MTaPS will be assisting the Procurement and Supply Chain Management Team (PSCMT) in standardizing the examinations for the PSCM workforce to ensure that the right competencies are evaluated; aligning the documented duties and responsibilities of the SCMS and procurement service (PS) workforce with the right PSCM/pharmacovigilance (PV) competencies indicated in the PSCM/PV workforce development plan; assisting SCMS with standardizing the supply chain unit staffing template that will also serve as guidance for local health systems in the DOH's devolution transition plan; and assisting SCMS with expediting hiring of the pending plantilla positions in coordination with the personnel administration division.

Apart from developing the two modules on pharmaceutical system strengthening (PSS) and one module on warehouse operations management, MTaPS is also finalizing courses on supply chain management (SCM) in the context of public health and inventory management and good distribution practices. The first three modules (PSS-1, PSS-2, and warehouse operations management) have been reviewed by the DOH Health Human Resources Development Bureau (HHRDB) and are awaiting PSCMT feedback. To

test these modules, MTaPS will be rolling out a series of webinars on these five topics in quarter four. The materials shall be revised based on the feedback during the webinars and will be converted to an e-learning format prior to endorsement by the DOH academy. The modules aim to capacitate the PSCM workforce, who can complete the courses at their own convenience. Corresponding continuous professional development credits will be applied through the DOH HHRDB and will be awarded to those who can complete the whole training.

MTaPS is also supporting SCMS to carry out SCM capacity building activities as part of DOH's devolution transition plan. On June 24, 2021, MTaPS supported SCMS and provided warehouse and inventory management training to universal health care integration sites under CHD Western Visayas to enable staff to better manage the warehouse operations and inventory to ensure an uninterrupted supply of health commodities from the warehouse to the health facilities.

Based on the LGU capacity gap analysis for PSCM and PV conducted earlier by MTaPS, and the PSCM road map being developed by DOH with MTaPS' support, MTaPS is currently developing an LGU capacity building road map for establishing PSCM and PV systems at the local government level. MTaPS is also drafting a scope of work to identify and engage potential organizations (non-governmental organizations, Academe, training organizations) that will use the curriculum to recruit, capacitate, and deploy local technical assistance providers (LTAPs) in pilot UHC implementation sites. The LTAPs—once capacitated and deployed by the partner organizations—are expected to conduct rapid assessment at LGUs, advocate with the local chief executives to establish the desired PSCM-PV structure, provide orientation to the LGU health office management, train and mentor the PSCM and PV workforce at the LGU level, and provide monitoring and follow-up support to the LGUs in performing desired PSCM and PV functions.

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

Electronic Logistics Management Information System (eLMIS):

MTaPS has developed and shared a request for proposal (RFP) with DOH and USAID for engaging technical assistance from an off-the-shelf eLMIS provider to acquire and implement an eLMIS in the Philippines for effective management of the health commodities supply chain. The project's main objective is to support DOH in acquiring, configuring, and implementing an end-to-end eLMIS at the central, regional, LGU, and service delivery point levels to operate and manage the health products supply chain. Based on the RFP, a high-level presentation on the eLMIS implementation approach and timeline was developed and endorsed to DOH SCMS. Once agreed, the RFP will be the basis for co-developing an eLMIS implementation road map with DOH and the selected vendor. Along with the PSCM road map, the eLMIS will facilitate an efficient business process and data visibility to effective management of PSCM functions across the devolved health system in the Philippines.

Couple Years of Protection (CYP) Report:

MTaPS continues to support DOH in collecting data from public and private sectors to calculate and analyze CYP, a key family planning program coverage indicator. MTaPS finalized and shared the draft of the CYP report (July 2019–June 2020) to key stakeholders. Feedback from the stakeholders will be used to finalize said report. In addition, MTaPS has started working with stakeholders to collect data for the July 2020–June 2021 CYP report. In quarter four, MTaPS will analyze and present the preliminary July 2020–June 2021 CYP data results with key stakeholders including DOH, USAID Office of Health, implementing partners, and private sector participants to inform policy review and future programming.

PViMS:

MTaPS is continuously working with Columbus Consulting to update and align PViMS to the Philippines context, for example the need for interoperability with Integrated TB Information System (ITIS). MTaPS and Columbus Consulting are also preparing to automate the update and release cycle to ensure future sustainability for DOH. MTaPS has also facilitated the approval of formal data sharing between the ITIS and PViMS. In July 2021, MTaPS will support the DOH Pharmaceutical Division (PD), Knowledge Management and Information Technology Service (KMITS), and National TB Program (NTP) for the adverse events reports under Active Drug Safety Monitoring (aDSM) to be encoded in PViMS starting with 2 regions with 45 sites.

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

Framework agreement and pooled procurement mechanism:

MTaPS supported the DOH PS in finalizing an administrative order for framework agreement and pooled procurement mechanism by providing comments and suggestions. MTaPS supported DOH in drafting this order to serve as a guideline implementing framework contracting and pooled procurement of drugs, medical devices, and supplies for CHDs and DOH hospitals.

MTaPS continued to support DOH and LGUs by facilitating discussion with Philippine Pharmaceutical Procurement Inc., the procuring agent for interested LGUs joining the pooled procurement of pediatric first-line TB medicines and GeneXpert cartridges. To promote an understanding of the processes, timelines, and requirements for the pooled procurement mechanism, MTaPS—together with other USAID implementing partners, TB platforms, and Sustaining Technical and Analytical Resources (STAR)—conducted a series of pooled procurement mechanism orientations that were attended by 360 participants coming from different LGUs and CHDs all over the Philippines. Outputs from the orientation are to be used in drafting frequently asked questions, which can be an additional resource for advocating for pooled procurement mechanisms to the LGUs. The framework agreements and pooled procurement mechanisms will provide a greater economy of scale and more efficient procurement of health commodities in preparation for the further devolution of health systems in the Philippines.

Provider Integration and Engagement System (PIES):

MTaPS and USAID's ReachHealth project are continuing collaboration to test the use of PIES. PIES is a digital platform for integrating public and private health service providers into local health systems by facilitating the formation of health care provider networks and enabling them to exchange information, cross-referrals, and cost reimbursements through the digital platform. MTaPS and ReachHealth developed an implementation road map that outlined the key activities, timeline, and roles of each stakeholder. The conceptual phase is now complete, and the team is moving on to the pre-implementation/preparatory phase, which includes identifying a pilot site, customizing the technology, and preparing contracting and price negotiation requirements. The MTaPS team is reviewing an RFP for the services of a digital platform provider. Following the provider's onboarding, customization of the digital platform and other related activities that will support the PIES initiative's implementation will begin. The PIES concept was presented by MTaPS and ReachHealth to Laguna Provincial Department of Health Office that expressed interest in piloting the initiative in one of their inter-local health zones. A follow-up presentation to Laguna local chief executives and provincial health offices will be conducted upon confirmation of their availability. The team will continue to arrange exploratory meetings with other local governments to present the project design and gain support.

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

PViMS Lessons Learned:

In order to promote greater understanding of active PV systems for ensuring patient safety and pharmaceutical governance, MTaPS organized a forum on April 6, 2021, to capture the lessons learned from two operational research activities that used active surveillance methods to monitor the safety features of a new TB drug and novel treatment regimen. The forum aimed to highlight the importance of active PV and shared DOH's practical experience and lessons learned in implementing active PV and utilizing PViMS throughout the novel nine-month TB treatment regimen and new drug (Bedaquiline) operational research, which started in 2015 and is now in the process of closeout and completion. Around 95 participants from DOH PD, NTP, Lung Center of the Philippines, KMITS, health regulation office, public health services office, FDA, World Health Organization (WHO), the Global Fund, USAID, implementing partners, Centers for Health Development offices, and the National AIDS and STI Prevention and Control Program (NASPCP) benefited from the knowledge shared in the online forum. Building on the lessons learned—including the usefulness of active surveillance and the experience of establishing aDSM for the NTP and NASPCP—MTaPS continued to work with the FDA to push for issuing active PV policy to further institutionalize pharmaceutical governance for ensuring safety and efficacy of medical products. To push the agenda further, MTaPS is planning to organize a follow-up meeting with the FDA to discuss the terms of reference development for the establishment of the national medicine safety advisory committee.

National dialogue on regulatory system strengthening for product registration:

MTaPS—in collaboration with the Pharmaceutical and Healthcare Association of the Philippines, World Bank, Healthcare Technology Association of the Philippines, and WHO—supported the FDA in organizing a national regulatory systems strengthening dialogue on May 19, 2021, focusing on product registration and touching on post-marketing surveillance. Key partner agencies—including patient groups—participated and highlighted the importance of collaboration among relevant institutions and organizations that would support DOH and FDA in achieving an efficient product registration process that increases confidence in the health system and medicines and improves treatment outcomes.

MTaPS' mid-term review on June 1, 2021—participated in by DOH and FDA—reinforced the idea of creating a national medicine safety advisory committee within the FDA to work closely with the programs to further institutionalize PV governance in the Philippines. A follow-up meeting with the FDA is set for July 1, 2021, to open the discussion on creating the committee, including developing the terms of reference and formulating both active and spontaneous PV policy.

Infection Prevention and Control (IPC) and Health Care Waste Management (HCWM):

MTaPS shared the final report on COVID-19 facility assessment—focusing on IPC, HCWM, and COVID-19 SCM—with the Health Facility Development Bureau (HFDB). HFDB used the report data to conduct a root cause analysis for health care facilities and identified gaps in IPC protocol and implementation that are rooted in inadequate facility assessment for continuous quality improvement. HFDB requested MTaPS to review their existing tools to enhance efficiency in monitoring compliance with IPC standards. MTaPS will review the tools and existing materials related to IPC, HCWM, and antimicrobial stewardship (AMS) and develop a combined facility assessment checklist that can be utilized by hospitals. MTaPS will collaborate with HFDB to train trainers—with participants from the DOH HFDB and regional health facility development units—to use the combined facility assessment checklist to improve health facilities' IPC, HCWM and AMS practices. HFDB has also asked if MTaPS could support developing a cloud-based system for submission, monitoring, and eventually issuing a policy to institutionalize the reporting mechanism.

ACTIVITIES FOR NEXT QUARTER	
ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1: Strengthen the stewardship role of PSCM team to establish centrally integrated PSCM functions with decentralized implementation (Guidelines developed and consulted to clarify stewardship role of PSCMT for centrally integrated PSCM functions under the UHC law)	September 30, 2021
Activity 1.2.2: Capacitate a pool of LTAPs to support institutional capacity building of LGUs for PSCM and PV functions (A technical assistance curriculum developed for provincial health offices and city health offices)	September 30, 2021
Activity 1.3.1: Support DOH to develop a road map, acquire necessary technology, and implement the road map for an end-to-end eLMIS (eLMIS vendor selected and implementation road map co-created)	September 30, 2021
Activity 1.4.2: Conduct a pilot use of an electronic platform to integrate private pharmacies into local service delivery networks through cross-referral and a voucher reimbursement system (Digital platform provider engaged)	September 30, 2021
Activity 1.5.2: Support DOH in institutionalizing annual quantification and periodic review of TB and Family Planning commodity needs to inform procurement and supply planning (Review of quantification and stock analysis of key TB and FP commodities organized)	September 30, 2021
Activity 2.1.1: Support DOH in strengthening the national PV governance structure and processes for aDSM (Administrative order for active PV drafted for FDA)	September 30, 2021
Activity 2.4.1: Support DOH in rolling out PViMS for active PV (Data entered into PViMS for use for aDSM purposes)	September 30, 2021

RWANDA

OBJECTIVE 1: STRENGTHEN GOVERNMENT AND HEALTH WORKER CAPACITY TO MANAGE PHARMACEUTICAL SYSTEMS

1.1.1: Strengthen capacity of Rwanda FDA to regulate pharmaceuticals used in HIV/AIDS, MNCH, and FP/RH programs

MTaPS is currently working with the MOH and its institutions, which includes but is not limited to Rwanda Food and Drug Administration (FDA), Rwanda Biomedical Center (RBC), and the National Pharmacy Council (NPC), to implement several activities that are aimed at strengthening the pharmaceutical sector's governance, service delivery, and regulatory system. During the quarter, MTaPS worked with these stakeholders to:

- Provide support to Rwanda FDA to finalize the four-year strategic plan (2021-2024), which was approved and signed in June 2021 by the chair of the board of directors for Rwanda FDA; the next step is the Rwanda FDA implementing the strategic plan
- Facilitate Rwanda FDA with validating several documents, including two regulations, six SOPs, eight guidelines, and three annexes, which took place over the period May 5 to June 3
- Support the development of draft guidelines on regulating medical gases (oxygen), which are under technical review
- Support technical validation of the WHO AWaRe (access, watch, and reserve) classification of antibiotics in Rwanda, conducted on June 10; this will be followed by external validation by stakeholders planned for July 2021, as part of developing an updated national essential medicines list with antibiotics categorized by AWaRe classification
- Put in place a mechanism for financial sustainability to support Rwanda FDA; MTaPS held a preliminary meeting with Pharmaceutical System Africa (PSA) and Rwanda FDA on June 24. PSA shared an inception report and implementation plan with MTaPS for review. PSA is working with MTAPS and Rwanda FDA to collect reference material to facilitate developing the business plan.
- Conclude training of internal auditors as part of implementing a quality management system (QMS) at Rwanda FDA; an internal quality audit will be held in July, which will determine the readiness of Rwanda FDA to be externally audited for ISO 9001:2015 certification. As part of strengthening internal controls at Rwanda FDA and strengthening service delivery, 25 QMS internal auditors (18 males and 7 females) were trained in conducting audits.

1.1.2 Streamline registration of essential medicines and medical devices, including those used in MNCH and FP programs

In strengthening registration of essential medicines and medical devices, MTaPS supported development of the following regulatory documents which are under technical review: a draft SOP on assessing generic medicines, including WHO prequalified products, and a draft SOP and guideline on registering vaccines and biological products.

1.2.1: Enhance the capacity of pharmacy and clinical staff to transition patients to tenofovir + lamivudine + dolutegravir at antiretroviral therapy sites

During the quarter, MTaPS supported the MOH and its stakeholders in drafting a DTC operational manual for Rwanda, which is under technical review before validation.

OBJECTIVE 3: STRENGTHEN SYSTEMS FOR PROVIDING SAFE PATIENT-CENTERED PHARMACEUTICAL CARE SERVICES OF ENSURED QUALITY

3.1.1: Strengthen delivery of high quality, patient-centered pharmaceutical care by developing pharmacy service standards aligned with Rwanda's health care quality and accreditation system

Regarding the strengthening of patient-centered pharmaceutical care, MTaPS supported the MOH in printing seed copies of the pharmaceutical service accreditation standards and information, education, and communication (IEC) materials for public awareness on medicine safety. The documents were disseminated during the Annual National Pharmacy Council Conference on June 30, 2021. The conference was attended by 440 participants (295 males and 145 females). Knowledge exchange on the Rwandan pharmaceutical system and service strengthening was among the goals of the meeting.

3.1.2: Improve quality and use of medicines for pre-eclampsia, eclampsia, and postpartum hemorrhage

MTaPS finalized a report on a rapid desk review of storage and management of oxytocin in 10 districts, which were used to develop guidelines; MTaPS is working with MOH/RBC and its stakeholders. The developed guidelines were shared with RBC, who recommended input from Rwanda Medical Supplies (RMS). RMS requested the addition of information on central-level management of oxytocin, which has been added, and the revised draft guidelines have been submitted to RMS for feedback.

A checklist for DTCs was developed to monitor MNCH medicine use in the district.

3.1.3: Improve the access and administration of oxygen to hypoxic newborns and children with pneumonia

MTaPS is working with the MOH to improve access to and administration of oxygen in health facilities, beginning with identification of existing gaps. MTaPS finalized the report on assessment of supply and availability and use of oxygen, equipment, and medical devices, which complements the final validated report on the MOH-led nationwide inventory assessment (supported by the Clinton Health Access Initiative) whose release is awaited.

3.2.1: Support establishment of a system for active surveillance of the new dolutegravir-based regimen and strengthen the existing spontaneous reporting system

During the quarter, MTaPS supported the MOH/RBC in finalizing the protocol and its implementation plan for active monitoring of patients on dolutegravir-based antiretroviral therapy regimens. The protocol was submitted for ethical approval in June 2021.

ACTIVITIES FOR NEXT QUARTER	
ACTIVITY AND DESCRIPTION	DATE (2021)
1.1.1: Strengthen capacity of the Rwanda FDA in regulating pharmaceuticals used in HIV/AIDS, MNCH, and FP/RH programs • Support development of Rwanda FDA business plan, including a financial strategy • Start planning for external quality audit report to determine readiness of Rwanda FDA ISO 9001:2015 certification • Support Rwanda FDA in conducting capacity-building training sessions for about 55 staff on Good Manufacturing Practice (GMP) site inspections • Support validation of the updated national essential medicine list with antibiotics categorized per WHO AWaRe classification	July–Sept.

1.1.2: Streamline registration of essential medicines and medical devices, including those used in HIV/AIDS, MNCH, and FP programs • Organize a capacity-building session for Rwanda FDA staff in medical device assessment and review of technical files • Support Rwanda FDA in developing a list of medical devices categorized according to risk and SOPs for listing medical devices • Support Rwanda FDA in conducting a capacity-building training session on assessing vaccines and biological products, as well as GMP inspection	July–Sept.
1.1.3: Enhance capacity of Rwanda FDA to ensure quality of food products • Support revising regulation on registering food products • Support developing regulation on food safety surveillance • Support revising registration for food products • Support developing guidelines on recall, seizure, and disposal of unfit products • Support Rwanda FDA stakeholders' validation workshop on food regulations • Support developing risk-based plan for inspecting food premises for Rwanda FDA • Write workshop report on orienting Rwanda FDA personnel on risk-based inspection plan (28 staff estimated)	July–Sept.
1.2.1: Support functionality of DTCs and enhance their capacity to transition patients to tenofovir + lamivudine + dolutegravir and monitor pharmaceutical management in supported health facilities • Develop tools, specifically, SOPs for drug use review, supportive supervision during active monitoring, and facility-level ADR reporting and a checklist for data quality check • Report on training/orientation of DTCs (estimated 153 staff trained)	July–Sept.
3.1.1: Strengthen delivery of high-quality, patient-centered pharmaceutical care through the development of pharmacy service standards aligned with Rwanda's health care quality and accreditation system • Report on the Annual National Pharmacy Council Conference • Support the dissemination and implementation of the approved pharmacy service accreditation standards and IEC materials for public awareness on medicines safety	July–Sept.
3.1.2: Improve quality and use of medicines for RH and MNCH • Provide support on training health care providers in storage of oxytocin (128 staff estimated) • Support the orientation of DTCs (128 staff estimated) on CQI to improve use of medicines for selected MNCH conditions • Provide technical support on situational analysis on the supply and use of FP products at facility level and any barriers to access, especially in the teenage population	July–Sept.
3.2.1: Support establishment of a system for active surveillance of the dolutegravir-based regimen and strengthen the existing spontaneous reporting system • Support patient enrollment in the active monitoring cohort and follow-up for the occurrence of adverse events • Support Rwanda FDA to finalize the national PV plan approval process • Support Rwanda FDA to have at least 30 trainees who completed the e-Learning courses on PV	July–Sept.

SENEGAL

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON ANTIMICROBIAL RESISTANCE (AMR)

Activity 1.1.1: Strengthen the functionality of the AMR technical working group (TWG) by supporting effective coordination through regular meetings

MTaPS participated in the fourth meeting of the *Haut Conseil de Sécurité Sanitaire Mondiale*/One Health (HCSSM/OH) steering committee on April 27. The purpose of the meeting was to take stock of the 2020 action plan and recommendations from the third meeting and to review and validate the 2021 action plan. In preparation for the meeting, MTaPS reviewed and provided technical inputs on the implementation reports for the 2020 and 2021 annual multisectoral action plans and the projected 2022–2024 action plan. During the meeting, the HCSSM/OH's steering committee reviewed and approved the 2020 multisectoral activity report and the 2021 action plan.

From June 1 to June 11, 2021, MTaPS participated in the World Health Organization (WHO)-led initiative to support the government's monitoring exercise of the implementation of its National Health Security Action Plan (PANSS 2017–2021). The PANSS was developed following the Joint External Evaluation of the International Health Regulations conducted in 2016. The result of this monitoring exercise will inform the development of the next PANSS for 2022–2026. In addition to inputting its activities into the WHO data collection tool, MTaPS provided technical contributions to the updating of the AMR section of the PANSS monitoring and evaluation framework.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL (IPC)

Activity 2.5.4: Support the revitalization of IPC committees (ICCs) at selected district and regional hospitals

MTaPS supported the Direction de la Qualité, de la Sécurité et de l'Hygiène Hospitalières (DQSHH) to conduct the IPC capacity assessment of the level-three hospital Aristide LeDantec (HALD) of Dakar using the WHO Infection Prevention and Control Assessment Framework (IPCAF) tool from April 6 to April 7, 2021. HALD has basic IPC capacity, with a score of 320.50/800, and developed its improvement action plan to address identified gaps.

MTaPS, in collaboration with the DQSHH, supported ICCs in implementing their improvement action plans by providing training and coaching through supportive supervision visits. In June, MTaPS supported the organization of a three-day IPC training for the ICC members at the level-one hospital in Mbour, the level-two hospital in Fatick, and the level-three hospital in Dakar. The training focused on the IPC core components, including the WHO multimodal strategy and the continuous quality improvement approach. During the training sessions, MTaPS and DQSHH trainers trained the three ICCs on IPC standard operating procedures (SOPs) and guidelines developed by the piloted hospitals (the level-three Hospital General Idrissa Pouye (HOGIP), the level-one hospital Abdoul Aziz Sy of Tivaouane, and the level-two hospital Saint John of God) and the DQSHH with MTaPS' support. The trained hospitals adapted the IPC SOPs and guidelines to their local context by using the standardized guidance matrix that the DQSHH developed with MTaPS' support.

MTaPS also supported the DQSHH in organizing a two-day workshop from May 3 to May 4, 2021, to review and update the 2017 national IPC supervision checklist by including WHO's multimodal strategy and the components of water, sanitation, and hygiene (WASH) in health care settings. Using the updated supervision checklist, MTaPS worked with the DQSHH to conduct supervision visits in the level-three HOGIP, the level-one hospital Abdoul Aziz Sy of Tivaouane, and the level-two hospital Saint John of

God. Overall, DQSHH and MTaPS observed many improvements for most of the IPC core components, such as hand hygiene, biomedical waste management, and bio cleaning. Health care-associated infection (HCAI) surveillance is carried out regularly in the level-two and level-three hospitals, with each using its own surveillance tool. The level-one hospital is reporting on multi-resistant bacteria; however, it has not yet started HCAI surveillance.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

MTaPS continued working with the National Committee for Antibiotic Treatment (NCAT) secretariat (e.g., the Director of the DQSHH) to monitor and support the implementation of recommendations from the technical validation of the updated antibiotic therapy policy and guidelines, which include WHO's Access, Watch, and Reserve (AWaRe) classification. The NCAT secretariat shared the final version of the antibiotic therapy policy and standard treatment guidelines (STGs) document with MTaPS. MTaPS hired a printing house to perform editing, infographics, and printing work for the policy and STGs document. The printing house completed the editing and infographics work on the updated antibiotic therapy policy and guidelines in preparation for their final validation by the Ministry of Health's (MOH) health systems strengthening platform (MOH/HSSP). MTaPS provided support to the DQSHH to prepare for a meeting to present and discuss the updated antibiotic therapy policy and guidelines before the service delivery commission of the MOH/HSSP on June 25, 2021. The service delivery commission concluded the meeting by providing its technical validation and recommended accelerating the process of disseminating the antibiotic therapy policy and guidelines in health facilities following its official approval by the Minister of Health, who will sign off on the preface on June 29, 2021.

MTaPS will work with DQSHH on the dissemination plan that will be implemented as soon as the MTaPS-contracted printing house completes the printing work for the officially approved antibiotic treatment policy and STGs.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Finalize/monitor implementation of the consolidated AMR 2021 work plan	July–August 2021
Support training for ICC members in two remaining hospitals on IPC core components, WHO multimodal strategy, and continuous quality improvement	July 2021
Support the monitoring visits in each hospital for the revitalization process	July–August 2021
Launch the IPC e-learning platform and train health care workers at the national level	July 2021
Support the printing and dissemination of the validated antibiotic therapy policy and STGs	July–August 2021

TANZANIA

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Activity 1.1.1: Review plans and progress through regular MCC meetings

MTaPS supported the antimicrobial stewardship (AMS) technical working group (TWG) meeting on June 22–23, 2021, in Dodoma. The AMS TWG, led by MOH experts from the pharmaceutical services unit (PSU), discussed interventions for implementation strategies of the June 2020 "Policy Guidelines for Implementing Antimicrobial Stewardship" for mainland Tanzania as requested from the previous MCC meeting. This activity enables effective AMS implementation in all levels—from centrally at the ministry to locally at health facilities—with respect to AMS TWG interventions, ensuring documentation and sharing of achievements and results and building capacity at the MCC to ensure a mechanism of regular data collection and information sharing within groups.

MTaPS attended and presented at the MCC meeting on July 25, 2021, in Dodoma. The MCC meeting supports the one health approach highlighted in Tanzania's National Action Plan on Antimicrobial Resistance (NAPA), improving multisectoral coordination on antimicrobial resistance (AMR), and strategically engaging experts from the animal health sector. During the MCC meeting, the chairperson of the AMS TWG—Professor Jeremiah Seni (CUHAS)—was appointed. In addition, MTaPS presented on project implementation and achievements, including which MTaPS work towards improving AMS and preventing AMR was appreciated by the participants.

As a way forward, MTaPS will seek to involve private sectors for all four TWGs—AMR awareness, AMR surveillance, AMR infection prevention and control (IPC), and AMS—and to improve support of animal health and plant health sectors towards implementation of the one health approach.

This achievement will improve AMS TWG functioning, strengthen the MCC, and enable effective MTaPS activity implementation in cooperation with the appointed AMS TWG chairperson due to additional human resources to synergize with MOH. The MCC contributes to Tanzania progressing to the next Joint External Evaluation (JEE) capacity level rating by implementing the recommended actions in benchmark 3.1 for Multisectoral Coordination Committee on AMR in WHO's 2019 International Health Regulations capacities benchmarking tool. This activity is interrelated with activities in MTaPS/Global Health Security Agenda objectives two and three.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL (IPC)

Activity 2.2.1: Strengthen institutional capacity building for local training institutions to manage e-learning on IPC for both pre- and in-service health care workers

MTaPS supported the Centre for Distant Education (CDE) under the Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) to conduct a dry run session for five trainers as part of preparation for the launch of the CDE e-learning platform. Trainers were given technical support on how to operate the platform during the launch, which was held on June 4, 2021.

This activity supports Tanzania in progressing from JEE capacity level three to four on the mainland and aligns with priority action 6.1.2 of Tanzania's NAPA, which lists IPC-related interventions. NAPA's strategic objective three seeks accredited, competency-based curricula in both teaching institutions and

the working environment. Additionally, this aligns with WHO benchmark capacity level three action on training adequate health care workers on the IPC guidelines.

Activity 2.3.1: Develop a system for monitoring and evaluation of IPC program in health facilities

MTaPS has contracted the University of Dar es Salaam (UDSM) to provide technical support to MOHCDGEC on inclusion of IPC indicators in the District Health Information Software 2 (DHIS2) platform. Once the indicators are in the platform, all facilities in Tanzania will be able to report on IPC indicators up to the national level. UDSM has already submitted the system requirement specifications document and the implementation plan to MTaPS.

This activity supports Tanzania in progressing from JEE capacity level three to four by implementing the following level four-recommended action: mandate and support IPC improvement at all health care facilities.

Activity 2.5.1: Continue to promote a self-improvement culture through local teams that use continuous quality improvement (CQI) methodologies for IPC

MTaPS conducted mentorship visits to ten supported health facilities targeting quality improvement (QI) teams and IPC teams. Depending on the gap that existed in those facilities, other health care workers were also mentored on hand hygiene; waste separation, transportation, and disposal; instruments and linen processing; and appropriate use of personal protective equipment, among others. Approximately 150 people were mentored on IPC.

This activity supports Tanzania in progressing from JEE capacity level three to four by implementing the following level four-recommended actions: update and implement action plans—informed by assessment results and following the five-step cycle described in the practical manuals—that progressively cover all recommended IPC priority components at the national and facility levels according to the WHO requirements/action checklists, and share the plans with national, subnational, and local IPC committees and incorporate their guidance.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.1.1: Support development of hospital antimicrobial formulary and other related AMS policies

The launch of the sixth edition 2021 Standard Treatment Guidelines/National Essential Medicines List (STG/NEMLIT), with Access, Watch, Reserve list of antibiotics included, was on July 25, 2021, in Dodoma. The guest of honor was the Minister of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) Dr. Dorothy Gwajima (MP). She advised health care providers to adhere to rational prescribing and dispensing of drugs—in alignment with the STG/NEMLIT—in order to maximize treatment benefits and reduce unnecessary cost and conflicts with payment from the National Health Insurance Fund. The minister acknowledged MTaPS' support, promising to involve MTaPS in the STG/NEMLIT implementation plan. She appreciated MTaPS' efforts, promising to write a letter and prepare a certificate for recognition of efforts made; however, she also requested more support for dissemination and implementation activities.

This launch facilitated MTaPS program implementation of activity 3.1.1 for development of hospital antimicrobial formulary based on the STG/NEMLIT and activity 3.5.1 for capacity building of Medicines and Therapeutic Committees (MTCs) on AMS activity implementation, including AWaRe categorization of antibiotics.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE (2021)
Strengthen institutional capacity building for local training institutions to manage e-learning on IPC for both pre- and in-service health care workers: MTaPS will train master of trainers and support the IPC e-learning platform launch	July
Develop a system for Monitoring and Evaluation of IPC program in health facilities: MTaPS will support the MOHCDGEC to customize IPC indicators into DHIS2	July–September
Report the NAPA indicators performance at MCC meetings and stakeholders' forums	July–September
Develop hospital antimicrobial formulary based on STG/NEMLIT 2021 and conduct mentorship	August–September
Conduct needs assessment for ethical prescribing and dispensing and develop training package	July–September
Conduct MTC needs assessment for the four new MTaPS-supported health facilities	July–September
Conduct Extension for Community Healthcare Outcomes Project platform immersion training and sensitization meeting to remotely enable the supported hospitals to implement and monitor IPC and AMS interventions to curb AMR	July–August

UGANDA

RESULT AREA 1: EFFECTIVE MULTISECTORAL COORDINATION ON AMR

Activity 1.2.1: Strengthen national and sub-national human resource capacity through support to the IPC and AMS TWCs of the National AMR Sub-Committee (NAMRsC)

MTaPS, working with Makerere University, supported the Antimicrobial Stewardship (AMS) Technical Working Committee (TWC) of the National Antimicrobial Resistance Sub-Committee (NAMRsC) to develop a draft newsletter for AMS with the theme of setting the stage for AMS in the country. The bi-annual newsletter is a publication of the Ministry of Health (MOH), the AMS TWC, and MTaPS. It addresses the challenges of antimicrobial resistance (AMR) information sharing in the country and disseminates work done in health facilities and at the national level. This newsletter builds on MTaPS' work on the information and documentation sharing platform it developed in project years 1 and 2 and also builds capacity for data and information management within the AMS TWC. This edition features articles from Makerere University, Mbarara University of Science and Technology, the Pharmaceutical Society of Uganda, frontline health care workers, and MTaPS. The newsletter emphasizes a One Health approach to AMR containment in Uganda.

To address gender inequity in AMR work in Uganda, MTaPS is highlighting the work of two female leaders in AMR containment in Uganda. Two success stories have been written by the female leaders identified at the national level with support from the NAMRsC and will be published on MTaPS, NAMRsC, and MOH platforms. Through this work, MTaPS is encouraging more women and girls to contribute to AMR control and bridge the gender gap in pharmaceutical systems strengthening while contributing to USAID's goal of gender equity.

RESULT AREA 2: INFECTION PREVENTION AND CONTROL

Activity 2.1.2: Strengthen human resource capacity of health facilities and professional bodies

MTaPS, in partnership with the Pharmaceutical Society of Uganda (PSU) and academic institutions, has conducted human resource capacity building activities aimed at increasing health worker awareness of AMR, improving practices for appropriate use of antibiotics, and building a culture of AMS. A mix of approaches that include both virtual and physical learning sessions and are aimed at contributing to continuous professional development (CPD) have been conducted during this quarter. MTaPS supported the PSU to conduct a continuing medical education (CME)-linked CPD session on AMS that was attended by 89 pharmacists (65% males, 35% females). A one-day online lecture series contributed 25% (10/40) of the CPD points required for annual registration as a pharmacist. The CME activities aimed to create awareness of AMR and develop a community of practice for AMS and specifically targeted pharmacists at community pharmacies, where over-the-counter irrational use of antibiotics remains high. Other professional bodies, including the Uganda Medical Association, Uganda Allied Health Professionals Council, and Uganda Medical and Dental Practitioners Council, have been engaged, and activities targeting members of these professional bodies are planned.

To increase knowledge about AMR and prepare future health practitioners as stewards for AMR containment, MTaPS is working with medical schools in Uganda to create a national community of interest on AMR, with the view of having a future workforce equipped with knowledge and skills on AMR control. During quarter 2, MTaPS supported three of the six medical schools in the country to begin the student interest groups, including identifying academic mentors, appointing leaders for the university AMR interest group charters, and conducting induction CME sessions. As a result, 478 (59% males, 41% females) medical students (nurses, midwives, doctors, and laboratory staff) were reached during this quarter, with three student AMR interest charters created. Ten academic and clinical

mentors were identified across the medical schools, and one follow-on journal club has been organized to date. Future engagements will aim at creating a national network of AMR interest groups, supporting them through clinical and academic mentorships, and organizing routine journal clubs and grand rounds to ensure that the country has the critical human resources to support the national and global response to AMR.

Activity 2.5.1: Improve the quality of health care services through strengthening IPC at centers of excellence

MTaPS is working with the MOH and the medical bureaus (Uganda Protestant Medical Bureau and Uganda Catholic Medical Bureau) to implement the infection prevention and control (IPC) continuous quality improvement project with a focus on hand hygiene (HH) during FY21. So far, MTaPS has conducted mentorships visits to 14 hospitals and directly reached out to 503 health workers (55% females, 45% males) during 16 mentorship visits. During these sessions, training on the data collection procedures and tools was undertaken, preliminary results of the surveys were disseminated and discussed, technical meetings with hospital IPC committees were held, and next steps were discussed. A particular focus was placed on improving key HH indicators, including knowledge and attitude, alcohol-based hand rub (ABHR) use, and compliance. In addition to the Infection Prevention and Control Assessment Framework (IPCAF) and Hand Hygiene Self-Assessment Framework (HHSAF) tools used for IPC assessments by MTaPS during years 1 and 2, additional tools to assess HH programs at health facilities were applied during these mentorship visits. These include HH observation for compliance, a ward infrastructure survey, a hand-rub/soap use survey, an ABHR planning and costing tool, an HH perception survey for health care workers and senior managers, knowledge of health care workers on HH, and evaluation of tolerability and acceptability of ABHR. The health workers in the surveyed facilities scored an average of 42.41 (standard deviation [SD] 10.9) on knowledge about HH, with the health facilities having an average score of 234.44 (SD 44.7) on the HHSAF, indicating basic HH capacity, and 476.15 (SD 118.9) on the IPCAF, indicating intermediate IPC capacity. The facilities' ward infrastructure is not sufficient to support proper IPC and HH practices in 93% of the health facilities. The average consumption of ABHR was 39.4mL/patient days, implying high consumption. These detailed findings will be disseminated in upcoming CME sessions and trainings in the health facilities. In addition, a health facility mentorship checklist developed by MTaPS/Uganda in collaboration with the health facilities was applied to assess the progress of the IPC committee in implementation of the eight WHO core components for IPC and HHSAF. These activities aimed at providing technical assistance to the health facility IPC committees to develop their facilities as centers of excellence in IPC.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

Activity 3.2.1: Strengthen Centers of Excellence for AMS

Sub-activity: Conduct an assessment of AMS policies and regulations

Working with the MOH and the Ministry of Agriculture, Animal Industry and Fisheries, MTaPS has completed a rapid assessment/situational analysis of AMS policies in Uganda with the objective of understanding the current policies and regulatory frameworks that influence AMS. Technical review of the document

Students from the Faculty of Medicine of Mbarara University of Science & Technology posing in the AMS photo frame. Photo Credit: Sherie Tumwebaze, MTaPS/Uganda

has been completed, with editorial review planned for the end of quarter 4. Subsequently, the information gathered will be used to inform a national AMS plan for the use of antimicrobials in humans and animals in Uganda. Key findings include the existence of a regulatory structure to support prudent use of antibiotics; poor enforcement of antibiotic use laws; and a lack of guidance on human resource use (e.g., prescribers, dispensers) of antibiotics in the agricultural sector.

Addressing policy challenges or conflicts for AMS is a key foundation building activity for the national AMS program and is a WHO Benchmark 3.4 capacity 2 activity.

Sub-activity: Working with NDA to measure and report on antimicrobial consumption at national level

MTaPS/Uganda is supporting the National Drug Authority (NDA) to implement the proposed framework on measuring antimicrobial consumption at the national level, which is a WHO requirement. Working with its Information Technology department to manipulate the data, the NDA has to routinely generate this report, which will help inform policy and regulation on antimicrobial consumption and use. Conducting antimicrobial consumption and use surveillance is a WHO Benchmark 3.4 capacity 3 activity requirement. A consulting firm was identified that has now completed an assessment of the system capabilities of the NDA's management information system (NDAMIS) and will produce a sample report on national-level antimicrobial consumption. To ensure sustainability after MTaPS, in PY4 the project will support software development for a module within NDAMIS that will allow for the report to be auto-generated.

Sub-activity: Mentorship, training to build capacity of health workers on AMS

MTaPS supported health facilities to conduct CME activities on AMS to cascade the knowledge and skills acquired during the AMS and IPC trainings and disseminate the results of the AMS survey. The CME activities directly reached 245 health workers (46% males, 54% females) in five health facilities. MTaPS also conducted prescriber trainings in six health facilities, directly reaching 165 prescribers (44% males, 56% females) and key stakeholders in antibiotic prescription. The trainings aimed at transfer of knowledge about appropriate antimicrobial prescribing; conducting a root cause analysis on the causes of inappropriate prescriptions and poor adherence to standard treatment guidelines; agreeing on key interventions for the medicine and therapeutic committees (MTCs) and AMS teams; and developing a prescription improvement plan focusing on urinary tract infection, upper respiratory tract infection, and surgical antibiotic prophylaxis for caesarean section. Findings from the antimicrobial consumption and use survey were shared with the health facilities, with health facility-specific reports under development and review for sharing with hospital management (table 13). Gross misuse of antibiotics was found, with 72% and 76% of hospitalized patients receiving at least one antibiotic in private not-for-profit (PNFP) and public hospitals, respectively. The average number of antibiotics prescribed per hospitalized patient was 2.1.

Table 13: Antibiotic use at MTaPS-supported hospitals (FY20/21): % encounter with antibiotic prescribed by hospital

Ownership	Name of Hospital	Antibiotic prescribed (N=100)	
		Yes	No
Private Not-for-profit		72%	28%
	A	51%	49%
	B	48%	52%
	C	86%	14%
	D	59%	41%
	E	84%	16%
	F	76%	24%
	G	94%	6%
Public		76%	24%
	H	76%	24%
	I	73%	27%
	J	82%	18%
	K	87%	13%
	L	65%	35%
	M	72%	28%
Grand Total		**73%**	**27%**

Sub-activity: Support to lower-level health facilities

Working with a regional partner, the USAID Regional Health Integration to Enhance Services in South-West Uganda program in Gulu and Soroti, MTaPS leveraged its support to lower-level health facilities (Health centers II, III, and IV and general hospitals) to train staff on how to constitute MTCs and AMS teams at lower levels of care. Staff were trained on the constitution of the MTC and/or AMS teams and terms of reference. Working with partners whose mandates reach these lower district-level facilities will ensure that the principles of medicines management, rational use of antibiotics, and AMS extend to the lowest levels of health care, supporting the country to mandate AMS practices at all health facilities—a WHO Benchmark 3.4 required activity. Discussions are ongoing to adopt this model to other health regions in the country, which will allow MTaPS to provide above site catalytic technical assistance to more 60 districts in the country. This is in line with the USAID mission goal of sustainability and the global goal of mandating AMS/IPC practices in all health care facilities.

MTaPS Senior Technical Advisor Marion Murungi facilitating a session during the prescriber training in Kiwoko Hospital. Photo Credit: JP Waswa, MTaPS/Uganda

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Complete and publish two AMS newsletters	September 2021
Publish two articles about female leaders in AMR	September 2021
Conduct mentorship activities (AMS and IPC) in lower-level health facilities	August 2021
Conduct two AMS and IPC capacity building activities for regional implementing partners	August 2021
Final report on situational analysis of AMS policies in Uganda	August 2021
Disseminate IPC and HH survey results in health facilities	August 2021
Conduct HH trainings in supported health facilities	September 2021
Conduct AMR symposiums in the remaining two universities	July 2021
Print and distribute information, education, and communication materials in the remaining MTaPS-supported health facilities	August 2021
Conduct support supervision for hospital IPC and AMS teams	September 2021
Support the MOH AMS TWC to develop a schedule of meetings for next six months	July 2021
Support medical school AMS interest groups	August 2021
Support one meeting of the AMS TWC	September 2021

MONITORING, EVALUATION, RESEARCH AND LEARNING

MONITORING AND EVALUATION

DevResults Data Management System

At the beginning of PY3, MTaPS partnered with an external contractor, DevResults, to develop the MTaPS permanent data management system. During Q3, the MERL team worked with DevResults to complete a setup template used to structure and configure an MTaPS DevResults website. The MERL team finished uploading MTaPS historical data pulled from SurveyCTO and Google-based reporting tools into DevResults. In Q3, as MTaPS fully transitioned its data management system to DevResults, MTaPS' 23 countries and portfolios reported Q3 data by using Google-based reporting tools. During Q4, the MERL team will provide training to MTaPS' country and home office staff to use DevResults for data reporting and data management. At the end of PY3, all country teams will report Q4 and annual data in the MTaPS DevResults platform.

Ebola and COVID-19 Transition to DevResults

MTaPS has been monitoring and evaluating COVID-19 and Ebola activity by using Google-based tools, SurveyCTO, and PowerBI. In Q3, with the establishment of MTaPS' new data management platform, MTaPS developed a transition plan to transfer COVID-19 and Ebola indicators and reporting to DevResults. In Q4, the MERL team, in collaboration with technical leads and country teams, will upload historical COVID-19 and Ebola data into DevResults, develop SOPs for routine data collection and reporting for COVID-19 and Ebola, and develop training materials to train country teams entering and managing data in DevResults.

COVID-19 External Data Quality Audit

During PY3, MTaPS partnered with Data.FI to conduct an external COVID-19 data quality audit (DQA). The DQA assessed MTaPS' data management and reporting systems, specifically the process, guidelines, and tools used to collect COVID-19 data and the quality of reported data. In Q3, MTaPS continued to work with Data.FI to complete country DQAs and support Data.FI in developing the COVID-19 DQA final report. In addition, MTaPS held a meeting with USAID/COR and Data.FI to discuss DQA findings and recommendations for MTaPS' data quality procedures and processes. During the next quarter, MTaPS will continue implementing DQA recommendations and developing resources to strengthen MTaPS' data management and reporting system.

COVID-19 in-Country Activity Reports

MTaPS has engaged with local stakeholders to respond to the pandemic in 13 countries. MTaPS has implemented capacity-building and IPC activities, strengthened emergency supply chain management systems, and developed SOPs to prevent and reduce the spread of the disease. MTaPS country teams have been performing data collections to track the implementation and progress of MTaPS' COVID-19 activities. MTaPS has generated over 100 country reports monitoring and evaluating COVID-19 activity progress, including the number of health workers who received COVID-19 training and facilities in compliance with IPC COVID-19 guidelines. In Q3, MTaPS began developing country technical summaries, sharing the critical role MTaPS GHSA and PSS approach played in the COVID-19 rapid response and key lessons from MTaPS' COVID-19 response implementation. In Q4, MTaPS will finalize and disseminate COVID-19 country technical highlights and briefs.

Ebola in-Country Activity Reports

During PY3, in collaboration with global and local stakeholders, MTaPS played a key role in response to the Ebola outbreak in Côte d'Ivoire, Mali, Rwanda, Senegal, and Uganda. MTaPS has provided various technical assistance, including conducting rapid IPC assessments, developing and updating strategies and tools, and monitoring compliance with IPC guidelines and SOPs. During Q3, MTaPS generated country activity reports to monitor progress against the outbreak. During Q4, MTaPS will continue to monitor Ebola technical activities and produce progress reports.

Data Quality Assurance SOP

In Q3, the MERL team established a working group to develop a data quality assurance SOP. The SOP will play a key role in MTaPS achieving a higher standard of data quality and will result in informed decision making. The SOP focuses on using three critical approaches to preventing data quality issues and addresses short- and long-term problems. Integration of automated data quality checks in DevResults, continuous data quality assurance activities at country levels, and internal and external data quality assurance conducted by MTaPS, and USAID will provide a comprehensive strategy to ensure quality data and strengthen the data management system. Data quality assurance activities will be implemented through a collaborative effort between the HQ and regional MERL teams and country teams. In Q4, the HQ MERL team will finalize the SOP and begin orienting country teams in August and September.

Supplemental Baseline Indicators

During Q3, the MERL team worked with Burkina Faso, Cameroon, DRC, Kenya, Mali, Rwanda, Tanzania, and Uganda to address challenges in collecting baseline values for long-term outcome indicators (GH-IO3, GH-IO4, and GH-IO5) that were added to respective MEL plans at the beginning of PY3. In coordination with country MERL points of contact and technical leads, the MERL team engaged key stakeholders, including Mission, MOH, and DTCs at MTaPS-supported health facilities, to obtain guidance and clearance to collect data and assist with data collection at the health-facility level. In addition, MTaPS is working to establish and revive many dormant DTCs in which MTaPS can work through to collect values of indicators and other information. During Q4, the MERL team will continue to coordinate efforts with key stakeholders to complete the collection and reporting of supplemental baseline indicators.

KNOWLEDGE MANAGEMENT

Medicines to Markets: Building Effective Medicine Registration Systems in LMICs

On April 13, 2021, MTaPS hosted a webinar on "Medicines to Markets: Building Effective Medicine Registration System in LMICs" as part of our global learning series. The webinar shared MTaPS' approach and experience in Bangladesh, Mozambique, Rwanda, and Nepal where the program is supporting the national medicine regulatory authority to bolster medicine registration functions and expedited registration in the wake of the COVID-19 pandemic. Strong and effective medicine registration systems are foundational to strong pharmaceutical systems to ensure timely access to safe, effective, and quality-assured medicines and be responsive to health care needs of countries.

Using Novel Capacity-Building Approaches to Prepare Health Workers and Systems for COVID-19 IPC Response

On April 22, 2021, MTaPS presented at the virtual Global Health Science and Practice Technical Exchange (GHTechX). This presentation described MTaPS' experience implementing IPC interventions against COVID-19 in the middle of learning about the novel virus. During the session, the panelists described how MTaPS innovated and tailored capacity-building approaches to rapidly establish IPC

committees and sustainably strengthen IPC practices in countries as part of USAID's global response to the pandemic.

Improving Access to MNCH Products by Strengthening Registration

On April 27, 2021, MTaPS presented the findings from a nine-country study conducted to better understand the challenges of registering MNCH medical products. The presentation to the Child Health Task Force discussed the registration status of tracer MNCH medicines, the maturity of the regulatory agencies in each country, and key considerations to strengthen registration systems in these countries for better access to MNCH medicines.

Effective Multisectoral Coordination on AMR

On May 18, 2021, MTaPS held a knowledge exchange on its technical approach to strengthen multisectoral coordination on AMR in 11 countries to advance the objectives of the GHSA. Increasingly, there has been recognition that AMR containment efforts warrant a coordinated multisectoral (One Health) approach. However, institutionalizing multisectoral coordination across sectors used to working in silos is an ongoing challenge. The knowledge exchange focused on the MTaPS approach to overcoming these challenges for effective multisectoral coordination for AMR containment and the lessons learned from the experience.

What COVID-19 Taught Us About Infection Prevention and Emergency Supply Chains

On June 3, 2021, MTaPS held a roundtable webinar on insights and takeaways from our multi-country COVID-19 response in 13 countries focused on improving health workers' IPC capacities and supporting countries' emergency supply chain management to avoid stock-outs. MOH officials and the MTaPS COVID-19 response team shared their experiences in Bangladesh, Côte d'Ivoire, Kenya, and the Philippines. The roundtable discussion centered on what worked, what didn't, and what we could do to improve emergency preparedness and health system resilience.

Sex, Gender, and PSS: A Focus on Antimicrobial Stewardship

On June 29, 2021, MTaPS held a knowledge exchange on addressing sex, gender differences, and inequities to reduce the global risk of antimicrobial resistance. Antimicrobial stewardship requires an understanding of both sex (biological differences) and gender (constructed roles, behaviors, activities) to effectively reduce AMR. Only by addressing sex, local gender differences and inequities will we succeed in reducing the global risk of AMR.

Pause and Reflect

Taking time to pause and reflect (P&R) on our work is critical to MTaPS' continuous learning and improved performance. Pausing and reflecting helped MTaPS identify what's working and what needs adapting. It allows MTaPS to consider the impact of changes in the operating environment or context. The PY3 P&R sessions focused on technical performance and legacy, MEL, partner engagement, and learning agenda to inform PY work planning. Outputs from the PY3 P&R sessions will serve as a key resource/foundation in developing year 4 country and portfolio work plans and MEL plans. Between May and June 2021, MTaPS held internal PY3 P&R sessions for 16 portfolios: Asia Bureau, IGAD/EAC, Bangladesh, Burkina Faso, Cameroon, Côte d'Ivoire, DRC, Kenya, Mali, Mozambique, Nigeria, Nepal, Philippines, Rwanda, Tanzania, and Uganda. A P&R session for Jordan will be held in Q4.

RESEARCH

This quarter, MTaPS presented four sessions at the Global Health Science and Practice Technical Exchange 2021, which was held April 21–24, 2021:

- Global tools to combat AMR: A close look at GHSA-supported interventions in Côte d'Ivoire

- Balancing equity and emergency response during the COVID-19 pandemic: The case of the Philippines
- Using novel capacity-building approaches to prepare health workers and systems for COVID-19 IPC response
- The GBT: Experiences and lessons learned strengthening national regulatory systems

MTaPS had three of five abstracts accepted for oral presentations at the American Public Health Association (APHA) 2021 Annual Meeting scheduled for October 24–27, 2021:

- Establishing an emergency supply chain system for continuous access to COVID-19 commodities in Bangladesh
- Improving IPC practices: Interventions in six Tanzanian hospitals
- Experiences and lessons from using GHSA perspectives and approaches to implement AMR containment efforts in 11 countries

The remaining two abstracts were waitlisted for oral presentations.

This quarter, MTaPS also submitted three abstracts to the American Society of Tropical Medicine and Hygiene (ASTMH) Annual Meeting scheduled for November 17-21, 2021:

- Antimicrobial consumption surveillance in a resource-limited setting: Findings from 13 hospitals in Uganda
- Building capacity on IPC in health care settings during the COVID-19 pandemic in Bangladesh
- COVID-19 IPC outcome assessment in USAID MTaPS-supported health facilities

Abstract status notification from ASTMH is still pending. One other abstract entitled Knowledge and Perception on Hand Hygiene and Correlation with IPC Practices and Structures in Health Facilities in Uganda was submitted to 6th International Consortium for Prevention and Infection Control Conference scheduled for September 14-17, 2021.

This quarter, MTaPS initiated the development of four peer-reviewed publications. Zero drafts have been produced for a paper on the registration status of MNCH medical products. This is based on a study that was conducted under the MNCH core portfolio. In addition, we have produced a zero draft of commentary on the experiences and lessons from using GHSA approaches to implement AMR containment efforts. This commentary is based on the abstract that was accepted for APHA. The last two papers, one on the revision of Kenya's essential medicines list and the integration of AWaRe categories and the other reporting on lessons learned strengthening IPC capacity for the COVID-19 pandemic response, are in earlier stages of development.

LEARNING

This quarter, MTaPS undertook a program-wide revision of its learning agenda and refined its objectives. The learning agenda revised objectives include the following: (1) document and share the latest knowledge, information, and best practices to promote learning, improve decision making (adaptive management), and enable innovation; (2) measure progress toward achieving MTaPS' objectives; (3) measure MTaPS' contribution to PSS; (4) set the stage for MTaPS' legacy and the footprint for post-MTaPS; (5) use as a foundation for the end-of-project report and end-of-project events; (6) contribute to the global learning agenda on pharmaceutical strengthening; and (7) serve as a key resource for the end-of-project evaluation. In addition to the global learning agenda, review sessions have been conducted with eight portfolios. The sessions for the remaining portfolios are scheduled for July. The purpose of the sessions is to review the learning questions and the state of evidence to determine whether they are still relevant, timely, feasible, and actionable for the respective portfolios. In addition, the proposed activities and learning activities for each question are discussed and revised. The key

output of each session is a refined list of learning questions with proposed learning activities and products that each portfolio can incorporate into their year 4 work plan.

Lessons Learned from Program Implementation

Objective 1: Pharmaceutical Sector Governance Strengthened

In **Nepal**, MTaPS is collaborating with the Department of Drug Administration (DDA) to update the Drug Act, regulation, rules, and guidelines. Strengthening collaboration with the DDA was identified as a need, as they were hesitant to share their draft of the drug law with MTaPS. Lawmaking is a transparent and consultative process, so it's important for MTaPS to build trust with the DDA. Ramping up advocacy efforts and involving high-level policymakers are key factors to drive change when revising regulations. This will allow MTaPS to be flexible to the changing needs of the DDA.

In the **Philippines**, during the COVID-19 emergency response, the team supported the MOH in developing an emergency task force whose leadership reported directly to the president's office. The task force was in charge of logistics and issuing executive and departmental orders (for MOH) to provide clear direction and lines of communication between various departments and implementing partners. Having the military take the lead in transporting essential COVID-19 commodities, mobilizing the government's assets and supply inside and outside of the health sector to use for the medical product supply chain, engaging the private sector, and setting up an accessible and accurate data and reporting platform were contributing factors to the success of the COVID-19 response in the Philippines.

In the **Philippines**, MTaPS strived to establish a technical working group to strengthen pharmaceutical supply chain management. During the establishment process, MTaPS found an existing pharmaceutical supply chain management team that could fulfill the same role as was intended for the technical working group. This approach used existing MOH structures and prevented duplication for increased sustainability. Through this experience, MTaPS learned to analyze existing options for implementation and remain flexible with the approach to achieving a goal.

In **Senegal**, MTaPS is providing technical assistance for supportive supervision to increase compliance with the updated national IPC guidelines. MTaPS supported the review and refinement of the national IPC supervision checklist by including the WHO's multimodal strategy and the component of WASH in health care settings. Furthermore, MTaPS supported the supervision of three pilot hospitals that used the updated national IPC supervision checklist. During the pilot visits, a need for more guidance on supportive supervision was identified because emphasis was placed on achieving a high score as opposed to mentoring health workers. The routine use of the updated supervision checklist is insufficient for achieving incremental compliance with the updated national IPC guidelines. Supportive supervision is key for ensuring that job aids are rolled out effectively. As a result, MTaPS identified a need to develop a formative/supportive supervision guide.

In **Tanzania**, MTaPS is launching the 6th edition of the 2021 Standard Treatment Guideline (STG/NEMLIT) by Ministry of Health, Community Development, Gender, Elderly and Children (MOHCDGEC) with a WHO access, watch, and reserve (AWaRe) list of antibiotics. Careful selection of a team of experts from MOHCDGEC with technical backstop from MTaPS and from the national medicines and therapeutics committee was a success factor for accomplishing this activity. The launch of the STG marks a stepping stone for creating hospital antimicrobial formularies and other AMS and IPC activities. Strong engagement with government partners and inclusive planning lay the groundwork for improved governance.

In **Tanzania**, MTaPS is using virtual learning to support AMS activities. When obtaining buy-in from the MOH's Pharmaceutical Services Unit, MTaPS organized a peer-to-peer exchange with the IPC Unit to encourage sharing knowledge and experiences surrounding virtual learning. This internal exchange allowed MTaPS to successfully obtain buy-in from the Pharmaceutical Services Unit. As a result of this

success, it would be beneficial for MTaPS to encourage sharing between units within the ministry. Peer-to-peer exchange promotes collaboration and experience sharing to obtain buy-in from units within the MOH.

Objective 2: Institutional and Human Resource Capacity for Pharmaceutical Management and Services Increased, including Regulation of Medical Products

In **Burkina Faso**, environments without strong regulatory systems can threaten the health system when it comes to medicine utilization. Using guidelines to control AMR is important for sectors that currently lack guidelines, including livestock, environment, and agriculture. With the establishment of guidelines and implementation of training for key stakeholders in these sectors, MTaPS built individuals' capacity and promoted awareness of AMR in the animal sector.

In the **IGAD/EAC Regional Portfolio**, MTaPS is setting up a regulatory compliance working group(s) with local pharmaceutical manufacturers in the IGAD/EAC regions. There are challenges in the relationship between the NMRAs and the leading pharmaceutical manufacturers, which affect compliance. Having a neutral party, such as MTaPS, allows conflicting groups to harmonize and continue promoting strong regulatory systems.

In **Mali**, MTaPS is strengthening institutional capacity-building for local training institutions to manage eLearning on IPC and AMS for both pre- and in-service health care workers. One activity was to launch an eLearning platform for three training institutions in the MOH. There were challenges in implementing the training because only one person was trained per institution. It's necessary for the management of eLearning platforms to train multiple people per institution for training logistics to be successful. MTaPS will work with the MOH to train additional staff to implement the training.

In **Nepal**, when buy-in is needed from government partners, live testimonials and examples from countries that have implemented similar interventions are powerful ways to increase others' appreciation of how the intervention works. Therefore, always include more testimonials and examples of success stories from MTaPS countries as a proof of concept for any intervention buy-in.

In the **Philippines**, MTaPS supported the Food and Drug Administration (FDA) in organizing a national dialogue on regulatory system strengthening, which involved collaboration with the Pharmaceutical and Healthcare Association of the Philippines, World Bank, Healthcare Technology Association of the Philippines, and WHO. These groups had not been brought together before, but MTaPS identified a need for collaboration between the FDA, patient groups, development partners, and partners in the pharmaceutical industry. As a neutral party in the group, MTaPS was able to facilitate discussion and pull out useful insights that will inform the program. Bringing together stakeholders working on various aspects of regulatory system strengthening provides a fuller and more inclusive perspective that can strengthen program activities.

In **Uganda**, MTaPS is strengthening the human resource capacity of health facilities and professional bodies for IPC and AMS. Professional councils and medical schools were engaged through symposia, which proved to be an effective approach. In addition, MTaPS Uganda reached out to MTaPS Kenya for guidance on reaching civil society organizations and professional bodies for IPC and AMS activities. This cross-country exchange allowed MTaPS to reach 180 members of professional councils and 479 medical students. Cross-country exchanges to learn about best practices can achieve stronger results. One challenge that MTaPS faced was buy-in from nurses and veterinarians, so these groups will be further targeted in year 4.

Objective 3: Availability and Use of Pharmaceutical Information for Decision Making Increased and Global Learning Agenda Advanced

In **Bangladesh**, MTaPS collaborated with different USAID partners and other development partners to scale-up the General Directorate of Hospital Services (DGHS) eLMIS for MNCH commodities in

selected districts. Collaboration with the UNFPA worked very well in scaling up eLMIS completely in two districts and partially in six districts. This collaboration helped scale up DGHS eLMIS in more than 200 community clinics and health facilities. Currently, more than 4,400 facilities run the system, providing eLMIS stock and consumption data, which contributes to strong decision making at the MNCH directorate.

In **Bangladesh**, e-TB Manager is a web-based patient data management system that captures data across all aspects of TB control and management, including information on confirmed patients, medicines, laboratory testing, diagnosis, treatment, and outcomes. The system rollout will be completed across the country by the end of June 2021. The National Tuberculosis Control Program (NTP) issued an order at the beginning of 2021 for all drug-resistant TB treatment centers to share e-TB Manager-generated reports with the center, quarterly. The decision to make the system paperless has proven successful and more effective within a few months. Implementing a paperless reporting system is a successful method of capturing TB patient data. Digital systems simplify recording data, keep data safe, allow staff to search data, and generate reports rapidly. The streamlined interface makes it easier to monitor the program and decision making. The NTP took ownership of this process and is planning to roll out e-TB Manager nationwide.

In **Mozambique**, MTaPS is enhancing the National Directorate of Pharmacy's (DNF) management information system by modifying Pharmadex. The DNF expressed hesitation about moving Pharmadex from a local system to the cloud because of concerns about data privacy. Ensuring that concerns about privacy are understood and mitigated is a key step in moving toward cloud-based systems. MTaPS will connect the DNF to focal points in the Namibian MOH and discuss how they ensure the confidentiality of Pharmadex data in the cloud.

Objective 4: Pharmaceutical-Sector Financing, including Resource Allocation and Use, Optimized

In the **Asia Bureau Portfolio**, a roadmap for identifying barriers, facilitators, and lessons learned in implementing health technology assessments (HTA) in LMICs was developed. As an initial step of the process, a comprehensive evidence review was undertaken, including peer-reviewed and gray literature. The synthesis of this review laid the foundation for understanding the needs of various countries and how HTAs are used globally. Reviewing evidence provides key context prior to designing an activity or developing a publication.

In the **Asia Bureau Portfolio**, MTaPS is conducting One Health Tool trainings in Kyrgyzstan, a country where MTaPS does not have a presence. There have been delays in engaging with MOH to coordinate the dates and logistics of the training because of the lack of staff there. Even though training is conducted virtually, it's key to have someone designated to provide local support for logistics, coordinating with ministries, opening doors, etc., to avoid delays.

Objective 5: Pharmaceutical Services, including Product Availability and Patient-Centered Care to Achieve Health Outcomes, Improved

In **Bangladesh**, with MTaPS' technical assistance, Communicable Disease Control (CDC)/DGHS is developing an STG on common infectious diseases from 2020. The STG is yet to be finalized, though five virtual meetings of the core working group have already been held. One in-person meeting was held, but CDC is waiting to conduct another one as they believe a one-on-one meeting will be a more effective means of compiling inputs and finalizing the STG. Virtual events are not always compatible with effective implementation.

In **Cameroon**, MTaPS is strengthening the capacity of key government AMR stakeholders through eLearning courses. MTaPS planned to support the in-person training of national stakeholders on AMR topics. However, COVID-19 pandemic restrictions prevented in-person training. As a result, MTaPS advocated to set up a Moodle eLearning platform to complement in-person training. At first, some of

the stakeholders were hesitant and expressed concerns about the quality of virtual courses. MTaPS organized a blended session (in-person and virtual) to train master trainers on IPC and included capacity building on how to use the Moodle platform. After this training, MTaPS was able to facilitate installation of the Moodle platform on MOH's DPML website. MTaPS collaborated with MOH in uploading courses on the platform, training staff to manage the platform, and organizing simulation exercises on the platform with the national counterparts. This strategy proved to be successful since the national stakeholders have sustained ownership of the Moodle platform. Obtaining buy-in from MOH and building capacity on the operational side of a virtual learning platform lays the foundation for implementation of virtual courses.

In **Kenya**, MTaPS is strengthening the national and county AMS governance structures. The target counties had varying levels of buy-in to implementing County AMS Interagency Committees (CASICs). In Kisumu, MTaPS lobbied with the focal persons to include a CASIC in the county. This can be used as a model to work in other countries under this activity.

In **Senegal**, in collaboration with Empower, MTaPS was responsible for launching IPC eLearning courses to strengthen the capacity of infection control committees (ICCs). After developing the eLearning courses, the team found that MOH counterparts had technical challenges accessing and reviewing the modules, and the IPC courses in French did not use language in alignment with MOH. To mitigate these challenges, MTaPS conducted highly interactive virtual sessions for MOH counterparts and imparted skills to deploy and manage the eLearning courses. Providing skill-building sessions on deploying and managing eLearning courses is key for course development.

In **Senegal**, MTaPS is supporting the Directorate of Pharmacy and Medicines in disseminating the national AMS plan. The AMS plan received technical validation from the PREVENTION/AMR technical working group. As a result of conflicting roles and responsibilities between the MOH and One Health platform, the national AMS plan will not be disseminated. As a result, MTaPS learned that it is critical to assess, confirm and address with counterparts any factors that may affect MTaPS' work plan activities. The One Health Permanent Secretariat informed MTaPS that the technically validated national AMS plan will be included in the next version of the national AMR action plan (2022-2026).

In **Senegal**, MTaPS is working to roll out IPC eLearning courses in advance of training ICCs. Because of the upcoming elections, there have been changes in political priorities that have affected the progress of MTaPS' activities. As a result, only some members of the ICCs have been trained, and the IPC actors in health facilities are waiting for the IPC eLearning courses to be rolled out. To adapt during the delays, MTaPS will focus on facilities supported by the program and postpone the nationwide launch until there is more political will. Adapting to changes in political priorities keeps program activities moving forward.

In **Tanzania**, MTaPS is supporting the development and dissemination of the AMR communications strategy. MTaPS ensured that stakeholders were engaged early and often to create buy-in for the strategy. Every key member of the process felt that they were owners of the strategy. This built a strong response from stakeholders and produced the strategy in a timely manner.

ACTIVITIES FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE (2021)
COVID-19 response summary report	July
COVID-19 response country briefs (13)	July
PSS in practice knowledge exchange: eSCM in Bangladesh	July
PSS in practice knowledge exchange: Subnational procurement of medicines	July
Regulatory systems strengthening: Technical program update	August
PSS in practice knowledge exchange: Regional harmonization of medicines regulation	August
Global learning series: Webinar	September
Participate in work plan development discussions and review PY4 work plans	July - September
Update country MEL plans	July - September
Review global and country-level indicators and update global MEL plan	July - September
Finalize collection of supplemental baseline indicators	July - September
Finalize and disseminate data quality assurance SOP	July - September
Conduct Data Quality Assurance trainings	July - September
Finalize data collection, management (DevResults) SOP	July - September
Conduct data collection, management (DevResults) trainings	July - September
Revise multiyear learning (research) agenda and develop implementation plan for years 4 and 5	July - September
Finalize Reporting SOP	July - September

ANNEX 1: MTAPS SUCCESS STORIES

USAID
FROM THE AMERICAN PEOPLE

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

SUCCESS STORY

Tanzania Implements AWaRe Classification to Improve the Use of Antibiotics by Clinicians

An analysis revealed frequent inappropriate antimicrobial use in Tanzania, which is fueling antimicrobial resistance in the country. The implementation of a first ever methodological categorization of antibiotics will help improve their use by clinicians.

Dr. Brycesson Kiwellu, practicing orthopedic surgeon and Tanzania Orthpedic Society representative, at the stakeholders' workshop. Photo Credit: Dr. Jackson Ilangali

A situational analysis conducted by Global Antimicrobial Resistance Partnership (GARP) in 2015 revealed inappropriate antimicrobial use in Tanzania. GARP found that physicians and other healthcare workers often prescribe antibiotics without fully establishing the need. Some drug outlets, especially in the country's rural areas, dispense antibiotics without prescription or dispense incomplete doses, fueling the challenge of antimicrobial resistance (AMR) in the country.

Antimicrobial resistance is a rapidly emerging global public health crisis. The World Health Organization (WHO) developed and published a global action plan on AMR in response. To help implement this plan and optimize antimicrobial use, WHO published a new approach in 2017 that classifies antibiotics into three main groups: the Access, Watch, and Reserve (AWaRe) categories. Countries are advised to implement this approach based on epidemiological data and resistance and sensitivity patterns of prevalent germs.

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) program worked with Tanzania's Ministry of Health, Community Development, Gender, Elders and Children to implement the WHO AWaRe categorization as a model to classify the antibiotics registered for

About USAID MTaPS

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018-2023) enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to better health outcomes and higher-performing health systems. The program is implemented by a consortium of global and local partners, led by Management Sciences for Health (MSH), a global health nonprofit.

www.mtapsprogram.org

Contact: Edgar Lusaya, MTaPS Tanzania Director, elusaya@mtapsprogram.org

use, using a methodological process for the first time in the country.

In 2017, Tanzania had attempted to classify antibiotics according to the level of health facilities, where class A or 'Access' antibiotics would be prescribed and dispensed at all levels; class B or 'Watch' group would only be prescribed and dispensed from council hospitals; and class S or 'Reserve' group would consist of protected and prioritized antibiotics for use only at tertiary level, i.e., national, zonal, referral, and specialized hospitals. However, since the classification was not based on epidemiological data and resistance and sensitivity of prevalent germs to antibiotics—locally or in neighboring countries—it had posed a challenge to clinicians who prescribe antibiotics without clear evidence of their effectiveness relative to local sensitivity data.

The new categorized antibiotics list will be an integral part of the country's revised Standard Treatment Guidelines and National Essential Medicines List (EML). The categorization of antibiotics is critical to restrict their use in clinical settings and in the community and will contribute to reducing the pressure on the Watch antibiotics, while retaining the effectiveness of the Reserved antibiotics. The implementation of AWaRE categorization will also help build the Ministry's capacity and the National Medicines and Therapeutic Committee's (NMTC) on AWaRe.

MTaPS' Approach

After preliminary desk review and expert consultations, MTaPS organized two workshops between August and September 2020 toward classifying the antibiotics registered and making the classification functional in policies and guidelines. The first workshop convened a range of stakeholders, including experts from health research institutions, national tertiary hospitals, members of the NMTC, and representatives from President's Office – Regional Administration and Local Government and the National Reference Laboratory. This workshop produced a preliminary draft of the list of antibiotics classified into AWaRe groups, as per the identified list of infectious diseases and syndromes.

The second workshop, with participation from specialist doctors from Muhimbili University of Health and Allied Sciences and representatives from regional referral hospitals, NMTC, and national hospitals, built on the outcomes of the first one and developed the AWaRe categorization operationalization strategy to guide implementation and monitoring. The resulting AWaRe categorization of antibiotics was finalized according to the country's syndrome list and is undergoing review for integration into the Standard Treatment Guidelines.

"We are really thankful to MTaPS project for providing technical and financial support for the activity on AWaRe categorization of antibiotics. We specifically appreciate the technical support extended to us because our knowledge on the subject was limited, and we would have never been able to kick start and implement this activity without their support." – Ms. Siana Mapunjo, AMR focal person from the Ministry of Health, Community Development, Gender, Elders and Children

What's Next

MTaPS is working with the Ministry and partners to finalize the list of EML antibiotics classified into AWaRe groups, develop its operationalization strategy, and plan for dissemination of the AWaRe classification under the updated Standard Treatment Guidelines and EML. The program will also support the capacity building of the health facilities' medicines and therapeutic committees for implementation of AWaRe in their facilities toward optimizing the use of antimicrobials and defeating AMR in Tanzania.

USAID FROM THE AMERICAN PEOPLE

This document is made possible by the generous support of the American people through the US Agency for International Development (USAID) contract no. 7200AA18C00074. The contents are the responsibility of Management Sciences for Health and do not necessarily reflect the views of USAID or the United States Government.

USAID
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Understanding the level of consumption of antimicrobials is a critical first step in optimizing the use of medicines to contain AMR. In DRC, the USAID MTaPS Program supported the Ministry of Health, in collaboration with WHO, to conduct the first national study on the consumption of antimicrobials as a part of and prerequisite to AMR containment efforts.

About USAID MTaPS

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018-2023) enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to better health outcomes and higher-performing health systems. The program is implemented by a consortium of global and local partners, led by Management Sciences for Health (MSH), a global health nonprofit.

www.mtapsprogram.org

Contact: Dr. Robert Tuala Tuala, MTaPS DRC Country Project Director, rtuala@mtapsprogram.org

DRC completes its first national survey on antimicrobial consumption

The presentation of the survey results on December 4, 2020. Left to right: The Director of the DPM, the WHO Representative for DRC, the Minister of Health, and the USAID Health Office Director for DRC. Photo credit: Junior Kiama/USAID MTaPS

"Antibiotic resistance (AMR) has dramatically increased these past years throughout the world. It is now considered one of the biggest and most pressing threats for global public health. For this reason, and based on the World Health Assembly's resolution [on antimicrobial resistance (AMR)], the Democratic Republic of Congo (DRC) has developed a national plan against antimicrobial resistance."

These are the words that Dr. Eteni Longondo, Minister of Health for DRC, used to highlight the dangers of AMR on December 4, 2020, during a presentation of the results of a survey on antimicrobial consumption in DRC (source: National Congolese Radio and Television (RTNC)).

AMR decreases the effectiveness of antimicrobials and impacts not just the human sector, but also the animal, environmental, and agricultural sectors. This threat is even more challenging in low- and middle-income countries due to various constraints, including the availability of funding, and lack of data to deal with the issue.

As part of AMR containment efforts, DRC prioritized the implementation of a national action plan to monitor the consumption of antimicrobials and improve their use. A survey tool was created to obtain this consumption data and then use that data to raise awareness of AMR and inform the actions of health professionals, clients, and political leaders.

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program worked with the Directorate for Pharmacy and Medicines (DPM), in collaboration with WHO, to help conduct the survey. They collaborated to train surveyors and supervisors on the survey's methodology. This work included mastering the Anatomical Therapeutic Chemical/Daily Defined Dose (ATC/DDD) classification, antimicrobial surveillance, and data collection.

The survey started in August 2020 and lasted for two months. It was carried out in Haut-Katanga, Kinshasa, and Nord-Kivu, the three provinces that are principal entry points for imported medicines, and that host the manufacturing sites for locally produced medicines. Due to challenges in collecting accurate data, the survey only included antimicrobials that were distributed between 2018 and 2019 in private sector wholesale facilities, regional medicines distribution centers, local medicine production industries, UN agencies, and international and local NGOs.

The survey showed a number of positive indicators. Using WHO's AWaRE (Access, Watch, and Reserve) classification, a tool designed to support antimicrobial stewardship, the survey revealed that antibiotics in the Access category—the category offering the best therapeutic value while minimizing the potential for resistance—represented 71% of the total number of antimicrobials in 2018 and 70% in 2019, well above the WHO's recommendation of at least 60%. Keeping the use of Access group medicines above 60% for the treatment of infectious diseases helps promote the rational use of antimicrobials, as Watch and Reserve groups are reserved for special cases in which Access group antibiotics don't work or can't be used.

The data collected on antimicrobial consumption has enabled DRC to join WHO's GLASS platform—a step that will help the country increase its capacity level as per WHO's framework, while also supporting global surveillance efforts.

"We wanted to know what was the quantity of antimicrobials that are used in the country. We want last resort antibiotics to be protected. With AMR, if there isn't any protection for antibiotics and that there is an overconsumption, we'll be in a situation of complete resistance."

— Dr. Donatien Kabamb Kabey, Director of the DPM, in an interview with the RTNC during the presentation of the survey results

MTaPS will continue to support the DPM to ensure that the survey is conducted annually, following WHO recommendations, to help identify a trend of antimicrobial use in DRC. With this trend and quantitative analysis, the country will be able to determine the areas that need attention for specific corrective measures. Additionally, MTaPS will provide its expertise to help implement the AMR action plan for better antimicrobial stewardship.

Participants during the presentation of the survey results on December 4, 2020. Photo credit: Junior Kiama

USAID FROM THE AMERICAN PEOPLE

This document is made possible by the generous support of the American people through the US Agency for International Development (USAID) contract no. 7200AA18C00074. The contents are the responsibility of Management Sciences for Health and do not necessarily reflect the views of USAID or the United States Government.

ANNEX 2: MTAPS INDICATOR TRACKING TABLE

Annex Table 1: MTaPS Performance Indicator Tracking Table

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result	PY3Q2 Result	PY3Q3 Result	PY3 Cumulative Result
Objective 1: Pharmaceutical-Sector Governance Strengthened									
Sub-Objective 1.2: Evidence-Based Medicines Policies, Laws, Regulations, Guidelines, Norms, and Standards Improved and Enforced									
MT 1.2.2	# of pharmaceutical regulatory enforcement mechanisms established or strengthened with MTaPS support	Semi-annually	0	0	8	4	~	4
	Mozambique		0	0	2	2	~	2
	Rwanda		0	0	6	2	~	2
MT 1.2.3	% of established pharmaceutical regulatory enforcement mechanisms that are functional	Semi-annually				85% (11/13)	~	85% (11/13)
	Bangladesh		50%	Data not reported	100%	100% (4/4)	~	100% (4/4)
	Mozambique		0%	22% (2/9)	50%	67% (2/3)	~	67% (2/3)
	Rwanda		0%	83%	83%	83% (5/6)	~	83% (5/6)
		Objective 2: Institutional and Human Resource Capacity for Pharmaceutical Management and Services Increased, Including Regulation of Medical Products							
		Sub-Objective 2.2: Capacity of Government to Manage Pharmaceutical Systems Strengthened							

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
MT 2.2.2	# of persons trained in pharmaceutical management with MTaPS support	Quarterly	0	1,116	2,107	1,219		3,489		2,225		6,933
	Asia Bureau		0	0	45	*Female*	0	*Female*	0	*Female*	0	52
						Male	0	*Male*	0	*Male*	0	
						Unknown	52	*Unknown*	0	*Unknown*	0	
						Total	52	*Total*	0	*Total*	0	
	Bangladesh		0	961	800	*Female*	218	*Female*	203	*Female*	167	2,418
						Male	645	*Male*	722	*Male*	463	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	863	*Total*	925	*Total*	630	
	DRC		0	0	230	*Female*	0	*Female*	95	*Female*	58	373
						Male	0	*Male*	162	*Male*	58	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	257	*Total*	116	
	IGAD		0	0	100	*Female*	40	*Female*	13	*Female*	11	257
						Male	97	*Male*	48	*Male*	48	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	137	*Total*	61	*Total*	59	
	Mozambique		0	40	52	*Female*	0	*Female*	2	*Female*	3	10
						Male	0	*Male*	3	*Male*	2	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	5	*Total*	5	
	Nepal		0	0	10	*Female*	0	*Female*	35	*Female*	0	73
						Male	0	*Male*	36	*Male*	2	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	71	*Total*	2	
	Philippines		0	0	0	*Female*	86	*Female*	1,424	*Female*	641	3,269
						Male	50	*Male*	746	*Male*	312	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	136	*Total*	2170	*Total*	953	
	Rwanda		0	0	1200	*Female*	8	*Female*	0	*Female*	152	493
						Male	20	*Male*	0	*Male*	313	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	28	*Total*	0	*Total*	465	

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
MT 2.2.4	# of people successfully completing MTaPS-developed e-learning courses	Quarterly	0	65	231	890		2,170		604		3,669
	Asia Bureau		0	0	30	*Female*	0	*Female*	0	*Female*	0	52
						Male	0	*Male*	0	*Male*	0	
						Unknown	52	*Unknown*	0	*Unknown*	0	
						Total	52	*Total*	0	*Total*	0	
	Bangladesh		0	0	30	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Cross Bureau		0	0	60	*Female*	0	*Female*	0	*Female*	0	8
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	8	*Unknown*	0	
						Total	0	*Total*	8	*Total*	0	
	Mozambique		0	65	53	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Philippines		0	0	1000	*Female*	575	*Female*	1,424	*Female*	416	3,609
						Male	260	*Male*	746	*Male*	188	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	835	*Total*	2170	*Total*	604	
	Rwanda		0	0	58	*Female*	0	*Female*	0	*Female*	0	
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
		Objective 3: Availability and Use of Pharmaceutical Information for Decision Making Increased and Global Learning Agenda Advanced										
		Sub-Objective 3.1: Pharmaceutical Management Information Systems that Are Interoperable and Link Patients and Products Effectively Implemented										
MT 3.1.1	# and % MTaPS-supported health facilities that have	Semi-annually				100% (2016/2016)				~		100% (2016/2016)

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result	PY3Q2 Result	PY3Q3 Result	PY3 Cumulative Result
	newly implemented or improved PMIS to document specific components of the pharmaceutical system for analysis and reporting with MTaPS support								
	Bangladesh		90%	92%	90%	100% (2006/2006)		~	100% (2006/2006)
	Philippines		0%	0%	30%	0%		~	0%
	Rwanda		0%	100%	100%	100% (10/10)		~	100% (10/10)
MT 3.1.2	# and % of MTaPS-supported health facilities using interoperable PMIS tools	Semi-annually				85% (6434/7565)		~	85% (6434/7565)
	Bangladesh		61%	87%	65%	87% (5112/5913)		~	87% (5112/5913)
	Mozambique		0%	68%	90%	80% (1322/1652)		~	80% (1322/1652)
		Sub-Objective 3.2: Information on Pharmaceutical Systems Available and Used							
MT 3.2.1	# and % of MTaPS-supported health facilities that complete and submit an LMIS report on time for the most recent reporting period	Quarterly	74.3% (84/115)	92% (4293/4680)	95%	83% (4334/5213)	85% (4428/5232)	80% (4,638/5,779)	80% (4,638/5,779)

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
	Bangladesh		74.3% (84/115)	92% (4293/4680)	95%	*DGFP (Sub-District Level)*	100% (488/488)	*DGFP (Sub-District Level)*	100% (488/488)	*DGFP (Sub-District Level)*	100% (489/489)	81% (4527/5602)
						DGFP (Central/ Regional Level)	100% (22/22)	*DGFP (Central/ Regional Level)*	100% (22/22)	*DGFP (Central/ Regional Level)*	100% (22/22)	
						District Hospital	82% (18/22)	*District Hospital*	91% (20/22)	*District Hospital*	71% (20/28)	
						Civil Surgeon Office	61% (14/23)	*Civil Surgeon Office*	78% (18/23)	*Civil Surgeon Office*	59% (17/29)	
						Upazila Health Complex	75% (117/156)	*Upazila Health Complex*	75% (130/173)	*Upazila Health Complex*	69% (150/217)	
						Union Sub Center	76% (283/371)	*Union Sub Center*	78% (289/371)	*Union Sub Center*	77% (287/371)	
						Community Clinic	82% (3392/4131)	*Community Clinic*	86% (3387/3956)	*Community Clinic*	80% (3542/4446)	
						Total	83% (4334/5213)	*Total*	86% (4354/5055)	*Total*	81% (4527/5602)	
	DRC		42% (74/177)	Data not reported		*Hospitals*	Data not reported	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	95% (111/177)
						Health centers		*Health centers*	38% (64/167)	*Health centers*	60% (101/167)	
						Total		*Total*	42% (74/177)	*Total*	95% (111/177)	
		Sub-Objective 3.3: Pharmaceutical Systems Strengthening Research and Global Learning Agenda Advanced										
MT 3.3.2	# of PSS technical documents authored by MTaPS	Semi-annually	0	1	14	11				~		11

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result	PY3Q2 Result	PY3Q3 Result	PY3 Cumulative Result
	Cross Bureau		0	1	12	10		~	10
	CSL		0	0	3	1		~	1
	Rwanda		0	0	1	15		~	15
MT 3.3.3	# of activities to engage with stakeholders to advance the PSS global learning agenda	Quarterly	0	11	11	2	2	6	10
	Cross Bureau		0	11	10	2	2	6	10
	CSL		0	0	1	0	0	0	0
		Objective 4: Pharmaceutical-Sector Financing, Including Resource Allocation and Use, Optimized							
		Sub-Objective 4.2: Evidence-Based Medicines Strategies and Pharmacy Benefits Programs Developed and Implemented							
MT 4.2.3	# of strategic plans developed or updated to address pharmaceutical costs and financing with MTaPS support	Semi-annually	0	2	1	0		~	0
	Bangladesh		0	2	1	0		~	0
Objective 5: Pharmaceutical Services, Including Product Availability and Patient-Centered Care, to Achieve Health Outcomes Improved									
Sub-Objective 5.1: Increased availability of essential medicines and other health technologies									
MT 5.1.1	% of service delivery points with stock out of FP, TB and HIV-AIDS tracer commodities	Quarterly							
	Philippines								
	First line TB meds (4 FDC)		40.5%	30% (472/1552)	25%	23%	22%	20%	20%

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result	PY3Q2 Result	PY3Q3 Result	PY3 Cumulative Result
	TB Pediatric Med (4FDC)		90.6%	97% (856/883)	30%	48%	46%	44%	44%
	TB Preventive Treatment (for children)		63.8%	65% (645/987)	30%	81%	79%	77%	77%
	TB Second Line Drug (Levofloxacin 500mg)		N/A	53% (105/199)	20%	7%	Data not reported	12%	12%
	TB Second Line Drug (Moxifloxacin 400mg)		N/A	5% (9/199)	20%	4%	Data not reported	14%	14%
	TB Second Line Drug (Linezolid 600mg)		N/A	12% (24/199)	20%	5%	Data not reported	6%	6%
	TB Second Line Drug (Bedaquiline)		N/A	13% (25/199)	20%	5%	Data not reported	16%	16%
	GeneXpert Cartridges		N/A	3% (13/395)	25%	15%	1%	15%	15%
	FP Injectable		30.2%	12% (218/1775)	20%	13%	20%	28%	28%
	FP Implant		52.7%	55% (717/1316)	30%	45%	43%	40%	40%
	FP Oral COC		25.6%	8% (143/1798)	20%	11%	11%	11%	11%
	FP Oral POP		69.3%	31% (507/1630)	30%	27%	26%	23%	23%
	IUD		36.7%	29% (454/1566)	25%	41%	41%	42%	42%
	Male condom		38.9%	21% (358/1743)	25%	31%	26%	24%	24%

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result	PY3Q2 Result	PY3Q3 Result	PY3 Cumulative Result
MT 5.1.2	% of tracer products stocked according to plan	Semi-annually							
	Bangladesh			Data not reported	TBD	*Stocked according to plan*	0% (0/7)	~	0% (0/7)
						Overstocked	86% (6/7)	~	86% (6/7)
						Understocked	14% (1/7)	~	14% (1/7)
						Stocked out	0% (0/7)	~	0% (0/7)
	DRC			Data not reported	TBD	*Stocked according to plan*	26% (5/19)	~	26% (5/19)
						Overstocked	63% (12/19)	~	63% (12/19)
						Understocked	16% (3/19)	~	16% (3/19)
						Stocked out	0% (0/19)	~	0% (0/19)
MT 5.1.3	% of initially MTaPS-supported supply chain functions carried out by national entities that are done without external technical assistance	Semi-annually	0%	Data not reported	TBD	100% (3/3)		~	100% (3/3)
	Bangladesh		0%	Data not reported	TBD	*LMIS*	100% (1/1)	*LMIS* ~	100% (3/3)
						Inventory management	100% (2/2)	*Inventory management* ~	
		Sub-Objective 5.2: Patient-centered Pharmaceutical Care Improved							
MT 5.2.1	% of MTaPS-supported health facilities which have developed, adopted or implemented pharmaceutical services standards	Semi-annually	0%	0%	50%	0% (0/100)		~	0% (0/100)
	Rwanda		0%	0%	50%	0% (0/100)		~	0% (0/100)

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
		Sub-Objective 5.3: Patient Safety and Therapeutic Effectiveness Ensured										
MT 5.3.1	% of MTaPS-supported health facilities that have implemented medicines safety activities	Quarterly	31% (31/100)	3% (3/110)	91% (106/116)	20% (13/66)		30% (30/99)		44% (46/105)		44% (46/105)
	Bangladesh		31% (31/100)	3% (3/100)	90% (90/100)	*Pharmaceuticals*	26% (13/50)	*Pharmaceuticals*	20% (10/50)	*Pharmaceuticals*	22% (11/50)	22% (11/50)
						Total	26% (13/50)	*Total*	20% (10/50)	*Total*	22% (11/50)	
	IGAD		0%	Data not reported	70%	*Hospitals*	77% (24/31)	*Hospitals*	55% (17/31)	*Hospitals*	76% (28/37)	77% (30/39)
						Health Center	100% (2/2)	*Health Center*	100% (2/2)	*Health Center*	100% (2/2)	
						Total	79% (26/33)	*Total*	58% (19/33)	*Total*	77% (30/39)	
	Jordan		0% (0/0)	0% (0/0)	100% (6/6)	*Hospitals*	0% (0/6)	*Hospitals*	0% (0/6)	*Hospitals*	0% (0/6)	0% (0/6)
						Total	0% (0/6)	*Total*	0% (0/6)	*Total*	0% (0/6)	
	Rwanda		0% (0/10)	0% (0/10)	100% (10/10)	*Health Center*	0% (0/9)	*Health Center*	0% (0/9)	*Health Center*	45% (4/9)	50% (5/10
						Hospital	100% (0/1)	*Hospital*	100% (1/1)	*Hospital*	100% (1/1)	
						Total	0% (0/10)	*Total*	10% (1/10)	*Total*	50% (5/10	
MT 5.3.2	% of adverse drug events (ADEs) reported to the NMRA and reviewed by the NMRA	Semi-annually				68% (1886/2756)				~		68% (1886/2756)
	IGAD		0% (0/0)	Data not reported	TBD	0% (0/0)				~		0% (0/0)
	Bangladesh		68%	22%	50%	46% (151/328)				~		46% (151/328)

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result	PY3Q2 Result	PY3Q3 Result	PY3 Cumulative Result
	Mozambique		60%	Data not reported	70%	70% (1563/2240)		~	70% (1563/2240)
	Rwanda		91%	Data not reported	100%	91% (172/188)		~	91% (172/188)
		Sub-Objective 5.4 Antimicrobial Resistance Containment Supported							
MT 5.4.2	% of MTaPS-supported health facilities implementing locally identified and prioritized core elements of infection prevention and control activities	Semi-annually	0%	100%	100%	43% (3/7)		~	43% (3/7)
	Mozambique		0%	100%	100%	43% (3/7)		~	43% (3/7)
		MTaPS Global Health Security Agenda (GHSA) Indicators							
		Result Area 1: Effective multisectoral coordination on AMR							
MSC 1	# of AMR-related in-country meetings or activities conducted with multisectoral participation	Quarterly	0	122	87	36	32	36	104
	Bangladesh		0	3	2	0	1	0	1
	Burkina Faso		0	2	2	2	0	1	3
	Cameroon		0	5	14	1	1	2	4
	Côte d'Ivoire		0	35	18	11	13	17	41
	DRC		0	6	6	4	10	2	16
	Jordan		0	0	4	1	1	0	2
	Kenya		0	38	14	14	0	2	16
	Mali		0	16	15	0	2	1	3

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result	PY3Q2 Result	PY3Q3 Result	PY3 Cumulative Result
	Mozambique		0	0	3	0	1	5	6
	Nigeria		0	0	4	0	1	2	3
	Senegal		0	4	4	1	1	1	2
	Tanzania		0	4	4	1	0	1	2
	Uganda		0	9	4	1	1	2	4
MSC 2	# and % of female participants in meetings or other events organized by the multisectoral body on AMR	Semi-annually							
	Bangladesh		29% (24/84)	29% (24/84)	30%	35% (12/34)		~	35% (12/34)
	Burkina Faso		18% (3/17)	22% (6/27)	50%	0% (0/0)		~	0% (0/0)
	Cameroon		50% (2/4)	39% (39/101)	45%	0% (0/0)		~	0% (0/0)
	Côte d'Ivoire		38% (21/55)	38% (21/55)	38%	43% (65/150)		~	43% (65/150)
	DRC		34%	36% (45/124)	40%	30% (22/73)		~	30% (22/73)
	Jordan		45% (5/11)	Data not reported	50%	45% (5/11)		~	45% (5/11)
	Kenya		66%	43% (496/1147)	50%	0% (0/0)		~	0% (0/0)
	Mali		15%	16% (20/124)	20%	17% (20/116)		~	17% (20/116)
	Mozambique		48% (11/23)	Data not reported	50%	48% (11/23)		~	48% (11/23)
	Nigeria		Data not	Data not reported	TBD	Data not reported		~	Data not reported

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
			reported									
	Senegal		58% (54/93)	58% (54/93)	58%	55% (16/29)				~		55% (16/29)
	Tanzania		14% (3/21)	14% (3/21)	20%	19% (4/21)				~		19% (4/21)
	Uganda		Data not reported	Data not reported	TBD	Data not reported				~		Data not reported
MSC 5	# of persons trained in AMR-related topics in leadership/management related to multisectoral engagement in AMR with MTaPS support	Quarterly	0	164	532	204		301		56		561
	Bangladesh		0	0	0	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Burkina Faso		0	0	0	*Female*	0	*Female*	3	*Female*	2	36
						Male	0	*Male*	18	*Male*	13	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	21	*Total*	15	
	Cameroon		0	0	20	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Côte d'Ivoire		0	134	160	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	DRC		0	0	150	*Female*	98	*Female*	112	*Female*	0	463
						Male	106	*Male*	147	*Male*	0	

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	204	*Total*	259	*Total*	0	
	Kenya		0	0	0	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Mali		0	30	2	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Mozambique		0	0	20	*Female*	0	*Female*	11	*Female*	5	37
						Male	0	*Male*	12	*Male*	11	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	21	*Total*	16	
	Nigeria		0	0	199	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Senegal		0	0	0	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Tanzania		0	0	200	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Uganda		0	0	0	*Female*	0	*Female*	0	*Female*	16	25
						Male	0	*Male*	0	*Male*	9	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	25	
Result Area 2: Infection Prevention and Control Improved and Functional												
IP 2	# of persons trained in IPC with MTaPS support	Quarterly	0	1,199	2,806	4,566		832		1,353		6,751

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
	Bangladesh		0	0	600	*Female*	0	*Female*	41	*Female*	14	95
						Male	0	*Male*	32	*Male*	8	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	73	*Total*	22	
	Burkina Faso		0	0	0	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Cameroon		0	86	66	*Female*	0	*Female*	32	*Female*	0	68
						Male	0	*Male*	36	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	68	*Total*	0	
	Côte d'Ivoire		0	0	120	*Female*	0	*Female*	34	*Female*	28	131
						Male	0	*Male*	37	*Male*	32	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	71	*Total*	60	
	DRC		0	0	90	*Female*	50	*Female*	0	*Female*	0	94
						Male	44	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	94	*Total*	0	*Total*	0	
	Kenya		0	642	1,500	*Female*	0	*Female*	53	*Female*	58	4,614
						Male	0	*Male*	29	*Male*	19	
						Unknown	4,455	*Unknown*	0	*Unknown*	0	
						Total	4,455	*Total*	82	*Total*	77	
	Mali		0	0	0	*Female*	0	*Female*	7	*Female*	0	21
						Male	0	*Male*	14	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	21	*Total*	0	
	Mozambique		0	0	0	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Nigeria		0	0	100	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
	Senegal		0	0	20	*Female*	0	*Female*	0	*Female*	11	22
						Male	0	*Male*	0	*Male*	11	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	22	
	Tanzania		0	471	200	*Female*	8	*Female*	0	*Female*	0	17
						Male	9	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	17	*Total*	0	*Total*	0	
	Uganda		0	0	210	*Female*	0	*Female*	294	*Female*	759	1,689
						Male	0	*Male*	223	*Male*	413	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	517	*Total*	1,172	
IP 3	# and % of MTaPS-supported facilities that are using standardized tool(s) for monitoring IPC and informing programmatic improvement	Quarterly	56% (5/9)	100% (9/9)	100% (87/87)	66% (57/87)		78% (89/111)		95% (105/111)		95% (105/111)
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	*Hospitals*	0% (0/2)	*Hospitals*	100% (2/2)	*Hospitals*	100% (2/2)	100% (2/2)
						Total	0% (0/2)	*Total*	100% (2/2)	*Total*	100% (2/2)	
	Burkina Faso		0% (0/0)	0% (0/0)	0% (0/0)	*Total*	0% (0/0)	*Total*	0% (0/0)	*Total*	0% (0/0)	0% (0/0)
	Cameroon		0% (0/0)	0% (0/0)	100% (6/6)	*Hospitals*	100% (6/6)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	100% (12/12)
						Total	100% (6/6)	*Total*	100% (12/12)	*Total*	100% (12/12)	
	Côte d'Ivoire		0% (0/0)	0% (0/0)	100% (12/12)	*Hospital*	20% (2/10)	*Hospital*	20% (2/10)	*Hospital*	100% (10/10)	100% (12/12)
						Animal health Centers	100% (2/2)	*Animal health Centers*	100% (2/2)	*Animal health Centers*	100% (2/2)	

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
						Total	33% (4/12)	*Total*	33% (4/12)	*Total*	100% (12/12)	
	DRC		0% (0/0)	0% (0/0)	100% (5/5)	*Hospitals*	60% (3/5)	*Hospitals*	86% (6/7)	*Hospitals*	100% (7/7)	100% (7/7)
						Total	60% (3/5)	*Total*	86% (6/7)	*Total*	100% (7/7)	
	Jordan		0% (0/0)	0% (0/0)	100% (6/6)	*Hospitals*	0% (0/4)	*Hospitals*	0% (0/4)	*Hospitals*	0% (0/4)	0% (0/4)
						Total	0% (0/4)	*Total*	0% (0/4)	*Total*	0% (0/4)	
	Kenya		0% (0/0)	0% (0/0)	100% (20/20)	*Hospitals*	79% (15/19)	*Hospitals*	100% (19/19)	*Hospitals*	100% (19/19)	100% (20/20)
						Health Centers	100% (1/1)	*Health Centers*	100% (1/1)	*Health Centers*	100% (1/1)	
						Total	80% (16/20)	*Total*	100% (20/20)	*Total*	100% (20/20)	
	Mali		0% (0/0)	0% (0/0)	100% (16/16)	*Hospital*	67% (6/9)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	100% (16/16)
						Health Centers	86% (6/7)	*Health Centers*	100% (7/7)	*Health Centers*	100% (7/7)	
						Total	75% (12/16)	*Total*	100% (16/16)	*Total*	100% (16/16)	
	Mozambique		43% (3/7)	Data not reported	100% (7/7)	*Hospitals (in-person support)*	Data not reported	*Hospitals (in-person support)*	100% (3/3)	*Hospitals (in-person support)*	100% (3/3)	100% (7/7)
						Hospitals (remote support)	Data not reported	*Hospitals (remote support)*	0% (0/4)	*Hospitals (remote support)*	100% (4/4)	
						Total	Data not reported	*Total*	43% (3/7)	*Total*	100% (7/7)	
	Nigeria		0% (0/0)	Data not reported	100% (3/3)	*Hospitals*	Data not reported	*Hospitals*	0% (0/0)	*Hospitals*	0% (0/0)	0% (0/0)
						Total	Data not reported	*Total*	0% (0/0)	*Total*	0% (0/0)	
	Senegal		100% (3/3)	100% (3/3)	100% (3/3)	*Hospitals*	100% (3/3)	*Hospitals*	38% (3/8)	*Hospitals*	75% (6/8)	75% (6/8)
						Total	100% (3/3)	*Total*	38% (3/8)	*Total*	75% (6/8)	

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
	Tanzania		33% (2/6)	100% (6/6)	100% (10/10)	*Hospitals*	60% (6/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	100% (10/10)
						Total	60% (6/10)	*Total*	100% (10/10)	*Total*	100% (10/10)	
	Uganda		0% (0/0)	0% (0/0)	7/7 (100%)	*Hospitals*	100% (7/7)	*Hospitals*	100% (13/13)	*Hospitals*	100% (13/13)	100% (13/13)
						Total	100% (7/7)	*Total*	100% (13/13)	*Total*	100% (13/13)	
IP 5	# and % of MTaPS-supported facilities implementing continuous quality improvement (CQI) to improve IPC	Quarterly	43% (20/47)	83% (39/47)	100% (81/81)	48% (39/81)		74% (81/107)		94% (101/107)		94% (101/107)
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	*Hospitals*	0% (0/2)	*Hospitals*	100% (2/2)	*Hospitals*	100% (2/2)	100% (2/2)
						Total	0% (0/2)	*Total*	100% (2/2)	*Total*	100% (2/2)	
	Burkina Faso		0% (0/0)	0% (0/0)	0% (0/0)	*Total*	0% (0/0)	*Total*	0% (0/0)	*Total*	0% (0/0)	0% (0/0)
	Cameroon		0% (0/6)	100% (6/6)	100% (6/6)	*Hospitals*	0% (0/6)	*Hospitals*	50% (6/12)	*Hospitals*	100% (12/12)	100% (12/12)
						Total	0% (0/6)	*Total*	50% (6/12)	*Total*	100% (12/12)	
	Côte d'Ivoire		50% (2/4)	100% (4/4)	100% (12/12)	*Hospitals*	20% (2/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	100% (12/12)
						Animal Health Centers	100% (2/2)	*Animal Health Centers*	100% (2/2)	*Animal Health Centers*	100% (2/2)	
						Total	33% (4/12)	*Total*	100% (12/12)	*Total*	100% (12/12)	
	DRC		0% (0/0)	0% (0/0)	100% (5/5)	*Hospitals*	60% (3/5)	*Hospitals*	43% (3/7)	*Hospitals*	43% (3/7)	43% (3/7)
						Total	60% (3/5)	*Total*	43% (3/7)	*Total*	43% (3/7)	
	Kenya		100% (16/16)	100% (16/16)	100% (20/20)	*Hospitals*	79% (15/19)	*Hospitals*	79% (15/19)	*Hospitals*	100% (19/19)	100% (20/20)

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
						Health Centers	100% (1/1)	*Health Centers*	100% (1/1)	*Health Centers*	100% (1/1)	
						Total	80% (16/20)	*Total*	80% (16/20)	*Total*	100% (20/20)	
	Mali		0% (0/5)	0% (0/5)	100% (16/16)	*Hospital*	0% (0/9)	*Hospital*	89% (8/9)	*Hospital*	89% (8/9)	81% (13/16)
						Health Centers	0% (0/7)	*Health Centers*	71% (5/7)	*Health Centers*	71% (5/7)	
						Total	0% (0/16)	*Total*	81% (13/16)	*Total*	81% (13/16)	
	Mozambique		43% (3/7)	Data not reported	100% (7/7)	*Hospitals (in-person support)*	Data not reported	*Hospitals (in-person support)*	100% (3/3)	*Hospitals (in-person support)*	100% (3/3)	100% (7/7
						Hospitals (remote support)	Data not reported	*Hospitals (remote support)*	0% (0/4)	*Hospitals (remote support)*	100% (4/4)	
						Total	Data not reported	*Total*	43% (3/7)	*Total*	100% (7/7)	
	Nigeria		0% (0/3)	Data not reported	100% (3/3)	*Hospitals*	Data not reported	*Hospitals*	0% (0/0)	*Hospitals*	0% (0/0)	0% (0/0)
						Total	Data not reported	*Total*	0% (0/0)	*Total*	0% (0/0)	
	Senegal		0% (0/3)	0%(0/3)	100% (3/3)	*Hospitals*	100% (3/3)	*Hospitals*	38% (3/8)	*Hospitals*	75% (6/8)	75% (6/8)
						Total	100% (3/3)	*Total*	38% (3/8)	*Total*	75% (6/8)	
	Tanzania		33% (2/6)	100% (6/6)	100% (10/10)	*Hospitals*	60% (6/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	100% (10/10)
						Total	60% (6/10)	*Total*	100% (10/10)	*Total*	100% (10/10)	
	Uganda		0% (0/7)	100% (7/7)	7/7 (100%)	*Hospitals*	100% (7/7)	*Hospitals*	100% (13/13)	*Hospitals*	100% (13/13)	100% (13/13
						Total	100% (7/7)	*Total*	100% (13/13)	*Total*	100% (13/13)	
IP 6	# and % of MTaPS-supported facilities with functional IPC committees	Quarterly	37% (15/41)	87% (41/47)	100% (81/81)	72% (58/81)		83% (91/110)		88% (94/107)		88% (94/107)

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	*Hospitals*	50% (1/2)	*Hospitals*	100% (2/2)	*Hospitals*	100% (2/2)	100% (2/2)
						Total	50% (1/2)	*Total*	100% (2/2)	*Total*	100% (2/2)	
	Burkina Faso		0% (0/0)	0% (0/0)	0% (0/0)	*Total*	0% (0/0)	*Total*	0% (0/0)	*Total*	0% (0/0)	0% (0/0)
	Cameroon		0% (0/0)	83% (5/6)	100% (6/6)	*Hospitals*	100% (6/6)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	100% (12/12)
						Total	100% (6/6)	*Total*	100% (12/12)	*Total*	100% (12/12)	
	Côte d'Ivoire		100% (4/4)	100% (4/4)	100% (12/12)	*Hospitals*	20% (2/10)	*Hospitals*	100% (10/10)	*Hospitals*	40% (4/10)	50% (6/12)
						Animal Health Centers	100% (2/2)	*Animal Health Centers*	100% (2/2)	*Animal Health Centers*	100% (2/2)	
						Total	33% (4/12)	*Total*	100% (12/12)	*Total*	50% (6/12)	
	DRC		0% (0/0)	0% (0/0)	100% (5/5)	*Hospitals*	60% (3/5)	*Hospitals*	86% (6/7)	*Hospitals*	86% (6/7)	86% (6/7)
						Total	60% (3/5)	*Total*	86% (6/7)	*Total*	86% (6/7)	
	Kenya		0% (0/16)	100% (16/16)	100% (20/20)	*Hospitals*	79% (15/19)	*Hospitals*	79% (15/19)	*Hospitals*	89% (17/19)	92% (18/20)
						Health Centers	100% (1/1)	*Health Centers*	100% (1/1)	*Health Centers*	100% (1/1)	
						Total	80% (16/20)	*Total*	80% (16/20)	*Total*	92% (18/20)	
	Mali		0% (0/5)	0% (0/5)	100% (16/16)	*Hospital*	67% (6/9)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	88% (14/16)
						Health Centers	68% (6/7)	*Health Centers*	71% (5/7)	*Health Centers*	71% (5/7)	
						Total	75% (12/16)	*Total*	88% (14/16)	*Total*	88% (14/16)	
	Mozambique		43% (3/7)	Data not reported	100% (7/7)	*Hospitals (in-person support)*	Data not reported	*Hospitals (in-person support)*	100% (3/3)	*Hospitals (in-person support)*	100% (3/3)	100% (7/7)

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
						Hospitals (remote support)	Data not reported	*Hospitals (remote support)*	0% (0/4)	*Hospitals (remote support)*	100% (4/4)	
						Total	Data not reported	*Total*	43% (3/7)	*Total*	100% (7/7)	
	Nigeria		0% (0/3)	Data not reported	100% (3/3)	*Hospitals*	Data not reported	*Hospitals*	0% (0/0)	*Hospitals*	0% (0/0)	0% (0/0)
						Total	Data not reported	*Total*	0% (0/0)	*Total*	0% (0/0)	
	Senegal		100% (3/3)	100% (3/3)	100% (3/3)	*Hospitals*	100% (3/3)	*Hospitals*	38% (3/8)	*Hospitals*	75% (6/8)	75% (6/8)
						Total	100% (3/3)	*Total*	38% (3/8)	*Total*	75% (6/8)	
	Tanzania		17% (1/6)	100% (6/6)	100% (10/10)	*Hospitals*	60% (6/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	100% (10/10)
						Total	60% (6/10)	*Total*	100% (10/10)	*Total*	100% (10/10)	
	Uganda		100% (7/7)	100% (7/7)	7/7 (100%)	*Hospitals*	100% (7/7)	*Hospitals*	100% (13/13)	*Hospitals*	100% (13/13)	100% (13/13)
						Total	100% (7/7)	*Total*	100% (13/13)	*Total*	100% (13/13)	
Result Area 3: Use of anti-microbial medicines is optimized												
AS 2	# and % of MTaPS supported facilities' MTC/AMS committees or other relevant groups that implemented AMS improvement plans and/or monitoring framework	Quarterly	14% (4/29)	81% (25/31)	100% (92/92)	33% (30/92)		33% (41/125)		54% (70/129)		54% (70/129)
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	*Hospitals*	0% (0/2)	*Hospitals*	0% (0/2)	*Hospitals*	0% (0/2)	0% (0/2)
						Total	0% (0/2)	*Total*	0% (0/2)	*Total*	0% (0/2)	
	Burkina Faso			0% (0/0)		*Hospitals*	0% (0/8)	*Hospitals*	12% (1/8)	*Hospitals*	25% (2/8)	17% (2/12)

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
			0% (0/0)		100% (12/12)	*Health Centers*	0% (0/4)	*Health Centers*	0% (0/4)	*Health Centers*	0% (0/4)	
						Total	0% (0/12)	*Total*	8% (1/12)	*Total*	17% (2/12)	
	Cameroon		0% (0/0)	0% (0/0)	100% (6/6)	*Hospitals*	0% (0/6)	*Hospitals*	0% (0/12)	*Hospitals*	92% (11/12)	92% (11/12)
						Total	0% (0/6)	*Total*	0% (0/12)	*Total*	92% (11/12)	
	Côte d'Ivoire		0% (0/0)	0% (0/0)	100% (12/12)	*Hospitals*	17% (2/12)	*Hospitals*	17% (2/12)	*Hospitals*	75% (9/12)	75% (9/12)
						Total	17% (2/12)	*Total*	17% (2/12)	*Total*	75% (9/12)	
	DRC		0% (0/0)	0% (0/0)	100% (5/5)	*Hospitals*	60% (3/5)	*Hospitals*	43% (3/7)	*Hospitals*	57% (4/7)	57% (4/7)
						Total	60% (3/5)	*Total*	43% (3/7)	*Total*	57% (4/7)	
	Jordan		0% (0/0)	0% (0/2)	100% (6/6)	*Hospitals*	0% (0/6)	*Hospitals*	0% (0/6)	*Hospitals*	0% (0/6)	0% (0/6)
						Total	0% (0/6)	*Total*	0% (0/6)	*Total*	0% (0/6)	
	Kenya		6% (1/16)	100% (18/18)	100% (24/24)	*Hospitals*	81% (17/21)	*Hospitals*	81% (17/21)	*Hospitals*	100% (21/21)	83% (20/24)
						Health Centers	100% (1/1)	*Health Centers*	100% (1/1)	*Health Centers*	100% (1/1)	
						Pharmacy	0% (0/2)	*Pharmacy*	0% (0/2)	*Pharmacy*	0% (0/2)	
						Total	75% (18/24)	*Total*	75% (18/24)	*Total*	83% (20/24)	
	Mali		0% (0/0)	0% (0/0)	100% (5/5)	*Hospital*	0% (0/4)	*Hospital*	50% (2/4)	*Hospital*	89% (8/9)	56% (9/16)
						Health Centers	0% (0/1)	*Health Centers*	0% (0/1)	*Health Centers*	14% (1/7)	
						Total	0% (0/5)	*Total*	40% (2/5)	*Total*	56% (9/16)	
	Mozambique		0% (0/7)	Data not reported	100% (7/7)	*Hospitals (in-person support)*	Data not reported	*Hospitals (in-person support)*	0% (0/3)	*Hospitals (in-person support)*	0% (0/3)	0% (0/7)
						Hospitals (remote support)	Data not reported	*Hospitals (remote support)*	0% (0/4)	*Hospitals (remote support)*	0% (0/4)	
						Total	Data not reported	*Total*	0% (0/7)	*Total*	0% (0/7)	

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
	Nigeria		0% (0/3)	Data not reported	100% (3/3)	*Hospitals*	Data not reported	*Hospitals*	0% (0/0)	*Hospitals*	0% (0/0)	0% (0/0)
						Total	Data not reported	*Total*	0% (0/0)	*Total*	0% (0/0)	
	Senegal		0% (0/0)	0% (0/0)	100% (3/3)	*Hospitals*	0% (0/3)	*Hospitals*	0% (0/8)	*Hospitals*	0% (0/8)	0% (0/8)
						Total	0% (0/3)	*Total*	0% (0/8)	*Total*	0% (0/8)	
	Tanzania		0% (0/6)	0% (0/6)	100% (10/10)	*Hospitals*	0% (0/10)	*Hospitals*	20% (2/10)	*Hospitals*	20% (2/10)	20% (2/10)
						Total	0% (0/10)	*Total*	20% (2/10)	*Total*	20% (2/10)	
	Uganda		43% (3/7)	100% (7/7)	7/7 (100%)	*Hospitals*	100% (7/7)	*Hospitals*	100% (13/13)	*Hospitals*	100% (13/13)	100% (13/13)
						Total	100% (7/7)	*Total*	100% (13/13)	*Total*	100% (13/13)	
AS 3	# of persons trained in AMS topics with MTaPS support	Quarterly	0	436	2,304	1,302		645		2,042		3,989
	Bangladesh		0	0	0	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Burkina Faso		0	0	100	*Female*	0	*Female*	3	*Female*	17	53
						Male	0	*Male*	18	*Male*	15	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	21	*Total*	32	
	Cameroon		0	0	144	*Female*	0	*Female*	9	*Female*	104	202
						Male	0	*Male*	7	*Male*	82	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	16	*Total*	186	
	Côte d'Ivoire		0	0	100	*Female*	0	*Female*	0	*Female*	50	87
						Male	0	*Male*	0	*Male*	37	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	87	
	DRC		0	0	150	*Female*	61	*Female*	14	*Female*	0	176
						Male	60	*Male*	41	*Male*	0	

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	121	*Total*	55	*Total*	0	
	Jordan		0	0	20	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Kenya		0	165	1,500	*Female*	0	*Female*	20	*Female*	13	1,179
						Male	0	*Male*	16	*Male*	6	
						Unknown	1,125	*Unknown*	0	*Unknown*	0	
						Total	1,125	*Total*	36	*Total*	18	
	Mali		0	0	0	*Female*	12	*Female*	0	*Female*	8	136
						Male	44	*Male*	0	*Male*	72	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	56	*Total*	0	*Total*	80	
	Mozambique		0	0	0	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Nigeria		0	0	40	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Senegal		0	0	20	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Tanzania		0	201	200	*Female*	0	*Female*	0	*Female*	0	0
						Male	0	*Male*	0	*Male*	0	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	0	*Total*	0	
	Uganda		0	70	70	*Female*	0	*Female*	294	*Female*	790	2,124
						Male	0	*Male*	223	*Male*	817	
						Unknown	0	*Unknown*	0	*Unknown*	0	
						Total	0	*Total*	517	*Total*	1,607	
AS 4	# and % of MTaPS-supported facilities	Quarterly	62% (24/39)	75% (41/55)	100% (86/86)	35% (30/86)		37% (41/112)		50% (61/123)		50% (61/123)

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
	implementing continuous quality improvement (CQI) to improve AMS											
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	*Hospitals*	0% (0/2)	*Hospitals*	0% (0/2)	*Hospitals*	0% (0/2)	0% (0/2)
						Total	0% (0/2)	*Total*	0% (0/2)	*Total*	0% (0/2)	
	Burkina Faso		0% (0/0)	100% (5/5)	100% (12/12)	*Hospitals*	0% (0/8)	*Hospitals*	12% (1/8)	*Hospitals*	25% (2/8)	8% (1/12)
						Health Centers	0% (0/4)	*Health Centers*	0% (0/4)	*Health Centers*	0% (0/4)	
						Total	0% (0/12)	*Total*	8% (1/12)	*Total*	8% (1/12)	
	Cameroon		0% (0/0)	0% (0/6)	100% (6/6)	*Hospitals*	0% (0/6)	*Hospitals*	0% (0/12)	*Hospitals*	92% (11/12)	92% (11/12)
						Total	0% (0/6)	*Total*	0% (0/12)	*Total*	92% (11/12	
	Côte d'Ivoire		0% (0/0)	100% (2/2)	100% (12/12)	*Hospitals*	17% (2/12)	*Hospitals*	17% (2/12)	*Hospitals*	75% (9/12)	75% (9/12)
						Total	17% (2/12)	*Total*	17% (2/12)	*Total*	75% (9/12)	
	DRC		0% (0/0)	100% (3/3)	100% (5/5)	*Hospitals*	60% (3/5)	*Hospitals*	43% (3/7)	*Hospitals*	43% (3/7)	43% (3/7)
						Total	60% (3/5)	*Total*	43% (3/7)	*Total*	43% (3/7)	
	Kenya		100% (18/18)	100% (18/18)	100% (24/24)	*Hospitals*	81% (17/21)	*Hospitals*	81% (17/21)	*Hospitals*	90% (19/21)	83% (20/24)
						Health Centers	100% (1/1)	*Health Centers*	100% (1/1)	*Health Centers*	100% (1/1)	
						Pharmacy	0% (0/2)	*Pharmacy*	0% (0/2)	*Pharmacy*	0% (0/2)	
						Total	75% (18/24)	*Total*	75% (18/24)	*Total*	83% (20/24)	
	Mali		0% (0/5)	0% (0/5)	100% (5/5)	*Hospital*	0% (0/4)	*Hospital*	50% (2/4)	*Hospital*	22% (2/9)	13% (2/16)
						Health Centers	0% (0/1)	*Health Centers*	0% (0/1)	*Health Centers*	0% (0/7)	
						Total	0% (0/5)	*Total*	40% (2/5)	*Total*	13% (2/16)	
	Mozambique		0% (0/7)	Data not reported	100% (7/7)	*Hospitals (in-person support)*	Data not reported	*Hospitals (in-person support)*	0% (0/3)	*Hospitals (in-person support)*	0% (0/3)	0% (0/7)

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result		PY3Q2 Result		PY3Q3 Result		PY3 Cumulative Result
						Hospitals (remote support)	Data not reported	*Hospitals (remote support)*	0% (0/4)	*Hospitals (remote support)*	0% (0/4)	
						Total	Data not reported	*Total*	0% (0/7)	*Total*	0% (0/7)	
	Nigeria		0% (0/3)	Data not reported	100% (3/3)	*Hospitals*	Data not reported	*Hospitals*	0% (0/0)	*Hospitals*	0% (0/0)	0% (0/0)
						Total	Data not reported	*Total*	0% (0/0)	*Total*	0% (0/0)	
	Senegal		0% (0/3)	0% (0/3)	100% (3/3)	*Hospitals*	0% (0/3)	*Hospitals*	0% (0/8)	*Hospitals*	0% (0/8)	0% (0/8)
						Total	0% (0/3)	*Total*	0% (0/8)	*Total*	0% (0/8)	
	Tanzania		0% (0/6)	100% (6/6)	100% (10/10)	*Hospitals*	0% (0/10)	*Hospitals*	20% (2/10)	*Hospitals*	20% (2/10)	20% (2/10)
						Total	0% (0/10)	*Total*	20% (2/10)	*Total*	20% (2/10)	
	Uganda		86% (6/7)	100% (7/7)	7/7 (100%)	*Hospitals*	100% (7/7)	*Hospitals*	100% (13/13)	*Hospitals*	100% (13/13)	100% (13/13)
						Total	100% (7/7)	*Total*	100% (13/13)	*Total*	100% (13/13)	
DRC Custom Indicators												
DRC 1	# of quality assured MNCH, RH/FP, and TB medicines products registered with MTaPS support	Semi-annually	0	0	2	16				~		16
DRC 5	# of DPS and/or IPS using the updated directory of registered medicines	Semi-annually	0	0	4	3				~		3
DRC 8	# of health zones involved in provincial quantification exercises with MTaPS support	Semi-annually	0	0	10	10				~		10

Code	Performance Indicator	Reporting Frequency	Base-line Value	PY2 Cumulative Result	PY3 Target	PY3Q1 Result	PY3Q2 Result	PY3Q3 Result	PY3 Cumulative Result
DRC 10	# of Contraceptive kit (reduced FP package) distributed to community care sites (CSS) in MTaPS supported HZs	Semi-annually	0	0	24	0		~	0
DRC 11	% of CSS reporting contraceptive data to health facilities in MTAPS supported HZs	Semi-annually	0%	0	60%	0% (0/12)		~	0% (0/12)
DRC 12	# of mini awareness raising campaigns for active detection of tuberculosis and adherence to TB treatment supported by MTaPS	Semi-annually	0	0	10	0		~	0
Nepal Custom Indicators									
NP 8	Number of monitoring visits in which GON participates	Quarterly	0	0	2	1	2	0	3

Annex Table 2: Indicator JC1: Percentage of WHO international Health Regulation (IHR) benchmark actions completed with MTaPS support for each level of JEE capacity (IPC, AMS, and multi-sectoral collaboration) for PY3Q3

WHO Benchmark	JEE capacity level	MTaPS-supported country											
		Bangladesh	Burkina Faso	Cameroon	Côte d'Ivoire	DRC	Kenya	Mali	Mozambique	Nigeria	Senegal	Tanzania	Uganda
P.3.1 Effective MSC on AMR	Limited Capacity - 02	25% (1/4)	50% (2/4)	25% (1/4)	100% (4/4)	75% (3/4)	0% (0/4)	0% (0/4)	50% (2/4)	0% (0/4)	75% (3/4)	50% (2/4)	50% (2/4)
	Developed Capacity - 03	25% (1/4)	50% (2/4)	50% (2/4)	75% (3/4)	100% (4/4)	50% (2/4)	100% (4/4)	75% (3/4)	25% (1/4)	50% (2/4)	75% (3/4)	50% (2/4)
	Demonstrated Capacity - 04	50% (2/4)	0% (0/4)	25% (1/4)	50% (2/4)	100% (4/4)	50% (2/4)	0% (0/4)	0% (0/4)	0% (0/4)	50% (2/4)	25% (1/4)	25% (1/4)
	Sustainable Capacity - 05	0% (0/5)	0% (0/5)	0% (0/5)	0% (0/5)	80% (4/5)	20% (1/5)	0% (0/5)	0% (0/5)	0% (0/5)	0% (0/5)	0% (0/5)	0% (0/5)
P.3.3 Infection prevention and control	Limited Capacity - 02	60% (3/5)	0% (0/5)	60% (3/5)	100% (5/5)	60% (3/5)	80% (4/5)	80% (4/5)	80% (4/5)	0% (0/5)	60% (3/5)	80% (4/5)	80% (4/5)
	Developed Capacity - 03	67% (4/6)	0% (0/6)	50% (3/6)	83% (5/6)	50% (3/6)	50% (3/6)	50% (3/6)	83% (5/6)	0% (0/6)	50% (3/6)	100% (6/6)	83% (5/6)
	Demonstrated Capacity - 04	20% (1/5)	0% (0/5)	20% (1/5)	40% (2/5)	20% (1/5)	40% (2/5)	0% (0/5)	40% (2/5)	0% (0/5)	0% (0/5)	60% (3/5)	0% (0/5)
	Sustainable Capacity - 05	0% (0/5)	0% (0/5)	0% (0/5)	0% (0/5)	20% (1/5)	0% (0/5)	0% (0/5)	0% (0/5)	0% (0/5)	0% (0/5)	20% (1/5)	0% (0/5)
P.3.4 Optimize use of	Limited Capacity - 02	0% (0/4)	50% (2/4)	50% (2/4)	100% (4/4)	100% (4/4)	50% (2/4)	75% (3/4)	25% (1/4)	0% (0/4)	75% (3/4)	100% (4/4)	25% (1/4)

WHO Benchmark	JEE capacity level	MTaPS-supported country											
		Bangladesh	Burkina Faso	Cameroon	Côte d'Ivoire	DRC	Kenya	Mali	Mozambique	Nigeria	Senegal	Tanzania	Uganda
antimicrobial medicines in human and animal health and agriculture	Developed Capacity - 03	17% (1/6)	33% (2/6)	17% (1/6)	67% (4/6)	67% (4/6)	67% (4/6)	33% (2/6)	0% (0/6)	0% (0/6)	17% (1/6)	50% (3/6)	33% (2/6)
	Demonstrated Capacity - 04	0% (0/7)	14% (1/7)	0% (0/7)	0% (0/7)	57% (4/7)	14% (1/7)	0% (0/7)	0% (0/7)	0% (0/7)	0% (0/7)	0% (0/7)	0% (0/7)
	Sustainable Capacity - 05	0% (0/7)	0% (0/7)	0% (0/7)	0% (0/7)	71% (5/7)	14% (1/7)	0% (0/7)	0% (0/7)	0% (0/7)	0% (0/7)	0% (0/7)	0% (0/7)

ANNEX 3: EBOLA RESPONSE INDICATORS

EVD 1: # of policies, legislation, regulations, operational documents, or guidelines for EVD management developed or updated with technical assistance from MTaPS

Country	April	May	June	Total
Mali	0	0	22	22
Rwanda	0	0	0	0
Senegal	1	32	0	33
Uganda	0	0	0	0
Total	**1**	**32**	**22**	**55**

- Côte d'Ivoire not reporting on this indicator

EVD 2: # of entities implementing EVD guidelines with MTaPS support

		April	May	June	Total
Countries	Côte d'Ivoire	0*	0	0	0
	Mali	0*	0	6	6
	Rwanda	0*	0	0	0
	Senegal	0*	0	0	0
	Uganda	0*	20	0	20
	Total	**0***	**20**	**6**	**26**
Entity type	Ebola treatment unit	0*	4	6	10
	Non-ETU health facility	0*	5	0	5
	Point of entry	0*	11	0	11
	Other	0*	0	0	0

* This activity was not carried out during the month

EVD 3: # of persons who received EVD training with MTaPS support

		April	May	June	Total
Countries	Côte d'Ivoire	19	59	0	78
	Mali	0*	0	89	89
	Rwanda	0*	0	0	0
	Senegal	0*	0	0	0
	Uganda	0*	96	0	96
	Total	**19**	**155**	**89**	**263**
Sex	Female	5	49	26	80
	Male	14	106	63	183
	Unknown	0	0	0	0
By entity type	Ebola treatment unit	2	20	0	20
	Non-ETU health facility	8	25	89	124
	Point of entry	0	48	0	48
	Other	9	62	0	71
By training type	Non-ToT	0	140	89	229
	ToT	19	15	0	34

* This activity was not carried out during the month

EVD 4: # of MTaPS-supported entities in compliance with EVD IPC guidelines

		April	May	June
Countries	Côte d'Ivoire	0*	5	4
	Mali	0*	0	6
	Rwanda	0*	0	0
	Senegal	0*	0	0
	Uganda	0*	20	0
	Total	**0**	**25**	**10**

* This activity was not carried out during the month

ANNEX 4: MONTHLY COVID-19 INDICATORS

COV 2. (0.2) Number of people trained on COVID-19 vaccine-related topics with MTaPS support

Portfolio/ Disaggregation	Country	Apr. 2021	May 2021	Jun. 2021	Total
CN108	Burkina Faso	0	0	0	0
	Cote d'Ivoire	0	0	0	0
	Kenya	0	0	0	0
	Mali	0	0	125	125
	Mozambique	0	0	0	0
	Rwanda	0	0	0	0
	Philippines	0	0	0	0
	Senegal	0	0	0	0
CN210	Bangladesh	0	0	403	403
	Total by month	**0**	**0**	**528**	**528**
Sex	Male	0	0	456	456
	Female	0	0	72	72
	Unknown sex	0	0	0	0
Technical area	Policy, planning, and coordination	0	0	0	0
	Pharmacovigilance	0	0	125	125
	Supply chain and logistics	0	0	0	0
	Vaccine service delivery	0	0	403	403
	Human Resources for health, training and supervision	0	0	0	0
	Communications and Advocacy	0	0	0	0
	Community Engagement and Demand	0	0	0	0
	Monitoring, Evaluation and HIS	0	0	0	0

COV 4. (0.8) Number of COVID-19 vaccine multisectoral coordination mechanisms that meet regularly (at least once a month) with MTaPS support

Portfolio	Country	Apr. 2021	May 2021	Jun. 2021	Total
CN108	Burkina Faso	0	0	0	0
	Cote d'Ivoire	0	0	2	2
	Kenya	1	2	0	3
	Mali	0	0	0	0
	Mozambique	0	0	0	0
	Philippines	0	1	0	1
	Rwanda	0	0	0	0
	Senegal	0	0	0	0
CN210	Kenya	1	0	0	1
Total by month		**2**	**3**	**2**	**7**

COV 5. (5.1) Number of health facilities where MTaPS provided support for IPC and/or water, sanitation and hygiene (WASH) for COVID-19

Portfolio	Country	Apr. 2021	May 2021	Jun. 2021	Total
CN108	Cote d'Ivoire	0	0	0	0
	Mali	0	0	0	0
CN210	Bangladesh	0	0	437	437
	Kenya	30	210	38	278
Total per month		**30**	**210**	**475**	**715**

COV 6. (5.2) Number of workers who received COVID-19-related training in IPC and/or WASH with MTaPS support

Portfolio/ Disaggregation	Country	Apr. 2021	May 2021	Jun. 2021	Total
CN108	Cote d'Ivoire	0	0	0	0
	Mali	0	0	0	0
CN210	Bangladesh	0	0	113	113
	Kenya	30	311	50	391
Total by month		**30**	**311**	**163**	**504**
Sex	Male	14	179	116	309
	Female	16	132	47	195
	Unknown sex	0	0	0	0
Trainee category	HCW	30	311	163	504
	Non-HCW	0	0	0	0

COV 7. (6.1) Number of policies, protocols, standards, and guidelines across any of the result areas developed or adapted with MTaPS support for COVID-19

Portfolio/ Disaggregation	Country	Apr. 2021	May 2021	Jun. 2021	Total
CN108	Burkina Faso	0	0	0	0
	Cote d'Ivoire	0	0	1	1
	Kenya	0	1	1	2
	Mali	0	0	1	1
	Mozambique	0	0	0	0
	Philippines	0	1	0	1
	Rwanda	0	0	0	0
	Senegal	0	0	0	0
CN210	Kenya	2	0	0	2
Total by month		**2**	**2**	**3**	**7**
Technical area	Infection prevention and control	2	0	0	2
	Coordination and operations	0	1	1	2
	Vaccine introduction (incl., PV)	0	1	2	3