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

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FISCAL YEAR 2022
QUARTER 2
(JANUARY–MARCH 2022) REPORT

USAID
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TABLE OF CONTENTS

PROJECT OVERVIEW

Program Name:		USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program
Reporting Period:		Fiscal Year (FY) 2022 Quarter 2 (January - March 2022
Activity Start Date and End Date:		September 20, 2018–September 19, 2023
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MTaPS Partners:	Core Partners:	Boston University, FHI360, Overseas Strategic Consulting, Results for Development, International Law Institute-Africa Centre for Legal Excellence, AUDA-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

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ACRONYMS AND ABBREVIATIONS

3HP	once-weekly dose of isoniazid and rifapentine for 12 weeks
4PL	fourth-party logistics provider
ACIPC	Advisory Committee for IPC
ACTB	Alliance for Combating TB in Bangladesh
ADE	adverse drug event
ADR	adverse drug reaction
ADRAC	Adverse Drug Reaction Committee
aDSM	active TB drug safety monitoring and management
AE	adverse event
AEFI	adverse events following immunization
AFROHUN	Africa One Health University Network
AMC	antimicrobial consumption
AMDF	Africa Medical Devices Forum
AMR	antimicrobial resistance
AMRH	African Medicines Regulatory Harmonization Initiative
AMR-TCC	AMR Technical Thematic Committee
AMS	antimicrobial stewardship
AMU	antimicrobial use
ANARME, PI	*Autoridade Nacional Reguladora de Medicamentos, Instituto Público* [National Medicines Regulatory Authority, Public Institute]
ANEH	National Hospital Evaluation Agency
ARC	antimicrobial resistance containment
ARV	antiretroviral
ARVs	antiretroviral medicines
ASEAN	Association of Southeast Asian Nations
ASM	active safety monitoring
ASO	AMS optimal access and use
ASRAMES	*Association Régionale d'Approvisionnement en Médicaments Essentiels*
AUDA-NEPAD	African Union Development Agency's New Partnership for Africa's Development
AWaRe	Access, Watch and Reserve
BA	Breakthrough Action
BCZC	Bureau central de la zone de santé
BKKBN	National Board for Family Planning
BPOM	National Agency for Food and Drug Control
BSC	balanced scorecard
CAC	community outreach unit
CAPA	corrective and preventive action
CASIC	County Antimicrobial Stewardship Interagency Committee
CASS	communication and awareness intervention for school students
CCS	community care site
CDC	US Centers for Disease Control and Prevention
CDR	regional distribution center
CHD	Center for Health Development

CHTF	child health task force
CIPCAC	County Infection Prevention and Control Advisory Committee
CME	continuous medical education
CMSD	Central Medical Store Depot
CNAMM	National Marketing Authorization Commission
CODESA	health area development committee
COE	center of excellence
COI	conflict of interest
COVD	COVID-19 Vaccine Delivery
CPD	continuing professional development
CQI	continuous quality improvement
CRH	county referral hospital
CSD	Clinical Services Directorate
CYP	Couple Years of Protection
DDA	Department of Drug Administration
DEPS	DRC Ebola post-mortem surveillance
DFDS	Department of Food and Drug Services
DGDA	Directorate General of Drug Administration
DGFP	Directorate General of Family Planning
DGHS	Directorate General of Health Services
DGSHP	General Directorate of Health and Public Hygiene
DGSV	General Directorate of Veterinary Services
DH	district hospital
DHIS 2	district health information system version 2
DMHP	Directorate of Hospital and Proximity Medicine
DNAM	*Direcção Nacional de Assistência médica* [National Directorate of Medical Assistance]
DNF	National Directorate of Pharmacy (Mozambique)
DOH	Department of Health
DPCB	Disease Prevention and Control Bureau
DPM	Directorate of Pharmacy and Medicine
DPML	Directorate of Pharmacy, Medicines, and Laboratories (Cameroon)
DPS	*Division Provinciale de la Sante* [Provincial Health Division]
DQA	data quality assurance
DQSHH	Directorate for Quality, Security, and Hospital Hygiene
DRC	Democratic Republic of the Congo
DR-TB	drug-resistant TB
DSMO	district surveillance medical officer
DTC	drug and therapeutics committee
DTG	dolutegravir
EAC	East African Community
eAMS	electronic asset management system
eLMIS	electronic Logistics Management Information System
EML	essential medicines list
e-SPAR	Electronic State Parties Self-Assessment Annual Reporting Tool
EVD	Ebola virus disease

EVML	essential veterinary medicines list
EWG	Expert Working Group
FA	Framework Agreement
FAIG	framework agreement implementation guidelines
FAO	Food and Agriculture Organization
FDA	US Food and Drug Administration
FMARD	Federal Ministry of Agriculture and Rural Development
FP	family planning
GBT	Global Benchmarking Tool
GCMN-RAM	National MSC Group on AMR
GFF	Global Financing Facility
GHeL	Global Health eLearning Platform
GHPP	good hospital pharmacy practices
GHSA	Global Health Security Agenda
GHSC-PSM	Global Health Supply Chain Program-Procurement and Supply Management
GOB	Government of Bangladesh
GOJ	Government of Jordan
GoU	Government of Uganda
GPB	government procurement bylaw
GPD	Government Procurement Department
GPP	Good Pharmacy Practices
GRP	good regulatory practice
GSDP	good storage and distribution practices
GVP	Good Pharmacovigilance Practice
GWG	gender working group
HA	health area
HA	health account
HAD	health affairs directorate
HCAC	Health Care Accreditation Council
HCAD	Health Communication and Awareness Directorate
HCAI	health care-associated infection
HCP	health care provider
HCW	health care worker
HCWM	health care waste management
HEOC	health emergency operation center
HEU	Health Economic Unit
HF	health facility
HH	hand hygiene
HHRDB	Health Human Resources Development Bureau
HHSAF	Hand Hygiene Self-Assessment Framework
HQ	headquarters
HSR 2022	Seventh Global Symposium on Health Systems Research
HTA	health technology assessment
HWDP	Health Workforce Development Plan
HZ	health zone

ICC	IPC committee
iCCM	integrated community case management
ICCs	infection control committees
ICN	instructions for competitive negotiations
ICT	information and communication technology
ICU	intensive care unit
IDDS	Infectious Disease Detection and Surveillance
IFRC	International Federation of Red Cross
IGAD	Intergovernmental Authority on Development
IHR	International Health Regulations
IMS	information management system
IMS	Ebola incident management structure (Senegal)
InaHTAC	Indonesia HTA Committee
INH	isoniazid
INRB	Institut National de Recherche Biomédicale
IP	implementing partner
IPC	infection prevention and control
IPCAF	Infection Prevention and Control Assessment Framework
IPCAT2	Infection Prevention and Control Assessment Tool 2
IPNET	Infection Prevention Network
IPRA	Ivorian Pharmaceutical Regulatory Authority
IPS	Provincial Health Inspectorate
IRIMS	Integrated Regulatory Information Management System
IVD	in vitro diagnostic
JEE	Joint External Evaluation
JFDA	Jordan Food and Drug Administration
JLN	joint learning network
JOOTRH	Jaramogi Oginga Odinga Teaching and Referral Hospital
KAP	knowledge, attitudes, and practices
KMITS	Knowledge Management and Information Technology Service
KNMF	Kenya National Medicines Formulary
LCP	Lung Center of the Philippines
LGU	local government unit
LHSS	Local Health System Sustainability project
LMICs	low- and middle-income countries
LMIS	logistics management information system
LTAP	local technical assistance provider
M&E	monitoring and evaluation
MA	marketing authorization
MAAIF	Ministry of Agriculture, Animal Industry, and Fisheries
MALAP	Maturity Level Action Plan
MALF	Ministry of Agriculture, Livestock, and Fisheries
MCC	Multisectoral Coordinating Committee
MCCH	maternal, child, and community health
MCDA	multi-criteria decision analysis

MDA	ministries, departments, and agencies
MER	medicines evaluation and registration
MERL	monitoring, evaluation, research, and learning
MIC	middle-income country
MIHR	USAID MOMENTUM Integrated Health Resilience project
MIS	management information system
MMD	multimonth dispensing
MMS	medicines management supervisors
MNCH	maternal, neonatal, and child health
MOES	Ministry of Education and Sports
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
MOPH	Ministry of Public Health
MPTF	Multi-Partner Trust Fund Office
MSC	multisectoral coordination
MSC-AMR	multisectoral coordination on AMR
MSH	Management Sciences for Health
MSR	medical and surgical requisites
MSSFPO	Momentum Safe Surgery in Family Planning and Obstetrics
MTaPS	Medicines, Technologies, and Pharmaceutical Services
MTC	Medicines and Therapeutics Committee
NAMRAC	National Antimicrobial Resistance Advisory Committee
NAMRsC	national AMR sub-committee
NAP	National Action Plan
NAP-AMR	National Action Plan for AMR
NASIC	National Antimicrobial Stewardship Interagency Committee
NC-AMR	National Commission on AMR
NCAT	National Committee for Antibiotic Treatment
NCC	national coordinating center
NCD	non-communicable disease
NCDC	Nigeria Center for Disease Control
NCDC	National Curriculum Development Center (Uganda)
NDA	National Drug Authority
NEML	national essential medicines list
NMP	National Medicines Policy
NMRA	National Medicines Regulatory Authority
NPC	National Pharmacy Council
NRA	National Regulatory Authority
NSP	national strategic plan
NTC	National Technical Committee
NTP	National Tuberculosis Control Program
NVPMC	National Vaccines Procurement Modernization Committee
OH	One Health

OHP	One Health Platform
OHS	Office of Health Systems
OHT	One Health Tool
OIE	World Organization for Animal Health
OP	operational plan
OSH	occupational safety and health
P	Partnership
PBF	performance-based financing
PCPD	Pharmacy and Clinical Pharmacy Directorate
PCR	polymerase chain reaction
PD	Pharmaceutical Department
PEA	political economy analysis
PIC	Pharmaceutical Inspection Convention
PIES	provider integration and engagement system
PMDT	programmatic management of drug-resistant TB
PMED	Pharmaceuticals and Medical Equipment Directorate
POPCOM	Commission on Population and Development
PPE	personal protective equipment
PPM	pooled procurement mechanism
PPSSP	*Programme de Promotion de Soins de Santé Primaires*
PQM+	Promoting the Quality of Medicines Plus
PRIMS	Pharmaceutical Regulatory Information System
Pro-EMED	*Processus d'Enregistrement des Médicaments*
PS	Procurement Service
PSCM	Procurement and Supply Chain Management
PSCMT	Procurement and Supply Chain Management Team
PSD	Procurement and Supply Directorate
PSS	pharmaceutical systems strengthening
PSU	pharmaceutical services unit
PSUR	periodic safety update report
Pusjak PDK	Policy Center of Health Financing and Decentralization
PV	pharmacovigilance
PViMS	Pharmacovigilance Monitoring System
PY	program year
QMS	quality management system
RBC	Rwanda Biomedical Center
RCCE	risk communication and community engagement
RDT	rapid diagnostic test
REC	regional economic community
RECO	community health worker
REDISSE	Regional Disease Surveillance Systems Enhancement
RH	reproductive health
RHB	regional health bureau
RHMT	regional health management team
RMP	risk management plan

RMS	Royal Medical Services
RSS	regulatory systems strengthening
RUA	rational use of antimicrobials
RWE	real-world evidence
SADC	Southern African Development Community
SC	steering committee
SCM	supply chain management
SCMP	supply chain management portal
SCMS	Supply Chain Management Service
SDP	service delivery point
SEARN	South-East Asia Regulatory Network
SHA	Systems for Health Accounts
SHD	School Health Directorate
SI	strategic information
SMT	senior management team
SOP	standard operating procedure
SOW	scope of work
SPARS	supervision, performance assessment, and recognition strategy
SSI	surgical site infection
STG	standard treatment guideline
TB	tuberculosis
TLD	dolutegravir-based tenofovir + lamivudine + dolutegravir
TMDA	Tanzania Medicines and Medical Devices Authority
TOE	Table of Organization and Equipment
TOR	terms of reference
TOT	training of trainers
TPT	TB preventive treatment
TS	technical secretariat
TTC	technical thematic committee
TWC	technical working committee
TWG	technical working group
UAT	user acceptance testing
UHC	universal health coverage
UIMS	Upazila Inventory Management System
UNFPA	United Nations Population Fund
UON	University of Nairobi
USAID	US Agency for International Development
VAMOHS	Voluntary Access Mechanism for Originator Health Supplies
VSS	vaccine safety surveillance
VTC	vigilance technical committee
WAAW	World Antimicrobial Awareness Week
WASH	water, sanitation, and hygiene
WB	World Bank
WHO	World Health Organization
WIMS	Warehouse Inventory Management System

1. INTRODUCTION

A. 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 Medicines, Technologies, and Pharmaceutical Services (MTaPS) program (2018–2023) is to provide pharmaceutical system strengthening (PSS) 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.

B. MTAPS' GOAL & OBJECTIVES

The goal of the MTaPS program is to help low- and middle-income countries (LMICs) 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' objectives are to:

1. Strengthen pharmaceutical-sector governance
2. Increase institutional and human resource capacity for pharmaceutical management and services, including regulation of medical products
3. Advance availability and use of pharmaceutical information for decision making and global learning agenda
4. Optimize pharmaceutical-sector financing, including resource allocation and use
5. Improve pharmaceutical services, including product availability and patient-centered care, to achieve health outcomes

C. MTAPS' APPROACH TO STRENGTHENING PHARMACEUTICAL SYSTEMS

USAID awarded the MTaPS program to assist LMICs 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). "Appropriate use" requires that the right medicine selected cost-effectively is given to a patient that is appropriate to his/her clinical condition, in the right dose, for the right duration, and with careful precautions to minimize any adverse events.

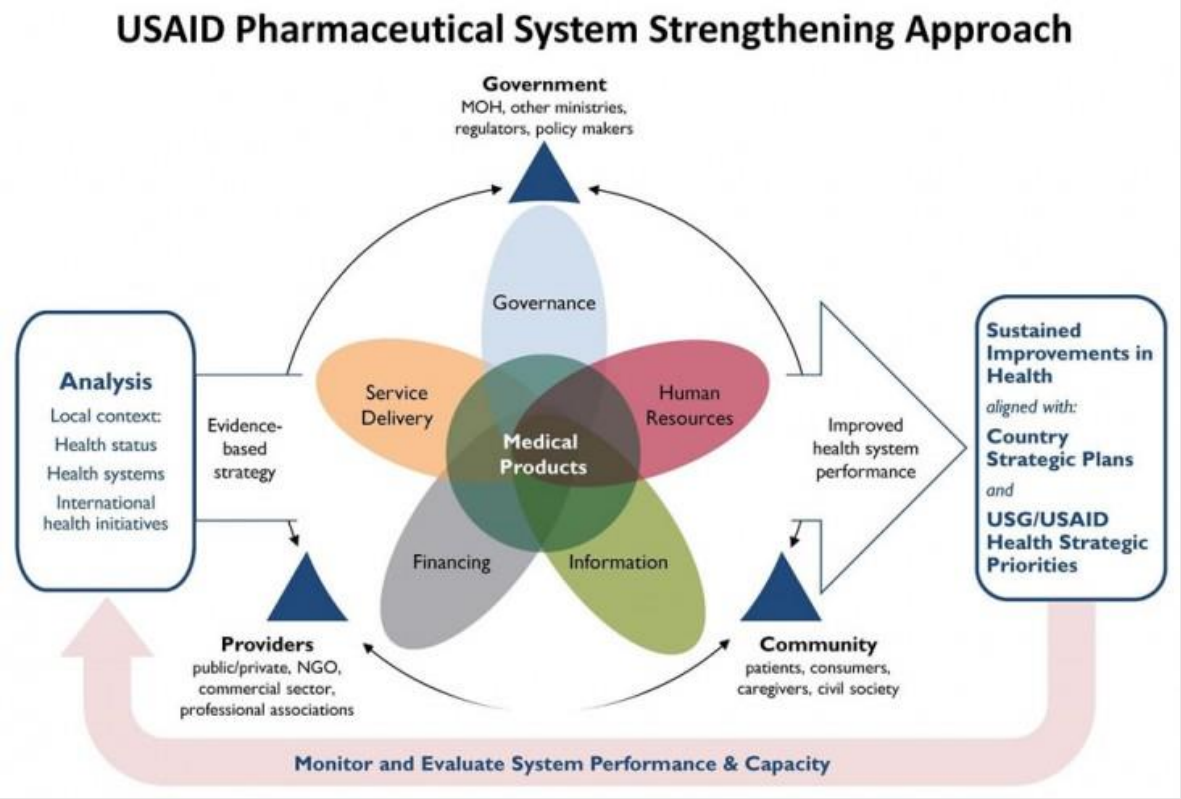


Figure 1. USAID pharmaceutical systems strengthening approach

The program's conceptual approach is based on USAID's Pharmaceutical systems strengthening approach. See Figure 1 above 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.

D. ABOUT THIS PROJECT

This report presents activity progress achievements by portfolio for fiscal year (FY) 2022, quarter 2 (January–March 2022). The report summarizes program performance and key challenges and is organized as follows: Progress by objectives, progress by health area/funding stream, progress by country, progress by regional bureaus, progress in achieving contract deliverables, program spotlights, and monitoring, evaluation, research, and learning.

Implementation of planned activities this quarter continued to be impacted by the Coronavirus Disease 2019 (COVID-19) pandemic. Some activities have been delayed or postponed due to the general slowdown of activities and restrictions on gatherings/movement.

2. PROGRESS BY OBJECTIVES

A. OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

MTaPS Objective 1: Pharmaceutical-sector governance strengthened

- **Sub-Objective 1.1:** Transparency and accountability of country pharmaceutical systems improved
- **Sub-Objective 1.2:** Evidence-based medicines policies, laws, regulations, guidelines, norms, and standards improved and enforced
- **Sub-Objective 1.3:** Stakeholder engagement and empowerment, including civil society and consumers, increased

CUMULATIVE PERFORMANCE TO DATE

Promoting transparency and accountability is a prerequisite for improving access to essential medicines and strengthening health systems to achieve universal health coverage (UHC). Poor governance in pharmaceutical systems can reduce access to pharmaceutical products, inflate medicine prices, and waste scarce health system resources. 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 documents cumulative progress in selected MTaPS program governance activities from the start of the project to demonstrate improvements through the application of MTaPS' systematic approaches.

SUB-OBJECTIVE 1.1: TRANSPARENCY AND ACCOUNTABILITY OF COUNTRY PHARMACEUTICAL SYSTEMS IMPROVED

Philippines (Procurement and Supply Chain Management [PSCM]) - MTaPS conducted a rapid assessment of the PSCM system in the Philippines and supported the Department of Health (DOH) to develop a PSCM strategic plan. MTaPS analyzed the draft UHC implementing rules and regulations and suggested the addition of relevant supply chain-related articles to ensure legal support for supply chain reforms at the central and local government unit levels. MTaPS supported the DOH in designing and developing a PSCM road map for the central, regional, and local government levels to implement the UHC law of the Philippines. MTaPS has been assisting the DOH in developing a PSCM reform plan and institutionalizing a fully functional PSCM governance mechanism with clear roles among different units of the DOH central office, Centers for Health Development, and local government units to ensure uninterrupted access to and appropriate use of health commodities across the country.

Rwanda (Pharmaceutical Systems) - Over the past three years, MTaPS has continued to provide pharmaceutical systems strengthening support to the MOH and its institutions, including the Rwanda Food and Drugs Authority (FDA); the Maternal, Child, and Community Health division; and the Rwanda Biomedical Center. Through support to the Rwanda FDA, the four-year Rwanda FDA Strategic Plan (2021–2024); four regulations; and other pharmaceutical-sector regulatory documents, including guidelines, manuals, and standard operating procedures (SOPs), have been developed. MTaPS also supported an internal audit at the Rwanda FDA as part of implementation of a quality management system based on ISO 9001:2015 requirements in June 2021; a quality manual and corresponding SOPs

were approved by the Authority's board in May 2021. MTaPS has contributed to strengthening five pharmaceutical regulatory enforcement mechanisms: the national regulatory system, vigilance, product registration and marketing authorization, licensing establishments, and regulatory inspection.

SUB-OBJECTIVE 1.2: EVIDENCE-BASED MEDICINES POLICIES, LAWS, REGULATIONS, GUIDELINES, NORMS, AND STANDARDS IMPROVED AND ENFORCED

Based on a detailed gap analysis, the Nepal Drug Act (1978) was revised to bring the Department of Drug Administration's practices in line with World Health Organization (WHO) best practices and with that of a mature regulatory authority. The revised Drug Act version 6 is now in final review for submission through the Ministry of Health and Population for approval along with a concept note advocating for the new law and several companion codes, regulations, and guidelines linked to the revised law. The consultative process and the drafting of the option analysis to revise the existing National Medicines Policy 1995 has started and aims to bring the policy in line with the updated Nepal Drug Act, the Nepal Health Policy (2015), and the Nepal National Health Strategy (2015–2022).

Applying the WHO Global Benchmarking Tool results and institutional development plans in Bangladesh, Mozambique, and Rwanda, MTaPS worked with national regulatory authorities to develop, draft, review, and update regulations, guidelines, and strategic plans to operationalize the regulatory authorities. MTaPS facilitated the development of a business plan for the Rwanda FDA to assist in developing a road map for self-sustainability in the next five years. Other activities include ensuring uniformity and good governance through implementation of SOPs and related documentation for all regulatory activities, setting up a quality management system targeting ISO 9001:2015 certification, and revising and aligning to WHO best practices in the regulation of medical products.

SUB-OBJECTIVE 1.3: STAKEHOLDER ENGAGEMENT AND EMPOWERMENT, INCLUDING CIVIL SOCIETY AND CONSUMER, INCREASE

Democratic Republic of Congo (DRC) - MTaPS provided support in building the capacity of 350 community members to fulfill their role in monitoring and overseeing medicines management, particularly with respect to maternal, newborn, and child health (MNCH); family planning/reproductive health; and TB commodities with a focus on stock management, accountability between the health facility and the community, logistics data collection, and storage conditions.

QUARTER 2 ACHIEVEMENTS & RESULTS

SUB-OBJECTIVE 1.1: TRANSPARENCY AND ACCOUNTABILITY OF COUNTRY PHARMACEUTICAL SYSTEMS IMPROVED

Jordan - MTaPS' continued its work toward procurement modernization culminating in the legislative and policy reform required to accomplish the five points defined by USAID in their Conditions Precedent (CP) with the Government of Jordan (GOJ). (See MTaPS Jordon report for more detail). Three legislative points were modified in the Government Procurement Bylaw and their ratification was announced in the Government of Jordan's national gazette on January 16, 2022. MTaPS also supported The Jordan Food and Drug Administration to modify its registration procedures to accept fast-tracking of WHO-prequalified vaccines, and shared vaccine reference prices with the Government Procurement Department.

SUB-OBJECTIVE 1.2: EVIDENCE-BASED MEDICINES POLICIES, LAWS, REGULATIONS, GUIDELINES, NORMS, AND STANDARDS IMPROVED AND ENFORCED

Nigeria (GHSA) - MTaPS supported the Antimicrobial Resistance Technical Working Group (TWG) Secretariat to develop the national infection prevention and control strategic plan. A consultant was engaged by MTaPS to lead the process of developing the document. Three workshops were organized between November 2021 and February 2022 to present key stakeholders with the opportunity to review and validate the draft plan. The document is in the final stage of review by the Antimicrobial Resistance TWG Secretariat before it is presented to the Director General of the Nigeria Center for Disease control for endorsement and publication.

Uganda (GHSA) - MTaPS disseminated the Essential Veterinary Medicines List and antibiotic use guidelines for the animal health sector across six geographical regions of the country in collaboration with the Ministry of Agriculture, Animal Industries, and Fisheries, district veterinary offices, and the Uganda One Health Platform. During the dissemination, the district veterinary team held discussions on the use and implementation of these guidelines. This contributes to building the country's Joint External Evaluation 2 capacity by bridging the gap between human and animal health.

MTaPS continued to work with the national regulatory authority in **Nepal** to prepare the updated Drug Act version 6 for submission to the council of Ministers for consideration. In addition, the regulations relating to the Code on Sales and Distribution and price regulation were drafted, reviewed, and submitted to the Drug Advisory Committee, the Ministry of Health and Population, and the Department of Drug Administration for consideration.

SUB-OBJECTIVE 1.3: STAKEHOLDER ENGAGEMENT AND EMPOWERMENT, INCLUDING CIVIL SOCIETY AND CONSUMER, INCREASE

Burkina Faso (GHSA) - MTaPS supported the establishment of Drug and Therapeutics Committees (DTCs) in 10 health care facilities, including regional hospitals, teaching hospitals, and district medical centers, with the final DTC established in March 2022 in Koudougou, where MTaPS supported the training of 22 DTC members. The DTC members went on to develop draft antimicrobial stewardship action plans as part of a continuous quality improvement program.

DRC - MTaPS supported the *Division Provinciale de la Sante* (DPS) in conducting four provincial TWG meetings in Nord Kivu and one in Ituri. Participants included representatives from implementing and development partners; the DPS, the TB, malaria, reproductive health, and HIV programs; and civil society. The engagement of communities and civil society groups was designed to increase community engagement in health product management, build communities' capacity, and improve the management of medical products at the health facility and community care site levels. To date, key results include improved participation of community members in co-managing health products in health facilities and improved transparency in managing health commodities.

BEST PRACTICES/LESSONS LEARNED

- Regular meetings with MOH staff at the national and provincial levels are the best platform for discussions and sharing experiences and lead to greater coordination and trust among stakeholders.

- Working in collaboration/cooperation with other implementing partners strengthens the impact of our interventions in the field as well as government ownership.
- Multistakeholder engagement is key to successful program implementation. It is critical to include all key stakeholders and decision makers to improve future pharmaceutical systems strengthening outcomes.
- The use of virtual platforms as an alternative to in-person meetings during COVID-19 restrictions enabled TWGs to continue holding meetings. The success of this experiment has encouraged authorities to initiate the use of virtual support to communicate with provincial teams and health facilities.
- The process of obtaining necessary MOH approval for activities is made easier by collaborating with trusted multilateral organizations such as UNFPA and WHO.

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

MTaPS Objective 2: Institutional and human resource capacity for pharmaceutical management and services increased, including regulation of medical products

- **Sub-Objective 2.1:** Innovative and proven approaches for human resource capacity building institutionalized
- **Sub-Objective 2.2:** Capacity of government to manage pharmaceutical systems strengthened
- **Sub-Objective 2.3:** Capacity of private-sector organizations to support pharmaceutical operations improved
- **Sub-Objective 2.4:** Medicines regulatory capacity strengthened, including through regional regulatory harmonization

CUMULATIVE PERFORMANCE TO DATE

Capacity building of individuals and institutions is a critical aspect of sustainability within the MTaPS program. Sustainable pharmaceutical systems require more than just training. Moving into PY4, MTaPS is taking a sharper focus on capacity building, ensuring that the range of activities the program is involved in produces a lasting legacy in areas such as but not limited to - antimicrobial resistance working groups are self-sustaining, eLearning materials are integrated into the learning system of ministries for ongoing use, and digital solutions are seamlessly embedded into the workflows of pharmaceutical systems. This section documents cumulative progress in selected MTaPS program institutional and human resource capacity building governance activities from the start of the project to demonstrate improvements through the application of MTaPS' pharmaceutical system strengthening approach.

SUB-OBJECTIVE 2.1: INNOVATIVE AND PROVEN APPROACHES FOR HUMAN RESOURCE CAPACITY BUILDING INSTITUTIONALIZED

Tanzania (Global Health Security Agenda [GHSA]) - An infection prevention and control (IPC) benchmarking assessment conducted early in the program identified the need for improved competence around IPC for health workers in Tanzania. In response MTaPS has applied a systematic approach where eLearning modules were developed and integrated into the Ministry of Health (MOH) system. This was achieved through a combination of actions, including training MOH trainers to establish a pool, training focal point to oversee the modules, uploading eLearning material to MOH learning management system, and registering the IPC modules for continuing professional development points to drive learning.

Indonesia (Health Technology Assessment [HTA]) - In December 2021, MTaPS carried out mapping activities for HTA topic selection and performance evaluation tracking. In 2022, a capacity building plan for the MOH to support the process of selecting HTA topics and performance evaluation tracking was prepared and is ready to be implemented. This plan seeks to use supported workplace learning to guide participants in developing HTA competencies that are immediately applicable to the work context.

Rwanda (Regulation) - In addressing an identified human resources capacity gap, MTaPS has supported training in pharmaceutical management of 667 Rwanda Food and Drug Authority (FDA) staff and other

health care providers on medicines evaluation and registration, Good Manufacturing Practices, Good Review Practices, Good Reliance Practices, pharmacovigilance (PV), the quality management system (QMS), and other topics. As part of long-term sustainability of capacity building, MTaPS provided technical support to develop eLearning courses in medicines evaluation, registration, and PV that are hosted on the Rwanda FDA server.

SUB-OBJECTIVE 2.2: CAPACITY OF GOVERNMENT TO MANAGE PHARMACEUTICAL SYSTEMS STRENGTHENED

Kenya (GHSA) - Through its year 1, 2, and 3 work plans, MTaPS helped country counterparts in Kenya improve the Joint External Evaluation (JEE) score by supporting 50% (31/62) of the World Health Organization (WHO) Benchmark actions for International Health Regulations capacities. To improve the JEE score for multisectoral coordination, MTaPS supported 75% (3/4) of capacity level 2, 50% (2/4) of level 3, 100% (4/4) of level 4, and 20% (1/5) of level 5 actions. MTaPS is supporting these activities at the national and subnational/county levels in its focus counties. In improving JEE scores for antimicrobial stewardship (AMS), MTaPS supported 75% (3/4) of capacity level 2, 67% (4/6) of level 3, 14% (1/7) of level 4, and 14% (1/7) of level 5 actions. MTaPS AMS interventions in Kenya mainly focused on strengthening AMS governance structures at the national level and in focus counties and facilities; review of the Kenya Essential Medicines List to incorporate the Access, Watch, and Reserve (AWaRe) classification of antibiotics; development and dissemination of the national AMS guidelines; development and dissemination of regulatory guidance to health care workers and the general public on optimal use of antimicrobials; development and implementation of the AMS curricula at pre-service and in-service levels; training of health care workers on AMS; and monitoring implementation of AMS activities using a continuous quality improvement approach in focus counties and health facilities.

Mozambique (GHSA) - In the baseline JEE in 2016, Mozambique scored 1 (no capacity) in AMS (P.3.4). In PY3, MTaPS supported two of four (50%) benchmark actions for capacity level 2. In preparation for hospital AMS activities, MTaPS identified staff from seven priority health facilities who were trained on AMS in February 2020. Given the COVID-19 pandemic, instead of in-person visits, MTaPS facilitated virtual visits targeting five of the seven hospitals. Although the five hospitals had established AMS committees with terms of reference, only three were functional as the other health facilities focused on addressing the COVID-19 case burden. Analysis of antibiotic consumption data for a one-year period from Xai-Xai Hospital showed that there was increased use of selected antibiotics, namely azithromycin and ceftriaxone, tied to the management of COVID-19 patients. The latter findings are expected to contribute to the design of stewardship interventions.

SUB-OBJECTIVE 2.3: CAPACITY OF PRIVATE-SECTOR ORGANIZATIONS TO SUPPORT PHARMACEUTICAL OPERATIONS IMPROVED

Nepal - Following the Good Pharmacy Practices (GPP) assessment in private- and public-sector facilities with only 16% (5/31) of facilities passing critical measures in the GPP assessment, it was evident that a strong and well-documented strategy to strengthen medicines management and GPP implementation in government health facilities in Nepal was needed to safeguard the government investment in making essential medicines free of charge; implementing the national health insurance scheme; and improving supply chain management, dispensing, and prescribing. As an initiative to help achieving these objectives, the multipronged supervision, performance assessment, and recognition strategy (SPARS) was

successfully implemented in Uganda. Based on the Uganda experience, SPARS was customized to the Nepal context and a SPARS concept note was developed for the Ministry of Health and Population to initiate the implementation of the SPARS pilot study in 12 districts.

SUB-OBJECTIVE 2.4: MEDICINES REGULATORY CAPACITY STRENGTHENED, INCLUDING THROUGH REGIONAL REGULATORY HARMONIZATION

Institutional capacity building in regulatory systems is essential for sustainable access to and appropriate use of safe, effective, quality-assured, and affordable essential medical products and pharmaceutical services that contribute to better health care delivery systems. To strengthen regulatory systems in countries of interest, MTaPS performed assessments and reviewed previous assessments to determine the level of maturity of the regulatory system in five countries and develop institutional development plans to address the gaps identified. MTaPS worked with national regulatory authorities (NRAs) in Bangladesh, Mozambique, Nepal, and the Philippines to implement QMS for efficient delivery of regulatory services and streamline and improve registration systems through capacity building by imparting principles of Good Review Practices and use of electronic information management systems. MTaPS worked with several continental and regional organizations (e.g., Association of Southeast Asian Nations, South-East Asia Regulatory Network) to support convergence and harmonization of medical product regulation in PV, regulatory inspections, and regulatory information management systems. MTaPS offered technical assistance to validate and use the regional centers of regulatory excellence monitoring and evaluation tool to measure the performance of 11 designated centers and provide baseline information on the status of the institutions and organizations providing capacity development in medicine regulation.

QUARTER 2 ACHIEVEMENTS & RESULTS

SUB-OBJECTIVE 2.1: INNOVATIVE AND PROVEN APPROACHES FOR HUMAN RESOURCE CAPACITY BUILDING INSTITUTIONALIZED

Bangladesh (GHSA) - The standard treatment guideline (STG) on common infectious disease was approved by the National Technical Committee, and capacity building was initiated by conducting a training of trainers (TOT) on the STG and its accompanying app. A total of 420 doctors (60 female, 360 male) from district and subdistrict-level health facilities received TOT to prepare for training their technical staff through a cascade approach. The STG provides a tool for doctors to ensure appropriate STG for use of antibiotics.

Mozambique (GHSA) - During this quarter, MTaPS and the National Directorate of Medical Services implemented three TOT workshops to build the capacity of provincial health authorities to deliver IPC training to health facilities that have never been trained on IPC or that need refresher training. In all, 44 provincial health professionals (23 male, 21 female) were trained as trainers on general and COVID-19-related IPC standards to strengthen the capacity of provincial IPC teams. During the training, each provincial team was coached to develop a plan to cascade the training to health facilities.

Philippines (Pharmaceutical Systems Strengthening) - On March 15, the Health Policy Development and Planning Bureau presented the MTaPS Change Management eLearning course initiative to the undersecretary of the Health Policy and Systems Development Team and received formal approval; the undersecretary recommended harmonizing and integrating this initiative with the umbrella organizational

development activities led by the Health Human Resources Development Bureau. This course aims to support the Department of Health and local government units to effectively manage change because of the recent reforms in the Philippines pharmaceutical system and the implementation of universal health coverage.

Uganda (GHSA) - To demonstrate capacity built in the MTaPS-supported health facilities to the level of centers of excellence, MTaPS conducted a benchmark learning activity providing logistical and technical support to 34 health workers from six health facilities to visit another MTaPS-supported health facility for peer-to-peer learning. The hospital used for the benchmark visit has demonstrated advancement in AMS and IPC through MTaPS support with high overall scores on hand hygiene compliance and use of antibiotics according to the WHO AWaRe categorization, with more than 78% of antibiotics used in this hospital from the Access category. This activity builds local capacity and ownership for IPC training and education and contributes toward sustained capacity (level 4) in WHO Benchmark 3.3.

SUB-OBJECTIVE 2.2: CAPACITY OF GOVERNMENT TO MANAGE PHARMACEUTICAL SYSTEMS STRENGTHENED

Cameroon - Activity 3.5.1: Carry out onsite supportive supervision of DTCs in all 12 MTaPS-supported health facilities

In March, MTaPS supported the Department of Pharmacy, Medicine, and the Laboratory (DPML) of the Ministry of Public Health to carry out onsite supportive supervision of Drug and Therapeutic Committees (DTCs) in all 12 MTaPS-supported health facilities. The aim of this supervision was to assess the functionality of the DTCs using the WHO checklist of essential health care facility core elements for AMS programs in low- and middle-income countries, assess the level of implementation of DTC activities in the facility action plans with a focus on AMS interventions, and identify implementation challenges and discuss viable solutions to address them. A team of three supervisors from the DPML, Regional Delegation of Public Health, and MTaPS carried out the supervision. The facility DTC champion worked with the supervisors to involve all relevant staff in the supervision exercise.

Mali - MTaPS supported the Directorate of Pharmacy and Medicine (DPM) in December 2021 to conduct a three-day training to build the capacity of the DPM's data entry team to use the *Programme d'Enregistrement des Médicaments* (Pro-EMED) software. Pro-EMED is used by the DPM to register medications. Pharmaceutical management systems that are interoperable link patients and products effectively. MTaPS supported the DPM to begin entering a backlog of nearly 5,000 files that had been on hold since 2019 into the Pro-EMED database. To date, the data entry team previously trained on Pro-EMED with support from MTaPS has entered data from 3,379 (68%) files into Pro-EMED. This update of the Pro-EMED database will allow the DPM to efficiently process and store all medical product registration applications received, approved, rejected, suspended, and/or withdrawn from the market with the appropriate and required documentation.

Rwanda - MTaPS supported the Rwanda FDA in a medicines dossier assessment retreat that reduced the backlog of pending medicine dossier applications to improve access to quality, safe, and efficacious medicines on the Rwandan market. MTaPS is providing technical assistance to replace the existing electronic regulatory information management system, the Pharmaceutical Regulatory Information Management System, with the new Integrated Regulatory Information Management System (IRIMS) to

increase the efficiency of the Rwanda FDA's regulatory functions, such as effective online registration of medicines. The IRIMS test system was deployed on the local Rwanda FDA server, and 35 staff from the Rwanda FDA Information Communication and Technology team and internal unit leads have been trained on the system. The developed Medicines and Therapeutics Committee manual has been formally approved and signed by the minister of health and is now ready to be disseminated and implemented.

SUB-OBJECTIVE 2.3: CAPACITY OF PRIVATE-SECTOR ORGANIZATIONS TO SUPPORT PHARMACEUTICAL OPERATIONS IMPROVED

Nepal - The GPP guidelines for public- and private-sector pharmacies were submitted to the Drug Advisory Committee for finalization, and a strategy to implement GPP in the public and private sectors is being developed.

Maternal, Newborn, and Child Health (MNCH) - In March, MTaPS and the Southern African Development Community (SADC) held a knowledge exchange forum of two half-day sessions with regulators from 12 of the 16 SADC member states on optimization and prioritization of MNCH medical products registration. The sessions drew on the MTaPS registration mapping and on current data on registration in SADC member states and included a panel with invited manufacturers. Challenges in registration of MNCH medicines and opportunities to streamline registration for the benefit of MNCH medicines through recognition and reliance were discussed, and pragmatic solutions were proposed by both regulators and manufacturers.

SUB-OBJECTIVE 2.4: MEDICINES REGULATORY CAPACITY STRENGTHENED, INCLUDING THROUGH REGIONAL REGULATORY HARMONIZATION

With the goal of raising the maturity level of supported countries, MTaPS continued to work with NRAs in Bangladesh, Mali, Mozambique, Nepal, Rwanda, Tanzania, and the Philippines to address WHO Global Benchmarking Tool (GBT) indicators that were not implemented. MTaPS worked with the Rwanda FDA and Nepal's Department of Drug Administration to develop QMS documentation to fulfill the requirements in the 14 GBT sub-indicators and prepare for quality audits. MTaPS facilitated product dossier evaluation retreats in DRC, Rwanda, and Tanzania to reduce the backlog of pending applications for marketing authorization. The exercise enables expedited access to quality-assured medicines and promotes knowledge transfer between experts and assessors.

To promote the harmonization of medical products regulation, MTaPS engaged local pharmaceutical industry stakeholders in the East African Community and Intergovernmental Authority on Development to sustain regulatory compliance through a workshop in March 2022. A compliance group was developed to serve as a technical exchange network/platform for exchanging best practices, lessons learned, collaborative actions to advocate for a balanced regulatory environment, capacity building on regulatory issues and PV, and technical skill improvement.

MTaPS collected data on regulatory competencies and gaps in Bangladesh, Nepal, Vietnam, and the Philippines by utilizing the WHO global competency framework and implementation tool.

BEST PRACTICES/LESSONS LEARNED

- Training is not enough; mentoring and field supervision is essential for effective functioning of health facilities and their DTCs.
- To build sustainable capacity through its programs, MTaPS supported the implementation of the pre-service AMS curriculum at the University of Nairobi, School of Pharmacy. This activity ensures that human resource competence in AMS practices is enhanced, which will improve AMS practices. This and other activities promote, and support gender equity and inclusiveness as evidenced by the increasing rate of female participation in medical education and training activities. This activity highlights the critical role of incorporating comprehensive and actionable diversity, equity, and inclusion (DEI) elements into MTaPS programs to ensure optimal representation and participation at both implementor and participant levels.
- Using globally recognized tools for measuring the functionality of NRAs (e.g., WHO GBT, WHO global competency framework) produces meaningful results and aims to meet the needs for a stable regulatory system in countries.
- Working to raise the maturity level of an NRA from 1 to 3 takes a considerable time—from five to seven years depending on commitment from NRA leadership and availability of financial and human resources.
- Implementing a QMS in an NRA could be achieved in a phased manner to implement and meet the WHO sub-indicators in the short term and work toward achieving ISO 9001:2015 certification in the medium term.
- Having an international consultant paired with an experienced and well-known local consultant facilitates access to stakeholders and the Ministry of Health and Population and streamlines the introduction of international best practices.
- A solid technical partnership between the MTaPS home office and country teams can accelerate interventions. There is a renewed richness of ideas brought by the two teams that can lead to a more concrete and specific plan of action for capacity building.

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

CUMULATIVE PERFORMANCE TO DATE

MTaPS **Bangladesh** performed enhancements to the electronic Logistics Management Information System (eLMIS), Warehouse Inventory Management System (WIMS), and Upazila Inventory Management System (UIMS) for the Directorate General of Family Planning (DGFP). Following MTaPS' recommendations, the DGFP allocated adequate funds in its operation plans for maintaining and managing these systems toward sustainability. MTaPS provided technical assistance to the DGFP throughout the project to review and manage the stock status of reproductive health and family planning commodities at distinct levels of the supply chain, resulting in maintaining a stock-out rate at service delivery points below 1% during the last few years. The DGFP also saved USD 9.6 million by reducing unnecessary procurement of family planning injectable commodities by 20 million units during FY 2021–22. These results were achieved through the utilization of data generated from the MTaPS-developed DGFP eLMIS.

MTaPS **Bangladesh** introduced the electronic asset management system in all 62 district hospitals across the country. Approximately 50% of the hospitals completed the data entry of assets into the system, which allowed near real-time tracking of assets and timely maintenance and contributed to effective procurement.

MTaPS **Bangladesh** successfully established e-TB Manager as the digital platform to capture and manage individual TB patient information, enabling the National Tuberculosis Control Program (NTP) to maintain proper and accurate recording and reporting of quality TB data. The system has been rolled out nationally to all 868 sites.

The NTP in **Bangladesh** has moved to paperless reporting of TB data using e-TB Manager for selected divisions and plans to expand nationwide in a phased manner. This has reduced the workload of end users and made the data available in real time, allowing for prompt monitoring and management actions.

The e-TB manager is interoperable with the Janao App in **Bangladesh** to capture information about TB patients treated at private centers, thereby increasing the network and data visibility. The system server has been transferred to the management information system (MIS) of the Directorate General of Health Services (DGHS) and is managed by local developers. The system has been enhanced for electronic reporting of active TB drug safety monitoring and management in all 10 drug-resistance TB sites, which allows prompt data analysis and actions by the Directorate General of Drug Administration.

In **Nepal**, a new regulatory management information system, **Pharmadex**, is in the process of being customized to increase efficiency and data use at the Department of Drug Administration (DDA). The pharmacy registration module is ready for user acceptance testing and implementation, while the wholesaler, manufacturer, and product registration modules are being customized. The Pharmadex registration module, developed in line with World Health Organization (WHO) best practices, will improve DDA registration functions toward best dossier review and is linked to available DDA resources. The Pharmadex registration module will include registration of medical devices and health

technology products, which is important to set up their regulation. A situation analysis was conducted, and a strategy for the new regulatory requirement for medical devices and health technology products was drafted for discussion with the DDA. MTaPS **Mozambique** and the National Directorate of Pharmacy/*Autoridade Nacional Reguladora de Medicamentos de Moçambique* achieved key agreements to implement the online version of Pharmadex and are working to enhance it to follow the Common Technical Document format for evaluation of marketing authorization dossiers in the product registration process. The Common Technical Document format functionality in Pharmadex is being finalized for the review of product dossiers in alignment with Directorate of Pharmacy requirements. The import module was also finalized and installed on the Amazon web server. These functionalities for the import and registration modules will contribute to improved customer service, reduce time needed to register a medicine, and reduce the backlog of dossiers at the Directorate of Pharmacy.

MTaPS **Rwanda** supported the Rwanda Food and Drug Administration (FDA) to adapt the electronic Pharmacovigilance Monitoring System (**PViMS**) for spontaneous reporting of adverse drug events, including COVID-19 vaccine adverse events following immunization, and subsequently for active safety monitoring of dolutegravir-based antiretroviral therapy regimens. From June 2021 to January 2022, 568 adverse events following immunization, 186 of which were serious adverse drug events, were reported to the Rwanda FDA, which reported them to WHO. The use of PViMS will ensure that medicine safety monitoring reports are quickly received and analyzed by the Authority, which can then provide feedback to clients, patients, and health facilities in a timely manner. MTaPS **Philippines** supported the Department of Health (DOH) Pharmacy Department (PD) to present and align with DOH active drug safety monitoring stakeholders such as the NTP, Lung Center of the Philippines (LCP) training team, Philippine Business for Social Progress-Global Fund, and USAID TB. **PViMS** training rolled out to 198 programmatic management of drug-resistant TB facilities in January 2022 to ensure patient safety related to drug-resistant TB treatment. MTaPS **Philippines** also supported the Pharmaceutical Department (PD) to meet with Knowledge Management and Information Technology Service and the NTP to align and discuss different scenarios relevant to the interoperability between PViMS and the Integrated Tuberculosis Information System. MTaPS, the PD, and the NTP trained more than 750 participants from 201 programmatic management of drug-resistant TB (PMDT) facilities on the use of PViMS and issued 70 user accounts.

MTaPS **Philippines** selected the vendor for a commercial off the-shelf **eLMIS** solution (Entuition Vesta of Bileeta Pvt. Ltd.) and kicked off implementation of the eLMIS by conducting a co-development workshop September 30–October 1, 2021, with the DOH, MTaPS, Bileeta, and development partners. Sixty participants attended the workshop and discussed the features of the **eLMIS** solution and implementation approach. A workshop with DOH and eLMIS stakeholders was held in November 2021 to validate the eLMIS requirements and confirm the system requirement specifications document. Phase 1 of implementation will roll out the eLMIS to 171 sites and is targeted for May–June 2022.

QUARTER 2 ACHIEVEMENTS & RESULTS

SUB-OBJECTIVE 3.1: INTEROPERABILITY OF PHARMACEUTICAL MANAGEMENT INFORMATION SYSTEMS THAT LINK PATIENTS AND PRODUCTS

MTaPS **Bangladesh** facilitated training on the use of e-TB Manager organized by the NTP for 71 (17 female, 54 male) newly recruited District Surveillance Medical Officers for all 64 districts to strengthen

the peripheral supervision and monitoring of the NTP. The Officers will be working as the NTP's district representatives to supervise and monitor TB activities in their assigned districts.

Final customization of the **Pharmadex** pharmacy registration module in **Nepal** continued to incorporate DDA requests following a demonstration of the system and the preliminary user acceptance testing. The final user acceptance testing is scheduled for April in preparation for the launch of the module. Customizations of the remaining registration modules for wholesaler, manufacturer, and product registration are in progress.

MTaPS **Rwanda** is providing technical assistance to replace the existing electronic regulatory information management system, the Pharmaceutical Regulatory Information Management System, with the new Integrated Regulatory Information Management System (IRIMS) to increase the efficiency of the Rwanda FDA's regulatory functions, such as effective online registration of medicines. The IRIMS test system was deployed on the local Rwanda FDA server, and 35 staff from the Rwanda FDA Information Communication and Technology team and internal unit leads have been trained on management and administration of the system.

SUB-OBJECTIVE 3.2: INFORMATION ON PHARMACEUTICAL SYSTEMS AVAILABLE AND USED

In **Bangladesh**, the Central Medical Store Depot approved MTaPS to work on the comprehensive eLMIS through customization of the COVID-19 eLMIS to capture all DGHS commodities based on discussions and demonstration of the system by MTaPS. This engagement will contribute to better inventory management for all products at the Central Medical Store Depot.

A **Nepalese** government-required security audit of Pharmadex, which is mandatory for its use by the DDA, was initiated by the Department of Information Technology. In addition, a helpdesk was established. Finally, a plan to train DDA staff was prepared, including the development of an eLearning course.

The **Philippines** DOH PD released a department memo (DM 2022-0087: Reporting of Adverse Event in PViMS) to further guide PMDT health facilities on the use of **PViMS**. To institutionalize the training of PMDT staff on the use of PViMS, the LCP, which is the training arm of the NTP, incorporated PViMS into its PMDT training curriculum for newly hired staff. On March 7, MTaPS and the PD participated in a supplementary training on PViMS for 13 PMDT staff (4 male, 9 female) hosted by the LCP training team. To date, staff from 198 of 199 PMDT facilities have been trained on PViMS. MTaPS is working with the DOH and LCP to schedule training for staff at the last health facility.

MTaPS **Philippines** has been working with the FDA to improve the product registration system by supporting the adaptation of a reliance pathway and the possible use of information technology for streamlining and automating the product registration process. MTaPS organized a demonstration of **Pharmadex**, which has been used in several countries to streamline the MIS for product registration and can assist the FDA in planning for increasing efficiency of the current product registration system.

SUB-OBJECTIVE 3.3: PHARMACEUTICAL SYSTEMS STRENGTHENING RESEARCH AND GLOBAL LEARNING AGENDA ADVANCED

Please refer to Cross Bureau Activity 2 for a full description of progress on this activity.

BEST PRACTICES/LESSONS LEARNED

- MTaPS **Bangladesh** learned that development and implementation of a pool of master trainers and troubleshooters is critical to the long-term uptake and sustainability of locally managed programs.
- MTaPS **Bangladesh** found that once local capacity was built into the operational component of the program, the team was able to transfer the software to MIS of the DGHS, allowing for e-TB Manager management by a team of in-country experts.
- MTaPS **Rwanda** supported the Ministry of Health to use an online survey tool to assess the functionality of Drug and Therapeutics Committees in health facilities in 2021 and learnt from this activity that reliable and consistent internet network connectivity and users' experience in using online survey tools are required elements of any online survey program.

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

MTaPS Objective 4: Pharmaceutical-sector financing, including resource allocation and use, optimized

- **Sub-Objective 4.1:** Financial barriers to access to medicines reduced
- **Sub-Objective 4.2:** Evidence-based medicines strategies and pharmacy benefits programs developed and implemented
- **Sub-Objective 4.3:** Efficacy of pharmaceutical resource allocation and use increased
- **Sub-Objective 4.4:** Mobilization of additional and sustainable resources increased

OVERVIEW

Improving pharmaceutical-sector financing is essential to ensuring universal access to pharmaceutical products and services. In many low- and middle-income countries (LMICs), pharmaceuticals are primarily financed through direct out-of-pocket payments by individuals and households, but this source of financing is both inefficient and inequitable. At the same time, a sizable level of health expenditures in LMICs is estimated to be wasted in the form of expiries; poor financial management; misaligned provider incentives; inefficient medicine selection; and outdated procurement, pricing, reimbursement, and distribution practices.[1,2] MTaPS supports countries to achieve local health system financing objectives and the global Sustainable Development Goal of improving access to essential medicines and health technologies by focusing on strategies that align pharmaceutical-financing strategies with overall health system objectives; strengthen country systems for efficient pharmaceutical resource allocation and use; improve the availability and use of evidence-based medicines;[3] adopt viable approaches to reduce financial barriers to access to medicine; strengthen in-country capacity to mobilize additional resources;[4] and develop cost-effective pharmacy benefits programs.

CUMULATIVE PERFORMANCE TO DATE

Ensuring the availability and use of financial resources is a key requirement for enhancing access to essential medicines and strengthening health systems to achieve universal health coverage. Poor allocation and sub-optimal use of existing resources, coupled with high financial barriers, can reduce access to medical products and diagnostics within health systems. Implementing effective financing strategies plays a key role in minimizing the incidence of stock-outs and reducing the inefficient use of system resources. This section presents cumulative performance progress in selected MTaPS financing activities from the start of the project for **Burkina Faso, Indonesia, Philippines, Jordan, Asia Bureau, and Cross Bureau**. MTaPS finalized the **Burkina Faso** pharmaceutical expenditure tracking exercise by submitting a pharmaceutical expenditure policy brief in PY4. In PY2 and 3, after adapting the System for Health Accounts (SHA) 2011 framework to conduct an exploratory pharmaceutical expenditure tracking exercise in Burkina Faso using 2018 data, MTaPS developed a new guideline and

[1] WHO Africa Health Expenditure Atlas 2014. Available at: https://apps.who.int/iris/bitstream/handle/10665/145197/9789290232735.pdf?sequence=1&isAllowed=y WHO
[2] Management Sciences for Health. 2012. MDS-3: Managing Access to Medicines and Health Technologies. Arlington, VA: Management Sciences for Health
[3] Wirtz VJ, Hogerzeil HV, Gray AL, Bigdeli M, De Joncheere CP, Ewen MA, Möller H. (2017). Essential medicines for universal health coverage. The Lancet, 389(10067), 403-476. World Health Organization.
[4] https://www.usaid.gov/global-health/health-areas/hiv-and-aids/technical-areas/sustainable-financing-initiative

global resource on pharmaceutical expenditure tracking that will enable countries to capture population-per-capita pharmaceutical expenditures per disease or drug therapeutic class more accurately. The resource complements the SHA 2011 manual and provides global guidance on tracking pharmaceutical expenditures with more accuracy and detail. This unique resource also recommends an approach that entails the use of both top down, more detailed data collection from national drug authorities and national importation data sources and a bottom-up approach using subnational sources to obtain pharmaceutical expenditure data. MTaPS completed a similar pharmaceutical expenditure tracking exercise in Benin.

To support increased use of evidence-based medicines strategies and pharmacy benefits programs, in PY2 the **MTaPS Asia Bureau** developed a policy and guideline document entitled *Practical Guide for Systematic Priority Setting and HTA Introduction in LMICs* that provides a stepwise approach for Health Technology Assessment (HTA) implementation. In October 2020, MTaPS hosted a webinar with more than 300 attendees to launch the road map. The recording has been viewed more than 18,000 times, and the road map has been downloaded more than 350 times. MTaPS published a systematic literature review and a reference article for HTAs in the *Journal of Technology Assessment and Health Care*. In PY3, to further build the evidence base for defining and costing pharmaceutical benefits packages to inform pharmaceutical policymaking, the **MTaPS Asia Bureau** completed two reports on costing pharmaceutical benefits. The first included a review of existing tools and identified the One Health Tool (OHT) as the most suitable to conduct pharmaceutical benefits package costing. The second provided tailored guidance for country stakeholders to use the OHT for pharmaceutical benefits package costing. MTaPS also developed a report reviewing a range of pharmaceutical pricing policies in Asia that can be leveraged to increase affordability and access to pharmaceuticals. MTaPS developed and delivered two training courses for countries in the Asia region on how to use the OHT to cost pharmaceutical benefits packages. The **MTaPS Asia Bureau** also published a blog in PY3 highlighting costing pharmaceutical benefits packages to help policymakers set priorities and understand how much public and private payers will spend on medical products under a variety of scenarios.

MTaPS Indonesia showed significant cumulative progress in pharmaceutical expenditure tracking and in strengthening HTA capability through support to the Health Account unit and the Indonesia Health Technology Assessment Committee. In addition to this progress, **MTaPS Bangladesh**, building on the objectives of the country's 20-year health care financing strategy, worked with the Ministry of Health and Family Welfare and other stakeholders to examine options for supporting implementation of the pharmaceutical-related components of the strategy, including expenditure tracking.

MTaPS Philippines supported the Department of Health, local government units, and Philippine Pharmaceutical Procurement Inc. in introducing Framework Agreements and pooled procurement mechanisms for increased efficiency in procurement and availability of health commodities. MTaPS supported the Department of Health to design and pilot a strategic procurement mechanism with demand aggregation, price negotiation, and Framework Agreements to ensure availability and economy of quality-assured health commodities. Finally, **MTaPS** successfully conducted a capacity-building course on financing pharmaceutical and medical products targeted at USAID staff globally.

QUARTER 2 ACHIEVEMENTS & RESULTS

SUB-OBJECTIVE 4.2: EVIDENCE-BASED MEDICINES STRATEGIES AND PHARMACY BENEFITS PROGRAMS DEVELOPED AND IMPLEMENTED

During this quarter, **MTaPS Indonesia** commenced a sequence of activities linked to documenting recommendations to improve the HTA topic selection process in Indonesia. As deliverables of these activities, a report documenting the literature review, stakeholder engagement, and observations on collaboration on topic selection process (guidance) and a draft report documenting recommendations and potential interventions to strengthen HTA topic selection processes, use, uptake, and impact will be submitted in May 2022. MTaPS has also revised the initial scope of the work plan for the remainder of PY1 and PY2 to better align with the Indonesian Ministry of Health's (MOH) expectations and objectives. In addition, the HTAsiaLink conference digest report, which was developed with funding from the **MTaPS Asia Bureau**, has been submitted to and received with high appreciation from the HTAsiaLink board for its quality. It is currently undergoing final editorial review and formatting and will be printed and distributed in May 2022.

SUB-OBJECTIVE 4.3: EFFICACY OF PHARMACEUTICAL RESOURCE ALLOCATION AND USE INCREASED

During this quarter, MTaPS finalized the Burkina Faso pharmaceutical expenditure tracking exercise as part of the Cross Bureau work and shared a pharmaceutical expenditure policy brief with USAID. For pharmaceutical expenditure tracking to increase understanding of pharmaceutical resource allocation and use, **MTaPS Indonesia** completed all deliverables planned for December 2021. During this quarter, the scope of the work plan was changed to realign with recent changes in the objectives and timeline of the MOH for the national health accounting process. In addition, the deliverables for quarter 2 were changed from a focus on one selected district to the implementation of the pharmaceutical expenditure tracking exercise at the national level to enable an effective contribution to the national 2021 NHA report being prepared this year.

From the mapping of the sources of pharmaceutical expenditure data in collaboration with local health accounts experts, MTaPS will adapt the global guidelines to fit the Indonesian context. The team will identify key variables to include in the dataset (e.g., drug molecules, therapeutic class, total spending, final consumption costs, source of funding) and develop any data compilation tools/templates needed. As a last step, MTaPS will facilitate virtual/in-person training for the Health Account team and consultants to ensure that they have the skills to facilitate the pharmaceutical expenditure tracking process.

SUB-OBJECTIVE 4.4: MOBILIZATION OF ADDITIONAL AND SUSTAINABLE RESOURCES INCREASED

During this quarter, MTaPS Jordan, in coordination with MTaPS partner Results for Development, began technical work on a comprehensive assessment report and recommendations for potential sustainable vaccine funding mechanisms for the MOH and Government of Jordan. To ensure optimal evaluation of the local context and applicability of recommendations, a local legal consultant will work closely with MTaPS. A contract for the local consultant was signed in quarter 2 after a competitive hiring process.

BEST PRACTICES/LESSONS LEARNED

Based on experience in Burkina Faso, Benin, and Indonesia, we learned that even though adapting the SHA approach for pharmaceutical expenditure tracking is an acceptable approach for many countries, countries need capacity building in identifying sources of pharmaceutical expenditure data. In addition, for many countries, training personnel to understand how to access these data remains a critical need and success factor. The global guidance and resource for pharmaceutical expenditure tracking developed by MTaPS will go a long way toward addressing these country-level capacity gaps and to help increase the accuracy and details required to effectively track pharmaceutical expenditures within health systems. To build sustainable capacity through its programs, MTaPS utilized hands-on practice. This approach builds the capacity of Health Account and HTA teams with countries as shown in Indonesia, Benin, and Burkina Faso. The use of multicriteria decision analysis (MCDA) to support health care and pharmaceutical-sector decision making is also increasingly becoming a need in many countries. Approaches for institutionalizing MCDA in countries such as in Indonesia are in discussion and its acceptance is still limited. The MTaPS approach with the use of national and international experts is expected to help increase MCDA use and acceptability.

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

SUB-OBJECTIVE 5.1: AVAILABILITY OF ESSENTIAL MEDICINES AND OTHER HEALTH TECHNOLOGIES IMPROVED

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

CUMULATIVE PERFORMANCE TO DATE

Supply chain policies and strategies provide clear goals and objectives and guide focused interventions to ensure continuous availability of medicines. In PY1, MTaPS **Philippines** helped with the development of a three-year National Procurement and Supply Chain Management (PSCM) Strategy (2019–2022); in **Bangladesh**, in collaboration with the Ministry of Health and Family Welfare (MOHFW), MTaPS facilitated the development of a strategic plan for coordinated procurement of health commodities. In PY3, with strong leadership from local counterparts, MTaPS **Jordan** supported the government in advancing efficient vaccine procurement through policy and legal reforms to create a conducive environment to further institutionalize procurement best practices. The reform will facilitate market entry, increase competitiveness, and enhance vaccine availability to strengthening the country's immunization programs and safeguard the health of its population.

In PY2, MTaPS **Philippines** helped the PSCMT incorporate supply chain-related articles into the universal health coverage (UHC) implementing rules and regulations to provide legal and policy support for supply chain reforms, future funding, and sustainability at the central and local government unit (LGU) levels. MTaPS **Philippines** also facilitated the design of a PSCM road map to support UHC implementation. In **Bangladesh**, MTaPS helped standardize and roll out inventory management tools so that all health facilities under the Director General of Health Services are recording and reporting stock data uniformly. In the **Philippines**, MTaPS helped complete the warehouse operation manual, which is being used as a standard operating procedure (SOP) at central and regional warehouses.

QUARTER 2 ACHIEVEMENTS & RESULTS

During this quarter, MTaPS **Jordan's** support for vaccines procurement modernization resulted in key legislative and policy reforms published in the Government's National Gazette on January 16, 2022. MTaPS **Philippines** has been supporting the Department of Health (DOH) in developing a PSCM road map for UHC implementation. This quarter, through MTaPS' support, the UHC integration technical working group (TWG) was formed to facilitate PSCM road map implementation. Meetings with TWG members will be held to prioritize key activities and ask for feedback on PSCM reforms, including proposed stakeholder roles and responsibilities. MTaPS will keep supporting the TWG to institutionalize a fully functional PSCM governance mechanism.

In **Bangladesh**, vetting and approving of procurement documents is a common challenge and delays procurement processes. To mitigate the issue, MTaPS **Bangladesh** facilitated a one-day workshop that

discussed a list of issues, found root causes, and made recommendations. In addition, MTaPS recommended developing a checklist incorporating all the issues in line with the Public Procurement Rules 2008. The workshop was attended by line directors of different operations and directors of different projects and recommended organizing follow-up meetings to check progress.

In the **Philippines**, the MTaPS-initiated Change Management eLearning course received formal approval from the Undersecretary of the Health Policy and Systems Development Team. Next quarter, MTaPS Philippines will integrate the initiative with other organizational development activities led by the Health Human Resources Development Bureau and work to develop the Change Management eLearning course. The course aims at to support the DOH and LGUs to effectively manage change due to recent reforms in the **Philippines** health system, including PSCM, and the implementation of UHC.

In **Bangladesh**, MTaPS facilitated a five-day training on quantification and early warning systems for TB medicines. Participants will be able to estimate quantity and budget requirement to help with on time procurement. Participants will also avoid stock-outs of life-saving TB medicines using early warning systems. During this quarter, MTaPS **Jordan** commenced a comprehensive supply chain assessment in collaboration with the Ministry of Health's (MOH) Procurement and Supply Directorate. Earlier assessment reports, policy documents, and guidelines have been reviewed, and a data collection tool was developed. The results from the assessment will inform future key interventions to improve product availability at the service delivery point. In the **Philippines**, MTaPS facilitated a learning session on strategic procurement best practices from New Zealand, South Africa, and Indonesia. The learning session is part of an MTaPS **Philippines'** initiative to assess health commodity procurement policies and operations and design options for strategic procurement mechanisms such as Framework Agreement and pooled procurement.

In **Bangladesh**, MTaPS helped the Director General of Family Planning analyze family planning commodity data for decision making. After conducting the consumption trend analysis, a circular was issued to increase the distribution performance of injectable and oral contraceptives. Couple Years of Protection (CYP) is the estimated protection provided by contraceptive methods during a given period, based upon the volume of all contraceptives sold or distributed free of charge to clients in the public or private sector during that period. In quarter 2, MTaPS **Philippines** presented the CYP analysis to stakeholders for January 2018–June 2021. The analysis found that the public sector is the main contributor to the supply based CYP in Luzon region at 68%, followed by Visayas (59%), and Mindanao (74%), while the private sector was found to be the main CYP contributor in the National Capital Region at 93%. This analysis can allow family planning programs and partners to compare coverage in different sectors and regions for further interventions. Routine inventory data analysis is instrumental to track and check product availability at the service delivery point. During this quarter, MTaPS **Philippines** supported the Pharmacy Division (PD) to analyze and present inventory data for family planning, TB, and HIV/AIDS commodities. The analysis showed commodities consistently stocked-out and understocked and informed immediate action. The analysis will be shared with regional stakeholders to implement concrete actions to avoid stock-outs.

SUB-OBJECTIVE 5.2: PATIENT-CENTERED PHARMACEUTICAL CARE IMPROVED

SUB-OBJECTIVE 5.3: PATIENT SAFETY AND THERAPEUTIC EFFECTIVENESS ASSURED

CUMULATIVE PERFORMANCE TO DATE

Over the past three years, MTaPS has continued to strengthen regulatory systems, including pharmacovigilance (PV), to safeguard populations from harm associated with the use of health products. MTaPS supports countries with the goal of achieving at least maturity level 3 on the World Health Organization (WHO) Global Benchmarking Tool (GBT) by the end of the program in September 2023. In **Bangladesh**, MTaPS supported the Director General of Drug Administration (DGDA) to develop and implement risk management and investigation procedures; scaling up PV to more than 30 health facilities, including in private settings, by providing training and creating PV sections; and creating PV awareness among health care workers and the population in general. MTaPS also enhanced eTB Manager for reporting active TB drug safety monitoring and management (aDSM) in all 10 drug-resistant TB sites. As a result of the above interventions, approximately 800 adverse drug reaction (ADR) reports were received and reviewed by the DGDA's Adverse Drug Reaction Advisory Committee in PY3. With support from MTaPS, the DGDA was able to address PV sub-indicators as per WHO GBT assessment requirements, leading to a score of 88% to reach maturity level 3 with respect to PV.

In **Jordan**, MTaPS was granted official membership to the National Pharmacovigilance and COVID-19 Vaccines Adverse Events Monitoring Committee in July 2021 and provided technical support in data processing. More than 1.35 million data-point entries describing adverse events following immunization with COVID-19 vaccines were cleaned, aggregated, analyzed, and presented in comprehensive and descriptive reports to the Ministry of Health (MOH) and other national entities to inform decision-making processes.

MTaPS **Mozambique** has been supporting the *Autoridade Nacional Reguladora de Medicamentos, Instituto Público* [National Medicines Regulatory Authority, Public Institute] (ANARME, PI); the HIV program; and the National Tuberculosis Program to set up and implement PV systems. In PY2, MTaPS supported the development of the protocol for implementation of active safety monitoring of the dolutegravir-based tenofovir + lamivudine + dolutegravir (TLD) regimen, and the protocol was sent to and approved by the national ethics committee. As of December 2020, about 3,000 patients had been enrolled in the cohort. MTaPS supported quarterly supervisions and data cleaning and analysis and developed an eight-month progress report on the active surveillance activity. As of December 2021, 7,447 patient follow-up visits and 88 adverse events (AEs) had been reported.

In **Nepal**, the implementation of the PV strategy has progressed well, and a focal person at the Department of Drug Administration (DDA) supported by MTaPS PV experts has drafted the regulation and guidelines to define the PV regulatory framework. Collaboration between DDA central and the provincial centers has started with the appointment of provincial PV coordinators.

In **Rwanda**, MTaPS has supported the Rwanda Food and Drugs Authority (FDA) in the development of regulations, guidelines, manuals, and SOPs related to PV. In addition, MTaPS helped adapt the electronic Pharmacovigilance Monitoring System (PViMS) for spontaneous and active safety reporting and monitoring of AEs. Through PViMS, 568 adverse events following immunization (AEFI), 168 of which were serious, had been reported to the **Rwanda** FDA, facilitated quicker reporting of safety data, analysis, and feedback. MTaPS also supported the development of a costed multiyear national implementation plan to guide the implementation of medicines safety activities. MTaPS has supported the Rwanda Biomedical Center and **Rwanda** FDA to set up and implement active surveillance of

dolutegravir-based regimens at 20 health facilities. The protocol for this study, its implementation plan, SOPs, and a patient consent form were sent to and approved by the Rwanda National Ethics Committee.

MTaPS **Tanzania** facilitated the revision of terms of reference (TOR) for the national Vigilance Technical Committee to allow incorporation of four pediatric experts. MTaPS also supported the development of guidelines for monitoring the safety of medicines used in pediatric population. The Tanzania Medicines & Medical Devices Authority (TMDA), with support from MTaPS, built the capacity of its staff on assessment of periodic safety update reports and risk management plans to increase the number of competent assessors at TMDA. MTaPS **Philippines** worked with the Philippines Food and Drug Administration, DOH, and WHO to set up a national medicine safety advisory committee to ensure patient safety. In addition, MTaPS supported the DOH to develop and implement the PV workforce development plan.

MTaPS supported the Intergovernmental Authority on Development (**IGAD**) and East African Community (**EAC**) Secretariats to strengthen governance for safety monitoring of health products. MTaPS helped the **IGAD** Secretariat operationalize the IGAD Expert Working Group (EWG) for PV by supporting the review and validation of the TOR and the development of a harmonized IGAD and EWG-PV action plan. The experts then developed a harmonized, indicator-based PV assessment and monitoring tool and carried out a baseline assessment of the PV systems to inform regional activities after proper training was provided on the tool. A total of 97 (31 female, 66 male) in-country health care workers were trained in five member countries. Additionally, MTaPS, in collaboration with the IGAD Secretariat, has supplied PV training of trainers to cross-border area health facility personnel to enhance integration and harmonization. MTaPS supported cross-border facilities through continuous quality improvement and mentorship to implement PV activities as per developed work plans during the training. Through its support, MTaPS has ensured that 40 health facilities found in cross-border areas of Uganda/Kenya, Ethiopia/Kenya, and Kenya/Somali implement patient safety activities, including reporting of AEs. MTaPS supported the Pharmacy and Poisons Board of Kenya in PV to analyze data for decision making with the goal of ensuring prompt evaluation and use of available data for regulatory actions, including alerts or recalls. In addition, MTaPS collaborated with the EAC Secretariat and EAC partner states to develop and validate harmonized SOPs to implement the EAC harmonized PV compendium and draft a harmonized PV curriculum and training packages.

QUARTER 2 ACHIEVEMENTS & RESULTS

To strengthen the MOH's response to vaccine safety data in **Jordan**, MTaPS developed comprehensive but short summaries of analysis and recommendations on the safety data collected from COVID-19 vaccines. The summaries were sent to the Minister through USAID. All nine MTaPS **Mozambique**-supported health facilities were using PViMS for active safety monitoring of TLD and implementing medicines safety activities. MTaPS supported the ANARME, PI, and HIV program team, who made physical visits to inform staff of the TLD active surveillance sites to close data collection and complete and hand over their collected data for final analysis at the central level. In addition, MTaPS worked with local counterparts to address feedback from the US Centers for Disease Control and Prevention on the active safety monitoring protocol of TPT regimens and obtained official approval. During quarter 2, approximately 800 AEs reports, including aDSM reports, that were received from July 2021 to February

2022 have been assessed by the DGDA with support from MTaPS **Bangladesh**. Among them, 35 serious AEs and 9 aDSM reports were reviewed by the Adverse Drug Reactions Advisory Committee. Six medicine alerts published in the WHO pharmaceutical newsletter were also discussed by the committee, and regulatory recommendations were made.

In the **Philippines**, the DOH-PD released a memo to guide programmatic management of drug-resistant TB (PMDT) health facilities on the use of PViMS. To institutionalize the training of PMDT staff on the use of PViMS, the Lung Center of the Philippines, the training arm of the National TB Program, incorporated PViMS in its PMDT training curriculum. On March 7, 2022, MTaPS supported the PD in a supplementary training on PViMS for 13 (4 male, 9 female) newly hired PMDT staff hosted by the Lung Center of the Philippines training team. To date, staff from 198 of the 199 PMDT facilities have been trained on PViMS. In **Nepal**, data on ADR reports of the COVISHIELD vaccine were cleaned, and the reporting form was revised. The TOR of the drug committee was revised to include review of ADRs, and a database to manage ADR-related data at the central and regional levels was developed. The post-marketing surveillance database was updated with 50 samples for analysis.

MTaPS **Rwanda** supported the Rwanda Biomedical Center and Rwanda FDA in supportive supervisory visits to the 20 health facilities where active surveillance of DTG-based regimens is being implemented. As of the end of March 2022, 609 participants have been enrolled across the 20 health facilities. In quarter 2, MTaPS and the **IGAD** Secretariat attended EWG-PV meetings to develop and review a costed work plan with the goal of improving the capacity of the EWG-PV to support implementation of regional PV activities.

SUB-OBJECTIVE 5.4: ANTIMICROBIAL RESISTANCE CONTAINMENT SUPPORTED

BEST PRACTICES/LESSONS LEARNED

- Local capacity development, closer engagement, and partnerships with government counterparts helps facilitate MTaPS interventions and sustainability, as shown in **Jordan** and **Bangladesh**.
- Continuous and regular engagement and offering of high-level technical support to local counterparts, decision makers, and technical staff is critical to ensure the achievement of planned activities while building the ability of leadership and technical staff to address identified issues.
- It is especially important to develop a clear and standardized method for collecting AEFI data in **Jordan** to reduce time to clean and analyze data and reduce the subjectivity of data collectors.
- We have learnt in **Bangladesh** that it is possible to convince government officials and related entities to collaborate with MTaPS to achieve common goals related to pharmacovigilance. We also have learned that such collaboration requires continuous engagement with decision makers and public health advocates. An example of such engagement with decision makers in Bangladesh is our successful collaboration with MOHFW and DGDA that resulted in their securing adequate levels of Government funding needed to continue programs aimed at increasing pharmacovigilance awareness amongst both public health practitioners and the public more generally. Finally, the Government of Bangladesh both developed and implemented of the activity outside of MTaPS funding.

3. PROGRESS BY HEALTH AREA/FUNDING STREAM

A. GLOBAL HEALTH SECURITY AGENDA/ANTIMICROBIAL RESISTANCE (GHSA/AMR)

OVERVIEW

In project year 4, MTaPS provides Global Health Security Agenda (GHSA) support to 13 partner countries focusing on antimicrobial resistance (AMR) containment. The countries supported are Bangladesh, Burkina Faso, Cameroon, Côte d'Ivoire, Democratic Republic of Congo (DRC), Ethiopia, Kenya, Mali, Mozambique, Nigeria, Senegal, Tanzania, and Uganda The MTaPS GHSA approach is to help countries make progress on the pathway to higher levels of Joint External Evaluation (JEE) capacity in multisectoral coordination on AMR (MSC-AMR), infection prevention and control (IPC), and antimicrobial stewardship (AMS) to enhance the ability to effectively implement their national action plans on AMR. MTaPS GHSA activities use two World Health Organization (WHO) documents as the guiding tools—*JEE* (2018 edition) and *Benchmarks for International Health Regulations Capacities (2019)*.

CUMULATIVE PERFORMANCE TO DATE

In the 13 GHSA-supported countries, MTaPS has helped make considerable progress on the pathway to higher JEE levels in all the three mandate areas of MSC-AMR, IPC, and AMS. Salient capacity transfer achievements included development/adoption of evidence-based tools and approaches, transfer of technology, and transfer of competencies. These capacity enhancements not only supported patient safety and AMR containment efforts but also contributed to pandemic preparedness and response, for example, in mobilizing and rapidly escalating MSC and IPC training during COVID-19.

Illustrative examples of system strengthening MTaPS support in multiple countries include improvement in national and facility scores on IPC core components through baseline and repeat assessments; cascading of capacity building/training through training of trainers (TOT)-trained local master trainers; development, establishment, and use of IPC eLearning courses in several countries; substantial improvements in governance and functioning of national MSC bodies on AMR; inclusion of access, watch, and reserve (AWaRe) categorization of antibiotics in national essential medicines lists (EMLs) and/or standard treatment guidelines (STGs); establishment and/or improvements in the functioning of facility IPC committees and drugs and therapeutics committees (DTCs); and assessments followed by evidence-based action plan development for IPC and AMS as well as development of policies and guidelines in both the human and animal sectors.

MTaPS has worked closely with counterparts and stakeholders in the human and animal health sectors, both at the national and facility levels, and with various partners, including WHO, Food and Agriculture Organization (FAO), World Organization for Animal Health (OIE), and Centers for Disease Control (CDC) to achieve these results. MTaPS GHSA/AMR work has been presented in several conferences and meetings, such as the American Public Health Association, American Society of Tropical Medicine and Hygiene, Global Health Science and Practice Technical Exchange, International Consortium for Prevention, and Infection Control, ReAct, and a side event during the 2020 GHSA ministerial meeting in Thailand.

About 25% of the facilities MTaPS is currently supporting for IPC and/or AMS in its partner countries are in the private sector. Continuous quality improvement (CQI) is a key technique MTaPS uses to enhance IPC/AMS performance of these supported facilities. In 8 of the 13 supported countries, MTaPS has worked closely with over 25 professional associations in MSC, guideline and policy development, trainings, and assessments. In four supported countries, MTaPS has worked with civil societies to incorporate them into MSC bodies. Since 2019, MTaPS has also supported celebration of World Antimicrobial Awareness Week (WAAW) in several countries by helping organize or facilitating various events, such as symposia, panel discussion, rallies, and advocacy workshops on AMR and One Health, and raising awareness on AMR and One Health among community members, journalists, and student AMR interest groups. At a global level, for WAAW 2021, MTaPS relaunched an updated version of its part 1 AMR course for USAID's Global Health eLearning (GHeL) platform. MTaPS will further focus on capacity transfer, institutionalization, local ownership, sustainability, and collaboration with partners who can take on tasks after MTaPS ends.

QUARTER 2 ACHIEVEMENTS AND RESULTS

EFFECTIVE MSC-AMR

Strengthening MSC governance structures and functions: As part of the establishment and training of the AMS subcommittee of the AMR Technical Thematic Committee (AMR-TCC) in **Burkina Faso**, MTaPS conducted a meeting with the president of the AMR-TCC. As a result, the participants agreed to hold a workshop in April on the 2022 action plan for the AMR-TCC. Building on previously completed work, MTaPS **Kenya** supported establishment of a new County Antimicrobial Stewardship Interagency Committee (CASIC) in Kisumu County and subsequent work plan development. At a national level, MTaPS assisted the National Antimicrobial Stewardship Interagency Committee conduct an AMS technical working group (AMS-TWG) meeting to update their work plan to begin development of a new surveillance structure for antimicrobial consumption and use for the Kenya Pharmacy and Poisons Board.

Holding multisectoral meetings or activities: During this quarter, MTaPS supported routine MSC meetings in **Côte d'Ivoire, Kenya, Mali,** and **Senegal**. In February, MTaPS **Cameroon** helped organize a meeting with the MSC committee and other stakeholders of the One Health Platform on the plan to update the national AMR action plan, resulting in the development of a roadmap for the updating process and a cost-sharing plan between MTaPS, FAO, and the Infectious Disease Detection and Surveillance project.

Drafting or updating multisectoral policies, plans, or guidelines: This quarter, MTaPS **Côte d'Ivoire** supported development of the AMR Secretariat's annual roadmap and the creation of the AMR-TWG's 2022-2023 AMR operational plan. In **DRC**, MTaPS provided technical support in development of both the AMR Operational Action Plan of the National AMR Plan and the AMR monitoring framework for the Operational Action Plan. Using the results of the 2021 annual report of the electronic State Parties Self-Assessment Annual Reporting Tool (e-SPAR), MTaPS **Senegal** supported development of the 2022 Multisectoral Health Security Action Plan, including planning for revitalizing IPC committees as a tool to address the new IPC component in the 2022 e-SPAR added by WHO.

IPC Improved and Functional

Strengthening IPC governance structures: MTaPS received government approval to implement IPC and AMS activities in six additional facilities covering both public and private sectors.

Developing and implementing IPC policy and guidance documents: In February, MTaPS **Cameroon** supported the Directorate of Health Promotion (DPS) in organizing a workshop disseminating the national IPC guidelines to participants from the central, regional, and health facility levels of the health system, ending in the distribution of 150 copies of guidelines to participants. Additionally, to finalize and validate the newly created **Cameroon** IPC National Action Plan, the DPS, with support from MTaPS, organized a three-day workshop with national stakeholders, including TWGs, MOH department representatives, and staff from regional and local-level health facilities. The workshop concluded with the validation of the plan and a plan to format and distribute the last version.

Upon resumption of activities in **Ethiopia** this year (after a year-long gap during the year 3 work plan cycle), MTaPS participated in an MOH-run workshop to review and provide feedback on the National IPC Policy and Strategy. Similarly, in **Kenya** this quarter, MTaPS developed several critical IPC documents, including the National IPC Monitoring and Evaluation Framework, a high-level IPC communique providing standard guidance on IPC activities at all health system levels, and national IPC indicators for several MOH divisions. Since November 2021, MTaPS **Nigeria** has been working with the AMR-TWG and key stakeholders to develop the National IPC Strategic Plan. This quarter, MTaPS worked on receiving the final inputs to the document and conducting final editing and formatting ahead of the formal endorsement process.

Developing individual and local training capacities: In preparation for the launch of MTaPS-supported IPC and AMS e-learning modules at universities and training institutes, MTaPS **Côte d'Ivoire**, in collaboration with the Africa One Health University Network, trained eight university authorities on One Health approaches. MTaPS collaborated with the National Directorate of Medical Assistance in **Mozambique** to provide three separate TOT workshops focused on building the capacity of provincial health authorities to cascade trainings on both general and COVID-19-related IPC standards to health facilities. MTaPS **Tanzania** provided technical assistance to government partners to train regional health management teams on IPC monitoring and evaluation tools and reporting IPC indicators. MTaPS **Uganda**, in collaboration with the local USAID mission, conducted two workshops on IPC and water, sanitation, and hygiene for local implementing partners, including John Snow International, Elizabeth Glaser Pediatric AIDS Foundation, and IntraHealth.

Use of Antimicrobial Medicines Optimized

Developing and implementing AMS policies, plans, and guidance documents, including AWaRe classification: Upon approval of the STG by the National Technical Committee in **Bangladesh**, MTaPS supported the TOT on the STG for over 400 doctors, who will then cascade the information to their technical staff. MTaPS **Ethiopia** supported the MOH draft of its hospital antimicrobial use policy manual and review the STG for General Hospitals as part of the implementation of the national EML and STG. In support of implementing the AWaRe classification of antibiotics, MTaPS met with government counterparts to develop data collection tools, which will allow **Kenya** to measure the volumes and use of antimicrobials in the country. Similarly, in **Tanzania**, MTaPS supported the development of an

indicator checklist to measure the progress of AMR interventions from the National Action Plan Monitoring Framework. MTaPS **Nigeria** is currently categorizing antibiotics according to AWaRe, in collaboration with WHO and the ad hoc AWaRE TWG.

Assessing AMS capacity at the national and local levels and developing action plans: This quarter, MTaPS supported the establishment of 14 DTCs across **Burkina Faso** and **DRC** and supported subsequent training of their members on AMS. Additionally, MTaPS supported supportive supervision visits to 34 facilities in **Cameroon, Côte d'Ivoire, Senegal**, and **Mali** this quarter. In **Cameroon**, MTaPS supported government partners in conducting onsite supportive supervision visits to the DTCs in all 12 supported health facilities, with the intention to (1) assess the functionality of AMS in the facilities using the WHO checklist, (2) assess the implementation level of the DTCs' action plans, and (3) identify any challenges and devise potential solutions. The visit found that 11 of the 12 DTCs are functional, with an average DTC meeting attendance of 60% of members. About 50% of the DTCs were found to have AMS sub-committees and/or IPC sub-committees. Similarly, in **Côte d'Ivoire**, MTaPS supported the AMS-TWG to assess the functioning of DTCs in eight health facilities and conduct a supportive supervision visit to one regional hospital to monitor implementation of CQI.

Strengthening individual and local capacity: With the University of Nairobi (UON), MTaPS **Kenya** trained almost 90 UON Bachelor of Pharmacy Students this quarter as part of implementing the pre-service AMS curriculum developed with MTaPS support.

BEST PRACTICES/LESSONS LEARNED

- MTaPS **Burkina Faso** learned that the training of DTCs must incorporate innovative approaches, including implementation of individual (nominative) drug dispensing systems at patients' bedsides and digitizing facilities' health information systems.
- This quarter, MTaPS **Cameroon** learned that, in the development of effective DTCs, training alone is not sufficient—continual mentoring and field supervision is key to the success of health facilities and their DTCs. Additionally, in **Cameroon**, MTaPS found that direct engagement with and mapping of all partners supporting AMR activities helped create a funding plan for updating the National AMR Action Plan.
- Despite the closure of the MTaPS **Ethiopia** program in FY21, the sustainable nature of the interventions implemented in FY20 allowed AMR prevention and containment activities to continue uninterrupted. Even without MTaPS' presence, the Ethiopian MOH implemented many of the activities that it developed and planned jointly with MTaPS before its departure, including the official launch of the national One Health AMR Strategic Plan (2021-2025) and the finalization of the revised EML. This demonstrates that ensuring ownership and leadership of government partners *at all stages* of the planning and implementation process helps spur both success and sustainability.
- Throughout the course of the COVID-19 pandemic, MTaPS **Mozambique** supported the use of virtual platforms as an alternative to in-person meetings to enable the AMR MSC committee and the TWGs to continue meeting. This initiative proved so successful that government partners have now initiated virtual meetings and other forms of virtual engagement to communicate with and support its provincial teams and health facilities. MTaPS **Mozambique** also learned that, in the absence of clearly allocated domestic funding for NAP-AMR activities, MSC on AMR does not always get the attention it deserves. A best practice emerging from this activity is that periodic advocacy,

engagement, negotiation, and close follow-up are needed with stakeholders to mobilize the needed resources to sustain AMR initiatives.

- In **Nigeria**, MTaPS learned that collaborating with trusted and well-established multilateral organizations, such as the FAO and WHO, helped overcome bureaucratic delays in engagement with government ministries and in the actual development and validation of governance documents, such as the AWaRE categorization of antibiotics and the National AMS Plan.
- Both MTaPS **Cameroon** and **Uganda** have found that ensuring commitment from leadership at all levels is critical to ensuring the effectiveness and sustainability of GHSA actions.
- MTaPS **Uganda** has found that peer-to-peer learning is a best practice for facilities that are being prepared as centers of excellence.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

Bangladesh (BD), Burkina Faso (BF), Cameroon (CM), Côte d'Ivoire (CDI), Democratic Republic of the Congo (DRC), Ethiopia (ET), Kenya (KN), Mali (ML), Mozambique (MZ), Nigeria (NG), Senegal (SN), Tanzania (TZ), Uganda (UG)

	ACTIVITY AND DESCRIPTION
Global	▪ Complete draft revision of GHeL AMR part 2 course and send to USAID for review ▪ Present at the upcoming June/July 2022 Global Health Security Conference in Singapore
MSC	▪ Support development of the operation plan for NAP-AMR (BD) and MSC-AMR bodies (CDI, ET, SN) ▪ Facilitate meetings of MSC-AMR bodies and/or their TWGs (CM, CDI, DRC, ET, MZ, TZ, UG) ▪ Provide technical support for implementing CASIC activities (KN) ▪ Finalize updated mapping of AMR stakeholders and activities (MZ)
IPC	▪ Conduct initial IPC assessments by using the IPCAF tool (BD, DRC, SN) ▪ Conduct supportive supervision visits to supported facilities (CM, CDI) ▪ Support repeat IPC assessments at the national level (ET, MZ) and facility level (KN, MZ) ▪ Organize launch workshop to familiarize stakeholders with the revised STG and EML (ET) ▪ Support the inception meeting and stakeholder consultation for developing the national IPC plan for the agricultural sector (UG)
AMS	▪ Provide technical assistance to DTCs at supported health facilities (BF, CDI, DRC, ML) ▪ Support the technical secretariat of the AMR MCC and the One Health platform to update the NAP-AMR (CM) ▪ Finalize the categorization of antibiotics according to WHO AWaRe classification (CM, MZ), and develop an AWaRe implementation framework (KN) ▪ Embed the pre-service AMS curriculum in the UON (KN) ▪ Support finalization, publication, and dissemination of the second biannual AMS newsletter (UG)

B. COVID-19

COVID-19 VACCINE INTRODUCTION - QUARTER PROGRESS FOR FY22Q2

In Q2 FY22, MTaPS continued to support the governments in 11 countries to plan, deploy, administer, and monitor the safety of COVID-19 vaccines. The vaccines availability bottlenecks that were hindering the vaccination programs in many MTaPS countries in Q4 FY21 have been mostly relieved, and MTaPS has been actively supporting national vaccination programs with dedicated funding (CN108, CN164, and American Rescue Plan Act [ARPA]). The MTaPS COVID-19 activities are fully aligned with the objectives and results areas of the *USAID Implementation Plan for the US COVID-19 Global Response and Recovery Framework*, published in October 2021. The MTaPS COVID-19 interventions support two USAID objectives and three result areas.

COVID-19 funded countries:
Bangladesh (BG)
Burkina Faso (BF)
Cameroon (CM)
Côte d'Ivoire (CI)
Kenya (KN)
Mali (ML)
Mozambique (MZ)
Philippines (PH)
Rwanda (RW)
Senegal (SN)
Tanzania (TZ)

USAID OBJECTIVE 1: ACCELERATE WIDESPREAD AND EQUITABLE ACCESS TO AND DELIVERY OF SAFE AND EFFECTIVE COVID-19 VACCINATIONS

MTaPS' lines of effort:

- Support comprehensive country readiness to administer COVID-19 vaccines:
  - Support multisectoral coordination for COVID-19 immunization
  - Improve regulatory environment and policy for COVID-19 vaccines
  - Strengthen financial planning and costing of vaccine introduction
- Expand equitable access to vaccines:
  - Strengthen vaccine-related supply management, including electronic logistics management information system (eLMIS) and inventory management, data-driven decision making
  - Support the development of microplans and distribution plans at subnational level
  - Expand vaccine service delivery, including vaccine-related capacity building, and engagement of private sector
- Monitor and evaluate the safety and effectiveness of vaccination programs
  - Improve systems for monitoring and reporting adverse events following immunization (AEFI)
  - Strengthen national pharmacovigilance capacity to set up systems for monitoring safety of vaccines

USAID OBJECTIVE 2: REDUCE MORBIDITY AND MORTALITY FROM COVID-19, MITIGATE TRANSMISSION, AND STRENGTHEN HEALTH SYSTEMS, INCLUDING TO PREVENT, DETECT, AND RESPOND TO PANDEMIC THREATS

Result Area 4: Infection Prevention and Control (IPC)

- Support health- and non-health facilities to set up proper systems for managing and monitoring IPC during COVID-19 to ensure uninterrupted and safe health service delivery
- Increase human resources capacity to manage COVID-19 IPC measures, including in clinical and vaccine delivery settings, waste management, mortuaries, funerals, transportation, and points of entry

Result Area 6: Coordination and Operations

- Support the development/revision of COVID-19-related policies, protocols, standards, guidelines, and tools across all areas of COVID-19 response
- For more information about MTaPS' COVID-19 activities, click here

Table 1. MTaPS COVID-19 Q2 FY22 Indicators (detailed breakdown can be found in Annex 3)

Indicator and Disaggregation		Q2 FY22	Total from March 2020
Objective 1. Accelerate widespread and equitable access to and delivery of safe and effective COVID-19 vaccinations			
0.2 Number of AEFI reports reviewed with MTaPS' support among those submitted to country monitoring systems			
	# of AEFI reports reviewed with MTaPS' support	2,095	5,035
0.3 Number of people trained on COVID-19 vaccine-related topics with MTaPS' support			
	# of people trained	565	3,348
Sex	Male	345	2,019
	Female	220	1,329
	Unknown sex	0	0
0.7 Number of tools for planning and conducting safety monitoring developed, adapted, or disseminated with MTaPS' support			
	Establishing surveillance systems	0	1
	Monitoring and responding to AEFI	1	6
	Monitoring and responding to adverse events of special interest	1	2
	Safety data management systems	0	1
	COVID-19 vaccine safety communication	11	11
0.8 Number of COVID-19 vaccine multisectoral coordination mechanisms that meet regularly (at least once a month) with MTaPS' support			
	# of multisectoral coordination mechanisms	0	31
C.1 Number of countries that developed or adapted COVID-19 vaccine microplans with MTaPS' support			
	# of countries with developed/adapted microplans		4
C.2 Number of countries that have improved the regulatory and/or policy environment for COVID-19 vaccines with MTaPS' support			
	# of countries with improved regulatory environment		2
C.3 Number of countries that have plans for vaccine distribution to the sub-national level developed, adapted, or disseminated with MTaPS' support			
	# of countries with distribution plans to sub-national level		2
C.4 The country has vaccine tracking systems developed or adapted to track COVID-19 vaccines with USAID support			
	# of countries with vaccine tracking system		0
Objective 2. Reduce morbidity and mortality from COVID-19, mitigate transmission, and strengthen health systems, including to prevent, detect, and respond to pandemic threats			
Result Area 4. IPC			
4.1 Number of health facilities where MTaPS provided support for IPC and/or water, sanitation, and hygiene (WASH) for COVID-19			
	# of health facilities	539	4,782
4.2 Number of workers who received COVID-19-related training in IPC and/or WASH with MTaPS' support			
	# of people trained	1,560	44,369

Sex	Male	878	19,295
	Female	682	24,853
	Unknown sex	0	221
Result Area 6. Coordination and Operations			
Number of policies, protocols, standards, and guidelines across any of the result areas developed or adapted with MTaPS' support			
	# of policies, protocols, standards, and guidelines	8	47

COVID-19 VACCINE COSTING

OVERVIEW

Data on the actual costs of delivering COVID-19 vaccines in low- and middle-income countries (LMICs) are limited. As the supply of vaccines increases, it is important to know how much is spent to deliver the vaccine to inform strategies and plans and identify funding sources and gaps. There are some resources, such as tools and guidance developed by the World Health Organization (WHO) and its partners, that can be helpful in generating estimates of COVID-19 vaccine delivery costs.

COVID-19 vaccination rates remain exceptionally low in many LMICs.[5] Delivering COVID-19 vaccines will require additional global funding commitments. Cost estimates remain broad, with limited data available on COVID-19 vaccine-specific delivery. Cost estimates vary, and decision makers need to project the costs of rolling out the vaccines more accurately.

The work conducted by the COVAX Working Group on vaccine delivery costs produced a single estimate of USD 1.41 per dose. Importantly, the COVAX Working Group also limited its early cost estimates work to 20% coverage of the population even though coverage rates in LMICs continue to languish far below 20%. It is important to build a model that takes a broader perspective on how and where the population will get vaccinated. While existing data, including pre-COVID-19, on the costs of routine immunization, immunization campaigns, and other health campaigns can be used to generate plausible estimates of these costs, targeted data collection efforts are necessary to refine these estimates and ensure that they remain grounded in the realities faced by LMICs.

Modelled estimates at the global level indicate that the delivery cost of COVID-19 vaccines in LMIC settings could be several times greater than for routine childhood vaccines (USD 1.66 per dose[6] in Advance Market Commitment countries compared with USD 1.45–1.50 per dose for routine childhood vaccines in LMICs). Note that this estimate assumes that the existing health systems will be leveraged, and the costs of health worker salaries are excluded.

CUMULATIVE PERFORMANCE TO DATE

To date, MTaPS has assessed the available modeling tools and determined that the Harvard/COVAX model has granularity and features that can be fit for purpose. MTaPS conducted a model adaptation and developed a scenario builder on the various cost estimates of delivering COVID-19 vaccines under different assumptions. The scenario builder was developed in October 2021 and updated in December 2021, January 2022, and March 2022.

MTaPS has also conducted due diligence in gathering more detailed vaccine delivery expenditure data in two countries. Following discussion with USAID and considering USAID priority countries; ongoing work by other development partners; technical and operational feasibility; and a country's current level of vaccination, geographic region, and existing access to the ministry of health, MTaPS will conduct data collection in Malawi and Madagascar. If a study is not feasible in these countries, MTaPS will select from

[5] https://ourworldindata.org/covid-vaccinations

[6] Griffiths U, Adjagba A, Attaran M, et al., Costs of delivering COVID-19 vaccine in 92 AMC countries, Updated estimates from COVAX Working Group on delivery costs, UNICEF, WHO, Gavi, BMGF, Harvard University, ThinkWell, World Bank, 26th February 2021

Indonesia, Philippines, Mali, Jordan, Senegal, Haiti, and Cameroon, and at least one country will be selected from among the 17 USAID priority countries.

Global estimates require assumptions that would benefit from in-country intelligence. MTaPS conducted an online survey of health experts working in each of its countries to gather real-time COVID-19 vaccine delivery data, including human resources, types of delivery sites/methods, availability of supplies, capacity of cold chain, and implementation of demand generation campaigns. This survey, completed in November 2021 and planned again for May 2022, will identify evolving trends in vaccine delivery at the country level.

In January and February 2022, MTaPS conducted a desk review across three databases, screened 530 articles, and identified 20 relevant studies on social mobilization (14) and campaign/outreach strategies (6). The purpose of this exercise was to gather insight to improve the MTaPS-adapted Harvard/COVAX costing model.

Lastly, with the countries and donors' increasing interest in COVID-19 vaccination costs, MTaPS has supported ad hoc requests beyond the scope mentioned in the work plan. To date, MTaPS has assessed the CARE Studies on the cost of COVID-19, conducted a comparative assessment with ACT-A studies, and led two presentations with major stakeholders at the USAID-UNICEF-led Funders Forum and the USAID COVID-19 Task Force Leadership.

QUARTER 2 ACHIEVEMENTS & RESULTS

Between January and March 2022, MTaPS produced current cost estimates for COVID-19 global delivery. March estimates included a major adaptation to the model that expands the delivery modality from only fixed sites and outreach to include campaigns and last-mile delivery. MTaPS presented this work at the Funders' Forum and the USAID COVID-19 Task Force. MTaPS is also now formally a part of the COVID-19 Vaccine Delivery Partnership (COVDP) working group on costing and financing and will contribute toward developing a single set of cost estimates for various global stakeholders.

In addition to the two presentations mentioned above, MTaPS also conducted a comparative assessment with CARE studies and ACT-A as part of the ad-hoc support to USAID.

For country-level cost data, MTaPS analyzed the landscape of costing work and received approval for study commencement in Malawi and Madagascar. MTaPS received IRB approval (non-human subject determination) from MSH's Scientific Committee and has conducted the necessary steps to receive IRB approval in-country. Study protocol and data collection forms were also completed and are now under review with the country teams.

BEST PRACTICES/LESSONS LEARNED

The various estimates of COVID-19 vaccination delivery cost cause confusion for the policy space even if they are internally consistent from a modeling and technical standpoint. MTaPS conducted the presentations mentioned above to further disseminate our findings and will be working closely with COVDP to streamline this work with other global partners.

Data are scarce around the cost of COVID-19 vaccination delivery. MTaPS' activity to formally capture current information through desk review and informally check the pulse of countries through global surveys has proven to be helpful to our internal estimation work and for external stakeholders.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
1.1 Complete data collection in Malawi and Madagascar	May 2022
2.1 Analyze data collected of country #1 (June) and country #2 (July)	June 2022
2.2 COVID-19 vaccination delivery cost estimate model adaptation (April) and 2x model update (May, June)	June 2022
2.3 Global survey report	May 2022

C. MATERNAL, NEONATAL, AND CHILD HEALTH (MNCH)

OVERVIEW

The goal of the MTaPS maternal, neonatal, and child health (MNCH) core-funded portfolio is to ensure the 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. In year 4, MTaPS is building on the activities of years 1, 2, and 3, focusing on improving regulatory systems to ensure the quality and safety of MNCH medicines and medical devices; addressing bottlenecks that were identified in the mapping of MNCH medical products registration in year 1; continuing to address the barriers that prevent the uptake of amoxicillin and gentamicin; and ensuring the lessons learned from previous work in social accountability and subnational procurement are disseminated widely and effectively to increase uptake of best practices.

CUMULATIVE PERFORMANCE TO DATE

Pharmaceutical systems strengthening (PSS) is essential to achieving Sustainable Development Goal targets 3.1 and 3.2 for MNCH and requires a holistic look beyond product availability and logistics to additionally strengthen the other system components—such as governance, regulation and pharmacovigilance, financing, information, human resource capacity, and pharmaceutical services—that affect access to and appropriate use of medicines, technologies, and supplies. This section presents cumulative performance progress on the MTaPS MNCH portfolio.

OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE INCREASED

Sub-objective 1.3: Stakeholder engagement and empowerment, including civil society and consumers, increased for access to medicines, technologies, and supplies for women, newborns, and children

In year 3, MTaPS developed a discussion paper on engaging civil society in social accountability to improve access to and appropriate use of safe, effective, and quality-assured MNCH medical products and services. This discussion paper contributes to the knowledge based on lessons learned from social accountability research and interventions that engage civil society in improving access to and appropriate use of quality MNCH medical products and services. It focuses on the importance of understanding the accountability ecosystem and the building of linkages between levels and with civil society to facilitate effective advocacy for systemic change.

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

Sub-objective 2.1: Regulatory system for MNCH medical products improved

In year 2, MTaPS conducted a mapping exercise to identify challenges in registering MNCH medical products in nine countries: Bangladesh, DRC, Mali, Mozambique, Nepal, Rwanda, Senegal, Tanzania, and Uganda. The technical brief of the registration mapping synthesizes the findings from the nine countries, as well as interviews with pharmaceutical manufacturers, and informs regulatory authorities and other policy makers to consider strategies to eliminate barriers and bottlenecks to further improve the registration process.

As a follow-on, MTaPS has been supporting Mozambique's regulatory authority (National Directorate of Pharmacy [DNF]) to streamline registration of MNCH medicines by using findings and recommendations from the mapping. During quarter 1 of year 4, MTaPS held a virtual training on the assessment of bioequivalence studies as part of the evaluation of MNCH generic medicines dossiers in Mozambique with 13 participants from the DNF.

In year 2, MTaPS completed the mapping of partner support in the respiratory ecosystem to strengthen systems to ensure appropriate oxygen administration. Looking across the different system elements of the respiratory ecosystem, the areas of procurement (including guidance on quantification), distribution, and training in both oxygen therapy and maintenance are supported by most organizations. Regulation and quality assurance of medical devices and medical gases receives little support from implementing partners. MTaPS also compared guidance on the technical packages of medical devices and their technical specifications for the respiratory ecosystem from different global guidance documents and highlighted discrepancies in these packages for administering oxygen therapy. WHO is currently addressing this lack of a standard package of medical devices and accessories for oxygen delivery through the development of its priority medical devices information system.

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

Sub-objective 3.1: PSS global learning agenda advanced for MNCH

In year 1, MTaPS seconded a pharmaceutical advisor to the Global Financing Facility (GFF), who developed a number of documents as resources for the GFF country focal points and country teams—including a document on medicines and supplies management to support new countries beginning the GFF approach to consider and include pharmaceutical issues in their investment cases to ensure availability and effective use of safe and quality MNCH medicines and technologies, a set of documents on management of medicines and supplies, and a country mapping of USAID support in pharmaceutical systems. A webinar was conducted for GFF countries to stimulate thinking of the importance of a robust pharmaceutical system to support MNCH interventions and to consider it among the priorities of the investment case.

A package of draft documents on quality of pharmaceuticals procurement, for World Bank (WB) task team leaders who approve WB procurements, was shared with the WB pharmaceutical team. In Liberia, the MTaPS senior principal technical advisor provided support to the Ministry of Health and the WB performance-based financing (PBF) team to establish a framework agreement for county procurement of specific MNCH medicines and supplies from approved wholesalers when the central medical stores are unable to supply to ensure availability of quality medicines in counties implementing PBF.

A flyer highlighting the variety of interventions for managing medicines and supplies prioritized in most GFF investment cases was developed and presented at the Reproductive Health Supplies Coalition General Meeting in Nepal in March 2019. This has been disseminated to the inter-agency supply chain group for their consideration in the investment case process in the new GFF countries. To finalize the secondment, a scope of work was developed for a GFF staff person to ensure adequate financing and cost efficiency as related to management of commodities and to coordinate among countries and implementing partners.

As part of the global learning agenda on pharmaceutical systems for MNCH, MTaPS has developed a series of microlearning seminars to raise awareness and promote understanding of why PSS is important for women's and children's health outcomes. Three microlearning videos complement MTaPS training programs on PSS (PSS 101) and are posted as an integral part of the PSS 101 e-learning course.

Recognizing that most MNCH medicines are essential and are procured by national governments and not by donors, sufficient measures need to be in place to assure the quality of these medicines. This is particularly true in decentralized settings where responsibility for procurement is also decentralized, yet capacity for assuring quality of local procurement may be limited. If heat-sensitive oxytocin, for example, is procured locally, its quality needs to be guaranteed at the point of procurement as well as throughout the chain. In year 2, MTaPS described the subnational procurement practices in Liberia, Nigeria, and Tanzania in a technical brief highlighting key areas to consider to ensure the quality of those procured products. Building and expanding on that work, during the last part of year 3, MTaPS conducted a detailed mapping of subnational procurement in four provinces of Nepal, a country which has just undergone decentralization.

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

Sub-objective 5.1: Availability of essential medicines, supplies, and other health technologies for MNCH improved

MTaPS has been updating the reproductive MNCH forecasting supplement, as applying best practices in quantification of reproductive MNCH medical products has a direct impact on product availability and on the potential to save lives. In year 2, MTaPS updated the 2016 forecasting supplement for lifesaving essential reproductive MNCH commodities, first developed by partners under the United Nations Commission on Life-Saving Commodities for Women and Children. With partners' support, MTaPS revised the document to align with recent changes in WHO recommendations and has, during year 3, validated the guide in five countries in collaboration with the USAID Global Health Supply Chain Program-Procurement and Supply Management (GHSC-PSM).

In support of management of medicines and supplies at the community level, during this year MTaPS has supported the formation of a commodities sub-group of the child health task force (CHTF), which is a mechanism to align efforts and optimize coordination around ensuring availability and quality of child health commodities. In year 1, MTaPS' participation in the WHO/UNICEF technical consultation Institutionalizing Integrated Community Case Management to End Preventable Child Deaths in Ethiopia resulted in mainstreaming the discussion of the importance of robust pharmaceutical systems and the inclusion of interventions in the country action plans.

Sub-objective 5.2: Pharmaceutical services for women and children improved

Amoxicillin is the first-line treatment for pneumonia in children under 5 and is also used, together with gentamicin, for the treatment of possible serious bacterial infection in newborns. The preferred formulation is dispersible tablets, which need some explanation for caregivers to know how to administer them correctly. In year 2, MTAPS updated a set of job aids and dispensing envelopes to promote adherence to correct treatment by health care providers and caregivers. During previous quarters, MTaPS has worked with UNICEF, USAID, GHSC-PSM, and Promoting the Quality of

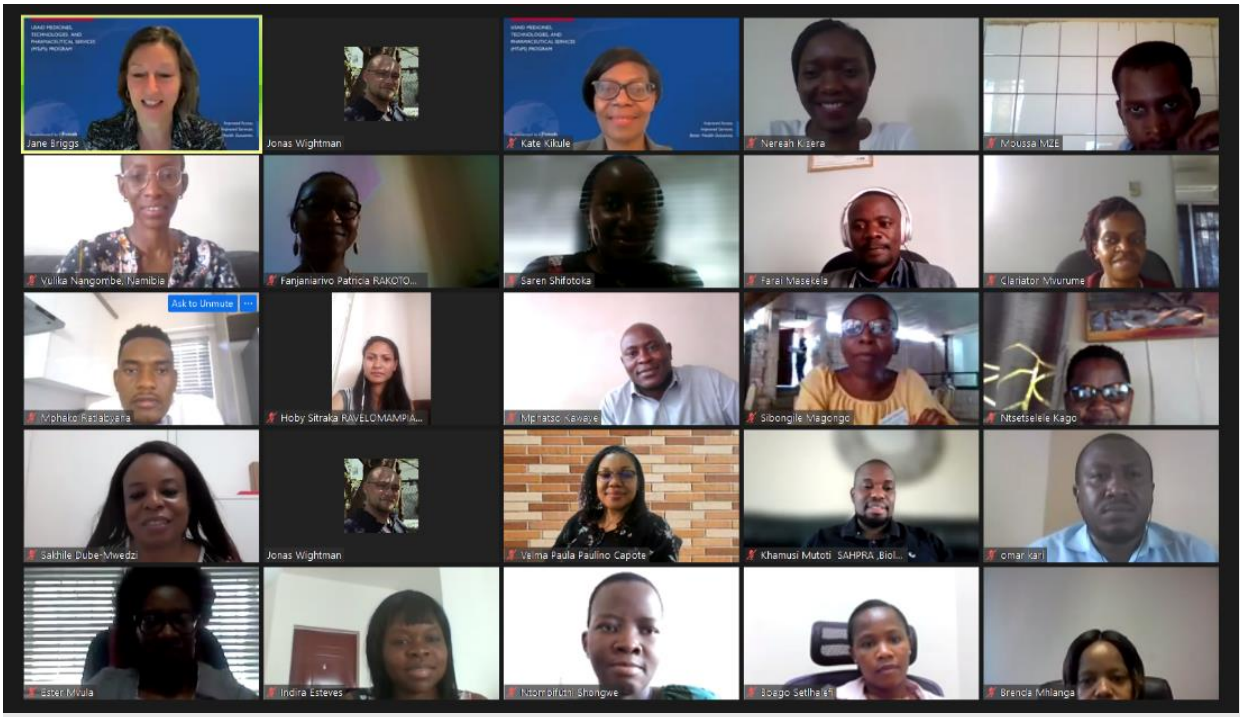
Medicines Plus (PQM+) to prepare for a series of consultative meetings to address bottlenecks in access to and appropriate use of amoxicillin and gentamicin.

QUARTER 2 ACHIEVEMENTS & RESULTS

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

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

In March, MTaPS and the Southern African Development Community (SADC) held a knowledge exchange forum, consisting of two half-day sessions with regulators from 12 of the 16 SADC member states, on optimization and prioritization of MNCH medical products registration. The sessions drew on the MTaPS registration mapping as well as current data on registration in SADC member states and included a panel with invited manufacturers. Challenges in registration of MNCH medicines and opportunities to streamline registration for the benefit of MNCH medicines through recognition and reliance were discussed, and pragmatic solutions were proposed by both regulators and manufacturers.



Regulators in the SADC region meet in a virtual forum on March 29, 2022, to discuss how to streamline registration of MNCH medicines. Photo credit: Jonas Wightman

Year 3, Activity 2.1.1: Improve regulation of MNCH medical devices at regional level

Medical devices, just like any other medical product, require strong regulatory systems—as part of larger pharmaceutical systems—to ensure their quality, safety, and efficacy. Medical devices for use in MNCH are considered essential commodities and are mostly procured by national governments for

public-sector use, which highlights the key role of national regulators in ensuring their quality, safety, and efficacy. MTaPS is developing a document to focus on the specific considerations when regulating MNCH medical devices rather than outlining the regulation process itself, as there are four Africa Medical Devices Forum (AMDF) documents that outline the process. The document is in the final stages of development. Once the revised version is available, MTaPS will share it with the AMDF leadership team for validation and dissemination to countries. The collaborative activity was included in the African Union Development Agency's New Partnership for Africa's Development/African Medicines Regulatory Harmonization quarterly newsletter for quarter 3 of 2021.

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

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

The two-day workshop on subnational procurement of MNCH medicines in Nepal was held in March with high-level participation from the Ministry of Health and Population. MTaPS presented the findings of the mapping, summarized the key issues, suggested recommendations to address them, and presented some best practices and resources on framework agreements, prime vendors, and electronic procurement. Participants were engaged and analyzed and prioritized the findings and recommendations in working groups on both days. Some immediate next steps were defined to guide the adoption of recommendations, such as establishing a centrally negotiated framework agreement, improving distribution practices, and strengthening use of data in quantification.

Year 2, Activity 3.3.1: Map the institutionalization of pediatric amoxicillin formulation in countries

During this quarter, evidence of the bottlenecks and interventions has been collected through a literature review and from partners. The evidence is being compiled to present in a series of consultative meetings on improving access to and appropriate use of pediatric amoxicillin and gentamicin. In January, a meeting was held with the CHTF commodities subgroup to engage members in the data compilation exercise for the consultative meetings. MTaPS, PQM+, and GHSC-PSM followed up with several organizations directly regarding the evidence they shared through the data compilation exercise. The dates of the three consultative meetings have been confirmed for May. MTaPS, PQM+, and GHSC-PSM are preparing the materials for the meetings.

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

Year 3, Activity 5.1.1: Validation of the reproductive MNCH forecasting supplement

The reproductive MNCH forecasting supplement, algorithms, Excel tools, and summary document have been completed and are undergoing final editorial review and formatting. The French translation is underway. MTaPS discussed dissemination with GHSC-PSM and decided on an orientation of the Task Order 4 country teams and that the algorithms will be included in the orientation of the USAID Quantification Analytics Tool developed by GHSC-PSM. MTaPS also proposes to collaborate with

GHSC-PSM to deliver English and French webinars through CHTF and Maternal Health Supplies Coalition, in addition to other avenues of dissemination.

BEST PRACTICES/LESSONS LEARNED

Although regulators in low-resource settings recognize the importance of prioritizing registration of MNCH medicines, mechanisms to expedite registration have not been put in place and prove challenging if there are not permissive policy measures in place.

Program interventions that target access to medicines for a specific disease area benefit and contribute to improvements in system strengthening across all essential medicines.

Civil society engagement should be included at the design and implementation phases focusing on improving access to and appropriate use of quality MNCH medical products. Additionally, civil society is not homogenous, and a mapping of the actors in the accountability ecosystem is needed.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Year 2, Activity 2.1.1: Disseminate the SADC forum report for the regulators to use as an advocacy tool with their management boards	April 2022
Year 3, Activity 2.1.1: Disseminate the considerations for regulating MNCH medical devices and conduct a joint assessment of a MNCH medical device	June 2022
Year 2, Activity 3.1.1: Finalize and disseminate the workshop report of the mapping of subnational procurement practices in Nepal	May 2022
Year 2, Activity 3.3.1: Conduct the series of consultative meetings on access to and use of amoxicillin and gentamicin	June 2022
Year 3, Activity 5.1.1: Disseminate the reproductive MNCH forecasting supplement in English and French	June 2022

D. OFFICE OF POPULATION AND REPRODUCTIVE HEALTH (PRH), COMMODITY SECURITY & LOGISTICS (CSL)

OVERVIEW

USAID advances and supports voluntary family planning (FP)/reproductive health (RH) programs in nearly 40 countries. As a core partner in FP 2030, it is working with the global community to reach an additional 120 million women and girls with FP information, commodities, and services.[7] USAID's CSL Division promotes the long-term availability of a range of high-quality contraceptives, condoms, and other essential RH supplies and strengthens global and country systems from manufacturer to service sites. MTaPS is using CSL funds to contribute to the Division's goal of promoting the long-term availability of a range of essential FP/RH commodities. The program aims to do this by analyzing and recommending approaches for increasing financing and strengthening supply and logistics services to improve the availability and accessibility of FP/RH commodities.

MTaPS' strategic approach is premised on the notion that implementing a systems strengthening approach in a country will lead to better commodity security. If MTaPS effectively engages with the various entities in a country, including the private sector, providers, and other stakeholders in the community, through targeted advocacy and evidence-based technical assistance, government financing of FP/RH commodities will increase, and there will be improved availability of and access to these commodities at service delivery points and in communities because of stronger supply and logistics services.

CUMULATIVE PERFORMANCE TO DATE:

ACTIVITY 1: INCREASING GOVERNMENT FINANCING OF FP COMMODITIES AND SUPPLY CHAIN IN A DECENTRALIZED HEALTH SYSTEM: A POLITICAL ECONOMY ANALYSIS (PEA)

MTaPS conducted a PEA in Uganda to examine the factors that influence domestic financing of FP products and associated supply chain costs and that may shape decisions around increasing government financing within its decentralized health system. The engagement of stakeholders working in RH was facilitated by an MTaPS briefing of the Commissioners of Pharmacy and of Reproductive and Child Health, an introductory meeting of stakeholders, and a letter signed by the Minister of Health. By the end of quarter 1, year 4, MTaPS had completed 30 interviews with 35 key informants, including development partners; implementing partners; the Ministry of Health Departments of Pharmacy and Reproductive and Child Health; the Ministry of Finance, Planning and Economic Development; the Ministry of Local Government; the National Population Council; national medical stores; local nongovernmental organizations; and civil society organization coalitions.

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

MTaPS conducted a study in Nigeria and the Philippines on the use of private-sector fourth-party logistics providers (4PLs) with the objectives to understand factors, considerations, and influences; developed models and advocacy strategies for governments and donors; and leverage private-sector

[7] OPRH. (2020). Family Planning and reproductive health overview. USAID Office of Population and Reproductive Health. Available at: https://www.usaid.gov/sites/default/files/documents/FPRH-factsheet_OCT2020.pdf

supply chain service providers in the public health supply chain. MTaPS engaged its partner organization, Pharmaceutical Systems Africa, to conduct the study. There are four parts to the study: a desk review of 4PLs in public health supply chains, a rapid PEA to understand influences and motivating factors, an operational capabilities analysis using the operational capabilities audit tool, and a cost-benefit analysis in both countries.

In year 3, quarter 4, and year 4, quarter 1, MTaPS completed data collection on all sections of the study, cleaned the data, and started analysis. MTaPS also developed a decision framework for the selection and/or engagement of private-sector supply chain service providers.

ACTIVITY 3: 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): A THOUGHT LEADERSHIP PAPER

MTaPS, with core partner Boston University, developed a thought leadership paper on using retail pharmacies as a source of FP products and other essential medicines for public-sector clients in LMICs to identify and document examples of high-income countries and LMICs using private-sector outlets to serve public-sector clients with FP and other essential medicines and to assess how these private-sector engagements are operationalized. During year 3, MTaPS developed an analytical framework to guide the assessment of how the public sector in high-income countries incorporates retail pharmacies into the provision of FP and essential medicines and to gather evidence on how high-income countries mitigate risks of engagement of private-sector pharmacies. MTaPS developed country case reports from three high-income countries (Spain, Sweden, and the United Kingdom) and three middle- to low-income countries (Namibia, Ghana, and South Africa), and the draft technical report was developed and shared with USAID and external reviewers for comments and input. In year 4, quarter 1, MTaPS further revised the draft of the technical paper and initiated the development of a dissemination plan, including social media and distribution on listservs.

QUARTER 2 ACHIEVEMENTS & RESULTS

ACTIVITY 1: INCREASING GOVERNMENT FINANCING OF FP COMMODITIES AND SUPPLY CHAIN IN A DECENTRALIZED HEALTH SYSTEM: A PEA

During this quarter, MTaPS completed an analysis of the desk review and interview data of the PEA and developed an early draft of a policy brief entitled *Increasing government financing and resource allocation for FP commodities and supply chain operations in Uganda: A Political Economy Analysis (PEA*). A briefing session was held with the USAID Uganda mission, and feedback from both the mission and the MTaPS Uganda team has been received and incorporated into the draft brief. A revised version has been shared with the USAID CSL Contracting Officer's Representative with a view to send an advanced draft of the policy brief to Ugandan stakeholders as a pre-read before the anticipated in-country validation activity. Detailed planning for the workshop has begun with an anticipated date of mid-April.

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

During this quarter, MTaPS completed data analysis of the 4PL study and drafted detailed technical reports for Nigeria and the Philippines. Also in this quarter, two advocacy briefs titled *Building a more efficient public-health supply chain through 4PL* were developed—one for the Philippines and one for

Nigeria. MTaPS, in collaboration with Pharmaceutical Systems Africa, successfully facilitated virtual study result dissemination workshops for Nigeria (with more than 45 participants) and the Philippines (with more than 75 participants). The workshops were attended by government officials, implementing partners, and donors from both countries. Comments and recommendations from the workshops will be incorporated and used for next steps and implementation.

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

During this quarter, MTaPS completed and shared with USAID a last version of the thought leadership paper, highlighting the key considerations and advantages and disadvantages of engaging retail pharmacies as a source of essential medicines and FP products in LMICs, as well as the lessons learned in the context of COVID-19 in LMICs. Also, during this quarter, MTaPS held a dissemination webinar to share and discuss the findings from the thought leadership paper on the use of retail pharmacies as a source of essential medicines, including FP products, for public-sector clients in LMICs to a USAID-only audience. The USAID webinar, facilitated by MTaPS and with about 110 participants, had a presentation of findings from Boston University, followed by reflections from a three-member panel of representatives and thought leaders from the Center for Global Development, the Department of Pharmacy of the University of Huddersfield, and USAID's CSL Division. This was followed by a question-and-answer session and recommendations for next steps.

BEST PRACTICES/LESSONS LEARNED

In the Ugandan FP PEA activity, we have been able to demonstrate the effective use of remote short-term technical assistance to effectively conduct a streamlined PEA. A key success factor has been the engagement and commitment of local MTaPS champions who have seen the importance of this activity and aligned it with their own project priorities. Their relationships with stakeholders have also been critical to success.

More educational presentations on 4PLs would be important as it is a new concept in public-health supply chains in LMICs, and there are some misunderstandings and concerns.

The retail pharmacy activity has highlighted that academic studies are an important first step to considering options in LMIC contexts but that more context is needed to explore the feasibility in a particular country setting.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1: Ugandan FP PEA in-country validation workshop will be held, and a final round of feedback is anticipated, with the last version of the policy brief expected by the end of the quarter	April-June 2022
Activity 2: Finalize and disseminate 4PL study reports, develop blog, and conduct webinars for internal and external audiences	April-June 2022
Activity 3: Disseminate findings to an external audience through an MTaPS Global Learning Series webinar	May 2022

E. OFFICE OF HEALTH SYSTEMS, CROSS BUREAU

OVERVIEW

The US Agency for International Development (USAID) Office of Health Systems (OHS) works across the Bureau for Global Health's programs and is responsible for technical leadership and direction in health system strengthening, enabling countries to address complex health challenges and protect against extreme poverty. Pharmaceutical systems strengthening (PSS) is one of its areas of work. The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) program uses OHS cross-bureau funds to demonstrate and advance technical leadership in PSS, in line with the overall program goal and objectives. Through the cross-bureau portfolio, MTaPS works to develop evidence-based approaches and tools and identify best practices in PSS, which contributes to addressing emerging health problems. MTaPS collaborates with regional and global stakeholders to shape the norms and discourse on pharmaceutical systems and to coordinate efforts at identifying and promoting best practices. The tools and best practices developed or documented by this effort are intended to be adopted and applied at the regional and/or country-level in low- and middle-income countries (LMICs). Cross-bureau activities aim to identify innovative strategies and tools to advance USAID's technical leadership in PSS and improve equitable access to and appropriate use of medical products and pharmaceutical services, especially for preventing child and maternal deaths, controlling the HIV/AIDS epidemic, and combating infectious diseases—including the current COVID-19 pandemic.

CUMULATIVE PERFORMANCE TO DATE

OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

Through year 1 and 2 activities, MTaPS engaged with and supported global initiatives such as the World Health Organization (WHO)/Global Fund/ United Nations Development Programme anti-corruption, transparency, and accountability in the health sector and the WHO Collaborating Center for Governance, Accountability, and Transparency in the Pharmaceutical Sector, working on health governance, anti-corruption, and helping to define priorities and share lessons learned.

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

MTaPS has been engaging with the African Union Development Agency's New Partnership for Africa's Development (AUDA-NEPAD) on medical products regulation, especially in the wake of the COVID-19 pandemic and participated in advocacy initiatives for the creation of the African Medicines Agency for improved regulation of medical products in Africa. MTaPS also supported other institutional capacity development efforts for medicines regulation. The program supported AUDA-NEPAD to conduct a quality review of the African Medicines Regulatory Harmonization Initiative (AMRH) program management guidance tool aimed to help streamline regulatory harmonization program implementation, strengthening the impact and sustainability of program results and outcomes. MTaPS also validated the monitoring and evaluation tool for the performance of the AMRH's regional centers of regulatory excellence and collected baseline data.

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

MTaPS has advanced the global PSS learning agenda through several efforts, including developing and launching the face-to-face PSS 101 course and developing an e-learning version. The course will increase USAID staff's understanding of the basic principles of PSS, including how addressing pharmaceutical management problems contributes to advancing universal health coverage; combating antimicrobial resistance, HIV/AIDS, malaria, and TB; and promoting maternal and child health. MTaPS also convened an 11-member PSS technical advisory group of donor governments, foundations, academic institutions, and public-private partnerships, publishing a paper to generate political attention for improving access to medicines in health systems. The program also successfully conducted a peer-to-peer learning exchange on medical products pricing strategies with health policy and financing government officials from 15 LMICs. To date, MTaPS has submitted 30 global conference abstracts with an estimated 70% acceptance rate, and through cross-bureau has published 6 peer-reviewed manuscripts.

At the start of FY20, PSS Insight contained 117 indicators and was intended for use as a global-level tool for monitoring PSS across countries and over time. As the purpose of the tool evolved to focus increasingly on use by national-level policy and decision makers for internal pharmaceutical systems monitoring, MTaPS worked with global partner Boston University School of Public Health to reconfigure the tool, reducing the number of indicators from 117 to 38, and proposed a method for benchmarking progress that can be readily deployed at the national level. MTaPS also initiated collaboration with WHO on the development of its proposed Access Global Benchmarking Tool.

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

MTaPS developed a policy and guideline document entitled *Practical Guide for Systematic Priority Setting and Health Technology Assessment (HTA) Introduction in LMICs,* a roadmap that provides a stepwise approach for HTA implementation. In October 2020, MTaPS hosted a webinar with over 300 attendees to launch the roadmap. The recording has been viewed more than 18,000 times and the roadmap has been downloaded at least 370 times. MTaPS has also been collaborating with the USAID Local Health System Sustainability (LHSS) project to develop an approach for tracking pharmaceutical expenditure using the Systems for Health Accounts (SHA) 2011 framework. The team has drafted a guide, which will enable countries to capture population-per-capita pharmaceutical expenditures per disease or drug therapeutic class more accurately.

The program collaborated with LaunchDSI, funded by the Bill & Melinda Gates Foundation, to conduct a case study in Tanzania on the engagement of retail drug outlets by the National Health Insurance Fund in the national benefits program. The case study characterizes barriers and facilitators related to incorporating retail drug outlets into national prepayment schemes and provides insights that countries can use when designing initiatives to include retail outlets in their health insurance schemes.

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

MTaPS collaborated with the West African Health Organization and the 15 Economic Community of West African States member states to develop a web-based platform for improving pharmacovigilance (PV) systems in the region. The platform will allow member states to share PV data and support the

strengthening of PV systems in the region. The program also completed a case study in Bangladesh to identify gaps in integration of infection prevention and control (IPC)/water, sanitation, and hygiene critical conditions into the quality-of-care and quality improvement tools and processes—establishing that the maternal and newborn health and quality improvement staff in health facilities generally rely on a set of eight tools related to quality improvement, IPC, and supportive supervision—and a robust internal/external supportive supervision mechanism is in place.

QUARTER 2 ACHIEVEMENTS & RESULTS

ACTIVITY 2.2.1: METHODOLOGY FOR ASSESSING THE ROLES OF NATIONAL PHARMACEUTICAL SERVICES UNITS (PSUS) AND THEIR CAPACITY TO FULFILL THEIR MANDATE

The first phase of this activity is a three-country case study to examine the current status of national PSUs with respect to their structure, roles, responsibilities, operation, how they have evolved over time, and what should be the critical roles and responsibilities of these units going forward. During this quarter, MTaPS finalized the study protocol and identified Côte d'Ivoire, Kenya, and Nepal as the potential cases. We are in the process of obtaining mission concurrence and have engaged a consultant to support the execution of the case studies starting with a desk review. MTaPS is also creating a technical working group to provide technical advice on this activity, and outreach to potential members is ongoing.

ACTIVITY 2.4.1: COMMON STANDARDS FOR REGULATORY INFORMATION MANAGEMENT SYSTEM (IMS) TOOLS IN LMICS

Activity 2.4.1.1: Dissemination and Roll-Out of Common Standards

In January, MTaPS successfully co-hosted a consultative workshop engaging national experts in pharmaceutical regulatory systems and IMSes from 11 countries in Africa and Asia. The purpose of the workshop was to orient them on the common standards activity, solicit feedback on the identified standards, and request involvement in future consultations noting the regulators' role as end-users. Participants acknowledged the importance of having common standards, discussed some of the specific challenges with IMS in their context, and how they may be addressed. This quarter, MTaPS also drafted an advocacy brief to argue for the importance and benefits of adopting a set of minimum common standards for regulatory IMS. The brief is under review. MTaPS and the Promoting the Quality of Medicines Plus program met with the WHO team to clarify their role in the activity and discuss how to best coordinate the development of a pathway/principles document for countries. Further discussion with the WHO team is still pending.

Activity 2.4.1.2: Optimize Pharmadex and the PV Monitoring System to Reflect Common Standards, Add Vaccines and Medical Devices, and Incorporate Emergency Use Authorizations and Monitoring/Oversight

MTaPS completed development of the registration and marketing authorization and import workflows as part of the system optimization. The team submitted two technical reports as deliverables for that aspect of the activity. The team has also tested the registration workflow in Nepal and is revising it accordingly. MTaPS has deployed the marketing authorization and import workflows on the Mozambique server and is making minor configurations.

ACTIVITY 3.3.1: MEASURING PSS, INCLUDING ACCESS TO MEDICINE

MTaPS implemented the first phase of data collection for the PSS Insight pilot. The team completed the desk reviews for Bangladesh and Nepal, and those for Tanzania and Uganda are near completion. In preparation for the second phase, MTaPS further oriented the MTaPS country teams on the activity and collaborated with them on a strategy for engaging government counterparts and to generate a list of key informants. MTaPS Tanzania facilitated a meeting with the pharmacy department and the chief pharmacist of Tanzania's Ministry of Health for the team to introduce PSS Insight and clarify the data collection process. Coordination is ongoing to schedule similar meetings with the ministries and missions in the other three countries. MTaPS also developed a general consultant scope of work to support in-country data collection. With respect to the redevelopment of pssinsight.org, the team identified internal staff resources for software requirements specification development, which is now underway.

ACTIVITY 3.3.2: PSS 101 COURSE

In February, MTaPS completed uploading the PSS 101 course e-learning modules to USAID University and started preparations for the first virtual blended delivery. In March, the team successfully delivered the first iteration of the course, engaging 65 participants across 40 countries. Participants included USAID staff from both health and non-health areas. The course combined 4 real-time interactive seminars with 10 asynchronous e-learning modules. The team also uploaded the course to the USAID Global Health eLearning Center and will be launching the course in April.

ACTIVITY 3.3.3: PSS LEARNING EXCHANGE ON THE JOINT LEARNING NETWORK (JLN) FOR UNIVERSAL HEALTH COVERAGE

This quarter, MTaPS finalized and submitted a concept note to the JLN management team for their steering group approval. The learning exchange will facilitate peer-to-peer learning among both JLN and non-JLN country participants to share on improving conflicts of interest management in national pharmaceutical systems. The team received approval of the concept note in March and plans are now underway to solicit expressions of interest with plans to conduct the exchange from June to August 2022.

ACTIVITY 5.4.1: TESTING BEHAVIORAL NUDGES FOR ANTIMICROBIAL STEWARDSHIP

Deloitte developed the first draft of a protocol outlining the steps for designing and implementing a social and behavior change intervention to encourage appropriate antibiotic use among health professionals in Uganda. The team received feedback from USAID in early March and revised the protocol, which it resubmitted to USAID for final review. Pending USAID approval, the team will submit the finalized protocol for ethical review at Makerere University before implementing the study in a purposive sample of MTaPS-supported facilities.

ACTIVITY 6: PROGRAM MANAGEMENT

This quarter, MTaPS submitted four organized session proposals to the Seventh Global Symposium on Health Systems Research (HSR 2022). MTaPS is currently coordinating individual abstract submissions for HSR 2022, the American Society of Tropical Medicine and Hygiene 2022 annual meeting, and the American Public Health Association 2022 annual meeting.

EXTENDED YEAR 3 ACTIVITIES

ACTIVITY 3: ROADMAP FOR HTA INSTITUTIONALIZATION

MTaPS received and approved mission concurrence to support the development of an evidence-based framework for HTA institutionalization in Ethiopia in February. The HTA team also presented the activity to the USAID Ethiopia mission and received positive feedback. MTaPS is now finalizing the recruitment of a consultant, who once fully onboarded, will plan a stakeholder engagement meeting and interviews as needed with different actors involved in HTA institutionalization in the country to kick off framework development.

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

In year 3, MTaPS and LHSS adapted the SHA framework and conducted an exploratory pharmaceutical expenditure tracking exercise in Burkina Faso using 2018 data. This quarter, the team submitted two deliverables associated with that pilot: a report documenting the challenges in collecting and compiling the data and a policy brief highlighting the results of the exploratory exercise core elements of the draft pharmaceutical expenditure guide. The team is also in the process of finalizing a second policy brief based on piloting the pharmaceutical expenditure tracking approach in Benin.

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

Based on the feedback from the OHS equity team, MTaPS developed a concept for a five-part webinar series exploring the theme of advancing equitable access to quality pharmacy services through private retail drug outlets. The insights gathered from the series will be supplemented with a targeted literature review to produce a technical brief on essential elements to consider for equitable and quality pharmacy services through the private sector. USAID has approved the concept and the team is now working on implementation.

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

MTaPS completed the successful recruitment of a consultant to support the ethical review and data collection in Mozambique. The team has onboarded the consultant, who has translated the protocol into Portuguese for submission by April 15 for the next round of ethical review.

EXTENDED YEAR 2 ACTIVITIES

ACTIVITY 8: SUPPORT AFRICAN REGIONAL HARMONIZATION EFFORTS FOR PV

MTaPS successfully completed all three deliverables for this activity. The platform went live in June 2021 and includes country sites, regional reports, and dashboards. The team is now working with the West Africa Health Organization to orient countries that have signed the data sharing agreement, incorporate the community of practice for the PV expert working group, and launch the platform among Economic Community of West African States member states on April 28, 2022.

BEST PRACTICES/LESSONS LEARNED

MTaPS continues to demonstrate the benefits of collaboration with our country counterparts and implementing partners as a critical best practice in achieving success in our program implementation.

The MTaPS-led desk review of standards for regulatory information management systems identified at least 56 relevant standards, underscoring the need for a minimum common set. The ongoing consultation process has shown, at least preliminarily, that NMRA respondents generally scored the feasibility of standards adoption higher than global or regional respondents did, and ranked process standards above dictionaries and knowledge tress, and data exchange standards.

Piloting of the new pharmaceutical tracking methodology has shown that to be successful, the exercise must include a strong cohort of data collectors to handle the high volume of data. Further, the inclusion of pharmacists is critical for facilitating data collection, organization, and mapping. The new methodology has improved the accuracy of estimating pharmaceutical expenditure tracking in both Benin and Burkina Faso. In Benin, for example, total pharmaceutical expenditure tracking in 2020 (USD $450.6 million) was five times that estimated through previous health accounts exercises.

Deliberations from the PSS 101 course revealed that most USAID staff had learnt for the first time the USAID approach to pharmaceutical systems strengthening and why it cannot be conflated with supply chain management. There was an increased understanding and appreciation for areas such as but not limited to - regulatory systems, medicine quality assurance, pharmaceutical governance, pharmaceutical financing and antimicrobial resistance.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
2.2.1. Pending mission director approval, submit protocols for ethical review; complete desk review; convene technical working group	April-June
2.4.1.1. Plan dissemination strategy for the activity; hold follow-up discussions with WHO re-developing the guidance document; complete analysis of feedback on selected standards; prepare for the validation workshops to finalize the set of common standards and road map for countries to adopt the standards	April
3.3.1. Finalize Uganda and Tanzania desk reviews Seek country approvals for pilot in Uganda and Bangladesh Develop country brief template and begin populating with desk review findings	April April April-June
3.3.2. Launch PSS 101 on the Global Health eLearning Center to a global audience; start French translation of PSS 101	April-June
3.3.3. Finalize learning exchange scaffold using a small working group (MTaPS, WHO, Boston University), complete recruitment of participants	April-June
5.4.1. Finalize the study protocol based on any further feedback from USAID; submit the finalized protocol to Makerere University for ethical review/approval; initiate baseline data collection after receiving any required ethical clearance	April-June
Year 3, 3. Support the development of an evidence-based framework for the institutionalization of HTA in Ethiopia—stakeholder engagement meeting and interviews to evaluate interest and situational assessment development	April-June
Year 3, 6. Launch webinar series; draft technical highlight	April-June
Year 3, 7. Complete ethical review in Mozambique and start data collection	April-June
Year 2, 8. Collaborate with West Africa Health Organization to launch the platform	April 28

F. VOLUNTARY ACCESS MECHANISM FOR ORIGINATOR HEALTH SUPPLIES (VAMOHS)

OVERVIEW

The US Agency for International Development (USAID) is exploring the feasibility and the design of potential first steps for the Voluntary Access Mechanism for Originator Health Supplies (VAMOHS). VAMOHS is a means to facilitate access to new (mostly on-patent) medicines and other health products in developing countries, particularly middle-income countries (MICs). The mechanism will facilitate access to medical products in a more rapid manner at higher aggregate volumes and lower unit cost to purchasers and patients in these countries. VAMOHS seeks to address existing market inefficiencies by helping de-risk these markets and reduce the transaction costs associated with market entry while also increasing the bargaining power of purchasers to promote prompt, commercially sustainable access to patient medical products (medicines, diagnostic tests, medical devices). Meanwhile, MTaPS has the expertise and has established presence and connections with potential MICs that seem best suited for the VAMOHS initiative, and which might be interested in participating in its pilot.

MTaPS is currently supporting USAID with the selection of possible countries and their entry points for a pilot of the VAMOHS mechanism. This selection process will identify critical aspects for future country and industry participation in VAMOHS and qualify success within countries for a potential proof of concept. For example, the right country, countries with adequate governance structures in place, economic and political stability, the heterogeneity of the purchasing markets within countries (including monopsony or oligopsony), functional information and monitoring system, and the right entry point given the political economy of what stakeholders should be engaged early in the process, as well as their potential position, interest, and level of power/agency to support or resist the VAMOHS approach.

CUMULATIVE PERFORMANCE TO DATE

The VAMOHS activity is a relatively recent project within MTaPS and performance has been assessed since the end of project year 3. More specifically, the MTaPS team has been providing support for USAID to refine its thinking on the VAMOHS medicines market access model, enablers of success, and best entry points since quarter 4 of year 3. Through desk reviews and qualitative analyses (including brainstorming sessions, in-depth interviews, and focus groups), the team has started evaluating the likelihood of success for VAMOHS. During quarter 4 of year 3 and quarter 1 of year 4, the MTaPS team held several meetings with USAID to refine the workplan and facilitated a few interviews with key stakeholders from Latin America who represented government agencies and pharmaceutical companies. The objective of these in-depth interviews was to collect feedback on the mechanism and identify areas of improvement in medical access particular to the regional context of Latin America. Given the interest expressed through these interviews, the MTaPS team organized a focus group with several stakeholders from the region to broaden the results for the qualitative analysis. Results from this focus group are explained in more detail under the Quarter 2 Achievements & Results section.

In addition, an initial conversation about a potential collaboration with IQVIA representatives to explore a partnership with VAMOHS, MSH/MTaPS, and IQVIA was held during quarter 1 of year 4. The objective of this potential partnership is to review existing data on product launch and penetration/revenue and ways in which VAMOHS would enable companies to launch in more countries.

After the first conversation, subsequent ones have taken place, so this activity was carried over to quarter 2 as there were further interactions between IQVIA and USAID.

QUARTER 2 ACHIEVEMENTS & RESULTS

As stated in the workplan, one of the tasks assigned to the MTaPS team in this activity is to facilitate two focus groups with regional experts representing different sectors and working on improving access to medical products. After several conversations with USAID during quarter 4 of year 3 and quarter 1 of year 4, it was agreed that the region selected for the first focus group would be Latin America. The focus group in this region was initially planned for quarter 1 of year 4; however, this activity was postponed until quarter 2 due to availability conflicts for some of the participants. The main objective of this activity was to collect feedback on the mechanism and identify areas of improvement in medicines access specifically for this region. A total of 15 attendees representing a diverse set of government agencies from different countries, representatives from several pharmaceutical companies working in the region, academia, and patient association groups joined this discussion, which took place virtually. During the session, several proposals around some of the challenges as well as proposals on the current state of access to innovative medicines in Latin America were presented to start the conversation. Based on the propositions, participants engaged in a deep discussion and had the opportunity to share their comments and views on the challenges presented and propose solutions in which VAMOHS could be key as a mechanism to increase access to medical products in the region.

Some of the key takeaways from the discussion during the focus group on VAMOHS in Latin America were:

1. Delayed regulatory approvals for medical products are a common issue in the region; however, it is only one of many reasons why access to drugs and technologies is a challenge in Latin America. If the regulatory issue gets solved, access to medicines is not necessarily fixed. VAMOHS could serve as a mechanism to look at inefficiencies and create a forum to increase availability, affordability, and accessibility to medicines.
2. Lack of trust between stakeholders, misalignment between national regulatory authorities and health technology assessment (HTA) institutions, limited capacity, and understaffed government agencies represent serious challenges. However, countries in the region are motivated to work on these issues. There is potential for VAMOHS to support capacity building within the region by providing technical assistance and handholding.
3. VAMOHS could work as an external agent (not government or private manufacturer) and be an innovator in multilateral conversations by taking the price element of the conversation as a marginal criterion and focusing on access, equity, and sustainability.
4. There are countries in the region, such as Argentina, that are using HTA from countries like the UK or Brazil, but countries in general are not willing to rely on external HTA assessments from other countries and extrapolate their results. A workable solution to the trust and transparency issue is to have another organization, such as VAMOHS, perform assessments and contextualize them for each country.
5. Some small countries in the region, particularly in the Caribbean, are paying higher prices for medicines and creating an equity issue. A tier pricing strategy could be a fair way to ensure that the cost is related to the capacity of countries, but if managed in a centralized way, it would require

rules of engagement accepted upfront. Taxations and markups represent another challenge to the systems. Tax exemptions for medicines and control of pharmacy/provider margins are policy solutions with robust evidence supporting them.

Overall, the first focus group was very productive and successful because the objective was achieved, and stakeholders had the opportunity to present different suggestions about how VAMOHS could act as a mechanism to address some of the challenges faced in Latin America in terms of access to medical products. For that reason, USAID continued to hold interviews with some of the individuals with whom they had not met prior to the workshop, aiming to collect additional information about challenges in a particular country, unmet clinical needs and products of interest that had a substantial health value in this context. In addition, a request to hold a third regional focus group was presented to MTaPS by the VAMOHS advisory group, aiming to collect information about challenges and status of access to medicines in Africa. Given the latter, during quarter 3 of year 4, MTaPS will host two additional focus groups: one for Asia, which was already accounted for in the workplan submitted by MTaPS to USAID, and an additional workshop for stakeholders in Africa. These two focus groups are currently in the planning stages and details of the results will be presented in a subsequent report.

BEST PRACTICES/LESSONS LEARNED

One of the lessons learned from the first focus group was that VAMOHS could potentially be a valuable tool for countries across Latin America, as there is a need for, and increasing interest in mechanisms that can address some of the current issues that hinder access to medicines and medical products, such as transparency and lack of trust between stakeholders. One of the emerging themes during the workshop was that there is a need to increase trust among the different sectors and as such, VAMOHS could act as an external agent in multilateral conversations for price negotiations. Continuing to facilitate these focus groups in different regions might be useful to refine the objective and scope of VAMOHS, taking into consideration the different challenges and needs faced across diverse regions.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1: Refine thinking on the VAMOHS medicines market access model MTaPS will support USAID to refine its thinking on the VAMOHS medicines market access model, enablers of success, and the best entry point. Through desk reviews and qualitative analyses (attending meetings, co-creation, brainstorming encounters, focus groups, and in-depth interviews if needed), the team will assess the likelihood of success and the best entry point for VAMOHS.	Q1-Q3/Y4
1.a. Conduct an initial horizon scanning triangulated via focus groups of therapeutic areas that may represent the most value for MICs MTaPS is conducting a horizon scanning triangulated via focus groups of therapeutic areas that may represent the most value for MICs (from the perspective of both payers and manufacturers), aiming to identify the therapeutic areas of most interest. The data collected will be of help for depicting the most relevant criteria for topic selection that will serve for future and dynamic priority setting for VAMOHS once it has been established. During quarter 2 of year 4, the first focus group was conducted with stakeholders in Latin America, representing different organizations that included—among others—government agencies, pharmaceutical companies, and academia. This activity will continue during quarter 3 of year 4 with two additional focus groups: one in Asia and one in Africa.	Q1-Q3/Y4
1.b. Codesign a framework for strategically selecting target pilot countries to increase the likelihood of success MTaPS and USAID will codesign a framework for strategically selecting target pilot countries to increase the likelihood of success. Among the criteria to be considered are level of income (focus on MICs), political and economic stability, a "dual" burden of disease, minimum institutional capacity to enable	Q3/Y4

negotiations on follow-up payment-linked outcomes, and countries with substantial regulatory barriers to innovation and high rates of "judicialization of health."	
Activity 2: Develop a messaging strategy to support dialogues with key stakeholders about VAMOHS introduction MTaPS will develop a messaging strategy for VAMOHS introduction in-country (industry, government, purchasers). Through qualitative methods of research (in-depth interviews, focus groups, and stakeholder analysis), the team will collect data from key respondents to inform USAID's decision on the right messaging to introduce VAMOHS (key messages to increase trust and establish the mechanism as an honest broker). MTaPS will also consider how a national health sector (public and private, where appropriate) might work together to develop an "investment case" for helping address inefficiencies, such as moving to a higher volume commitment for a product, investing in needed health systems (diagnostics, clinician training), or expediting regulatory reviews. This activity will help develop an understanding of the motivators within purchasers, and what might make VAMOHS attractive.	Q3/Y4
2.a. Develop messaging strategy for buyers and manufacturers based on information and feedback received during semi-structured interviews and focus groups Information collected during the semi-structured interviews and focus groups with experts from two regions will serve as the foundation for the messaging strategy to support dialogues between different stakeholders (including government agencies and pharmaceutical companies) when introducing VAMOHS.	Q3/Y4

G. DRC EBOLA POST-MORTEM SURVEILLANCE (DEPS)

ACTIVITY OVERVIEW

The first case under the DRC's 13th Ebola virus disease (EVD) outbreak was confirmed on October 8, 2021, in the Beni health zone (HZ) of North Kivu province. There were eight confirmed cases and three possible cases across the three health areas (HAs) of Bundji, Butsili, and Kanzulinzuli. After the declared end of the outbreak on December 16, 2021, the 90-day period of heightened surveillance began. After receiving the task order for the DRC Ebola post-mortem surveillance (DEPS) activity on December 16, 2021, MTaPS partner FHI 360 quickly mobilized to implement rapid diagnostic test (RDT) activities during the 90-day surveillance period.

Before activating the RDT teams, MTaPS began by participating in coordination meetings to harmonize the intervention approach and the HAs to be covered. After discussing the selection criteria, the Bureau Central de La Zone de Sante (BCZS) collaborated with the Infirmier Titulaire to select the team members. In partnership with the BCZS, Institut National de Recherche Biomedicale (INRB), Centers for Disease Control and Prevention (CDC), International Federation of Red Cross (IFRC), and iMMAP, MTaPS started implementing surveillance activities—including supporting 12 RDT teams and radio programming facilitated by community leaders. RDT teams covered 12 HAs of the Beni HZ, including the 3 HAs with confirmed and probable cases and the following 9 bordering HAs: Ngongolio, Tamende, Mabakanga, Kasabinyole, Malepe, Kasanga, Ngilinga, Mukulyia, and Mabolio. The radio programming covered the entire Beni HZ with a total of 19 HAs and other nearby HZs.[8]

This activity is being implemented by MTaPS core partner FHI 360.

CUMULATIVE PERFORMANCE TO DATE

Over the course of the reporting period, MTaPS trained 12 teams of 36 people (7 female, 29 male), and 7 supervisors. After a two-day training session that focused on the importance of RDTs as a diagnostic and post-mortem surveillance tool for EVD; data collection and management; communication and community engagement; utilization of personal protective equipment (PPE); dead body management; and use of the RDT, MTaPS equipped these teams with boots, raincoats, latex gloves, heavy duty gloves, hand sanitizer, masks, soap, tablets, and stipends. Additionally, they received t-shirts and caps with awareness messages.

To increase acceptance of RDT activities, MTaPS established partnerships with two local radio stations: Radio Television Rwanzururu and Radio Television Kivu Amani. Additionally, MTaPS organized a one-day briefing for the ten (four female, six male) community leaders on the vital role of risk communication and community engagement (RCCE) in public health emergencies, radio call-in programming, and journalism techniques and briefed them on the purpose of the RDT activity in EVD post-mortem surveillance. When the RDT teams transitioned from performing the RDT to polymerase chain reaction (PCR) tests, MTaPS organized a session for the community leaders to update them on the

[8] Based on the feedbacks collected during the radio programs and the results of the radio stations' coverage capacities, FHI 360 discovered that the programs were also followed in the Oicha, Mutwanga, Manguredijpa, Mandima, and Mambasa HZs.

status of RDT activities, including the temporary stockout of RDTs and the interim strategy for the collection of swabs for the PCR test followed by securing the bodies.

To ensure that the field activities ran smoothly and that the RDT teams and community leaders produced high quality work, MTaPS supported the seven local supervisors, a data manager, and a laboratory technician from INRB to provide onsite supervision and continued mentoring. Local supervisors conducted supervision of activities and regular joint follow-ups took place between local supervisors and MTaPS partner FHI 360 staff. Supervision included stakeholders from Bureau central de la zone de santé (BCZS), INRB, DPS, FHI 360, CDC, and IFRC.

QUARTER 2 ACHIEVMENTS & RESULTS

Since the beginning of the interventions (**December 31, 2021–March 26, 2022**) the following results have been achieved:

- The 12 teams of 36 people positioned in 12 HAs have performed the following:

Table 2: Alerts Received and Responded to between December 31, 2021, and March 27, 2022

	Butsili	Bundji	Kanzulinzuli	Ngongolio	Tamende	Mabakanga	Kasabinyole	Ngilinga	Kasanga	Malepe	Maboli	Mukulyia	Total
Number of Alerts Received	34	10	58	25	23	28	7	27	20	20	13	15	280
Number of Completed RDTs	4	4	4	7	6	13	3	6	0	2	4	7	60
Number of Non-Reactive RDTs	4	4	4	7	6	13	3	6	0	2	4	7	60
Number of PCR Tests Performed	34	8	54	18	17	15	4	21	20	18	9	8	226[9]
Number of PCR Negative Results	34	8	54	18	17	15	4	21	20	18	9	8	226

- The 10 trained community leaders conducted **49** radio programs followed by **49** rebroadcasts. During the radio programs, community leaders collected **216 pieces** of feedback via direct phone call and messages. Additionally, **112 feedbacks** were received verbally by the RDT teams.
- Supported **14** community dialogue and awareness sessions on the RDT-related messages. **576** people (357 female, 219 male) participated.
- Conducted **26** joint supervision visits with local supervisors and **2** joint supervisions with the BCZS, CDC, IFRC, and local supervisors. Additionally, FHI 360 conducted **1** joint provincial-level supervision with the INRB, DPS, BCZS, IFRC, CDC, and local supervisors. These supervision visits strengthened the RDT team's capacities on data collection and the use of both RDT and PCR data collection tools.

[9] Six of these PCR performed were done for quality assurance after the RDT was performed.

- As part of the field coordination, MTaPS supported training for the Red Cross volunteers on the RCCE and on the techniques of PPE donning and doffing. In total, 89 people (31 female, 58 male) participated.
- Collected all expired RDT kits from the teams and handed them over to the INRB laboratory for disposal.

KEY PROGRAM CHALLENGES

The CDC had informed partners involved in the RDT activity that there would be a two-week stockout of RDT kits in early February, with the first supply expiring on January 31. On February 25, the CDC confirmed that the delivered kits did not meet the necessary quality criteria. At the most recent INRB meeting held in late March, the CDC informed MTaPS that the next batch of RDT kits would be available in early April. The lack of RDTs and the uncertainty of their arrival has caused challenges for the RDT activities. During this reporting period of kit shortage, RDT teams have been performing PCR tests. Although they have not encountered any resistance during the tests, community members must wait several hours before receiving the test results instead of the 30 minutes needed for the RDT.

Another challenge MTaPS faced was the unpredictability of the security situation in the areas of operation. In late January, civil society pressure groups—including Lutte Pour Le Changement and Véranda Mutsanga—organized *villes mortes* in Beni to protest the state of siege in effect across the Ituri and North Kivu provinces. Due to the unpredictable security situation in Beni and near the office, FHI 360 advised staff to work from home on several different days, which impacted staff and RDT supervisors' abilities to carry out joint supervision visits during the week. However, these events did not significantly impact the overall activity implementation.

BEST PRACTICES & LESSONS LEARNED

During the reporting period, communities have demonstrated good involvement in post-mortem surveillance activities through the community engagement approach and the introduction of RDT teams in contrast to past epidemics. The community-led radio programming resulted in community members alerting the RDT teams and the radio program facilitators of deaths in the communities themselves. In the Ngilinga HA on January 20, a radio program listener alerted one of the leaders facilitating the show to a case of community death. Also, in the Ngongolio HA—one of the most resistant HAs during the EVD outbreak—as well as the Kasabinyole, Kanzulinzuli, and Kasanga HAs, family members and youth groups reported several cases of community deaths to the RDT teams. The RDT teams also faced one instance of community resistance throughout the reporting period, which was swiftly resolved. The case of resistance occurred in the Butsili HA in mid-January when motorcycle taximen resisted an RDT team attempting to perform an RDT on a deceased taximan. While the taximen did not want the team to perform the RDT, a community member on the team negotiated with them, leading them to accept the collection of a sample.

To ensure accountability to the populations reached through the activity, MTaPS' monitoring and evaluation team established feedback mechanisms (receiving, analyzing feedback, and answering questions). The principal feedback mechanisms in place for community members under the DEPS activity are sharing written or verbal feedback directly with RDT team members or via phone call/SMS message during the radio programs. MTaPS received and responded to 318 pieces of feedback during the

reporting period. To develop appropriate responses, MTaPS participated in weekly community feedback analysis sessions with community leaders and HZ authorities. Most of the feedback received was requests for information or assistance (57%), while the remaining were positive feedback (37%), minor dissatisfaction (4%), or did not relate to MTaPS activities (2%). The most utilized mechanism was sending SMS messages to radio program facilitators (68%), followed by communicating feedback to RDT team members (32%).

Feedback from the community underscored the importance of continuously distilling well-calibrated community-led contextualized health education messages to overcome resistance. In terms of positive feedback, many community members expressed their appreciation for the radio programs and committed to spreading the information they had learned within their communities, while others were grateful for the quick results made possible via RDTs. Among the minor expressions of dissatisfaction, a few individuals expressed discontent about continually talking about Ebola when it no longer presented in the Beni HZ. Other community members wanted to know why handwashing was important; if those carrying out the RDT activity were community members or foreigners; and if the leaders themselves had been vaccinated. Finally, some community members expressed the desire for MTaPS to continue with post-mortem surveillance activities, including radio programs.

ACTIVITIES & EVENTS FOR NEXT QUARTER

During the remaining period of this project, MTaPS will conduct the following activities:

ACTIVITY AND DESCRIPTION	DATE
Organization of closing sessions to officially hand over the activities to the communities	Until April 15, 2022

PHOTOS

FHI 360 completes joint supervision with the Beni BCZC in the Bundji HA. In this photo, the BCZC emphasizes the need for a debriefing session after each training and recommends that the team share the knowledge gained with other health care workers in the HA. Photo Credit: Jean Paul Tsandiraki

FHI 360's project liaison officer presents RCCE strategies during the RDT team training. Photo Credit: Jonathan Kihuo

FHI 360's community engagement assistant explains post-mortem surveillance activities to the leaders of the women's groups, requesting their engagement. Photo Credit: Jadot Kasereka (Ngongolio RDT team member)

Family photo taken after the community dialogue session with religious leaders in the Kasanga HA. Photo Credit: Justin Mayani (Beni BCZC staff)

H. GENDER

OVERVIEW

The goal of the MTaPS gender core-funded portfolio is to address both the biological (sex) and social differences (gender) that impact equity in pharmaceutical systems. This focus is critical to MTaPS' goal of ensuring sustainable access to and effective use of affordable medicines that are equitable for all sexes and genders. A pharmaceutical system consists of people, resources, processes, and interactions within the broader health system to ensure access to and appropriate use of safe, effective, quality-assured, and affordable medical products and related services to improve health outcomes. Each of these conditions requires that sex and gender be integrated to ensure sustainable and equitable access to safe, effective, quality assured medical products and related services to improve outcomes for all sexes and genders. These outputs support the broader cross-cutting goal of ensuring that MTaPS' activities are sex- and gender-responsive to promote equitable access to medicines.

CUMULATIVE PERFORMANCE TO DATE

Core-funded gender activities focused on bringing gender to the forefront of MTaPS through the following activities:

In year 2, the gender working group (GWG) helped to connect those across the different MTaPS portfolios in discussions of gender activities and areas of possible collaboration and learning. In addition, GWG has been used to discuss and get feedback on document development and utility. Active as needed in years 2 and 3, the working group in year 4 was only held as needed due to the concern of line-item funding for participation in this group by other members.

In coordination with the monitoring, evaluation, and learning team, the MTaPS gender advisor provided key inputs and recommendations for useful gender indicators, which resulted in two indicators specifically measuring gender inclusion across the program: number of pharmaceutical sector-related policy, legislation, regulation, or operational documents with gender inclusive language that are developed or updated with technical assistance from MTaPS, and number of gender-related technical guidance documents and other capacity building products produced by MTaPS. These gender-specific indicators will be used going forward and assist the entire program in measuring progress against these two broad indicators.

Three key capacity building documents and presentations stand out as important to highlight as key successes in year 2. The first, entitled "A Checklist for Gender Considerations for Pharmaceutical Systems," was developed in collaboration with LeaderNet, an online learning and exchange platform managed by MSH for global health professionals working to strengthen health systems in low- and middle-income countries. Another key capacity building document entitled "MTaPS Gender Guide for Work Planning" was developed by the MTaPS gender advisor with inputs from the senior management team (SMT) and disseminated to all program staff to assist their gender inclusion activities into third-year work plans. Last was a presentation entitled "Transforming Health and Pharmaceutical Policies to be Gender Inclusive" given by the MTaPS gender advisor during one of the bi-weekly MTaPS staff meetings in August 2020. This presentation gave an overview of what a gender-inclusive policy entails across distinct levels within a health system, why it is a critical element of gender mainstreaming, and provided context-specific examples of how gender-inclusive policies fit across MTaPS' five program

objectives. Each of the above key activities built on and increased MTaPS' gender capacity and learning within the program as well as integrated MTaPS gender indicators.

The **year 3 focus** for core-funded gender activities was to better define the impacts of not just gender, but also sex on pharmaceutical systems strengthening (PSS) health outcomes and to find better ways of bringing sex and gender to the forefront of MTaPS. To understand the gaps in understanding of how sex and gender impact PSS, a survey was developed and launched to assess the use and usefulness of the gender integration guide (developed in year 2) for year 3 work planning. The survey, developed and led by MTaPS' partner Overseas Strategic Consulting with input from the SMT, was distributed to SMT members. In brief, only one-third of respondents had a good understanding of sex and gender considerations in PSS. Important findings of the survey included that the guide was understandable, easy to read, of the right length, and had relevant entry points. However, it was less useful for work planning and training was needed to utilize the guide efficiently. Only one-third of respondents used the guide, and only 25–30% of respondents added sex/gender-specific activities to year 3 work plans. And, if gender activities were added, they focused largely on "equal" participation and did not consider important sex/gender pharmacodynamics, especially within the Global Health Security Agenda (GHSA) portfolios. A review of approved year 3 work plans found that 75% did not include any sex/gender activities, and there were many missed opportunities for sex/gender activities in year 3 work plans. Based on survey findings, it was determined that training was necessary for MTaPS staff on sex/gender considerations in PSS, and practical examples would be helpful for staff to integrate sex/gender into work planning.

The monthly GWG was re-established. However, given the lack of gender activities in year 3 work plans, the group opted to meet only when there are pressing issues that need review, given the time commitments of group members.

Based on survey results—and to address MTaPS staff's lack of understanding of how sex and gender need to be integrated into PSS—the gender advisor started an informational series called the "Gender Gist" blog, geared for field practitioners on sex and gender considerations important to PSS that are tied to MTaPS activities. The Gist includes useful, concise, and practical information for different topics in PSS. These blogs were among the top pages viewed on the MTaPS website. Published blogs in year 3 include:

- Lawry LL, Creating Sex/Gender-Responsive Health Supply Chains: COVID-19 Reminds Us Again. https://www.mtapsprogram.org/news-blog/creating-sex-gender-responsive-health-supply-chains-covid-19-reminds-us-again/
- Lawry LL, The Importance of Being Gender Responsive for COVID-19 Vaccine Introduction: Build It Right or They Won't Come. https://www.mtapsprogram.org/news-blog/build-it-right-or-they-wont-come-being-gender-responsive-for-covid-19-mass-vaccination/
- Lawry LL, How Sex and Gender Impact Antimicrobial Resistance Risk. https://www.mtapsprogram.org/news-blog/how-sex-and-gender-impact-antimicrobial-resistance-risk/
- Lawry LL. Sex, Gender, and Vaccines: Considerations for COVID-19. https://www.mtapsprogram.org/news-blog/sex-gender-and-vaccines-considerations-for-covid-19-vaccine-immunity/

To reinforce the necessity of sex and gender integration in PSS, presentations to the COR and MTaPS staff in year 3 included "The Importance of Being Gender-Responsive for COVID-19 Vaccination Introduction: Afghanistan Case Study"; "PSS in Practice: USAID MTaPS Knowledge Exchange Series"; and "Sex, Gender, and PSS: A Focus on Antimicrobial Stewardship and Sex and Gender Implications in Pharmaceutical Service Strengthening." The gender advisor also developed a presentation for USAID Missions to understand how sex and gender are important in PSS. To add data to the presentation, she initiated a desk review of year 4 training to assess whether MTaPS included sex and gender concepts and whether these trainings need to be updated to include these concepts in PSS. It was determined that none of the trainings to be updated in year 4 included sex and gender concepts relative to PSS.

Throughout **year 3**, MTaPS' gender advisor identified opportunities for interventions to mitigate sex and gender disparities within pharmaceutical systems and their beneficiaries within technical activities that were country-specific and/or crosscutting to the project such as for antimicrobial stewardship under the GHSA. In addition to the blogs and presentations, and contributions to the journal article "Point prevalence survey of antibiotic use across 13 hospitals in Uganda," one-on-one meetings were conducted with country teams to educate, mentor, and assist in developing sex and gender activities for year 4. Finally, technical reviews of the year 4 work plans for MTaPS countries were conducted and the gender advisor finalized sex and gender indicators in MERL plans with careful review to ensure that sex and gender differences were noted and accounted for in relevant indicators.

The **year 4 focus** for the core-funded gender portfolio, in addition to numerous country-specific sex and gender activities, is continuing the momentum of bringing sex and gender to the forefront of MTaPS through scholarly activity, education, and mentorship. Year 4 will focus on starting the development of knowledge products that formalize practical ways to integrate sex and gender in PSS, creating a methodology for case studies in year 5; academic products such as a journal articles to address the need for standardized PSS tools to incorporate sex-disaggregated data; technical guidance on incorporating sex-disaggregated data and gender considerations as part of antimicrobial stewardship interventions presentations to staff and partners; and Gender Gist blogs relevant to current activities.

QUARTER 2 ACHIEVEMENTS & RESULTS

A panel presentation in support of the GHSA action package on antimicrobial resistance (AMR) entitled "GHSA-Supported AMR Investments: Results and Lessons Learned in Strengthening Infection Prevention and Control (IPC); Enhancing Inclusion; and Enabling Rapid COVID-19 Response and Future Pandemic Preparedness" was accepted for presentation at the 2022 Global Health Security Conference in June/July 2022. The panel will discuss MTaPS' successful collaboration with national and facility counterparts to implement IPC interventions—including performance assessments, health worker training, and mentorship—and the importance of gender- and sex-responsive approaches for improving IPC capacity to decrease AMR.

The Gender Gist blog series includes useful and practical information on sex and gender considerations for different topics in PSS to ensure that MTaPS activities are sex- and gender-responsive to promote equitable access to medicine. The blog published this quarter, "Lawry LL. We Can Only Fix What We Know About – Why Sex-Disaggregated Data in Pharmaceutical Systems is Crucial," addressed how collecting, analyzing, and reporting sex-disaggregated data is important for evidence-based policymaking, advocacy, and accountability. These data help us develop sex- and gender-responsive programs that are

necessary to evaluate risks to improve health and well-being. Disaggregating data by sex can help in achieving health equity.

A typical gender analysis ignores biological differences that impact PSS; therefore, an adapted gender analysis for PSS needs to understand the sex and gender dynamics within a community that impact PSS. By creating an adapted gender analysis that is specific to PSS, MTaPS and other PSS programs can easily identify where programs benefit sexes and genders equitably and are able to identify any sex and/or gender inequities that might cause negative outcomes and how to mitigate them. During this quarter, the gender advisor continued developing a PSS-specific gender analysis and its associated interview guides as an MTaPS knowledge learning product. The PSS gender analysis is critical to MTaPS' goal of ensuring sustainable access to and effective use of affordable medicines that is equitable for all sexes and genders.

As part of continued mentorship and education on sex and gender concepts in PSS, a presentation and discussion with the west Africa technical working group on sex, gender, and antimicrobial stewardship occurred this quarter. The discussion will be used for drafting technical guidance on incorporating sex-disaggregated data and gender considerations as part of antimicrobial stewardship interventions.

The gender advisor participated in biweekly staff meetings, the quarterly COR, and technical meetings, and developed a task order to meet country-level gender activity needs. Reviews of COVID-19 workplans and other country workplan reviews were completed to ensure sex and gender were integrated into activities. Given the reviews, the gender advisor wrote sex and gender technical guidance on adverse events following immunization for several countries with COVID-19 work plans.

BEST PRACTICES/LESSONS LEARNED

Even with presentations and other academic writings, one-on-one mentoring with country teams appears to be the most effective for getting staff to fully understand the importance of sex and gender integration into PSS activities. This has led to increases in tasks for the gender advisor and more engagement early in work planning. Sex-disaggregated data throughout the program is lacking in reporting and tools, and although attempts were made to get sex-disaggregated data across all activities, this remains a challenge as there is still a misunderstanding that "gender" (cis, trans, and non-binary individuals) is not "sex" (male/female biological determination). Gender and sex continue to be used interchangeably and will require more effort.

ACTIVITIES & EVENTS FOR NEXT QUARTER

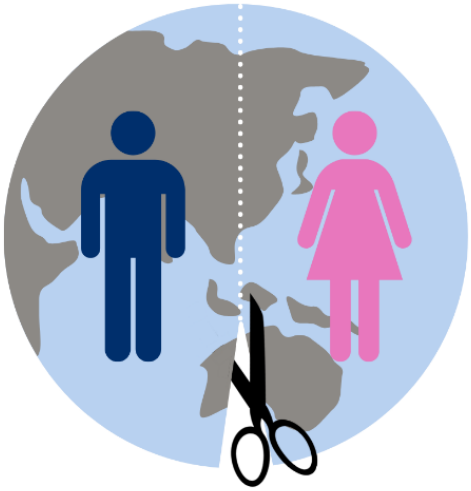
ACTIVITY AND DESCRIPTION	DATE
Gender Gist blog – GHSC summary from panel presentation	July 2022
Draft a technical commentary paper on the need for sex-disaggregated data and recommendations for improvement in WHO PSS methodology	June 2022
Attending staff, quarterly, and technical meetings	May-August 2022
Continue to develop PSS gender analysis guide and instruments	September 2022
Develop case study task order for year 5 assessment of sex/gender PSS successes	July 2022

Pictures (in case you have not seen them) from blogs that might add visual effect to the gender section:

Supply Chain blog that shows that PPE was not sex equitable:

Supply Chain blog that shows that PPE was not sex equitable:

Sex-disaggregated data:



AMR Blog:

Vaccines:

4. PROGRESS BY COUNTRY

A. BANGLADESH

FIELD SUPPORT

OVERVIEW

The overall goal of the USAID MTaPS Program in Bangladesh is to strengthen pharmaceutical systems to ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable medical products and related pharmaceutical services in support of the Government of Bangladesh's (GOB) health objectives and commitment to achieving universal health coverage (UHC).

To achieve the goal, MTaPS Bangladesh has the following technical objectives:

- Objective 1: Procurement and supply chain systems improved and modernized
- Objective 2: Pharmaceutical regulatory systems strengthened
- Objective 3: Systems for evidence-based decision making institutionalized
- Objective 4: Pharmaceutical services that promote appropriate medicine use and antimicrobial resistance (AMR) containment (ARC) improved
- Objective 5: Pharmaceutical financial resource allocation and use optimized

The MTaPS' overall strategic approach is to support the GOB in using evidence-based recommendations and tested approaches to strengthen the pharmaceutical system. MTaPS is providing technical assistance to the Ministry of Health and Family Welfare (MOHFW) to build institutionalized and sustainable capacity, which is critical to achieving UHC, sustainable development goals, and the country's self-reliance.

CUMULATIVE PERFORMANCE TO DATE

With MTaPS facilitation, MOHFW and key directorates developed a strategic plan for coordinated procurement. The plan includes mapping MOHFW's procurement entities and their practices, identifying actions with timelines, and periodic reviews. MTaPS reactivated and strengthened the Procurement and Logistics Management Cell functions in two divisions of MOHFW (Health Services Division and Medical Education and Family Welfare Division) through advocacy with their staff and reviewed the terms of references (TOR) to ensure effective and efficient procurement systems. MTaPS also developed the Table of Organization and Equipment (TOE) up to tertiary level health facilities and updated the medical and surgical requisites (MSRs) list with specifications. MTaPS has also been assisting in the efforts of the MSR List Updating Committee constituted by MOHFW to assign standard prices to the updated list.

Following MTaPS' recommendations, the Directorate General of Family Planning (DGFP) allocated adequate funds in their operational plans (OPs) for maintaining and managing their systems for sustainability. MTaPS provided technical assistance to DGFP in reviewing and managing the stock status of reproductive health and family planning (FP) commodities at various levels of the supply chain, resulting in maintaining stock-out rates at service delivery points (SDPs) below 1%. DGFP reduced

unnecessary procurement of FP injectable commodities by 20 million units, saving USD 9.6 million during FY 2021-22. These results were achieved by utilizing data generated from the MTaPS-developed DGFP electronic logistics management information system (eLMIS). Additionally, MTaPS introduced the electronic asset management system (eAMS) in all 62 district hospitals (DHs) across the country. Among them, approximately 50% completed entering data on assets into the system, which allows near real-time tracking of assets and timely maintenance and contributes to ensuring effective procurement.

MTaPS successfully established e-TB Manager (over the e-Tracker tool) as the digital platform to capture individual tuberculosis (TB) patient information and management, enabling the National TB Control Program (NTP) to maintain proper and accurate recording and reporting of quality TB data. The system has been rolled out nationally to all 868 sites. NTP has declared paperless reporting of TB data by using e-TB Manager for selected divisions and is planning to deploy it nationwide in a phased manner. These steps have reduced the workload for end users and made the data available in real-time, allowing prompt monitoring and management actions. e-TB Manager is interoperable with the Janao app to capture information from TB patients treated at private centers, thereby increasing the data network and visibility. The system server has been transferred from MSH to the Management Information System (MIS), Directorate General of Health Services (DGHS) and managed by local developers. The system has been enhanced for electronic reporting of active TB drug safety monitoring and management (aDSM) in all 10 drug-resistant TB (DR-TB) sites to allow data analysis and prompt actions by the Directorate General of Drug Administration (DGDA). In collaboration with NTP, MTaPS completed a peripheral TB storage system assessment. As part of the assessment, options for storage integration were analyzed, and a phased transition plan was proposed. The phases were set based on preparedness scores of each facility at the peripheral level. The plan includes the timeline for transition of storage from nongovernmental organization sites to the government to ensure government leadership and sustainability of the storage process.

In years 1 and 2, MTaPS assisted DGDA in developing an inspection strategy for model pharmacies and model medicine shops. In year 3, MTaPS facilitated DGDA's scaling up of pharmacovigilance (PV) to 30+ government and private health facilities by providing training and creating PV sections at all these facilities to continue PV actions. Also in year 3, MTaPS led development of DGDA's action plan based on a five-year strategic plan and assisted in establishing a monitoring mechanism for implementing the institutional development plan. An electronic inspection and licensing system for pharmacies has been implemented with MTaPS support as well. In the latest WHO Global Benchmarking Tool (GBT) assessment, DGDA achieved the highest score in PV, an MTaPS-supported function.

Built on the objectives of the GOB's 20-year health care financing strategy, MTaPS worked with MOHFW and other stakeholders to explore options for supporting implementation of the pharmaceutical-related components of the strategy, including pharmaceutical expenditure tracking. This activity has been undertaken with the technical assistance of MTaPS' partner Results for Development, which delivered a situational analysis report.

QUARTER 2 ACHIEVEMENTS AND RESULTS

MTaPS facilitated a workshop organized by MOHFW to discuss shared challenges in documenting procurement processes received from procuring entities for vetting or approval. Recommendations from the workshop were to develop a checklist incorporating all the issues in line with Public

Procurement Rules 2008 and organize periodic workshops for monitoring. Additionally, MTaPS updated a list of common MSRs for feedback from the members of the MOHFW MSR List Updating Committee and is also working on assigning prices to the related items.

Based on discussions and demonstration of the system, the Central Medical Store Depot (CMSD) approved MTaPS to customize the comprehensive eLMIS with COVID-19-related commodities to work as a COVID-19 eLMIS for the time being. Once the comprehensive system is fully developed/deployed countrywide, it will be the unique system to manage all medicines and medical products under the DGHS health program. This process will contribute to better inventory management for all products at CMSD.

MTaPS facilitated a five-day training for NTP officials on quantification and an early warning system for TB medicines. The objective of the training was to build the capacity of NTP officials and other key partners (i.e., BRAC; Damien Foundation; Interactive Research & Development; the International Center for Diarrheal Disease Research, Bangladesh; and the Alliance for Combating TB in Bangladesh [ACTB] program) to accurately estimate quantity and budget requirements for procurement and supply chain of TB medicines and to avoid stock disruptions by using early warning systems. MTaPS facilitated training organized by NTP on the use of e-TB Manager for the newly recruited 71 (17 women and 54 men) district surveillance medical officers (DSMO) at all 64 districts to strengthen peripheral supervision and monitoring of NTP. The DSMOs will be working as NTP's district representatives to supervise and monitor TB activities in their assigned districts.

Staff of PV Department at DGDA facilitating the 14th Meeting of the ADRAC at DGDA on March 21, 2022 (Photo credit: Md. Abul Kalam Azad, MTaPS)

MTaPS is contributing to increasing the DGDA GBT score and improving the skills of DGDA officials. MTaPS provided support to DGDA for a range of activities, including drafting legal provisions, guidelines, and procedures; facilitating meetings and visit plans; organizing training calendars; and developing risk communication procedures, organograms with TOR, and components of quality management systems (QMSs). Around 800 adverse events (AEs), including aDSM reports received from July 2021 to February 2022, were assessed by DGDA with MTaPS support. Among them, 35 serious AEs and 9 aDSM reports were reviewed by the Adverse Drug Reaction Committee (ADRAC). Moreover, six medicine alerts published in the WHO pharmaceutical newsletter were also discussed by the committee. As outcome of this discussion, some regulatory recommendations were made.

BEST PRACTICES/LESSONS LEARNED

MTaPS handed over the DGFP eLMIS and two inventory management tools (Warehouse and Upazila Information Management Systems) to DGFP in FY19. Management, enhancement, and capacity-building activities for the systems are being managed by DGFP with GOB using its own funding. The systems are working effectively and helping DGFP ensure product availability at the SDPs for better service for clients utilizing these systems. MTaPS created a pool of master trainers and troubleshooters at the DGFP program and advocated with DGFP to keep allocating budget in their OP for managing the system, including training new users and refreshers for existing users. A lesson learned from this activity is that local capacity for procuring, maintaining, and operationalizing information management systems are all key components of a program's long-term viability.

The transfer of the e-TB Manager server from MTaPS to the Government of Bangladesh's MIS team and the development of country capacity to manage the server, including system enhancement, propelled the implementation of MTaPS-supported TB activities in Bangladesh. The server and software were previously managed by an international developer outside of the country, but now, with local capacity built, the server has been transferred to DGHS, and e-TB Manager software is now managed by country experts. Switching public health data recording and reporting to paperless is a lengthy process but brings impactful benefits. NTP had being using paper-based forms to collect distinct types of TB reports from all reporting sites since the introduction of the DOTS strategy in 1993. The phased introduction of paperless reporting will potentially cover half of the country by April 2022 and all sites by December 2022, improving data quality and ensuring accurate reporting and data for decision making at all levels.

Up to program year 2, MTaPS provided support to DGDA to raise awareness of PV among stakeholders countrywide, increase the number of AEs reported, and ensure safety of medicines and medical products. After this period, MTaPS sustained advocacy to include adequate funds in the OP, which was granted by MOHFW, and currently, DGDA is using its own funds to continuously conduct awareness programs.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1: Update the Price Guide of Medical Equipment and align with the revised TOE (carried over from Year 3) ▪ Hire consultant and one-line specification for items in the TOE.	June 30
Activity 1.1.2: Map the organizational and governance structure of DGHS procurement functions. ▪ Hire consultant and map organizational and governance structure.	June 30
Activity 1.2.1: Continue to enhance the capacity of national and sub-national-level managers to use data for decision making and compliance with monitoring the functionality of existing systems (continuing from year 3 activity 1.2.1). ▪ Facilitate several training sessions on data use, data analysis, and how to make decisions based on the available data for facility managers.	June 30
Activity 1.3.1: Institutionalize eLearning courses of the relevant directorates of MOHFW (continuing from year 3 activity 1.3.2). ▪ Finalize the e-Learning courses.	June 30
Activity 1.3.2: Strengthen the capacity of DGHS decision makers and health facility staff to use eAMS at selected districts (new). ▪ Assist MOHFW and DGHS in organizing refresher training for eAMS users and conduct field visits to assist in entering asset information into the system.	May 31

Activity 2.1.2: Support DGDA, in collaboration with other partners, in developing a five-year strategic plan (2022-2026) to strengthen the regulatory system (refer to RS03) (new). ▪ Prepare an SOW for a consultant and arrange their onboarding.	June 30
Activity 2.2.2: Assist DGDA in strengthening the existing online ADR reporting and monitoring system (refer to VL04.01 and VL06) (new). ▪ Finalize the SOW that has been drafted already and engage an IT firm or consultant.	June 30
Activity 2.2.4: Work with DGDA and other stakeholders to develop guidelines on Good Pharmacovigilance Practice (GVP) and to update the National Guideline on the PV System in Bangladesh as per WHO GBT requirements (refer to VL01.02) to increase score toward maturity level 3 (new). ▪ Address the recommended changes in the national guideline on PV.	June 30
Activity 3.1.1: Enhance and scale up eLMIS previously developed for TB commodities in DGHS (continuing from year 3 activity 3.1.1). ▪ Conduct UAT of the DGHS eLMIS (CMSD part) and pilot in two selected stores for two months. ▪ Enhance and scale up eLMIS previously developed for TB commodities in DGHS.	June 30
Activity 3.1.2: Provide technical assistance to DGFP in transitioning the existing inventory tools from offline to online (new). ▪ Hold a focus group discussion with officials of the Logistics and Supply Unit under DGFP.	June 30
Activity 3.2.2: In collaboration with partners, transition e-TB Manager to NTP (new). ▪ Develop e-TB Manager transition plan in collaboration with NTP and partners.	June 30

Table 3. Quarter 2, FY22, Activity Progress, Bangladesh – FIELD SUPPORT

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Update the Price Guide of Medical Equipment and align with the revised TOE. ***Activity Description:*** Price guide was developed by MOHFW with SIAPS assistance, and the TOE has been updated with MTaPS assistance in FY20. Now, the price guide will be updated in line with the updated TOE.	Obj 1, SO 1.1	N/A	N/A	Consultant selection is in progress.
Activity 1.1.2: Map the organizational and governance structure of DGHS procurement functions. ***Activity Description***: The present organizational and governance structure of DGHS will be reviewed in the context of a diversified procurement function, and an appropriate structure will be suggested.	Obj 1, SO 1.1	N/A	N/A	Consultant selection is in progress.
Activity 1.2.1: Continue to enhance the capacity of national and sub-national-level managers to use data for decision making and compliance with monitoring the functionality of existing systems. ***Activity Description:*** Capacity building of district and sub-district health and FP managers on data for decision making.	Obj 1, SO 1.2	N/A	N/A	DGFP organized 6 batches of 3-day long training and 3 1-day workshops in different districts, where a half-day session was on data for decision making. MTaPS facilitated the technical discussion on importance and use of data. A total of 299 participants (240 male and 59 female) attended these events.
Activity 1.2.2: Assist DGFP in developing a mechanism on the service and logistics data validation process. ***Activity Description:*** Integrate two systems (eLMIS and eMIS) to validate the rationality between service and logistics data.	Obj 1, SO 1.2	N/A	N/A	No major updates.
Activity 1.3.1: Institutionalize eLearning courses of the relevant MOHFW directorates. ***Activity Description:*** Inform the relevant government directorates through a consultative workshop about the objectives, benefits, and features of the e-learning courses, and advocate the respective officials at all levels to attend the courses.	Obj 1, SO 1.3	N/A	N/A	Four modules (procurement basics, basic logistics management, e-TB Manager, and IPC) have been developed, and two of them have already been uploaded for testing to the MUKTAPATH platform managed by the a2i program under Ministry of Information and Communication Technology.
Activity 1.3.2: Strengthen the capacity of DGHS decision makers and health facility staff to use eAMS at selected districts. ***Activity Description:*** Capacitate the selected DHs on efficient management of the eAMS system.	Obj 1, SO 1.3	N/A	N/A	Implementation of the eAMS was a priority of MOHFW. Accordingly, the MTaPS team visited 27 DHs (out of 40 selected) and provided technical assistance in entering remaining asset information into the system and helped authorities generate QR codes and place them on the assets. These actions will help hospitals in managing and tracking the assets during their lifespan.

Activity 2.1.1: Continue to provide technical assistance in selected regulatory functions, including QMS of the National Regulatory System, and PV to develop and implement the CAPA plan and establish performance and enforcement mechanisms as per the WHO external assessment report for DGDA to contribute to increasing the score on WHO GBT. ***Activity Description:*** Support DGDA in addressing the observations of the WHO external assessment held in 2021 as per CAPA plan.	Obj 2, SO 2.1	N/A	N/A	MTaPS provided technical assistance to DGDA, in collaboration with WHO and other development partners, to help DGDA address legal provisions, guideline development/ revision and different procedures to strengthen selected regulatory functions. To date, no challenges have been faced to implement this activity. MTaPS provided support to develop DGDA's competency framework to determine its level of competency for good regulatory practice. MTaPS provided support to DGDA to finalize and disseminate the annual publication 2020-2021.
Activity 2.1.2: Support DGDA, in collaboration with other partners, in developing a five-year strategic plan (2022-2026) to strengthen the regulatory system (refer to RS03). ***Activity Description:*** Incorporate new priorities of DGDA into the strategy. A consultant is to be hired.	Obj 2, SO 2.1	N/A	N/A	MTaPS is developing an SOW and searching for a suitable candidate to deploy at DGDA upon their request to support them on this activity.
Activity 2.1.3: Support DGDA in implementing a QMS jointly with Promoting the Quality of Medicines Plus (PQM+) to achieve ISO 9001:2015 certification (refer to RS05). ***Activity Description:*** Support for QMS components.	Obj 2, SO 2.1	N/A	N/A	MTaPS assisted DGDA in establishing QMS according to the QMS implementation plan. Guidance was provided on other key components of QMS, for example, internal audit, roles, and responsibilities. No challenges were encountered.
Activity 2.2.1: Continue to provide technical assistance for ongoing monitoring of ADRs, including introducing aDSM report evaluation to contribute to evidence-based regulatory decision making to ensure medical safety (refer to VL04.01). ***Activity Description:*** Assess AEs, including aDSM reports.	Obj 2, SO 2.2	N/A	N/A	MTaPS participated in several workshops of ADR monitoring cells, Technical Sub-Committee, and ADRAC to assess and evaluate AEs, including aDSM reports. No challenges were encountered. MTaPS conducted a PV awareness training program for 96 (17 female and 79 male) health care professionals from various levels of two divisions for creating a reporting culture to ensure medicine safety.
Activity 2.2.2: Assist DGDA in strengthening existing online ADR reporting and monitoring system (refer to VL04.01 and VL06). ***Activity Description:*** Finalize the draft SOW and engage an IT firm/consultant for system enhancement.	Obj 2, SO 2.2	N/A	N/A	MTaPS prepared an SOW covering the areas that need to be incorporated into PViMS and for an IT consultant to be onboarded.
Activity 2.2.3: Collaborate with NTP, WHO, DGDA, ACTB, and other stakeholders to expand functional electronic reporting system on aDSM in all DR-TB treatment facilities (eight hospitals) (refer to VL04.04). ***Activity Description:*** Ensure aDSM reporting through e-TB Manager from DR-TB sites, in collaboration with partners.	Obj 2, SO 2.2	N/A	N/A	MTaPS introduced an aDSM reporting system in all 10 DR-TB sites. NTP received 93 reports through e-TB Manager in 2021 and submitted all reports to DGDA for next-level action.

Activity 2.2.4: Work with DGDA and other stakeholders to develop guidelines on GVP and update the national PV system guideline as per WHO GBT requirements (refer to VL01.02) to increase score to maturity level 3. ***Activity Description:*** Form a working committee, arrange workshops, and prepare drafts.	Obj 2, SO 2.2	N/A	N/A	MTaPS assisted DGDA in forming a 17-member working committee and drafting a GVP guideline, which has been uploaded to the DGDA website (www.dgda gov.info) to seek public opinion. Revision of the national PV system guideline will follow.
Activity 3.1.1: Enhance and scale up eLMIS previously developed for TB commodities in DGHS. ***Activity Description:*** DGHS eLMIS will be scaled up to hundreds of sites that provide TB services, CMSD, and two districts for other pharmaceutical items.	Obj 3, SO 3.1	N/A	N/A	The demonstration and the UAT of the system were completed with recommended adjustment. MTaPS and DGHS teams are now ready for the pilot and scale up of the eLMIS capacity building in the selected sites.
Activity 3.1.2: Provide technical assistance to DGFP in transitioning existing inventory tools from offline to online. ***Activity Description:*** DGFP's inventory management tools will be converted to online with updated features.	Obj 3, SO 3.1	N/A	N/A	Primary discussion has been initiated and more formal and comprehensive discussions with DGFP are planned for Q3.
Activity 3.1.3: Customize and implement Pharmadex version 2 for vaccine registration in DGDA. ***Activity Description:*** Cover the registration of vaccines as agreed by DGDA. Pharmadex version 2 is expected to be user-friendly and customizable to accommodate new process flows.	Obj 3, SO 3.1	N/A	N/A	Customizations of Pharmadex 2 for Bangladesh is underway. Once complete, MTaPS will provide training to DGDA staff for implementation.
Activity 3.2.1: Enhance and maintain e-TB Manager through the national technology partner. ***Activity Description:*** Knowledge of and skills for using and maintaining enhanced e-TB Manager will be transferred to the national technology partner from the international consultant.	Obj 3, SO 3.2	N/A	N/A	MTaPS helped transfer the e-TB Manager server from MSH to MIS, DGHS. Moreover, MTaPS assisted in transferring e-TB Manager knowledge to a local consultant. Currently, the local consultant is troubleshooting, maintaining, and enhancing e-TB Manager locally.
Activity 3.2.2: In collaboration with partners, transition e-TB Manager to NTP. ***Activity Description:*** Plan for transitioning e-TB Manager from MTaPS to NTP will be developed, focusing on the sustainability of the system.	Obj 3, SO 3.2	N/A	N/A	MTaPS is hiring a consultant to develop the transition plan for e-TB Manager.
Activity 3.2.3: Collaborate with development partners, donors, and DGHS to update priority MNCH live-saving commodities and incorporate DHIS 2 as well as SCMP. ***Activity Description:*** Based on the last technical working group, MTaPS is committed to updating DHIS 2-based logistics reporting item list based on the revised and updated MNCH priority list. The existing DHIS 2-based logistics reporting will further be scaled up by partners (especially by MaMoni MNCSP, UNFPA) with technical assistance from MTaPS.	Obj 3, SO 3.2	N/A	N/A	The list has been updated to DHIS 2 and users are reporting the updated item list.

Activity 5.1.1: Continue to support HEU in pharmaceutical expenditure tracking for selected commodities other than MNCH. ***Activity Description:*** MTaPS will collaborate with HEU and WHO to continue the exercise of pharmaceutical expenditure tracking for commodities other than MNCH.	Obj 5, SO 5.1	N/A	N/A	Several discussions initiated among different stakeholders, e.g., HEU of MOHFW, WHO, World Bank, and R4D, to finalize the extent, methodology, and selection of commodities for the expenditure tracking of pharmaceuticals. A consensus was reached to conduct training, perform dissemination from the exercise, and engage consultants for data collection. Workshops are being costed by MTaPS.

GLOBAL HEALTH SECURITY AGENDA

OVERVIEW

Under objective 4, MTaPS Bangladesh supports ARC by implementing the AMR action package. The Global Health Security Agenda (GHSA)-related goal of MTaPS Bangladesh is to improve ARC by building the capacity of in-country stakeholders and institutions in three result areas: effective multisectoral coordination (MSC) on AMR, infection prevention and control (IPC), and optimize the use of antimicrobial stewardship (AMS) to help the country progress to the next higher Joint External Evaluation (JEE) levels.

CUMULATIVE PERFORMANCE TO DATE

In July 2019, under field support funding, MTaPS facilitated stakeholder engagement, information sharing, and coordination under the leadership of the line director, Communicable Disease Control (CDC)/DGHS, by holding a consultative workshop on strengthening MSC for containing AMR in Bangladesh. Another consultative workshop organized in December 2019 reviewed the status of the MSC mechanism for ARC in Bangladesh, with a focus on AMS, and conducted a mapping exercise to assess the status of implementation of the national action plan (NAP)-AMR in the areas of MSC, AMS, and IPC and to identify gaps and priorities. On both occasions, the participation of different stakeholders was overwhelming. In FY20, with the inception of GHSA funding, MTaPS' contribution to ARC was further strengthened with successful facilitation of joint stakeholders' meetings, finalization of the AMR framework and indicators for IPC and AMS, finalization of the national assessment of IPC, and extension of AMR activities to the facility level. In collaboration with CDC, MTaPS updated the National AMR Strategy, developed standard treatment guidelines (STG), and continued technical assistance to the national MSC mechanism (holding the National Technical Committee [NTC] meeting), along with strengthening multidisciplinary implementation of IPC and AMS at two facilities. MTaPS has so far supported the government and stakeholders in Bangladesh to complete 14 (23%) out of the 62 global benchmark actions related to the AMR technical area under the GHSA mandate.

QUARTER 2 ACHIEVEMENTS AND RESULTS

TOT on STG on antibiotic use and AMS for health care workers at DGHS in Dhaka on February 23, 2022 (Photo credit: Quazi Shahreen Haq, MTaPS)

MTaPS received government approval to implement IPC and AMS activities in six additional facilities (Sher-e-Bangla Medical College Hospital, Barishal; Jhalokathi DH; Jinaidha DH; Narail DH; Lohagora Upazila Health Complex, Narail; and Impulse Hospital, Dhaka) covering both public and private sectors under result area 2. The STG on common infectious disease was approved by NTC, and capacity building was initiated by conducting trainings of trainers (TOTs) on the STGs and its accompanying app. A total of 420 doctors

(60 female and 360 male) from district and sub-district-level health facilities received the TOT in preparation for training their technical staff through the cascade approach.

BEST PRACTICES/LESSONS LEARNED

By strengthening MSC, MTaPS catalyzed joint action between government departments and stakeholders to implement key actions that will help improve the JEE levels of Bangladesh.

MTaPS' active facilitation, effective communication, and sharing of evidence-based information contributed to continuous implementation of IPC activities at the facility level. For instance, the Cumilla Medical College and Munshiganj DH effectively managed their IPC committees and teams and implemented IPC activities by effective resource utilization facilitated by MTaPS.

Transferring knowledge and building local capacity to run the MISs developed by implementing partners should be done early and throughout the planning, development, and implementation processes, as it requires time and resources to be effective, impacting the proper handover to the government in the pathway to sustainability.

ACTIVITIES AND EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1 Continue to support governance, functionality, and implementation capacity of the national MSC mechanism. ▪ Develop a costed OP for the NAP-AMR 2021-2026. ▪ Assess AMS policies, regulations, and practices in human and animal health sector.	June 30
Activity 2.2.1: Strengthen the technical and managerial capacity of IPC committees and providers to implement the updated IPC standards, based on revised national guidelines. ▪ Assess IPCAF in the six new hospitals.	June 30
Activity 2.5.1 Continue to strengthen IPC activities in the four current participating facilities, and use lessons learned to implement similar activities in the six additional facilities. ▪ Assess IPCAF in the participating hospitals.	June 30
Activity 3.1.1 Strengthen AMS governance structures at the national level. ▪ Develop AMS national guidelines. ▪ Implement AMS CQI at Cumilla Medical College Hospital and Munshiganj DH.	June 30
Activity 3.5.1: Improve AMS practices and services at the facility level. ▪ Assess AMS in the six new hospitals.	June 30

Table 4. Quarter 2, FY22, Activity Progress, Bangladesh – GLOBAL HEALTH SECURITY AGENDA (GHSA)

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Continue to support governance, functionality, and implementation capacity of national MSC mechanisms. ***Activity description:*** MTaPS will develop a costed OP for the new NAP-AMR 2021-2026. Update the current M&E framework to align with the new NAP-AMR 2021-2026.	N/A	1.1	N/A	Under the leadership of MOHFW, all stakeholders, including donors, partners, and different government wings, participated in WAAW to increase awareness and contain resistance by preventing improper use of antibiotics. A detailed report on WAAW is in editorial review. One NTC meeting has been organized with the continuous pursuit of MTaPS.
Activity 2.2.1: Strengthen the technical and managerial capacity of IPC committees and providers to implement updated IPC standards based on revised national guidelines. ***Activity description:*** IPC training materials developed for refresher training. Develop and deploy e-learning modules.	N/A	2.2	N/A	In collaboration with CDC, MTaPS is in the process of selecting six new health facilities and finalizing the SOW for the initial facility assessments.
Activity 2.5.1: Continue to strengthen IPC activities in the current four participating facilities; scale up similar initiatives to six additional facilities. ***Activity description:*** Conduct IPC training in MTaPS-supported health facilities.	N/A	2.5	N/A	Drafted, shared, and received approval of SOW to conduct repeat IPCAF assessments in the initial four participating hospitals as well as the six additional facilities.
Activity 3.1.1: Strengthen AMS governance structures at the national level. ***Activity description:*** Conduct baseline assessment of stewardship practices. Strengthen the AMS program through policy and guidelines development.	N/A	3.3	N/A	Consultant is engaged for assessment of AMS policies, regulations, and practices in the human and animal health sectors. Consultant is engaged for AMS guideline development.
Activity 3.5.1: Improve AMS practices and services at the facility level. ***Activity description:*** Assess AMS practices in selected health facilities.	N/A	3.5	N/A	SOW is final for the repeat AMS assessments at the four currently supported facilities and initial assessments at the six additional facilities.

B. BURKINA FASO

OVERVIEW

The Global Health Security Agenda (GHSA)-related goal of the Medicines, Technologies, and Pharmaceutical Services (MTaPS) program in Burkina Faso is to support antimicrobial resistance (AMR) containment by slowing the emergence of resistant pathogens and preventing the spread of resistant infections. This will be attained by building the capacity of in-country stakeholders through a system strengthening approach. These objectives are directly aligned with the MTaPS GHSA portfolio-level objectives. Infection prevention and control and antimicrobial stewardship (AMS) are two of the five strategic objectives in the 2015 World Health Organization (WHO) Global Action Plan on AMR, which also strongly emphasizes multisectoral coordination (MSC). MTaPS is providing technical support to consolidate MSC for AMR and optimize the use of antimicrobial medicines.

MTaPS is assisting Burkina Faso in making progress toward the next level in terms of the country's Joint External Evaluation capacities by focusing interventions on MSC and AMS components of AMR in both the human and animal sectors. MTaPS is providing comprehensive technical assistance for sustained improvements in health system performance to advance the US Agency for International Development (USAID) and Burkina Faso's goal: to support AMR containment by slowing the emergence of resistant bacteria and preventing the spread of resistant infections.

A clear strategy is in place to ensure the availability of, access to, and appropriate use of quality-assured antimicrobials in the human and animal health sectors. MTaPS must emphasize the structures that ensure enforcement and compliance monitoring of existing regulations, policies, and guidelines, including the recently updated standard treatment guidelines (STGs) and essential medicines list (EML). Such enforcement is needed to address the sale and use of antibiotics without prescription. Policies must be developed to address prescription practices that do not always follow national or international guidelines for using antibiotics.

MTaPS follows a sustained, systematic approach to train, coach, and mentor health workers in both the human and animal sectors to be good stewards of antimicrobials and to monitor their practices. This requires strong central- and facility-level governance and stewardship mechanisms, such as establishing drug and therapeutics committees (DTCs) in more health facilities and capacitating those that already exist to provide supportive supervision in their facilities to promote AMS practices. In FY22, in addition to activities to strengthen facility-level DTCs, MTaPS is supporting the technical secretariat (TS) of the One Health platform (OHP) and the AMR technical thematic committee (AMR-TTC) to strengthen governance and effective MSC on AMR and to optimize the use of antimicrobial medicines in the human and animal sectors. Particularly in the animal sector, MTaPS will support the General Directorate of Veterinary Services (DGSV) to develop and validate a draft ministerial order regulating antimicrobial use in the animal sector based on the developed AMS guidelines.

CUMULATIVE PERFORMANCE TO DATE

MTaPS is supporting the operationalization of the OHP in Burkina Faso. The OHP was established by the Government of Burkina Faso to implement MSC activities, including AMR as an important focus. To

facilitate this, MTaPS—in collaboration with the USAID Global Health Supply Chain-Procurement and Supply Management program and the OHP members—drafted an inter-ministerial order establishing the OHP TS. Inter-ministerial Order No. 2020-210/MS/MINEFID/MESRSI/ MAAH/MRAH/ MEEVCC—defining the terms of reference (TOR), organization, composition, and functioning of the technical steering committee, TS, and One Health focal points—was signed on June 30, 2020. To operationalize the OHP, MTaPS collaborated with the other OHP stakeholders to organize a governance meeting of the TTC presidents and vice presidents to provide them with the necessary orientation to enable the good governance of each of the seven TTCs. The AMR-TTC is the entry point of MTaPS into the OHP. MTaPS met with the AMR-TTC to nominate the members of the five sub-TTCs. To enable their full operationalization, MTaPS will support a workshop on April 27–29, 2022, to develop an activity plan for the AMR-TTC. Finally, in collaboration with the DGSV and other partners, MTaPS supported the development of guidelines for the use of antimicrobials in the animal sector.

To ensure the proper use of antimicrobials, MTaPS supported DGSV to develop a training package (including facilitator and participant guides, training modules, and a manual) based on the guidelines. To strengthen the capacity of service providers, MTaPS supported three training of trainers (TOT) sessions for 15 veterinarians and 42 livestock technicians using the developed training package. With funding from the Ministry of Animal Resources and Fisheries, the trainers from the TOT will go on to train livestock technicians at the peripheral level of the health system. The AMS guidelines will be printed and disseminated before the peripheral-level training.

Under the leadership of WHO and the Directorate General of Pharmacy, Medicines, and Laboratories, a review of Burkina Faso's EML took place in 2020. As part of the process, MTaPS provided technical assistance to ensure that antibiotics were classified according to the WHO access, watch, and reserve (AWaRe) categorization. In FY21, MTaPS supported the National Drug Regulatory Authority to print and disseminate 1,500 copies of the EML, which included the AWaRe categorization of antibiotics, to assist health care professionals with proper prescribing practices and safeguarding patients from harm.

Finally, MTaPS supported the *Direction de la Pharmacie Hospitalière* to establish and train DTCs in 10 selected health care facilities. Each DTC developed an action plan to implement and oversee AMS interventions in its respective facility. The DTC members' situational analysis of the causes of inappropriate antibiotics use highlighted the unavailability of facility-level infectious disease STGs.

QUARTER 2 ACHIEVEMENTS & RESULTS

In line with its operationalization, the OHP decided to develop its strategic plan. This strategic plan is based on the roadmap developed by the OHP with the support of MTaPS and is now ready for use. MTaPS participated in the validation of the strategic plan in March 2022. The validated plan will be submitted to the ministries involved in the OHP for official endorsement during a steering committee meeting of the OHP council in May 2022.

To provide technical assistance to the AMR-TTC to complete the establishment of and capacitate the AMS sub-committee—including its human-, animal-, agricultural-, and environmental-sector technical working groups (TWGs)—MTaPS organized a meeting with the AMR-TTC president. Participants decided to hold a second meeting to discuss the AMR-TTC composition, the establishment of sub-committees, and the identification of sub-committee heads. MTaPS and the AMR-TTC have planned a

workshop in April, focusing on the AMR-TTC action plan for 2022. MTaPS—in collaboration with AMR-TTC—has drafted and submitted the TOR, technical note, and invitation letter for the workshop to the OHP TS.

Before the printing and dissemination of the guidelines for rational antibiotics use in the animal sector, MTaPS collaborated with the DGSV to finalize and submit the foreword page of the guidelines to the general secretary of the Ministry of Animal Resources and Fisheries for signature.

MTaPS supported the establishment of DTCs in 10 health care facilities including regional hospitals, teaching hospitals and district medical centers, with the final DTC established in March 2022 in the city of Koudougou. MTaPS supported the training of 22 DTC members at Koudougou. The DTC members went on to develop their draft AMS action plans as part of continuous quality improvement.

BEST PRACTICES/LESSONS LEARNED

During the establishment and training of DTCs, the MTaPS team learned that the DTCs must be accompanied by innovative approaches, such as computerizing the health information systems—including patient and drug circuits—in the hospitals as well as implementing individual nominative drug dispensing systems at the patients' bedsides. The awaited country adoption of universal health insurance is also an opportunity for functional DTCs at the health care facility level.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1: Support the OHP TS	
▪ Validate the reviewed national multisectoral action plan for AMR control	May 2022
▪ Sign the ministerial order	June 2022
Activity 3.2.2: Support the DGSV to print and disseminate the guidelines for the rational use of antibiotics in the animal sector	
▪ Print the national guidelines, which include the World Organization for Animal Health (OIE) categorization for antibiotics, to promote the appropriate use of these antimicrobials	April 2022
▪ Disseminate the national guidelines, which include the OIE categorization for antibiotics, to promote the appropriate use of these antimicrobials	May 2022
Activity 3.5.1: Support implementation of DTCs in five additional hospitals	
▪ Monitor and supervise the established DTCs in health care facilities and support them to carry out cross-cutting activities from their developed action plans	April-June 2022

Table 5. Quarter 2, FY22, Activity Progress, Burkina Faso

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Support the OHP TS ***Activity Description:*** Support the TS to operationalize the OHP established by the Government of Burkina Faso to handle One Health-related issues	3	1.1.		The OHP has developed a strategic plan validated on March 25, 2022. The validated plan will be submitted to the ministers involved in the OHP for official endorsement during a steering committee meeting of the OHP council in May 2022.
Activity 1.1.2: Provide technical assistance to the AMR-TTC to complete the establishment of and capacitate the AMS sub-committee, including its human-, animal-, agricultural-, and environmental-sector TWG. ***Activity Description:*** Operationalize the AMR-TTC, which is the entry point for MTaPS to engage in MSC activities in Burkina Faso	1, 2	1.1.		MTaPS, in collaboration with the other stakeholders, is advocating for OHP operationalization. MTaPS had supported the AMR-TTC to carry out an induction workshop for the AMR-TTC sub-committee heads during the previous quarter. A meeting is planned in April 2022 to develop an activity and implementation plan of the AMR-TTC sub-committees.
Activity 3.2.2: Support the DGSV to print and disseminate the guidelines for rational antibiotics use in the animal sector ***Activity Description:*** Print the developed guidelines for rational antibiotics use in the animal sector, then disseminate them to stakeholders at the peripheral level	2	3.2.		The foreword of the guidelines has been developed and is currently awaiting signature at the Ministry of Animal Resources and Fisheries.
Activity 3.5.1: Support implementation of DTCs in five additional hospitals ***Activity Description:*** Monitor and supervise the established DTCs in health care facilities and support them to carry out cross-cutting activities from their developed action plans	1, 2, 5	3.5.		MTaPS has supported the establishment of DTCs in 10 health care facilities at the primary (2), secondary (6), and tertiary (2) levels and has trained a total of 250 DTC members.

C. CAMEROON

OVERVIEW

In FY22, MTaPS planned to monitor and strengthen the functionality of existing infection prevention and control (IPC) committees by using IPC assessment tools to identify areas for improvement and guide the development of a detailed improvement plan of action, to support the Directorate of Health Promotion (DPS) to monitor health care-associated infections (HCAIs) at the health facility level, and orient IPC activities in the health facilities.

MTaPS also planned to support the classification of antibiotics in the human sector following recommendations from the World Health Organization (WHO) Access, Watch, Reserve (AWaRe) categorization, and support drug and therapeutics committees (DTCs) to ensure the enforcement and compliance monitoring of existing regulations, policies, and guidelines. A sustained, systematic approach is needed to train, coach, and mentor managers and providers on being good stewards of antimicrobials and to monitor health workers' practices in the human sector. This will require a strong central-level governance and stewardship mechanism that is associated with facility-level interventions, such as organizing supportive supervision visits in facilities that already have DTCs to strengthen their role in promoting antimicrobial stewardship (AMS).

Through MTaPS, USAID will address some of these challenges to help Cameroon advance to higher Joint External Evaluation capacity levels in the antimicrobial resistance (AMR) technical area. These activities fall under MTaPS sub-objective 5.4, and some of them will be implemented in coordination with activities supported by other partners, especially those funded by USAID and the US Centers for Disease Control and Prevention (CDC). In consultation with the Ministry of Public Health (MOPH), MTaPS activities have been designed to avoid duplication and enhance synergies and complementarity.

CUMULATIVE PERFORMANCE TO DATE

From the beginning of the program until now, MTaPS has supported Cameroon to carry out the following benchmark actions in multisectoral coordination (MSC), IPC, and AMS:

- For MSC, MTaPS has supported the coordination of AMR activities through the organization of 15 routine meetings of the technical secretariat (TS) of the AMR MSC committee (MCC), the AMS and IPC technical working groups (TWGs) and other members of the One Health platform, and partners to monitor the implementation of AMR activities.
- For IPC, MTaPS has supported the baseline evaluation of IPC practices in 38 health facilities, the development of IPC training curricula, the establishment of IPC committees in 12 health facilities, the development of the national IPC guidelines, the training of 174 health staff in IPC, and the continuous quality improvement of IPC practices in 12 health facilities.
- For AMS, MTaPS also supported the Directorate of Pharmacy, Medicines, and Laboratories (DPML) to carry out the situational analysis of AMS-related policies in the animal and human sectors, the development of a national integrated AMS action plan, the establishment of DTCs in 12 health facilities, the training of 239 persons in AMS, and the continuous quality improvement of AMS activities in supported health facilities.

QUARTER 2 ACHIEVEMENTS & RESULTS

RESULT AREA 1: EFFECTIVE MSC OF AMR

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

For MSC, MTaPS supported the coordination of AMR activities through the organization of routine meetings of the TS of the AMR MCC, the AMS and IPC TWGs, and other members of the One Health platform, and partners to monitor the implementation of AMR activities.

For IPC, MTaPS supported the baseline evaluation of IPC practices in 38 health facilities, the development of IPC training curricula, the establishment of IPC committees in 12 health facilities, the development of the national IPC guidelines, the capacity building of health staff in IPC, and the continuous quality improvement of IPC practices in 12 health facilities.

For AMS, MTaPS also supported the DPML to carry out the situational analysis of AMS-related policies in the animal and human sectors, the development of a national integrated AMS action plan, the establishment of DTCs in 12 health facilities, and the continuous quality improvement of AMS activities in supported health facilities.

QUARTER 2 ACHIEVEMENTS & RESULTS:

RESULT AREA 1: EFFECTIVE MSC OF AMR

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

In February, MTaPS supported the organization of a preparatory meeting of the MCC TS with other stakeholders of the One Health platform and partners to plan the update of the national AMR action plan. This meeting was held at the MTaPS head office in Yaoundé and saw the participation of 19 participants from the DPML; National Public Health Laboratory; Ministry of Environment and Nature Protection; Ministry of Livestock, Fisheries, and Animal Industries; and Ministry of Agriculture and Rural Development. Partners included WHO and Infectious Disease Detection and Surveillance (IDDS).

Meeting participants agreed on a roadmap with a timeline for the update of the national AMR action plan. Costs for this activity will be shared among the Food and Agricultural Organization (FAO), IDDS, and MTaPS. All the above activities are scheduled before the end of June 2022.

RESULT AREA 2: IPC

Activity 2.1.1: Support the printing and dissemination of IPC guidelines and standards for the human sector

In February, MTaPS supported the DPS to organize a two-day workshop to disseminate the IPC national guidelines. This workshop brought together 25 participants from the central, regional, and health facility levels of the health system with all 10 health regions of Cameroon represented. Some partners who

supported the development of the guidelines, such as CDC-Metabiota, also participated in the workshop. Facilitators showed the participants how to use the guidelines, which were presented to the participants in both English and French. At the end of the workshop, the 150 copies of the guidelines printed with the support of MTaPS were distributed to participants by the DPS.

CPD handing over printed copies of the national IPC guidelines to the MOPH during a two-day dissemination workshop in Ebolowa, February 2022. Photo credit: Alphonse Acho

Activity 2.1.2: Support the drafting of the national IPC action plan

Group picture of participants during the validation of the national IPC action plan in Kribi, February 2022. Photo credit: Francine Obama

In February, MTaPS supported the DPS to organize a three-day workshop of national stakeholders to finalize and validate the IPC national action plan. This workshop brought together participants from the IPC TWG, the TS of the AMR MCC, the regional level, health facilities, and staff from the Ministry of Environment. This workshop also saw the participation of some sub-directors from various departments of the MOPH, as well as technical partners like IDDS and USAID. A total of 29 participants were present. Throughout the three days, the participants reviewed each section of the IPC plan, including the introduction, the logical activity framework, the budget, and the monitoring and evaluation framework. At the end of the workshop, the plan was validated and the DPS was given the task of formatting the last version, which will be shared with participants once it is ready.

RESULT AREA 3: OPTIMIZE USE OF ANTIMICROBIAL MEDICINE IN HUMAN AND ANIMAL HEALTH AND AGRICULTURE

Activity 3.5.1: Carry out onsite supportive supervision of DTCs in all 12 MTaPS-supported health facilities

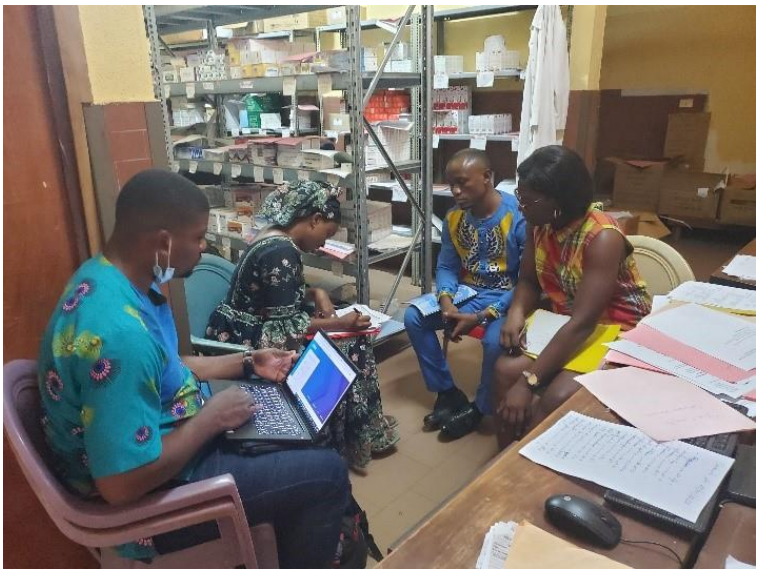
In March, MTaPS supported the DPML of MOPH to carry out onsite supportive supervision of DTCs in all 12 MTaPS-supported health facilities. The aim of this supervision was first to assess the functionality of the DTCs using the WHO checklist of essential health care facility core elements for AMS programs in low- and middle-income countries, secondly to assess the level of implementation of DTC activities in

the facility action plans with a focus on AMS interventions, and lastly to identify implementation challenges and discuss viable solutions to address them. A team of three supervisors—composed of a DPML representative, the regional pharmacy focal person from the Regional Delegation of Public Health, and an MTaPS staff member—carried out the supervision. The facility DTC champion worked with the supervisors to involve all the relevant staff in the supervision exercise. The health facilities visited are as shown in the table below:

Table 6: Health Facilities Visited

REGION	HEALTH FACILITY	DATE
Littoral	▪ Douala Laquintini Hospital ▪ Bonassama District Hospital ▪ Nkongsamba Regional Hospital	March 14–19, 2022
West	▪ Bafoussam Regional Hospital ▪ Foumbot District Hospital	March 14–19, 2022
East	▪ Bertoua Regional Hospital	March 21–26, 2022
Adamawa	▪ Ngaoundere Regional Hospital	March 21–26, 2022
South	▪ Ebolowa Regional Hospital ▪ Sangmelima Reference Hospital	March 21–26, 2022
Center	▪ Yaounde Emergency Hospital ▪ Yaounde Jamot Hospital ▪ Mbalmayo District Hospital	March 28–31, 2022

The preliminary findings from this supervision revealed that 11 (91.7%) of the 12 DTCs were functional and had been formalized, with signed service notes and terms of reference. These committees had held at least one coordination meeting with an average attendance of 60%. Over half (58.3%) of the DTCs had created AMS sub-committees. However, less than half (41.7%) of the DTCs had implemented at least 50% of activities in their action plans. At least half of the DTCs had either created an IPC sub-committee or were working in collaboration with the IPC committees where they already existed. Some of the activities implemented by these DTCs included the update of their facility essential medicine list and the classification of the listed antibiotics in line with the WHO AWaRe categorization, the development or update of therapeutic protocols for the management of priority infections in the health facility, and policies restricting the entry of pharmaceutical company medical representatives into health facilities. Some of the challenges faced by the DTCs included the lack of interest or engagement from the leadership of their health facilities and the lack of funding for the implementation of activities in their workplans. During the debriefing sessions in the health facilities, the facilitators advocated for the health facility leadership to budget for DTC activities.



Onsite supervision of the DTC at the Bertoua Regional Hospital, Cameroon, March 2022. Photo credit: Alphonse Acho

BEST PRACTICES/LESSONS LEARNED

MTaPS Cameroon learned the following lessons:

1. The engagement of the leadership of a health facility is critical for its functioning.
2. Training is not enough. Mentoring and field supervision is essential for the effective functioning of health facilities and their DTCs.
3. The lack of a budget line for DTCs slowed the implementation of activities in the facility improvement plans.
4. Engaging the different partners supporting AMR activities enabled a mapping of partners to fund each step in the process to update the national AMR action plan.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1: Support MSC of AMR activities through regular meetings of the AMR governance committee	April and June
Activity 1.2.1: Support the TS of the AMR MCC and the One Health platform to update the national action plan on AMR	June
Activity 2.5.1: Carry out onsite supportive supervision of IPC committees in all 12 MTaPS-supported health facilities	May
Activity 2.5.2: Support the DPS to monitor HCAIs at the health facility level	June
Activity 3.1.1: Support the classification of antibiotics in the human sector following recommendations from the WHO AWaRe categorization	June

Table 7. Quarter 2, FY22, Activity Progress, Cameroon

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Support MSC of AMR activities through regular meetings of the AMR governance committee ***Activity Description:*** MTaPS supports the organization of quarterly coordination meetings of the TS-MCC and the meeting of the TWGs once every two months.	5.4	1.1		MTaPS supported the organization of the quarterly coordination meeting of the TS-MCC to plan the update of the national AMR action plan. Different stakeholders from the relevant sectors of the One Health platform were invited and developed a roadmap for the update. The meeting of the TWGs, initially scheduled for March, was rescheduled for April due to schedule conflicts with most of the TWG members.
Activity 1.2.1: Support the TS of the AMR MCC and the One Health platform to update the national action plan on AMR ***Activity Description:*** The existing national AMR action plan is obsolete and needs to be updated. MTaPS plans to collaborate with other partners to update the plan.	5.4	1.2		The TS-MCC conducted a mapping of possible partner funding opportunities to support the update of the national AMR action plan and developed a roadmap including a timeline. The FAO agreed to support the evaluation of the existing plan as a first step, IDDS agreed to support the recruitment of a national consultant to develop a first draft, and MTaPS will support the review and validation of the plan.
Activity 2.1.1: Support the printing and dissemination of IPC guidelines and standards for the human sector ***Activity Description:*** MTaPS has supported the DPS to develop the national IPC action plan. MTaPS plans to support the printing of 500 copies of the guidelines and a dissemination workshop for the guidelines.	5.4	2.1		MTaPS supported the printing of 150 copies of the guidelines and the organization of a two-day workshop to disseminate them.
Activity 2.1.2: Support the drafting of the national IPC action plan ***Activity Description:*** MTaPS has supported the DPS to develop a draft national IPC action plan. MTaPS plans to support a three-day workshop to review and validate the action plan.	5.4	2.1		The national IPC action plan has been validated. The DPS has promised to share the last version of the plan once it finishes formatting the document.
Activity 3.5.1: Carry out onsite supportive supervision of DTCs in all 12 MTaPS-supported health facilities ***Activity Description:*** MTaPS has supported the establishment of DTC committees in 12 health facilities. During this quarter, MTaPS plans to support the onsite supportive supervision of all 12 DTCs.	5.4	3.5		MTaPS carried out the onsite supportive supervision of all 12 DTCs.

D. CÔTE D'IVOIRE

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The GHSA-related goal of the US Agency for International Development (USAID) Medicines, Technologies, and Pharmaceutical Services (MTaPS) program/Côte d'Ivoire is to support sustained antimicrobial resistance (AMR) containment by slowing the emergence of resistant bacteria and preventing the spread of resistant infections. This goal will be attained by building the capacity of in-country stakeholders through a system strengthening approach. MTaPS/Côte d'Ivoire has been supporting the national action plan for AMR (NAP-AMR) strategic objectives 4 (reduce incidence of infections through effective sanitation, hygiene, and prevention measures) and 5 (improve rational use of antimicrobials in human and animal health and environmental sectors). These objectives are directly aligned with MTaPS GHSA portfolio-level objectives. Infection prevention and control (IPC) and antimicrobial stewardship (AMS) are two of the strategic objectives in the 2015 World Health Organization (WHO) Global Action Plan on AMR and in Côte d'Ivoire's NAP-AMR. Both documents strongly emphasize multisectoral coordination (MSC). MTaPS has been providing technical support to consolidate MSC on AMR, and the program's work focuses on the IPC and AMS technical areas, with direct technical assistance to the national AMR technical working group (TWG) and relevant ministries. The proposed activities for FY22 are built on the work done during the previous three years. In FY22, MTaPS will continue to support Côte d'Ivoire to strengthen the governance of IPC committees, improve IPC practices, conduct AMS practices in health facilities, and develop and implement systems to monitor antimicrobial use and consumption at both the national and facility levels.

CUMULATIVE PERFORMANCE TO DATE

Since the launch of MTaPS in September 2018, MTaPS Cote d'Ivoire has made progress towards establishing a set of legislation and regulations aimed at strengthening the surveillance, rapid detection, and response capabilities of the country to disease outbreaks. In addition, MTaPS Cote d'Ivoire successfully established an MSC mechanism for zoonotic diseases, a technical secretariat (TS) and TWGs to monitor AMR activities, and an assessment of IPC practices and AMS regulations leading to the development of IPC guidelines and an AMS action plan.

Through a decree in April 2019, the Ivorian Government formalized the One Health platform (OHP) to institutionalize a national MSC mechanism that can address public health threats, including AMR. MTaPS has helped establish an AMR TWG to monitor AMR activities. This TWG is connected to the OHP through a national coordinating body called the MSC Group. MTaPS helped finalize the terms of reference (TOR) and guidance manual for this body and its sub-committees.

In collaboration with WHO, USAID, US Centers for Disease Control and Prevention, and the UN Food and Agriculture Organization, MTaPS has supported the AMR, IPC, and AMS TWGs with the development and validation of more than 15 reference documents including the AMR governance manual; the national AMR policy; the 2019–2020 multisectoral NAP-AMR; the national IPC plan; animal-sector IPC guidelines; and the national AMS policy, guidelines, and plan.

MTaPS supported the execution of a rapid situational analysis of the capacity and functionality of IPC committees and drug and therapeutics committees (DTCs) in 10 targeted health facilities in the human health sector and 2 in the animal health sector (the veterinary clinic of the Ministry of Animal Resources and Fisheries' regional directorate of Bouake and the Antirabic Center of Cocody) and the capacity strengthening of actors through the development and validation of documents and training modules in IPC and AMS; the training of health care providers (HCPs); and the establishment of a continuous quality improvement (CQI) process in health facilities. IPC committees and DTCs were established in these health facilities with clear TOR and developed capacity building plans.

QUARTER 2 ACHIEVEMENTS & RESULTS

RESULT AREA 1: EFFECTIVE MSC ON AMR

MTaPS supported the AMR secretariat to draft its annual roadmap, then supported the AMR TWG to develop the AMR operational plan for 2022–2023.

MTaPS has also supported the organization of routine meetings between the IPC and AMS TWGs and the TS to monitor and coordinate the implementation of AMR activities. MTaPS also supported an AMR TWG coordination meeting, and 22 meetings or other events organized by the multisectoral bodies on AMR. These TWGs are leading the implementation of and reporting on MTaPS-supported activities through regular online and face-to-face meetings and active participation in field activities.

RESULT AREA 2: IPC

In collaboration with the Africa One Health University Network (AFROHUN), MTaPS supported a multidisciplinary training on One Health approaches, including AMR, for eight university authorities to prepare for the deployment of the IPC and AMS e-learning modules for universities and training institutes (developed with support from MTaPS).

Additionally, MTaPS supported IPC baseline assessments in four regional referral hospitals and two private clinics. In IPC, four health facilities were at an intermediate level and two at a basic level, while almost all facilities (five out of six) were at a basic level of hand hygiene. The facilities used the assessment results to develop their respective IPC action plans to improve their IPC and hand hygiene practices.

RESULT AREA 3: USE OF ANTIMICROBIAL MEDICINES OPTIMIZED

MTaPS has supported the AMR TWG to assess the capacities and functionality of DTCs in 8 health facilities and trained 60 HCPs on AMS (including 13 DTC members). In addition, MTaPS has supported the AMS TWG to conduct one supervision visit to monitor CQI in a regional hospital (Abengourou). MTaPS completed the dissemination of communications materials provided by Breakthrough Action (BA) and bioMerieux to promote the appropriate use of antimicrobials and help address the limited awareness of health professionals about appropriate antimicrobial use as highlighted in the 2016 Joint External Evaluation report. Finally, MTaPS supported the AMR TWG to validate the assessment report on the monitoring of antimicrobial use and consumption. This report showed a need to set up a platform for routine data collection on antimicrobial use and consumption for AMS decision making.

BEST PRACTICES/LESSONS LEARNED

- The appropriation of IPC tools, including WHO IPCAF, HHSAF, WASH-FIT by local actors (trainers & regional IPC focal points) conducting IPC activities has facilitated the quick scale-up of IPC assessment and supervision at facilities.
- Though it is not a contractual requirement, it is important to seek cost-sharing opportunities with other GHSA partners to increase the efficiency of activity implementation. For example, using the AFROHUN platform for our IPC and AMS e-learning training for university faculty has allowed MTaPS to quickly reach a local network of teachers that can provide cascade trainings in the country
- Supporting IPC and AMS assessments at private clinics was challenging because those facilities were reluctant to share data indicating deficient performance with the MOH staff. To successfully assess those private facilities, it is important to have a MTaPS staff member in the assessment team to facilitate data sharing.
- By using online platforms (Webex, Google Meet, etc.) to organize TWG meetings, MTaPS has taken a leadership role and can support more AMR TWG coordination meetings.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1: Strengthen the functionality of the MSC committee by organizing effective coordination through regular meetings of the AMR TWG	
▪ Support the AMR TWG to organize a workshop to develop the 2022–2023 operational plan: **Two one-day bi-monthly coordination meetings between the IPC and AMS TWGs and a one-day coordination meeting of the AMR secretariat**	April 2022
Activity 1.1.2 Support the AMR TWG to set up a monitoring and evaluation (M&E) system to monitor implementation of the NAP-AMR and provide timely feedback	
▪ Support the AMR TWG through the M&E officer and AMR M&E regional focal points to develop an M&E plan, activity implementation dashboard, and reporting tools	May 2022
▪ Support the TWGs to conduct periodic stocktaking of benchmark tool actions and monitoring of NAP-AMR implementation	May-Sept 2022
Activity 2.1.1: Support the AMR TWG to strengthen the IPC program at the national and facility levels	
▪ Conduct quarterly supportive supervision visits and mentoring in each facility: **the two IPC regional trainers and the IPC regional focal point will conduct 2-day site visits in 10 health facilities for supportive supervision of IPC committee members**	May 2022
▪ Technical support to the local IPC committees to repeat assessments in the initial 10 facilities as well as the 10 new facilities: **3-day site visits in 10 health facilities to repeat IPC assessment framework (IPCAF) assessments**	June 2022
Activity 2.3.1: Support the AMR TWG to begin integrating data from the IPCAF, IPC assessment tool 2, and scorecard evaluations into District Health Information Software 2	
▪ Support the AMR TWG to organize 2 working sessions for 10 participants from General Directorate of Health, Directorate of Hospital and Proximity Medicine (DMHP), Direction de l'Hygiene Publique et Sante Environnement, Directorate of IT and Health Information, multisectoral technical committee 4, and the AMR TWG: **1-day meetings to solicit feedback from participants, propose draft indicators, define the process for integrating the indicators, and prepare development and validation workshops**	May 2022
Activity 2.5.1: Strengthen the functionality of IPC committees in the human health sector and the capacity of HCPs to implement IPC	
▪ Conduct onsite competency-based training of frontline health care workers in the 10 additional intervention facilities, including the use of new guidelines, and sensitize providers on the risks of AMR: **3-day training workshop of HCPs in 10 hospitals**	April-May 2022

Activity 3.1.1 (year 3): Support the AMR TWG to improve the national essential medicines list using the WHO antibiotic access, watch, and reserve (AWaRe) categorization	
▪ Support the expert group to gather, curate, and analyze multi-criteria evidence for review and decision making, building on the WHO methodology: **3-day workshop for the AWaRe categorization of antibiotics**	April 2022
Activity 3.5.1: Support the AMR TWG to improve the governance and oversight system for AMS in health facilities, including monitoring implementation of related policies, guidelines, and standards: establish/strengthen DTC capacities to implement AMS activities	
▪ Extend the training to DTC members in 10 additional hospitals through a 3-day competency-based training workshop for selected facility staff (8 regional hospitals and 2 private clinics): **3-day competency-based training of DTC members in 8 regional hospitals and 2 private clinics**	April-May 2022
▪ Monitor implementation of AMS interventions through the supervision and monitoring of DTCs' action plans during site visits to the additional health facilities (10 for FY21 and 10 for FY22): **2-day joint visits to 10 health facilities from FY21**	May 2022
Activity 3.5.2: Support the AMR TWG to strengthen capacities of pharmacists to implement stewardship activities in the private sector	
▪ Support the AMR TWG to organize a one-day meeting to train additional private pharmacists and representatives from private companies and civil society organizations in the animal health and agricultural sectors on AMS: **organize a one-day meeting to train private pharmacists in Bassam to improve AMS practices**	May-June 2022

Table 8. Quarter 2, FY22, Activity Progress, Cote d'Ivoire

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Strengthen MSC committee functionality by organizing effective coordination through regular meetings of the AMR TWG ***Activity Description:*** Support the AMR TWG to organize a meeting of the AMR secretariat	5.4	1.1	N/A	MTaPS supported the development of an operational plan for FY22-23 and a roadmap for the AMR secretariat, identifying priority activities and key interventions based on the five-year strategic plan validated in September 2021. The operational plan will be submitted to the OHP and used by stakeholders to develop annual roadmaps and implement activities.
Activity 2.1.1: Support the AMR TWG to strengthen the IPC program at the national and facility levels ***Activity Description:*** Conduct baseline assessments in 10 additional health facilities (regional hospitals of Korhogo, Odienné, Bondoukou, Bouaflé, Divo, Man, San Pedro, and Gagnoa; the *Polyclinique International Indenie*; and the *Clinique Centrale d'Abobo*) using the WHO IPCAF tool	5.4	2.1	N/A	MTaPS supported the country to have data on the functionality of the national IPC program and facility-level IPC in 10 additional health facilities. Local IPC committees were established with TOR specifying their roles and responsibilities and are now capable of effectively implementing AMR activities at the operational level. The capacity of health care workers and governance structures for IPC will be strengthened.
Activity 2.2.1: Support the AMR TWG to design and deploy interactive e-learning courses on AMR/AMS/IPC for health professionals ***Activity Description:*** Support the AMR TWG to identify and select additional universities to host the AMR course on a user-friendly, accessible, and sustainable e-learning platform	5.4	1.2, 2.2, 3.2	N/A	MTaPS collaborated with AFROHUN to support a multidisciplinary training workshop on One Health approaches for university faculty on January 24–27, 2022, with 35 participants, targeting university authorities involved in public health, animal health, environment, bioscience, law, and social sciences. MTaPS focused on AMR, IPC, and AMS modules and the development of an action plan to deploy training on the One Health approach at national universities and training institutes.
Activity 2.5.1: Strengthen the functionality of IPC committees in the human health sector and the capacity of HCPs to implement IPC ***Activity Description:*** Conduct a rapid situational analysis of IPC committee capacity and functionality in the 10 additional health facilities using the DMHP tool	5.4	2. 2, 2.5	N/A	MTaPS strengthened IPC committees by orienting members on their roles and responsibilities and giving them IPC-related documents. MTaPS developed a unique IPC action plan for the health facility, considering the capacity building of the IPC committee and the improvement of IPC practices. This action plan was based on the assessment results and was developed using a participatory approach with the members of the IPC committees as part of the CQI of IPC practices.
Activity 3.1.3: Support the AMR TWG to establish standard operating procedures and tools for monitoring antimicrobial use in humans and animals ***Activity Description:*** Conduct a national-level assessment of systems to monitor antimicrobial use and consumption by using a multisectoral approach	5.4	3.3	N/A	MTaPS—in collaboration with WHO and the Ivorian Pharmaceutical Regulatory Authority—helped validate the assessment report on the monitoring of antimicrobial use and consumption. Some participants requested remote participation, and fortunately the WHO venue used was equipped with a video system that allowed participants to contribute their input online. The validated report will help the country to improve the existing surveillance of antimicrobials.

Activity 3.5.1: Support the AMR TWG to improve the governance and oversight system for AMS in health facilities, including monitoring implementation of related policies, guidelines, and standards: establish/strengthen the capacities of DTCs to implement AMS activities ***Activity Description:*** Support the AMR TWG to assess capacities and functionality of DTCs in the 10 new health facilities and have baseline data on AMS activities (8 regional hospitals and 2 private clinics)	5.4	3.2, 3.5	N/A	From January 10, 2022, to February 10, 2022, MTaPS supported the AMR TWG—in collaboration with the regional directorates of health—to assess the capacities and functionality of DTCs in seven regional hospitals. The evaluation team recommended establishing a DTC at the private clinic, sharing the AMS toolkit, and supporting documentation, and training the eight DTCs on AMS to improve their capacity to oversee AMS activities within their facilities.
Activity 3.5.1: Support the AMR TWG to improve the governance and oversight system for AMS in health facilities, including monitoring implementation of related policies, guidelines, and standards: establish/strengthen the capacities of DTCs to implement AMS activities (year 3) ***Activity Description:*** Establish/reinforce the capacities of DTCs to implement AMS activities in the eight additional hospitals in the human health sector and two veterinary clinics	5.4	3.2, 3.5	N/A	MTaPS supported the AMR TWG to train 12 DTC members on AMS at the university teaching hospital of Angre during a 3-day workshop in collaboration with bioMerieux. On the third day, 50 additional HCPs joined the training on rational antibiotics use—trainers presented them with sample standard treatment guidelines for common diseases and case studies of antibiogram results to improve antibiotics prescription at the referral hospital.
Activity 3.5.3: Support the AMR TWG to disseminate communication materials to health facilities and private pharmacies ***Activity Description:*** Disseminate communications materials to health facilities and private pharmacies	5.4	3.5	N/A	During the joint visits to assess the capacities and functionality of DTCs from January 10 to February 10, 2022, MTaPS supported the AMR TWG—through the AMS TWG—to distribute communications materials printed by BA and bioMerieux to eight regional hospitals (Abengourou, Bouafle, Bondoukou, Gagnoa, Korhogo, Man, Odienne, and San-Pedro) and one private clinic (Central Polyclinic of Abobo). The AMS TWG monitored the display of posters delivered during previous visits by the IPC TWG.

EBOLA RESPONSE ACTIVITIES

MTaPS supported the National Institute of Public Hygiene to monitor the preparation for Ebola virus disease outbreak response through joint visits held from March 12 to March 24, 2022, combined with the COVID-19 vaccination campaign, and helped evaluate staff availability for the Ebola campaign and areas for vaccines and commodities storage. This field visit combined both the assessment of Ebola readiness in health districts and the evaluation of cold chain storage areas/raining supervision of regional depot managers, health districts, and health centers conducted for the COVID-19 vaccination campaign. In total, 8 teams carried out the mission, which covered 42 sites in 8 regions, 18 districts, and 16 health centers. This included 8 districts in the Ebola intervention zone (Man, Bangolo, Biankouma, Soubré, Gueyo, Méagui, San Pedro, Tabou). This mission provided support to on-site coaching of multidisciplinary teams in 8 health regions. During the coaching sessions, teams' capacities on quantification, logistics, and cold chain were strengthened. Overall, 96 HCPs were supervised.

E. DRC

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The MTaPS Global Health Security Agenda (GHSA) strategy is aligned with MTaPS' results framework. The goal of MTaPS' antimicrobial resistance (AMR) work in DRC is to support AMR containment and to slow the emergence of resistant bacteria and prevent the spread of resistant infections. This goal will be attained by building the capacity of in-country stakeholders through a system strengthening approach. The MTaPS GHSA portfolio is focused on three GHSA-specific result areas—multisectoral coordination (MSC) on AMR strengthened, infection prevention and control (IPC) improved, and antimicrobial stewardship (AMS) improved.

The strategic approach and actions are focused on supporting the critical path to achieving higher capacity levels as outlined in the Joint External Evaluation (JEE) tool and WHO benchmarks for International Health Regulations (IHR) capacities. In DRC, the goal of achieving good patient outcomes will be met using multidisciplinary and multisectoral collaboration to improve IPC and AMS. MTaPS' strategy is to base its activities and implementation on guidance from WHO benchmarks and the JEE tool while relying on other published guidance on best practices; to collaborate with the appropriate partners at the global, regional, and country levels; and to combine planning and implementation with an embedded monitoring and knowledge sharing element to capture, document, and disseminate experience and results. Through MTaPS, USAID is contributing to addressing the challenges mentioned above to help DRC achieve higher WHO IHR capacity levels in the AMR technical areas.

CUMULATIVE PERFORMANCE TO DATE

DRC had a score of 1 (no capacity) for both IPC (P.3.3) and AMS (P.3.4) during the baseline JEE in March 2018. As per the MTaPS DRC strategic approach, actions were focused on supporting the critical path to achieving higher capacity levels and helping the country to improve the JEE scores.

Since the beginning of the MTaPS project, MTaPS/DRC has supported 25 WHO benchmark actions—7 contributing to MSC/AMR, 9 to IPC, and 9 to AMS. The breakdown of achieved WHO benchmark capacity level actions by mandated areas from year 1 to date are summarized below:

MSC ON AMR

MTaPS has helped country counterparts make progress in MSC/AMR by supporting 75% (3/4) of the level 2 actions, 50% (2/4) of the level 3 actions, 25% (1/4) of the level 4 actions, and 20% (1/5) of the level 5 actions. Note that these numbers include only MTaPS' support and reflect the current achievement status of the country in exception to level 3 actions, which benefited from other partners' contribution making it to 100% (4/4).

IPC

MTaPS has helped country counterparts make progress in IPC by supporting 40% (3/5) of the level 2 actions, 50% (3/6) of the level 3 actions, and 20% (1/5) of the level 4 actions. Note that these numbers reflect only MTaPS' support and reflect the current achievement status of the country in exception to

level 2 and 3 actions, which benefited from other partners' contribution making it to 60% (3/5) and 67% (4/6), respectively.

AMS

MTaPS has contributed to progress toward level 2 capacity in AMS, as it has already supported 100% (4/4) of the actions recommended for that level. MTaPS has also supported 50% (3/6) of the actions recommended for capacity level 3 and 29% (2/7) of the actions for capacity level 5. Note that these numbers include only MTaPS' support and reflect the current achievement status of the country in exception to level 3 actions, which benefited from other partners' contributions making it to 67% (4/6).

QUARTER 2 ACHIEVEMENTS & RESULTS

MSC ON AMR

MTaPS provided technical support to the National Commission on AMR (NC-AMR) to develop the AMR operational action plan to ensure the smooth implementation of the national AMR plan. MTaPS, in collaboration with other GHSA partners, will continue to support the NC-AMR to implement the national AMR plan using the developed operational plan to improve JEE scores.

MTaPS also supported the development of the AMR monitoring framework aligned with the AMR operational plan to ensure regular monitoring and tracking of AMR activity implementation.

AMS

With MTaPS support, the drug and therapeutics committees (DTCs) collected antibiotic use data as part of continuous quality improvement (CQI) at Saint-Joseph Hospital. Data collected were related to medicines prescribing patterns (especially for antimicrobials) and patients' knowledge on medicines prescribed. Through this exercise, antibiotic use issues were identified, and corrective measures were implemented.

Data analysis revealed the following:

- 27% (8/30) of prescriptions assessed were for male patients and 73% (22/30) were for female patients
- The average number of medicines per prescription was 3.8 (WHO-recommended: 2.5 max)
- The percentage of medicines prescribed by generic name was 21.7% (WHO-recommended: 90% min)
- The percentage of prescriptions with at least one antibiotic was 53% (WHO-recommended: less than 30%)
- The percentage of prescriptions with at least one injectable was 13% (WHO-recommended: 10% max)
- The percentage of medicines prescribed that are in the national essential medicines list was 54% (WHO-recommended: 100%)
- The patient exit interviews revealed that 100% of patients knew the route of administration for their medications, 100% knew the dose and frequency of their medication, and 90% knew the duration of treatment

The trend analysis for **Saint Joseph hospital** that includes all the reviews conducted, including the baseline data, is summarized on the table, and depicted in the graph below:

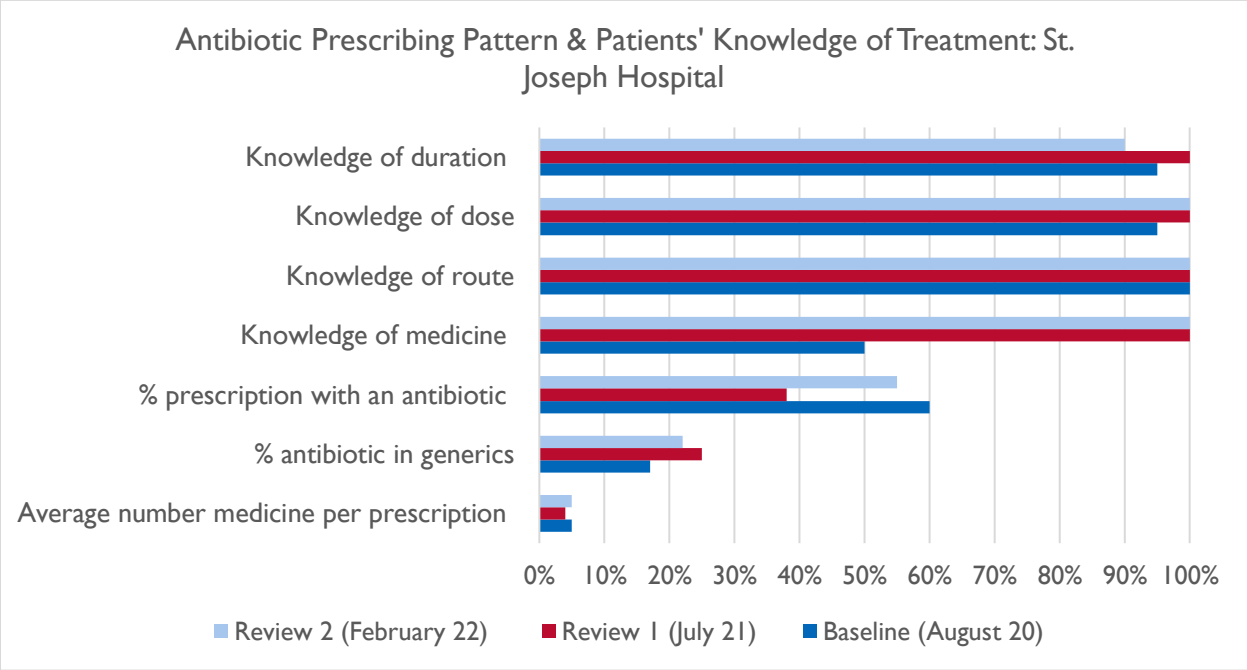


Figure 2: Antibiotic Prescribing Pattern and Patients' Knowledge of Treatment: St. Joseph Hospital

Additionally, MTaPS supported the establishment of four DTCs (two in Lubumbashi at Cliniques Universitaires de Lubumbashi-CUL and Kenya Hospital and two in Kolwezi at General Reference Hospital of Kolwezi-HGRK and Hospital Mwangeji). A total of 80 DTC members were trained in the rational use of medicines (especially antibiotics) as part of AMS CQI.

BEST PRACTICES/LESSONS LEARNED

- Through sensitization and training, MTaPS helped the DRC government to consider AMR as one of the priority health issues that need to be tackled in the country. To this end, WHO has recommended DTCs as one of the mandatory governing structures at referral hospitals to oversee AMS-related activities at the operational level. This is a good step forward toward sustainability and government ownership.
- To ensure the continuous effectiveness of DTCs, MTaPS conducted a training on CQI for AMS for all DTC members at supported facilities. AMS CQI is now being implemented in all 12 MTaPS-supported facilities to continuously promote the rational and appropriate use of antibiotics.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Rapid assessment on IPC in animal sector (using the adapted IPC Assessment Framework tool)	April 2022
Rapid assessment on IPC at national level (using IPC Assessment Tool)	April-May 2022
One additional DTC establishment in Kinshasa and further CQI indicators review for all the DTCs	April-June 2022
Quarterly MSC meeting	May-June 2022

Table 9. Quarter 2, FY22, Activity Progress, DRC – GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.3.1: Development of monitoring framework ***Activity Description:*** Support the development of the national action plan on AMR monitoring framework that ensures regular monitoring and tracking of AMR activity implementation	5.4.1	1.3, 1.1, 2.1, 3.1		MTaPS, in collaboration with the Food and Agriculture Organization, provided technical support to the NC-AMR to develop the AMR operational action plan. The AMR operational plan will serve as an operational tool to ensure the smooth implementation of the national AMR plan. In addition, MTaPS supported the development of the AMR monitoring framework aligned with the AMR operational action plan to ensure regular monitoring and tracking of AMR activity implementation.
Activity 3.5.1: Establishment of effective DTCs ***Activity Description:*** Establish/strengthen DTCs to oversee the implementation of AMS interventions and conduct stewardship practices at designated health care facilities	5.4.1	3.5		MTaPS supported the DTC at Saint Joseph Hospital to hold its quarterly meeting and collect antimicrobial use data as part of CQI. Additionally, MTaPS supported the establishment of four DTCs (two in Lubumbashi at Cliniques Universitaires de Lubumbashi-CUL and Hopital Kenya and two in Kolwezi at Hopital General de Reference de Kolwezi-HGRK and Hopital Mwangeji). A total of 80 DTC members were trained in the rational use of medicines, especially antibiotics, as part of the AMS CQI program. Prior to the training, MTaPS conducted medicines using data collection to obtain baseline data for the CQI program as part of the strategies in the fight against AMR.

MATERNAL, NEWBORN, AND CHILD HEALTH (MNCH), FAMILY PLANNING (FP), REPRODUCTIVE HEALTH (RH), TUBERCULOSIS (TB) ACTIVITIES

OVERVIEW

MTaPS' maternal, newborn, and child health (MNCH)/family planning (FP)/reproductive health (RH)/ tuberculosis (TB) goal in Democratic Republic of Congo (DRC) is to strengthen the country's pharmaceutical system to ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable essential medicines, medical products, and medicine-related pharmaceutical services—particularly for women and children—with a focus on USAID-supported provinces. Based on the available funds, USAID and MTaPS selected two eastern provinces, Nord Kivu and Ituri, for this work plan period. A stronger pharmaceutical system in DRC will enable achievement of USAID-supported health goals, including preventing maternal, newborn, and child deaths, as well as expanding access to essential medical products and progressing toward universal health coverage in the country.

To achieve this goal, MTaPS' interventions in DRC will cover four technical areas:

- Strengthening governance, focusing on coordination, leadership, stewardship, transparency, accountability, and community and civil society involvement
- Building individual, institutional, and regulatory capacity for smooth and sustained implementation of quality interventions
- Strengthening information systems for informed decision making
- Improving the availability and use of medical products (for both curative and preventive care) and pharmaceutical services

Activities for year 4 are built on the work that MTaPS has achieved in previous years, as well as achievements of the previous USAID-funded Systems for Improved Access to Pharmaceuticals and Services program. These activities include the coordination among the various country programs and partners that are providing pharmaceutical system or supply chain support, implementing policies and practices that optimize use of regional distribution centers (CDRs), building technical and managerial capacities in pharmaceutical management in coordination with other partners (GHSA-TA, IHP, and the new USAID MOMENTUM Integrated Health Resilience [MIHR] and Safe Surgery in FP and Obstetrics projects in eastern DRC), and strengthening civil society engagement by enhancing the involvement of formal groups that have community representation in medical product management (monitoring and oversight at health facilities [HFs] and community care sites [CCSs]).

CUMULATIVE PERFORMANCE TO DATE

Throughout the past three years, MTaPS has supported the Directorate of Pharmacy and Medicine (DPM) by holding registration sessions to facilitate the timely registration of needed MNCH, FP/RH, TB, and other essential medical products, as well as the update and dissemination of the Directory of Registered Medicines to support customs control and inspectorate functions. MTaPS also strengthened the capacity of new members of the national medicine registration committee by organizing training

workshops on processing marketing authorization (MA) requests, as well as briefing requesters on marketing and import authorization processes.

MTaPS' support also strengthened the stewardship role of the medicine technical working groups (TWGs) in Nord Kivu and Ituri. The project's support was essential for the establishment of a MNCH subgroup with a special focus on MNCH health products. Specific achievements resulting from the functioning of the TWGs and subgroups include the effective use of national supply chain system by partners for medicines distribution; more effective collaboration with donors and implementing partners (USAID, GF, EU, UNICEF, MSH, Cordaid, Caritas, Sanru, *Association Régionale d'Approvisionnement en Médicaments Essentiels* [ASRAMES], Cadimebu, IMA, Save the Children, UNFPA, MEDAIR, *Programme de Promotion de Soins de Santé Primaires* [PPSSP], etc.); effective redistribution/reallocation of commodities close to expiry, including MNCH products, to prevent losses (the value of commodities close to expiry was estimated at over $400,000 in Nord Kivu and over $250,000 in Ituri); better visibility of medicines stock level, which is one of the key topics addressed during the TWG meetings; and the establishment of provincial quantification committees to address quantification-related weaknesses at the provincial and health zone (HZ) levels.

MTaPS provided support in building the capacity of 350 community members to effectively fulfill their role in monitoring and overseeing medicines management—particularly with respect to MNCH, FP/RH, and TB commodities—with a focus on stock management, accountability between the HFs and the community, logistics data collection, and storage conditions. MTaPS also provided support to the Provincial Health Division (DPS) in Nord Kivu and Ituri in holding quarterly one-day meetings in each supported HZ where community and civil society members could discuss their perceptions of and involvement in health service delivery, and specifically issues pertaining to transportation and distribution of medicines, findings from the stock taking, and any other medicine management issues. These meetings are attended by 35 community members on average by HZ each quarter. Due to MTaPS' support, this is the first time that community members have been involved in medicines management at their respective HZs. As a result, community members have started influencing the management of health commodities by alerting issues regarding medicine availability and management. Other key results to date include good collaboration between health center managers and community health workers (RECOs) in Nord Kivu, improved transparency in managing health commodities and finances, and improved accountability in management through the effective participation of the community in inventory management.

To bring FP services closer to the community, MTaPS—in collaboration with USAID/MIHR project and UNFPA—supported the National Program for Reproductive Health to define a reduced FP package, specifically the contraceptive kit for the CCSs, as well as to estimate the quantity of needed items for CCSs. The package consisted of cycle beads, subcutaneous DMPA (Sayana Press), the oral combined pill, the progestogen-only pill, and female and male condoms. With MTaPS' advocacy to other partners, UNFPA started supplying HFs with FP products, and another FP commodities order is under processing with USAID/PSM for CCSs.

MTaPS collaborated with Action Damien to support the DPS and the provincial TB program in Ituri to organize mini awareness raising campaigns for active detection of TB and adherence to TB treatment in two selected HZs (Bunia and Nizi) with low case notification rates and high rates of TB default and losses to follow-up. During these campaigns, 41 out of 248 sputum samples, or 16.5%, collected tested positive in Bunia HZ. In Nizi HZ, out of 634 suspected cases referred to the health screening and treatment center, 77 tested positive, including 4 cases of TB/HIV co-infection.

Sputum samples analysis in the lab with GeneXpert in Bunia, November 2021. Photo Credit: Popol Burume

In addition to disseminating 16 protocols and job aids to all 166 MTaPS-supported HFs in Nord Kivu and Ituri, MTaPS supported the Ministry of Health (MOH) in updating the essential medicines list to include other MNCH products, such as heat-stable carbetocin and tranexamic acid. MTaPS also supported the national MNCH program to develop treatment protocols and job aids for the use of oxygen, heat-stable carbetocin, tranexamic acid, and folic acid in collaboration with the USAID/IHP project. The workshop also validated amoxicillin DT dispensing job aids that were developed by PATH in 2015 and updated by MTaPS in 2020. Participants in the workshop included members of the National Acute Respiratory Infections Control Program, National RH Program, the DPM, anesthesiologists and resuscitators from the University of Kinshasa, the DRC national president of gynecologists and obstetricians, and representatives of partners (MTaPS and IHP). To date, protocols, and job aids for the use of medical oxygen, heat-stable carbetocin, tranexamic acid, and folic acid—as well as updated and validated amoxicillin DT dispensing job aids—are available and ready for dissemination.

QUARTER 2 ACHIEVEMENTS & RESULTS

During this quarter, MTaPS supported the DPM in the preparation and implementation of a two-week quarterly medicine registration session to facilitate the timely registration of MNCH, FP/RH, TB, and other essential medical products. A total of 320 candidate products were submitted for registration, and 195 were evaluated for registration. The remaining 125 products will be reviewed during the next session.

MTaPS also supported pharmacist inspectors in conducting field visits to pharmaceutical wholesalers in Nord Kivu and Ituri (including Getraco, Shalina, Edinoki, Moon-Pharma, Unique Pharma, Noblesse, Bethel, Shikina, Gulf Africa, Pharmacie de l'Espoir, Prince-Pharma, BDOM, ASRAMES, and CDR CADIMEBU) to inspect whether imported products/medicines are registered and authorized for sale in the DRC market. Using the Directory of Registered Medicines, the inspection consisted of identifying unregistered medical products that are being imported by local companies and products with MAs

expiring in the next six months and notifying wholesalers to renew their registration. The last visits conducted this quarter reported the presence of products with valid MA in more than 70% of the companies visited in Goma and Bunia, and many other products for which MA request is being processed.

MTaPS also assisted the Provincial Health Inspectorate (IPS) in holding a sensitization meeting to share the results of the inspection visits conducted to wholesaler and partner warehouses to track unregistered medicines in Nord Kivu. The meeting focused on raising awareness among wholesalers and implementing partners on the need to register health commodities they are supplying on the local market. During the meeting, IPS informed participants of the risk of marketing unregistered drugs. All the stakeholders, including the Congolese Control Office and the DGDA, have committed to ensuring that health products they manage in the provinces have MA. Following the meeting, MTaPS supported the IPS to draft a reporting tool for information on customs-identified unregistered products and present it to participants for review.

MTaPS also supported the DPS in conducting four provincial TWG meetings in Nord Kivu and one in Ituri. Participants included representatives from partners (UNICEF, MSF, CORDAID, IMA, Save the Children, UNFPA, MEDAIR, PPSSP, SANRU, CARITAS, ASRAMES, CADIMEBU, etc.), DPS, specific program members including TB, malaria, RH, and HIV programs, and civil society members. Meeting participants worked on validating the provincial list of medical equipment for HFs, presenting, and validating reports on the use of contraceptives received by partners and civil society associations in 2021 from UNFPA, preparing for the consolidation of the provincial quantification of FP commodities carried out by HZs, and approving the distribution plans for malaria, HIV/AIDS, TB, and COVID-19 PPE for the first quarter of 2022.

In collaboration with UNICEF in Nord Kivu, the TWG also authorized the CDR (ASRAMES) to reallocate products close to expiry (Chlohexidine Digluconate 7.1%, Amoxicillin DT 250mg, delivery kit, etc.) to other HZs not supported by UNICEF.

To increase the engagement of communities and civil society groups in managing medical products and their capacity to participate effectively in oversight and other activities, MTaPS continued supporting the HZs in organizing one-day quarterly meetings of health area development committees (CODESAs) in Nord Kivu and Ituri, respectively, to increase community engagement in health product management, build communities' capacity, and ultimately improve the management of medical products at the HF and CCS levels. To date, key results include:

- Good collaboration between health center managers and RECOs reported in Nord Kivu
- Improved participation of community members in co-managing health products in HFs
- Improved transparency in managing health commodities
- Improved accountability in management through the effective participation of the community in inventories

BEST PRACTICES/LESSONS LEARNED

- Regular meetings with MOH staff (at the national and provincial levels) are the best platforms for discussions and sharing experiences, and lead to greater coordination and trust among stakeholders.
- Working in collaboration/cooperation with other implementing partners strengthens the impact of our interventions in the field as well as government ownership.
- Although the commitment of the DPS is important for success, it is also important to identify and collaborate with resource persons at the lowest level to accelerate progress.
- When a tool meets the needs of users, they take ownership of it in a sustainable way.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Continue supporting the DPS and the HZs to train community members in the use of integrated community case management (iCCM) commodities and develop distribution plans	April 2022
Finalize data collection and analysis, submit technical report, and disseminate the results on contraceptive consumption from the private sector to determine contraceptive information gaps	April 2022
Support the national MNCH program (*Direction Générale de la Famille et Groupes Spécifiques*) to print and disseminate protocols and job aids for the use and administration of heat-stable carbetocin, tranexamic acid, and folic acid, as well as amoxicillin DT job aids	April 2022

Table 10. Quarter 2, FY22, Activity Progress, DRC – MNCH ACTIVITIES

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Assist the DPM in strengthening medicine registration procedures for essential medicines, especially MNCH, FP/RH, and TB medicines ***Activity Description:*** Support DPM's medicine registration procedures to facilitate the timely registration of needed MNCH, FP/RH, TB, and other essential medical products and the update and dissemination of the Directory of Registered Medicines to support customs control and inspectorate functions; build the capacity of new members of the validation commission through a training workshop on processing MA requests, as well as briefing MA requesters on using the new electronic platform	1		1.1	MTaPS assisted the DPM to hold a 2nd two-week quarterly medicine registration session. 195 applications were processed, of which a hundred were backlogs from previous sessions including imported and locally manufactured products. The updated Directory of Registered Medicines is also under review. Dissemination is expected by early April in provinces and on the DPM website.
Activity 1.1.2: Assist DPS, inspectors, and customs officers in accessing and using the updated directory of registered medical products for inspections and import control (cross-cutting activity: MNCH, FP/RH, and TB) ***Activity Description:*** Support the IPS at the provincial level in conducting inspection visits and control of the use of the directory; document, report, and publish key findings at the provincial and national levels	1		1.1	MTaPS continued supporting field inspection visits to identify unregistered products. In January, a field visit was also conducted to Medair office by MTaPS in Bunia to help them comply with import and MA requirements in DRC, as well as feedback meetings to raise awareness among 30 participants, including delegates from the pharmaceutical private sector; CDR; DPS; civil society; the Order of Pharmacists; and the provincial MOH. The customs services continue systematically using the MA directory to check whether the medical products are registered before carrying out any product analysis.
Activity 1.1.3: Improve the functioning of provincial TWGs on medicines in Nord Kivu and Ituri ***Activity Description:*** Continue improving the functionality of the provincial medicines TWGs and related sub-groups; thematic sub-groups (MNCH, FP, and TB) meet monthly to discuss and present their specific issues and suggest corrective measures during the quarterly provincial medicines TWG meetings; support the TWGs in developing action plans and building the capacity of the TWGs and sub-groups in data analysis and decision making	1		1.1	MTaPS continues supporting regular medicine TWGs on a quarterly basis, and sub-group meetings on a monthly basis. Visibility of stock level of medicines and quarterly distribution remains one of the key topics during the TWG meetings. During this quarter, the TWG decided to reallocate UNICEF's close to expiry products.
Activity 1.2.1: Enhance the role of CODESAs and community outreach units (CACs) in medical product management at the health center and community levels (cross-cutting activity: MNCH, FP/RH, and TB)	1		1.2	MTaPS supported HZs to organize one-day quarterly meetings for community members. In Nord Kivu, participants reported an improvement of the reporting rate, with an average level over 90% for all HFs, as well as improved participation of community members in managing

Activity Description: Work with other partners, such as UNICEF and SANRU, to provide support in building the capacity of CODESAs, CACs, and other active community platforms with civil society representation to effectively fulfill their role in monitoring and oversight of medicine management, particularly with respect to MNCH, FP/RH, and TB products				health products in HFs. However, unlike in Nord Kivu, participants in Ituri reported with concern a significant staff turnover among health workers, which required HFs to hire new staff without significant knowledge in pharmaceutical management. Participants recommended conducting a refresher training in pharmaceutical management for RECOs, focusing on those who missed the last training workshop.
Activity 3.2.1: Assist DPS and HZs in strengthening the data collection system to improve availability, quality, visibility, and use of logistics data for decision making (cross-cutting activity: MNCH, FP/RH, and TB) ***Activity Description:*** Assist HZs and facilities in improving logistics management information system (LMIS) data collection and reporting using the existing paper-based system and facilitating data capture and recording in District Health Information Software 2 at the HZ level for migration and visualization into InfoMED, particularly for MNCH, FP/RH, and TB commodities	3		3.2	In February, MTaPS supported the DPS to organize a briefing session on the use of InfoMED platform to improve logistics data visibility in Nord Kivu. The briefing was held to respond to the findings from the meeting in November 2021, when it was noted that most of the staff trained in the use of InfoMED were then transferred to other HZs. This resulted in low LMIS data completeness in the InfoMED platform in all MTaPS-supported HZs. Participants included newly recruited managers in the five MTaPS-supported HZs.
Activity 5.1.2: Improve the availability of commodities needed for iCCM for treating children at the community level in selected HZs (MNCH-specific activity) ***Activity Description:*** Continue with the advocacy efforts to other partners, especially those providing child health commodities, to address the underlying causes and critical issues identified in the previous year to allow the delivery of the full iCCM package at the community level, thereby reducing unnecessary referrals of children from community level to HFs, especially in the context of insecurity and poverty in eastern DRC	5		5.1	MTaPS collaborated with DPS, HZs, and CCSs to prepare for the upcoming training of RECOs and health care providers in estimating needs, developing distribution plans, and managing and using MNCH commodities. Due to security issues in Rwanguba HZ, only RECOs from Kirotshe and Nyiragongo HZs will be trained. Note that there are no CCSs in urban HZs.
Activity 5.1.3: Support DPS in collecting contraceptive consumption information from the private sector to determine the contraception information gap ***Activity Description:*** Support DPS to conduct an operational study to determine the proportion of missing private-sector data, thereby helping close the gap and eliminate the contraceptive prevalence bias in MTaPS-supported HZs in Ituri and Nord Kivu	5		5.1	MTaPS continued supporting the MOH to prepare for and conduct a survey on contraceptive consumption in the private sector in Nord Kivu and Ituri. To this end, data collection protocols and tools have been validated by the national FP program in collaboration with MTaPS and other FP partners. In February, the pre-test of the data collection tools was also conducted, and a briefing session was held at the national level (for supervisors of the survey). Field visits for data collection and analysis are underway.

F. ETHIOPIA

OVERVIEW

Ethiopia is one of the countries selected to implement interventions aimed at the prevention and containment of antimicrobial resistance (AMR) through funding from the Global Health Security Agenda (GHSA). The goal of MTaPS Ethiopia's GHSA portfolio is to build the capacity of government stakeholders to effectively combat the development and spread of AMR. MTaPS will provide targeted technical assistance to Ethiopian stakeholder institutions in three result areas of the AMR action package: effective multisectoral coordination (MSC), infection prevention and control (IPC), and optimizing use of antimicrobial medicines at health facilities through effective implementation of antimicrobial stewardship (AMS) programs. These interventions are meant to support the country on its pathway toward improving its Joint External Evaluation (JEE) scores to meet the priorities of the GHSA compared to the baseline JEE done in 2016, where the country scored limited capacity level 2 for both the IPC and AMS components.

MTaPS Ethiopia employs the pharmaceutical systems strengthening approach when designing and implementing its interventions. Specifically, MTaPS aligns its work plan with the Pharmaceuticals and Medical Equipment Directorate (PMED), the main Ministry of Health (MOH) stakeholder responsible for AMS, and the Clinical Services Directorate (CSD), which specifically works on IPC. MTaPS addresses priority elements of AMR governance at both the central and facility levels, including supporting locally led implementation of key AMR guidance documents and governance processes required for subsequent institutionalization and individual capacity transfer and longer-term sustainability. MTaPS is providing continued support to strengthen the national coordination role of the MOH to enhance collaboration and ensure effective coordination among National Antimicrobial Advisory Committee (NAMRAC) stakeholders and create cooperation in the fight to prevent and contain AMR. MTaPS is also working with various Ethiopian civil society organizations to enhance their participation in preventing and containing AMR. In addition, MTaPS engages selected public and private hospitals with the potential to implement an AMS program that could serve as a showcase to other health facilities.

CUMULATIVE PERFORMANCE TO DATE

Since the program launched in 2018, MTaPS Ethiopia has worked closely with the MOH and regional health bureaus (RHBs) to implement priority actions of the World Health Organization (WHO) Benchmarks for International Health Regulations (IHR) Capacities to make a significant contribution to increasing the country's JEE capacity on MSC, AMS, and IPC. MTaPS supported the country's progress toward higher JEE scores by aiding the completion of 3 of 4 (75%) capacity level 2 and level 3 actions and 2 of 4 (50%) level 4 actions by the end of PY2 (FY20). Over PY1 and 2, MTaPS Ethiopia supported the process of revising the National One Health AMR action plan and establishing an AMR Prevention and Containment Unit within the MOH. The unit provides leadership, facilitates national coordination, and identifies and allocates resources for implementing the AMR national action plan. To strengthen the operational capacity of the NAMRAC, MTaPS facilitated its restructuring, including updating the membership to ensure broader stakeholder/partner involvement and revising its terms of reference (TOR) to perform both advisory and MSC roles as well as development of TOR for its IPC and AMS technical working groups.

In the area of AMS, MTaPS supported the practical implementation of AMS interventions at selected referral hospitals and the revision of the national essential medicines list (EML) and national standard treatment guidelines (STGs) for general hospitals, which are based on the WHO-recommended Access, Watch, and Reserve (AWaRe) categorization of antibiotics for the first time. Regarding progress toward implementing GHSA benchmark actions, MTaPS' support contributed to improving AMS by completing 3 of 6 (50%) level 3 and 1 of 7 (14%) level 4 actions.

As part of improving the country's capacity in IPC, MTaPS Ethiopia supported the revision and launch of the National IPC Guideline and IPC training materials and built the capacity of IPC focal persons at the national, regional, and health facility levels by providing training of trainers (TOT) and stepdown IPC training to more than 2,500 health care providers. MTaPS also supported the MOH in identifying the gaps in the national IPC program using WHO's Infection Prevention and Control Assessment Tool 2 (IPCAT2) and designing a central-level improvement plan based on the findings of the assessment. MTaPS also provided technical support to health facilities to improve their IPC performance using WHO's Infection Prevention and Control Assessment Framework (IPCAF) tool. An initial group of 21 hospitals conducted IPCAF self-assessments with support from MTaPS, and a later assessment conducted at four of those hospitals showed substantial improvement in their IPCAF scores. One hospital progressed from an inadequate IPC score to the higher end of the basic level score, the second progressed from basic level to intermediate level, and the other two maintained their IPC levels but improved their IPC score by 20–25%. Regarding the GHSA benchmark actions, MTaPS' support contributed to improving Ethiopia's progress toward achieving higher JEE scores in IPC by supporting 3 of 5 (60%) level 2, and 5 of 6 (83%) level 3 actions.

QUARTER 2 ACHIEVEMENTS & RESULTS

MTaPS Ethiopia resumed operation in PY4 of program after a suspension in PY3. As a result, a substantial portion of time in Q1 and Q2 was spent setting up the office, recruiting staff, and revising the PY4 approved work plan. The earlier version of the PY4 work plan, which was approved by USAID, was revised after discussion with the MOH to better address its priorities. The amended work plan was re-submitted to USAID on March 22, 2022, and is pending approval. In the meantime, the MTaPS Ethiopia team has continued implementation of activities that were unchanged from the earlier plan.

In Q2, MTaPS provided technical support to the Addis Ababa City Administration Health Bureau to revitalize the regional AMR advisory committee and create awareness on AMR prevention and containment efforts. MTaPS also provided technical assistance by reviewing and providing feedback on the National IPC Policy and Strategy document and participating in a workshop organized by the MOH.

Health care providers at a training on AMS at Zewditu Hospital, March 24, 2022. Photo Credit: Workneh Getahun

MTaPS also provided technical support to the MOH in developing a hospital antimicrobial use policy manual to enforce adherence to the national EML and STGs and technically reviewed the revised STG for general hospitals. In addition, MTaPS supported MOH in the provision of onsite training on AMS

to 31 hospital staff (18 female) at Zewditu Memorial Hospital, Addis Ababa, March 22–24. MTaPS provided technical assistance by moderating sessions and presenting stepwise approaches to establish/strengthen AMS in hospital settings. The event was a good opportunity for staff to discuss AMR/AMS-related issues and raise their awareness. This is expected to enhance their engagement on AMR prevention and containment efforts through the promotion of the prudent use of antimicrobials and implementation of good IPC practices.

The Q2 activities contribute to MTaPS' sub-objective 5.4— "Antimicrobial resistance containment supported". They also support Ethiopia's progress toward WHO IHR benchmark 3.4 actions for level 3 for AMS: "Develop/update and disseminate national stewardship and clinical/treatment guidelines that include EML AWaRe categorization for antibiotics promoting appropriate use of antimicrobials," and "implement AMS programs, including monitoring antimicrobial use, education/communication, and other interventions to improve antibiotic use, at designated facilities".

BEST PRACTICES/LESSONS LEARNED

Official launch of national One Health AMR Strategic Plan by officials of tripartite Government institutions and international organizations, November 18, 2021. Photo Credit: Workneh Getahun

As a result of the closure of MTaPS Ethiopia in PY3, its support to the Ethiopian Government was interrupted. However, because of the catalytic effect of interventions initiated in PY2, its absence did not result in disruption of AMR prevention and containment- related activities. The MOH continued implementation of many of the planned activities developed with MTaPS. This is demonstrated by the finalization and official launch of the national One Health AMR Strategic Plan (2021–2025) and the finalization and printing of the revised EML, both of which were drafted with support from MTaPS. This indicates that ensuring leadership of the government counterpart from the prioritization of an activity through planning and implementation is a key driver to not only its success but also its sustainability.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Support the MOH and national AMR MSC stakeholders to develop sector-specific and regional operational plans based on the revised national AMR prevention and containment strategic plan, including a monitoring and evaluation (M&E) framework	May–July 2022
Support the MOH/PMED to organize effective MSC through regular meetings of AMR stakeholders, including animal health and environmental protection	April 2022
Support to the MOH/PMED to strengthen the capacity of the two RHBs through review of their action plans	May 2022
Support the MOH and national stakeholders to assess the core components of the national IPC program using IPCAT2	April–May 2022
Provide IPC TOT training for key IPC personnel at the MOH, RHB, and selected health care facilities to support the implementation of the revised national IPC reference manual in health care facilities	April 2022

Finalize the IPC facilitator guide and participant manual for health care workers and revision of IPC training materials	April 2022
Organize launch workshop to familiarize stakeholders with the revised STG and EML	May 2022
Provide TOT and basic training on AMS core components for AMS team members and program managers at the MOH and RHBs	April 2022
Support the facilitators trained during the TOT to organize stepdown training of AMS committee members in their respective facilities	June 2022
Provide technical assistance to the PMED and RHBs to conduct supportive supervision, monitoring, and mentoring to ensure that knowledge and skills are translated into practice	May–June 2022
Support the PMED and RHBs to strengthen AMS implementation in targeted health facilities, conduct AMS assessments, and develop and implement hospital specific AMS action plans	May 2022

Table 11. Quarter 2, FY22, Activity Progress, Ethiopia

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Support the MOH and national AMR MSC stakeholders to develop sector-specific and regional operational plans based on the revised national AMR prevention and containment strategic plan, including an M&E framework ***Activity Description:*** Disseminate the revised national action plan on AMR to relevant stakeholders, organize and facilitate advocacy and familiarization workshops, and conduct partner mapping through stakeholder forums	5.4	1.1	N/A	No activities were held this quarter
Activity 1.1.2: Continue to support the PMED to organize effective MSC through regular meetings of AMR stakeholders, including animal health and environmental protection ***Activity Description:*** Provide technical support to strengthen the NAMRAC and its AMS and IPC technical working groups and to strengthen the capacity of six RHBs through review of their action plans	5.4	1.1	N/A	Provide technical support to the Addis Ababa City Administration Health Bureau to restructure the regional AMR advisory committee and develop its TOR and an action plan on AMR
Activity 2.2.1: Update and finalize IPC training materials for health care workers and support staff based on revised IPC guidelines ***Activity Description:*** Support the MOH to finalize, print, and distribute the revised national IPC reference manual; finalize the IPC facilitator guide and participant manual for health care workers and revise IPC training materials; and guide the CSD, PMED, RHBs, and targeted facilities to facilitate IPC training to health workers and support staff	5.4	2.2	N/A	Discussion with MOH counterparts conducted and agreed to implement the activity in April 2022
Activity 2.3.1: Continue to support the MOH and RHBs to monitor IPC improvement in selected health care facilities using the IPCAF and national IPC monitoring tool ***Activity Description:*** Support the MOH/CSD and RHBs to facilitate monitoring of the effectiveness of IPC implementation and compliance in selected health facilities; update and implement action plans, informed by assessment results	5.4	2.3	N/A	MTaPS supported the MOH to develop and finalize the national IPC strategy M&E tool, which will be used to monitor and evaluate IPC activities, included in the national IPC Strategy. Discussion with the MOH in progress to determine the tools and dates of implementation.

Activity 3.1.1: Support finalization and dissemination of revised STGs and EML ***Activity Description:*** Support dissemination of the STGs and STG implementation manual after technical review, design, and printing	5.4	3.1	N/A	Undertook technical review of the STG for general hospitals in alignment with the new 2021 version of the WHO model EML
Activity 3.2.1: Continue to support training of health care providers on AMS at public and private health facilities ***Activity Description:*** Support the facility AMS committee and facility AMS champions to organize training in their respective facilities with technical support from the PMED and RHBs	5.4	3.2	N/A	Conducted a situational analysis of the AMS core elements at the national level using the WHO checklist
Activity 3.5.1: Strengthen AMS implementation in targeted health facilities ***Activity Description:*** Build the capacity of Drug and Therapeutics Committee to facilitate ownership of AMS programs and enhance performance of the facility AMS team	5.4	3.5	N/A	MTAPS supported the MOH/PMED to develop the hospital antimicrobial use policy manual and provide onsite training on AMS to 31 (18 female, 13 male) staff at Zewditu Memorial Hospital March 22–24, 2022. The training was organized by the hospital AMS team and facilitated by experts from the MOH, Addis Ababa University, and MTaPS. Besides sensitization, staff discussed AMR/AMS-related issues, the need for prudent antimicrobial use, and implementation of good IPC practices.

G. INDONESIA

OVERVIEW

Promoting transparency and accountability is a prerequisite for improving access to essential medicines and strengthening health systems to achieve universal health coverage (UHC). The overall goal of the US Agency for International Development (USAID) Medicines, Technologies, and Pharmaceutical Services (MTaPS) program in Indonesia is to build the country's pharmaceutical systems by strengthening their ability to institutionalize transparent and evidence-based decision making, build its capacity to use robust information to define and cost pharmaceutical coverage, promote pharmaceutical expenditure tracking to improve purchasing value, and strengthen pharmaceutical-sector governance. The strategic approach and results framework presented in the next section illustrate how MTaPS' goals meet USAID's Country Development Cooperation Strategy 2020-2025 intermediate results in high-quality communication, equitable outcomes and quality of care, and improved governance. This section presents performance progress in selected MTaPS program governance activities from the start of the project, for which there are activities to report, to the first quarter of FY22 for the countries contributing to the global MTaPS objective 1.

CUMULATIVE PERFORMANCE TO DATE

The implementation of MTaPS in Indonesia officially began in July 2021. Entering nine months of its implementation in March 2022, MTaPS has carried out mapping activities for health technology assessment (HTA) topic selection and pharmaceutical expenditure until December 2021 and, entering 2022, has prepared a capacity building plan for the Ministry of Health (MOH) in supporting the process of selecting HTA topics and pharmaceutical expenditure tracking that is ready to be implemented.

From the results of the joint analysis of MOH, Indonesia HTA Committee (InaHTAC), and stakeholders, the HTA topic selection process in Indonesia requires strengthening in improving transparency, which includes the need for outreach to improve submitters' understanding and improve the submission process; improved transparency on scoring methods, standards, and expertise of scorers; improved publicity beyond the immediate circle of influence of key MOH/InaHTAC actors; and management improvement on the technicalities of scoring and a guideline or standard operating protocol. Therefore, MTaPS presented the next planned activities on March 23, 2022, and MOH accepted. A summary of the planned activities that MTaPS will implement—three pillars to improve the HTA topic selection process in Indonesia—is shown in Figure 3 below.

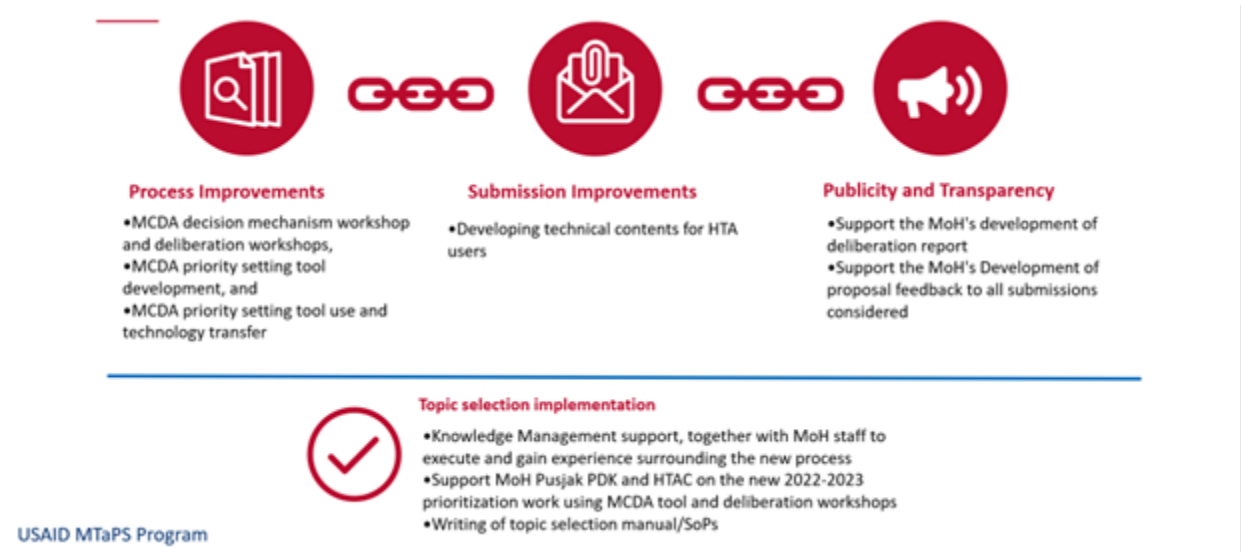


Figure 3. The three pillars of intervention to improve HTA topic selection process in Indonesia

In addition, there are three other HTA-related activities supported by MTaPS until May 2023.The first is to provide hands-on learning support to InaHTAC and researchers for completing HTA using advanced methods of multi-criteria decision analysis (MCDA) and real-world evidence (RWE), as identified in the beginning of year 1 of the project. MTaPS will work closely with the HTA agents conducting the studies through collaboration on research proposal design, analysis, and final report. The second is providing technical assistance on HTA appraisal processes—MTaPS will start the process by conducting due diligence and light touch support. This will include landscaping, literature review, and inclusion of appraisal topics in the stakeholder interviews. This finding will also provide more clarity on immediate next steps to improve the HTA appraisal process in Indonesia. In addition, MTaPS and World Bank will work together to support MOH and KPTK in developing HTA guidance and manuals—in this case, MTaPS will focus on the topic selection and appraisal section. The third is providing financial assistance to support the HTAsiaLink conference held in Indonesia in October 2021 through funding received by USAID Asia Bureau. Engagement in international HTA conferences is an important capacity building opportunity for participants to be exposed to recent HTA research/methods and to build connections with the international HTA network. These connections can potentially create opportunities for capacity building collaboration or joint projects. Areas of support were determined to be translation and operational support in executing the HTAsiaLink conference; MTaPS hosting the preconference session entitled "HTA Pathways in Low- and Middle-Income Countries: Scaling Up for Sustainability of UHC in Asia" (both were completed at the October 2021 conference); documenting conference activities and learning under a conference digest; and developing and publishing 1-3 peer-reviewed articles.

For pharmaceutical expenditure activities, MTaPS has carried out mapping of institutions that have pharmaceutical spending data from both the public and private sectors, the summary of which can be seen in Table 12.

Table 12. Map of Pharmacy Data Availability in Various Agencies

Agency	Information System	Level of Pharmacy Data Available				Availability of Transaction Data
		Manufacturer	Distributor	HCP	Consumer	
MOH	simada			v		Available
	e-desk			v		Available
	e-licensing	v	v			Available
	e-report pbf		v	v		Available
	sipnap			v	v	Available
	e-monev katalog			v		Available
	e-logistik			v		Unavailable
	Sikobat			v		Unavailable
	SAS	v		v		Available
National Institution for Policy of Public Procurement	E-catalogue atau ISB (Inaproc Service Bus)	v		v		Available
National Board for Family Planning (BKKBN)	LSPSE BKKBN	v		v		Available
	sirika			v	v	Available
National Agency for Food and Drug Control (BPOM)	E-Was		v	v		Available
	e-BPOM	v	v			Available
	e-napza	v	v			Available
Ministry of Industries	tkdn.kemenperin.go.id	v				Unavailable
Social Health Insurance Administration Body	pcare untuk obat PRB non-kapitasi				v	Available
	top-up CBGs (untuk *special drugs*)				v	Available
	obat non-CBGs				v	Available
IQVIA	ITMA	v				Available
	IHPA				v	Available
	IPA				v	Available
	IDA				v	Available
Business Association of Medical Devices	alkespintar	v		v		Available
Business Association for Pharmaceutical Manufacturers	No pharmaceutical expenditure information, but there is information on the Pharmaceutical Inspection Convention (PIC) of association members					
International Pharmaceutical Manufacturers Group	No pharmaceutical expenditure information, but there is information on the PIC of association members					

From the mapping, MTaPS submitted the planned activities on March 18, 2022, and MOH approved the plan. MTaPS planned to implement a co-lead process of compiling existing pharmaceutical expenditure data available from national sources with support from the Indonesian health account (HA) team. In collaboration with local HA experts, MTaPS will adapt the global guidelines to fit the Indonesian context.

The team will identify key variables that need to be included in the dataset (drug molecules, therapeutic class, total spending, final consumption costs, source of funding, etc.) and develop any data compilation tools/templates needed. As a last step, MTaPS local and headquarters staff will facilitate a five-day virtual/in-person training for the HA team and consultants to ensure that they have the skills to facilitate the pharmaceutical expenditure tracking process in the future.

QUARTER 2 ACHIEVEMENTS & RESULTS

Since March 2022, MTaPS Indonesia has achieved interim achievements in completing its deliverables and is in the final process of completing reports summarizing the pharmaceutical expenditure data sources where all activities can be completed, according to the December 2021 timeline, and continue with the plan. Work that has been approved by MOH, and implementation of national-level pharmaceutical expenditure tracking starting in April 2022, will contribute to the 2021 National Health Account report that is being prepared this year.

For HTA, two reports are being completed; however, a series of activities related to documenting recommendations for HTA topic selection improvement were carried out until March 2022, so the two reports (one documenting the literature review, stakeholder engagement, and observations of collaboration on topic selection process [guidance] and one documenting recommendations and potential intervention to strengthen HTA topic selection processes, use, uptake, and impact) will be submitted in May 2022. MTaPS has also submitted intervention recommendations to improve the HTA topic selection process through three pillars— improvement in process, submission, and publicity and transparency—and they have been approved by MOH to be used as an MTaPS activity in year 2.

Furthermore, for the HTAsialink digest, the report has been submitted to the HTAsialink board and received appreciation for its high quality and is in the editorial process. It will be printed and distributed in May 2022.

BEST PRACTICES/LESSONS LEARNED

The use of MCDA in HTA in Indonesia is still in the discussion phase and its development is limited. MTaPS comes with national and international experts to make it happen. Furthermore, the initial step in the development of pharmaceutical expenditure has been carried out by developing a data source landscape, and the MOH vision to have a national pharmaceutical expenditure report was initiated by MTaPS. To build sustainable capacity through its programs, the MTaPS team utilized hands-on practice. This approach built the capacity for Policy Center of Health Financing and Decentralization (Pusjak PDK), InaHTAC, and the HA team so that they can continue to implement HTA topic selection and appraisal and pharmaceutical expenditure tracking after the MTaPS program has completed.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
1.1.1: Strengthen the topic selection process for InaHTAC:	
(a) Draft report documenting recommendations and potential intervention to strengthen HTA topic selection processes, use, uptake, and impact	May 31
(b) MCDA tool, populated with weights and operational definition as agreed by stakeholders	September 30
(c) HTA topic selection input to the World Bank-led revision process of the HTA guidelines	September 30

1.1.2: Build capacity of key stakeholders on HTA methods; support the HTA study on Transtuzumab for early breast cancer	March 31, 2023
1.1.3: Support HTAsiaLink 2021—support the government on reporting the 9th HTAsialink conference (October 11–13, 2021) through the conference digest and article publications in scientific journals	September 30
2.1.2: Support the HA team to compile secondary pharmaceutical expenditure data at the national level—completed compilation of pharmaceutical spending data at the national level and preliminary aggregate results	June 30
2.1.3: Strengthen the centers of excellence for antimicrobial stewardship; develop guide on antimicrobial use/clinical surveillance at the health facility level; initial results tables from the pharmaceutical data mapping	November 30
2.1.4: Build capacity of the HA team to compile pharmaceutical expenditure data; five-day virtual/in-person training for HA team on pharmaceutical expenditure tracking	March 31, 2023

Table 13. Quarter 2, FY22, Activity Progress, Indonesia

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Strengthen the topic selection process for InaHTAC	5.4.1, 5.4.2	1.2.1	N/A	A meeting was held with Pusjak PDK, InaHTAC, USAID mission office, and MTaPS to discuss the results of the year 1 work plan. At this meeting, MTaPS explained that the reports from the online survey and FGD related to the implementation of HTA topic selection had been completed and submitted in December 2021 and continued documenting recommendations from January to March 2022 to strengthen the implementation of HTA topic selection and revision of its technical guidance. It was also agreed that the process of HTA topic selection using MCDA will begin in 2022 for the implementation of the HTA studies in 2023, while determining that the two HTA topics in 2022 are using existing guidelines. In addition, Pusjak PDK submitted a list of new needs for year 2 to MTaPS, namely the development of a manual for selecting HTA topics using MCDA and strengthening the HTA appraisal support/due diligence.
Activity 1.1.2: Build capacity of key stakeholders on HTA methods	5.4.1	2.1.1	N/A	KPTK has decided on two HTA studies in 2022, namely the study of the use of the drug Trastuzumab for early-stage breast cancer and another study for colorectal cancer. MTaPS will support capacity building related to maternal and child health and tuberculosis HTA studies in the form of collaborative protocol development and selection of methodologies (e.g., MCDA, RWE) and direct learning with research implementing agencies. One of the studies that is in line with maternal and child health is the use of the drug Trastuzumab. Under the support of Asia Bureau, MTaPS is formulating a webinar on HTA in May/June 2022 on RWE. As requested by Pusjak PDK, Indonesia will be among the key participants and stakeholders for this event. Interviews with stakeholders, Pusjak PDK staff, and InaHTAC members—in the context of documenting recommendations and potential interventions to strengthen the process of selecting HTA topics—will be completed in March 2022.
Activity 1.1.3: Support HTAsialink 2021	5.4.1, 5.4.6, 5.4.7	3.2.1	N/A	MTaPS submitted a draft of the HTAsialink conference digest at the end of December 2021 and on January 28, 2022, it received input from the HTAsialink conference's local committee regarding several aspects, including the emphasis on using a combination of HTA and non-HTA methods (such as the use of MCDA and value-based medicine), cooperation between HTAsialink member countries in exchanging data on HTA studies, and how to address political and HTA issues. The draft digest containing input from the HTAsialink conference's local committee was submitted to the HTAsialink board and was approved on February 18, 2022. However, it is still open if the board members want to provide input (due April 6, 2022). The next step is the editorial and printing process by MTaPS.

				One article for a scientific journal has been approved to be written regarding cooperation between HTAsialink member countries in exchanging data on HTA studies. MTaPS compiled an outline in February 2022 and is currently in the process of developing a draft article.
Activity 2.1.1: Landscaping of pharmaceutical expenditure tracking data sources				A draft report on landscape data sources for tracking pharmaceutical expenditure in Bahasa, Indonesia, was completed and shared with the USAID mission and MOH in February 2022 to get their input. At the time this report was prepared, it was being translated into English to get broader input from the MTaPS home office and USAID. A landscape matrix of data sources will be used for tracking pharmaceutical spending at the national level in 2022. Updates will be made if new or revised data sources are obtained from the relevant agencies/organizations.
Activity 2.1.2: Support the HA team to compile secondary pharmaceutical expenditure at the national level				The acting head of Pusjak PDK and her team provided input to the implementation plan for tracking pharmaceutical expenditures on February 10, 2022, and March 18, 2022. MTaPS submitted a revision of the activity of tracking pharmaceutical expenditures from one city to the national level using the landscape report data source to trace compiled pharmaceutical spending. This change in activity has been approved by the acting head of Pusjak PDK. The tracking of pharmaceutical expenditures will be carried out from April to December 2022 and will be discussed again regarding the technical assistance plan in 2023.

H. JORDAN

OVERVIEW

The US Agency for International Development (USAID) Medicines, Technologies, and Pharmaceutical Services (MTaPS) program Jordan's overall goals are to improve pharmaceutical-sector governance, institutional capacity for pharmaceutical management and services, patient safety, and antimicrobial resistance (AMR) containment. To address the needs of the pharmaceutical sector in Jordan, MTaPS has adopted USAID's pharmaceutical systems strengthening approach. This method shows how governments, providers, and community members all play important roles in reinforcing key system functions, and how the entire strategy must be guided by evidence-based decision making to achieve its objectives.

CUMULATIVE PERFORMANCE TO DATE

MTaPS Jordan has conducted rapid infection prevention and control (IPC) assessments of 30 Ministry of Health (MOH) and private hospitals, built the capacities of nearly 1,300 health care providers, and developed an e-learning module on COVID-19 and national COVID-19 IPC guidelines to increase accessibility during the pandemic. With strong leadership from local counterparts, MTaPS was able to provide technical and logistic support culminating in legislative and institutional reform governing procurement practices. Over 1.35 million data-point entries describing adverse events following immunization (AEFIs) with COVID-19 vaccines were cleaned, aggregated, analyzed, and presented in comprehensive and descriptive reports to MOH and other national entities for decision making. MOH awareness campaigns covering AMR were enriched and expanded through MTaPS support during the World Antimicrobial Awareness Week 2022 and continues with efforts aimed at improving awareness among secondary school children.

QUARTER 2 ACHIEVEMENTS & RESULTS

OBJECTIVE 1: STRENGTHEN PHARMACEUTICAL-SECTOR GOVERNANCE

MTaPS' efforts toward procurement modernization culminated in key legislative and policy reform as all five of the actionable points from the US Government/Government of Jordan (GOJ) conditions precedent were fulfilled (summarized in table 14 below). The three legislative actionable points were modified in the government procurement bylaw (GPB) and its ratification was officially announced in the GOJ's national gazette on January 16, 2022. As stated in the quarter 1 report, the remaining 2 actionable points are governed by institutional policy. The Jordan Food and Drug Administration (JFDA) modified its registration procedures to accept a fast-track of World Health Organization (WHO)-prequalified vaccines, and shared vaccine reference prices with the Government Procurement Department (GPD).

Table 14: Summary of legislative and policy reform

Condition Precedent Actionable Point	Reform	How
Extend the maximum limit of procurement agreements (framework agreement) for GPD with suppliers to three years instead of two	✓	Modification in the updated GPB (article #57) specifically increased the limit to 5 years
Permit negotiations with suppliers under specific and exceptional provisions	✗	While this point was not added specifically in the GPB, the government instead outlined it as a requirement in the GPB's implementation instructions
Activating and implementing existing article #93 of the GPB which permits partial pre-payment for vaccines	✓	An official letter from the Minister of Health was sent on August 30, 2021, to the GPD, the MOH Procurement and Supply Directorate (PSD), and to the Ministry of Finance to activate prepayment
Providing the GPD with the vaccine's reference prices from the JFDA through internal communication between the two entities	✓	Vaccine reference prices were communicated to the GPD through an official letter by the JFDA on November 24, 2021
Integrating the WHO pre-qualified vaccines into the required registration policies and procedures of the JFDA	✓	The JFDA officially announced the updated registration principles formalizing faster processes in the official national gazette on October 17, 2021

MOH announced a new organizational structure in quarter 2. Of note, the Communicable Diseases Directorate now falls under the newly established Epidemics Administration which has consequences on the membership and leadership of the National Vaccines Procurement Modernization Committee (NVPMC).

After discussions with MOH, MTaPS is currently awaiting official updates on the committee's membership before calling a next meeting. In the meantime, MTaPS has held a series of meetings with key committee members and stakeholders including the new director of the Epidemics Administration, the Pharmaceutical Procurement Unit (PPU) of the GPD, the Competition Directorate of the Ministry of Industry and Trade, and the MOH PSD to initiate work on related program interventions in coordination with the MOH director of project management.

Currently, a draft outline of the framework agreement implementation guidelines (FAIG) has been submitted to USAID while the comprehensive document is being developed by MTaPS based on initial discussions with counterparts. As discussed in the previous NVPMC meeting, a technical working group (TWG) will be formed as a sub-committee of the NVPMC to further develop and finalize the FAIG according to local needs and context. Moreover, this TWG will lead the other MTaPS interventions related to procurement in a collaborative and comprehensive manner.

For the instructions for competitive negotiations (ICN) intervention, MTaPS held two technical meetings with the Competition Directorate in which implementation steps were identified and a technical approach was outlined. Moreover, MTaPS coordinated with the Competition Directorate, the GPD, and the PSD to jointly identify the relevant audience for the ICN. This collaboration will help strengthen and streamline procurement processes across entities in an institutional and constructive manner. Internally, and based on progress in the different procurement interventions, MTAPS is now outlining

the modules for the comprehensive procurement training curriculum which will cover the main program interventions including FAIG, ICN, and general training over the GPB.

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

After several discussions with the PSD leadership, in quarter 2 MTaPS organized technical discussions with the different PSD units to engage counterparts and ensure their commitment. An initial key meeting was held with the heads of the purchasing unit and the audit unit, during which program goals were discussed comprehensively and in detail, linking the procurement interventions with the supply chain and even the clinical interventions aiming to standardize and rationalize use of antimicrobials in health facilities which may also improve forecasting quantities for procurement. PSD staff highlighted the importance of the MTaPS procurement interventions and how closely related it is to their work. Accordingly, the head of the purchasing unit outlined the different capacities and competencies needed for different stakeholders with whom the department interacts; she further named different stakeholders, including members of her own department, for whom the training would be essential. MTaPS will further work with the PSD to ensure all key stakeholders are included in the procurement training according to their vision.

A second meeting was coordinated between MTaPS and all six technical units (table 15) of the PSD, during which the PSD director also attended. MTaPS again described its program interventions, focusing on the supply chain assessment and procurement. Counterparts pointed out the concurrent WHO supply chain assessment to which MTaPS explained that duplication will be avoided and results of the standard WHO assessment will be utilized to further guide and tailor MTaPS interventions according to local needs and priorities. Moreover, the MTaPS intervention will build on the resulting recommendations from the assessments and address challenges in a comprehensive manner. Further technical meetings were held with each of the six PSD units followed by an assessment visit to the northern region's PSD warehouse in Irbid governorate. As such, the MTaPS supply chain assessment is underway with full counterpart engagement.

Table 15: Technical units and warehouses of the PSD

Unit / Warehouse	Manager or Key Contact
Information Unit	Dr. Yousef Al Hindi
Purchasing Unit	Dr. Reem Al Habahbeh
Storage Unit	Dr. Mohammad Jaradat
Receiving Unit	Dr. Lina Odeh
Audit and Follow-Up Unit	Dr. Bassam Theeb
Gas-Supplies Unit	Dr. Raed Mraweh
North Warehouse	Dr. Hashim Suhail
South Warehouse	Dr. Ahmed Abu Salamah

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

In coordination with MTaPS partner Results for Development, MTaPS began technical work on a comprehensive assessment report of and recommendations for potential sustainable vaccine funding mechanisms for the MOH and GOJ. To ensure optimal evaluation of the local context and applicability of recommendations, a local legal consultant will work closely with the MTaPS team. A contract for the local consultant was signed in quarter 2 after a proper competitive hiring process.

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

MTaPS collaborated with the Pharmacy and Clinical Pharmacy Directorate (PCPD) to develop the rational use of antimicrobials (RUA) program design and implementation plan in support of the implementation of the national action plan on AMR (NAP-AMR). The PCPD director is also the chairperson of the national antimicrobial stewardship committee, and the program implementation plan was finalized with the director and her team's engagement. A collaborative approach that engages key stakeholders at the central and facility level was outlined in the plan.

Accordingly, MTaPS conducted a series of successful meetings to engage key stakeholders and obtain their feedback and commitment. Stakeholders include the Quality Directorate, the Nursing Directorate, the Central Laboratories Directorate, and the chief of the MOH obstetrics and gynecology specialty. MTaPS also organized a meeting with the new epidemics administration manager to provide an overview of the RUA program and other AMR activities.

To further optimize efforts, a meeting was held between MTaPS and WHO in the presence of the USAID activity manager to further coordinate interventions, during which MTaPS presented and discussed all AMR-related activities. Subsequently, MTaPS requested regular monthly meetings with WHO. In addition, MTaPS advocated for a joint meeting that includes WHO and MTaPS but is led by MOH, which is being discussed.

MTaPS also met with the MOH national AMR focal point and provided feedback on the members of the AMR steering committee (SC) as requested. MTaPS was also officially invited to become a member of the AMR surveillance national coordinating center (NCC) and asked to review the members list and terms of reference (TOR) for the committee. MTaPS provided feedback on the NCC TOR based on the latest WHO guidance. The MOH national AMR focal point is also interested in re-activating the AMR SC, but only after the NCC is re-activated. In quarter 3, MTaPS will work to reactivate the NCC and AMR SC, as well as design capacity building activities once these committees are up and running.

MTaPS organized a workshop for key stakeholders from Al Bashir Hospital to present the RUA program and discuss their priority clinical areas for AMR interventions. A second workshop will be organized in quarter 3 to include all heads of medical specialties with other stakeholders—including quality, IPC, medical records and information technology, laboratories, nursing, hospital leadership, and pharmacy—to determine the most appropriate AMR interventions for Al Bashir Hospital and for the other MOH hospitals. In the meantime, MTaPS is coordinating with the Health Care Accreditation Council (HCAC), which is a USAID implementing partner in Al Bashir Hospital, to ensure complementarity in interventions.

"Increasing AMR is costly to the health care system which is why it is pertinent to work on the rational use of antimicrobials"
Dr. Bassam Badwan, Chief of Surgery at Al Bashir Hospital

Following a request from the Royal Medical Services (RMS), MTaPS received concurrence from its USAID activity manager to conduct a series of scoping meetings with RMS counterparts including IPC, intensive care unit (ICU) physicians, and senior administrators for potential collaboration. The RMS then organized a meeting with MTaPS that was led by the Assistant Director for King Hussein Medical Center Technical and Administrative Affairs, Brig. Gen. Dr. Ghazi Al Dehayat, and the heads of all related departments (including medical, pharmacy, microbiology, IPC, quality, nursing, and information technology) to discuss and agree on key priority interventions. MTaPS gave an overview of the program objectives and technical areas and presented the RUA program design and implementation plan, giving the successful example of Systems for Improved Access to Pharmaceuticals and Services' Improving Antibiotic Prophylaxis in Cesarean Section in Jordanian Hospitals program. The group discussed the challenges of AMR in the ICU setting and the importance of improving antibiotics policies to combat AMR. Brig. Gen. Dr. Ghazi Al Dehayat requested that a full comprehensive program be developed to include AMR and IPC interventions. He also requested support for the RMS research department in all aspects of research: design, data collection, analysis, interpretation, statistics, and technical writing. In quarter 3, MTaPS will develop and submit the proposal to USAID for approval.

MTaPS continued to support MOH in raising awareness of AMR and rational use of antibiotics. MTaPS conducted a meeting with the MOH School Health Directorate (SHD) to discuss the planned communication and awareness intervention for school students (CASS) activities for quarter 3. This will target students aged 14–18 years and aim to increase their awareness of AMR. MTaPS will develop AMR awareness messages based on the latest evidence in collaboration with relevant MOH directorates, external stakeholders, and partners. MTaPS will then coordinate with the MOH SHD to nominate health educators from health affairs directorates (HADs) at each governorate to deliver the AMR awareness sessions at the selected schools. Then, in collaboration with MOH stakeholders, MTaPS will conduct a training of trainers (TOT) session for the selected health educators in preparation for delivering the AMR awareness sessions.

Previously in quarter 1, MTaPS organized, validated, and analyzed data for the COVID-19 vaccine safety surveillance (VSS) and presented results to the MOH Secretary General for their actions. Moreover, MTaPS worked with the related MOH committee's chairperson and her department and trained them to process the data from the MOH-developed system. In quarter 2, the chairperson communicated results and analysis with the MOH Secretary General and with the national epidemics committee, but these actions were not officially communicated with MTaPS or USAID. To strengthen MOH's response to the vaccine safety data, MTaPS developed comprehensive but short summaries of results with analysis and recommendation—these were submitted to the minister directly via USAID. As such, results and analysis have been communicated to various levels of MOH as well as the responsible committee. For quarter 3, MTaPS will focus on data collected in March and those targeting the newest age group receiving the vaccines (i.e.,12–17 years).

MTaPS continued to provide technical, logistic, and administrative support to the advisory committee for IPC (ACIPC). Due to the rise in COVID-19 cases, the ACIPC did not convene in February; however,

MTaPS supported the committee in two meetings held in March, one of which was attended by AMR and IPC experts from WHO. MTaPS presented its role in supporting MOH to implement the NAP-AMR and its key activities in AMR and IPC for FY22. In the second meeting, MTaPS facilitated a review and discussion of the NAP-AMR IPC objective. MTaPS was also invited to join an ACIPC sub-committee that was formed by His Excellency the Minister of Health to deal with an outbreak of Acinetobacter in one hospital. MTaPS provided technical, logistic, and administrative support to the ad-hoc committee and presented data on global trends of Acinetobacter and its impact. The TOR for IPC focal points, IPC units, and IPC committees prepared by MTaPS—in collaboration with the head of the MOH IPC department—have been reviewed and approved by the ACIPC members; however, they have not yet been officially approved by His Excellency the Minister of Health. MTaPS will follow up on the official approval of the TOR in the next quarter.

BEST PRACTICES/LESSONS LEARNED

Based on the experience working on COVID-19 VSS:

- Multi-stakeholder engagement is key to successful program implementation. It is critical to include all key stakeholders and decision makers to improve future AMR and surveillance outcomes.
- Developing a clear and standardized methodology for collecting AEFI data for future surveillance is necessary to reduce the amount of time it takes to clean and analyze data and reduce subjectivity of data collectors.
- Activating the AEFI causality assessment committee to review and investigate reported AEFI information will provide a better understanding of the reported data.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Coordinate meeting(s) with the NVPMC to initiate the implementation of the prioritized activities in the national vaccine procurement modernization operational plan	April–June 2022
Initiate the desk review for the study on the best modality to fund vaccine procurement in Jordan	April–June 2022
In coordination with the GPD, initiate drafting of the negotiation instruction and framework agreement guidelines	April–June 2022
Initiate coordination with the competition department in the Ministry of Industry, Trade, and Supply to develop manual and training materials for the fair competition	April–June 2022
Start the supply chain assessment in coordination with the PSD	April–June 2022
Develop communication and awareness materials for CASS	April–June 2022
Conduct a TOT at HADs on the developed communication and awareness materials for CASS	April–June 2022
Conduct communication and awareness sessions for schools in the selected governorates	April–June 2022
Submit the COVID-19 VSS report for August–December 2021	April–June 2022

Table 16. Quarter 2, FY22, Activity Progress, Jordan

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity: Coordinate technical discussions among relevant stakeholders enabling legislative and regulatory reform for vaccine procurement ***Activity Description:*** TWG will be assembled to oversee development and implementation	1.1	N/A	N/A	New organizational chart in MOH affects committee membership; communicated with MOH and members being updated
Activity: Develop implementation guidelines for the framework agreement ***Activity Description:*** a guideline for implementing framework agreements will be developed to assist stakeholders in their procurement processes	1.2	N/A	N/A	Outline of the guidelines completed; draft guidelines completed and to be discussed with counterparts
Activity: Develop instructions for the procurement negotiation ***Activity Description:*** strengthening ability to negotiate, and at the key timing during procurement, will benefit the government	1.2	N/A	N/A	Technical meetings were held with stakeholders according to bylaw implementation instructions and instructions outline being drafted for further technical discussion
Activity: Enable continued cooperation between the GPD and JFDA	1.2	N/A	N/A	No major updates; JFDA shared the prices with GPD in closed communication
Activity: Improve the monitoring of fair competition in medicine and vaccines procurement	1.3	N/A	N/A	Engaged all stakeholders including the competitiveness unit of the Ministry of Industry and Trade to develop the related instructions—will draft an outline in preparation for the TWG
Activity: Improve the rational use of antibiotics at selected health facilities according to the NAP-AMR ***Activity Description:*** Update antimicrobial prophylaxis and treatment guidelines for selected hospitals and pilot health care centers	4.1	N/A	N/A	Collaborated with the PCPD to develop the RUA program design and implementation plan Have been engaging key stakeholders from the central MOH directorates including the Quality Directorate, the Nursing Directorate, the Central Laboratories Directorate, and the chief of the MOH obstetrics and gynecology specialty Will engage all participating hospitals in the next quarter and re-activate hospital-level antimicrobial stewardship teams to support the implementation of the RUA program
Activity: Improve governance and organizational capacity of the multisectoral ACIPC ***Activity Description:*** Update the ACIPC TOR and support committee meetings	4.2	N/A	N/A	Continued to provide technical, logistic, and administrative support to the ACIPC—supported the committee in two meetings held in March, one of which was attended by AMR and IPC experts from WHO

Activity: Support the multisectoral ACIPC in overseeing the implementation of IPC interventions according to the NAP-AMR ***Activity Description:*** Develop the national IPC program with implementation plan	4.2	N/A	N/A	Facilitated a review and discussion on the IPC objective of the NAP-AMR Will meet with the HCAC to explore opportunities to collaborate in designing an IPC training curriculum as part of the national IPC program
Activity: Support the MOH Health Communication and Awareness Directorate in raising awareness on AMR and rational use of antibiotics ***Activity Description:*** Conduct AMR awareness sessions for school students	4.3	N/A	N/A	Conducted a meeting with the MOH SHD to discuss the planned CASS activities for quarter 3 Will coordinate with the MOH SHD to nominate health educators from HADs to deliver the AMR awareness sessions at the selected schools In collaboration with MOH stakeholders, we will conduct a TOT session for the selected health educators in preparation for delivering the AMR awareness sessions
Activity: Support the MOH to raise awareness and promote reporting of adverse drug reactions including COVID-19 vaccines safety ***Activity Description***: Raise awareness on safety of COVID-19 vaccines	4.3	N/A	N/A	Produced two communication pieces for MOH on the safety surveillance outcomes of the COVID-19 vaccines and submitted them to the Minister of Health
Activity: Support the national surveillance of AEFIs with COVID-19 vaccines ***Activity Description:*** Produce comprehensive COVID-19 VSS reports	4.4	N/A	N/A	Continued to support MOH in COVID-19 VSS and submitted the report for August and September 2021 for final approval from MOH counterparts Will continue to clean and aggregate data received for October, November, and December during quarter 3 to produce a cumulative report for August–December 2021

I. KENYA

OVERVIEW

MTaPS' Global health Security Agenda (GHSA) goal in Kenya is to slow the emergence of antimicrobial resistance (AMR) and prevent the spread of resistant infections. To achieve this goal, the MTaPS Kenya team is supporting three result areas in the AMR action package: optimizing the use of antimicrobials through antimicrobial stewardship (AMS), strengthening infection prevention and control (IPC) practices, and strengthening multisectoral coordination (MSC) on AMR through the National Antimicrobial Stewardship Interagency Committee (NASIC) and County Antimicrobial Stewardship Interagency Committees (CASICs) One Health platforms.

The activities for program year 4 are built on the work done in program years 1, 2, and 3. MTaPS will continue to focus on institutionalizing activities at the national, county, and health facility levels. MTaPS will focus on strengthening the core governance structures for AMR stewardship at the national and county levels and apply a structured continuous quality improvement (CQI) approach with ongoing mentorship to ensure that national, county, and health facility plans are implemented as envisaged. MTaPS will also provide targeted capacity building to address county- and facility-specific gaps and implement activities that have been jointly prioritized by counties and health facilities. This joint prioritization and implementation of targeted interventions through a CQI approach will ensure that sustainable AMR programs are built at the health facilities for control of health care-associated infections, containment of AMR, and improved patient safety.

CUMULATIVE PERFORMANCE TO DATE

Through its year 1, 2, and 3 work plans, MTaPS helped country counterparts in Kenya improve the joint external evaluation (JEE) score by supporting 50% (31/62) of the World Health Organization Benchmark actions for International Health Regulations capacities. To improve the JEE score for MSC, MTaPS supported 75% (3/4) of capacity level 2, 50% (2/4) of level 3, 100% (4/4) of level 4, and 20% (1/5) of level 5 actions. MTaPS is supporting these activities at both the national and subnational/county levels in its focus counties. Strengthening the MSC structures at the national (NASIC) and county (CASIC) levels, developing and disseminating standardized AMR communique and bulletins to One Health stakeholders, and developing the AMR National Action Plan (NAP) Monitoring and Evaluation (M&E) framework have been key activities supported by MTaPS.

By improving the JEE scores for IPC, MTaPS supported 80% (4/5) of capacity level 2, 83% (5/6) of level 3, and 60% (3/5) of level 4 actions. MTaPS IPC activities in Kenya are only within the human health sector. MTaPS focused on strengthening IPC governance structures at the national and county levels; developing/reviewing the IPC guidelines in human health; applying IPC assessment tools; training health care workers (HCWs); and monitoring implementation of IPC and water, sanitation, and hygiene (WASH) activities using a CQI approach in focus counties and health facilities. In improving JEE scores for AMS, MTaPS supported 75% (3/4) of capacity level 2, 67% (4/6) of level 3, 14% (1/7) of level 4, and 14% (1/7) of level 5 actions. MTaPS AMS interventions in Kenya mainly focused on strengthening AMS governance structures at the national level and in focus counties and facilities, reviewing the Kenya Essential Medicines List to incorporate the Access, Watch, and Reserve (AWaRe) classification of

antibiotics, developing and disseminating the national AMS guidelines, developing and disseminating regulatory guidance to HCWs and the general public on optimal use of antimicrobials, developing and implementing the AMS curriculums at the pre-service and in-service levels, training HCWs on AMS, and monitoring implementation of AMS activities using a CQI approach in focus counties and health facilities. MTaPS AMS activities in Kenya are also within the human health sector only.

QUARTER 2 ACHIEVEMENTS & RESULTS

During Y4Q2, MSC activities in results area 1.1.1 built on work conducted in previous years to strengthen efforts for effective MSC on AMR by supporting the establishment and inauguration of the Kisumu CASIC and the development of the draft county work plan. The inauguration of the Kisumu CASIC brought together stakeholders from the human, agricultural, and environmental sectors to better contain AMR. MTaPS provided technical assistance at the first National AMS Technical Working Group (TWG) meeting of 2022 under the NASIC. The AMS TWG work plan was updated and planning was initiated in relation to the creation of a centralized surveillance system. The second NASIC AMR bulletin was compiled and disseminated this quarter. The bulletin highlighted the various activities that were undertaken during World Antimicrobial Awareness Week 2021.

Regarding IPC activities under results area 2.1.1, MTaPS continued strengthening governance bodies for IPC at the national, county, and facility levels for sustainable capacity. MTaPS focused on developing core IPC documents, including the National IPC Monitoring and Evaluation framework to monitor IPC indicators at all levels. A high-level IPC communique was developed and launched to give standard guidance on IPC activities at all levels of implementation. Additionally, MTaPS provided technical assistance to the Ministry of Health (MOH) to develop the divisional national indicators for IPC, patient, and health worker safety, occupational health, and safety (OSH), and WASH. MTaPS trained 13 members (8 female, 5 male) of the Murang'a County IPC Advisory Committee (CIPCAC) on the operations of the CIPCAC and supported them to finalize their costed work plan. Overall, 100% (20/20) of the target facilities have functional IPC committees. Under results area 2.2.1 on providing technical assistance to scale up a continuing professional development (CPD) and relicensure-linked in-service IPC training course through professional associations, MTaPS provided technical assistance to Infection Prevention Network (IPNET) Kenya to train health care providers in infection control through an online ECHO platform. Under results area 2.5.1, continuing support to county-, subcounty-, and facility-level IPC, OSH, and WASH activities, MTaPS undertook supportive supervision and mentorship sessions in 18 health facilities to monitor IPC CQI action plan implementation. Overall, 100% (20/20) of the target health facilities are implementing CQI to improve their IPC. Similarly, 100% (20/20) can monitor their performance using standardized IPC tools to inform improvement.

For AMS activities under results area 3.1.1, MTaPS continued strengthening national and county AMS structures by supporting Medicines and Therapeutics Committee (MTC)/AMS Committee member training in two focus counties—Murang'a (18 participants, 7 male and 11 female) and Kilifi (25 participants, 9 male and 16 female). Under results area 3.1.2 on strengthening institutionalization of the AWaRe categorization of antibiotics, MTaPS held a meeting with the Pharmacy and Poisons Board core team to develop a roadmap on antimicrobial consumption (AMC) and antimicrobial use (AMU) data collection tools. Through the activity, Kenya will have the capacity to generate data and reports on the

volumes and use of antimicrobials in the country. MTaPS also supported the finalization of the Kenya National Medicines Formulary, whose launch and dissemination are planned for next quarter.

Under results area 3.2.1 on continued strengthening and scale up of health care human resource capacity for AMS, MTaPS implemented the University of Nairobi pre-service AMS curriculum by training 89 (32 male and 57 female) University of Nairobi Bachelor of Pharmacy year 4 and 5 students. Under results area 3.5.1 on support to county, subcounty, and health facility AMS activities, MTaPS conducted mentorship in 19 health facilities, revealing success stories from the focus facilities (e.g., implementation of mandatory stop date and duration on antimicrobial prescriptions in the Jaramogi Oginga Odinga Teaching and Referral Hospital [JOOTRH]; enforcement of prescriber monitoring in Kisumu County Referral Hospital [CRH], which filtered out nonprescribers; reduction of intravenous antimicrobial use in Maragua CRH in the outpatient department by 96% for ceftriaxone, 99% for gentamycin, and 100% for benzylpenicillin and amoxicillin between June 2021 and February 2022; implementation of standardized prescription pads in Kilifi CRH, which will enable the AMS team to track prescribing habits, AMC, and prescribing errors). Finally, the team was able to finalize key facility documents, including the Kenyatta National Hospital Surgical Prophylaxis Guidelines and the JOOTRH formulary, which was officially launched this quarter. The team further supported facility AMS focal persons from Nyeri County to develop presentations of two AMS abstracts for the 9th Annual IPNET conference, which will be turned into manuscripts in the next quarter.

BEST PRACTICES/LESSONS LEARNED

To build sustainable capacity through its programs, MTaPS supported the implementation of the pre-service AMS curriculum at University of Nairobi, School of Pharmacy. This activity ensures human resource competence in AMS practices is enhanced, which will in turn improve AMS practices. This and other activities also promote and support gender equity and inclusiveness, as evidenced by the increasing rate of female participation in medical education and training activities.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1: NASIC for coordination, policy direction, review, and M&E of national AMR plan ▪ Technical assistance for NASIC to develop/disseminate the AMR documents and review the AMR NAP ▪ Provide technical support for implementation of CASICs	April–June 2022
Activity 2.1.1: Continue strengthening governance bodies for IPC at the national, county, and facility levels ▪ Finalize and disseminate the national IPC documents ▪ Finalize and launch CIPCAC action plans and conduct quarterly CIPCAC meetings	April–June 2022
Activity 2.2.1: Continue providing technical assistance to scale up a CPD and relicensure-linked in-service IPC training course through the relevant professional associations ▪ Conduct CPD training on IPC in collaboration with professional associations	April–June 2022
Activity 2.5.1: Continue support to county, subcounty, and facility-level IPC, OSH, and WASH activities for sustainable capacity ▪ IPC mid-term assessments in focus counties, including OSH and WASH assessments ▪ Conduct IPC training in focus health facilities and undertake supportive supervision/mentorship ▪ Develop and disseminate IPC and OSH job aids in target facilities	April–June 2022
Activity 3.1.1: Strengthening AMS governance structures at national and county levels ▪ Develop the national AMC/AMU data collection tool ▪ Technical assistance to national and county AMS TWG teams in implementing AMS	April–June 2022

Activity 3.1.2: Strengthening institutionalization of AWaRe categorization of antibiotics ▪ Printing, launch, and dissemination of the Kenya National Medicines Formulary ▪ Development of AWaRe implementation framework	April–June 2022
Activity 3.2.1: Strengthening and scale up of health care human resource capacity for AMS through pre- and in-service training ▪ Conduct online continuing medical education activities with professional bodies ▪ Support the embedding of the pre-service AMS curriculum at University of Nairobi, School of Pharmacy	April–June 2022
Activity 3.5.1: Continue support to county, subcounty, and facility-level AMS activities ▪ Conduct quarterly supportive supervision and mentorship and mid-term assessment in focus counties ▪ Technical assistance to focus hospitals to implement priority interventions	April–June 2022

Table 17. Quarter 2, FY22, Activity Progress, Kenya

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Continue strengthening the NASIC's capacity for coordination, policy direction, and M&E of the national AMR plan ***Activity Description:*** Continue supporting the NASIC and other stakeholders in implementing the AMR NAP M&E framework; provide technical guidance in institutionalizing CASICs in the four MTaPS target counties (Kisumu, Nyeri, Kilifi, and Murang'a) in collaboration with other USAID GHSA partners	5.4	1.1	N/A	Provided technical assistance in the first National AMS TWG meeting of 2022, development of an M&E system for the MOH Division of Patient and Health Workers Safety, compilation, and finalization of the second NASIC AMR bulletin, and establishment of the One Health Kisumu CASIC. The Kisumu CASIC includes representation from the Agriculture, Irrigation, Livestock and Fisheries, and Environment departments. and its inauguration brought together stakeholders from the human, agricultural, and environmental sectors. MTaPS provided technical assistance in CASIC's work plan development.
Activity 2.1.1: Continue strengthening governance bodies for IPC at the national, county, and facility levels for sustainable capacity ***Activity Description:*** Provide technical assistance in implementation of government-led development/review and dissemination of IPC documents; support national IPC TWG, National Infection Prevention and Control Advisory Committee, and CIPCAC activities; support establishment of IPC management and coordination structures at county, sub-county, and facility levels	5.4	2.1	N/A	MTaPS supported the MOH to review divisional indicators covering IPC, patient and health worker safety, OSH, and WASH activities and review national IPC guidelines. Participated in quarterly National Infection Prevention and Control Advisory Committee meeting, two CIPCAC meetings, and 18 hospital IPC committee meetings to review IPC implementation progress. Supported the NASIC to launch a national IPC M&E framework and a high-level IPC communique aimed at giving standard guidance on IPC activities. Supported the Murang'a CIPCAC orientation and action planning.
Activity 2.2.1: Continue providing technical assistance to scale up a continuing professional development (CPD) and relicensure-linked in-service IPC training course through the relevant professional associations ***Activity Description:*** Continue to roll out the IPC CPD course in collaboration with the National Nurses Association of Kenya and other health professional associations	5.4	2.2	N/A	MTaPS gave a keynote address at the Kenya Infection Prevention and Control Network (IPNET) scientific conference and supported staff from three counties and four health facilities to review and present seven scientific papers at the conference. MTaPS also provided technical assistance to IPNET in training of HCWs on IPC standard precautions and hand hygiene and held meetings with new National Nurses Association of Kenya leadership to plan for activity implementation.
Activity 2.5.1: Continue support to county, sub-county, and facility-level IPC, OSH, and WASH activities for sustainable capacity ***Activity Description:*** Continue supporting the review and implementation of CQI IPC action plans by the counties and health care facilities	5.4	2.5	N/A	Carried out supportive supervision and mentorship sessions in 18 health facilities to monitor IPC CQI action plan implementation progress, reaching 105 HCWs (37 male, 68 female). The USAID Kenya and MTaPS teams conducted a program oversight visit in Kisumu to assess implementation of GHSA and COVID-19 activities in seven facilities: four public, one faith-based, and two from a maximum-security prison. The prison facilities are producing soap for hand hygiene.

Activity 3.1.1: Continue to strengthen national and county AMS governance structures ***Activity Description:*** Contribute to strengthening the monitoring system for antimicrobial consumption and use (AMC/U) and offer technical assistance to national and county AMS TWG teams in implementing the AMS component of the NAP-AMR M&E framework	5.4	3.1	N/A	MTaPS supported AMS/MTC Part II training in Murang'a and Kilifi Counties with 43 participants (27 female, 16 male). Provided technical assistance on AMS during an IDDS-supported training on diagnostic stewardship in Nyeri County. Two planning meetings were held with the Pharmacy and Poisons Board for review of AMC/U tool indicators and development of a finalization roadmap. In the first national AMS TWG meeting of 2022, the AMS TWG work plan was updated.
Activity 3.1.2: Continue to strengthen institutionalization of AWaRe categorization of antibiotics ***Activity Description:*** Develop and disseminate a national medicines formulary and practical guide on implementation of the AWaRe categorization of antibiotics at the national and county levels	5.4	3.1	N/A	Supported the finalization of the Kenya National Medicines Formulary (KNMF) that incorporates the AWaRe categorization. Launch and dissemination of KNMF planned for next quarter. Reviewed abstracts for submission to the 9th annual IPNET-Kenya conference from AMS focal persons from the focus counties. The team will later support the development of these abstracts into manuscripts for publication.
Activity 3.2.1: Continue to strengthen and scale up health care human resource capacity for AMS through pre- and in-service training ***Activity Description:*** Support the delivery of the pre-service AMS curriculum and engage professional associations to roll out in-service AMS training	5.4	3.2	N/A	MTaPS provided technical assistance in the planning and implementation of the University of Nairobi pre-service AMS student training for Bachelor of Pharmacy students in years 4 and 5. The training provided undergraduate students with key information and learning around AMR/AMS, IPC, diagnostic stewardship, and M&E principles.
Activity 3.5.1: Support to county, sub-county, and facility-level AMS activities ***Activity Description:*** In target counties and health facilities, provide technical assistance in implementation of priority AMS interventions, including monitoring antimicrobial use.	5.4	3.5	N/A	MTaPS supported 18 hospitals and 1 community pharmacy in monitoring AMS CQI action plan implementation and mentorship of AMS focal persons. Conducted point prevalence survey sensitization training for Gertrude's Hospital core AMS team. Supported finalization of KNH Surgical Prophylaxis Guidelines, and finalization and official launch of JOOTRH medicines formulary. Facility AMS focal persons from Nyeri County were supported to develop two AMS abstracts for 9th IPNET conference.

J. MALI

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

MTaPS Mali's strategy is to base the program implementation on guidance from the World Health Organization (WHO) benchmarks for International Health Regulations capacities while relying on other published best practices; to collaborate with the appropriate partners at the global, regional, and country levels; to combine planning and implementation with an embedded monitoring and knowledge sharing element to capture, document, and disseminate experience and results; and to address sex and gender impacts on antimicrobial resistance (AMR). MTaPS advocates for a systematic and comprehensive approach to support infection prevention and control (IPC) and antimicrobial stewardship (AMS) activities for AMR containment with the support and oversight of the multisectoral coordination (MSC) body on AMR and its IPC and AMS technical working groups (TWGs). In Mali, this MSC body is the National MSC Group on AMR (GCMN-RAM). The AMR activities span the national, facility, and community levels.

CUMULATIVE PERFORMANCE TO DATE

During years 2 and 3, MTaPS worked with GCMN-RAM to develop its terms of reference (TOR) as well as those for its IPC and AMS subcommittees. The GCMN-RAM has been able to organize four coordination meetings out of the eight initially planned to monitor progress on implementing the national action plan on AMR (NAP-AMR).

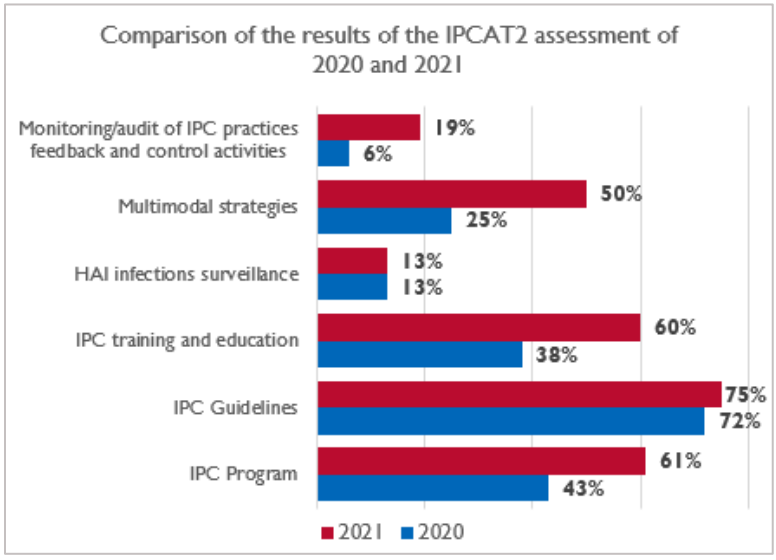


Figure 4: Comparison of the Results of the IPCAT2 Assessment, 2020 and 2021

The IPC TWG organized one meeting to fill out the IPC Assessment Tool 2. During this meeting, the IPC TWG 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 (hospital-acquired infection surveillance and monitoring/audit of IPC practice feedback and control activities) as indicated in Figure 4.

MTaPS support to IPC was focused on the human and animal health sectors. In years 2 and 3, MTaPS supported the GCMN-RAM and General Directorate of Health and Public Hygiene (DGSHP) in training IPC committees in 16 facilities to apply the WHO IPC Assessment Framework (IPCAF), WHO Hand Hygiene Self-Assessment Framework (HHSAF), and scorecard tool for COVID-19. During onsite workshops, data collectors were trained on using IPCAF, HHSAF, and the scorecard for COVID-19. The IPC toolkit (IPC guidelines, training manual, job aids, videos, and standard operating procedures) and the IPC committees' TOR were shared and are available in the 16 facilities supported by MTaPS. In addition, MTaPS, in collaboration with EMPOWER, developed 10 IPC e-learning modules, installed a Moodle e-learning platform at 3 local training institutions, and trained their respective IT staff to use and manage the platforms. Supervisory visits conducted in these facilities in year 4 quarter 1 showed progress in the implementation of their action plans and conformance to recommended IPC practices:

- The data from the HHSAF showed that 12 of the 15 facilities have reached the intermediate level, compared to just 3 facilities at the first assessment.
- Additionally, the IPCAF tool found that 3 facilities reached the advanced level.

Thus, 100% of MTaPS-supported health facilities are using standardized tools for monitoring IPC and informing programmatic improvement.

The AMS TWG also organized a meeting to evaluate AMS core components at the national level using the checklist of essential national core elements for AMS programs in low- and middle-income countries (LMICs) from the WHO practical toolkit for AMS programs in health care facilities in LMICs.[10] One AMS core component (regulations and guidelines) had a score of 50%, while the other three components (national plan and strategy; awareness, training, and education; supporting technology and data) had a score greater than 75%. These different interventions allowed the country to complete level-3 WHO benchmark actions.

For the animal health sector, MTaPS collaborated with the Direction *Nationale des Services vétérinaires* and the GCMN-RAM to develop IPC guidelines and an action plan for animal health. The results of the MTaPS-supported rapid assessment of hygiene and IPC in the animal health sector were used during this process.

Participants review the animal health guidelines and action plan to integrate their comments during the validation workshop. Photo Credit: Famory Samassa, STA, MTaPS

Regarding AMS, MTaPS supported a rapid assessment of stewardship policies and regulations and supply chain management of antimicrobials in the human and animal health sectors. The results informed the development of AMS action plans for the animal health sector and human health sector. In addition, 16 drug and therapeutics committees (DTCs) were established in health facilities during years 2 through 4.

[10] AMS program in health-care facilities in low- and middle-income countries. A practical toolkit. Geneva: World Health Organization; 2019.

QUARTER 2 ACHIEVEMENTS & RESULTS

Regarding MSC, MTaPS supported GCMN-RAM to hold its coordination meeting and to organize an AMS TWG meeting.

MTaPS also supported the GCMN-RAM and the DGSHP to organize a virtual meeting to monitor the implementation of IPC activities at 16 MTaPS-supported health facilities. The implementation rate of the facility IPC action plans varied from 5% to 85% depending on the facility.

MTaPS supported Directorate of Pharmacy and Medicine (DPM) and National Hospital Evaluation Agency (ANEH) to conduct supervision visits to 6 health facilities (Mali Gavardo Hospital, Dermatology Hospital of Bamako, Hospital of Sikasso, Hospital of Segou, CSRéf of Bougouni, and CSRéf Koutiala). Additionally, a virtual meeting was held with 14 facilities under DPM leadership.

BEST PRACTICES/LESSONS LEARNED

N/A

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1: Provide technical and operational support to GCMN-RAM and its two subcommittees (IPC and AMS)	April–June 2022
Activity 1.1.2: Review the NAP-AMR and its monitoring and evaluation plan—recruit a consultant to support review	April–June 2022
Activity 2.1.1: Support the GCMN-RAM in developing a national IPC action plan for the human health sector—recruit a consultant for the development of the national IPC strategic plan	April–June 2022
Activity 2.5.1: Support the GCMN-RAM and DGSHP in monitoring implementation of IPC practices at health facilities	April–June 2022
Activity 2.5.2: Strengthen capacity of three local training institutions to manage e-learning on IPC and AMS for pre-and in-service health care workers	April–June 2022
Activity 3.5.1: Support DPM in developing and disseminating DTC training toolkit—reproduce the treatment guidelines for infectious diseases	May–June 2022
Activity 3.5.2: Support the GCMN-RAM, DPM, and ANEH in monitoring the functionality of DTCs in 16 facilities	April–June 2022

Table 18. Quarter 2, FY22, Activity Progress, Mali – GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Provide technical and operational support to the GCMN-RAM and its two subcommittees (IPC and AMS)	5	5.4		MTaPS Mali supported the AMR focal point and chairperson of the GCMN-RAM and the AMS TWG to hold the following meetings: ▪ A coordination meeting of the GCMN-RAM with 26 participants from the animal health, human health, and environment sectors ▪ A meeting of the AMS TWG to review the implementation of activities to optimize antimicrobial use in the NAP-AMR
Activity 1.1.2: Review the NAP-AMR and its monitoring and evaluation plan	5	5.4		The MTaPS team supported the AMR focal point to develop and share the draft consultant TOR for this activity with the representatives of four key sectors (human health, animal health, environment, and agriculture) for review. Only the Food and Agriculture Organization's Emergency Centre for Transboundary Animal Diseases, which supports the animal sector, made suggestions for improvement.
Activity 2.1.1: Support the GCMN-RAM in developing a national IPC action plan for the human health sector	5	5.4		MTaPS has supported the GCMN-RAM and the DGSHP to develop and finalize the consultant TOR, advertise the position, and select candidates to recruit a consultant to develop the national strategic plan for IPC.
Activity 2.5.1: Support the GCMN-RAM and DGSHP in monitoring implementation of IPC practices at health facilities	5	5.4		MTaPS supported the GCMN-RAM and the DGSHP to organize a virtual meeting to monitor the implementation of IPC activities at 16 MTaPS-supported health facilities. 33 participants from 16 health facilities, 3 regional health directorates, the general health directorate, and ANEH attended this meeting. 15 out of 16 facilities assessed their IPC practices using scorecards, and 13 facilities have improved their IPC practices.
Activity 2.5.2: Strengthen capacity of three local training institutions to manage e-learning on IPC and AMS for pre- and in-service health care workers	5	5.4		MTaPS supported the DGSHP team to register e-learning participants. Additionally, during all its activities, the MTaPS team informed participants of the existence of the e-learning platforms and how to register for them. Currently, 108 participants are registered, of whom 12 have received their certificate.
Activity 3.5.2: Support the GCMN-RAM, DPM, and ANEH in monitoring the functionality of DTCs in 16 facilities	5	5.4		MTaPS supported DPM and ANEH to conduct supervision visits to 6 health facilities (Mali Gavardo Hospital, Dermatology Hospital of Bamako, Hospital of Sikasso, Hospital of Segou, CSRéf of Bougouni, and CSRéf Koutiala). The supervision revealed the following: ▪ The implementation rate of the facility action plans varies from 17% to 50% depending on the facility. ▪ 5 out of 6 facilities prescribed at least 60% of antibiotics under the Access category of the AWaRe categorization. ▪ The percentage of international nonproprietary named medicines prescribed varied from 60.94% to 80.49% depending on the facility. Additionally, a virtual meeting was held with 14 facilities under the DPM's leadership to monitor progress in the implementation of their action plans.

MATERNAL, NEWBORN, AND CHILD HEALTH (MNCH) ACTIVITIES

OVERVIEW

MTaPS Mali's maternal, newborn, and child health (MNCH) goal includes strengthening pharmaceutical regulatory systems focusing on registration or marketing authorization for all products, and specifically for MNCH products. This will be done by building the capacity of in-country stakeholders and supporting the implementation of the procedure manual for the registration of medicines for human use. To achieve this goal, MTaPS Mali supports two result areas: transparency and accountability of the country's pharmaceutical systems are improved, and pharmaceutical management systems that are interoperable and link patients and products are effectively implemented. These areas are directly aligned with the first and third global objectives of MTaPS.

CUMULATIVE PERFORMANCE TO DATE

MTaPS supported the Directorate of Pharmacy and Medicine (DPM) in December 2021 to conduct a three-day training session to build the capacity of the DPM's data entry team to use the *Programme d'Enregistrement des Médicaments* (Pro-EMED) software. The DPM uses Pro-EMED for the registration of medications.

Training workshop for the data entry team, December 21, 2021. Photo Credit: Youssouf Haidara, Senior Technical Advisor – MNCH

QUARTER 2 ACHIEVEMENTS & RESULTS

PHARMACEUTICAL MANAGEMENT SYSTEMS THAT ARE INTEROPERABLE AND LINK PATIENTS AND PRODUCTS EFFECTIVELY IMPLEMENTED

MTaPS supported the DPM to begin entering a backlog of nearly 5,000 files that had been on hold since 2019 into the Pro-EMED database. So far, the data entry team previously trained on the Pro-EMED tool with support from MTaPS has entered the data from 3,379 (68%) files into Pro-EMED. This update of the Pro-EMED database will allow the DPM to efficiently process and store all medical product

registration applications received, approved, rejected, suspended, and/or withdrawn from the market with the appropriate and required documentation.

BEST PRACTICES/LESSONS LEARNED

- As building sustainable capacity is one of the keys to successful of the use of the tool, MTaPS supported a training session for the data entry team. It is essential to build the capacity of DPM team who must use PRO-EMED for drug registration but did not previously know how to use it.
- Regular data entry monitoring through daily briefing meetings makes it possible to deal with the difficulties encountered on a day-to-day basis, to consider the comments and suggestions made by the data entry team, to consistently remember the data entry instructions, and to provide feedback on inaccuracies found while checking the data entered. This contributes to improving the quality of data entered into the tool.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1: Support the DPM to operationalize the National Marketing Authorization Commission (CNAMM)	April–June 2022
Activity 3: Assist the DPM to update and disseminate the directory of registered medicines and medical products	April–June 2022
Activity 4: Assist the DPM to set up an operational website	April–June 2022

Table 19. Quarter 2, FY22, Activity Progress, Mali – MATERNAL, NEWBORN, AND CHILD HEALTH ACTIVITIES

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1: Support the DPM to operationalize the CNAMM	1		1.1	MTaPS supported the DPM to prepare for the next session of the CNAMM. A technical note has been prepared and will be submitted to the commission of experts for review before the session is held.
Activity 3: Assist the DPM to update and disseminate the directory of registered medicines and medical products	3		3.1	This activity began with the update of the Pro-EMED data entry software. With support from MTaPS during the preparatory phase, the entry team developed the entry criteria and an individual daily monitoring sheet, distributed the number of files between the members of the entry team, and configured software settings. A team of seven data entry clerks, two supervisors (one from the DPM and the other the MNCH senior technical advisor from MTaPS) began data entry in January. The supervision team checked all the data entered tab by tab and corrected any data entered incorrectly. Any shortcomings noted were brought to the attention of the operators involved during each day's briefing session so they could make any needed corrections. Currently, 68% of the data is updated in Pro-EMED.
Activity 4: Assist the DPM to set up an operational website	3		3.1	MTaPS supported the development of website specifications to better ascertain the DPM's needs related to the website. Additionally, MTaPS communicated with the DPM about expected deliverables from this activity. In April, the DPM and MTaPS will select a company to begin the design work and submit it to the Director General of the DPM for approval.

K. MOZAMBIQUE

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The Global Health Security Agenda (GHSA)-related goal of MTaPS in Mozambique is to strengthen technical and managerial capacities within the human and animal health systems to contain the emergence and propagation of antimicrobial resistance (AMR). This goal is consistent with USAID's strategic objective on slowing the emergence of resistant bacteria and preventing the spread of resistant infections as well as the goal of Mozambique's national action plan (NAP) on AMR. Controlling the global hazard of AMR relies on robust pharmaceutical systems worldwide that address appropriate use of and access to medicines, which is the core mission of MTaPS. The MTaPS GHSA strategy is grounded in a systems strengthening approach in three technical areas pivotal to containing AMR: multisectoral coordination (MSC) on AMR (Joint External Evaluation [JEE] 2.0 indicator P.3.1), infection prevention and control (IPC) (JEE 2.0 indicator P.3.3), and antimicrobial stewardship (AMS) (JEE 2.0 indicator P.3.4).

CUMULATIVE PERFORMANCE TO DATE

MSC (P.3.1) had no baseline score because this indicator was not included in the World Health Organization's (WHO) Joint External Evaluation (JEE) 1.0 tool used in 2016 but was included in the revised 2018 version (JEE 2.0). Mozambique completed a situational analysis on MSC (level 2 action) some years ago, which led to the development of its NAP. In program year (PY) 3, MTaPS supported two of four (50%) benchmark actions in capacity level 2 and two of four (50%) in capacity level 3. MTaPS collaborated with the Ministry of Health and National Institute of Health to revise and discuss the membership structure and governance arrangement for the AMR Multisectoral Coordinating Committee (MCC). Support was provided to AMR MCC members to draft and discuss terms of reference (TOR) for the MCC and its Secretariat, general TOR for a technical working group (TWG), and specific TOR for the AMS and IPC TWGs. The TOR were presented at the first virtual meeting of the AMR MCC for comment and feedback. There were three AMR MCC meetings, two IPC TWG meetings, and two AMS TWG meetings. In these meetings, members reviewed the priorities of the NAP AMR and activities by implementing partners, reviewed the TOR, and provided input to refine them. During the first quarter of PY4, there was an AMR MCC meeting, and MTaPS worked with the Government of Mozambique and other partners to contribute to the organization of the 2021 symposium for World Antimicrobial Awareness Week November 18–24, 2021, which highlighted AMR MCC's accomplishments.

Mozambique scored 3 (developed capacity) for IPC (P.3.3) during the baseline JEE in 2016. MTaPS supported the National Directorate of Medical Assistance's (DNAM) IPC team to complete four of five (80%) benchmark actions for capacity level 2 and four of six (66%) for capacity level 3. In FY20 and FY21, COVID-19 funds from USAID were leveraged for IPC training in all provinces. MTaPS trained 44 persons on IPC and supported seven health facilities (HFs) that are using standard tools for monitoring IPC and informing programmatic improvement. From the baseline JEE in 2016, Mozambique scored 1 (no capacity) in AMS (P.3.4). In PY3, MTaPS supported two of four (50%) benchmark actions for capacity

level 2. In preparation for hospital AMS activities, MTaPS identified staff from seven priority HFs who were trained on AMS in February 2020. Given the COVID-19 pandemic, instead of in-person visits, MTaPS facilitated virtual visits targeting five of the seven hospitals. Although the five hospitals had AMS committees with TOR, only three were functional as the other HFs were focused on addressing the COVID-19 case burden. Analysis of antibiotic consumption data for a one-year period from Xai-Xai Hospital showed that there was increased use of selected antibiotics, namely azithromycin and ceftriaxone, likely tied to management of COVID-19 patients.

QUARTER 2 ACHIEVEMENTS & RESULTS

MTaPS supported the AMR MCC to develop the Knowledge, Attitudes, and Practices (KAP)-TWG draft TOR and identify its members and chair. The TOR will be validated at the AMR MCC's April meeting. TOR for the TWGs and secretariat have been refined to incorporate feedback from previous meetings.

During this quarter, MTaPS and the DNAM implemented three training of trainers (TOT) workshops to build the capacity of provincial health authorities to deliver IPC training to HFs that have never been trained on IPC or that need refresher training. In all, 44 provincial health professionals (23 male, 21 female) were trained as trainers on general and COVID-19-related IPC standards to strengthen the capacity of provincial IPC teams. During the training, each provincial team was coached to develop a plan to cascade the training to HFs.

BEST PRACTICES/LESSONS LEARNED

The use of virtual platforms as an alternative to in-person meetings during COVID-19 restrictions enabled the AMR MCC and TWGs to continue holding meetings. The success of this experiment has encouraged authorities to initiate the use of virtual support to communicate with provincial teams and HFs.

In the absence of clearly allocated domestic funding for NAP AMR activities, AMR MSC does not always get the attention it deserves. MTaPS has learned that periodic advocacy, engagement, negotiation, and close follow-up with stakeholders is needed to mobilize resources to sustain AMR initiatives.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1: Support the governance and organizational capacity of the AMR MCC ▪ Support the AMR MCC Secretariat in organizing regular meetings ▪ Finalize updated mapping of AMR stakeholders and activities ▪ Provide support to start development of an NAP AMR monitoring framework	April–June 2022
Activity 2.2.1: Support the national IPC TWG in IPC oversight and management ▪ Compile results of the repeat central-level Infection Prevention and Control Assessment Tool 2 (IPCAT2) assessment and provide technical assistance in interpreting the findings and options on advocating for resources and suitable budget at the national level	March–June 2022
Activity 2.5.1: Support implementation of prioritized IPC interventions in selected HFs ▪ Ensure that the IPC Committee repeats the HF Infection Prevention and Control Assessment Framework assessment ▪ Support IPC Committees in developing detailed implementation plans for specific activities ▪ Provide technical assistance on selected IPC interventions based on action plans for the seven intervention hospitals and support implementation of continuous quality improvement (CQI) methodologies	April–June 2022

▪ Provide support to IPC Committees to conduct hand hygiene self-assessment; design suitable interventions; and advocate for inclusion of water, sanitation, and hygiene activities ▪ Start a situational analysis of the root causes of IPC commodity-related stock-outs in designated HFs, particularly as they relate to COVID-19	
Activity 3.1.1: Support development of AMS policies at the national level ▪ Finalize the categorization of antibiotics in the national essential medicines list (NEML) as per the WHO-recommended Access, Watch, and Reserve (AWaRe) classification ▪ Start development of a provision on appropriate use of antimicrobials in existing regulatory frameworks for medicines ▪ Start the draft regulation on prescription-only sales of key antibiotics	April–June 2022
Activity 3.5.1: Support the design and implementation of AMS interventions in priority HFs ▪ Use the CQI approach to conduct a baseline assessment at the supported HFs ▪ In collaboration with the Hospital Pharmacy Department, undertake on-site technical support on AMS interventions in the three direct support provincial hospitals and plan for virtual support to the provincial hospitals by reviewing their progress on AMS action plans	

Table 20. Quarter 2, FY22, Activity Progress, Mozambique – GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Support the governance and organizational capacity of the AMR MCC ***Activity Description:*** Support the AMR MCC Secretariat in organizing regular meetings and facilitate updated mapping of AMR stakeholders and activities	5.4	1.1	N/A	MTaPS worked with the AMR MCC Secretariat to prepare proposed agenda items and revised TOR for the IPC TWG, AMS TWG, KAP-TWG, MCC Secretariat, and MCC meetings planned for the second week of April.
Activity 2.2.1: Support the national IPC TWG in IPC oversight and management ***Activity Description:*** Support the national IPC TWG in organizing routine meetings and providing updates to the AMR MCC Secretariat; review the implementation status of the TWG's action plan of April 2021; provide technical assistance on implementation strategies	5.4	2.2	N/A	IPC TOT done with 44 health care workers (HCWs) (23 male, 21 female) trained. The repeat central-level IPCAT2 assessment was done on March 29, 2022. It showed some improvement on IPC core components 1, 3, and 4 over the baseline done in 2021 as follows: component IPC program improved from 57% to 70% and IPC education and training improved from 90% to 100%, but there was only a slight improvement of component surveillance of health care-associated infection from 0% to 3%.
Activity 2.5.1: Support implementation of prioritized IPC interventions in selected HFs ***Activity Description:*** Support the IPC Committees in developing detailed implementation plans for specific activities and provide technical assistance on selected IPC interventions for the seven intervention hospitals	5.4	3.4	N/A	While there were no activities undertaken this quarter, MTaPS developed the scope of work for a consultant to undertake a situational analysis of the root causes of IPC commodity-related stock-outs in designated HFs. The consultant engagement process is ongoing.
Activity 3.1.1: Support development of AMS policies at the national level ***Activity Description:*** Undertake AWaRe classification and develop a draft provision on appropriate use of antimicrobial and regulation of prescription-only sales of key antibiotics	5.4	3.1	N/A	MTaPS supported the National Medicines and Therapeutics Committee, AMS TWG, and NEML Committee in analyzing the antibiotics listed in the draft 2022 NEML and clinical guidelines against the WHO EML and planning for a committee to undertake AWaRe classification. Planning for a review of the draft rapid assessment of policies and regulatory framework for AMS report is ongoing.
Activity 3.5.1: Support the design and implementation of AMS interventions in priority HFs ***Activity Description:*** Implement a CQI approach to conduct a baseline assessment and AMS interventions at priority HFs				MTaPS reached an agreement with the government to get authorization for in-person visits to the supported hospitals after several discussions with the government institutions involved in AMS. MTaPS worked with *Departamento de Terapêutica Hospitalar* to plan for in-person visits to the three selected hospitals.

FIELD SUPPORT ACTIVITIES

OVERVIEW

In PY4, MTaPS continues to provide technical assistance to strengthen active and spontaneous pharmacovigilance (PV) systems to enable the national regulatory authority (NRA) *Autoridade Nacional Reguladora de Medicamentos, Instituto Público* (ANARME, PI) and the HIV/AIDS and TB programs to systematically monitor adverse events (AEs) related to the tenofovir + lamivudine + dolutegravir (TLD) antiretroviral therapy regimen and TB preventive treatment (TPT) medicines. MTaPS also supports the adaptation and use of the electronic Pharmacovigilance Monitoring System (PViMS) for use in active surveillance of TLD and TPT.

CUMULATIVE PERFORMANCE TO DATE

In PY2, the national ethics committee approved the protocol for implementation of active safety monitoring (ASM) of the dolutegravir-based TLD regimen. The ANARME, PI, and HIV program, with support from MTaPS, conducted training of HCWs on the protocol and proper data collection. Following the training, 9 of the 10 selected HFs commenced enrolling HIV/TB co-infected patients on TLD and patients transitioned from nevirapine-based regimens to TLD into the cohort in April 2020. The tenth facility was being used as a COVID-19 treatment center and did not enroll patients. At the end of year 2, more than 1,800 of the target 3,000 patients had been enrolled into the cohort, approximately 330 patients had follow-up visits, and five patients reported experiencing AEs.

In PY3, MTaPS continued to support implementation and completion of active TLD surveillance. This included patient enrollment and follow-up and supporting the ANARME, PI, and HIV program team to conduct quarterly on-site and virtual supervisions to the nine HFs implementing the active surveillance program. Through these supportive visits and calls, the ANARME, PI, and HIV program team were able to continuously mentor and support health care providers at the participating sites to implement the protocol. The HF team reported progress on enrollment and patient follow-up to document any AEs that might occur and received feedback on its performance from the ANARME, PI, and HIV program team.

As of December 2020, about 3,000 patients had been enrolled into the cohort as per manual records. As of July 2021, 2,990 unique patient records were entered into PViMS, bringing the total enrollment in PViMS to 99.67% of the total enrolled. MTaPS undertook quarterly data cleaning and analysis and developed an eight-month progress report on the active surveillance activity. MTaPS supported the ANARME, PI, in a data cleaning exercise to improve the quality of data collected during follow-up visits of the enrolled patients. The number of patient follow-up visits increased from 4,920 in September 2021 to 7,447 in December 2021. As of December 2020, 20 AEs have been reported. The reported AEs increased to 49 by September 2021 and 88 by December 2021. No severe AEs were reported.

WHO guidance recommends use of a once-weekly dose of isoniazid and rifapentine for 12 weeks (3HP) for the treatment of latent TB in HIV patients. In Mozambique, the use of 3HP for TPT will be implemented in addition to the continued use of isoniazid (INH) preventive therapy. In PY3, the national HIV and TB programs in Mozambique, with support from MTaPS, developed a study protocol, standard

operating procedures (SOPs), and training materials to establish and implement active safety monitoring of TPT medicines. MTaPS built on ongoing support to the ANARME, PI, and HIV program on active TLD surveillance to establish a similar safety surveillance system to actively monitor patients using INH and 3HP for TPT. Some of the activities carried out during the year include periodic engagement with stakeholders, including the ANARME, PI; National Tuberculosis Program (NTP); US Centers for Disease Control and Prevention (CDC) and its implementing partners (*Centro de Colaboração em Saúde* and Elizabeth Glaser Pediatric AIDS Foundation); and Aurum Institute, to plan for implementation. The developed study protocol was approved by the national bioethics committee. MTaPS procured some of the hardware (tablets) required for facility-level data collection and management.

QUARTER 2 ACHIEVEMENTS & RESULTS

MTaPS worked with the ANARME, PI, and TB program to address feedback from CDC Mozambique and CDC headquarters on the study protocol. Official approval from the CDC was received on March 31, 2022, to start establishing an active system for monitoring AEs related to INH and 3HP for TPT.

During Q2, all nine MTaPS-supported HFs were using PViMS for TLD ASM and were implementing medicines safety activities. TLD active safety surveillance is in its final stages of implementation, and MTaPS supported the ANARME, PI, and HIV program team who made physical visits to advise the study sites to close the active surveillance activity and finalize and hand over their collected data for final analysis at the central level.

ANARME, PI, representatives working with the PV and HIV focal persons in Carmelo HF in Gaza province during the close-out of the TLD ASM activity (Photo credit: Merana Mussa)

BEST PRACTICES/LESSONS LEARNED

Constant engagement with the NRA is critical to achieve the intended results given that the environment around the NRA is very dynamic and depends on many variables—political, human, and economic—that can cause conflict in schedules and planned activities. One solution that MTaPS is

implementing is constant engagement with ANARME, PI, management and concerned technical staff to discuss bottlenecks and plan and execute mitigation actions.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 3.1.1: Provide technical assistance to establish an active surveillance system for newly introduced medicines in HIV and TB programs ▪ Continue to provide guidance to the ANARME, PI, and HIV program team to manage the TLD ASM data in PViMS, including its review, cleaning, and analysis ▪ Compile the next quarterly progress report showing results of supportive supervisory visits, number of patients enrolled and followed up, and reported AEs disaggregated by sex ▪ Develop a report on lessons learned with recommendations	April–June 2022
Activity 3.1.2: Develop and implement an active PV program for safety monitoring of TPT scale-up in Mozambique ▪ Pilot the data collection forms at one HF in Maputo ▪ Conduct a TOT to train ANARME, PI, and TB and HIV program staff on the approved protocol, SOPs, data collection forms, and checklists to prepare them to train staff from the five implementing HFs ▪ Support the ANARME, PI, and TB and HIV programs to cascade training to the focal staff of the implementing HFs on the approved protocol, SOPs, data collection forms, and checklists ▪ Work with the ANARME, PI, TB and HIV programs; and implementing sites to start patient enrollment and data collection at the five selected sites ▪ Prepare a quarterly report on the progress of TPT active surveillance implementation, including the training of ANARME, PI, and TPT staff of participating sites ▪ Start developing the report on implementation of AE surveillance, including training, supervision of personnel and activities, data management, and dissemination of findings from the surveillance system	April–June 2022

Table 21. Quarter 2, FY22, Activity Progress, Mozambique - FIELD SUPPORT ACTIVITIES

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 3.1.1: Provide technical assistance to establish an active (medicines safety) surveillance system for newly introduced medicines in national HIV and TB programs ***Activity Description:*** Support the ANARME, PI, and HIV team to complete the one-year follow-up of all enrolled patients; meet with the HFs to share progress reports; manage the data in PViMS; and develop the final active surveillance report with recommendations to inform further decisions on the continued safety of the TLD regimen in the population	5.3	N/A	N/A	MTaPS supported the ANARME, PI, to prepare for closure of data collection. A letter was sent to the implementing provinces and HF focal persons in February. The HF focal persons were instructed to compile folders with the study documents and review the completed data collection forms to confirm or correct data in PViMS. ANARME, PI, and provincial PV focal persons visited the sites and organized the transfer of the study materials to the central level.
Activity 3.1.2: Develop and implement an active PV program for safety monitoring of TPT scale-up in Mozambique ***Activity Description:*** Train ANARME, PI, and NTP staff on the protocol and support them to cascade the training to focal HCWs at the five selected sites and undertake monthly/quarterly supervision of implementing sites to provide guidance and mentor the teams to ensure compliance to the study protocol	5.3	N/A	N/A	The TPT protocol with attendant training materials, SOPs, and data collection forms was approved by the CDC after MTaPS addressed additional questions and comments from CDC headquarters. MTaPS worked with the ANARME, PI, and programs to plan for pilot-testing of the data collection tools in one HF, update the training materials based on changes to the protocol requested by CDC, and organize the TOT and HCW training planned for April.

L. NEPAL

OVERVIEW

To improve the country's pharmaceutical system, MTaPS Nepal aims to strengthen the health system by bolstering the pharmaceutical sector and medicines regulation in close collaboration with the Ministry of Health and Population (MOHP) and the Department of Drug Administration (DDA). MTaPS Nepal supports the policy, legislative, and system revision and implementation at the DDA and in the private and public sectors. There are many interlinked challenges, and the selected implementation strategies focus on evidence-based prioritized problems and World Health Organization (WHO) best practices operationalized by multipronged interventions implemented with broad stakeholder involvement, including the private and public sectors.

CUMULATIVE PERFORMANCE TO DATE

Despite many challenges linked to COVID-19 lockdowns, travel and meeting restrictions, frequent management and leadership changes, and postponement of planned activities, MTaPS Nepal has completed all Y3 and several Y4 deliverables. First, a reorganized structure for the DDA central and decentralized levels has been finalized with updated staffing norms, job descriptions for prioritized positions, and a mapping of DDA competencies that will lead to a training strategy. The DDA submitted a concept note to the MOHP to advocate for the new structure and staffing norms. Based on a detailed gap analysis, the Nepal Drug Act (1978) that provides the DDA with legal provisions was revised to bring the DDA's practices in line with WHO best practices and with a mature regulatory authority. The revised Drug Act version 6 is now in final review for submission to the MOHP for approval along with a concept note advocating for the new law and several companion codes, regulations, and guidelines linked to the revised law.

In addition to the achievements listed above, the consultative process and the drafting of the option analysis to revise the existing National Medicines Policy (NMP) 1995 has started. This option analysis aims to bring the NMP in line with the updated Nepal Drug Act, the Nepal Health Policy (2015), and the Nepal National Health Strategy (2015–2022). Applying the WHO Global Benchmarking Tool (GBT) annually to assess the maturity level of the regulatory functions of the DDA supported by WHO and MTaPS found the need to strengthen the overarching regulatory framework and regulatory functions to improve its current low maturity level. Based on the institutional development recommendations, a DDA indicator-based development plan for strengthening the DDA's maturity level was prepared and regularly updated to track and monitor progress. The DDA indicator-based development plan includes several challenging activities that are crosscutting to all DDA functions, such as legislation and restructuring. Other fundamental DDA activities include ensuring uniformity and good governance through implementation of standard operating procedures (SOPs) and related documentation for all regulatory activities; setting up a quality management system (QMS) targeting ISO 9001:2015 certification; and revising and aligning to WHO best practices in regulation, registration, and inspection. The work on the QMS has progressed well, and the technical working group has reviewed the QMS manual and several new SOPs.

Alignment with WHO best practices has progressed well with the development of guidelines and inspection tools for good pharmacy practices (GPP) and good storage and distribution practices (GSDP)

and implementation strategies that were submitted to the DDA for finalization. A new regulatory management information system, Pharmadex, is in the process of customization to increase efficiency and data use at the DDA. The pharmacy registration module is ready for user acceptance testing (UAT) and implementation, while the wholesaler, manufacturer, and product registration modules are being customized. The Pharmadex registration module, developed in line with WHO best practices, will improve DDA registration functions toward best dossier review and linked to available DDA resources.

The Pharmadex registration module will include registration of medical devices and health technology products, which is needed to set up their regulation. Finally, a situation analysis was conducted based on a strategy for the new regulatory requirement for medical devices and health technology products, which was drafted for discussions with the DDA.

The implementation of the pharmacovigilance (PV) strategy, which was developed on the basis of the PV situation analysis, WHO's best PV practices, and the GBT assessment recommendations, has progressed well, and a focal person at the DDA supported by MTaPS PV experts has drafted the regulation and guidelines to define the PV regulatory framework. Collaboration with the provincial centers has started with the appointment of provincial PV coordinators.

Following the GPP assessment in private- and public-sector facilities with only 16% (5/31) of facilities passing, it was evident that a strong and well-documented strategy to strengthen medicines management and GPP implementation in government health facilities in Nepal was needed to safeguard the government investment in making essential medicines free of charge; implement the national health insurance scheme; and improve supply chain management, dispensing, and prescribing. As an initiative to help achieve these objectives, the multipronged supervision, performance assessment, and recognition strategy (SPARS) was successfully implemented in Uganda. Based on the Uganda experience SPARS was customized to the Nepal context, and a SPARS concept note was developed for the MOHP to initiate the implementation of the SPARS pilot study in 12 districts.

QUARTER 2 ACHIEVEMENTS & RESULTS

OBJECTIVE 1: PHARMACEUTICAL-SECTOR GOVERNANCE STRENGTHENED

This quarter, job descriptions for the DDA industry section were drafted. The updated Drug Act version 6 was translated into Nepali and awaits expert comment before submission to the Council of Ministers along with the concept note drafted with MTaPS' support. The Code on Sales and Distribution was updated and submitted to the Drug Advisory Committee. A concept note on medicines price regulation was drafted and shared with the MOHP and DDA. In addition, the revision of the NMP 1995 started with stakeholder consultations conducted by international and local consultants.

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

The two-year DDA Maturity Level Action Plan (MALAP) was updated, and its implementation has progressed, with 16% of the activities completed and 61% initiated based on 136 indicators.

The Pharmadex product registration module developed in Bangladesh with MTaPS' support will be customized for Nepal. A learning visit by two DDA product registration staff to Indonesia planned for June 6–17 was approved.

In addition to the work above, MTaPS assisted in data cleaning on adverse drug reaction (ADR) reports for data entry into Vigiflow and revision of the reporting form. A database for hospital Drug and Therapeutics Committees and regional PV centers was established. The GPP guidelines were submitted to the Drug Advisory Committee for finalization, and a strategy to implement GPP in the public and private sectors is being developed.

The GSDP situation analysis report was finalized, and DDA inspectors will be trained by an experienced inspector from the regulatory body of Uganda in May and June. The piloting of the electronic GSDP inspection tool was finalized in Bagmati province and initiated in the remaining provinces. Work on the QMS manual and SOPs continued. A process review was finalized for the Inspection Division (Complaint Handling Section), resulting in the drafting of five new SOPs.

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

Final customization of the Pharmadex pharmacy registration module continued to incorporate DDA requests following a demonstration of the system and the preliminary UAT. The final UAT is scheduled for April in preparation for the launch of the module. Customizations of the remaining registration modules for wholesaler, manufacturer, and product registration are in progress. In addition, a government-required security audit of Pharmadex, which is mandatory for its use by the DDA, was initiated by the Department of Information Technology. A helpdesk was established. A plan to train DDA staff was prepared, including developing an e-learning course.

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

The first 30 selected medicines management supervisors (MMS) were trained by Kathmandu University, and the SPARS initiative was launched. MTaPS finalized and translated the electronic SPARS assessment tool. The SPARS impact assessment study was designed.

BEST PRACTICES/LESSONS LEARNED

- Having an international consultant paired with an experienced and well-known local consultant facilitates access to stakeholders and the MOHP and streamlines the introduction of international best practices.
- Using a maximum two-page summary when debriefing new or recently re-appointed high-level MOHP staff has proven to be the most effective approach.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1: Finalize DDA competency mapping report and training plan and implement selected training	May 31, 2022
Activity 1.2.1: Finalize Drug Act, Code on Sales and Distribution, and selected and prioritized regulations and guidelines	June 30, 2022
Activity 1.2.2: Policy options analysis and draft NMP	June 30, 2022
Activity 2.2.1: Implement regular MALAP updates toward maturity level 2	June 30, 2022
Activity 2.2.2: Finalize strategy for product registration, update SOP, and implement revised practices	June 30, 2022
Activity 2.2.3: Organize a stakeholder meeting, develop standard specifications of selected medical devices, and finalize draft registration guidelines in line with Pharmadex	June 15, 2022
Activity 2.2.4: Conduct streamlining meeting for PV reporting and finalize SOP with associated tool to increase maturity level	June 30, 2022
Activity 2.2.5: Develop GPP e-learning course and initiate implementation of GPP strategy, including community awareness	June 30, 2022
Activity 2.2.6: Finalize GDP guidelines, inspection tool, and e-learning material to train wholesalers	June 30, 2022
Activity 2.2.7: Update good hospital pharmacy practices (GHPP) directive and guidelines and develop GHPP capacity building strategy	June 30, 2022
Activity 2.2.8: Finalize QMS manual and SOP toward ISO 9001:2015 certification	May 30, 2022
Activity 3.1.1: Finalize and implement Pharmadex registration module	June 30, 2022
Activity 5.1.1: Implement SPARS in selected districts	June 30, 2022
Activity 5.3.1: Hire a senior technical advisor – antimicrobial resistance, implement situation analysis, and support revision of national plan	June 30, 2022

PHOTOS

From Left: Dr. Pawanjung Rayamajhi, Director, Curative Service Division; Bharat Bhattarai, Director General, DDA; Dr. Dipendra Raman Singh, Director General, Department of Health Services; Dr. Jaganath Sharma, MNCH Senior Advisor, Health Office, USAID; and Dr. Birna Trap, Country Project Director, MTaPS Nepal, during the opening session of the MMS training (*Photo credit: Prabin Tamang*)

Table 22. Quarter 2, FY22, Activity Progress, Nepal

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Assist DDA in organizational restructuring	1.1	N/A	N/A	The DDA appointed a focal person for development and approval of job descriptions. Job descriptions for the DDA industry section were drafted for approval by the DDA.
Activity 1.2.1: Update Drug Act, regulations, rules, and guidelines	1.2	N/A	N/A	The Drug Act was finalized, translated into Nepali, and shared with MTaPS' legal partner before submission to the MOHP and the Council of Ministers along with MTaPS' draft concept note. The Code on Sale and Distribution was updated to include GPP and GSDP licensing for pharmacies, wholesalers, importers, and GPP and GSDP guidelines were submitted to the Drug Advisory Committee. A concept note on medicines price regulation was drafted and shared with the MOHP.
Activity 1.2.2: Revise and update the NMP	1.2	N/A	N/A	To bring the NMP 1995 in line with the Nepal Health Policy and the updated Drug Act, 12 thematic groups were established, and group work has started. A traffic light review of the existing NMP assessed implementation and documented that only about 20% of the policies had been implemented in the past 25 years. Assisted by international and local consultants, a stakeholder consultation was conducted to identify priority policy issues and possible interventions.
Activity 2.2.1: Strengthen regulatory capacity and maturity	2.2	N/A	N/A	MTaPS met with WHO and the Promoting the Quality of Medicines Plus program to update the two-year DDA MALAP with the first year targeting maturity level 2. The implementation status for year 1, showed that 16% of the 136 indicators were completed and 61% had been initiated. The next WHO-led GBT assessment is planned for late 2022, replacing the previous annual virtual self-assessments.
Activity 2.2.2: Strengthen regulatory systems for medical products	2.2	N/A	N/A	The revision of the product registration workflow began based on GBT/MALAP indicators and WHO best practices. The customization process of the Pharmadex Bangladesh product registration module has started for use in Nepal. A learning visit to Indonesia June 6–17 by two DDA product registration staff was approved.
Activity 2.2.3: Strengthen regulatory system for medical device registration	2.2	N/A	N/A	The situational analysis of medical device regulation was updated to incorporate reviewer comments, and the stepwise implementation strategy was drafted. Work on product selection and standards development was started. The streamlining of the DDA registration workflow and procedures between medicines and devices registration were initiated.
Activity 2.2.4: Strengthen pharmacovigilance at the national and provincial levels	2.2	N/A	N/A	Data on ADR reports of the COVISHIELD vaccine were cleaned, but reporting quality precluded entry into Vigiflow, and the reporting form was revised. A database for drug committees and regional PV centers was developed, and terms of reference for committees were revised to include ADR and application for special import permission for drugs. The post-marketing surveillance database was updated with 50 samples for analysis and preparation of drug recall notices for publication in the drug bulletin.

Activity 2.2.5: Strengthen GPP	2.2	N/A	N/A	The GPP guidelines were submitted to the Drug Advisory Committee for discussion. A story board has been developed for GPP e-learning materials to train pharmacy owners. Implementation of a GPP strategy has started to increase the quality of DDA inspections and build GPP capacity in community pharmacies.
Activity 2.2.6: Strengthen GSDP	2.2	N/A	N/A	The GSDP situation analysis report was finalized and sent for quality assurance. Term of reference for inspector training were developed and will be implemented by an inspector from the regulatory body of Uganda in May and June. The piloting of the electronic GSDP inspection tool was finalized in Bagmati province and initiated in the remaining provinces.
Activity 2.2.7: Strengthen GHPP	2.2	N/A	N/A	The revision of the GHPP directives has started. Interviews were held for a consultant to support the GHPP work to improve the quality of care and revise guidelines to improve the efficient operation of hospital pharmacies, but no suitable candidate has been identified.
Activity 2.2.8: Assist DDA in developing a QMS	2.2	N/A	N/A	The work on the QMS manual and SOPs continued. The process review was finalized for the Inspection Division (Complaint Handling Section), resulting in the drafting of five new SOPs. The review of the registration division and regulation of clinical trials applications was initiated.
Activity 3.1.1: Implement pharmaceutical management information system, Pharmadex, for registration, inspection, importation and exportation, and PV	3.1	N/A	N/A	Development of the Pharmadex pharmacy registration module continued with customizations to incorporate DDA requests from pre-UAT along with finalizing the remaining registration modules. The final UAT is planned for April. A government-required security audit of Pharmadex, which is mandatory for use by the DDA, was initiated by the Department of Information Technology. A helpdesk was established, and a training plan for users was prepared. Development of an e-learning course is underway.
Activity 5.1.1: Strengthen medicine management in government-sector health facilities	5.1	N/A	N/A	Training of 30 MMS by Kathmandu University was implemented, and SPARS was launched. The MMS were equipped with laptops, telephones, and manuals for supervision to build GPP capacity at government health facilities/pharmacies as part of building overall medicines management capacity. MTaPS finalized and translated the electronic SPARS assessment tool. MTaPS technical advisors to be placed in Bagmati and Lumbini provincial offices were trained along with the MMS. The SPARS impact assessment study was designed.
Activity 5.3.1: Improve antimicrobial resistance containment	5.3	N/A	N/A	This activity was previously put on hold by the DDA, but the newly appointed director general has resumed the activity and the recruitment process for a senior technical advisor has started.

M. NIGERIA

GLOBAL HEALTH SECURITY AGENDA (GHSA) ACTIVITIES

OVERVIEW

PORTFOLIO GOAL

The GHSA-related goal of the US Agency for International Development (USAID) Medicines, Technologies, and Pharmaceutical Services (MTaPS) program/Nigeria is to support antimicrobial resistance (AMR) containment by slowing down the emergence of resistant bacteria and preventing the spread of resistant infections. In this regard, MTaPS/Nigeria is focused on supporting three result areas: effective multisectoral coordination on AMR, infection prevention and control (IPC) program, and use of antimicrobial medicines optimized. The country-level result areas align with MTaPS' overall GHSA portfolio-level results areas. The 2015 World Health Organization (WHO) global action plan on AMR and Nigeria's national action plan (NAP)-AMR include IPC and antimicrobial stewardship (AMS) as two key strategic objectives and multisectoral coordination (MSC) as a key approach.

MTaPS Nigeria's approach includes supporting the country to improve its Joint External Evaluation (JEE) scores in all three results areas. In this regard, our capacity strengthening approach is targeted at providing the necessary skills to members of the AMR technical working group (TWG) at the national and state levels and the facility teams and committees. In addition, MTaPS is supporting the AMR TWG secretariat to reinforce the multisectoral One Health (OH) approach to tackling the AMR containment challenges in the country. At the facility level, MTaPS is supporting the establishment of IPC and AMS programs with the required structures to ensure that IPC and AMS interventions are effective, sustainable, and coordinated by the established facility structures.

In FY22, MTaPS Nigeria is expanding the IPC and AMS programs to additional facilities while ensuring that the already established AMS and IPC programs in the supported facilities are consolidated and matured to address AMR-related challenges at the facilities.

CUMULATIVE PERFORMANCE TO DATE

From project year 1 to date, MTaPS supported the completion of six WHO International Health Regulations benchmark actions (10%)—three contributing to MSC/AMR, two to IPC, and one to AMS, while six other benchmark actions are at various stages of completion. MTaPS' goal of supporting the benchmark actions is to help the country move up to the next JEE level across the three result areas.

MTaPS, in collaboration with the AMR TWG secretariat, supported 50% (2/4) of benchmark actions capacity level 3 and 25% (1/4) of benchmark actions capacity level 4 for MSC. MTaPS' support contributed to the completion of 100% benchmark actions in level 4 of the MSC result area. The country is on track, with MTaPS' support, to completing 80% of level-5 benchmark actions by FY23. IPC and AMS subcommittees were revitalized with terms of reference (TOR) and work plans were developed. MTaPS also supported the establishment of a state-level committee in Enugu mirroring the federal committees with TOR and a state plan. As a result of MTaPS' support to the national AMR

TWG, there has been improved regularity of quarterly subcommittee meetings. In addition, the strengthening of the governance structure through MTaPS' support to the AMR TWG at the national subcommittee level has fostered an improved working relationship between the human and animal health sectors.

MTaPS supported the AMR TWG secretariat to develop the national IPC strategic plan, a capacity level-3 benchmark action. Though the baseline JEE level 2 for IPC has not changed, MTaPS' support is helping to move the country closer to the JEE score of 3, with MTaPS contributing 20% of the level-2 benchmark actions. MTaPS also supported the AMR TWG secretariat to review the 2013 national IPC policy and standard operating procedures for facility level use. Both documents are ready for dissemination to guide the planning and implementation of the IPC program and practices at the various levels of health care services in the country. At the state level, MTaPS—in collaboration with Nigeria Center for Disease Control (NCDC)—supported the development of the Enugu State IPC plan. MTaPS' key achievements at the facility level included the establishment of IPC programs in all three supported facilities in Enugu state. Key outcomes included baseline assessments conducted using the WHO IPC assessment tool 2 to assess the state-level program and IPC assessment framework/hand hygiene tools to assess the facility-level program. Guided by the result of the baseline assessment, MTaPS supported the facilities to develop improvement plans with a continuous quality improvement approach. State and facility IPC committees and teams were inaugurated in collaboration with the state Ministry of Health (MOH) and facility management. Through a face-to-face training approach, the member capacity of the three facility teams was built on key technical, managerial, and leadership components for effective coordination and management of the IPC program across the state. As a result, step-down training was conducted by the facility teams for about 300 staff. MTaPS provides ongoing monitoring of these programs remotely and through mentoring visits to the facilities.

From FY21 to date, MTaPS supported the country's AMR TWG secretariat to implement a capacity level-2 benchmark action with the goal of moving Nigeria's AMS program baseline JEE score of 2 to the next JEE level. With MTaPS' support, the country is on course to achieving 100% completion of level-2 benchmark actions by FY23 and positioning the country for JEE 3 score.

At the state level, an AMS program was established in Enugu state and across three selected health care facilities. Following the establishment of the AMS program at these facilities, AMS/IPC hybrid committees were established. The hybrid committee's goal is to ensure regular meetings and effective oversight of IPC and AMS activities in the facilities and avoid the pit falls of multiple and ineffective committees. The functionality of the facility AMS and IPC teams has been enhanced by the active hybrid committee model established at the facilities. The AMS team at the supported facility has developed a hospital formulary to guide the procurement and prescription of essential antibiotics at the facility. The laboratories at these facilities are implementing the use of hospital antibiogram to assist in streamlining antibiotics prescription in the facility and guide empirical prescribing of antibiotics at the health care facility.

A critical step in establishing an AMS program in a country is the development of an access, watch, and reserve (AWaRe) categorization of essential antibiotics used in the country to help control the misuse of life-saving antibiotics. In this regard, MTaPS collaborated with WHO and the Department of Food and Drug Services (DFDS) of the federal MOH to constitute an ad hoc AWaRe TWG that will be responsible for the categorization of antibiotics in Nigeria based on WHO AWaRe guidelines.

QUARTER 2 ACHIEVEMENTS & RESULTS

As a prelude to expanding to an additional state, MTaPS supported NCDC to conduct an advocacy visit to Kebbi State MOH and four selected facilities to initiate state- and facility-level AMR programs. A team of five people—three AMR TWG secretariat staff and two MTaPS Nigeria staff—visited Kebbi State Commissioner for Health and key management staff of the state MOH on March 21–22, 2022. One of the expected outcomes of the visit is the nomination of 15 people representing the ministries of health, ministry of agriculture, and ministry of environment into the state AMR TWG. The organizational heads of the four facilities to be supported by MTaPS in Kebbi state have submitted the list of people (five per team) that would constitute the facility AMS and IPC teams. The focal persons at Kebbi State MOH and the selected health care facilities were provided with necessary documents, the OH governance manual, and TOR to guide the process of selecting the team members.

MTaPS supported the AMR TWG secretariat to develop the national IPC strategic plan. A consultant was engaged by MTaPS to lead the process of developing the national document. Three workshops were organized between November 2021 and February 2022 to present key stakeholders with the opportunity to review and validate the draft national IPC plan developed by the consultant. The document is in the final stage of editing and formatting by the AMR TWG secretariat before it will be presented to the Director General of the NCDC for endorsement and publication on the NCDC website.

In collaboration with WHO and members of the ad hoc AWaRe TWG, MTaPS commenced the AWaRe categorization process of antibiotics in Nigeria. The categorization process is ongoing with the constitution of three subgroups that focus on the critical areas of epidemiological review of diseases of public health importance and the resistance profile of antibiotics in use in Nigeria and their supply chain. Data and information pooled from these critical areas of focus will be used for evidence-based AWaRe categorization of the essential antibiotics in Nigeria.

Group presentation at AWaRe TWG inaugural meeting on March 3, 2022. Picture taken by Babatunde Akinola

BEST PRACTICES/LESSONS LEARNED

In recent times, the acceptance of program intervention/support—especially by government institutions—at the national level in Nigeria is dependent on the affiliation of such interventions to programs initiated or endorsed by trusted multilateral organizations. Government agencies and institutions would not engage with non-governmental organizations without a high-level approval from their parent ministry. The process of getting the required approval is usually delayed and the outcome is uncertain. However, collaboration with trusted multilateral organizations such as WHO and Food and Agriculture Organization (FAO) guarantees acceptance when dealing with government agencies such as the federal MOH.

MTaPS' collaboration with WHO in advocating to the Government of Nigeria through the DFDS and federal MOH facilitated the approval of the AWaRe antibiotic's categorization process by the Minister of Health in December 2021 and the inauguration of the ad hoc AWaRe TWG in March 2022. Similarly, MTaPS' liaison with FAO encouraged Federal Ministry of Agriculture and Rural Development (FMARD) to collaborate with NCDC in developing a national AMS plan for Nigeria. FMARD was initially uninterested in the development of an OH AMS plan until they were assured by FAO of their collaboration with MTaPS on this effort.

Thus, collaborating with trusted multilateral organizations such as FAO and WHO gave credence to our activities and ensured that MTaPS is on track with program implementation.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
National AMS plan review workshops	April
Establishment of AMS and IPC programs and training at supported facilities in Enugu and Kebbi State	April–May
Development of workplace reminders for IPC and AMS practices for health care facility use	May
Development of AWaRe categorization of antibiotics	May–June
WHO point prevalent survey at MTaPS facilities	May
Supportive supervision and monitoring of IPC and AMS programs at ESUTH	June
Review of Nigeria NAP AMR 2017–2022	May–June

Table 23. Quarter 2, FY22, Activity Progress, Nigeria

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1: IPC strategic plan development ***Activity Description:*** Conclude the development of the national IPC strategic plan by organizing a stakeholder meeting to finalize the document	5.4	2.1	N/A	A third stakeholder workshop was organized by MTaPS on February 15–16, 2022, to update the draft national IPC plan with inputs from participants at the first two workshops. The final draft has been submitted to NCDC for sign-off.
Activity 2: National AMS plan validation workshop ***Activity Description:*** Organize stakeholder workshops to review and adopt the draft national AMS plan developed by the human and animal health consultants engaged by MTaPS	5.4	3.1, 1.1	N/A	Workshops, which were scheduled for March, were postponed to April due to the non-availability of the AMS lead in the animal health sector. They were rescheduled for April 4–6, 2022, with confirmation of participation by key stakeholders.
Activity 3: Facility IPC and AMS baseline assessment ***Activity Description:*** Conduct baseline assessment of IPC and AMS at the two additional facilities in Enugu State and training of IPC and AMS teams and committees at the facilities	5.4	2.1, 2.5	N/A	Pre-assessment of two faith-based facilities was carried out in February. As a result of the redesign of the AMS training curriculum by NCDC, baseline assessment of the IPC and AMS programs' core components would be carried out during the training of the IPC and AMS team members from the two selected facilities
Activity 4: Assessment of health care facilities and debrief ***Activity Description:*** Engagement with USAID partners (Integrated Health Program and Momentum Safe Surgery in Family Planning and Obstetrics [MSSFPO]) in Kebbi State on MTaPS program implementation	5.4	2.1, 2.5	N/A	A meeting with MSSFPO held in March on areas of collaboration at the facilities in Kebbi State. MTaPS will support the Fistula Centre in Birnin Kebbi in collaboration with Momentum SSFPO. AMR implementation in the facility will commence in April 2022.
Activity 5: Advocacy visit to Kebbi State MOH and selected facilities ***Activity Description:*** Commencement of IPC and AMS engagement in Kebbi State to initiate AMR program implementation	5.4	2.1, 2.5	N/A	IPC and AMS program initiation commenced in Kebbi state with an advocacy visit to the commissioner for health and the chief medical directors of the four health care facilities to be supported by MTaPS. The facilities were provided with guidelines for the formation/selection of the necessary teams that will be trained by MTaPS. The AMR program implementation commences at the facilities in April.
Activity 6: Advocacy visit to Kebbi State MOH and selected facilities ***Activity Description:*** Engage with the Government of Kebbi State through USAID to introduce the MTaPS GHSA support to the state	5.4	2.1, 2.5	N/A	MTaPS leveraged USAID's memorandum of understanding with the Kebbi State Government and NCDC's working relationship with the state MOH to position our AMR containment program to the state MOH, and the four facilities selected for the IPC and AMS programs. The AMR program support to the state is in progress, with the nomination of members of the state AMR TWG and the facility IPC and AMS teams by the state MOH and the facility heads, respectively.

N. PHILIPPINES

OVERVIEW

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

- Institutionalize integrated and effective procurement and supply chain systems for TB, family planning (FP), and other health program commodities
- Establish fully functional pharmacovigilance (PV) and product registration systems and improve pharmaceutical services to ensure patient safety and rational use of health commodities

MTaPS meets these objectives by identifying and addressing supply chain bottlenecks in the regular provision of TB, FP, and HIV services to improve access; supporting the DOH's central offices in redefining its procurement and supply chain management (PSCM)-related roles in the context of a devolved health system; professionalizing the PSCM and PV workforce; supporting the DOH to put in place necessary information systems; enabling the DOH and local government units (LGUs) to optimize PSCM resources; and supporting the DOH and the Food and Drug Administration (FDA) to enhance regulatory systems related to product registration and patient safety.

CUMULATIVE PERFORMANCE TO DATE

Governance and system design

MTaPS conducted a rapid assessment of the PSCM system in the Philippines and supported the DOH to develop a PSCM strategic plan. MTaPS analyzed the draft universal health coverage (UHC) implementing rules and regulations and suggested the addition of supply chain-related articles. The addition of those articles ensured legal support for supply chain reforms at the central and LGU levels. MTaPS supported the DOH in designing and developing a PSCM road map for the central, regional, and local government levels to implement the UHC law of the Philippines. MTaPS has been assisting the DOH in developing a PSCM reform plan and institutionalizing a fully functional PSCM governance mechanism with clear roles among different units of the DOH central office, Centers for Health Development (CHDs), and LGUs to ensure uninterrupted access to and appropriate use of health commodities across the country.

Workforce development

MTaPS supported the DOH in assessing PSCM and PV workforce needs and creating a PSCM and PV workforce development plan. MTaPS has been supporting the DOH in hiring the PSCM workforce, developing and offering e-learning modules to train the workforce, and developing a pool of local technical assistance providers (LTAPs) to set up PSCM and PV systems at the local government level. MTaPS is working with the DOH and LGUs to update the PSCM and PV workforce development plan to incorporate changes and directions from the implementation of the UHC law and the transition plan for DOH devolution.

Information systems

MTaPS supported the DOH in identifying technical requirements and planning a road map for implementation of an end-to-end, integrated electronic Logistics Management Information System (eLMIS) across the Philippines. MTaPS contracted a commercial off-the-shelf eLMIS solution provider and has been providing technical assistance to the DOH to implement the eLMIS solution for greater visibility of PSCM data and more efficient management of the health commodity supply chain, including COVID-19 vaccines. MTaPS also upgraded the Pharmacovigilance Monitoring System (PViMS) to version 2 with 87 enhancements to the software's features as requested by the DOH for setting up active drug safety monitoring (aDSM) of TB and HIV medicines. MTaPS has been supporting the DOH and FDA to roll out PViMS to targeted TB and HIV facilities and contribute to patient safety.

Financing and resource management

MTaPS supported the DOH, LGUs, and Philippine Pharmaceutical Procurement Inc. in introducing Framework Agreements (FAs) and pooled procurement mechanisms (PPMs) for increased efficiency in procurement and availability of health commodities. MTaPS is supporting the DOH to design and pilot a strategic procurement mechanism with demand aggregation, price negotiation, and FAs to ensure availability and economy of quality-assured health commodities. MTaPS is also working with USAID's ReachHealth project, the DOH, and LGUs to test out innovative uses of a digital platform to facilitate exchange of information, cross-referral, and cost reimbursements among members of local health care provider networks to integrate public and private providers into local health systems.

PSCM and PV services

MTaPS supported the DOH in updating and finalizing a warehouse operational manual. MTaPS also supported the long-term forecast demand of TB and FP commodities from 2019 to 2022. The forecast result estimated the quantity and budget requirements for three years. MTaPS has been working with the FDA, DOH, and World Health Organization to update the national PV policy, optimize the product registration system, and establish a national medicine safety advisory committee. MTaPS participated in joint activities with other USAID implementing partners (IPs) and supported the Bangsamoro Autonomous Region in Muslim Mindanao Ministry of Health to develop a PSCM action plan. These activities will contribute to increasing the availability and safety of critical medicines countrywide.

QUARTER 2 ACHIEVEMENTS & RESULTS

PSCM Road Map

The UHC Integration Technical Working Group (TWG) of the DOH has been formed to pioneer the implementation of the PSCM road map and to finalize the Disease Prevention and Control Bureau (DPCB)-initiated PSCM reforms administrative order/policy. The TWG, which includes members from the Knowledge Management and Information Technology Service (KMITS), Pharmaceutical Division (PD), Procurement Service (PS), Supply Chain Management Service (SCMS), and DPCB bureaus, initially met to realign on the objectives of the TWG. The DPCB will be conducting separate meetings with each member bureau to prioritize activities and gather feedback on the content of the PSCM reforms policy, which outlines the proposed roles and responsibility of the bureaus per PSCM function.

Change Management Course

On March 15, the Health Policy Development and Planning Bureau presented the MTaPS Change Management eLearning course initiative to the undersecretary of the Health Policy and Systems

Development Team and received formal approval; the undersecretary recommended harmonizing and integrating this initiative with the umbrella organizational development activities led by the Health Human Resources Development Bureau (HHRDB). MTaPS reached an agreement with the HHRDB to work together in the development of the Change Management eLearning course prior to its uploading to the DOH Academy platform. This course aims to support the DOH and LGUs to effectively manage change because of the recent reforms in the Philippines health system and the implementation of UHC.

Health Workforce Development Plan (HWDP)

On March 15, MTaPS conducted an online consultation with 139 participants from the LGUs, CHDs, and IPs. The consultation sought feedback on the recommended minimum key health workforce needed to perform PSCM functions at LGUs as outlined in the devolution transition plan of the DOH, in line with the finalization of the HWDP. MTaPS will consolidate and incorporate the feedback of the LGUs in the HWDP prior to its presentation to the DOH. The HWDP describes the workforce development needs and competencies to perform PSCM and PV functions at various levels of the supply chain.

Provider Integration and Engagement System (PIES)

On January 18, MTaPS, in collaboration with ReachHealth and TB Platforms, participated in the Primary Care Provided Network and PIES memorandum of understanding signing ceremony with the LGUs of Mabini and Batangas provinces.

Analysis of PSCM Data

On February 22, MTaPS supported the PD to present the Q4 2021 inventory data analysis of the commodities under the DOH priority programs (FP, TB, and HIV/AIDS) to SCMS and DPCB. The presentation highlighted commodities consistently out of stock in most health facilities and those that have insufficient stock at the warehouses at various levels (i.e., provincial, city, regional, national). The data inventory analysis will also be shared with regional staff to identify concrete actions on how to address the stock-out situation in some health facilities in the country.

Strategic Procurement

On January 26, MTaPS, in collaboration with the DOH and Price Negotiation Board, conducted a learning session on strategic procurement. More than 50 participants from the DOH (DPCB, PD, PS); Department of Trade and Industry; and IPs learned about best practices related to PPM, FA, and other procurement strategies used in New Zealand, South Africa, and Indonesia for ensuring availability, price, and quality of health commodities. As next steps, MTaPS will collaborate with the DOH on the environmental scanning, option analysis, and designing and piloting an agreed strategic procurement mechanism for the Philippines.

Couple Years of Protection (CYP)

On January 28, MTaPS and IQVIA presented the CYP analysis for the January 2018–June 2021 to the CYP reference group, which includes the DOH DPCB, PD, a private-sector partner (DKT), USAID, and USAID IPs. CYP is the estimated protection provided by contraceptive methods during a given period based on the volume of all contraceptives sold or distributed free of charge to clients in the public or private sector during that period. In terms of CYP of supply-based FP methods (e.g., condoms, pills, implants, IUD, injectables) in 2021, the public sector is the main contributor to the CYP in Luzon

(excluding the National Capital Region) with 68%, followed by Visayas (59%) and Mindanao (74%), while the private sector is the main contributor to the CYP in the National Capital Region with 93%.

PViMS

The DOH PD released a department memo (DM 2022-0087: Reporting of Adverse Event in PViMS) to further guide programmatic management of drug-resistant TB (PMDT) health facilities on the use of PViMS. To institutionalize the training of PMDT staff on the use of PViMS, the Lung Center of the Philippines (LCP), which is the training arm of the National TB Program, incorporated PViMS into its PMDT training curriculum for newly hired staff. On March 7, MTaPS and the PD participated in a supplementary training on PViMS for 13 PMDT staff (4 male, 9 female) hosted by the LCP training team. To date, staff from 198 of 199 PMDT facilities have been trained on PViMS. MTaPS is working with the DOH and LCP to schedule training for staff of the final health facility.

Product Registration System

MTaPS has been working with the FDA to improve the product registration system by supporting the adaptation of a reliance pathway and the possible use of information technology for streamlining and automating the product registration process. MTaPS organized a demonstration of the electronic tool Pharmadex, which has been used in several countries to streamline management information systems for product registration and can assist the FDA in planning for increasing efficiency of the current product registration system.

BEST PRACTICES/LESSONS LEARNED

Focused intervention on the eLMIS implementation

Compared to previous fiscal years, the development and implementation of eLMIS has moved at a faster pace. Comprehensive requirements were gathered in multiple sessions such as through the Requirements and Specifications Document with the identification of impediments. The solution was configured according to agreed-upon requirements to be released. This is great progress considering the challenges this activity has experienced in the past. This was possible as MTaPS has further strengthened its partnership with the DPCB and Procurement and Supply Chain Management Team, which are the primary bureaus in eLMIS implementation. *Lessons learned:* Identifying and engaging key counterparts and working together through a partnership and problem-solving approach produced better results.

Strong partnership between the field office and home office teams on capacity-building activities

MTaPS Philippines' capacity-building portfolio has also moved at a faster pace this quarter. This is primarily because of the solid partnership between different teams within the program. There is a renewed richness of ideas brought by the two teams, which led to a more concrete and specific plan of action for the portfolio. *Lessons learned*: A healthy interaction and synthesis of local knowledge and global expertise was useful in developing and implementing technically sound locally led solutions.

Identification of risk mitigation strategies to address potential emerging challenges

Risk mitigation planning is the process of developing options and actions to enhance opportunities and reduce threats to project objectives. The team and stakeholders identified potential challenges that might affect the implementation of a specific activity or portfolio. For example, the team is already anticipating that the upcoming national election will affect the general implementation of our activities and has identified potential risks, challenges, and opportunities that the election may bring. This helped

the program and DOH counterparts to prepare for the changes for a seamless continuity of activities in the context of upcoming transition. *Lessons learned*: Assessing and addressing the risks, especially those coming from external sources including programmatic environmental changes, need to be an integral part of the program implementation process for successful results.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Conduct learning session on global national regulatory registration tool	April 2022
Facilitate the PV eLearning webinar course 1	April 2022
Conduct user acceptance testing workshop for phase 1 of eLMIS	May 2022
Conduct consultative workshop on the concept of LTAPs for PSCM and PV functions in LGUs	April 2022
Facilitate infection prevention and control (IPC) and health care waste management (HCWM) training of trainers for CHDs	June–September 2022
Launch the roll out of the eLMIS	June 2022
Facilitate eLMIS training of trainers	May–June 2022
Facilitate a workshop for the conduct of value chain analysis for implementation of differentiated service delivery (PEPFAR work plan)	May–June 2022
Organize and facilitate the handover of the warehouse operations manual event	June 2022
Organize and facilitate the change management training	June 2022

Table 24. Quarter 2, FY22, Activity Progress, Philippines

WORK PLAN 1: TB- AND FP-FUNDED FIELD SUPPORT ACTIVITIES

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Support DOH in implementing PSCM road map as part of implementing UHC law	1.2	N/A	N/A	The UHC Integration TWG of the DOH has been formed to pioneer the implementation of the PSCM road map and to finalize the DPCB-initiated PSCM reforms administrative order.
Activity 1.2.1: Support DOH in implementing the PSCM workforce development plan for institutional capacity building of DOH and LGUs	2.1	N/A	N/A	MTaPS is updating the PSCM and PV workforce development plan for DOH and LGUs.
Activity 1.2.2: Capacitate a pool of LTAPs to support institutional capacity building of LGUs for PSCM functions	2.2	N/A	N/A	Design of the LTAPs scheme and development of the toolkit are underway.
Activity 1.3.1: Support DOH in implementing the road map for an end-to-end eLMIS	3.1	N/A	N/A	eLMIS vendor contracted and implementation of eLMIS underway
Activity 1.3.2: Support DOH in developing mechanisms and practices for regular data collection and analysis for programmatic and PSCM decision making and streamlining of workflows and processes	3.2	N/A	N/A	Established a practice of regular data collection, analysis, and presentation
Activity 1.4.1: Support DOH and LGUs to institutionalize practices related to procurements through FA and PPM for FP and TB commodities	4.3	N/A	N/A	A learning session on strategic procurement was organized, and an environmental scan and design of a strategic procurement mechanism are underway.
Activity 1.4.2: Conduct implementation research on using a digital platform to integrate public and private providers into local health care provider networks for information exchange, cross-referral, and cost reimbursements related to medical products and services to support UHC law implementation	4.1	N/A	N/A	Activity designed and request for proposals issued to commission services of a digital platform provider to start the implementation research (pilot)
Activity 1.5.1: Support DOH to institutionalize a practice of evidence-based quantification and allocation of TB and FP commodities and to inform procurement, supply planning, and distribution	5.1	N/A	N/A	Preparations underway to conduct a comprehensive quantification exercise for TB and FP commodities
Activity 1.5.2: Support the Commission on Population (POPCOM) in implementing segmented subnational supply chain management of FP commodities	5.1	N/A	N/A	POPCOM was supported to develop a warehouse operation manual.
Activity 2.1.1: Support DOH and FDA in strengthening national PV governance structure and processes for aDSM	5.2	N/A	N/A	MTaPS is supporting the FDA to update the national PV policy.
Activity 2.2.1. Support DOH and FDA in registering FP and TB products by optimizing and enhancing product registration process and targeted support	5.2	N/A	N/A	MTaPS has been working with the FDA in adapting the reliance pathway for streamlining the product registration system. MTaPS demonstrated Pharmadex, an electronic management information system tool, to increase efficiency of product registration processes.

Activity 2.3.1: Support health facilities on improved practices on IPC and HCWM related to climate risk mitigation	5.3	N/A	N/A	MTaPS has been working with the DOH to organize an IPC and HCWM training of trainers for a pool of trainers to conduct facility visits and provide onsite support for increased compliance of health facilities with IPC and HCWM practices.
Activity 2.4.1: Support DOH in rolling out active PV information system	5.3	N/A	N/A	PViMS is being rolled out to all PMDT sites countrywide.
Activity 3.1: Provide PSCM- and PV-related inputs to USAID IPs	5.1	N/A	N/A	MTaPS is actively taking part in UHC implementation planning with other USAID IPs.
Activity 3.2: Support gender equality and women's empowerment in pharmaceutical systems strengthening	5.2	N/A	N/A	MTaPS organized an orientation and advocacy session with key DOH and CHD officials on gender in pharmaceutical systems strengthening. Development of an eLearning course on this topic is underway.

WORK PLAN 2: PEPFAR-FUNDED FIELD SUPPORT ACTIVITIES

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1: Support Health Technology Assessment of PrEP, TLD, and other necessary HIV/AIDS products and their inclusion in the Philippine National Formulary	5.1	N/A	N/A	MTaPS supported the DOH and FDA to register PrEP and TLD and have them included in the Philippine National Formulary (activity completed).
Activity 1.2: Support DOH in sustainable roll out of PrEP and aggressive implementation of TLD transition plan	5.1	N/A	N/A	MTaPS supported the DOH to develop a road map for the roll out of PrEP. MTaPS has been supporting the DOH on PSCM-related issues in implementing the TLD transition plan.
Activity 1.3: Support institutional practice of data-driven quantification and procurement planning	5.1	N/A	N/A	MTaPS worked with the DOH to conduct quantification of PrEP and viral load testing cartridges. A comprehensive quantification exercise is planned for June 2022.
Activity 1.4: Support DOH in using appropriate procurement mechanisms for addressing procurement-related bottlenecks for HIV/AIDS commodities	5.1	N/A	N/A	MTaPS conducted a procurement mapping to identify bottlenecks for procuring HIV commodities through domestic funding and workable solutions to address them.
Activity 1.5: Support DOH in strengthening the distribution and inventory management system for HIV/AIDS commodities	3.2	N/A	N/A	MTaPS worked with the DOH to assess existing HIV commodities inventory management and logistic information management practices and developed a plan for how the inventory management system for HIV commodities can be integrated with the implementation of the eLMIS in the Philippines.
Activity 2.1: Support DOH in developing and implementing a PSCM support plan for MMD and DSD	5.2	N/A	N/A	Preparations to conduct a value chain analysis for setting up DSD for PLHIV are underway.
Activity 2.2: Support DOH in the aDSM of TLD and PrEP through the implementation of PViMS	5.3	N/A	N/A	MTaPS is working with the DOH and FDA to provide user training to roll out PViMS for aDSM of PrEP and TLD.
Activity 2.3: Support HIV facilities in strengthening practices for IPC	5.3	N/A	N/A	MTaPS has identified the sites and is in the process of hiring consultants to conduct facility assessment and training on IPC.

WORK PLAN 3: COVID-19 VACCINE TECHNICAL ASSISTANCE ACTIVITIES (CN108)

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
1. Support National Vaccine Operations Center to develop issuances related to procurement and supply chain and LMIS related to COVID-19 vaccines	1.2	Coordination & operations	N/A	Activity completed
2. Support the Procurement and Supply Chain Management Team of the DOH to manage contracts for vaccine and consumables storage and distribution	2.2	Coordination & operations	N/A	Activity completed
3. Support management and coordination of roles and responsibilities among key stakeholders and technical assistance providers on the COVID-19 vaccine LMIS	1.3	Coordination & operations	N/A	Activity completed
4. Support roll out of COVID-19 vaccine LMIS and inclusion of vaccine consumables in the COVID-19 vaccine LMIS	3.1	Vaccine introduction	N/A	eLMIS has been partially configured. User acceptance testing is planned for April 25–29, 2022.
5. Support KMITS to design and establish supply chain dashboards for tracking inventory, stock management, and analysis	3.1	Vaccine introduction	N/A	eLMIS has been partially configured. User acceptance testing is planned for April 25–29, 2022.
6. Provide user training and support HRH recruitment for roll out and use of COVID-19 vaccine LMIS	3.2	Vaccine introduction	N/A	Not yet started. User training will be provided after user acceptance testing.

O. RWANDA

FIELD SUPPORT ACTIVITIES

OVERVIEW

The goal of MTaPS in Rwanda is to assist the country in strengthening its pharmaceutical system to ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable essential medical products, including antiretrovirals (ARVs) and maternal, newborn, and child health (MNCH) products, and related pharmaceutical services. As part of its support to Rwanda's Ministry of Health (MOH) and the Rwanda Food and Drugs Authority (FDA), MTaPS focuses its technical assistance on both the public and private pharmaceutical sectors by continuing support to improving regulatory systems at the Rwanda FDA, improving pharmaceutical-sector oversight and management by bolstering Drug and Therapeutics Committees (DTCs), and ramping up pharmacovigilance (PV) systems.

MTaPS' strategic approach to strengthening the Rwanda FDA is to carefully address key gaps identified in the World Health Organization (WHO) Global Benchmarking Tool (GBT) assessment conducted in November 2018 and build the Authority's institutional capacity to address areas of weakness and gaps documented in its institutional development plan to facilitate the FDA to achieve WHO GBT maturity level 3. MTaPS' support is also strengthening established PV system for both active and spontaneous safety surveillance, enhancing the capacity of the FDA's regulatory workforce for medical product registration, and updating its regulatory information management system. MTaPS supports the MOH in strengthening DTCs at health facilities and engaging with them to monitor health facility performance in pharmaceutical management, including for MNCH medicines.

CUMULATIVE PERFORMANCE TO DATE

Over the past three years, MTaPS has continued to provide pharmaceutical systems strengthening support to the MOH and its institutions, including the Rwanda FDA; the Maternal, Child, and Community Health (MCCH) division; and the Rwanda Biomedical Center (RBC). Through support to the Rwanda FDA, the four-year Rwanda FDA Strategic Plan (2021–2024); four regulations; and other pharmaceutical-sector regulatory documents (e.g., guidelines, manuals, standard operating procedures [SOPs]), have been developed. MTaPS also supported an internal audit at the Rwanda FDA as part of implementation of a quality management system based on ISO 9001:2015 requirements in June 2021; a quality manual and corresponding SOPs were approved by the Authority's board in May 2021. MTaPS participated in the Authority's self-benchmarking assessment in September 2021 that assessed the Authority's progress and identified the remaining gaps on the journey toward maturity level 3 according to the WHO GBT. To date, MTaPS has contributed to strengthening five pharmaceutical regulatory enforcement mechanisms—the national regulatory system, vigilance, product registration and marketing authorization, licensing establishments, and regulatory inspection.

In information management, MTaPS supported the Rwanda FDA to adapt the electronic Pharmacovigilance Monitoring System (PViMS) for spontaneous reporting of adverse drug events (ADEs), including COVID-19 vaccine adverse events following immunization (AEFI) and for active safety monitoring of dolutegravir (DTG)-based antiretroviral therapy regimens. From June 2021 to January

2022, 568 AEFI, 186 of which were serious ADEs, were reported to the Rwanda FDA, which reported them to WHO. The use of PViMS will ensure that medicine safety monitoring reports are quickly received and analyzed by the Authority, which can provide feedback to clients, patients, and health facilities in a timely manner.

In addressing the human resources capacity gap, MTaPS supported training in pharmaceutical management of 667 Rwanda FDA staff and other health care providers in medicines evaluation and registration (MER), good manufacturing practices, good review practices, good reliance practices, PV, quality management systems, and other topics. As part of long-term sustainability of capacity building, MTaPS provided technical support to develop online eLearning courses in MER and PV, which are hosted on the Rwanda FDA server. In June 2021, during the annual National Pharmacy Council (NPC) conference, MTaPS supported the MOH and Rwanda FDA in disseminating information on the pharmaceutical service accreditation standards and medicines safety to 440 participants (295 male, 145 female).

MTaPS provided technical support to the MOH to categorize antibiotics as per WHO recommendations into the Access, Watch, and Reserve categorization and include them in the National Essential Medicines List to help prescribers use antibiotics more effectively for antimicrobial resistance containment.

In the MNCH area, guidelines on regulating medical gases were developed that were useful for the COVID-19 pandemic where medical oxygen is an essential part of treatment. A rapid assessment of the supply, availability, and use of oxygen, equipment, and medical devices of the respiratory ecosystem was developed. This program is aimed at informing development of a national road map on the supply and management of oxygen. MTaPS also supported the MCCH in a rapid assessment of the use of medicines for postpartum hemorrhage and eclampsia. MTaPS also supported a program focusing on storage conditions of oxytocin in health centers and hospitals that informed the development of the implementation manual for cold storage of oxytocin in Rwanda to guide health care workers on procedures for its storage and management.

To strengthen PV, MTaPS supported the development of a cost-effective multiyear national implementation plan to support and guide the implementation of medicines safety monitoring and PV activities. MTaPS is working with the MOH, RBC, and Rwanda FDA in conducting active surveillance of DTG-based regimens to support medicines safety. The protocol on active safety monitoring for DTG-based regimens, its implementation plan, SOPs, and a patient consent form were submitted to the Rwanda National Ethics Committee, which approved them on September 15, 2021. The active surveillance study implementation is ongoing at 20 health facilities. MTaPS supported the RBC to conduct a situational analysis on ARV multi-month dispensing (MMD) and pack size, which facilitated the roll-out of 6MMD using a recommended 90-pack size. MTaPS supported the development of a manual to improve pharmaceutical management in health facilities via Drug and Therapeutics Committees (DTCs), now known as Medicines and Therapeutics Committees (MTCs). This MTC manual will guide their establishment in health facilities and has tools and SOPs to guide health workers on monitoring MNCH medicine use in the district and ADE reporting.

QUARTER 2 ACHIEVEMENTS & RESULTS

MTaPS supported the Rwanda FDA in a medicines dossier assessment retreat that reduced the backlog of pending medicine dossier applications to improve access to quality, safe, and efficacious medicines on the Rwandan market.

Rwanda FDA assessors at the retreat on the assessment of dossier applications (Photo credit: Jean Mirimo)

MTaPS is providing technical assistance to replace the existing electronic regulatory information management system, the Pharmaceutical Regulatory Information Management System (PRIMS), with the new Integrated Regulatory Information Management System (IRIMS) to increase the efficiency of the Rwanda FDA's regulatory functions, such as effective online registration of medicines. The IRIMS test system was deployed on the local Rwanda FDA server, and 35 staff from the Rwanda FDA Information and Communication Technology (ICT) team and internal unit leads have been trained on the system. The MTC manual has been formally approved and signed by the Minister of Health and is ready to be disseminated and implemented.

BEST PRACTICES/LESSONS LEARNED

MTaPS supported the MOH to use an online survey tool to assess the functionality of DTCs in health facilities in 2021. This virtual platform expedited data collection and facilitated interactions between the MOH and health facilities. The use of the tool was limited by a requirement for user health facilities to have a good internet network and a lack of familiarity among some respondents of electronic online survey tools, leading to incomplete responses. A lesson learned in this context is that consistent network access and user proficiency in utilizing online tools are core components of success for virtual program activities.

Comprehensive capacity building should involve hands-on application to enhance skills development gained from training workshops as illustrated by the training of Rwanda FDA assessors in medicines registration, later followed by hands-on dossier evaluation.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
FS activity 1.1.1: Strengthen the capacity of Rwanda FDA in regulating pharmaceuticals used in HIV/AIDS, MNCH, and family planning (FP)/reproductive health programs ▪ Review legislative framework for medical devices to include in vitro diagnostics (IVDs) to ensure adequate regulatory provisions	April–June 2022
FS activity 1.2.1/ARPA Activity 1.2.1: Support functionality of DTCs and enhance their capacity to manage medicines at facility level ▪ Conduct training of DTCs across district, referral, and provincial hospitals in continuous quality improvement and monitoring appropriate use of medicines, including management of MNCH and FP products and storage of oxytocin ▪ Support MOH in integration of pharmaceutical services standards for accreditation into the package for roll out of the hospital accreditation standards implemented by the Rwanda Integrated Health Systems Activity project	April–June 2022
FS activity 2.1.1: Support replacement of PRIMS with IRIMS for effective regulatory and PV functioning of Rwanda FDA ▪ Provide customization and installation of IRIMS on Rwanda FDA server ▪ Conduct training of selected Rwanda FDA staff as master trainers in IRIMS system operations	June 2022
FS Activity 3.2.1: Support establishment of a system for active surveillance of the new DTG-based regimens for HIV/AIDS treatment ▪ Support the ongoing implementation of the active surveillance system for DTG-based regimens at 20 selected hospitals	September 2022
ARPA Activity 3.1.2: Enhance the capacity of RBC to manage MMD of ARV medicines to antiretroviral therapy patients ▪ Support RBC to conduct a feasibility study on the proposed adjustment from monthly to bimonthly dispensing (2MMD) for adherent breastfeeding mothers and new clients on ARVs	September 2022
ARPA Activity 3.2.1: Support the strengthening of the existing ADE/AEFI spontaneous reporting system for medicines ▪ Support PV training, including use of PViMS, to about 80 health care providers across the programs and health facilities	June 2022

Table 25. Quarter 2, FY22, Activity Progress, Rwanda – FIELD SUPPORT ACTIVITIES

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
FS Activity 1.1.1: Strengthen the capacity of Rwanda FDA in regulating medical products, including those used in HIV/AIDS, MNCH, and FP/reproductive health programs ***Activity Description:*** Support Rwanda FDA to conduct a medicines dossier assessment retreat to reduce backlog, review the legislative framework for medical devices to include IVDs, and develop guidelines for registration of IVDs	1.2	N/A	N/A	The retreat took place January 31–February 12, 2022. Of 735 unassessed applications, the Rwanda FDA submitted only 310. All 310 underwent their first screening. Of these, 149 completed the first assessment and 102 completed second assessment. Only 2 applications were recommended for peer review, while 100 are pending with queries to be addressed by applicants. MTaPS is working with the Rwanda FDA to review the regulation governing medical devices.
FS Activity 1.1.2: Streamline registration of medical products (essential medicines, vaccines, medical devices), including those used in HIV/AIDS, MNCH, and FP programs (activity continuing from FY21) ***Activity Description:*** Support the implementation of the designed eLearning module on MER in collaboration with the University of Rwanda, Rwanda FDA, and NPC	2.2	N/A	N/A	The MER and PV eLearning modules were uploaded to the Rwanda FDA platform in October 2021. MTaPS is working to support the Rwanda FDA and MOH to transfer the modules from Rwanda FDA servers to the MOH Moodle platform for ease of access by health workers. After transfer, links will be shared to the Rwanda FDA and NPC. The NPC has agreed to award continuous professional development points to learners for the annual relicensing of pharmacists.
FS Activity 1.2.1: Support functionality of DTCs and enhance their capacity to manage medicines at facility level ***Activity Description:*** Conduct training of DTCs across 35 district hospitals and 5 referral and provincial hospitals in continuous quality improvement and appropriate use of medicines and support the MOH's integration of pharmaceutical services standards in collaboration with USAID implementing partner Palladium through the Rwanda Integrated Health Systems Activity project	5.2	N/A	N/A	The MTC manual and its annexes, including the checklist for monitoring health facility performance on key MNCH areas, was validated in February 2021 and has received MOH approval. The planned training will be conducted starting in Q3 and will cover management of medicines, including MNCH products.
FS activity 2.1.1: Support replacement of PRIMS with IRIMS integrated with PViMS for effective regulatory and PV functioning of the Rwanda FDA ***Activity Description:*** Support to customize and install IRIMS on the Rwanda FDA servers; conducting training of selected Rwanda FDA staff as master trainers in IRIMS system operations	3.1	N/A	N/A	System gap analysis conducted, and report written. IRIMS is already deployed on Rwanda FDA test servers, and internal user accounts were created. Four internal ICT staff and 31 functional leads were trained in the administration and management of IRIMS. Staff were trained in the operationalization of registration, import and export, licensing, and inspection functional modules. Training is continuing with the usage of the remaining IRIMS functional modules. Progressive reports are shared weekly by the software developer.

FS WP Activity 3.1.3: Improve access to and administration of oxygen to hypoxic newborns and children with pneumonia ***Activity Description:*** Support development of guidelines and SOPs on medical oxygen therapy and oxygen equipment utilization and other MNCH-related activities	5.2	N/A	N/A	No activities were conducted this quarter. On other MNCH activities, the developed implementation manual for cold storage of oxytocin in Rwanda was reviewed and approved by a joint MCH technical working group and is pending final approval from the MOH.
FS WP Activity 3.2.1: Support establishment of a system for active surveillance of the new DTG-based regimen (activity continuing from FY21) ***Activity Description:*** Support the ongoing implementation of the active surveillance system for DTG-based regimens at the 20 selected hospitals and disseminate findings and recommendations of the study	5.3	N/A	N/A	MTaPS continued to support the RBC and Rwanda FDA in supportive supervisory visits to the 20 selected health facilities for active surveillance of DTG-based regimens. As of the end of March, 609 participants had been enrolled across the 20 selected health facilities.
ARPA Activity 1.2.1: Support functionality of DTCs and enhance their capacity to monitor pharmaceutical management at the supported health facilities ***Activity Description:*** Conduct training of DTCs across 15 district hospitals and 5 referral and provincial hospitals for at least 20 health care providers on the DTC manual and its SOPs and checklist for managing medicines, including ARVs	5.2	N/A	N/A	No activity was done during this quarter
ARPA Activity 3.1.2: Support the RBC to conduct a feasibility study on the proposed adjustment from monthly to bimonthly dispensing (2MMD) of ARVs for adherent breastfeeding mothers and new clients ***Activity Description:*** Support RBC to conduct a feasibility study on the proposed adjustment from monthly to bimonthly dispensing (2MMD) for adherent breastfeeding mothers and new clients on ARVs	5.2	N/A	N/A	MTaPS is developing a scope of work to engage a short-term consultant to conduct the feasibility study.
ARPA Activity 3.2.1: Support the strengthening of the existing ADE/AEFI spontaneous reporting system for medicines, including COVID-19 vaccines and ARVs ***Activity Description:*** Support PV training, including the use of PViMS, to about 80 health care providers across the programs and health facilities	5.3	N/A	N/A	The existing PV systems strengthening materials to be used in the training are currently under review, after which the planned capacity building training is to be conducted in Q4.

EBOLA RESPONSE ACTIVITIES

OVERVIEW

The 2004 outbreak of Ebola virus disease (EVD) in West Africa was the largest, most severe, and most complex Ebola outbreak in history and required the development of strategies to prevent the spread of the disease to other countries. Most cases occurred in DRC, Guinea, Sierra Leone, and Liberia. Without an effective early warning system, the virus can spread rapidly within the region, revealing the failures of the disjointed and under-resourced health care system in Africa. Health care-associated infections are a major public health problem with an impact on morbidity, mortality, and quality of life as well as presenting a significant economic burden for the health system. However, a sizable percentage of these infections are preventable through effective infection prevention and control (IPC) measures. IPC is also important to prevent the occurrence and spread of infections, thereby reducing the need for antibiotics and other expensive treatment measures. Lessons learned from outbreak measures from other countries have enabled Rwanda to think ahead and develop a national strategic plan (NSP) for the prevention of EVD, a national IPC policy, national IPC guidelines, and other documents through collaboration with public and private stakeholders. This early planning and availing of strategic documents are among health system strategies put in place to ensure that an early preparedness and response team in the health sector is available to prevent EVD outbreaks and has response tools in case there is an EVD outbreak.

CUMULATIVE PERFORMANCE TO DATE:

MTaPS Rwanda is one of the key stakeholders working with the MOH and RBC to ensure that the developed documents are reviewed by experts and validated and disseminated in health facilities for preparedness. In May 2021, MTaPS hired two consultants to work on development and review of key strategic documents for EVD prevention and control for the MOH. This assignment was strategically important for the MOH to be able to support health facilities with the most current and updated NSP for EVD prevention and have a validated and approved national IPC policy in place to ensure a measurable preparedness and response plan. The newly available IPC documents and NSP for EVD were reviewed by experts who provided tangible input to strengthen the documents. MTaPS also supported both the MOH and RBC in developing IPC risk communication materials that will be helpful in ensuring that IPC messages are communicated effectively to the population within the context of reducing and containing infections to an acceptable minimum level in the case of an outbreak.

Reception and review of EVD test kits (Photo credit: Abimana Rwandenzi Eugene)

MTaPS provided technical support to the MOH, RBC, and its stakeholders in the review of the national IPC policy, NSP, contingency plan for EVD, and national IPC guideline. The national IPC guideline has been completed and is pending MOH sign-off. In addition, MTaPS supported the development of the national Ebola IPC guidelines, training materials for EVD, 14 job aids, 15 tools and 13 SOPs on Ebola IPC, and the Ebola IPC compliance monitoring tool. The Ebola IPC compliance monitoring tool has been completed and piloted alongside the SOPs and IPC guidelines in both Kibagabaga and Muhima District hospitals as part of validation.

QUARTER 2 ACHIEVEMENTS & RESULTS:

The public health emergency response division of the RBC and the MOH quality assurance unit proposed that the documents be reviewed by quality and standards experts and technical working groups for additional technical input before final validation and approval by the MOH. This validation was done during the quarter.

BEST PRACTICES/LESSONS LEARNED:

The Excel-based Ebola IPC compliance monitoring tool for health facilities in the context of EVD developed by the MTaPS Rwanda team is a comprehensive electronic tool for systematic assessment of facility readiness that embeds more than 100 facility standards in 17 categories (Figure 5). The tool assesses functionality in each area based on available evidence and assigns numeric scores to assess compliance with each of the standards and with facility preparedness in general. MTaPS piloted the tool in two hospitals to evaluate compliance with Ebola IPC standards and validate the importance of the chosen approach.

Figure 5: Ebola IPC assessment results in two hospitals

Use of this tool helped identify several gaps in the two hospitals, including a lack of triage and isolation space, inadequate supplies of personal protective equipment and other IPC supplies, a lack of training and protocols for triage and case management, and a shortage of communication materials on EVD.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Conduct training of health care providers on the developed materials (IPC training of trainers for the central level)	April–June
Undertake simulation EVD drills at selected ports of entry to test communication among health authorities, the nearest district hospitals, and the national surveillance system	April–June

Table 26. Quarter 2, FY22, Activity Progress, Rwanda - EBOLA RESPONSE ACTIVITIES

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1: Provide training using existing training packages ***Activity Description:*** As per a request from the MOH/RBC, MTaPS will also provide some equipment (50 remote temperature screening devices [thermoflash], 10 tablets, and 10 modems with 3G internet connection for 6 months) to facilitate entry/exit screening and reporting at the ports of entry	5.4	N/A	N/A	MTaPS supported procurement of IT equipment to support the field simulation exercise (50 thermometers, 10 tablets, and 10 modems, each with 6 months connectivity). Handover of procured materials to the RBC will be done in Q3 of PY4.
Activity 2: Support development/adaptation of policy, frameworks, guiding documents, briefs, SOPs, strategies, tools, or systems ***Activity Description:*** Support technical review of national Ebola preparedness and response strategies, plans and/or guidelines	5.4	N/A	N/A	MTaPS supported the validation of the IPC guideline, tools, job aids, and SOPs through quality and standards experts and technical working groups in February 2022.

P. SENEGAL

GLOBAL HEALTH SECURITY AGENDA ACTIVITIES

OVERVIEW

The GHSA-related goal of the US Agency for International Development (USAID) Medicines, Technologies, and Pharmaceutical Services (MTaPS) program/Senegal is to support antimicrobial resistance (AMR) containment by slowing the emergence of resistant bacteria and preventing the spread of resistant infections. This will be achieved by building the capacity of in-country stakeholders through a system strengthening approach. MTaPS/Senegal provides support to strengthen governance for multisectoral coordination (MSC), improve infection prevention and control (IPC) practices and services, and strengthen governance for antimicrobial stewardship (AMS), including capacity building. In line with the GHSA AMR action package, the expectations of the USAID Mission in Senegal, and Ministry of Health (MOH) and its partners, MTaPS continues to focus on interventions to support progress on the pathway toward higher Joint External Evaluation (JEE) scores for IPC and AMS.

The MTaPS technical approach is designed to achieve expected outcomes while addressing identified challenges by basing country-specific technical assistance on a sound, evidence-based situational analysis of the strengths and weaknesses of activities at the eight targeted hospitals and of the IPC and AMS national programs. Program implementation is focused on solving immediate problems and demonstrating results at an additional two hospitals in FY22.

CUMULATIVE PERFORMANCE TO DATE

MTaPS has helped country counterparts make progress in MSC/AMR by supporting three out of four (75%) level-two actions, two out of four (50%) level-three actions, and two out of four (50%) level-four actions, as established by JEE version two. MTaPS' supported the PREVENTION/AMR technical working group (TWG) under the aegis of the One Health (OH) secretariat for the development and technical validation of the national AMS plan, regional development committees' ownership and implementation of their OH/AMR action plan, and consolidation of the 2021 AMR action plan and multisectoral health security action plan by following the Electronic State Parties Self-Assessment Annual Reporting Tool (e-SPAR) that was approved by the OH high council steering committee.

Senegal received a score of three, or "developed capacity," for IPC in the December 2016 JEE assessment. MTaPS has targeted its work toward eight specific facilities that scored below the level received by the country in general. To date, MTaPS has supported the implementation of the eight hospitals' IPC improvement plans that they developed to address the gaps identified using the World Health Organization (WHO) IPC assessment framework (IPCAF). As a result:

- Two hospitals improved their IPC capacity from inadequate to intermediate
- Four hospitals improved their IPC capacity from basic level to intermediate
- One hospital improved its IPC capacity from basic level to advanced
- One hospital continued to sustain its advanced IPC capacity level

In total, MTaPS supported three out of five (60%) level-two WHO benchmark actions for IPC and three out of six (50%) level-three actions. In the area of AMS, MTaPS has supported the development and validation of the multisectoral national AMS plan, the national antibiotic policy, and standard treatment guidelines (STGs) that include the WHO AWaRe categorization of antibiotics. As a result, MTaPS has supported three out of four (75%) of the benchmark actions recommended for level 2. MTaPS has also supported 17% (one out of six) of the actions for level 3 in AMS.

QUARTER 2 ACHIEVEMENTS & RESULTS

ACTIVITY 1.1.1: STRENGTHEN THE FUNCTIONALITY OF THE AMR TWG BY SUPPORTING EFFECTIVE COORDINATION THROUGH REGULAR MEETINGS

MTaPS provided technical contribution to the multisectoral meeting on the new project Multi-Partner Trust Fund Office (MPTF) on AMR, organized under the aegis of the OH secretariat. The United Nations Food and Agriculture Organization (FAO), WHO, and World Organization of Animal Health will be jointly implementing the MPTF project. During meeting discussions, MTaPS participants touched on potential implementation challenges and opportunities for cooperation with the MPTF project to maximize results and impact of the implementation of the AMR action plan.

MTaPS provided support to the development of the 2022 multisectoral health security action plan, using the assessment results of the 2021 plan, by following the e-SPAR. 46 participants from the human, animal, environmental, and vegetal health sectors attended the workshop. WHO added a component on IPC to the e-SPAR tool in 2022. MTaPS' support to the revitalization of the IPC committees (ICCs) will contribute to the expected results of the IPC component in 2022 and 2023.

The MSC activities on the MPTF project and the e-SPAR multisectoral health security action plan contributes to the MTaPS MSC 1 and MSC 2 indicators below.

- MSC 1: # of AMR-related in-country meetings or activities conducted with multisectoral participation
- MSC 2: # and % of female participants in meetings or other events organized by the multisectoral body on AMR

ACTIVITY 2.5.2: PROVIDE TECHNICAL ASSISTANCE FOR SUPPORTIVE SUPERVISION TO INCREASE COMPLIANCE WITH THE UPDATED IPC GUIDELINES AND STANDARDS

MTaPS provided technical support to the Directorate for Quality, Security, and Hospital Hygiene (DQSHH) biannual supervision visits that prioritized six hospitals and four health centers in three regions—Thies, Fatick, and Diourbel. The DQSHH used its newly updated supervision checklist that provides the IPC capacity level for each health facility visited.

Table 27: DQSHH Biannual Supervision Visit

HEALTH FACILITIES	SCORE	CAPACITY LEVEL
Hospital of Saint Jean de Dieu	96.5%	Advanced
Regional Hospital of Thiès	53.5%	Intermediate
Hospital of Tivaouane	90.5%	Advanced
Hospital of Mbour	52.5%	Intermediate
Regional Hospital of Fatick	74%	Intermediate

Regional Hospital of Diourbel	64%	Intermediate
Health Center of de Thiès	50%	Basic
Health Center of Mbour	54%	Intermediate
Health Center of Niakhar	49%	Basic
Health Center of Diourbel	67.5%	Intermediate

The hospitals of Saint Jean de Dieu, Tivaouane, Fatick, and Mbour are among the eight hospitals MTaPS has supported to revitalize their ICCs. MTaPS will work with DQSHH to prioritize more focused support for the continued improvement of poorly performing health facilities to comply with the updated IPC guidelines.

BEST PRACTICES/LESSONS LEARNED

The OH approach involves all the OH counterparts and implementing partners in managing all steps of developing and finalizing the MTPF project's workplan. Therefore, most of the potential implementation challenges and opportunities for cooperation with the MPTF project were considered in advance during the work planning process.

MTaPS and DQSHH had originally agreed to develop a supervision guide to standardize the use of the supervision checklist updated with MTaPS support in PY3. However, the DQSHH team then decided to use the CQI approach to update the supervision checklist instead to make it more user-friendly and include a scoring system that aligns with the WHO's IPCAF scoring system. As such, the initially planned supervision guide is no longer needed.

By supporting the integration of IPC courses in the MOH e-learning platform and training of a pool of trainers in the use of the platform of the Ministry of Health and Social Action (MSAS), MTaPS offered the possibility of training a greater number of providers on IPC. Therefore, the trained trainers can escalate and provide training to additional healthcare workers in the health facilities in a timely manner with few resources. This improves the continuous training of health professionals (self-learning, self-assessment for providers and regular updating of knowledge in PCI).

MTaPS AMS workplan activities had been delayed in 2022 because of the delayed official endorsement of the antibiotic treatment policy and STGs that considered WHO AWaRe categorization. As the Minister of Health granted his approval recently, MTaPS is diligently working with the DQSHH (secretariat of the National Committee for Antibiotic Treatment) to prepare for the training of health facilities.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
MTaPS will support the PREVENTION/AMR working group to develop the AMR annual action plan under the aegis of the OH secretariat.	May–June 2022
MTaPS will work with the DQSHH/MOH to conduct a baseline assessment of the six new hospitals using WHO's IPCAF and hand hygiene self-assessment framework and develop improvement action plans.	April 2022
MTaPS will support the National Committee for Antibiotic Treatment (NCAT) to prepare and conduct training sessions of supervisors and ICC antibiotic subgroups on the MOH-approved antibiotic policy and STGs.	April–June 2022
MTaPS will support the organization of the orientation of targeted health district teams on how to use the finalized standard operating procedures (SOPs) on Ebola virus disease.	April–June 2022

Table 28. Quarter 2, FY22, Activity Progress, Senegal

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Strengthen the functionality of the AMR TWG by supporting effective coordination through regular meetings ***Activity Description:*** Support the PRVENTION/AMR working group to organize a quarterly meeting under the aegis of the OH Permanent Secretariat	1.1, 2.3, 4.1, 5.3	1.1, 1.2, 1.3	N/A	MTaPS continued providing technical support to effective coordination through regular meetings under the aegis of the OH secretariat, and in collaboration with Breakthrough Action, FAO, WHO, PATH/FAO/Fleming Fund, and Regional Disease Surveillance Systems Enhancement (REDISSE) of the World Bank.
Activity 2.5.2: Provide technical assistance for supportive supervision to increase compliance with the updated IPC guidelines and standards ***Activity Description:*** Support the DQSHH's biannual supervision visits, prioritizing more focused support for the continued improvement of poorly performing health facilities to comply with the updated IPC guidelines	5.3	2.1, 2.2, 2.3, 2.5	N/A	MTaPS is supporting the DQSHH's biannual supervision visits in a complementary manner with REDISSE/World Bank.
Activity 2.5.3: Support the revitalization of ICCs at five selected district and regional hospitals ***Activity Description:*** Work with the DQSHH/MOH to select and conduct baseline assessment of the six new hospitals using the WHO IPCAF and hand hygiene self-assessment framework	5.3	2.1, 2.2, 2.3, 2.5	N/A	In preparation for extending ICC revitalization work to these six new hospitals, MTaPS provided technical and financial support to the DQSHH to organize an initial orientation workshop on February 24 under the aegis of the MOH's General Directorate of Health Facilities.
Activity 2.5.4: Support the development, dissemination, and implementation of the national IPC strategic plan ***Activity Description:*** Support the DQSHH to develop, disseminate, and implement the national IPC strategic plan to enable the rapid expansion of the ICC revitalization process	5.3	2.1, 2.2, 2.3, 2.5	N/A	In collaboration with the DQSHH, MTaPS has completed the process of selecting a consultant to develop the national IPC strategic plan. The process to recruit the selected consultant is ongoing.
Activity 3.1.1: Support the implementation of capacity building interventions to increase compliance with antibiotic STGs ***Activity Description:*** Support the NCAT to increase adherence to antibiotic therapy STGs in the eight selected hospitals through CQI practices by promoting supportive supervision and monitoring	5.3	3.1, 3.2, 3.5	N/A	The Minister of Health has signed the preface of the antibiotic therapy policy and STGs. The printing of these documents is in progress with MTaPS' support.

EBOLA RESPONSE ACTIVITIES

MTaPS proactively supported the revitalization of the Ebola incident management structure (IMS) at the health emergency operation center (HEOC). This center has not implemented any activities since May 2021. During this revitalization, MTaPS engaged with MOH counterparts including the HEOC, the Directorate of Disease Control, and the head of Ebola IMS. As a result, HEOC and Ebola/IMS started organizing weekly meetings which MTaPS attended to provide technical support for the review of the Ebola preparedness plans, including detailed activities and a timeline.

IPC, INCLUDING WATER, SANITATION, AND HYGIENE

In March, MTaPS supported a workshop to finalize 32 SOPs (on case management [6], IPC [8], surveillance [9], behavior change communication [4], logistics [3], and vaccination [2]).

MTaPS provided technical and financial support to a workshop to finalize the manual and a workshop to develop the SOP for psychosocial care of patients, families, and health care workers affected by Ebola.

Q. TANZANIA

GLOBAL HEALTH SECURITY AGENDA (GHSA) ACTIVITIES

OVERVIEW

The GHSA goal of MTaPS Tanzania is to support antimicrobial resistance (AMR) containment by slowing the emergence of resistant bacteria and preventing the spread of resistant infections. To achieve this, MTaPS Tanzania is implementing the strategic objective of improving quality of care and containment of AMR in the country by building capacity of in-country stakeholders through a system strengthening approach in three result areas: effective multisectoral coordination (MSC) on AMR, infection prevention and control (IPC), and optimizing the use of antimicrobial medicines.

The year 4 program implementation plan for GHSA is to build on the work done in years 1, 2, and 3. MTaPS continues to focus on strengthening governance of the Ministry of Health, Community Development, Gender, Elderly, and Children (MOHCDGEC) and health facilities in collaboration with other USAID programs and partners working to implement a sustainable AMR program in Tanzania. MTaPS is advocating for the use of data for continuous quality improvement (CQI) of both antimicrobial stewardship (AMS) and IPC interventions and supporting development and implementation of surveillance methods for surgical site infections (SSIs), whose treatment involves antibiotics and are therefore a key concern in AMR. MTaPS is building the capacity of health care workers to implement the IPC-related reporting system (as part of the district health information system version 2 [DHIS 2]) to provide MOHCDGEC with data for decision making about IPC and for implementation of CQI methodologies. MTaPS supports assessment of AMS policies using a multisectoral approach and active implementation of AMS practices in health facilities.

CUMULATIVE PERFORMANCE TO DATE:

During program years 1, 2, and 3, MTaPS supported 17 WHO International Health Regulations benchmark actions—4 contributing to MSC/AMR, 8 to IPC, and 5 to AMS. MTaPS helped the Ministry of Health (MOH) to improve Tanzania's Joint External Evaluation (JEE) score for MSC by supporting 25% (1/4) of capacity level 2, 50% (2/4) of level 3, and 75% (3/4) of level 4 WHO benchmark actions, making an overall achievement of 35% (6/17). MTaPS supported coordination of AMR activities under the AMR MSC committee (MCC), working under the One Health approach such that MCC had meetings and discussions to oversee and give guidance on implementing the national action plan (NAP) on AMR 2017–2022 across human, plant, animal, and fisheries sectors. MTaPS supported the setup and operation of IPC and AMS technical working groups (TWGs) that helped to improve implementation of IPC and AMS activities in Tanzania and fed into the MCC. MTaPS supported the development and operationalization of the "Multisectoral AMR Communication Strategy: Moving from Awareness to Action 2020–2025" that helped to improve One Health communications, practices, and implementations among MOHCDGEC; the Ministry of Agriculture, Livestock, and Fisheries (MALF); the President's Office Regional Administration and Local Government; and the four TWGs that feed into MCC (AMR awareness, AMR surveillance, IPC, and AMS).

Across IPC program years 1, 2, and 3, MTaPS Tanzania supported 60% (3/5) of capacity level 2, 67% (4/6) of level 3, 100% (5/5) of level 4, and 60% (3/5) of level 5 WHO benchmark actions, making an overall achievement of 71% (15/21), which contributed to improving the country beyond the 2016 JEE score of 3. MTaPS supported the revision of the national IPC guidelines for health care services in Tanzania (2018 edition) and its distribution across mainland Tanzania. MTaPS also conducted IPC training cumulatively among 519 people (297 female, 222 male), achieving 57% of total female health care providers trained. To improve IPC implementation and sustainability, MTaPS Tanzania established and strengthened IPC committees in 10 supported hospitals and conducted clinical mentorship and CQI that brought about improved water, sanitation, and hygiene (WASH), handwashing practices, and reduced SSI and nosocomial infections. An online IPC e-learning course was developed that equipped the Center for Distance Education in Morogoro to offer online IPC training to health care providers.

MTaPS' implementation of AMS activities across program years 1, 2, and 3 contributed to improving Tanzania's baseline JEE score of 1 towards level 2 JEE capacity by supporting 75% (3/4) of capacity level 2, 50% (3/6) of level 3, 14% (1/7) of level 4, and 14% (1/7) of capacity level 5 WHO benchmark actions, making an overall score of 33% (8/24). MTaPS supported MOH and MALF in developing the AMS policy guidelines as per the One Health approach. MTaPS supported MOH in developing the medicines and therapeutics committee (MTC) guidelines, the standard treatment guidelines, and the national essential medicines list consisting of the access, watch, and reserve categories of antibiotics. MTaPS disseminated all the developed documents to the health facilities to enhance implementation of NAP-AMR in the country. MTaPS conducted training on AMS, specifically ethical prescribing and dispensing of antimicrobials, among 110 (43 female, 67 male) health care providers. MTaPS, in collaboration with MOHCDGEC, supported health care workers to implement AMS interventions including reviving MTCs that will foster AMS implementation at the hospitals.

QUARTER 2 ACHIEVEMENTS & RESULTS

During the 19th MCC meeting on March 11-12, 2022, the roadmap for the 2017-2022 NAP-AMR final evaluation was drafted. The discussion on developing the next NAP was also initiated. There was a satisfactory level of female participation in both TWG and MCC meetings, achieving 22% compared to the 20% target (11 females out of 50 total participants). During the MCC meeting, the participants also discussed various challenges such as financial sustainability of the MCC and its TWGs as well as NAP implementation. MTaPS and other partners advised MOH to allocate budget to support the national-level coordination mechanisms, including the MCC and TWGs.

MTaPS supported the MOHCDGEC by training regional health management teams (RHMTs) on IPC monitoring and evaluation (M&E) tools, as well as training on reporting IPC indicators into DHIS 2. This will contribute to health facilities' ability to report IPC data in DHIS 2 for use in decision making and supports achievement of the following WHO benchmark actions: "analyze and regularly report national IPC and WASH data and support discussions on actions to incorporate lessons learned in the long-term improvement plan" (L5) and "document the incidence of patient and health care worker infections, including M. TB, and the effectiveness of measures to reduce their occurrence" (L5).

Finally, MTaPS Tanzania supported development of a checklist with indicators that will be used to monitor progress with implementation of AMS interventions in the NAP monitoring framework at the ministry level and at health facilities.

BEST PRACTICES/LESSONS LEARNED

A strong and reliable system for data reporting contributes to strengthening management functions and improves accountability mechanisms. This is evident from the fact that quality assurance department at the MOHCDGEC have now started regular meetings to discuss performance of the reported IPC indicators into the DHIS2 from the healthcare facilities. These regular meetings were not in place before the DHIS2 system supported by MTaPS.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Support active surveillance of hospital-acquired infections: development of job aids for prevention of hospital-acquired infections	June 2022
Supporting active implementation of the approved national IPC M&E protocol: finalization of training materials	June 2022
Review plans and progress through regular meetings of the AMR governance committee: quarterly AMS TWG meeting	June 2022
Assess stewardship policies and activities, including regulatory framework and supply chain management (SCM) of antimicrobials, using a multisectoral approach: hire a consultant	June 2022
Continue to support active implementation of AMS practices in 10 supported health facilities: supportive supervision visits to 10 supported hospitals	June 2022

Table 29. Quarter 2, FY22, Activity Progress, Tanzania - GLOBAL HEALTH SECURITY AGENDA (GHSA) ACTIVITIES

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Review plans and progress through regular meetings of the AMR governance committee ***Activity Description:*** Conducting regular MSC meetings to oversee implementation of NAP-AMR	5.4	1.1	N/A	MTaPS supported joint meetings of the AMS and surveillance TWGs to foster collaboration for curbing AMR. Challenges in AMS implementation and mitigation measures were discussed. Inadequate participation of the private sector, aquaculture, and plant health stakeholders in AMS implementation and MSC was noted, and the meetings insisted on their active engagement to be included in policy documents. MTaPS attended the 19th MCC that developed the draft roadmap for end-evaluation of the NAP-AMR 2017–2022.
Activity 2.3.1: Enhance data generation and use through supporting active implementation of the approved national IPC M&E protocol ***Activity Description***: Support MOH on development of IPC M&E training materials and conduct training to health care providers	5.4	2.3	N/A	Dissemination of the IPC M&E protocol in 2 IPC trainings of 36 health care providers (16 female, 20 male) done on February 21–25, 2022. On February 28–March 4, 2022, 80 (44 female, 36 male) health care providers, including MOH RHMT officials, were trained on use of the IPC M&E tools and reporting into DHIS 2. The RHMTs were assigned to cascade the training to lower-level health facilities.
Activity 2.5.1: Support active surveillance of hospital-acquired infections, specifically SSIs ***Activity Description:*** Support MOH on development of SSI guidelines and job aids, mentor health care workers, and monitor the SSIs	5.4	2.5	N/A	MTaPS provided technical review of the draft hospital-associated infection surveillance guidelines developed in collaboration with MOHCDGEC to be used by the hospitals in Tanzania.
Activity 3.1.1: Assess stewardship policies and activities, including regulatory framework and SCM of antimicrobials, using a multisectoral approach ***Activity Description:*** Review of current AMS policies, legislation, regulations, and guidelines to draft a rapid situational analysis report; engage stakeholders and MCC in dissemination of the findings and use the recommendations to feed into the development of the national AMS action plan	5.4	3.1	N/A	Scope of work (SOW) developed to facilitate recruitment of a consultant to undertake the assessment of the AMS policies and activities, including regulatory framework and SCM of antimicrobials, using a multisectoral approach. MTaPS held consultative meetings with the Ministry of Livestock and Fisheries' focal person and an influential leader from the Sokoine University of Agriculture to gather information on the design and content of the SOW for this activity.
Activity 3.5.1: Continue to support active implementation of AMS practices in 10 supported health facilities ***Activity Description:*** Support development of AMS NAP monitoring framework checklist that will be used to assist active AMS implementation at the facility and ministry level	5.4	3.5	N/A	MTaPS Tanzania supported AMS TWG in development of a checklist with indicators that will be used to monitor implementation progress of AMS interventions in the NAP monitoring framework at ministry level and at health facilities. Inputs from AMS TWG members have been collected to refine the framework and its checklist. Active implementation of AMS in the NAP monitoring framework will contribute to improving implementation of AMS at national and facility levels.

MISSION-FUNDED ACTIVITIES

OVERVIEW

The goal of MTaPS is to strengthen Tanzania's pharmaceutical system to ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable medical products and medicine-related pharmaceutical services. This is done through strengthening the Tanzania Medicines and Medical Devices Authority (TMDA)'s institutional capacity to manage pharmaceutical systems via improving its marketing authorization (MA) and import processes for antiretroviral medicines (ARVs) and improving its pharmacovigilance (PV) system using targeted interventions to enable evidence-based decision making for patient safety. This will help maintain the TMDA's maturity level 3 according to the WHO Global Benchmarking Tool and provide evidence to grow TMDA towards maturity level 4.

CUMULATIVE PERFORMANCE TO DATE

MTaPS provided technical support aimed at improving efficiency of TMDA to execute its regulatory functions by facilitating capacity building for TMDA medicine evaluators on medicine dossier evaluation to evaluate the quality, safety, and efficacy of medicines such as ARVs. 30 (12 female, 18 male) TMDA medicine evaluators were trained to conduct medicine dossier assessments, followed by hands-on medicine dossier evaluation where 45 dossiers were evaluated, of which 4 were for ARVs. With more staff trained in dossier assessment, the processing time for applications for the registration of new medicines will be reduced. In addition, the assessors trained with support from MTaPS will continue to train the new staff and ensure that sustainable knowledge transfer within the authority is achieved.

In the area of PV, MTaPS facilitated the revision of terms of reference for the national PV safety advisory committee, known as the vigilance technical committee (VTC), that allowed incorporation of four pediatric experts. The VTC now has the capacity to assess pediatric adverse drug reactions and provide feedback to ADR reporters. MTaPS also supported the development of "guidelines for monitoring of safety of medicines used in pediatric population, 1st edition November 2021," which will help improve monitoring of medicine safety among children, especially for medicines used to manage chronic diseases such as HIV/AIDS as children's susceptibility to adverse drug reactions differs from that of adults. TMDA, with support from MTaPS, conducted a 10-day training aimed at building capacity of TMDA staff on assessment of periodic safety update reports (PSURs) and risk management plans (RMPs) and consequently increasing the number of competent assessors at TMDA. 27 (10 female, 17 male) new TMDA staff, interns, and external assessors were trained on basic methods of assessment of PSUR and RMP for ARVs and other medicinal products. This support has helped TMDA to improve monitoring, review, and reporting of safety issues arising from medicines used by the pediatric population.

QUARTER 2 ACHIEVEMENTS & RESULTS

MTaPS conducted mapping of the process for the registration and importation of ARVs for the public sector to uncover bottlenecks in the supply chain and make recommendations to improve the MA and import processes. On February 23, 2022, TMDA and other stakeholders validated the draft report findings and recommendations. This activity raised awareness of the bottlenecks related to the registration and importation of ARVs and offered suggestions on the appropriate actions that should be

taken to streamline the process. Once these steps are taken, they will contribute to improving efficiency of registration and clearance of imported medicines for managing HIV/AIDS and other diseases.

BEST PRACTICES/LESSONS LEARNED

Strategic and stepwise engagement of stakeholders reduces obstacles and helps in achieving program objectives. Initially, the TMDA did not agree to collaborate with MTaPS in implementing this activity; however, with strategic and stepwise engagement, the program finally secured the Authority's support and was able to implement this activity. The engagement of an influential leader in the pharmaceutical industry as a consultant for this activity was of benefit. TMDA eventually acknowledged that recommendations from the assessment report will contribute to reducing bottlenecks in importation and registration of ARVs in Tanzania.

ACTIVITIES & EVENTS FOR NEXT QUARTER

None; activity implementation ended in quarter 2. The program is currently finalizing the remaining deliverables of the work plan.

Table 30. Quarter 2, FY22, Activity Progress, Tanzania - MISSION-FUNDED ACTIVITIES

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1: Conduct a process improvement mapping for registering and importing ARVs, including DTG, for the public sector ***Activity description:*** Conduct process improvement mapping to illustrate activities in product registration and import and identify bottlenecks and recommendations to address them	2.4	N/A	N/A	MTaPS conducted mapping of the importation and registration of medicines. Process mapping tools were developed, and in-depth interviews of 12 out of 17 key informants conducted—among them local technical representatives, MA holders or importers, and ARV distributors for public-sector HIV program. Additional information was collected from health facility-level via 64 targeted interviews. After data analysis, a draft report was validated by stakeholders, including TMDA, on February 23, 2022. MTaPS team is currently finalizing the remaining deliverables.

R. UGANDA

OVERVIEW

Uganda's Joint External Evaluation (JEE) assessment scored 3 (developed capacity) for both infection prevention and control (IPC) and antimicrobial stewardship (AMS) in 2017. The US Agency for International Development (USAID) Medicines, Technologies, and Pharmaceutical Services (MTaPS) program Global Health Security Agenda (GHSA) goal in Uganda is to slow the emergence and propagation of antimicrobial resistance (AMR) by building capacity of in-country stakeholders and facilities through a systems strengthening approach to implement Uganda's national action plan on AMR and make progress toward a higher JEE score which translates to improvement in the World Health Organization (WHO) benchmarks for International Health Regulations (IHR) capacities. MTaPS Uganda provides direct technical assistance to Government of Uganda ministries, departments, and agencies (MDAs) to support three result areas in the GHSA AMR action package—optimizing the use of antimicrobials, strengthening IPC practices, and strengthening government-led multisectoral coordination (MSC) for the national AMR program through the national AMR sub-committee (NAMRsC) of the One Health platform.

MTaPS focuses on strengthening leadership for AMR at the national level (through the NAMRsC and its IPC and AMS technical working committees [TWCs]), the health facility level (through the facility AMS and IPC committees), and the district level (district IPC teams). Continuous quality improvement (CQI) plans—informed by routinely collected data—are applied to tailor capacity building and implement locally prioritized activities at health facilities to ensure sustainable AMR programs. MTaPS strives to create a learning ecosystem in which health facilities are facilitated for knowledge exchange via targeted interventions. To ensure the sustainability of capacity building interventions, MTaPS supports medical schools and professional bodies to integrate AMR into their curriculum, activities, and continuing medical education (CME) where applicable. MTaPS focuses on institutionalizing activities at the ministry and health facility levels; supporting synergies with other USAID-funded programs working in GHSA by providing above-site catalytic technical assistance; and building the internal capacity of government MDAs to implement sustainable AMR programs in Uganda, intentionally engaging local universities and local partners to foster cooperation and ownership of activities and interventions. AMR interventions in the private not-for-profit sector are supported through ongoing engagement with the Uganda Catholic Medical Bureau and Uganda Protestant Medical Bureau.

CUMULATIVE PERFORMANCE TO DATE

MTaPS has helped Uganda to improve the JEE score of 2 for MSC/AMR by supporting 75% (3/4) of capacity level-2 actions, 50% (2/4) of capacity level-3 actions, and 50% (2/4) of level-4 actions. MTaPS worked with the Uganda One Health platform TWC to set up and establish the NAMRsC, identify its lead, develop terms of reference, and supported the coordination of sub-committee activities through provision of technical and logistical support for regular meetings and engagements and an online coordinating platform. Additionally, MTaPS supported the NAMRsC to identify programs and activities relating to key AMR objectives that need to be developed and scaled up. These activities enabled the country to consolidate capacity level 2 for MSC/AMR.

MTaPS supported the NAMRsC to set up IPC and AMS optimal access and use (ASO) TWCs. MTaPS supported effective coordination and adequate functionality of the NAMRsC and the TWCs through the provision of logistical support for regular meetings, developing an information exchange platform, and encouraging data use through publishing a newsletter. The newsletter highlighted the work done by two women leaders and champions in AMR in Uganda to promote gender equity consideration in leadership and participation of NAMRsC members.

MTaPS has helped Uganda to improve the JEE score of 2 for IPC over program year (PY) 1–3 by supporting 80% (4/5) of capacity level-2, 83% (5/6) of level-3, and 40% (2/5) of level-4 WHO IHR benchmark actions. MTaPS, working with the Ministry of Health (MOH), is building systematic capacity for IPC at supported health facilities and at the national level. In 2019, MTaPS supported the MOH to conduct the first ever national IPC survey. The findings have informed activity implementation at both the national and health facility levels. MTaPS has subsequently applied best practices to implement CQI plans for IPC improvement at supported centers of excellence (COEs). As part of capacity building at the COE, MTaPS has cumulatively conducted 84 mentorship visits in 13 health facilities, reaching 2,079 health care workers (55% female, 45% male). This activity completes various actions under WHO benchmark 3.4, including actions in capacity 2, 3, and 4. Progressively, MTaPS-supported health facilities have shown improved IPC capacity as summarized in the table below.

Table 31: Improvement in IPC assessment framework performance of six MTaPS-supported health facilities

Health facility	2019 (baseline) national IPC survey (/800)	2020 MOH independent assessment for regional referral hospitals (/800)	Improvement in IPC assessment framework scores
Gulu	430.0	591.0	37%
Lira	595.0	650.0	9%
Moroto	435.0	512.5	17.8%
Soroti	512.0	608.5	19%
Masaka	412.5	505.0	22%
Hoima	322.5	625.0	94%

Ratings: Advanced (601-800 [green]), Intermediate (401-600 [yellow]), Basic (201-400 [orange]), Inadequate [red] (0-200)

In the area of AMS, from PY 1 to 3, MTaPS has helped Uganda to improve the JEE 2 score by supporting 50% (2/4) of capacity level-2, 67% (4/6) of level-3, 43% (3/7) of level-4, and 14% (1/7) of level-5 WHO IHR benchmark actions, thus contributing to sustaining level 3 and progressing towards achieving levels 4 and 5.

MTaPS, working with MOH, has progressively built capacity for AMS at COEs through using standard guidelines to develop CQI plans at health facilities and supporting implementation of the plans. MTaPS has also supported development of guidelines and AMS standard operating procedures for use at hospitals and built both hospital and national capacity for antimicrobial use surveillance by training health workers in data collection and dissemination of the findings at the national level. Additionally, a system for measurement of antimicrobial consumption at the national level is under development, with a framework to guide this process developed during PY 2. These activities contributed to benchmark 3.4 capacity 2 and 3 actions.

To bridge the gap between human health and animal health that was observed at baseline, MTaPS has supported the animal health sector, working with the Ministry of Agriculture, Animal Industry, and Fisheries (MAAIF) to develop an essential veterinary medicines list (EVML) and guidelines on antibiotic use in the animal health sector. Additionally, information, education, and communication materials and AMR awareness messages for the animal health sector have been developed with MTaPS support. These activities support activities under JEE-2 capacity 2.

To inform policy changes, MTaPS conducted assessments of AMS policies and guidelines on supply chain and antibiotic use in Uganda, a key JEE-2 activity for capacity 2. The findings of this assessment have been used to inform development of the national AMS plan and will be used for future policy reviews.

QUARTER 2 ACHIEVEMENTS & RESULTS

MTaPS disseminated the EVML and antibiotic use guidelines for the animal health sector across six geographical regions of the country in collaboration with the MAAIF, district veterinary offices, and the Uganda One Health platform. During the dissemination, the district veterinary team held discussions on the use of these guidelines and their implementation. This contributes to building the country's JEE-2 capacity by bridging the gap between human and animal health.

To demonstrate capacity built in the MTaPS-supported health facilities to the level of COEs, MTaPS conducted a benchmark learning activity, providing logistical and technical support to 34 health workers from 6 health facilities to visit another MTaPS-supported health facility for peer-to-peer learning. This hospital used for the benchmark visit has demonstrated advancement in AMS and IPC through MTaPS support with high overall scores on hand hygiene (HH) compliance and use of antibiotics according to the WHO access, watch, and reserve categorization with over 78% of antibiotics used belonging to the access category. This activity built local capacity and ownership for IPC training and education and contributes towards sustained capacity (capacity 4) in WHO benchmark 3.3.

MTaPS continued to build capacity for AMS and IPC by conducting mentorship visits, IPC/HH trainings, and CME on IPC to 198 health care workers (56% female, 44% male) during the quarter. In addition, as part of sustainability, MTaPS conducted two workshops in collaboration with the USAID mission in Uganda as part of capacity building for IPC and water, sanitation, and hygiene (WASH) among the local implementing partners in Uganda. The goal of the activity was to ensure sustainability of USAID MTaPS investments in Uganda and support progress towards capacity 4 for JEE-2 benchmark action 3.3.

LESSONS LEARNED

To promote gender equity consideration in AMR governance and activities, there is a need to elucidate aspects of gender and highlight gender roles in all program activities. A holistic education sector approach is critical to filling gaps in human resources for health capacity for global health security and AMR control. A second lesson learned was that peer-to-peer learning is a best practice among COEs that have an adequate level of technical capacity. MOH and other partners should engage with lower-level health facilities for evidence-based national-level interventions. Leadership commitment (both political and technical) has proved to be the most important health systems component to sustain GHSA investments in Uganda.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Facilitate the quarterly meeting of the ASO TWC of the One Health platform	May 2022
Stakeholder meeting to disseminate findings from the rapid assessment of AMS policies in Uganda	May 2022
Publish bi-annual AMS newsletter and disseminate it to various stakeholders	June 2022
Disseminate MTaPS Uganda work at the Global Health Security Conference in Singapore	June 2022
Hold inception meeting for the development of the national IPC plan for the agricultural sector. later, hold stakeholder consultation workshop for its review	April–May 2022
Complete AMS and IPC data collection activities	June 2022
Develop a draft manual for monitoring and measuring antibiotic use at the national level	June 2022
Stakeholder meetings to review and validate the draft report on existing systems for monitoring antibiotic use in Uganda	June 2022
Hold inception meeting for development of curriculum for medical schools and policy brief for the Ministry of Education and Sports (MOES) and the National Curriculum Development Center (NCDC) followed by stakeholder consultation workshops for review of the draft curriculum competencies and education policy brief	May–June 2022
Site visit to COEs with the mission	June 2022

Table 32. Quarter 2, FY22, Activity Progress, Uganda

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.2.1: Strengthen institutional and HR capacity for AMR-related MSC ***Activity Description:*** Strengthen governance mechanisms; improve the capacity of members of the IPC and AMS TWCs to manage AMR-related work of the NAMRsC; generate biannual AMS newsletter	5.4	1.2	N/A	No progress to report about activity completion due to delays in contracting Makerere University
Activity 2.1.1: National IPC policy, guidelines, standards, and monitoring and evaluation developed and regularly updated, including the animal health sector ***Activity Description:*** Support dissemination of documents and guidelines developed during PY 1, 2, and 3 at both the national and sub-national levels; work with MAAIF and Food and Agriculture Organization to develop a national IPC framework/plan for the agricultural sector	5.4	1.2	N/A	Held events to launch the EVML and guidelines in AMS and infection control in the agricultural sector—this activity was followed up by dissemination of the same documents in six regions in Uganda
Activity 2.5.1: Improve the quality of health care services through strengthening IPC at COEs ***Activity Description:*** Provide support to the HH programs at the seven COEs and conduct an annual assessment of IPC practices at health facilities using WHO tools; provide site catalytic technical assistance to USAID partner programs to strengthen IPC in five health regions	5.4	2.5	N/A	Facilitated a peer-to-peer learning activity benefiting 30 technical officers from 5 health facilities—information on diseases, health care delivery, antibiotic prescription, and medicines management was exchanged; supported 8 mentorship visits, 11 IPC/HH trainings, and 3 CME on IPC, reaching 198 health care workers (56% females, 44% males); engaged USAID regional partners, providing above site training in 3 workshops, building their capacity for IPC and WASH
Activity 3.1.1: Implement national AMS policy and guidelines to ensure proper use of antimicrobials ***Activity Description:*** Support MOH in developing a national AMS plan	5.4	3.1	N/A	Over 12,000 data entries for AMS completed at 4 hospitals
Activity 3.2.1: Strengthen the COEs for AMS ***Activity Description:*** Support the seven COEs in implementing AMS practices in their respective regions; monitor and evaluate AMS programs at health facilities; support the National Drug Authority (NDA) in developing a system for monitoring use of antibiotics at the national level through the NDA management information system	5.4	3.2	N/A	Collection of data and information to inform the writing of a mini guide on antimicrobial use/capacity surveillance at the health facility level

Activity 3.2.2: Strengthen pre- and in-service training to enhance human resource competence in AMR ***Activity Description:*** Revise curricula to incorporate content on AMR and health security in pre-service curriculum; write an education policy brief to the NCDC and MOES highlighting need to incorporate AMR training into the national curriculum for pre-service training	5.4	3.2	N/A	No progress to report due to delay in contracting a firm to support activity implementation

5. PROGRESS BY REGIONAL BUREAUS

A. ASIA REGIONAL BUREAU

OVERVIEW

MTaPS will strengthen Asia Bureau region countries' pharmaceutical systems by improving their ability to institutionalize transparent and evidence-based decision making, building their capacity to use robust information to define and cost pharmaceutical coverage, and strengthening medicine regulatory capacity and pharmaceutical-sector governance.

CUMULATIVE PERFORMANCE TO DATE

Objective 1: MTaPS developed the roadmap for institutionalizing health technology assessments (HTAs) in low- and middle-income countries in consultation with global and regional HTA experts. Because of the COVID-19 pandemic, a previously planned dissemination workshop with Asia region experts (e.g., HTA practitioners, policy makers, academia, World Health Organization [WHO] regional experts) was switched to a virtual format and held in October 2020. Given the variability in HTA advancement across countries in the region, this virtual exercise provided a contextualization of the roadmap, including updates on progress, recent experiences, and practical considerations from various settings. Based on prior work by Chootipongchaivat et al., MTaPS created the balanced scorecard (BSC) to assess the status of HTA in nine Asian countries. The milestones depicted in this paper were used to create the BSC to assess the HTA progress in China, India, Indonesia, Malaysia, the Philippines, South Korea, Taiwan, Thailand, and Vietnam. An additional literature review of the previous systematic review conducted for the HTA roadmap document was conducted to provide up-to-date information for the BSC. Key informant interviews were conducted with regional HTA experts to fill information gaps from the desk research. This research provided insight into HTA implementation across various settings in the region which was incorporated into a summary addendum to the HTA roadmap. Feedback received from MTaPS internal reviewers and USAID was incorporated to distill the findings into an article submitted to the *International Journal of Technology Assessment in Health Care*. The BSC analysis was also shared as a poster presentation for ISPOR 2021 in May. An additional activity was a supplementary regional dissemination workshop for application of the roadmap in selected countries, which was conducted as a pre-workshop session for the HTAsiaLink Conference in October 2021 and engaged over 300 participants. HTAsiaLink 2021 provided an important opportunity for feedback from regional HTA stakeholders to inform the design of the related regional workshop planned for later in program year 4.

Objective 2: MTaPS published a series of reports on ways to improve pharmaceutical benefits packages and coverage. The first analysis outlined four major ways in which the analyzed countries define service and pharmaceutical benefits under their different coverage arrangements. MTaPS also developed a brief summarizing a high-level, six-step process for articulating pharmaceutical benefits coverage. The process built on a framework developed by Glassman et al., and it highlighted examples from the Asia region including Thailand's HTA process, Indonesia's national formulary, and the Philippines PhilHealth's "Z benefits" package. To further build the evidence base for defining and costing pharmaceutical benefits

packages to inform pharmaceutical policymaking, MTaPS completed a related pair of reports on the topic of costing pharmaceutical benefits. The first report included a review of existing tools and identified the OneHealth tool (OHT) as the most suitable to conduct pharmaceutical benefits package costing. The second report provided tailored guidance for country stakeholders to use the OHT for pharmaceutical benefits package costing. Additionally, MTaPS developed a report reviewing a range of pharmaceutical pricing policies in Asia, which can be leveraged to increase affordability and access to pharmaceuticals. MTaPS developed and delivered two training courses for countries in the Asia region on how to use the OHT to cost pharmaceutical benefits packages. MTaPS met with representatives of USAID missions in the Asia region to describe the OHT and how it could enable health planners to conduct more evidence-based pharmaceutical planning and budgeting, soliciting interest of missions from Kyrgyzstan, Bangladesh, Nepal, and the Philippines. Training for these countries was conducted virtually with support from local consultants, local MTaPS staff, and facilitation remotely. Participants included representatives of the ministries of health and social affairs, health insurance funds, local medical associations, and other local agencies. MTaPS finalized all five deliverables from FY20, including a short report entitled "Pharmaceutical Benefits and Benefits Packages in Asia: A Cross-Country Mapping of Coverage Arrangements," a brief entitled "Defining Pharmaceutical Benefits Packages," the two-part report reviewing costing tools and offering guidance for costing pharmaceutical benefits packages using the OHT, and a report on pricing policies within the Asia region.

Objective 3: MTaPS conducted a mapping exercise to identify key entities (i.e., initiatives, networks, and stakeholders) at regional and sub-regional levels which were supporting or working in pharmaceutical regulatory system strengthening in Asia and to identify potential areas for collaboration. Through this exercise, MTaPS identified 18 entities that aim to strengthen different pharmaceutical regulatory functions/areas, such as registration and market authorization, pharmacovigilance (PV), post-marketing control, and regulatory inspection. MTaPS followed up with three key networks (Association of Southeast Asian Nations [ASEAN], South-East Asia Regulatory Network [SEARN], and WPRO) for potential collaboration to strengthen regulatory systems in Asia. The online capacity building course on current good manufacturing practices for pharmaceutical manufacturers in active pharmaceutical ingredients and formulations for access to quality-assured medical products was hosted by the JSS Academy of Higher Education & Research in Mysuru, India, in collaboration with development partners and national stakeholders. The course was attended by 103 participants from 33 pharmaceutical companies. MTaPS planned a capacity building on the evaluation of vaccine dossier for National Medicines Regulatory Authority (NMRA) officials of four countries of interest in the Asia region: Bangladesh, Nepal, the Philippines, and Vietnam. However, due to conflicting schedules for the NMRA officials in the Philippines and Vietnam, the training was done for officials from Bangladesh and Nepal, which are both part of SEARN. MTaPS further facilitated NMRA officials in Bangladesh to participate in a course on good reliance practices organized by its core partner, Center of Regulatory Excellence Singapore.

Objective 4*:* Following the review of conflict of interest (COI) policies across several southeast Asian countries in 2021, a WHO- and peer-reviewed publication has been completed documenting current experiences. This information has been used to develop a manual which has undergone extensive review with WHO. The manual is currently going through the final editorial stage. For the strategic

procurement activity, the scope of the assessment and associated deliverables have been consulted with and intensively reviewed by USAID Philippines and Asia Bureau and received clearance.

QUARTER 2 ACHIEVEMENTS & RESULTS

Objective 1: MTaPS developed a concept note to conduct the "deep dive" workshop to improve HTA in Asia. The main topic for the workshop will be the use of real-world evidence (RWE) to improve HTA. The topic selection is informed by the findings from the HTAsiaLink pre-conference meeting that MTaPS hosted in quarter 1. Continuing work on the HTAsiaLink pre-conference is the development of the conference digest, which was presented to and endorsed by the HTAsiaLink board on February 18, 2022. MTaPS is currently finalizing the digest and drafting a peer-reviewed commentary article on the role of HTAsiaLink in fostering interagency collaboration in the Asia region. Further, MTaPS continued to conduct due diligence on the needs of the HTA hub in Asia. MTaPS hired a consultant to perform the first scoping and desk review work, and the results will be available in quarter 3. A senior consultant has also been hired to advance this work, including stakeholder interviews.

Objective 2: MTaPS will provide additional remote support to an Asian country to troubleshoot the OHT, interpret results throughout the program year, and institutionalize the OHT for pharmaceutical benefits package costing within the country system to the extent possible. Employing a learning-by-doing approach, MTaPS will support the development of scenarios for financing for pharmaceutical benefits package costing, conduct a fiscal gap analysis for potential expansion of pharmaceutical coverage, and support a dissemination or policy dialogue on the work carried out and its implications. In quarter 2, MTaPS worked to confirm Bangladesh's interest in further support for application of the OHT after the virtual/in-person OHT training in year 3. Important considerations included the ability to use maternal, neonatal, and child health (MNCH) funds to focus on the costing of a non-communicable disease (NCD) intervention and establishing a point of contact in the Ministry of Health and Family Welfare's Health Economics Unit. MTaPS also published a blog highlighting the two reports from activity 2.1.1, which provided an overview of how countries in Asia define pharmaceutical benefits packages and a guide for how to define pharmaceutical benefits packages more effectively.

Objective 3: Using the global competency framework and implementation tool developed by WHO to support capacity building and professional development of regulatory staff, MTaPS continued to gather data and information on the regulatory competencies and gaps in Bangladesh, Nepal, Vietnam, and the Philippines. A draft report was finalized on the knowledge, attitudes, and practices by regulatory personnel in Nepal and data collection was completed in Bangladesh. Preparations were initiated to conduct the competency framework exercise in Vietnam and the Philippines. Mechanisms for cooperation, such as work sharing and joint review sessions, promote convergence of standards and information exchange among established networks. MTaPS had several interactions with the ASEAN secretariat to come to an agreement on priority areas for support and implementation toward strengthening regulatory systems in the ASEAN region. MTaPS received approval to implement priority activities to support regulatory systems strengthening in ASEAN.

Objective 4: Extensive feedback on the draft COI manual was obtained from a range of stakeholders. This feedback has been reviewed in collaboration with WHO and an updated draft of the COI manual

has been produced. The resulting advanced draft has now been submitted to editorial. Work has also begun on laying the framework for the COI e-learning module.

BEST PRACTICES/LESSONS LEARNED

- There is great interest in the HTA area in Asia. Some countries are more advanced than others in adopting HTA processes and there is appetite to continue advancing HTA in the region. For this reason, MTaPS worked during quarter 2 to design and execute the "deep dive" workshop to improve HTA in Asia and explore the feasibility of a regional HTA hub.
- The HTA roadmap document is perceived as a useful tool to help guide countries that want to adopt HTA and presenting the work that MTaPS has been conducting in Asia at HTAsiaLink 2021 provided an important opportunity to inform the design of the other activities, such as the HTAsiaLink digest and drafting a peer-reviewed commentary article.
- The MTAPS/USAID blog published in quarter 2 highlighted that costing a pharmaceutical benefits package helps policymakers set priorities and understand how much public and private payers will spend on medical products under a variety of scenarios. The OHT is a leading global approach for estimating these costs, helping policymakers forecast spending on pharmaceutical coverage, and ensuring that the range of medicines available to the population is consistent with available resources.
- Program country presence facilitates quick implementation of activities coupled with designated focal persons to handle specific areas.
- Recommendations from surveys or studies incorporated in country plans facilitate effective follow-up, including budgeting and implementation.
- In addition to training, following up with mentorship programs yields impact and change in knowledge, attitudes, and behavior.
- Close monitoring of presidential elections and other major political movements in the country is critical when designing the workplans and to anticipating impact during activity implementation or completion of deliverables that would require timely and tailored adjustments in the approach or milestones.

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Activity 1.1.1 (Year 4): Findings from initial scoping review on the demand and interest for HTA hub in Asia	June 2022
Activity 1.1.2 (Year 3): HTA "deep dive" workshop executed	June 2022
Activity 1.1.3 (Year 3): HTAsiaLink Conference digest finalized; draft paper completed	June 2022
Activity 2.1.1 (Year 4): Build capacities related to OHT use to cost pharmaceutical benefits packages; determine the path forward for OHT application in one country by establishing verified interest by the Ministry of Health, relevant points of contact, and an activity plan	June 2022
Activity 3.1.1a (Year 3): Perform a regional competency mapping for pharmaceutical regulation; finalize data collection in the remaining two countries	April - May 2022
Activity 3.1.1b (Year 3): Support virtual capacity building on registration of specialized medical products for regulators in the Asia region	May 2022
Activity 3.2.1 (Year 4): Support ASEAN Pharmaceutical Products Working Group's joint assessment procedures by facilitating joint review sessions for the assessment of medical products	May 2022
Activity 3.1.2 (Year 3): Facilitate policy convergence of regional technical requirements for registration of medical products among Asian countries	June 2022

Activity 4.1.1 (Year 3): Support implementation and dissemination of the how-to manual on COI; seeking final editorial clearance of the manual through WHO, followed by online publishing; development of e-learning module will also be undertaken this quarter	April - June 2022
Activity 4.1.1 (Year 4): Adapt data collection tools and assessment methods, start data collection and analysis of the procurement policy and processes	June 2022

Table 33. Quarter 2, FY22, Activity Progress, Asia Regional Bureau

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
Activity 1.1.1 (Year 4): Findings from initial scoping review of the demand and interest for HTA hub in Asia	5	N/A	N/A	MTaPS continued to conduct due diligence on the needs for the HTA hub in Asia. MTaPS Consultant Julian Salim was contracted to perform the first scoping and desk review work, and the results will be available in quarter 3.
Activity 1.1.2 (Year 3): HTA "deep dive" workshop executed	5	N/A	N/A	MTaPS developed a concept note to conduct the "deep dive" workshop to improve HTA in Asia. The key topic for the workshop will be the use of RWE to improve HTA. The topic selection was informed by the findings of the HTAsiaLink pre-conference meeting that MTaPS hosted in quarter 1.
Activity 1.1.3 (Year 3): HTAsiaLink Conference digest finalized; draft paper completed	5	N/A	N/A	Continuing work on the HTAsiaLink pre-conference is the development of the HTAsiaLink digest, which was presented to and endorsed by the HTAsiaLink board on February 18, 2022. MTaPS is currently in the process of finalizing the HTAsiaLink digest and drafting a peer-reviewed commentary article on the role of HTAsiaLink to further interagency collaboration in the Asia region.
Activity 2.1.1 (Year 4): Build capacities related to OHT use to cost pharmaceutical benefits packages	4	N/A	N/A	MTaPS worked to confirm Bangladesh's interest in further support for application of the OHT after the virtual/in-person OHT training in year 3. Important considerations included the ability to use MNCH funds to focus on the costing of an NCD pharmaceutical benefits package and establishing a point of contact in the Ministry of Health and Family Welfare's Health Economics Unit.
Activity 3.1.1 (Year 3): Enhance pharmaceutical regulatory expertise among the region's workforce in product registration and PV ***Activity 3.1.1a (Year 3):*** Perform a regional competency mapping for pharmaceutical regulation; finalize data collection in the remaining two countries	2	N/A	N/A	MTaPS worked with government counterparts and the NMRA in two countries (Bangladesh and Nepal) to gather information and data regarding existent competencies for regulation of medicines. Gaps were identified and will be incorporated in the countries' work plans for budget and implementation.
Activity 4.1.1 (Year 3): Support implementation and dissemination of the how-to manual on COI ***Activity 4.1.1 (Year 4):*** Conduct a review/assessment on procurement policy, organizational capacity, and technical competency in one Asian country ***Activity description:*** MTaPS will map the policy and operational aspects of the procurement system to propose a set of options for centrally negotiated framework agreements and pooled procurement mechanisms	1	N/A	N/A	Working with WHO headquarters, MTaPS addressed a range of feedback on the manual, provided by several WHO-nominated stakeholders. The revised version has now been sent to editorial for finalizing. With this as the basis, work has now begun to conceptualize an associated e-learning module. MTaPS finalized the scope of work to engage consultants after receiving feedback from USAID Asia Bureau and USAID mission in the Philippines. MTaPS identified two potential consultants to conduct the assessment and option analysis. The two consultants will commence work in April 2022.

B. IGAD / EAC

OVERVIEW

The East African Community (EAC) and Intergovernmental Authority on Development (IGAD) are regional economic communities (RECs) in the broader eastern Africa region. IGAD consists of eight states in the horn of Africa (Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan, and Uganda) and EAC covers six partner states (Burundi, Kenya, Rwanda, South Sudan, United Republic of Tanzania, and Uganda), with three overlapping countries between them: Kenya, South Sudan, and Uganda. MTaPS supports IGAD/EAC to strengthen the pharmaceutical system to ensure sustainable access to and appropriate use of safe, effective, quality-assured, and affordable essential medicines and medicine-related pharmaceutical services. MTaPS' strategic approach for the IGAD/EAC portfolio applies MTaPS' pharmaceutical systems strengthening approach in the two RECs to achieve results in the areas of pharmacovigilance (PV) and patient safety, good medicine regulatory practices including support for local manufacturers to adhere to good regulatory practices (GRPs) and standards, and antimicrobial resistance containment. This approach includes use of regional-led coordination, stakeholder engagement, collaborations and partnerships, and capacity building to effect systemic change and integration.

CUMULATIVE PERFORMANCE TO DATE

Across the program years, MTaPS supported the IGAD and EAC secretariats to strengthen governance for safety monitoring working with respective expert working groups (EWGs) on PV to discuss activity implementation, monitor progress, and support development and adaptation of regional documents.

MTaPS assisted the IGAD secretariat to operationalize the IGAD EWG-PV by supporting the review and validation of the terms of reference (TOR) and the development of a harmonized IGAD and EWG-PV plan of activities. The experts adopted and developed a harmonized indicator-based PV assessment and monitoring tool and carried out a baseline assessment of the PV system in their member countries to inform regional activities. Approximately 17 (9 female and 8 male) regional experts drawn from the IGAD secretariat and member states were trained as trainers of trainers on the utilization of the harmonized indicator-based PV assessment and monitoring tool to carry out a baseline assessment within the member states. The regional experts carried out in-country training of data collectors to build their capacity to understand and utilize the tool to assess the PV systems. A total of 97 (31 female and 66 male) in-country health care workers were trained in Djibouti, Ethiopia, Kenya, Somalia, and Uganda.

The results and findings of the baseline assessment of the PV system in IGAD member states were discussed and deliberated upon during IGAD EWG-PV meetings. A regional report was developed from the findings and validated on October 7, 2021. An assessment of the local manufacturers in EAC and IGAD was carried out in 2020 to assess their capabilities to adhere to GRPs. Various stakeholders' forums have since been held to share the findings and build capacity of the manufacturers on adherence to GRPs and PV. To date, MTaPS has been able to reach approximately 760 pharmaceutical-industry stakeholders through virtual webinars and stakeholder forums to build capacity of the industry on regulatory compliance with GRPs.

Additionally, MTaPS—in collaboration with the IGAD secretariat—identified 94 IGAD/MTaPS cross-border area health facility personnel who were trained as trainers of trainers in PV (22 female, 72 male). The cross-border training was able to combine facility health care workers from different member states, which enhanced the integration and harmonization agenda. The health management teams within the cross-border areas were also sensitized on PV and regional collaboration and integration. Subsequently, MTaPS supported the cross-border facilities through continuous quality improvement and mentorship to implement PV activities as per developed workplans during the training of trainers. Another 107 (23 female, 84 male) health care workers drawn from health management teams and facilities were trained on PV and medicines therapeutic committees as institutional anchors for PV activities. Through this support, MTaPS has ensured that 40 health facilities located along cross-border areas of Uganda/Kenya (Amudat/West Pokot, Moroto/Turkana), Ethiopia/Kenya (Moyale), and Kenya/Somali (Mandera) implement patient safety activities including reporting of adverse events.

MTaPS supported the national medicines regulatory authorities (NMRAs), specifically the Pharmacy and Poisons Board of Kenya—which is the regional center of regulatory excellence in PV/post-marketing surveillance—to analyze data for decision making through capacity building of the PV expert review and advisory committee. This was to ensure that the existing safety data was evaluated and regulatory actions, including alerts or recalls, were undertaken.

In addition, MTaPS collaborated with the EAC secretariat and partner states to develop and validate harmonized standard operating procedures for the implementation of the EAC-harmonized PV compendium. A draft EAC-harmonized PV curriculum and training packages were also developed.

QUARTER 2 ACHIEVEMENTS & RESULTS

In collaboration with the IGAD secretariat, MTaPS convened various EWG-PV meetings to discuss the development and review of a costed work plan. This clearly costed work plan of activities for the PV EWG will improve capacity of the PV EWG and the IGAD secretariat to support implementation of regional PV activities.

Additionally, the program continually engaged the local pharmaceutical-industry stakeholders on sustaining regulatory compliance and was able to hold a stakeholders' forum on March 17, 2022, attended by 24 (10 female, 14 male) industry stakeholders within EAC and IGAD. A compliance group was officially adopted, with officials identified to coordinate its functions. The compliance group will act as a technical exchange network/platform for sharing best practices, lessons learned, collaborative activities to advocate for a balanced regulatory environment, capacity building on regulatory aspects and PV, and to improve technical skills in general.

BEST PRACTICES/LESSONS LEARNED

Constant engagement with an offering of high-level technical support to the regional secretariats, member countries, and local pharmaceutical-industry stakeholders has ensured achievements of planned activities while building capacity of the regional/industry leadership to address identified issues of concern.

ACTIVITIES & EVENTS FOR NEXT QUARTER

No activities are planned for next quarter. The program is currently finalizing the remaining activities and deliverables of the work plan.

Table 34. Quarter 2, FY22, Activity Progress, IGAD/EAC

Activity	MTaPS Objective(s)	GHSA Result(s)	MNCH Result(s)	Activity Progress
IGAD Activity 1.1.1: Support IGAD to establish and operationalize governance structures for PV ***Activity Description:*** Work with the IGAD secretariat and IGAD member states to develop a costed work plan using the findings from the PV baseline assessment for resource mobilization within the member states and other stakeholders	1.1	N/A	N/A	MTaPS, in collaboration with IGAD secretariat, has been able to convene EWG-PV meetings to discuss the development, review, and finalization of a draft work plan that has undergone several reviews and discussions by the EWG-PV. The planned activities are being finalized for further review by the secretariat and the EWG-PV, and preparation for the start of the costing stage.
IGAD Activity 2.1.1: Build capacity of selected NMRAs and cross-border sites in IGAD and EAC to analyze and use PV data for regulatory decision making ***Activity Description:*** Build the capacity of IGAD and EAC secretariats, NMRAs, and selected cross-border sites to analyze and use PV data for decision making	2.4	N/A	N/A	No activities were held this quarter.
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 ***Activity Description:*** Support the local pharmaceutical manufacturers to set up a regulatory compliance working group(s) with local pharmaceutical manufacturers in the IGAD/EAC regions for sustained discussion and collaboration towards enhanced adherence to GRPs	2.4	N/A	N/A	MTaPS held a stakeholders' forum on March 17, 2022, where industry stakeholders reviewed the TOR for the regulatory compliance group, adopted it, and identified officials to lead the group. A communication platform for the group is in place.
IGAD Activity 2.2.1: Support PV activities along IGAD cross-border points to promote patient safety ***Activity Description:*** Train regional and cross-border trainers; health care workers in Amudat, Moyale, Mandera, West Pokot, and Turkana; and sensitize ministry of health leaders on PV and safety monitoring in cross-border counties and districts jointly with the IGAD secretariat	2.4	N/A	N/A	No activities were held this quarter.
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 ***Activity Description:*** Collaborate with the IGAD secretariat and the IGAD member states to review existing in-country PV curriculums and training material and develop harmonized IGAD PV curriculum and training packages for in-service health care workers for regional adoption	5.3	N/A	N/A	MTaPS, in collaboration with IGAD secretariat, has developed a draft curriculum outline as well as a draft IGAD-harmonized PV curriculum and training packages that are undergoing review by the EWG-PV experts. This will be followed by finalization and validation prior to dissemination. Once validated, the curriculum will be disseminated to IGAD member states for adoption and implementation. The IGAD-harmonized PV curriculum and packages will support implementation of standardized PV interventions across the different IGAD and EAC countries.

6. PROGRESS IN ACHIEVING CONTRACT DELIVERABLES

Table 35. Quarter 2 Progress in Achieving Contract Deliverables

Contractual Deliverable	Due Date	Submission Date	Comments
Quarterly Performance Report – PY4 Quarter 1	2/28/22	1/28/22	The deadline for the PY4 Q1 report was revised to 2/28/22 per correspondence with Mr. Imran Mahmud on 2/22/21. MSH submitted the report one month in advance of the agreed-upon submission date.

7. PROGRAM SPOTLIGHTS

MODERNIZING VACCINE PROCUREMENT IN JORDAN

PREVENTING COVID-19 TRANSMISSION IN KENYAN PRISONS

SUPPORTING COVID-19 VACCINATION IN SENEGAL

USAID
FROM THE AMERICAN PEOPLE

SUCCESS STORY

Jordan's national immunization program although successful suffers from vaccine procurement practices that deter market competitiveness and hurt cost efficacy. Implementation of five regulatory actions is setting the country on course for improved procurement practices that will expedite market entry of vaccines and increase their market competitiveness—critical enablers for optimized use of nation's resources and sustainability of the country's expanding immunization program.

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

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

Modernizing Vaccine Procurement in Jordan

Although Jordan has a successful national immunization program, significant gains can be achieved in equitability, affordability, and sustainability through regulatory reform. Lower annual expenditures can support the sustainability and expansion of the immunization program and adaptability to emerging needs.

Pharmaceuticals represent 2.05% of Jordan's GDP and 23% of total health spending. Negotiation is not permitted under the Government Procurement Bylaw (GPB), which contributes to significant differences between international reference prices and local procurement prices. While pharmaceutical prices are regulated and set through the Jordan Food and Drug Administration (JFDA), vaccines' prices are not. An informal analysis conducted by the USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program in collaboration with the Government Procurement Department (GPD) found higher prices as compared to UNICEF-supplied rates.

Further, analysis of national vaccine procurement for 2018, conducted by MTaPS and the GPD, found suboptimal competitive practices in the market: 61% of GPD-procured vaccines had one bidder. Offers exceeded the GPD price estimates in 39% of bids, and bids exceeded estimates by an average of 3 Jordanian Dinars per unit for nearly half of all procured vaccines.

In 2019, a National Vaccines Procurement Modernization Committee (NVPMC) developed a research-based National Operational Plan with USAID's support that recommended 17 regulatory actions, and in 2021, MTaPS was tasked with providing support to the NVPMC and advancing five priority actions.

PHOTO CREDIT: USAID MTAPS JORDAN

At a National Vaccines Procurement Modernization Committee meeting

Advancing Vacinne Procurement Reform

MTaPS honed a two-pronged strategy to create an enabling environment for reform: inclusive NVPMC meetings and one-on-one meetings with stakeholders to obtain feedback and align efforts. Leveraging the Committee's knowledge and expertise while providing technical and legal backstopping, MTaPS secured agreement and buy-in from all Government of Jordan stakeholders, including the JFDA, GPD, Ministry of Health, and Legislation and Opinion Bureau. With robust follow-up and strategic communication, MTaPS ensured that the momentum created was converted to action to accelerate the pace of reform.

Backed by USAID's support and a rigorous approach to coordination and communication, MTaPS facilitated implementation of five NVPMC-identified actions. These regulatory actions further institutionalize procurement best practices, facilitated market entry, and increased competition in Jordan's pharmaceutical landscape.

Regulatory Reforms Implemented

- **Fast-tracking vaccine registration** by integrating WHO-prequalified vaccines into JFDA's registration policies and procedures. The JFDA announced updated registration principals in the National Gazette on October 17, 2021.
- **Informing the GPD of vaccine reference prices** by the JFDA. The JFDA communicated vaccine reference prices to the GPD on November 24, 2021.
- **Permitting partial prepayment** for vaccine procurement by activating and implementing GPB Article 93. The Ministry of Health sent a letter to the GPD, MOH Procurement and Supply Directorate, and Ministry of Finance on August 30, 2021, to activate prepayment via Article 93 for vaccine procurement.
- **Extending the maximum limit of procurement framework agreement** with suppliers from two to five years by amending GPB Article 57. On September 29, 2021, the Legislation and Opinion Bureau confirmed to the MOH the integration of an agreement extension into the draft GPB reform sent to the Prime Ministry for approval.
- **Permitting negotiations with suppliers** by adding an article to the GPB or within implementation instructions. A letter sent by the Legislation and Opinion Bureau to the MOH on September 29, 2021, confirmed the addition of a new article into the draft GPB reform submitted to the Prime Ministry for ratification.

The actions permitting partial prepayment and longer agreement duration will incentivize new suppliers and increase international bidding, spur competition, and lead to better pricing and optimal agreements. Further, access to information on existing suppliers and registered products in the local market and local and international reference prices will strengthen GPD decision-making power. Lastly, streamlining and expediting registration requirements will facilitate vaccine market entry.

What's Next

In FY22, MTaPS will support:

- Developing guidelines to optimize procurement framework agreements and negotiations
- Facilitating stakeholder cooperation
- Advocating for legislative reforms to foster competition and international bidding
- Researching new resources for vaccine procurement

Conclusion

Through strategic partnership and coordination, MTaPS supported the efforts of USAID and the NVPMC to advance reform for Jordan's vaccine procurement. The five policy and legislative reforms will further institutionalize procurement best practices, facilitate market entry, and increase competitiveness, thus strengthening the country's immunization programs and safeguarding the health of its population.

USAID FROM THE AMERICAN PEOPLE

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

Preventing COVID-19 Transmission in Kenyan Prisons

SUCCESS STORY

COVID-19 presented unique clinical and public health challenges for health care settings, including in prisons where crowded living conditions posed a particular challenge. Health care workers play an essential part in health care service provision in prisons, not in the least the handling of patients.

Prison health care worker training session at one of the prisons

When Kenya's Ministry of Health confirmed the first coronavirus disease (COVID-19) patient in the country on March 12, 2020, there was fear, panic, and disbelief among health care workers (HCWs) and the community at large. As the COVID-19 positivity rate increased, so did the unique clinical and public health challenges in health care settings. Health care facilities in prisons were no exception, facing a plethora of challenges exacerbated by crowded living conditions. Prison HCWs play an essential part in prison health care services provision that includes handling of patients, which involves COVID-19 case management and processing of samples for diagnosis. They, furthermore, generate health care waste at their point of service and are exposed to occupational health hazards and potentially, many pathogens.

In March 2020, USAID MTaPS was tasked with supporting the USAID COVID-19 response in several countries including Kenya. In Kenya, reaching prisons with measures to help contain the spread was part of MTaPS' pandemic response support. Working collaboratively with the Ministry of Health, MTaPS provided technical support to 13 counties, focusing on COVID-19 infection prevention and control (IPC) interventions including targeted support for training; provision of guidelines; various job aids and information; and education and communication materials.

About USAID MTaPS

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018-2023) enables low- and h 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: Ndinda Kusu, MTaPS Kenya Director, nkusu@mtapsprogram.org

MTaPS organized COVID-19 IPC and health care waste management training sessions for HCWs drawn from public hospitals, private hospitals, faith-based hospitals, and prisons in the respective counties.

Building the Capacity of Health Care Workers in Prisons

To contain the spread of COVID-19 in selected prisons across 13 counties, MTaPS prioritized capacity building of HCWs to support implementation of risk mitigation techniques such as hand hygiene, mask wearing, and waste management.

MTaPS employed a layered approach which entailed training of prison HCWs followed by institutional strengthening of the prisons themselves. MTaPS utilized trainers of trainers, who were identified and trained from the supported counties as the champions for capacity building of the targeted prisons' staff. Posters and job aids were distributed during the training sessions. During the COVID-19 IPC trainings, the HCWs developed action plans to guide implementation of prioritized post-training interventions in their respective prisons.

Toward Improved IPC in Prisons

With the help of MTaPS' interventions, supported prisons took steps to create awareness among inmates and staff and improving IPC practices on their premises. Outcomes included installation of new hand washing stations; dissemination of information, education, and communication materials on hand hygiene and use of personal protective equipment (PPE); and weekly awareness-building sessions on IPC and COVID-19 protocols for prisoners and staff with guidance on recognizing COVID-19 symptoms, self-reporting, and taking precautions to avoid transmission.

Specific examples include the Kajiado prison health center: the COVID-19 screening area was relocated from inside the health center to outside for better ventilation and PPE use was initiated during patient screening. In Mombasa county, the prison strategically displayed posters in different areas promoting good IPC practices, such as hand hygiene and donning and doffing of PPE, and held weekly sessions on IPC to sensitize staff and inmates. Further, new installation of hand washing stations in Nairobi-Langata women's prison and in Nakuru county—along with reminders to wash hands—increased adherence to hand washing, which is key to reducing transmission of infections.

Trained 364 health workers from prisons across 13 counties, following which prison health workers in Kisumu county established an IPC and advisory committee and developed a waste management plan with MTaPS support.

"MTaPS program provided support to our Kodiaga prison based in Kisumu county, including COVID-19 IPC training for our HCWs and assisting us to establish our prison IPC committee. Through this committee we were able to formulate our prison waste management plan again with your technical assistance and also conducted our first hand hygiene audit. I want to thank MTaPS and hope this collaboration continues." - Inspector Kepha Onditi, Public Health Officer-Kodiaga Prison

As part of Kenya's national pandemic response, MTaPS' support to build IPC capacity and waste management helped manage and contain the spread of COVID-19 in prisons, where crowded conditions aggravate the vulnerability of HCWs, staff, and inmates.

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USAID
FROM THE AMERICAN PEOPLE

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

SUCCESS STORY

Supporting COVID-19 Vaccination in Senegal

People waiting for their vaccines during the November 4–5, 2021, mass vaccination campaign. Photo credit: Georges Yameogo

COVID-19 is still testing health systems around the globe; disrupting large segments of the economy; and having unexpected consequences, such as delaying Senegal's departure to the African Cup of Nations due to players testing positive, and the need for mass vaccination is critical to avoid the occurrence of severe cases and deaths.

Senegal, through its Expanded Vaccination Program (PEV in French), has extensive experience in the vaccination of children under five as part of the country's routine health care activities and through specific PEV campaigns. The country decided to leverage the existing mechanism for COVID-19 vaccination of its population. However, COVID-19 vaccination required a number of adaptations to the PEV, including targeting an adult population instead of children and adopting additional and targeted service provision strategies, a data management system that shares weekly instead of monthly data for optimal stock monitoring of vaccine doses that are received intermittently, and an appropriate waste management system.

To support the country's COVID-19 vaccination program, the USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program provided technical and financial support to the medical region of Dakar, which is the region most impacted by the pandemic with 66% of cumulated cases. MTaPS' support focused on developing COVID-19 vaccination microplans, which are documents used to help identify and manage activities at the regional and district levels, and putting them into action to reach priority population groups.

About USAID MTaPS

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www.mtapsprogram.org

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Implementing COVID-19 Vaccination Microplans

In October 2021, a workshop was organized and facilitated by the medical region of Dakar, with support from MTaPS, with the heads of all 12 health districts of Dakar. During this workshop, a microplan template was adopted by all participants. The template provided for planning activities related to decentralized service provision strategies (e.g., providing vaccines in a health center, reaching individual patients directly, using a mobile clinic for zones without a health center); data, waste, and adverse events following immunization management; strengthening the capacity of service providers; and communications around risks and community engagement.

Following the adoption of the microplan template and to jumpstart the COVID-19 vaccination, the Ministry of Health and Social Action's PEV requested nationwide development of microplans in all medical regions and health districts.

Ms. Mame Diarra Diagne Ndour, Dakar's regional vaccination focal point, indicates: "Thanks to the funding and technical support to develop the microplans with the districts, we were able to standardize our interventions and prioritize our activities. This facilitated the coordination and monitoring of activity implementation."

Additionally, MTaPS provided field support to develop terms of reference; supervise the campaigns; and guide health professionals to organize mass vaccination campaigns designed to vaccinate as many people as possible in three to seven days, which is a priority service provision strategy included in the microplans. These mass vaccination days held across all Dakar districts enabled 12,889 people to be vaccinated between September and December 2021.

"Many people got infected lately, myself included. It is our responsibility, as citizens, to stand in the way of this disease and this includes getting […] vaccinated. […] This for me is a call for everyone to be responsible and to make this investment at his or her personal level to contain the virus," shared Mr. Axel MBoko, a geologist and project manager in water, health, and sanitation.

For Ms. Kine Willane, an entrepreneur living in Dakar, COVID-19 vaccination needs to be included in the long list of public health combats: "We were lucky to avoid diseases such as measles, yellow fever, or whooping cough thanks to our mothers who got us vaccinated. The least we can do is to do like our mothers and protect our loved ones by getting vaccinated."

To increase vaccination coverage in the country, MTaPS continues to support the Ministry by helping implement the COVID-19 vaccination microplans at the central and operational levels.

Kine Willane after receiving her COVID-19 vaccine. Photo credit: Georges Yameogo

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8. MONITORING, EVALUATION, RESEARCH, & LEARNING

A. MONITORING & EVALUATION

DEVRESULTS DATA MANAGEMENT SYSTEM

During Q2, all indicators and associated annual targets in DevResults were reviewed for completeness and accuracy. In preparation, headquarters (HQ) monitoring, evaluation, research, and learning (MERL) staff reviewed the year 4 country MEL plans and identified indicators for feedback and clarification by country teams. HQ MERL staff also reviewed and corrected DevResults calculations for accuracy.

The MERL HQ team, in collaboration with MSH strategic information (SI) and Deloitte data analytics teams, began development of interactive power BI dashboards to supplement the existing DevResults dashboards. Dashboards displaying global objective and sub-objective indicators have been designed and circulated for finalization. Country-specific dashboards, a Global Health Security Agenda (GHSA) dashboard, and a maternal, neonatal, and child health dashboard are in the design phase. The data model that will be the source of the data for all dashboards was further defined. Data will be refreshed on a monthly or quarterly basis as necessary.

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 infection prevention and control (IPC) activities, strengthened emergency SCMS, and developed standard operating procedures (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 COVID-19 IPC guidelines. In Q1, MTaPS continued to update country technical summaries, sharing the critical role MTaPS' GHSA and pharmaceutical systems strengthening approach played in the COVID-19 rapid response and key lessons from MTaPS' COVID-19 response implementation. In Q2, MTaPS will finalize and disseminate COVID-19 country technical highlights and briefs.

DATA QUALITY ASSURANCE (DQA) AUDIT

In Q2/Y4, a DQA audit scope of work was finalized in preparation for DQA implementation. The DQA aims to identify areas to improve MTaPS' data quality and the system producing this data and propose remedial actions. The DQA will verify the quality of reported project-level data, assess the project's data management and reporting system, and define a clear action plan to address the weakness observed. MERL HQ will share lessons across all MTaPS countries and update the SOP to reflect the DQA findings.

The DQA will be implemented in 6 countries with MTaPS regional representation: Bangladesh, the Philippines, Burkina Faso, Mali, Kenya, and Tanzania. 14 field support indicators and 18 GHSA indicators

have been selected for audit across the 6 countries. HQ and country staff were oriented towards the DQA scope of work.

An RFP was also finalized in Q2, consultant(s) will implement the DQA using the MSH DQA tool. The tool was developed by the USAID-funded MEASURE Evaluation and adapted by MSH to align with MTaPS projects. The tool will evaluate data on completeness, timeliness, and accuracy.

ACTIVITY AND DESCRIPTION	DATE
Finalize power BI dashboards: MERL HQ, MSH SI, and Deloitte teams will finalize all power BI dashboards by the end of Q2.	June 30, 2022
Power BI dashboard launch: MERL HQ will launch the final dashboards to MTaPS staff and demonstrate their use for project implementation and decision making.	July 13, 2022
Implement DQA in six countries: MERL HQ will select DQA consultant(s), train them on the DQA tool, and oversee completion of the DQA.	June–August 2022

B. KNOWLEDGE MANAGEMENT

MTAPS PSS IN PRACTICE KNOWLEDGE EXCHANGE

Health Technology Assessment (HTA) Pathways in Low- and Middle-Income Countries. Scaling Up for Sustainability of Universal Health Coverage in Ukraine. On January 18, 2022, Professor Rabia Kahveci—senior technical advisor of pharmaceutical policy and governance for the USAID SAFEMed project—presented on systematic priority setting and the pathway for legalization and institutionalization of HTA in Ukraine.

Infection Prevention and Control (IPC) Improvement at Health Facilities in Tanzania. On February 1, 2022, Dr. Doris Lutkam—senior technical advisor for MTaPS/Tanzania—presented on steps taken to improve IPC at health facilities in Tanzania through instituting an IPC monitoring system, educating quality improvement teams, and coaching and mentoring health facility staff.

Mali's IPC Experience: COVID-19 and Ebola. On March 1, 2022, Dr. Famory Samassa—senior technical advisor for MTaPS/Mali—presented on the steps taken to improve IPC in Mali and lessons learned after implementation, including the benefits of online training and physical supervision, and the need for consistent training and training of trainers.

Lessons Learned from the Infection Control Committees (ICCs) Revitalization Project in Senegal. On March 9, 2022, Mame Mbaye—technical advisor for MTaPS/Senegal—presented on lessons learned from the project, namely IPC assessment framework improvement, the necessity for hospital management engagement on ICC revitalization, and the need for an IPC focal point at hospitals.

A Point Prevalence Survey of Antimicrobial Prescribing: Findings from 13 Public and Private Hospitals in Uganda. On March 15, 2022, Dr. John Paul Waswa—technical advisor for MTaPS/Uganda—presented on how standardized monitoring of antibiotic use in Ugandan hospitals helped identify gaps and key areas for improvement of antimicrobial stewardship interventions in combating antimicrobial resistance.

How to Improve Your Presentation and Facilitation Skills. On March 29, 2022, Dr. Andrew Brown—MTaPS senior principal technical advisor for governance and capacity development—presented practical tips on how to be an effective communicator when presenting or facilitating and provided an overview of the essential elements of several adult learning methods.

COVID-19 Vaccines Safety Surveillance in Jordan. On March 30, 2022, Jumana Nabulsi—senior technical advisor for MTaPS/Jordan—presented on the country's experience with COVID-19 vaccines safety surveillance and active surveillance approaches implemented to monitor adverse events following vaccination.

TECHNICAL DOCUMENTATION

Advancing Regulatory Systems Strengthening (RSS). MTaPS developed a brief that provides an overview of MTaPS activities and achievements in advancing RSS through legal and regulatory frameworks; quality management systems; product registration and marketing authorization; licensing establishments and regulatory inspections; regional regulatory harmonization; and pharmacovigilance.

Ebola Virus Disease (EVD) Preparedness and Response in Southwestern Uganda. MTaPS developed a draft brief that highlights MTaPS' support to the Ugandan Ministry of Health, implementing partners, and the district health teams to strengthen their capacity to respond to the Ebola outbreak in southwestern Uganda.

MISCELLANEOUS ACTIVITIES

- Identified priority knowledge exchange and knowledge product for each MTaPS portfolio
- Updated country MEL plans to reflect priority knowledge products and exchanges
- Identified a pipeline of knowledge exchanges to be held in PY4 Q2 and Q3 and began coordinating with presenters to develop their presentations
- Provided input on MTaPS global learning series webinar plan
- Drafted PY4 MTaPS pause-and-reflect guidance
- Reviewed PY4 DRC MNCH annual work plan
- Worked with communications team to develop COVID-19 results webpages and infographics
- Oriented MTaPS staff on the standard process for developing MTaPS deliverables and knowledge products

ACTIVITIES & EVENTS FOR NEXT QUARTER

ACTIVITY AND DESCRIPTION	DATE
Advancing RSS: Technical Program Update	April 2022
EVD Preparedness and Response in Southwestern Uganda: Technical Highlight	April 2022
Lessons Learned from HTA Regional Workshops: Technical Brief	June 2022
MTaPS PSS in Practice Knowledge Exchanges	April–June 2022
MTaPS Global Learning Series Webinar	April–June 2022
PY4 MTaPS Pause-and-Reflect	June 2022

C. LEARNING

In Q2, global and country staff prioritized year 4 and year 5 learning questions to reduce the number by 40%. The prioritization included drawing linkages to project objectives or expected results, linkages to the HS2030 learning agenda, and available resources. Countries balanced short- and long-term questions of interest. Learning products and timelines for completion were then identified to respond to learning questions.

The HQ MERL team held a learning agenda launch to orient learning leads and product contributors to the agenda objectives, the prioritized agenda, roles and responsibilities, and next steps.

QUARTER 2 PLANNED ACTIVITIES

ACTIVITY AND DESCRIPTION	DATE
Develop learning products: country teams will begin developing year 4 learning products according to the learning agenda workplan	July 31, 2022

D. RESEARCH

MTaPS contributed to a study on conflict-of-interest management, which was published in the journal *Globalization and Health*, entitled "Disclosure, transparency, and accountability: A qualitative survey of public sector pharmaceutical committee conflict of interest policies in the World Health Organization south-east Asia region." The study found that public-sector pharmaceutical policies and regulations across the region consistently contained provisions for pharmaceutical committee members to disclose relevant interests but contained limited details about what should be declared and when and whether disclosures are evaluated. The MTaPS Uganda team also published its study on antibiotic use across 13 hospitals in Uganda in the journal *MDPI Antibiotics*. The study found a high use of antibiotics across all health facilities, low compliance with Uganda's clinical guidelines, relatively high use of WHO watch-class antibiotics, and extremely high use of parenteral antibiotics, all underscoring the need for strengthened antimicrobial stewardship in Uganda.

This quarter, MTaPS prepared and submitted the following four organized session abstracts to Health Systems Research 2022:

- Engaging with accountability ecosystems to improve health system responsiveness
- Demystifying political economy analysis—yes, it can be easy to use for workplace research
- Building strong health systems: the role of standardized regulatory information management systems
- Pharmaceutical expenditure tracking using the System for Health Accounts 2011 framework: lessons learned from Burkina Faso and Benin

In addition, the program received notification that all four of the following abstracts it had submitted to the Global Health Security 2022 Conference were accepted:

- GHSA-supported antimicrobial resistance investments: results and lessons learned in strengthening infection prevention and control; enhancing inclusion; and enabling rapid COVID-19 response and future pandemic preparedness (panel)
- Using the center of excellence model to improve infection prevention and control for antimicrobial containment and service delivery: experiences from Uganda (individual presentation)
- A point prevalence survey of antibiotic use across 13 hospitals in Uganda (individual presentation)
- Improving infection prevention and control practices: interventions in six Tanzanian hospitals (poster)

ACTIVITY AND DESCRIPTION	DATE
Finalize individual abstract submissions for Health Systems Research 2022, American Public Health Association annual meeting, and American Society of Tropical Medicine and Hygiene annual meeting	April

ANNEXES

ANNEX 1: MTAPS INDICATORS

Annex Table 1: MTaPS Performance Indicator Tracking Table

Code	Performance Indicator	Reporting Frequency	Baseline Value	PY2 Result	PY3 Result	PY4Q1 Result[11]	PY4Q2 Result	PY4Q3 Result	PY4Q4 Result	PY4 Cumulative Result
IO.1	% of median international price paid for a set of tracer medicines that was part of the last regular Ministry of Health (MOH) procurement	Baseline/ End-line	179%	N/A	N/A					
IO.4	Has the country's regulatory system increased its score since the last WHO global regulatory benchmarking assessment in at least one regulatory function? (yes/no)	Baseline/ End-line	0	N/A	N/A					
MNCH 1	# of countries participating in the dissemination of the regulation guidelines for medical devices	Annually	0	0	0					
MNCH 2	# of MNCH medical devices included in the guidelines	Annually	0	0	0					
MNCH 3	# of stakeholders from regulatory authorities and manufacturers of oxygen participating	Annually	0	0	0					

[11] N/A and data not reported means the country did not have planned activities for the reporting period

	in the dissemination and adoption of the oxygen regulatory framework						
MNCH 4	# of oxygen manufacturers committed to addressing weaknesses identified	Annually	0	0	0		
MT 1.1.1	# of entities that have clarified roles and responsibilities in pharmaceutical systems and made information publicly available with MTaPS support	Annually	0	3	7		
	Bangladesh		0	2	1		
	Indonesia		0	N/A	2		
	Jordan		0	0	0		
	Nepal		0	0	0		
	Rwanda		0	1	0		
	IGAD		0	0	4		
MT 1.1.2	# of MTaPS-supported entities that monitor key elements of the pharmaceutical management operations and make the information publicly available	Annually	0	0	29		
	DRC		0	0	29		
MT 1.1.3	% of MTaPS-supported decision making entities that have publicly available guidelines for key elements of pharmaceutical management operations	Annually	0	N/A	100% (2/2)		
	IGAD		0	N/A	100% (2/2)		

MT 1.2.1	# of pharmaceutical sector-related policy, legislation, regulation, or operational documents developed or updated with technical assistance from MTaPS	Annually	0	30	28			
	Asia Bureau		0	0	1			
	Bangladesh		0	2	2			
	Burkina Faso		0	1	0			
	Global MNCH		0	1	0			
	Indonesia		0	N/A	0			
	Jordan		0	0	0			
	Mozambique		0	0	0			
	Nepal		0	0	3			
	Philippines		0	0	3			
	Rwanda		0	26	17			
	Tanzania		0	N/A	2			
MT 1.2.2	# of pharmaceutical regulatory enforcement mechanisms established or strengthened with MTaPS support	Semi-annually	0	0	5	6		
	Global MNCH		0	N/A	0	N/A		
	Mozambique		0	0	2	0		
	Rwanda		0	0	2	6		
	Tanzania		0	N/A	1	N/A		
MT 1.2.3	% of established pharmaceutical regulatory enforcement mechanisms that are functional	Semi-annually			88% (15/17)	82% (9/11)		
	Bangladesh		50%	Data not reported	100% (8/8)	100% (2/2)		
	Mozambique		0%	22% (2/9)	67% (2/3)	67% (2/3)		

	Rwanda		0%	83%	83% (5/6)	83% (5/6)							
MT 1.3.1	# of platforms for citizen and consumer engagement in the pharmaceutical sector established or strengthened with MTaPS support	Annually	0	0	1								
	Jordan		0	0	0								
	DRC		0	0	1								
MT 1.3.2	# of civil society organizations or media groups that have disseminated information on pharmaceutical-sector monitoring activities or conducted advocacy for equity in access to medical products with MTaPS support	Annually	0	0	0								
	Jordan		0	0	0								
MT 2.1.2	# of MTaPS-supported health professional training curricula developed or revised to address pharmaceutical management topics	Annually	0	4	2								
	Asia Bureau		0	N/A	1								
	Bangladesh		0	0	0								
	IGAD		0	1	1								
2.2.2	# of persons trained in pharmaceutical management with MTaPS support	Quarterly	0	1,116	11,782	4487		889					
	Asia Bureau		0	0	99	*Female*	8	*Female*	0	*Female*		*Female*	
						Male	17	*Male*	0	*Male*		*Male*	
						Unknown	220	*Unknown*	0	*Unknown*		*Unknown*	
						Total	245	*Total*	0	*Total*		*Total*	
	Bangladesh		0	961	2856	*Female*	168	*Female*	83	*Female*		*Female*	
						Male	676	*Male*	367	*Male*		*Male*	

						Unknown	0	Unknown	0	Unknown		Unknown		
						Total	844	Total	450	Total		Total		
	Cross Bureau		0	N/A	N/A	Female	0	Female	0	Female		Female		
						Male	0	Male	0	Male		Male		
						Unknown	0	Unknown	60	Unknown		Unknown		
						Total	0	Total	60	Total		Total		
	DRC		0	0	373	Female	0	Female	1	Female		Female		
						Male	0	Male	9	Male		Male		
						Unknown	123	Unknown	0	Unknown		Unknown		
						Total	123	Total	10	Total		Total		
	IGAD		0	0	843	Female	0	Female	10	Female		Female		
						Male	0	Male	13	Male		Male		
						Unknown	0	Unknown	0	Unknown		Unknown		
						Total	0	Total	23	Total		Total		
	Indonesia		0	0	0	Female	110	Female	0	Female		Female		
						Male	94	Male	0	Male		Male		
						Unknown	16	Unknown	0	Unknown		Unknown		
						Total	220	Total	0	Total		Total		
	Jordan		0	N/A	N/A	Female	0	Female	0	Female		Female		
						Male	0	Male	0	Male		Male		
						Unknown	0	Unknown	0	Unknown		Unknown		
						Total	0	Total	0	Total		Total		
	Mali		0	0	0	Female	4	Female	N/A	Female		Female		
						Male	4	Male	N/A	Male		Male		
						Unknown	0	Unknown	N/A	Unknown		Unknown		
						Total	8	Total	N/A	Total		Total		
	Mozambique		0	40	21	Female	6	Female	0	Female		Female		
						Male	6	Male	0	Male		Male		
						Unknown	0	Unknown	0	Unknown		Unknown		
						Total	12	Total	0	Total		Total		
	Philippines		0	0	6926	Female	2160	Female	182	Female		Female		
						Male	833	Male	83	Male		Male		
						Unknown	15	Unknown	46	Unknown		Unknown		
						Total	3008	Total	311	Total		Total		
	Rwanda		0	0	603	Female	17	Female	13	Female		Female		
						Male	42	Male	22	Male		Male		
						Unknown	0	Unknown	0	Unknown		Unknown		
						Total	59	Total	35	Total		Total		
	Tanzania		N/A	N/A	30	Female	10	Female	N/A	Female		Female		
						Male	17	Male	N/A	Male		Male		
						Unknown	0	Unknown	N/A	Unknown		Unknown		
						Total	27	Total	N/A	Total		Total		

MT 2.2.3	# of in-person or e-learning courses developed with MTaPS assistance	Annually	0	1	11									
	Asia Bureau		0	N/A	3									
	Bangladesh		0	0	0									
	Cross Bureau		0	1	1									
	IGAD		N/A	N/A	0									
	Mozambique		0	0	1									
	Philippines		0	0	4									
	Rwanda		0	0	2									
MT 2.2.4	# of people successfully completing MTaPS-developed e-learning courses	Quarterly	0	65	6,917	2250		1,084						
	Asia Bureau		0	0	52	*Female*	0	*Female*	0	*Female*		*Female*		
						Male	0	*Male*	0	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		
						Total	0	*Total*	0	*Total*		*Total*		
	Bangladesh		0	0	0	*Female*	0	*Female*	0	*Female*		*Female*		
						Male	0	*Male*	0	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		
						Total	0	*Total*	0	*Total*		*Total*		
	Cross Bureau		0	0	8	*Female*	0	*Female*	0	*Female*		*Female*		
						Male	0	*Male*	0	*Male*		*Male*		
						Unknown	0	*Unknown*	60	*Unknown*		*Unknown*		
						Total	0	*Total*	60	*Total*		*Total*		
	Mozambique		0	65	0	*Female*	0	*Female*	0	*Female*		*Female*		
						Male	0	*Male*	0	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		
						Total	0	*Total*	0	*Total*		*Total*		
	Philippines		0	0	6857	*Female*	1602	*Female*	737	*Female*		*Female*		
						Male	648	*Male*	287	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		
						Total	2250	*Total*	1,024	*Total*		*Total*		
	Rwanda		0	0	0	*Female*	0	*Female*	0	*Female*		*Female*		
						Male	0	*Male*	0	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		
						Total	0	*Total*	0	*Total*		*Total*		
MT 2.4.1	# of days reduced for product	Annually	0	0	180									

	registration in countries with MTaPS-supported national medicines registration authority							
MT 2.4.3	# of regional harmonization initiatives with participation by MTaPS-supported NMRAs	Annually	0	0	3			
	Asia Bureau		0	N/A	1			
	IGAD		0	N/A	2			
	Mozambique		0	0	0			
MT 2.4.4	# of countries that have conducted an assessment at any level of the regulatory system	Annually	0	0	0			
MT 2.4.5	# of medicines with current valid registration	Annually	0	0	0			
NP 1	% of USG-assisted organizations with improved performance	Annually	0	0	0			
NP 2	# of wholesalers inspected according to the new good distribution practices inspection guidelines	Annually	0	0	0			
NP 3	# of public- and private-sector pharmacies inspected according to the new good pharmacy practices inspection guidelines	Annually	0	0	0			
NP 4	# of innovations supported through USG assistance	Annually	0	0	0			
NP 6	% of private-sector pharmacies surveyed dispensing prescription	Annually	0	0	0			

	medicines without prescription							
NP 8	# of monitoring visits in which GON participates	Annually	0	0	0			
PP 1.5.1	# of TB and FP commodities for which a quantification process is completed with MTaPS support	Annually	0	0	0			
PP 1.5.2	# of TB and FP commodities procured by DOH through framework agreements, pooled procurement, or other innovative procurement mechanism with support from MTaPS	Annually	0	0	0			
PP 2.2.1	# of TB and FP products registered in the Philippines with MTaPS support	Annually	0	0	0			
PP 3.2	# of synergized approaches for supply chain management, human resources for health, and engagements with private sector and local government units	Annually	0	0	0			
PP 3.3	% of MTaPS-supported entities carrying out supply chain management functions without external technical assistance	Annually	0	0	0			
DRC 3	# of health facilities that are implementing the post-training action plan	Annually	0	0	0			

DRC 4	% of facilities implementing appropriate storage of oxytocin	Annually	0	0	0			
DRC 5	# of DPS and/or IPS using the updated directory of registered medicines	Annually	0	0	0			
MT 3.1.1	# and % MTaPS-supported health facilities that have newly implemented or improved PMIS to document specific components of the pharmaceutical system for analysis and reporting with MTaPS support	Semi-annually				100% (2,086/2,006)		
	Bangladesh		90%	92%	100% (2006/ 2006)	100% (2,006/2,006)		
	Philippines		0%	0%	0%	N/A		
	Rwanda		0%	100%	100% (10/10)	100% (80/80)		
MT 3.1.2	# and % of MTaPS-supported health facilities using interoperable PMIS tools	Semi-annually			85% (6434/ 7565)	75% (5913/7865)		
	Bangladesh		61%	87%	77% (4734/ 6173)	72.27% (4,461/6,173)		
	Mozambique		0%	68%	85% (1412/ 1652)	85.47% (1,412/1,652)		
	Rwanda PEPFAR					100% (40/40)		
MT 3.1.3	# of countries that have a functional early warning system linking clinical and stock data	Annually	0	0	2			
	Bangladesh		0	Yes	Yes			
	Mozambique		0	0	0			
MT 3.2.1	# and % of MTaPS-supported health	Quarterly	54.11% (158/292)	92% (4293/ 4680)	76% (4588/ 6003)	75% (4723/6270)	62% (3916/6271)	

	facilities that complete and submit an LMIS report on time for the most recent reporting period													
	Bangladesh		74.3% (84/115)	92% (4293/ 4680)	77% (4488/ 5826)	*Hospitals*	64%	*Hospitals*	50% (155/308)	*Hospitals*		*DGFP (Sub-District Level)*		
						Other	77%	*Other*	63% (3,644/ 5,786)	*Other*		*DGFP (Central/ Regional Level)*		
						Total	141%	*Total*	62% (3,799/ 6,094)	*Total*		*Total*		
	DRC		42% (74/177)	Data not reported	56% (100/177)	*Hospitals*	100% (10/10)	*Hospitals*	90% (9/10)	*Hospitals*		*Hospitals*		
						Health centers	50.30% (84/167)	*Health centers*	65% (108/167)	*Health centers*		*Health centers*		
						Total	53.11% (94/177)	*Total*	66% (117/177)	*Total*		*Total*		
MT 3.3.2	# of PSS technical documents authored by MTaPS	Semi-annually	0	14	39	27								
	Asia Bureau		0	N/A	N/A	0								
	CSL		0	N/A	1	3								
	Cross Bureau		10	13	10	4								
	Indonesia		0	N/A	0	4								
	Jordan		0	N/A	N/A	0								
	Global MNCH		0	1	1	1								
	Rwanda		0	N/A	27	15								
MT 3.3.3	# of activities to engage with stakeholders to advance the PSS global learning agenda	Quarterly	0	4	12	11		8						
	Asia Bureau		0	N/A	N/A	0		0						
	CSL		0	N/A	0	0		5						
	Cross Bureau		0	4	12	8		2						
	Indonesia		0	N/A	0	3		1						
PP 3.1	# of joint success stories produced	Annually	0	0	6									

PP 3.4	# of gender assessments, analyses, studies, or research conducted by MTaPS on PSCM and PV	Annually	0	0	1				
DRC 6	% of MTaPS-supported health facilities that used data to inform medicine use, patient safety, quality of pharmaceutical services, and/or pharmacy benefits	Semi-annually	0	N/A	100%	100%			
ML 2	# of quarterly meetings to orient key stakeholders on the use of directory of registered medical products	Quarterly	0	N/A	N/A	0	0		
MNCH 18	# of countries supported to implement decentralized procurement systems	Semi-annually	0	N/A	N/A	1			
MNCH 19	# of tailored tools developed for prequalification of suppliers, tender invitation and conduct of restricted tenders for prequalified suppliers	Annually	0	0	N/A				
MNCH 20	# of countries where bottlenecks in access to pediatric amoxicillin are identified and presented to MOH	Annually	0	0	N/A				
MT 4.1.2	# of new or revised medicine pricing policies developed with MTaPS assistance	Annually	0	N/A	N/A				

	Indonesia		0	N/A	N/A					
MT 4.2.1	# of pharmacy benefits programs introduced or improved in health sector with MTaPS support	Annually	0	1	N/A					
	Bangladesh		0	1	N/A					
MT 4.2.2	Has the country established a national-level, multi-stakeholder platform for evidence-based PBP decision making? (yes/no)	Annually	0	N/A	0					
	Indonesia		0	N/A	0					
MT 4.2.3	# of strategic plans developed or updated to address pharmaceutical costs and financing with MTaPS support	Semi-annually	0	2	0	1				
	Bangladesh		0	2	0	N/A				
	Indonesia		N/A	N/A	N/A	1				
MT 4.3.1	Has the country increased domestic funding budgeted for or spent on high-priority diseases or conditions? (yes/no)	Annually	N/A	N/A	No					
	Indonesia		N/A	N/A	No					
MT 4.3.2	Has the country reviewed public-sector pharmaceutical financing in the last fiscal year? (yes/no)	Annually	N/A	N/A	Yes					
	Indonesia		N/A	N/A	Yes					
MT 4.3.3	Does the country have system(s) to track pharmaceutical expenditures? (yes/no)	Annually	N/A	N/A	0					

	Indonesia		N/A	N/A	0					
MT 4.3.4	Has the country reduced the value of product losses (due to expired medicines or damage or theft) per value of commodities received? (yes/no)	Annually	N/A	N/A	0					
	Indonesia		N/A	N/A	0					
PP 1.4.1	# of private-sector outlets providing FP or TB commodities through a referral and reimbursement scheme	Annually	N/A	N/A	N/A					
MT 5.1.1	% of service delivery points with stock out of FP, TB, and HIV-AIDS tracer commodities	Quarterly				38.31% (5262/13734)	44% (6,171/13,953)			
	Philippines									
	First-line TB meds (4 FDC)		40.5%	30% (472/1552)	19%	22.26% (348/1563)	25.16% (386/1,534)			
	TB pediatric med (4FDC)		90.6%	97% (856/883)	55%	59.73% (740/1239)	55.66% (693/1,245)			
	TB preventive treatment (for children)		63.8%	65% (645/987)	87%	89.97% (987/1097)	76.18% (355/466)			
	TB second-line drug (Levofloxacin 500mg)		N/A	53% (105/199)	0%	-	3.54% (7/198)			
	TB second-line drug (Moxifloxacin 400mg)		N/A	5% (9/199)	0%	-	-			
	TB second-line drug (Linezolid 600mg)		N/A	12% (24/199)	0%	-	4.55% (17/198)			
	TB second-line drug (Bedaquiline)		N/A	13% (25/199)	0%	-	27.79% (9/198)			
	GeneXpert cartridges		N/A	3% (13/395)	18%	-	31.64% (177/637)			
	FP injectable		30.2%	12% (218/1775)	34%	31.12% (526/1690)	69.95% (535/1,691)			
	FP implant		52.7%	55% (717/1316)	39%	40.8% (603/1478)	33.59% (894/1,278)			
	FP oral COC		25.6%	8% (143/1798)	16%	36.6% (624/1705)	24.41% (569/1,694)			
	FP oral POP		69.3%	31% (507/1630)	20%	21.49% (369/1717)	47.55% (411/1,684)			

	IUD		36.7%	29% (454/1566)	42%	43.97% (674/1533)	21.15% (679/1,428)			
	Male condom		38.9%	21% (358/1743)	22%	22.84% (391/1712)	25.16% (360/1,702)			
MT 5.1.1 (FP)	Stockout rates of tracer medicines in MTaPS-supported health facilities (FP)	Semi-annually		N/A	N/A					
	Bangladesh					.13% (38/30,172)				
MT 5.1.2	% of tracer products stocked according to plan	Semi-annually								
	Bangladesh			Data not reported		*Stocked according to plan*	50%	*Stocked according to plan*		
						Overstocked	50%	*Overstocked*		
						Understocked	0	*Understocked*		
						Stocked out	0	*Stocked out*		
	DRC			Data not reported		*Stocked according to plan*	58%	*Stocked according to plan*		
						Overstocked	26%	*Overstocked*		
						Understocked	16%	*Understocked*		
						Stocked out	0%	*Stocked out*		
MT 5.1.2 (FP)	% of tracer products stocked according to plan (FP)	Semi-annually								
	Bangladesh			Data not reported		*Stocked according to plan*	50%			
						Overstocked	50%			
						Understocked	0			
						Stocked out	0			
MT 5.1.2 (TB)	% of tracer products stocked according to plan (TB)	Semi-annually								
	Bangladesh			Data not reported		*Stocked according to plan*	N/A			
						Overstocked	N/A			
						Understocked	N/A			
						Stocked out	N/A			
MT 5.1.3	% of initially MTaPS-supported supply chain functions carried out by national entities that	Semi-annually	0%	Data not reported	100% (3/3)	100% (3/3)				

	are done without external technical assistance										
	Bangladesh		0%	Data not reported	100% (3/3)	*LMIS*	100% (1/1)	*LMIS*			
						Inventory management	100% (2/2)	*Inventory management*			
MT 5.2.1	% of MTaPS-supported health facilities which have developed, adopted, or implemented pharmaceutical services standards	Semi-annually	0%	0%	0% (0/100)	0% (0/0)					
	Rwanda		0%	0%	0% (0/100)	0% (0/0)					
MT 2.2.2	% of MTaPS-supported health facilities promoting patient-centered pharmaceutical services	Semi-annually	0%	N/A	N/A						
	Rwanda		0%	N/A	N/A	*Hospitals*	100% (10/10)				
						Health centers	100% (10/10)				
						Pharmacies	0				
						Other	0				
						Total	100% (20/20)				
MT 5.2.3	% of MTaPS-supported health facilities implementing continuous quality improvement (CQI) approaches to improve medicine use	Semi-annually									
	Rwanda		0%	N/A	N/A	*Hospitals*	100% (10/10)				
						Health centers	100% (10/10)				
						Pharmacies	0				
						Other	0				
						Total	100% (20/20)				
MT 5.3.1	% of MTaPS-supported health facilities that have implemented	Quarterly	31% (31/100)	3% (3/110)	44% (46/105)	55% (65/117)	65% (105/162)				

	medicines safety activities													
	Bangladesh		31% (31/100)	3% (3/100)	56% (28/50)	*Pharmaceuticals*	67% (44/65)	*Pharmaceuticals*	67% (44/65)	*Pharmaceuticals*		*Pharmaceuticals*		
						Total	*67% (44/65)*	*Total*	67% (44/65)	*Total*		*Total*		
	IGAD		0%	Data not reported	24% (10/41)	*Hospitals*	6.06% (2/33)	*Hospitals*	9% (3/33)	*Hospitals*		*Hospitals*		
						Health center	0% (0/6)	*Health center*	0% (0/6)	*Health center*		*Health center*		
						Total	4.88% (2/39)	*Total*	8% (3/39)	*Total*		*Total*		
	Jordan		0% (0/0)	0% (0/0)	0% (0/6)	*Hospitals*	N/A	*Hospitals*	N/A	*Hospitals*		*Hospitals*		
						Health center	N/A	*Health center*	N/A	*Health center*		*Health center*		
						Total	N/A	*Total*	N/A	*Total*		*Total*		
	Rwanda		0% (0/10)	0% (0/10)	50% (5/10	*Hospital*	100% (1/1)	*Hospital*	100% (20/20)	*Hospital*		*Hospital*		
						Health center	100% (9/9)	*Health center*	100% (20/20)	*Health center*		*Health center*		
						Total	100% (10/10)	*Total*	100% (40/40)	*Total*		*Total*		
	Mozambique		0%	N/A	100%	*Hospital*	100% (2/2)	*Hospital*	100% (4/4)	*Hospital*		*Hospital*		
						Health center	100% (7/7)	*Health center*	100% (14/14)	*Health center*		*Health center*		
						Total	100% (9/9)	*Total*	100% (18/18)	*Total*		*Total*		
MT 5.3.2	% of adverse drug events (ADEs) reported to the NMRA and reviewed by the NMRA													
	IGAD	Semi-annually	0% (0/0)	N/A	100% (1104/ 1104)	95.37% (1,667/1,748)								
	Bangladesh		68%	22%	77% (449/ 586)	86.68% (605/698)								
	Mozambique		60%	N/A	56% (1237/ 2213)	12.19% (2,446/20,070)								
	Rwanda		91%	N/A	55% (102/186)	32.75% (186/568)								
	Tanzania		N/A	N/A	2,641/	N/A								
MT 5.4.2	% of MTaPS-supported health facilities implementing locally identified and prioritized core	Semi-annually	0%	100%	100% (7/7)	100% (7/7)								

	elements of infection prevention and control activities									
	Mozambique		0%	100%	100% (7/7)	100% (7/7)				
MT 5.4.3	# of AMR-related in-country meetings or activities conducted with multisectoral participation	*Quarterly*	0	N/A	N/A	3	0			
	Jordan		0	N/A	N/A	3	0			
ML 1	# of marketing authorization commission meetings supported by MTaPS	*Quarterly*	0	0	0	0	0			
	Mali		0	0	0	0	0			
ML 2	# of quarterly meetings to orient key stakeholders on using directory of registered medical products	*Quarterly*	0	0	0	0	0			
	Mali		0	0	0	0	0			
EVD 1	# of policies, legislation, regulations, operational documents, or guidelines for EVD management developed or updated with technical assistance from MTaPS	*Quarterly*	0	0	0	3	3			
	Mali		0	0	0	0	0			
	Rwanda		0	0	0	1	1			
	Senegal		0	0	0	0	0			

	Uganda		0	0	0	2		2										
EVD 2	# of entities implementing EVD guidelines with MTaPS support	*Quarterly*	0	0	0	66		66										
	Cote D'Ivoire		0	0	0	*ETU*	0	*ETU*	0	*ETU*		*ETU*						
						Non-ETU	0	*Non-ETU*	0	*Non-ETU*		*Non-ETU*						
						POE	0	*POE*	0	*POE*		*POE*						
						Total	0	*Total*	0	*Total*		*Total*						
	Mali		0	0	0	*ETU*	0	*ETU*	0	*ETU*		*ETU*						
						Non-ETU	7	*Non-ETU*	7	*Non-ETU*		*Non-ETU*						
						POE	0	*POE*	0	*POE*		*POE*						
						Total	7	*Total*	7	*Total*		*Total*						
	Rwanda		0	0	0	*ETU*	0	*ETU*	N/A	*ETU*		*ETU*						
						Non-ETU	0	*Non-ETU*	N/A	*Non-ETU*		*Non-ETU*						
						POE	0	*POE*	N/A	*POE*		*POE*						
						Total	0	*Total*	N/A	*Total*		*Total*						
	Senegal		0	0	0	*ETU*	0	*ETU*	N/A	*ETU*		*ETU*						
						Non-ETU	0	*Non-ETU*	N/A	*Non-ETU*		*Non-ETU*						
						POE	0	*POE*	N/A	*POE*		*POE*						
						Total	0	*Total*	N/A	*Total*		*Total*						
	Uganda		0	0	0	*ETU*	9	*ETU*	9	*ETU*		*ETU*						
						Non-ETU	39	*Non-ETU*	39	*Non-ETU*		*Non-ETU*						
						POE	11	*POE*	11	*POE*		*POE*						
						Total	59	*Total*	59	*Total*		*Total*						
EVD 3	# of persons who received EVD training with MTaPS support	*Quarterly*	0	0	0	924		924										
	Cote D'Ivoire		0	0	0	*Female*	0	*Female*	0	*Female*		*Female*						
						Male	0	*Male*	0	*Male*		*Male*						
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*						
						Total	0	*Total*	0	*Total*		*Total*						
	Mali		0	0	0	*Female*	0	*Female*	0	*Female*		*Female*						
						Male	0	*Male*	0	*Male*		*Male*						
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*						
						Total	0	*Total*	0	*Total*		*Total*						
	Rwanda		0	0	0	*Female*	17	*Female*	17	*Female*		*Female*						
						Male	15	*Male*	15	*Male*		*Male*						
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*						
						Total	32	*Total*	32	*Total*		*Total*						
	Senegal		0	0	0	*Female*	0	*Female*	0	*Female*		*Female*						
						Male	0	*Male*	0	*Male*		*Male*						
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*						
						Total	0	*Total*	0	*Total*		*Total*						
			0	0	0	*Female*	464	*Female*	464	*Female*		*Female*						

	Uganda					*Male*	428	*Male*	428	*Male*		*Male*	
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*	
						Total	892	*Total*	892	*Total*		*Total*	
EVD 4	# of MTaPS-supported entities in compliance with EVD IPC guidelines	*Quarterly*	0	0	0	7		7					
	Cote D'Ivoire		0	0	0	*ETU*	0	*ETU*	0	*ETU*		*ETU*	
						Non-ETU	0	*Non-ETU*	0	*Non-ETU*		*Non-ETU*	
						POE	0	*POE*	0	*POE*		*POE*	
						Total	0	*Total*	0	*Total*		*Total*	
	Mali		0	0	0	*ETU*	0	*ETU*	0	*ETU*		*ETU*	
						Non-ETU	7	*Non-ETU*	7	*Non-ETU*		*Non-ETU*	
						POE	0	*POE*	0	*POE*		*POE*	
						Total	7	*Total*	7	*Total*		*Total*	
	Rwanda		0	0	0	*ETU*	0	*ETU*	0	*ETU*		*ETU*	
						Non-ETU	0	*Non-ETU*	0	*Non-ETU*		*Non-ETU*	
						POE	0	*POE*	0	*POE*		*POE*	
						Total	0	*Total*	0	*Total*		*Total*	
	Senegal		0	0	0	*ETU*	0	*ETU*	0	*ETU*		*ETU*	
						Non-ETU	0	*Non-ETU*	0	*Non-ETU*		*Non-ETU*	
						POE	0	*POE*	0	*POE*		*POE*	
						Total	0	*Total*	0	*Total*		*Total*	
PP 2.3.1	% of sentinel facilities using PViMS	*Quarterly*	0	0	20%	68.66% (138/201)		16% (32/200)					
	Philippines		0	0	20%	68.66% (138/201)		16% (32/200)					
JO 1	# of National Vaccine Procurement Modernization Committee (NVPMC) meetings with MTaPS support.	*Quarterly*	0	N/A	N/A	1		N/A					
	Jordan		0	N/A	N/A	1		N/A					
JO 4	Number of awareness-raising activities on AMR and rational use of antibiotics conducted	*Quarterly*	0	N/A	N/A	4		N/A					
	Jordan		0	N/A	N/A	4		N/A					
JO 5	Number of youth reached through	*Quarterly*	0	N/A	N/A	0		0					

	AMR activities covering health education messages related to AMR with MTaPS support										
	Jordan		0	N/A	N/A	*Female* 0 *Male* 0 *Unknown* 0 *Total* 0	*Female* 0 *Male* 0 *Unknown* 0 *Total* 0	*Female* *Male* *Unknown* *Total*	*Female* *Male* *Unknown* *Total*		
JO 6	Number of awareness-raising activities to promote vaccine safety messages and reporting of ADRs conducted at the community level	*Quarterly*	0	N/A	N/A	0	0				
	Jordan		0	N/A	N/A	0	0				
JO 7	# of COVID-19 vaccines safety surveillance reports produced with MTaPS support	Quarterly	0	N/A	N/A	1	1				
	Jordan		0	N/A	N/A	1	1				
MSC 1	# of AMR-related in-country meetings or activities conducted with multisectoral participation	Quarterly	0	122	170	55	39				
	Bangladesh		0	3	2	3	1				
	Senegal		0	2	5	2	2				
	Cameroon		0	5	7	1	1				
	Côte d'Ivoire		0	35	67	14	22				
	DRC		0	6	20	3	2				
	Jordan		0	0	2	1	N/A				
	Kenya		0	38	26	16	2				
	Mali		0	16	6	0	2				
	Mozambique		0	0	13	4	3				
	Nigeria		0	0	6	3	0				
	Tanzania		0	4	2	2	2				

	Uganda		0	9	7	4	1			
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)	29% (12/41)	19% (46/240)				
	Burkina Faso		18% (3/17)	22% (6/27)	33% (10/10)	29% (9/31)				
	Cameroon		50% (2/4)	39% (39/101)	52% (32/62)	45% (20/44)				
	Côte d'Ivoire		38% (21/55)	38% (21/55)	43% (70/163)	37% (79/214)				
	DRC		34%	36% (45/124)	32% (30/93)	34% (33/98)				
	Ethiopia		22%	17%	N/A	0 (0/0)				
	Jordan		45% (5/11)	Data not reported	45% (5/11)	N/A				
	Kenya		66%	43% (496/1147)	51% (105/207)	35% (13/37)				
	Mali		15%	16% (20/124)	20% (22/109)	21% (11/51)				
	Mozambique		48% (11/23)	Data not reported	40% (4/10)	40% (6/15)				
	Nigeria		Data not reported	Data not reported	41% (17/41)	N/A				
	Senegal		58% (54/93)	58% (54/93)	34% (11/32)	37% (26/71)				
	Tanzania		14% (3/21)	14% (3/21)	0% (0/0)	22% (11/50)				
	Uganda		Data not reported	Data not reported	61% (28/46)	42% (33/78)				
MSC 3	# of policies, legislation, regulation, and operational documents related to national action plan on AMR implementation developed or updated with MTaPS support	Annually	0	17	13					
	Bangladesh		0	0	2					
	Burkina Faso		0	0	1					

	Cameroon		0	1	1					
	Côte d'Ivoire		0	0	0					
	DRC		0	3	0					
	Kenya		0	3	3					
	Mali		0	8	0					
	Mozambique		0	N/A	2					
	Nigeria		0	N/A	0					
	Senegal		0	1	2					
	Tanzania		0	1	2					
	Uganda		0	0	0					
MSC 4	# of multisectoral bodies that have developed a national monitoring framework with MTaPS support	Annually	0	1	1					
	Bangladesh		0	0	0					
	Burkina Faso		0	0	0					
	Cameroon		0	0	0					
	Côte d'Ivoire		0	0	0					
	DRC		0	0	0					
	Kenya		0	1	1					
	Mali		0	0	0					
	Mozambique		0	0	0					
	Nigeria		0	N/A	0					
	Senegal		0	0	0					
	Tanzania		0	0	0					
	Uganda		0	0	0					
MSC 5	# of persons trained in AMR-related topics in leadership/management related to multisectoral engagement in AMR with MTaPS support	Quarterly	0	164	655	160		46		
	Bangladesh		0	0	0	*Female* 0 *Male* 0 *Unknown* 0 *Total* 0		*Female* N/A *Male* N/A *Unknown* N/A *Total* N/A		

	Burkina Faso		0	0	80	*Female*	Data not reported	*Female*	0	*Female*		*Female*		
						Male		*Male*	0	*Male*		*Male*		
						Unknown		*Unknown*	0	*Unknown*		*Unknown*		
						Total		*Total*	0	*Total*		*Total*		
	Cameroon		0	0	20	*Female*	0	*Female*	N/A	*Female*		*Female*		
						Male	0	*Male*	N/A	*Male*		*Male*		
						Unknown	0	*Unknown*	N/A	*Unknown*		*Unknown*		
						Total	0	*Total*	N/A	*Total*		*Total*		
	Côte d'Ivoire		0	134	0	*Female*	0	*Female*	0	*Female*		*Female*		
						Male	0	*Male*	0	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		
						Total	0	*Total*	0	*Total*		*Total*		
	DRC		0	0	463	*Female*	0	*Female*	0	*Female*		*Female*		
						Male	0	*Male*	0	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		
						Total	0	*Total*	0	*Total*		*Total*		
	Kenya		0	0	0	*Female*	0	*Female*	6	*Female*		*Female*		
						Male	0	*Male*	16	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		
						Total	0	*Total*	22	*Total*		*Total*		
	Mali		0	30	2	*Female*	0	*Female*	N/A	*Female*		*Female*		
						Male	0	*Male*	N/A	*Male*		*Male*		
						Unknown	0	*Unknown*	N/A	*Unknown*		*Unknown*		
						Total	0	*Total*	N/A	*Total*		*Total*		
	Mozambique		0	0	45	*Female*	5	*Female*	2	*Female*		*Female*		
						Male	2	*Male*	3	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		
						Total	7	*Total*	5	*Total*		*Total*		
	Nigeria		0	0	0	*Female*	23	*Female*	0	*Female*		*Female*		
						Male	24	*Male*	0	*Male*		*Male*		
						Unknown	47	*Unknown*	0	*Unknown*		*Unknown*		
						Total	94	*Total*	0	*Total*		*Total*		
	Senegal		0	0	0	*Female*	0	*Female*	N/A	*Female*		*Female*		
						Male	0	*Male*	N/A	*Male*		*Male*		
						Unknown	0	*Unknown*	N/A	*Unknown*		*Unknown*		
						Total	0	*Total*	N/A	*Total*		*Total*		
	Tanzania		0	0	0	*Female*	0	*Female*	N/A	*Female*		*Female*		
						Male	0	*Male*	N/A	*Male*		*Male*		
						Unknown	0	*Unknown*	N/A	*Unknown*		*Unknown*		
						Total	0	*Total*	N/A	*Total*		*Total*		
	Uganda		0	0	45	*Female*	27	*Female*	6	*Female*		*Female*		
						Male	32	*Male*	13	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		

						Total	59	*Total*	19	*Total*		*Total*	
MSC 6	# of e-learning courses or m-mentoring platforms related to AMR developed or adapted with MTaPS support	Annually	0	2	25								
	Bangladesh		0	0	0								
	Burkina Faso		0	0	1								
	Cameroon		0	0	20								
	Côte d'Ivoire		0	1	2								
	DRC		0	0	0								
	Kenya		0	0	0								
	Mali		0	1	2								
	Mozambique		0	N/A	0								
	Nigeria		0	N/A	0								
	Senegal		0	0	0								
	Tanzania		0	0	0								
	Uganda		0	0	0								
MSC 7	# of data collection and analysis mechanisms for tracking AMR-related indicators developed or strengthened with MTaPS support	Annually	0	0	2								
	Bangladesh		0	0	0								
	Burkina Faso		0	0	0								
	Cameroon		0	0	0								
	Côte d'Ivoire		0	0	0								
	DRC		0	0	1								
	Kenya		0	0	0								
	Mali		0	0	0								
	Mozambique		0	N/A	1								
	Nigeria		0	N/A	0								
	Senegal		0	0	0								
	Tanzania		0	0	0								
	Uganda		0	0	0								
IP 1	# of updated policies, legislation, regulations, or operational documents for improving infection prevention and control (IPC)	Annually	0	9	3								

	Bangladesh		0	0	0										
	Burkina Faso		0	0	0										
	Cameroon		0	0	1										
	Côte d'Ivoire		0	7	0										
	DRC		0	0	0										
	Kenya		0	0	0										
	Mali		0	1	0										
	Mozambique		0	N/A	1										
	Nigeria		0	N/A	1										
	Senegal		0	0	0										
	Tanzania		0	1	0										
	Uganda		0	0	0										
IP 2	# of persons trained in IPC with MTaPS support	Quarterly	0	1,199	7,477	988		0							
	Bangladesh		0	0	95	*Female*	0	*Female*	0	*Female*		*Female*			
						Male	0	*Male*	0	*Male*		*Male*			
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*			
						Total	0	*Total*	0	*Total*		*Total*			
	Burkina Faso		0	0	0	*Female*	Data not reported	*Female*	Data not reported	*Female*		*Female*			
						Male		*Male*		*Male*		*Male*			
						Unknown		*Unknown*		*Unknown*		*Unknown*			
						Total		*Total*		*Total*		*Total*			
	Cameroon		0	86	88	*Female*	0	*Female*	N/A	*Female*		*Female*			
						Male	0	*Male*	N/A	*Male*		*Male*			
						Unknown	0	*Unknown*	N/A	*Unknown*		*Unknown*			
						Total	0	*Total*	N/A	*Total*		*Total*			
	Côte d'Ivoire		0	0	131	*Female*	0	*Female*	N/A	*Female*		*Female*			
						Male	0	*Male*	N/A	*Male*		*Male*			
						Unknown	0	*Unknown*	N/A	*Unknown*		*Unknown*			
						Total	0	*Total*	N/A	*Total*		*Total*			
	DRC		0	0	94	*Female*	0	*Female*	0	*Female*		*Female*			
						Male	0	*Male*	0	*Male*		*Male*			
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*			
						Total	0	*Total*	0	*Total*		*Total*			
	Ethiopia		0	0				*Female*	0						
								Male	0						
								Unknown	0						
								Total	0						
	Kenya		0	642	5,230	*Female*	16	*Female*	8	*Female*		*Female*			
						Male	14	*Male*	5	*Male*		*Male*			
						Unknown	80	*Unknown*	0	*Unknown*		*Unknown*			
						Total	110	*Total*	13	*Total*		*Total*			
	Mali		0	0	21	*Female*	0	*Female*	0	*Female*		*Female*			
						Male	0	*Male*	0	*Male*		*Male*			

						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*	
						Total	0	*Total*	0	*Total*		*Total*	
	Mozambique		0	0	0	*Female*	0	*Female*	21	*Female*		*Female*	
						Male	0	*Male*	23	*Male*		*Male*	
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*	
						Total	0	*Total*	44	*Total*		*Total*	
	Nigeria		0	0	15	*Female*	210	*Female*	N/A	*Female*		*Female*	
						Male	124	*Male*	N/A	*Male*		*Male*	
						Unknown	0	*Unknown*	N/A	*Unknown*		*Unknown*	
						Total	334	*Total*	N/A	*Total*		*Total*	
	Senegal		0	0	22	*Female*	0	*Female*	5	*Female*		*Female*	
						Male	0	*Male*	8	*Male*		*Male*	
						Unknown	62	*Unknown*	0	*Unknown*		*Unknown*	
						Total	62	*Total*	13	*Total*		*Total*	
	Tanzania		0	471	17	*Female*	22	*Female*	60	*Female*		*Female*	
						Male	18	*Male*	56	*Male*		*Male*	
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*	
						Total	40	*Total*	116	*Total*		*Total*	
	Uganda		0	0	1,247	*Female*	257	*Female*	75	*Female*		*Female*	
						Male	185	*Male*	98	*Male*		*Male*	
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*	
						Total	442	*Total*	173	*Total*		*Total*	
IP 3	# and % of MTaPS-supported facilities that are using standardized tool(s) for monitoring IPC and informing programmatic improvement	Quarterly	50% (8/16)	100% (9/9)	94% (107/114)	91% (111/122)		95% (151/159)					
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	*Hospitals*	50% (2/4)	*Hospitals*	50% (2/4)	*Hospitals*		*Hospitals*	
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*	
						Others	0	*Others*	0	*Others*		*Others*	
						Total	50% (2/4)	*Total*	50% (2/4)	*Total*		*Total*	
	Burkina Faso		0% (0/0)	0% (0/0)	0% (0/0)	*Hospitals*	Data Not Reported	*Hospitals*	Data Not Reported	*Hospitals*		*Hospitals*	
						Health centers		*Health centers*		*Health centers*		*Health centers*	
						Others		*Others*		*Others*		*Others*	
						Total		*Total*		*Total*		*Total*	
	Cameroon		0% (0/0)	0% (0/0)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*		*Hospitals*	
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*	
						Others	0	*Others*	0	*Others*		*Others*	
						Total	100% (12/12)	*Total*	100% (12/12)	*Total*		*Total*	

	Côte d'Ivoire		0% (0/0)	0% (0/0)	100% (12/12)	*Hospital*	73% (16/22)	*Hospital*	100% (22/22)	*Hospital*		*Hospital*		
						Animal health centers	0	*Animal health centers*	0	*Animal health centers*		*Animal health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	73% (16/22)	*Total*	100% (22/22)	*Total*		*Total*		
	DRC		0% (0/0)	0% (0/0)	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (7/7)	*Total*	100% (7/7)	*Total*		*Total*		
	Ethiopia		0% (0/0)	50% (15/30)	N/A	*Hospitals*	N/A	*Hospitals*	0 (0/5)	*Hospitals*		*Hospitals*		
						Health centers	N/A	*Health centers*	0	*Health centers*		*Health centers*		
						Others	N/A	*Others*	0	*Others*		*Others*		
						Total	N/A	*Total*	0 (0/5)	*Total*		*Total*		
	Jordan		0% (0/0)	0% (0/0)	0% (0/4)	*Hospitals*	N/A	*Hospitals*	N/A	*Hospitals*		*Hospitals*		
						Health centers		*Health centers*		*Health centers*		*Health centers*		
						Others		*Others*		*Others*		*Others*		
						Total		*Total*		*Total*		*Total*		
	Kenya		0% (0/0)	0% (0/0)	100% (20/20)	*Hospitals*	100% (19/19)	*Hospitals*	100% (19/19)	*Hospitals*		*Hospitals*		
						Health centers	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (20/20)	*Total*	100% (20/20)	*Total*		*Total*		
	Mali		0% (0/0)	0% (0/0)	100% (16/16)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	*Hospital*		*Hospital*		
						Health centers	100% (7/7)	*Health centers*	100% (7/7)	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (16/16)	*Total*	100% (16/16)	*Total*		*Total*		
	Mozambique		43% (3/7)	Data not reported	100% (7/7)	*Hospital*	100% (7/7)	*Hospital*	100% (7/7)	*Hospital*		*Hospital*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (7/7)	*Total*	100% (7/7)	*Total*		*Total*		
	Nigeria		0% (0/0)	Data not reported	0% (0/0)	*Hospitals*	0% (0/3)	*Hospitals*	0	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	14% (1/7)	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	0% (0/3)	*Total*	14% (1/7)	*Total*		*Total*		
	Senegal		100% (3/3)	100% (3/3)	100% (8/8)	*Hospitals*	100% (8/8)	*Hospitals*	57% (8/14)	*Hospitals*		*Hospitals*		

						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (8/8)	*Total*	57% (8/14)	*Total*		*Total*		
	Tanzania		33% (2/6)	100% (6/6)	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (13/13)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (10/10)	*Total*	100% (13/13)	*Total*		*Total*		
	Uganda		0% (0/0)	0% (0/0)	100% (13/13)	*Hospitals*	100% (13/13)	*Hospitals*	100% (13/13)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (13/13)	*Total*	100% (13/13)	*Total*		*Total*		
IP 4	# of countries with improved performance in core IPC components at national level from baseline to follow-up	Annually	0% (0/12)	25% (3/12)	75% (8/12)									
IP 5	# and % of MTaPS-supported facilities implementing CQI to improve IPC	Quarterly	40% (23/57)	83% (39/47)	99% (106/107)	87% (106/122)		86% (118/137)						
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	*Hospitals*	50% (2/4)	*Hospitals*	50% (2/4)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	50% (2/4)	*Total*	50% (2/4)	*Total*		*Total*		
	Burkina Faso		0% (0/0)	0% (0/0)	0% (0/0)	*Hospitals*	Data Not Reported	*Hospitals*	Data Not Reported	*Hospitals*		*Hospitals*		
						Health centers		*Health centers*		*Health centers*		*Health centers*		
						Others		*Others*		*Others*		*Others*		
						Total		*Total*		*Total*		*Total*		
	Cameroon		0% (0/6)	100% (6/6)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (12/12)	*Total*	100% (12/12)	*Total*		*Total*		
	Côte d'Ivoire		50% (2/4)	100% (4/4)	100% (12/12)	*Hospitals*	55% (12/22)	*Hospitals*	100% (22/22)	*Hospitals*		*Hospitals*		
						Animal health centers	0	*Animal health centers*	0	*Animal health centers*		*Animal health centers*		
						Others	0	*Others*	0	*Others*		*Others*		

						Total	55% (12/22)	*Total*	100%(22/22)	*Total*		*Total*		
	DRC		0% (0/0)	0% (0/0)	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (7/7)	*Total*	100% (7/7)	*Total*		*Total*		
	Ethiopia		0% (0/0	70%	N/A	*Hospitals*	N/A	*Hospitals*	0 (0/5)	*Hospitals*		*Hospitals*		
						Health centers	N/A	*Health centers*	0	*Health centers*		*Health centers*		
						Others	N/A	*Others*	0	*Others*		*Others*		
						Total	N/A	*Total*	0 (0/5)	*Total*		*Total*		
	Kenya		100% (16/16	100% (16/16)	100% (20/20)	*Hospitals*	100% (19/19)	*Hospitals*	100% (19/19)	*Hospitals*		*Hospitals*		
						Health centers	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (20/20)	*Total*	100% (20/20)	*Total*		*Total*		
	Mali		0% (0/5)	0% (0/5)	94% (15/16)	*Hospital*	100% (9/9)	*Hospital*	100% (9/9)	*Hospital*		*Hospital*		
						Health centers	85.71% (6/7)	*Health centers*	100% (7/7)	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	93.75% (15/16)	*Total*	100% (16/16)	*Total*		*Total*		
	Mozambique		43% (3/7)	Data not reported	100% (7/7)	*Hospital*	100% (7/7)	*Hospital*	100% (7/7)	*Hospital*		*Hospital*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (7/7)	*Total*	100% (7/7)	*Total*		*Total*		
	Nigeria		0% (0/3)	Data not reported	0% (0/0)	*Hospitals*	0% (0/3)	*Hospitals*	14% (1/7)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	0% (0/3)	*Total*	14% (1/7)	*Total*		*Total*		
	Senegal		0% (0/3)	0% (0/3)	100% (8/8)	*Hospitals*	100% (8/8)	*Hospitals*	57% (8/14)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (8/8)	*Total*	57% (8/14)	*Total*		*Total*		
	Tanzania		33% (2/6)	100% (6/6)	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (10/10)	*Total*	100% (10/10)	*Total*		*Total*		

	Uganda		0% (0/7)	100% (7/7)	100% (13/13)	*Hospitals*	100% (13/13)	*Hospitals*	100% (13/13)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (13/13)	*Total*	100% (13/13)	*Total*		*Total*		
IP 6	# and % of MTaPS-supported facilities with functional IPC committees	Quarterly	35% (18/51)	87% (41/47)	94% (104/110)	90% (110/122)		86% (118/137)						
	Bangladesh		0% (0/0)	0% (0/0)	100% (2/2)	*Hospitals*	50% (2/4)	*Hospitals*	50% (2/4)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	50% (2/4)	*Total*	50% (2/4)	*Total*		*Total*		
	Burkina Faso		0% (0/0)	0% (0/0)	0% (0/0)	*Hospitals*	Data Not Reported	*Hospitals*	Data Not Reported	*Hospitals*		*Hospitals*		
						Health centers		*Health centers*		*Health centers*		*Health centers*		
						Others		*Others*		*Others*		*Others*		
						Total		*Total*		*Total*		*Total*		
	Cameroon		0% (0/0)	83% (5/6)	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*	100% (12/12)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (12/12)	*Total*	100% (12/12)	*Total*		*Total*		
	Côte d'Ivoire		100% (4/4)	100% (4/4)	100% (12/12)	*Hospitals*	73% (16/22)	*Hospitals*	100% (22/22)	*Hospitals*		*Hospitals*		
						Animal health centers	0	*Animal health centers*	0	*Animal health centers*		*Animal health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	73% (16/22)	*Total*	100% (22/22)	*Total*		*Total*		
	DRC		0% (0/0)	0% (0/0)	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (7/7)	*Total*	100% (7/7)	*Total*		*Total*		
	Ethiopia		0% (0/0)	100%	N/A	*Hospitals*	N/A	*Hospitals*	0 (0/5)	*Hospitals*		*Hospitals*		
						Health centers	N/A	*Health centers*	0	*Health centers*		*Health centers*		
						Others	N/A	*Others*	0	*Others*		*Others*		
						Total	N/A	*Total*	0 (0/5)	*Total*		*Total*		
	Kenya		0% (0/16)	100% (16/16)	92% (18/20)	*Hospitals*	100% (19/19)	*Hospitals*	100% (19/19)	*Hospitals*		*Hospitals*		
						Health centers	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*		*Health centers*		

						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (20/20)	*Total*	100% (20/20)	*Total*		*Total*		
	Mali		0% (0/5)	0% (0/5)	94% (15/16)	*Hospital*	88.89% (8/9)	*Hospital*	100% (9/9)	*Hospital*		*Hospital*		
						Health centers	85.71% (6/7)	*Health centers*	100% (7/7)	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	75% (14/16)	*Total*	100% (16/16)	*Total*		*Total*		
	Mozambique		43% (3/7)	Data not reported	100% (7/7)	*Hospital*	100% (7/7)	*Hospital*	100% (7/7)	*Hospital*		*Hospital*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (7/7)	*Total*	100% (7/7)	*Total*		*Total*		
	Nigeria		0% (0/3)	Data not reported	0% (0/3)	*Hospitals*	33.33% (1/3)	*Hospitals*	14% (1/7)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	33.33% (1/3)	*Total*	14% (1/7)	*Total*		*Total*		
	Senegal		100% (3/3)	100% (3/3)	100% (8/8)	*Hospitals*	100% (8/8)	*Hospitals*	57% (8/14)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (8/8)	*Total*	57% (8/14)	*Total*		*Total*		
	Tanzania		17% (1/6)	100% (6/6)	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (10/10)	*Total*	100% (10/10)	*Total*		*Total*		
	Uganda		100% (7/7)	100% (7/7)	100% (13/13)	*Hospitals*	100% (13/13)	*Hospitals*	100% (13/13)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (13/13)	*Total*	100% (13/13)	*Total*		*Total*		
IP 7	# and % of MTaPS-supported facilities with improved hand hygiene compliance	Annually												
	Bangladesh		0	0%	100% (2/2)					*Hospitals*				
										Total				
	Burkina Faso		0		0% (0/0)					*Total*				

	Cameroon		0	0%	100%	*Hospitals* *Total*		
	Côte d'Ivoire		0	100%	90% (9/10)	*Hospitals* *Total*		
	DRC		0		57% (4/7)	*Hospitals* *Total*		
	Kenya		0		100% (20/20)	*Hospitals* *Health centers* *Total*		
	Mali		0	0%	94% (15/16)	*Hospital* *Health centers* *Total*		
	Mozambique		0		0% (0/7)	*Hospitals* *Total*		
	Nigeria		0	N/A	0% 0(0/3)	*Hospitals* *Total*		
	Senegal		0		100% (8/8)	*Hospitals* *Total*		
	Tanzania		0		100% (10/10)	*Hospitals* *Total*		
	Uganda		0		100% (7/7)	*Hospitals* *Total*		
IP 8	# and % of MTaPS-supported facilities with improved performance in core IPC components	Annually						
	Bangladesh		0		100% (2/2)	*Hospitals* *Total*		
	Burkina Faso		0		0% (0/0)	*Total*		
	Cameroon		0		100% (12/12)	*Hospitals* *Total*		
	Côte d'Ivoire		0		80% (8/10)	*Hospitals* *Total*		
	DRC		0		0% (0/0)	*Hospitals* *Total*		
	Kenya		0		100% (20/20)	*Hospitals* *Health centers* *Total*		
	Mali		0		94% (15/16)	*Hospital* *Health centers* *Total*		
	Mozambique		0		100% (7/7)	*Hospitals* *Total*		
	Nigeria		0		0% 0(0/3)	*Hospitals*		

						Total						
	Senegal		0		100% (8/8)	*Hospitals*						
						Total						
	Tanzania		0		60% (6/10)	*Hospitals*						
						Total						
	Uganda		0		0% (0/0)	*Hospitals*						
						Total						
AS1	# of policies, legislation, regulations, or operational documents related to antimicrobial stewardship (AMS) developed or updated with MTaPS support	Annually	0	5	12							
	Bangladesh		0	0	0							
	Burkina Faso		0	0	2							
	Cameroon		0	0	0							
	Côte d'Ivoire		0	1	0							
	DRC		0	1	3							
	Kenya		0	1	3							
	Mali		0	1	0							
	Mozambique		0	N/A	1							
	Nigeria		0	N/A	0							
	Senegal		0	0	1							
	Tanzania		0	1	2							
	Uganda		0	0	0							
AS 2	# and % of MTaPS-supported facilities' MTC/AMS committees or other relevant groups that implemented AMS improvement plans and/or monitoring framework	Quarterly	10% (4/39)	81% (25/31)	60% (74/123	72% (90/125)		63% (93/148)				
	Bangladesh		0% (0/0)	0% (0/0)	0% (0/2)	*Hospitals*	25% (1/4)	*Hospitals*	50%	*Hospitals*		*Hospitals*	
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*	
						Others	0	*Others*	0	*Others*		*Others*	
						Total	25% (1/4)	*Total*	50% (1/4)	*Total*		*Total*	

	Burkina Faso		0% (0/0)	0% (0/0)	25% (3/12)	*Hospitals*	Data Note Reported	*Hospitals*	N/A	*Hospitals*		*Hospitals*			
						Health centers		*Health centers*	N/A	*Health centers*		*Health centers*			
						Others		*Others*	N/A	*Others*		*Others*			
						Total		*Total*	N/A	*Total*		*Total*			
	Cameroon		0% (0/0)	0% (0/0)	92% (11/12)	*Hospitals*	100% (12/12)	*Hospitals*	92% (11/12)	*Hospitals*		*Hospitals*			
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*			
						Others	0	*Others*	0	*Others*		*Others*			
						Total	100% (12/12)	*Total*	92% (11/12)	*Total*		*Total*			
	Côte d'Ivoire		0% (0/0)	0% (0/0)	75% (9/12)	*Hospitals*	40% (9/22)	*Hospitals*	45% (10/22)	*Hospitals*		*Hospitals*			
						Health centers	0	*Health centers*	0%	*Health centers*		*Health centers*			
						Others	0	*Others*	45%	*Others*		*Others*			
						Total	40% (9/22)	*Total*	45% (10/22)	*Total*		*Total*			
	Ethiopia		0% (0/0)	N/A	N/A	*Hospitals*	N/A	*Hospitals*	0% (0/5)						
						Health centers	N/A	*Health centers*	0						
						Others	N/A	*Others*	0						
						Total	N/A	*Total*	0% (0/5)						
	DRC		0% (0/0)	0% (0/0)	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*		*Hospitals*			
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*			
						Others	0	*Others*	0	*Others*		*Others*			
						Total	100% (7/7)	*Total*	100% (7/7)	*Total*		*Total*			
	Kenya		6% (1/16)	100% (18/18)	83% (20/24)	*Hospitals*	100% (20/20)	*Hospitals*	100% (20/20)	*Hospitals*		*Hospitals*			
						Health centers	100% (1/1)	*Health centers*	100% (1/1)	*Health centers*		*Health centers*			
						Pharmacy	0% (0/2)	*Pharmacy*	0%	*Pharmacy*		*Pharmacy*			
						Total	100% (21/23)	*Total*	100% (21/21)	*Total*		*Total*			
	Mali		0% (0/0)	0% (0/0)	56% (9/16)	*Hospital*	11.11% (1/9)	*Hospital*	78% (7/9)	*Hospital*		*Hospital*			
						Health centers	0% (0/7)	*Health centers*	100% (7/7)	*Health centers*		*Health centers*			
						Others	0	*Others*	0	*Others*		*Others*			
						Total	6% (1/16)	*Total*	87% (14/16)	*Total*		*Total*			
	Mozambique		0% (0/7)	Data not reported	0% (0/7)	*Hospitals*	71.43% (5/7)	*Hospitals*	80% (4/5)	*Hospitals*		*Hospitals*			
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*			
						Others	0	*Others*	0	*Others*		*Others*			
						Total	71.43% (5/7)	*Total*	57% (4/7)	*Total*		*Total*			
	Nigeria		0% (0/3)	Data not reported	0% (0/0)	*Hospitals*	100% (3/3)	*Hospitals*	14% (1/7)	*Hospitals*		*Hospitals*			

						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (3/3)	*Total*	14% (1/7)	*Total*		*Total*		
	Senegal		0% (0/0)	0% (0/0)	0% (0/8)	*Hospitals*	100% (8/8)	*Hospitals*	0	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (8/8)	*Total*	0%	*Total*		*Total*		
	Tanzania		0% (0/6)	0% (0/6)	20% (2/10)	*Hospitals*	100% (10/10)	*Hospitals*	100% (10/10)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (10/10)	*Total*	100% (10/10)	*Total*		*Total*		
	Uganda		43% (3/7)	100% (7/7)	100% (13/13)	*Hospitals*	100% (13/13)	*Hospitals*	100% (13/13)	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (13/13)	*Total*	100% (13/13)	*Total*		*Total*		
AS 3	# of persons trained in AMS topics with MTaPS support	Quarterly	0	436	4721	582		1,035						
	Bangladesh		0	0	0	*Female*	0	*Female*	60	*Female*		*Female*		
						Male	0	*Male*	360	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		
						Total	0	*Total*	420	*Total*		*Total*		
	Burkina Faso		0	0	97	*Female*	Data Note Reported	*Female*	8	*Female*		*Female*		
						Male		*Male*	13	*Male*		*Male*		
						Unknown		*Unknown*	0	*Unknown*		*Unknown*		
						Total		*Total*	21	*Total*		*Total*		
	Cameroon		0	0	222	*Female*	8	*Female*	0	*Female*		*Female*		
						Male	9	*Male*	0	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		
						Total	17	*Total*	0	*Total*		*Total*		
	Côte d'Ivoire		0	0	237	*Female*	0	*Female*	24	*Female*		*Female*		
						Male	0	*Male*	39	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		
						Total	0	*Total*	63	*Total*		*Total*		
	DRC		0	0	274	*Female*	0	*Female*	21	*Female*		*Female*		
						Male	0	*Male*	37	*Male*		*Male*		
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*		
						Total	0	*Total*	58	*Total*		*Total*		

	Jordan		0	0	0	*Female*	N/A	*Female*	N/A	*Female*		*Female*	
						Male		*Male*		*Male*		*Male*	
						Unknown		*Unknown*		*Unknown*		*Unknown*	
						Total		*Total*		*Total*		*Total*	
	Kenya		0	165	1,232	*Female*	103	*Female*	87	*Female*		*Female*	
						Male	58	*Male*	50	*Male*		*Male*	
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*	
						Total	161	*Total*	137	*Total*		*Total*	
	Mali		0	0	136	*Female*	0	*Female*	0	*Female*		*Female*	
						Male	0	*Male*	0	*Male*		*Male*	
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*	
						Total	0	*Total*	0	*Total*		*Total*	
	Mozambique		0	0	0	*Female*	3	*Female*	4	*Female*		*Female*	
						Male	4	*Male*	5	*Male*		*Male*	
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*	
						Total	7	*Total*	9	*Total*		*Total*	
	Nigeria		0	0	18	*Female*	10	*Female*	2	*Female*		*Female*	
						Male	7	*Male*	21	*Male*		*Male*	
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*	
						Total	17	*Total*	23	*Total*		*Total*	
	Senegal		0	0	0	*Female*	0	*Female*	0	*Female*		*Female*	
						Male	0	*Male*	0	*Male*		*Male*	
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*	
						Total	0	*Total*	0	*Total*		*Total*	
	Tanzania		0	201	0	*Female*	0	*Female*	N/A	*Female*		*Female*	
						Male	0	*Male*		*Male*		*Male*	
						Unknown	0	*Unknown*		*Unknown*		*Unknown*	
						Total	0	*Total*		*Total*		*Total*	
	Uganda		0	70	2,513	*Female*	204	*Female*	114	*Female*		*Female*	
						Male	176	*Male*	159	*Male*		*Male*	
						Unknown	0	*Unknown*	0	*Unknown*		*Unknown*	
						Total	380	*Total*	273	*Total*		*Total*	
AS 4	# and % of MTaPS-supported facilities implementing CQI to improve AMS	Quarterly	49% (24/49)	75% (41/55)	57% (71/124)	61% (74/122)		60% (89/148)					
	Bangladesh		0% (0/0)	0% (0/0)	0% (0/2)	*Hospitals*	0% (0/4)	*Hospitals*	25%	*Hospitals*		*Hospitals*	
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*	
						Others	0	*Others*	0	*Others*		*Others*	
						Total	0% (0/4)	*Total*	25%	*Total*		*Total*	
	Burkina Faso		0% (0/0)	100% (5/5)	25% (3/12)	*Hospitals*	Data Note Reported	*Hospitals*	0	*Hospitals*		*Hospitals*	
						Health centers		*Health centers*	0	*Health centers*		*Health centers*	
						Others		*Others*	0	*Others*		*Others*	
						Total		*Total*	0	*Total*		*Total*	

	Cameroon		0% (0/0)	0% (0/6)	92% (11/12)	*Hospitals*	100% (12/12)	*Hospitals*	92%	*Hospitals*		*Hospitals*	
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*	
						Others	0	*Others*	0	*Others*		*Others*	
						Total	100% (12/12)	*Total*	92%	*Total*		*Total*	
	Côte d'Ivoire		0% (0/0)	100% (2/2)	90% (9/10)	*Hospitals*	40% (9/22)	*Hospitals*	45%	*Hospitals*		*Hospitals*	
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*	
						Others	0	*Others*	0	*Others*		*Others*	
						Total	40% (9/22)	*Total*	45%	*Total*		*Total*	
	DRC		0% (0/0)	100% (3/3)	100% (7/7)	*Hospitals*	100% (7/7)	*Hospitals*	100%	*Hospitals*		*Hospitals*	
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*	
						Others	0	*Others*	0	*Others*		*Others*	
						Total	100% (7/7)	*Total*	100%	*Total*		*Total*	
	Kenya		100% (18/18)	100% (18/18)	92% (22/24)	*Hospitals*	100% (20/20)	*Hospitals*	100%	*Hospitals*		*Hospitals*	
						Health centers	100% (1/1)	*Health centers*	0	*Health centers*		*Health centers*	
						Pharmacy	0% (0/2)	*Pharmacy*	0	*Pharmacy*		*Pharmacy*	
						Total	91% (21/23)	*Total*	100%	*Total*		*Total*	
	Mali		0% (0/5)	0% (0/5)	13% (2/16)	*Hospital*	11.11% (1/9)	*Hospital*	78%	*Hospital*		*Hospital*	
						Health centers	0% (0/7)	*Health centers*	100%	*Health centers*		*Health centers*	
						Others	0	*Others*	0	*Others*		*Others*	
						Total	6.25% (1/16)	*Total*		*Total*		*Total*	
	Mozambique		0% (0/7)	Data not reported	57% (4/7)	*Hospital*	72% (5/7)	*Hospital*	71%	*Hospital*		*Hospital*	
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*	
						Others	0	*Others*	0	*Others*		*Others*	
						Total	72% (5/7)	*Total*	71%	*Total*		*Total*	
	Nigeria		0% (0/3)	Data not reported	0% (0/3)	*Hospitals*	0% (0/3)	*Hospitals*	14%	*Hospitals*		*Hospitals*	
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*	
						Others	0	*Others*	0	*Others*		*Others*	
						Total	0%	*Total*	14%	*Total*		*Total*	
	Senegal		0% (0/3)	0% (0/3)	0% (0/8)	*Hospitals*	0% (0/8)	*Hospitals*	0	*Hospitals*		*Hospitals*	
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*	
						Others	0	*Others*	0	*Others*		*Others*	
						Total	0% (0/8)	*Total*	0%	*Total*		*Total*	
	Tanzania		0% (0/6)	100% (6/6)	20% (2/10)	*Hospitals*	60% (6/10)	*Hospitals*	60%	*Hospitals*		*Hospitals*	
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*	
						Others	0	*Others*	0	*Others*		*Others*	

						Total	60% (6/10)	*Total*	60%	*Total*		*Total*		
	Uganda		86% (6/7)	100% (7/7)	100% (13/13)	*Hospitals*	100% (13/13)	*Hospitals*	100%	*Hospitals*		*Hospitals*		
						Health centers	0	*Health centers*	0	*Health centers*		*Health centers*		
						Others	0	*Others*	0	*Others*		*Others*		
						Total	100% (13/13)	*Total*	100%	*Total*		*Total*		
AS 5	#/% of MTaPS-supported facilities that have documented evidence of improvement in antimicrobial medicines prescribing or use	Annually												
	Bangladesh		0%		0% (0/2)	*Hospitals*								
						Total								
	Burkina Faso		0%		0% (0/12)	*Hospitals*								
						Total								
	Cameroon		0%		0% (0/11)	*Hospitals*								
						Total								
	Côte d'Ivoire		0%		0% (0/10)	*Hospitals*								
						Total								
	DRC		0%		0% (0/7)	*Hospitals*								
						Total								
	Kenya		0%		92% (22/24)	*Hospitals*								
						Health centers								
						Total								
	Mali		0%		13% (2/16)	*Hospital*								
						Health centers								
						Total								
	Mozambique		0%		57% (4/7)	*Hospitals*								
						Total								
	Nigeria		0%		0% (0/3)	*Hospitals*								
						Total								
	Senegal		0%		10	*Hospitals*								
						Total								
	Tanzania		0%		60% (6/10)	*Hospitals*								
						Total								
	Uganda		0%		0% (0/7)	*Hospitals*								
						Total								
DRC 1	# of quality-assured MNCH, RH/FP, and TB medicines products registered with MTaPS support	Semi-annually	0	0	29	23								

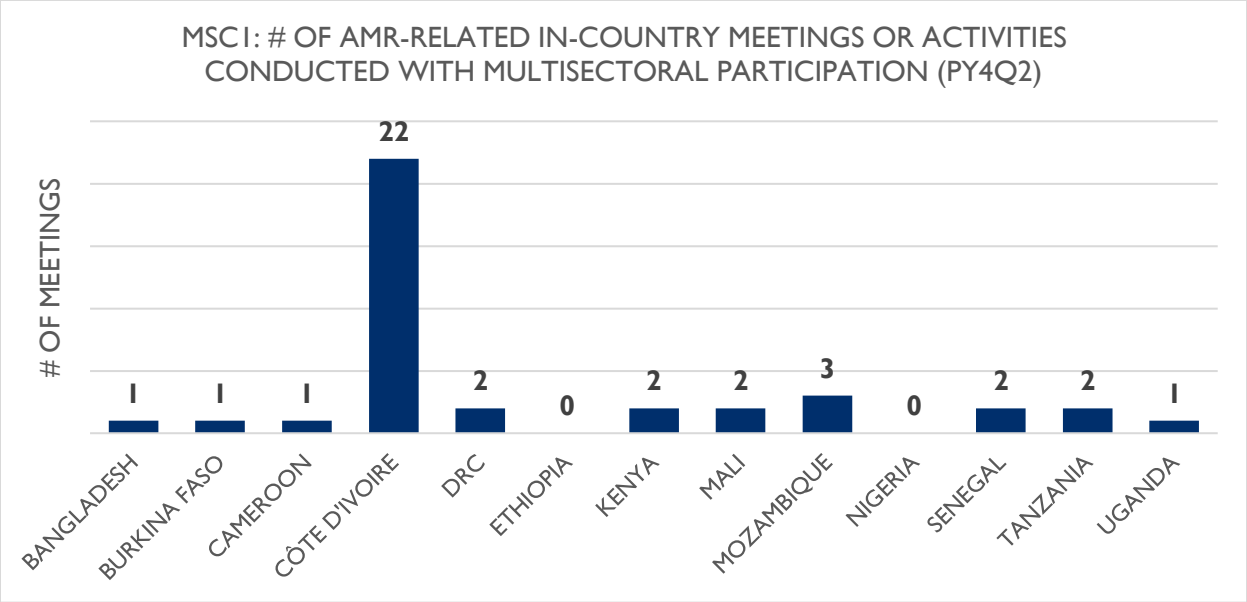
DRC 4	% of facilities implementing appropriate storage of oxytocin	Quarterly				69.44% (50/72)	75% (54/72)			
	DRC					69.44% (50/72)	75% (54/72)			
DRC 5	# of DPS and/or IPS using the updated directory of registered medicines	Semi-annually	0	0	7	4				
DRC 8	# of health zones involved in provincial quantification exercises with MTaPS support	Semi-annually	0	0	19	10				
DRC 9	# of MNCH treatment protocols or job aids disseminated to HFs with MTaPS support	Semi-annually	0	0	0	0				
DRC 10	# of contraceptive kits (reduced FP package) distributed to community care sites (CSS) in MTaPS-supported HZs	Semi-annually	0	0	0	0				
DRC 11	% of CSS reporting contraceptive data to health facilities in MTAPS-supported HZs	Semi-annually	0%	0	0% (0/12)	0				
DRC 12	# of mini awareness raising campaigns for active detection of TB and adherence to TB treatment supported by MTaPS	Semi-annually	0	0	0	2				
BG 1	% of procurement packages of DGFP and DGHS that are on schedule	Annually	0	0	82%					
DRC 2	# of CBO members that have been capacitated to participate in	Annually	0	0	350					

	oversight of pharmaceutical management for MNCH commodities with MTaPS support							
EVD 1	# of policies, legislation, regulations, operational documents, or guidelines for EVD management developed or updated with technical assistance from MTaPS	Quarterly	0	0	0	3		
	Mali		0	0	0	0		
	Rwanda		0	0	0	1		
	Senegal		0	0	0	0		
	Uganda		0	0	0	2		
EVD 2	# of entities implementing EVD guidelines with MTaPS support	Quarterly	0	0	0	66		
	Cote d'Ivoire		0	0	0	0		
	Mali		0	0	0	7		
	Senegal		0	0	0	0		
	Uganda		0	0	0	59		
ML 1	# of marketing authorization commission meetings supported by MTaPS	Quarterly	0	N/A	N/A	0		

ANNEX 2: GLOBAL HEALTH SECURITY AGENDA – QUARTER PROGRESS FOR FY22Q1

SUMMARY OF ACTIVITIES FOR THIS QUARTER (FY22Q2)

SELECTED MTAPS GHSA INDICATOR PROGRESS



Annex Figure 1. MSC1. # of AMR-related in-country meetings or activities conducted with multisectoral participation in PY4Q2

Annex Table 2.1 IP3: % of MTaPS-supported facilities that are using standardized tools for monitoring IPC and informing programmatic improvement

	Country											
Quarter	Bangladesh	Cameroon	Côte d'Ivoire	DRC	Ethiopia	Kenya	Mali	Mozambique	Nigeria**	Senegal	Tanzania	Uganda
PY3Q4	100% (2/2)	100% (12/12)	100% (12/12)	100% (7/7)	-*	100% (20/20)	100% (16/16)	100% (7/7)	0% (0/3)	100% (8/8)	100% (10/10)	100% (13/13)
PY4Q1	50% (2/4)	100% (12/12)	73% (16/22)	100% (7/7)	-*	100% (20/20)	100% (16/16)	100% (7/7)	0% (0/3)	57% (8/14)	100% (10/10)	100% (13/13)
PY4Q2	50% (2/4)	100% (12/12)	100% (22/22)	100% (7/7)	-*	100% (20/20)	100% (16/16)	100% (7/7)	0% (0/7)	57% (8/14)	100% (10/10)	100% (13/13)

*In Q2, facilities have been selected but work has not been started as the workplan is not yet approved.
** One facility IPC team started the implementation of its work plan following the completion of capacity training for its IPC team in PY4Q1. 6 supported facilities are currently undergoing capacity training for members of the IPC teams.

Annex Table 2.2. IP5. % of MTaPS-supported facilities implementing continuous quality improvement (CQI) to improve IPC

Country												
Quarter	Bangladesh	Cameroon	Côte d'Ivoire	DRC	Ethiopia	Kenya	Mali	Mozambique	Nigeria	Senegal	Tanzania	Uganda
PY4Q4	100% (2/2)	100% (12/12)	100% (12/12)	100% (7/7)	-*	100% (20/20)	94% (15/16)	100% (7/7)	0% (0/3)	100% (8/8)	100% (10/10)	100% (13/13)
PY4Q1	50% (2/4)	100% (12/12)	55% (12/22)	100% (7/7)	-*	100% (20/20)	94% (15/16)	100% (7/7)	0% (0/3)	57% (8/14)	100% (10/10)	100% (13/13)
PY4Q2	50% (2/4)	100% (12/12)	100% (22/22)	100% (7/7)	-*	100% (20/20)	100% (16/16)	100% (7/7)	14% (1/7)**	57% (8/14)	100% (10/10)	100% (13/13)

*In Q2, facilities have been selected but work has not been started as the workplan is not yet approved.
** Facility commenced the use of CQI approach for testing an intervention in line with the facility IPC work plan

Annex Table 2.3. IP6. % of MTaPS-supported facilities with functional IPC committees

Country												
Quarter	Bangladesh	Cameroon	Côte d'Ivoire	DRC	Ethiopia	Kenya	Mali	Mozambique	Nigeria	Senegal	Tanzania	Uganda
PY3Q4	100% (2/2)	100% (12/12)	100% (12/12)	100% (7/7)	-*	92% (18/20)	75% (12/16)	100% (7/7)	0% (0/3)	100% (8/8)	100% (10/10)	100% (13/13)
PY4Q1	50% (2/4)	100% (12/12)	73% (16/22)	100% (7/7)	-*	100% (20/20)	88% (14/16)	100% (7/7)	33% (1/3)	57% (8/14)	100% (10/10)	100% (13/13)
PY4Q2	50% (2/4)	100% (12/12)	100% (22/22)	100% (7/7)	-*	100% (20/20)	100% (16/16)	100% (7/7)	14% (1/7)**	57% (8/14)	100% (10/10)	100% (13/13)

*Facilities have been selected but work has not been started as Ethiopia workplan is not yet approved.
** IPC committee at supported facility held a meeting in Q1 to inaugurate the committee and a second meeting in Q2 to review the facility IPC work plan developed by the IPC team.

Annex Table 2.4. AS2. % of MTaPS-supported facilities' medicines and therapeutics/AMS committees or other relevant groups that implemented AMS improvement plans and/or monitoring framework

Country												
Quarter	Bangladesh	Burkina Faso*	Cameroon	Côte d'Ivoire	DRC	Ethiopia	Kenya	Mali	Mozambique	Nigeria	Senegal	Tanzania	Uganda
PY3Q4	0% (0/2)	25% (3/12)	92% (11/12)	75% (9/12)	100% (7/7)	-***	83% (20/24)	19% (3/16)	57% (4/7)	0% (0/3)	0% (0/8)	60% (6/10)	20% (2/10)
PY4Q1	25% (1/4)	-**	100% (12/12)	40% (9/22)	100% (7/7)	-***	91% (21/23)****	19% (3/16)	71% (5/7)	100% (3/3)	0% (0/14)	100% (10/10)	100% (10/10)
PY4Q2	50% (2/4)	0% (0/10)	92% (11/12)	45% (10/22)	100% (7/7)	-***	91% (21/23)	88% (14/16)	71% (5/7)	14% (1/7)*****	0% (0/14)	100% (10/10)	100% (10/10)

*Two facilities dropped at the start of PY4Q2. Funding remains a challenge in PY4; and MTaPS Burkina Faso is working to harmonize action plans for all hospital and plan a work plan session in PY4Q3.
**Data is not yet available for this quarter.
***Facilities have been selected but work has not been started as Ethiopia workplan is not yet approved.
****One facility dropped out at the beginning of PY4, hence the denominator changed from 24 to 23.
*****At the start of PY4 Q2 two facilities were dropped, and six new facilities were added in PY4 Q2.

Annex Table 2.5. AS4. % of MTaPS-supported facilities implementing CQI to improve AMS

Country													
Quarter	Bangladesh	Burkina Faso*	Cameroon	Côte d'Ivoire	DRC	Ethiopia	Kenya	Mali	Mozambique	Nigeria	Senegal	Tanzania	Uganda
PY3Q4	0% (0/2)	25% (3/12)	92% (11/12)	90% (9/10)	100% (7/7)	-***	92% (22/24)	19% (3/16)	57% (4/7)	0% (0/3)	0% (0/8)	60% (6/10)	100% (13/13)
PY4Q1	0% (0/4)	-**	100% (12/12)	40% (9/22)	100% (7/7)	-***	91% (21/23)****	19% (3/16)	71% (5/7)	0% (0/3)	0% (0/14)	100% (10/10)	100% (13/13)
PY4Q2	25% (1/4)	0% (0/10)	92% (11/12)	45% (10/22)	100% (7/7)	-***	91% (21/23)	88% (14/16)	71% (5/7)	14% (1/7)*****	0% (0/14)	100% (10/10)	100% (13/13)

*Two facilities dropped at the start of PY4Q2. Funding remains a challenge in PY4; and MTaPS Burkina Faso is working to harmonize action plans for all hospital and plan a work plan session in PY4Q3.
**Data is not yet available for this quarter.
***Facilities have been selected but work has not been started as Ethiopia workplan is not yet approved.
****One facility dropped out at the beginning of PY4, hence the denominator changed from 24 to 23.
*****At the start of PY4 Q2 two facilities were dropped, and six new facilities were added in PY4 Q2.

ANNEX 3: MONTHLY COVID-19 INDICATORS, QUARTER 1, YEAR 4

Annex Table 3.1: Number of people trained on COVID-19 vaccine-related topics with MTaPS support (COV 2. (0.2))

Portfolio/ Disaggregation	Country	Jan 2022	Feb 2022	Mar 2022	Total
	Bangladesh	0	0	0	0
	Burkina Faso	60	0	23	83
	Côte d'Ivoire	156	0	96	252
	Kenya	99	0	0	99
	Mali	0	0	24	24
	Mozambique	0	0	0	0
	Philippines	0	0	0	0
	Rwanda	0	0	0	0
	Senegal	107	0	0	107
Total by month		**422**	**0**	**143**	**565**
Sex	Male	229	0	116	345
	Female	193	0	27	220
	Unknown sex	0	0	0	0
Technical area	Policy, planning, and coordination	0	0	0	0
	Pharmacovigilance	0	0	23	23
	Supply chain and logistics	0	0	120	120
	Vaccine service delivery	42	0	0	42
	Human resources for health, training, and supervision	99	0	0	99
	Communications and advocacy	0	0	0	0
	Community engagement and demand	65	0	0	65
	Monitoring, evaluation, and HIS	93	0	0	93

Annex Table 3.2: Number of COVID-19 vaccine multisectoral coordination mechanisms that meet regularly (at least once a month) with MTaPS support (COV 4. (0.8))

Portfolio/ Disaggregation	Country	Jan 2022	Feb 2022	Mar 2022	Total
	Bangladesh	0	0	0	0
	Burkina Faso	0	0	0	0
	Côte d'Ivoire	0	0	0	0
	Kenya	0	0	0	0
	Mali	0	0	0	0
	Mozambique	0	0	0	0
	Philippines	0	0	0	0
	Rwanda	0	0	0	0
	Senegal	0	0	0	0
Total by month		**0**	**0**	**0**	**0**

Annex Table 3.3: Number of health facilities where MTaPS provided support for IPC and/or water, sanitation, and hygiene (WASH) for COVID-19 (COV 5. (4.1))

Portfolio/ Disaggregation	Country	Jan 2022	Feb 2022	Mar 2022	Total
	Bangladesh	0	0	0	0
	Cameroon	2	4	2	8
	Côte d'Ivoire	256	99	42	397
	Kenya	0	0	14	14
	Mali	69	0	12	81
	Senegal	0	0	0	0
	Tanzania	16	17	6	39
	Total by month	**343**	**120**	**76**	**539**

Annex Table 3.4: Number of workers who received COVID-19-related training in IPC and/or WASH with MTaPS support (COV 6. (4.2))

Portfolio/ Disaggregation	Country	Jan 2022	Feb 2022	Mar 2022	Total
	Bangladesh	0	70	111	181
	Cameroon	83	173	85	341
	Côte d'Ivoire	0	664	0	664
	Kenya	27	91	11	129
	Mali	81	0	0	81
	Senegal	0	0	0	0
	Tanzania	82	82	0	164
	Total by month	**273**	**1080**	**207**	**1560**
Sex	Male	125	623	130	878
	Female	148	457	77	682
	Unknown sex	0	0	0	0
Trainee Category	HCW	210	949	162	1321
	Non-HCW	63	131	45	239

Annex Table 3.5: Number of policies, protocols, standards, and guidelines across any of the result areas developed or adapted with MTaPS support for COVID-19 (COV 7. (6.1))

Portfolio/ Disaggregation	Country	Jan 2022	Feb 2022	Mar 2022	Total
	Bangladesh	0	0	0	0
	Burkina Faso	0	0	0	0
	Cameroon	0	0	0	0
	Côte d'Ivoire	0	0	0	0
	Kenya	0	0	5	5
	Mali	0	0	0	0
	Mozambique	0	0	0	0
	Philippines	0	0	0	0
	Rwanda	0	0	0	0
	Senegal	0	0	3	3
	Tanzania	0	0	0	0
Total by month		**0**	**0**	**0**	**8**
Technical area	Risk communication and community engagement	0	0	0	3
	Surveillance, rapid response teams, case investigation	0	0	0	0
	Infection prevention and control	0	0	0	0
	Coordination and operations	0	0	0	5
	Vaccine introduction (incl. PV)	0	0	0	0

ANNEX 3: QUARTERLY COVID-19 INDICATORS, QUARTER 1, YEAR 4

Annex Table 3.6. Percentage of adverse event following immunization (AEFI) reports reviewed with MTaPS support among those submitted to country monitoring systems (COV 1. (.2))

Portfolio/ Disaggregation	Country	Jan–Mar 2022	Direct Support	Indirect Support
	Bangladesh	99%	Yes	No
	Côte d'Ivoire	0%	No	Yes
	Jordan	N/A	--	--
	Kenya	100%	No	Yes
	Mali	100%	No	Yes
	Mozambique	N/A (0)	--	--
	Rwanda	N/A (0)	--	--
	Senegal	N/A (0)	--	--
Severity of Event*				
	Minor			3,515
	Moderate			0
	Serious/severe			40
	Total			**3,555**

*Does not include Kenya data, as severity data has not yet been released from the government.

Annex Table 3.7. Number of tools (e.g., reporting forms, checklists, and job aids) for planning and conducting safety monitoring developed, adapted, or disseminated with MTaPS support (COV 3. (.7))

Portfolio/ Disaggregation	Country	Jan–Mar 2022
	Bangladesh	0
	Côte d'Ivoire	0
	Kenya	10
	Mali	0
	Mozambique	0
	Rwanda	0
	Senegal	3
	Total	**13**
Technical area	Establishing surveillance systems	0
	Monitoring and responding to AEFIs	1
	Monitoring and responding to adverse events of special interest	1
	Safety data management systems	0
	COVID-19 vaccine safety communication	11

Annex Table 3.8. Country has developed or adapted COVID-19 vaccine micro plans with MTaPS support (COV 8. (C.1))

Country	Jan–Mar 2022
Bangladesh	No
Burkina Faso	Yes
Côte d'Ivoire	Yes
Kenya	Yes
Senegal	Yes

Annex Table 3.9. Country has improved the regulatory and/or policy environment for COVID-19 vaccines with MTaPS support (COV 9. (C.2))

Country	Jan–Mar 2022
Bangladesh	Yes
Côte d'Ivoire	No
Kenya	Yes
Mali	No
Mozambique	No
Rwanda	No
Senegal	No

Annex Table 3.10. Country has plans for vaccine distribution to the subnational level developed, adapted, or disseminated with MTaPS support (COV 10. (C.3))

Country	Jan–Mar 2022
Côte d'Ivoire	Yes
Kenya	N/A
Senegal	Yes

Annex Table 3.11. Country has developed or adapted vaccine tracking systems to track COVID-19 vaccine with MTaPS support (COV 11. (C.4))

Country	Jan–Mar 2022
Côte d'Ivoire	No
Kenya	N/A
Philippines	No
Senegal	No

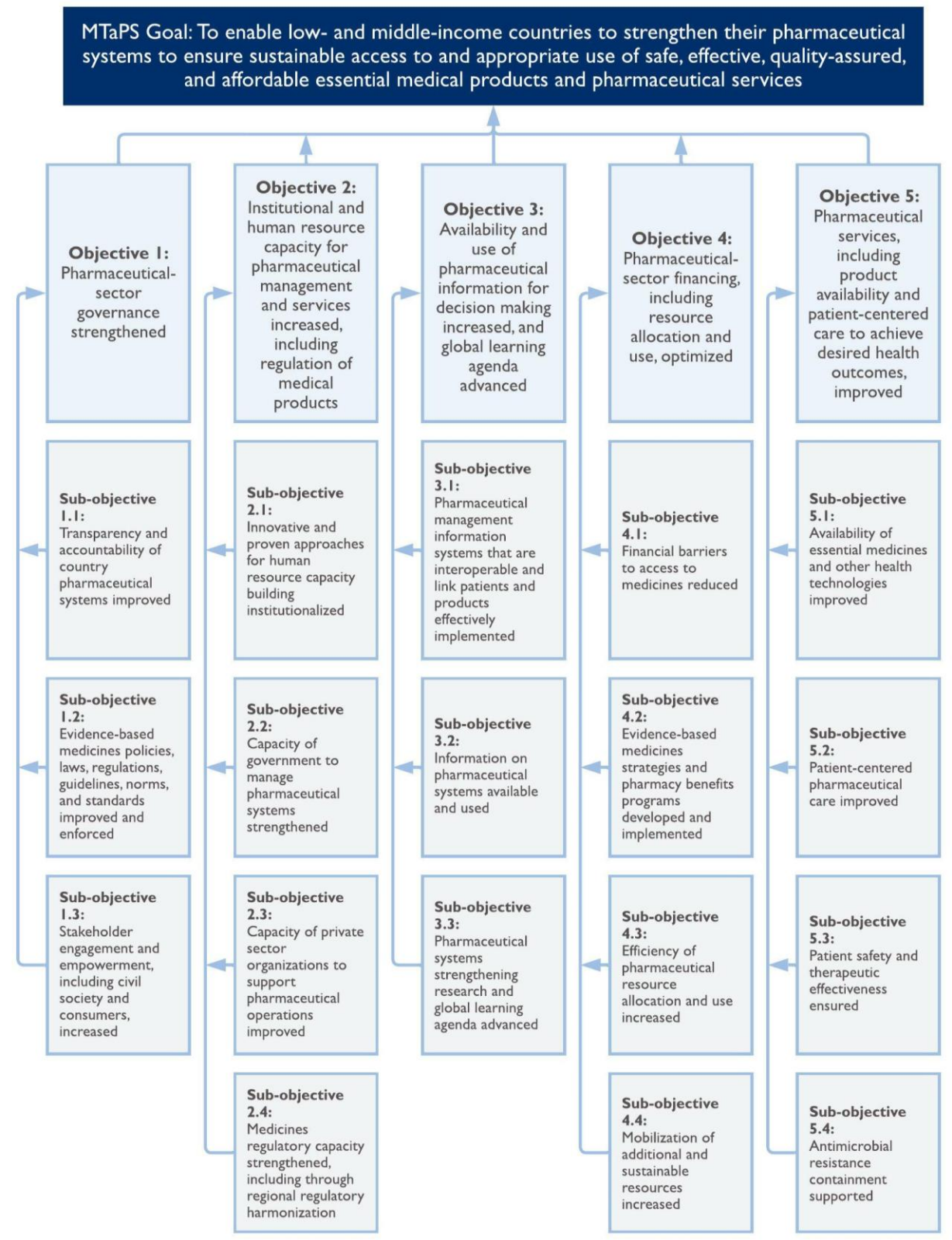
Annex Table 3.12. Percent of MTaPS-support health facilities in compliance with IPC COVID-19 guidelines/standard operating procedures (COV 12.)

Country	Jan–Mar 2022
Côte d'Ivoire	42% (14/33)
Kenya	0% (0/24)
Senegal	80% (8/10)

Annex Table 3.13. Number of COVID-19 vaccines safety surveillance reports produced under MTaPS support (JO7)

Country	Jan–Mar 2022
Jordan	1

ANNEX 4: MTAPS RESULTS FRAMEWORK



ANNEX 5: GHSA RESULTS FRAMEWORK

ANNEX 6: COVID-19 RESULTS FRAMEWORK

USAID OBJECTIVE 1: Accelerate widespread and equitable access to and delivery of safe and effective COVID-19 vaccinations

USAID OBJECTIVE 2: Reduce morbidity and mortality from COVID-19, mitigate transmission, and strengthen health systems, including to prevent, detect, and respond to pandemic threats

RESULT AREA 4: Infection Prevention and Control

RESULT AREA 6: Coordination and Operations

ANNEX 7: MNCH RESULTS FRAMEWORK